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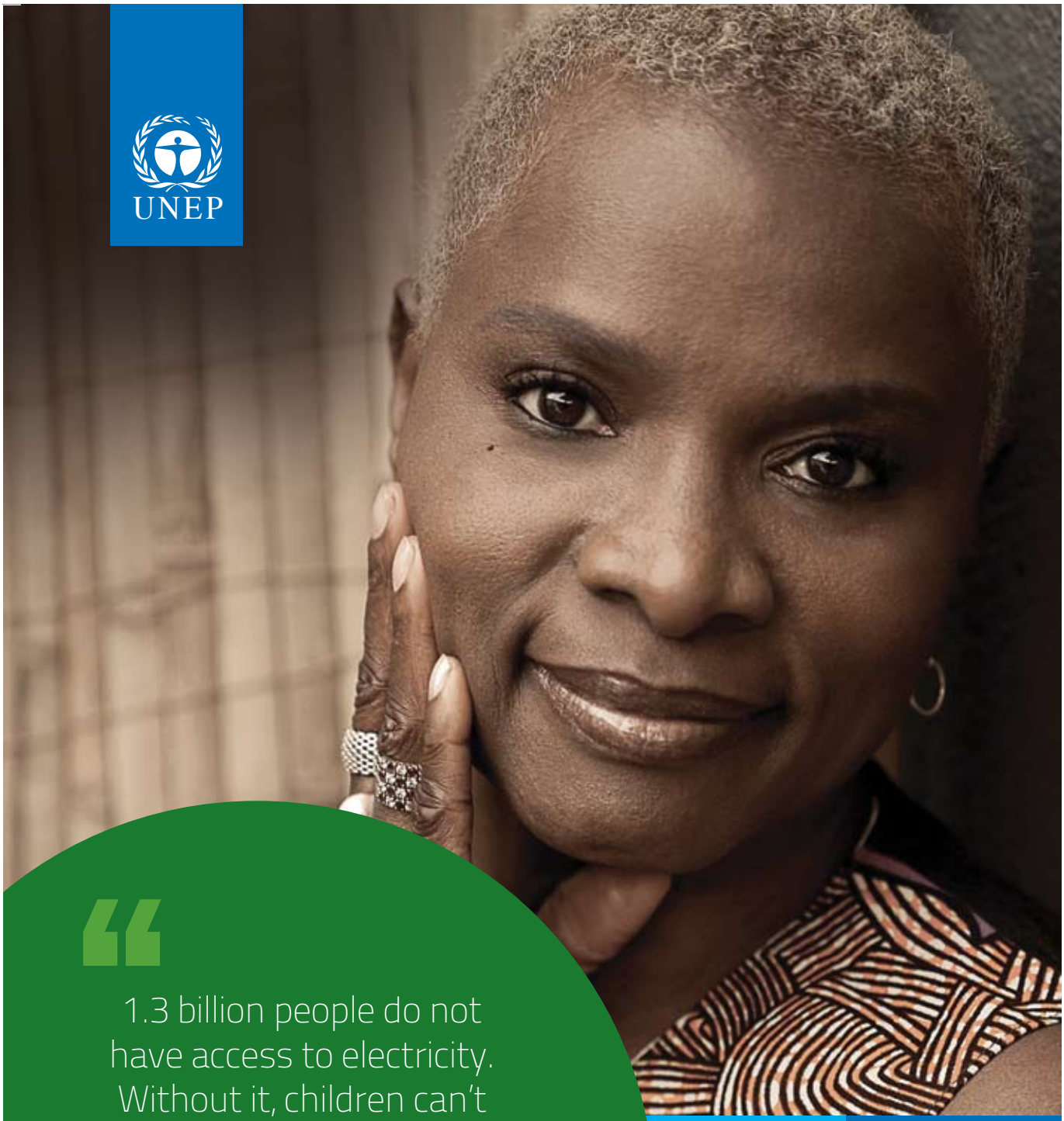
EARTH CONSCIOUS



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1.3 billion people do not have access to electricity. Without it, children can't study after dark and security issues increase. But there are safe, low-impact Green Economy solutions.

Angelique Kidjo

WORLD ENVIRONMENT DAY | 05 JUNE

Green Economy: Does it include you?

www.unep.org/wed

A model sustainable forestry management system in Suriname, cited as a model tool in climate change adaptation methods.
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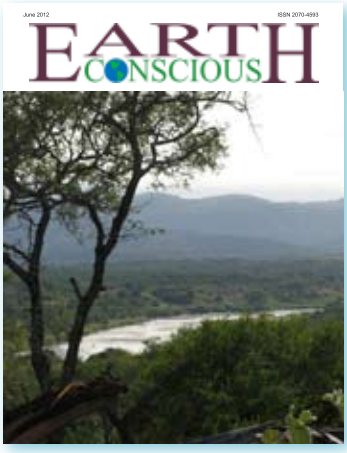

On our Cover

View towards the river at Hluhluwe-Imfolozi game reserve in eastern South Africa.

Photo: Eric Magni

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June 2012

CONTENTS

The Future we want

Over the last few months, we have been hearing and reading about the 'Future we want' campaign in the lead up to the UN Conference on Sustainable Development, known simply as Rio+20.

It's such a beautiful theme that our Youth Forum on Climate Change (www.youthforumonclimatechange.com) website adopted this initiative in collaboration with the Port of Spain-based United Nations Information Centre where we encouraged ordinary folks to share their dreams and aspirations about a future they would like to experience.

In Rio in the coming weeks, leaders, we hope, would have listened to what people around the world have had to say in the 'Future we want' campaign and reconcile that with what they should do to achieve a balanced and a sustainable and green economy for their populations.

Rio + 20 is an unprecedented opportunity to shape the future we all want and we know to achieve that, leaders will have to take some mighty political will to begin making those changes.

The official discussions will focus on two main themes: how to build a green economy to achieve sustainable development and lift people out of poverty; and how to improve international coordination for sustainable development.

In many ways, the future of the world is at stake at Rio+20. With the myriad of economic and sustainability challenges facing countries worldwide, there's now the challenge of climate change to compound it.

And speaking about climate change, we're hearing some good news from Bonn, Germany from the recent negotiator's meeting that progress was made in several areas to ensure that this year's conference in Doha can take essential steps towards meeting the long-term challenge of climate change.

Progress, we are told, was made in the areas of preparing for the amendment of the Kyoto Protocol; on building the institutions and infrastructure that can benefit the poor and most vulnerable in developing countries; and on paving the way for a new global climate agreement.

Indeed, good news to move forward on!

Linda Hutchinson-Jafar

Editor

Least Developed Countries issue bold plan to energize UN climate change talks

The world's poorest countries have issued a bold plan to make the UN climate change talks more likely to reach their goal of having an effective and legally binding agreement ready for governments to adopt by 2015.

The Least Developed Countries (LDCs) group's formal submission to the UN Framework Convention on Climate Change, under which the talks take place, includes the following demands:

- The new legally binding agreement should take the form of a new protocol under the convention that builds on and enhances the commitments under the Kyoto Protocol.
- Parties should agree new rules to allow the adoption of the Protocol by a 75% majority, not by consensus as under current rules.
- A final negotiating text should be ready a full year ahead of the 2015 deadline rather than the usual six months deadline that the UNFCCC imposes.
- Raising the ambition of commitments to mitigate climate change before 2020 must be the top priority.
- The new Protocol should have as a key objective, the full implementation of mitigation, adaptation and finance and capacity building among others.
- Systems for monitoring, reporting and verifying finance and mitigation actions must not be weaker than but should build upon those that already exist in the Kyoto Protocol.

"At last year's conference of parties to the convention in Durban, parties agreed to complete negotiations by 2015, but such deadlines have been broken before," says Pa Ousman Jarju, the chair of the LDC group. "Our countries cannot wait. We are already feeling the effects of climate change, but the time has come for us to be leaders in the international effort to address this global challenge."

"The creation of a new body to negotiate a second protocol under the Convention represents an overdue acknowledgement by all Parties that the Convention and the Kyoto Protocol alone are insufficient to drive action consistent with the ultimate objective of the Convention,"

"Urgent action is needed by all Parties to prevent dangerous interference with the climate system, and in particular to stay below 2°C and keep open the possibility of limiting warming to 1.5°C above preindustrial in the long-term as called for by the most vulnerable countries," says Jarju.

The LDC group also proposes changes to the way the negotiations work to make them faster and fairer.

To ensure that all issues can be dealt with, the group says the number and duration of future negotiation sessions must be agreed in Bonn, along with a timetable to discuss particular issues.

"The LDC group comes to the Bonn climate change talks with a strong set of recommendations," says Pa Ousman Jarju. "In the spirit of international cooperation and with our desire to see the UN climate change convention meet its objective, we urge other parties to join our call for these improvements to the negotiating process and its final goals."

Latin America, Caribbean face massive economic damages from global warming

Region needs to dramatically increase its investment in climate change adaptation and mitigation in the coming decades

Latin America and the Caribbean face annual damages in the order of US$100 billion by 2050 from diminishing agricultural yields, disappearing glaciers, flooding, droughts and other events triggered by a warming planet, according to the findings of a new report to be released at the Rio+20 summit.

On the positive side, the cost of investments in adaptation to address these impacts is much smaller, in the order of one tenth the physical damages, according to the study jointly produced by the Inter-American Development Bank (IDB), the Economic Commission of Latin America and the Caribbean (ECLAC) and the World Wildlife Fund (WWF).

However, the study also notes that forceful reductions in global emissions of greenhouse gases are needed to avert some of the potentially catastrophic longer term consequences of climate change. The report estimates that countries would need to invest an additional US$110 billion per year over the next four decades to decrease per capita carbon emissions to levels consistent with global climate stabilization goals.

"Many climate-related changes are irreversible and will continue to impact the region over the long term," said Walter Vergara, the IDB's Division Chief of Climate Change and Sustainability and the lead researcher of the study. "To prevent further damages, adaptation is necessary but not enough. Bolder actions are needed to bend the emissions curve in the coming decades," he added.

Region especially vulnerable

Latin America and the Caribbean contribute only 11 percent of the emissions that cause global warming. However, countries are especially vulnerable to its effects, given the region's dependence on natural resources, an infrastructure network that is susceptible to climate events, and the presence of bio-climate hotspots such as the Amazon basin, the Caribbean coral biome, coastal wetlands and fragile mountain eco-systems.

Estimated yearly damages in Latin America and the Caribbean caused by the physical impacts associated with the a rise of 2C degrees over pre-industrial levels are of the order of US$100 billion by 2050, or about 2 percent of GDP at current values, according to the report titled "*The Climate and Development Challenge for Latin America and the Caribbean: Options for Climate Resilient Low Carbon Development*."

The study cites climate impacts in areas such as agriculture, exposure to tropical diseases and changing rainfall patterns, among others. For instance, the report cites recent work estimating the loss of net agricultural exports in the region valued at between US$30 billion and US$52 billion in 2050.

Mexico and Brazil have the largest land distribution just above sea level, making those countries vulnerable to rising sea levels. A rise of one meter in the sea level could affect 6.700 kilometers of roads and cause extensive flooding and coastal damage.

A 50 percent loss of the coral cover in the Caribbean from coral bleaching would cost at least US$7 billion to the economies in the region.

The study notes that the adaptation costs are a small fraction of the costs of physical impacts, conservatively estimated at 0.2 percent of GDP for the region, at current values. In addition, adaptation efforts would have significant development benefits, from enhanced water and food security to improved air quality and less vehicle congestion, further reducing their net costs.

"Investments in adaptation are cost effective and have substantial co-benefits" said Luis Miguel Galindo, Chief of the Climate Change Unit of ECLAC, a key contributor to the study. "Also, some of these adaptation measures are very easy to implement and have significant positive impacts."

Though adaptation is important, substantial investments are also required in order to drastically cut the region's projected carbon emissions to levels consistent with global climate stabilization goals.

Under a business-as-usual scenario, Latin America and the Caribbean would contribute 9.3 tons per capita of greenhouse gas emissions by 2050, up from the current 4.7 tons per capita. The report identifies pathways to bend the emission curve to two tons per capita, by promoting zero net emissions from deforestation and other land-use practices by 2030, combined with efforts to eliminate the carbon footprint in the power matrix and transport infrastructure by 2050, at an annual cost of US$110 billion.

"Yes, spending US$110 billion a year for a region that faces major development challenges is not an easy proposition," said Pablo Gutman, the Director of Environmental Economics at the WWF. "However, this would also bring about major benefits such as improved food and energy security; people would have healthier lives in cleaner environments."

"In the long term," added Vergara, "this is the surest way to ensure Latin America and the Caribbean continues to prosper along a sustainable path."

SIDS agree to reduce dependence on fossil fuels

The ***Achieving Sustainable Energy for All in Small Island Developing States Conference*** concluded with the adoption of the "Barbados Declaration" calling for universal access to modern and affordable renewable energy services, while protecting environment, ending poverty and creating new opportunities for economic growth.

The declaration, adopted just weeks before the UN Conference on Sustainable Development 'Rio+20', includes an annex with voluntary commitments of 20 Small Island Developing States (SIDS) to take actions toward providing universal access to energy, switching to renewable energy and reducing dependence on fossil fuels.

The host country announced their plan to increase the share of renewable energy in Barbados to 29 percent of all electricity consumption by 2029.

"By 2029 we expect that total electricity costs would have been cut by US$283.5 million and CO2 emissions would have been reduced by 4.5 million tons," said Prime Minister Freundel Stuart of Barbados. "We also envisage an overall 22 percent reduction in projected electricity consumption based on the use of energy efficiency measures."

The commitments of other small developing island states include:

- Maldives committed to achieve carbon neutrality in the energy sector by year 2020
- Marshall Island aim to electrify all urban households and 95 percent of rural outer atoll households by 2015
- Mauritius committed to increasing the share of renewable energy - including solar power, wind energy, hydroelectric power, bagasse and landfill gas - to 35 percent or more by 2025
- Seychelles committed to produce 15 percent of energy supply from renewable energy by 2030

The declaration recognizes the importance of the UN Secretary General's Sustainable Energy for All initiative and that today's energy issues cannot be resolved unilaterally but rather through open dialogue and cooperation.

The declaration states that the delegates "Remain deeply concerned that most SIDS are highly dependent on imported oil and other fossil fuels for transport and electricity generation and this is a major source of economic vulnerability for SIDS. This leaves SIDS highly exposed to oil-price volatility."

The Barbados Declaration emphasizes that there are commercially feasible options in many small island states for providing energy such as wind, solar, geothermal, and oceans energy.

"However, these technologies must be made accessible, affordable and adaptable to the needs and particular circumstances of SIDS communities," states the declaration.

"In this regard, we strongly urge the international community, particularly developed countries, to ensure the provision of financial resources, technology transfer and capacity building to SIDS,"

The two-day conference in May brought together more than 100 heads of state, ministers, leading development experts, civil society activists, business executives and UN officials from 39 countries from the Caribbean, the Pacific, Indian Ocean, and Africa, that belong to the SIDS group.

"Our global presence, expertise in capacity building, and extensive development finance experience allow us to help small island development states in their transformation toward sustainable energy for all, by supporting them to develop capacities to attract investments," said Michelle Gyles-McDonnough, UN Resident Coordinator and UNDP Resident Representative for Barbados and the Organisation of Eastern Caribbean States.

The Declaration reiterates "that the outcomes of the Rio+20 Conference must be ambitious and convey the urgency of fully embracing the sustainable development agenda including the fulfillment of all commitments related to SIDS."

If small island states switch to renewable energy, they can free up to 30 percent of gross domestic product for investments into jobs, health care, education, adaptation to rising sea levels or other programs.

Small island developing states are among the most petroleum dependent countries in the world. Oil typically accounts for 95 percent of commercial energy use in the Pacific islands.

As small island states have limited negotiating power, the refined petroleum products, which need to travel in small volumes through long transport supply chains, become very expensive when they finally arrive. Oil imports take up to 29 percent of the gross domestic product in the Cook Islands; 15 percent in Tonga; nine percent in Samoa.

Increasing energy efficiency and developing hydro, solar, wind, biomass and coconut oil renewable options can transform small island states into energy independent countries. The governments could then redirect the savings into green jobs, stronger social safety nets for people whose livelihoods would be affected by the transition from fossil fuels to clean energy, adaptation to climate change and other policies.

Tonga and Tokelau plan to be fully energy independent this year, Tuvalu and Cook Islands by 2020. Other island states are following the trend.

Here are some of the policies that help them transform their energy sectors:

- The Cook Islands removed import duty and tax from solar water heaters which had become a standard on almost all new housing and commercial buildings.
- The National Development Bank of Palau has pioneered energy loan packages.
- Samoa has established a Clean Energy Fund to finance renewable energy systems.
- The Pacific island states established "The Sustainable Energy Industries Association of the Pacific Islands" in 2010 which provides technical guidelines on how to switch to sustainable energy options.

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Caribbean Wins the Seaweed Olympics

A new study finds that Caribbean seaweeds are far better competitors than their equivalents in the Indian and Pacific Oceans. But this triumph is bad news for Caribbean coral reefs.

The picture-postcard beauty of Caribbean reefs owes much to the living corals that build reefs and contribute startling white sand to beaches. Coral reefs might seem to be tranquil environment but in fact a battle is constantly waged between corals and seaweeds that fight over space.

Scientists have known for some time that seaweeds can gain the upper hand if corals are damaged by hurricanes or excessively warm sea temperatures that cause coral bleaching. But a new study, published online in early June, reveals that Caribbean seaweeds are the equivalent of Olympian athletes compared those found on coral reefs elsewhere.

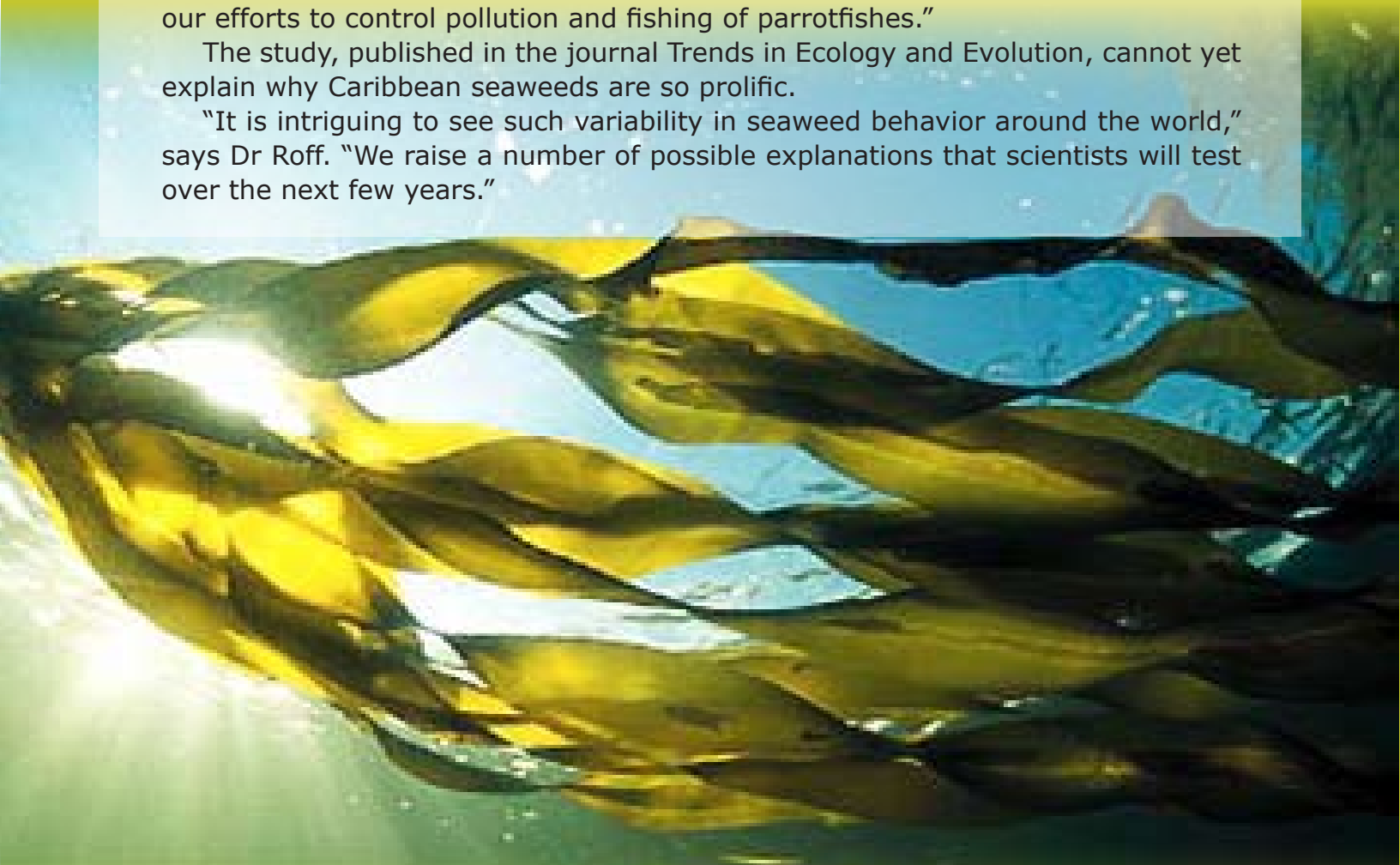
"Seaweeds bloom four times faster in the Caribbean than the Pacific Ocean," exclaims study author, Dr George Roff, of the University of Queensland. "This helps explain why corals in the Caribbean seem to be such weak competitors against seaweeds."

The study raises concerns about the future of Caribbean coral reefs. If seaweeds bloom faster, corals are less likely to recover once they have been damaged.

Co-author, Professor Peter Mumby, adds, "Seaweeds are able to bloom when we loosen their controls, either by polluting the sea with fertilizers or catching too many parrotfish, who treat seaweed as a delicacy. We now know that seaweeds will bloom if we give them the slightest chance. This means we should redouble our efforts to control pollution and fishing of parrotfishes."

The study, published in the journal Trends in Ecology and Evolution, cannot yet explain why Caribbean seaweeds are so prolific.

"It is intriguing to see such variability in seaweed behavior around the world," says Dr Roff. "We raise a number of possible explanations that scientists will test over the next few years."



Young Voices

Earth Conscious Magazine, in collaboration with the United Nations Information Centre for the Caribbean Area (UNIC), invited people to share their dreams and aspirations for a sustainable future.

What does your future look like in your dreams? What kind of world do you want to live in? What future would you want for your children? What kind of community would you like to live in ten, twenty or thirty years from now? What is your dream?

This is Jordan's submission which appeared on **www.youthforumonclimatechange.com**

The Future I want

by Jordan Brandon Jafar, 12 years

I would like a future where there is no crime. I look at the birds with envy because I want to be free like them. I want to be free to go into the yard anytime of the day without my parents watching over me all the time. I would like to go outside at nights and look at the stars and the moon and feel the cool, fresh breeze on my body. But I can't right now because there's too much crime and lawlessness in my country. I want a future that is peaceful; that future can be tomorrow.

I would like a future where people respect our environment; that they take time to collect their garbage and put it in a bin and not throw it out their car window. I want the rivers to be clean and not see fridges and stoves dumped in them, causing blockages and creating flood when the rains fall.

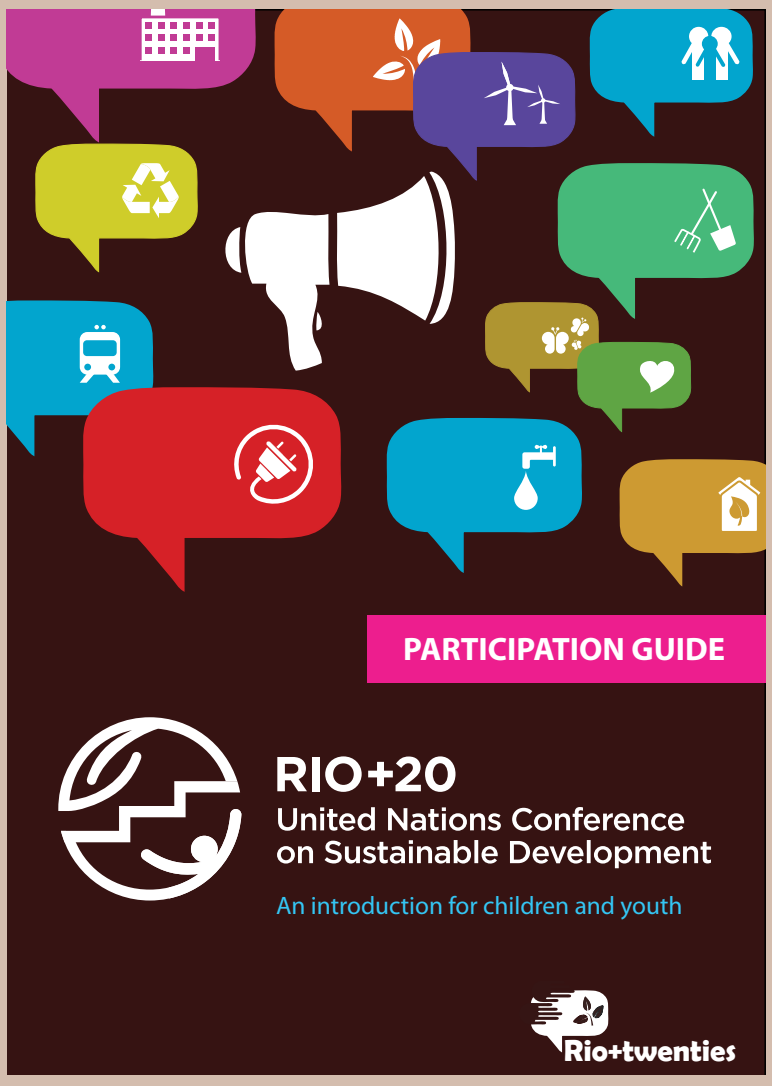
I want a future where people respect me for who I am; that they see beyond my skin colour and the texture of my hair. I think we all have a special place and a role to play in this world and we can all live together in peace and harmony. I wish this can be recognised more.

Most of all, I want a world in which I can live, play and work without feeling threatened and that those in authority take the best decisions and implement policies in the interest of their populations to ensure that their lives are improved.

Rio+20 Participation Guide

Efficiently getting involved and influencing political processes at international level can be a daunting task. The Rio+twenties-team has developed a participation guide to make the whole process understandable, giving you the tools to effectively get involved. The guide offers specific information for youth, identifies ways to make a real difference and shares a lot of best practices, tips and tricks and existing examples on youth activism.

Click here to access the publication online



For more information on youth participation in Rio+20 visit:
http://rioplustwenties.org/

CELOS forest management system a tool for climate change adaptation

By Marvin Hokstam

Photos: devsur.com

A sustainable forestry management system that was highlighted recently in the forests of Suriname can be a good tool in climate change adaptation methods, researchers have said.

Rudi van Kanten, Programme Director of Suriname's branch of the intermediary forest organization Tropenbos International explained that because the CELOS Management System calls for long term forestry planning and maintenance, it should lead to an increase of the net productive capacity of forests. "Sustainable forestry is the Plus in REDD+," Van Kanten said during an interview.

He was leading a delegation of forestry researchers, students, policy makers and village chiefs through Mapane, a wooded area in north-east Suriname where research initiated 45 years ago by the Center for Agricultural Research in Suriname CELOS, resulted in the "Sustainable Management of Tropical Rainforests: The CELOS Management System".

While rain poured in buckets through the dense forest canopy, the CELOS team showed their guests the differences between parcels of woodland that were left untouched and parcels where the forest had been managed; commercially valuable trees were given free reign and trees of lesser value had been removed.

"By removing the trees of lesser value that could hinder the growth of those of higher value, the latter is given the opportunity to grow unrestrained," Kenneth Tjon of CELOS explained. Trees to be removed were not rigorously cut down, but rather exterminated slowly.

"When you cut down a tree it usually takes other trees with it; a tree of lesser value can take a valuable tree down with it. We poisoned the trees and rather let them cave in on their own (nowadays there are also techniques to eliminate trees by girdling their stem mechanically).

"That's where the planning of this system comes into play; this system calls for careful registration of all valuable trees; when want to cut one down, you have to start planning

"Just as your hair grows faster when you cut it regularly, it has been proven that forests grow faster when you log trees in a sustainable manner; that's because you're creating more organic material,"

that years in advance; the time that it takes to kill the trees around it and the time that it takes for the valuable tree to reach maturity," Tjon explained.

Tropenbos Suriname Program Director Van Kanten pointed out that the system of exterminating unwanted trees should result in an increase of biomass of commercial trees in logging areas where the system is used. "Just as your hair grows faster when you cut it regularly, it has been proven that forests grow faster when you log trees in a sustainable manner; that's because you're creating more organic material," he said. According to him this could play well in REDD+ context.

Reducing Emissions from Deforestation and Forest Degradation (REDD) is an effort to create a financial compensation value for the carbon stored in forests, offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development.

"REDD+" goes beyond deforestation and forest degradation, and includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks. It is predicted that financial flows for greenhouse gas emission reductions from REDD+ could reach up to US$30 billion a year.

"If executed properly, sustainable forestry puts the plus in REDD+. This management system is based on forest planning, registration and maintenance, and that results in an increase of the net production capacity," Van Kanten said.

He referred to a 258-page book as the "Bible" for anyone interested in the contribution of the CELOS Management System to sustainable forestry. "This is an important document that does credence to the CELOS Management System.

I always find it pleasing when I visit countries in Latin America that have large forestry industries; when they talk about Suriname, they always mention three things: Our gold medal winning swimmer Anthony Nesty, our football players and the CELOS Management System also referred to as the Suriname Management System," he joked.

The 258-page book is written in English; its sustainable forestry management methods are transferrable to comparable areas in other parts of the world.

Bonn UN Climate Change meeting delivers progress on key issues

Meeting in Bonn, Germany for the first time after the UN Climate Change Conference in Durban, governments made progress in ensuring that this year's conference in Doha, at the end of 2012, can take the next essential steps towards meeting the long-term challenge of climate change.

Progress was made notably in the areas of preparing for the amendment of the Kyoto Protocol; on building the institutions and infrastructure that can benefit the poor and most vulnerable in developing countries; and on paving the way for a new global climate agreement.

"Work at this session has been productive. Countries can now press on to ensure elements are in place to adopt the Doha amendment to the Kyoto Protocol. I am pleased to say that the Bonn meeting produced more clarity on the Protocols' technical and legal details and options to enable a smooth transition between the two commitment periods of the protocol," United Nations Framework Convention on Climate Change (UNFCCC) Executive Secretary Christiana Figueres said.

Decisions scheduled to be taken in Doha include whether the second commitment period will be for 5 or 8 years and on the precise emission reduction commitments of industrialised countries that have obligations under the Protocol.

In terms of providing support to developing countries to adapt to climate change and to build their own sustainable energy futures, the Bonn meeting resulted in a raft of agreements relating to technology, finance and capacity-building which are also set to be adopted in Doha.

Meanwhile, the new ADP negotiation (the Ad Hoc Working Group on the Durban Platform for Enhanced Action) was launched and its agenda agreed. The ADP is tasked to adopt a new global climate agreement by 2015, to take effect from 2020, and also to find ways to raise global ambition to act on climate change before 2020.

"The agenda guarantees that attention is given both to the 2015 agreement, as well as to efforts to raise ambition to curb greenhouse gases up to 2020. This is a very important component of the Durban Platform and a response to what science is telling us on a repeated basis, namely that current mitigation efforts are not sufficient, "said Ms. Figueres.

The UN's top climate change official noted that the International Energy Agency (IEA) warned that the door to avoiding a maximum 2 degrees Celsius global average temperature rise is about to close. The IEA noted that greenhouse gas emissions have reached a record high and would need to

Ms. Christina Figueres

peak no later than 2017 for the world to have half a chance of staying below the 2 degrees Celsius rise.

Ms. Figueres called on governments to continue intensive, informal work on detailed substantive issues before the Doha meeting.

"Ministers can also take every opportunity with their governments and each other to resolve the outstanding high-level political issues that will deliver the next, successful step, in Doha," she said.

Key areas where progress was made on implementation:

Climate Technology Centre

Governments confirmed the ranking of three shortlisted hosts for the Climate Technology Center (CTC), with a UNEP-led consortium leading. The Climate Technology Centre, along with its associated Network, is the implementing arm of the UNFCCC's Technology Mechanism established by the Cancun Agreements in 2010. This means that the UN Climate Change Secretariat can start work immediately to help establish the CTC.

Green Climate Fund

Progress was also made on the Green Climate Fund, envisioned as a major global channel for long-term financial support to help developing countries in the urgent task of building their own sustainable and climate-resilient futures. During the Bonn meeting, most nominations to the Board of the Green Climate Fund were received and those outstanding are expected soon. Governments say they want a first Board meeting to go ahead at end June/beginning July, which would allow for the Fund to become operational in 2013.

Long-Term Finance

Regarding long-term Finance, there was strong endorsement of confidence in the Co-Chairs in Bonn and support to go ahead with a work programme that will deliver a clear report to governments meeting in Doha on the sources of finance that need to ramp up to $100 billion by 2020.

Adaptation

In the field of adaptation, a draft decision text for Doha was agreed on ways to implement National Adaptation Plans for least developed countries, including linking funding and other support. In addition, governments submitted nominations for the members of the Adaptation Committee. This paves the way for the first meeting of this important committee, which is tasked with better coordinating international adaptation efforts. In the area of loss and damage, governments agreed to recognize the impact of slow onset events, such as sea level rise and ocean acidification, and acknowledged the importance of local communities.

Registry

The UN Climate Change Secretariat presented the prototype of a registry that matches information on developing country actions to curb emissions with industrialized country support. The prototype was well-received, and the secretariat will now finalize a working prototype ready for Doha at the end of the year.

COUNTRIES RENEW CATASTROPHE INSURANCE POLICIES FOR 2012-2013

As the 2012 Atlantic Hurricane Season begins, all sixteen member governments of the Caribbean Catastrophe Risk Insurance Facility (CCRIF) have committed to renew their hurricane and earthquake insurance for the 2012-2013 policy year.

Since CCRIF's inception in 2007, these countries have incorporated catastrophe insurance into their national disaster risk management programmes by purchasing CCRIF's parametric hurricane and earthquake coverage.

The US National Oceanic and Atmospheric Administration (NOAA) forecasts that the 2012 Atlantic Hurricane season will have slightly reduced activity compared with the 1981-2010 average.

NOAA's Climate Prediction Center estimates that 2012 will have nine to fifteen named storms, including four to eight hurricanes, one to three of which will become major hurricanes (with peak winds of 111 mph or higher, ranking Category 3, 4 or 5).

Caribbean countries have long recognised the need to prepare for the annual hurricane season. Notwithstanding the economic downturn facing many Caribbean countries, there is a realisation of the importance of allocating resources for disaster risk reduction and risk transfer initiatives within a comprehensive disaster risk management framework.

For the 2012-2013 policy year, which began on June 1, CCRIF provided its member countries with a premium rebate equal to 25% of the premium paid in the previous policy year.

This came on the heels of a quiet 2011-2012 policy year in which none of the policies held by member countries were triggered.

Mr. Isaac Anthony, Permanent Secretary in Saint Lucia's Ministry of Finance, Economic Affairs and National Development and CCRIF Board Member, says that "this initiative provides a tangible benefit to CCRIF's members if payouts during the prior year result in a significant underwriting profit, while fully maintaining CCRIF's sound financial position and its unparalleled ability to pay the claims of its members."

CCRIF has encouraged member governments to use these savings either to purchase additional coverage or to implement programmes for improving hazard risk resilience as well as climate change adaptation towards reducing the impact of natural hazards.

Speaking at a recent forum on Globalisation, Climate Change and Rural Resilience at the University of the West Indies, World Bank Sector Manager, Sustainable Development for China and Mongolia, East Asia and Pacific, Ede Ijjasz-Vasquez stressed that "countries that are ready for the disasters and challenges of today would be in a much better position to handle climate change, in whatever direction it takes us."

This year CCRIF will add the excess rainfall product to its portfolio of offerings to Caribbean governments. This product covers extreme rainfall events, which are not included in current hurricane policies. CCRIF's hurricane policies are based on wind and storm surge.

Since 2007, the Facility has made eight payouts – on three earthquake policies and five hurricane policies – totalling US$32,179,470 to seven member governments.

ECLAC REPORT EXAMINES VULNERABILITY TO CLIMATE CHANGE OF LAC COASTS

The UN Economic Commission for Latin America and the Caribbean (ECLAC) has published a report that examines the vulnerability and exposure to climate change of the 72,182 km coastline of Latin America and the Caribbean (LAC).

The report looks at individual five km long, 20 km wide strips of LAC coastline, analyzing the physical, socioeconomic and ecological characteristics of coastal zones according to variables such as land type and use, crop areas or ecosystem zones, population density, urban areas, infrastructure (roads, rail lines, ports, etc.), and the type of coast.

This analysis of geospatial data from various sources allows for the analysis of coastal vulnerability at the country level according to the variables critical to each country, according to IISD Reporting Services.

The study points out that for certain small island states, such as Aruba, the Bahamas, Montserrat, Saint Kitts and Nevis, the Turks and Caicos, and the Virgin Islands, over 95% of the territory is within 20 km of the coast.

It notes that in the case of the Turks and Caicos, 100% of the territory is ten meters or less above sea level, while for the Bahamas and Cayman Islands, the figure is 70%, making these islands particularly vulnerable to climate-related impacts such as extreme weather events, sea level rise and coastal erosion.

Argentina, Brazil, Cuba and Mexico also have large coastal areas under the ten meter elevation mark. Brazil has the most inhabitants living in such zones, but Barbados, Dominica, Grenada and the US Virgin Islands having the highest population density in vulnerable zones.

Regarding infrastructure, the report finds that Argentina, the Bahamas, Brazil, Cuba and Mexico are the most vulnerable. In terms of crops grown along the coast, Brazil and Mexico have the greatest total areas vulnerable to possible climatic impacts, but the Bahamas, Cayman Islands, Guatemala and Suriname have the greatest vulnerability in terms of percentages of their national crop output.

As for ecosystems, the report highlights that the most vulnerable in terms of total economic valuation are located in Brazil and Mexico.

This report is the second in a series of four to be released in 2012 as part of an ECLAC project on climate change and LAC coastal regions financed by the Government of Spain. The first analyzed and provided an atlas of the current physical conditions and changes detected in key coastal variables. The third will detail probable climate change impacts, and the fourth will evaluate the climate change risks faced by LAC coasts.

OAS AND GOVERNMENT OF MEXICO TO IMPLEMENT ENERGY EFFICIENCY PROJECT

Organization of American States

The Organization of American States (OAS) and the Government of Mexico will implement "Energy Efficiency: Technical Assistance and Collaboration with the Government of Mexico."

This effort is framed under the Energy and Climate Partnership of the Americas (ECPA). The project will establish a regional working group to support the actions of the governments of the Western Hemisphere in the advancement of energy efficiency and conservation through policy, regulation and technology.

The Government of Mexico and the OAS have laid out a series of activities intended to deliver the expertise of the region's champions in energy efficiency so that they may share experiences and best practices with governments seeking to improve their own energy efficiency.

Over the course of three years, the project will deliver assistance through workshops, exchange missions and seminars that will strengthen the capacity of governments to follow the path toward greater energy efficiency and conservation.

Several policy tools are known for being effective at enhancing energy efficiency. Some of these include equipment certification, standards and labels, the Energy Service Company (ESCO) business model or public awareness campaigns.

The Government of the United States, through the Department of State, will provide the financial support required for these activities.

CARICOM TRAINS MORE ENVIRONMENTAL NEGOTIATORS IN MEA NEGOTIATIONS

WORKSHOP LAUDED A PHENOMENAL SUCCESS

A five-day training intervention on negotiation skills for junior environmental negotiators in St Kitts and Nevis in early June ended with the consensus that Negotiators play a vital role in the process of implementing Multilateral Environmental Agreements (MEAs).

The workshop, which was organized by the Caribbean Community (CARICOM) Secretariat in collaboration with the Foundation for International Environmental Law and Development (FIELD) forms part of the Community's thrust to build the capacity of Member States to comply with the several MEAs related to the Caribbean. The project is funded by the European Union, supported by the United Nations Environment Programme (UNEP) and implemented by the CARICOM Secretariat.

More than 35 participants received certificates indicating their successful completion of a rather comprehensive intervention in which they acquired skills in preparing for negotiations; engaging in negotiations; interpreting negotiation texts and understanding MEAs.

In underscoring the importance of negotiators in MEAs, Project Coordinator Dr. Therese Yarde stated that they were the people who represented the interests of the Community and the region.

Mr. Randolph Edmead, Director of the Department of Physical Planning and Environment in the Ministry of Health and Environment, St. Kitts and Nevis pointed out that many of the MEAs that were established to govern global environmental management had their genesis at the historic Rio Earth Summit 20 years ago.

Brazil prepares to hold largest UN conference

More than 50,000 people expected to participate in events for Rio+20

RIO+20
United Nations Conference on Sustainable Development

The United Nations Conference on Sustainable Development to be held in Rio de Janeiro from 20 to 22 June is expected to be the largest UN conference ever, with more than 50,000 people taking part in events leading up to and including the Conference. More are expected to participate in the many Rio+20-related events taking place throughout the Brazilian capital.

With the world facing many pressing challenges, including the global economic crisis, the growing gap between rich and poor, climate change, and increased loss of biodiversity and natural ecosystems, Rio+20 is a major opportunity for the international community to guide policies and actions that promote sustainable development. The Conference aims to help address some of the fundamental problems countries have faced in putting sustainable policies into practice, including the failure to consider economic growth, social well-being and environmental protection in a comprehensive way.

"There is a real spirit of compromise and determination among delegations to produce a document that can be endorsed by Heads of State and Government," said Sha Zukang, Rio+20 Secretary-General. "Rio+20 will provide the inspiration and the guidance to accelerate progress on the sustainability agenda."

Civil society has played an unprecedented role in negotiations for Rio+20, with different civil society groups commenting during negotiating rounds held over the last several months, as well as on the original draft of the text for the Rio+20 outcome document.

About 19,000 representatives of civil society Major Groups -- representing business, farmers, indigenous peoples, local authorities, non-governmental organizations, science, trade unions, women and youth -- will be attending Rio+20. It is also the first major UN conference where there are more civil society representatives attending from developing countries than from the developed world.

Rio+20 Outcomes

Rio+20 will produce three types of outcomes: a negotiated document that will promote international cooperation and action on sustainable development; the recommendations of civil society during four Dialogue Days; and the announcement or launch of many major initiatives and commitments that will advance results on the ground.

At the heart of the political document is a call for a renewed political commitment to sustainable development, and proposals for how the green economy could help achieve sustainable development and poverty eradication, as well as the institutions needed to promote and support sustainable development at the global level.

In the negotiations, there has been widespread support for a process to determine a set of sustainable development goals. The goals may be similar in fashion to the Millennium Development Goals -- agreed to in 2000 with targets set for 2015 related to eradicating extreme poverty and hunger and improving global health -- but possibly with a broader reach for all countries.

Lighting up lives: African women train as "barefoot" solar engineers

Photos by Gaganjit Singh

An illiterate grandmother from a small village in Malawi, Stella found it hard to picture what lay ahead when she arrived at the Barefoot College of India.

Six months later she emerged as one of 25 trained African solar technicians, ready to electrify her home village for the first time.

"I never imagined that technical knowledge like this would be open to women who were illiterates, like us," she reflected at the end of her training in Tilonia, in the state of Rajasthan. "But coming to Tilonia has given us this confidence that we can learn about new things and make our lives better."

By collaborating with the Barefoot College and its NGO partners, UN Women is supporting a programme to empower marginalized women across the world, and help them start to drive their local green economies.

The programme, running since 2004, teaches engineering skills to illiterate older women from rural communities – a particularly vulnerable group worldwide – before equipping them with solar lamp kits to assemble and install in their own and nearby villages, according to UN Women.

During this training session, which ran from September 2011 to the following March, women travelled from across Africa, from countries like Uganda, Liberia and South Sudan, to take part. Each were selected or nominated by their local community and supported by a variety of local and international organisations, and in some cases, their governments.

The purpose of the training is to empower the women, many of whom have laboured in agricultural work for most of their lives, to gain a skill more age appropriate, while affording them a new position of respect in their communities.

...students have shown that they can transcend tremendous barriers, and emerge as self sustaining solar engineers, and change-makers.

Bawor Mamma, for example, has spent years recovering from the lingering effects of civil war and economic dislocation in Liberia. At 53 she prefers assembling solar lanterns to the physical strain of farming. "I am not just a farmer like everyone else," she says with a clear sense of pride. "I am a solar engineer now and I want to electrify my village and other neighbouring villages."

"What Barefoot College has effectively demonstrated is how the combination of traditional knowledge (barefoot) and demystified modern skills can bring lasting impact and fundamental change when the tools are in the control and ownership of the rural poor," confirms Dr Bunker Roy, the Director of the Barefoot College.

The women are also supporting a greener form of energy usage. Many live in villages without any electricity at all, where kerosene usage is high. Yet kerosene is not a sustainable resource, nor is it cheap or healthy. Barefoot College estimates that the initiative now saves around 160,000 litres of kerosene a month across South America, Africa and Asia.

To ensure the sustainability of the project, the new technicians are also taught how to train other villagers in the maintenance of these lamps, and encouraged to set up electronics repairs shops, which will generate a regular income.

The programme can be a formidable challenge for the women. "In the beginning, many women face problems, since it is the first time they have left their children and village," says Leela Devi, a teacher in the solar engineering department. "But we have to be like their sisters, and constantly remind them of the advantages of being here and learning solar engineering." Their trainers, who mostly speak Hindi, must cut across linguistic and cultural barriers using gestures and signs.

Yet the desire to light up their communities and empower the women in them, has proven a unifying bond. With just six months training in the college, students have shown that they can transcend tremendous barriers, and emerge as self sustaining solar engineers, and change-makers.

Imfolozi

By Jocelyn Newmarch,
Journalist at large, South Africa

Photos by Eric Magni

Zebras live in herds or family group and will often be seen grazing peacefully with wildebeest. The stripes are thought to confuse predators, making them difficult to catch.

There is something very special about being in the bush. Those who are not used to visiting a game reserve are often surprised by how noisy it is, with birds singing in almost every tree, baboons coughing, bullfrogs croaking, and, every now and then, the roar of a lion or elephant's trumpet.

And yet I can think of nowhere I find more peaceful. There is a special quality to the air; a certain stillness that comes from being away from city life, immersed in the timeless rhythms of nature. As a South African, I am privileged enough to be able to spend a few days watching animals and birds in a game reserve whenever I feel like it – although, of course, one sometimes has to earn money as well.

Our Easter holidays were spent in the 960 sq km Hluhluwe-Imfolozi game reserve, in the eastern part of South Africa known as KwaZulu-Natal. (Originally, they were two reserves which have recently been combined). Wikipedia tells me it's the oldest proclaimed park in Africa, and was established in 1895. Despite this history, it was not always a centre of nature conservation. The tsetse fly is common in the area and carries the nagana disease, which causes fever, weakness and lethargy in cattle. Farmers blamed the disease on game animals, and so the reserve was used to slaughter antelope in efforts to eradicate the game. Over 100 000 animals were killed, until the introduction of DDT in 1945 solved the problem.

When there's an elephant in the road, you stop for the elephant. No question!

Fortunately, the area's white rhino were spared. Hluhluwe-Imfolozi now has the largest population of white rhino in the world. Rhino poaching has increased dramatically in recent years, as rhino horn is a popular ingredient in Far Eastern traditional medicine, but Hluhluwe-Imfolozi has so far been spared the worst of the scourge.

I'm sure you will have seen movies featuring safari tent accommodation, perhaps on the plains of Kenya. There is something very romantic about canvas walls rippling in the breeze – perhaps because it also feels far more vulnerable to its occupants, who can hear every roar in the night. Mpila Resort, in the iMfolozi section of the park,

The infamous vervet monkeys.
They are usually seen in large groups.

boasts comfortable safari tents on stilts, as well as a self-catering kitchen that is a veritable fortress. Vervet monkeys look terribly gorgeous, with their silky fur and sad, old men's faces , but they're also devilishly persistent burglars. Our kitchen was fortified with a screen door, a security gate, and locks on all cupboards as well as the fridge.

Baboons are highly social animals which are usually found in troops. They will often groom each other when they stop for a rest. The males in particular can be aggressive and, if not treated with respect, are dangerous.

Mpila is an unfenced camp, and so several animal species have lost their fear of humans sufficiently to make the campsite a regular grazing ground. Warthog and zebra grazed next to our tent, and one night we even had bushpig rooting around in the bushes. While warthogs are easily spotted in most reserves, bushpig are shy animals which tend to be nocturnal. They are as large as a farm pig, but with a significantly meaner disposition. (Sadly, I don't have a photo to show you).

I particularly loved the nyala – surely the most beautiful antelope to be created. They are small and graceful, perhaps the size of a Great Dane, with tear markings on their faces and striped bodies. They grazed quite unafraid on Mpila's trees, hardly bothering to look up as I walked past.

Such pretty birds!
Glossy starlings are very common throughout South Africa.

Most predators think of impala as breakfast. They are probably the most common antelope throughout South Africa and, sadly, with a mortality rate to match. We saw a male on another occasion with an open wound on his hindquarters. Someone had obviously taken a bite out of him in the not-too-distant past. This is a female with her gorgeous russet coat and dewy eyes.

By Garfield King

I attended an NGO workshop recently and a young man, involved in much-needed projects for youth in Trinidad and Tobago, shocked me with his views on development and the environment. "All these youth organisations focusing on Climate Change and the environment are just wasting time. They all have a political agenda," he declared. I almost spilled soup on my new shirt. He took my quizzing stare and raised eyebrows as permission to continue.

"There's nothing bad about industrialization and progress. For example, before the motor car people used horses. Can you imagine the mess and stench that would have come from all that horse manure in the road?" He then turned his attention to environmentalists. "Those environment people have it all wrong. We need to build houses and factories to provide jobs. When we have full employment then we can start thinking about saving trees and creating some green spaces." He closed his submission by sharing his motto… "People before trees."

I told him that while I'm not suggesting we return to horse drawn carriages, in those days some of the horse manure was used in agriculture. Today, how can we utilise the fumes from motor vehicle exhausts? I questioned that if we use the majority of our land only to build houses and centres of industry and commerce, where do we plant the food to eat so that we stay alive to construct the buildings? And how do we feed the people so they can be physically able to do the jobs we create for them?

The young man told me we can simply import the food we need. I asked him if he thought those countries would always be in a position to supply us.

Also, if they are following a development model similar to our own, they will eventually have to restrict their food exports to feed themselves. Can we develop a society without having some control over the food we produce? Is that sustainable?

When it comes to matters regarding development and our relationship with the environment, the debate is often heated. Improving the quality of life in a manner that can be sustained is a challenging goal. Sustainability itself is a challenge to define. It encompasses dozens of issues including the economy; the social dynamic; the environment; planning; law; lifestyles; as well as ethical considerations.

Challenge or not, we want a better life now… today. We have come to expect instant relief and immediate gratification. Policymakers often play to these expectations as they promise to deliver (within 5 years) the standard of living we demand. Growth and development are desirable goals and few would argue against them, the difficulty comes in deciding on the best route to those objectives.

One of the popular models aiming to satisfy our need to expand and improve, without destroying the very resources that growth is built upon, is Sustainable Development. The International Institute for Sustainable Development (IISD) uses a definition from the Brundtland Report:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

http://www.iisd.org/sd/

The IISD believes "All definitions of sustainable development require that we see the world as a system—a system that connects space; and a system that connects time. When you think of the world as a system over space, you grow to understand that air pollution from North America affects air quality in Asia, and that pesticides sprayed in Argentina could harm fish stocks off the coast of Australia."

While the young man at that workshop had the best interests of his community at heart, he believes only the infrastructural and economic components of development are worthy of consideration. He gave little thought to how those two factors balanced with the many other elements that constitute a society. Society itself is a system and for it to thrive, thought has to be given to practices that can be put in place and continue to run for the long haul – sustainability.

"A sustainable society is a society in which each human being has the opportunity to develop himself/herself in freedom, within a well-balanced society and in harmony with his/her surroundings."

Society itself is a system and for it to thrive, thought has to be given to practices that can be put in place and continue to run for the long haul – sustainability.

Garfield King is an independent radio producer, presenter and writer with almost 30 years broadcast experience.As a trainer, he conducts workshops on public speaking, presentation skills and communication dynamics. inkings@tstt.net.tt

PACIFIC ISLANDS CALL FOR INTERNATIONAL SUPPORT TO COPE WITH CLIMATE CHANGE

Tom Murdoch, Minister of Finance and Economic Development, Kiribati

Leaders of Pacific Island developing nations attending a regional United Nations meeting in Bangkok appealed to the world to help them deal with the impact of climate change and protect their marine environment to ensure their well-being and very survival.

Addressing a special forum on Pacific Island developing countries on the first day of the annual session of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), Tom Murdoch, Minister of Finance and Economic Development, Kiribati said climate change and ocean acidification were the greatest threats to Pacific Island developing nations.

"The Ocean is fundamental to our cultural identity, livelihoods and growth prospects. Our green economy is very 'blue'. It has been said that we are not a small island developing country but rather a large ocean developing economy. We are trying to do our part in the sustainable management of our ocean and marine environment."

As part of this effort, Kiribati has established the largest marine protected area in the Pacific – the Phoenix Islands Protected Area comprising 408,250 square kilometres, or 11%, of Kiribati's Exclusive Economic Zone.

On the energy front, Tuvalu has made significant commitments to renewable energy aiming for 100% renewable energy by 2020.

"We are totally dependent on fossil fuels for our energy needs. The recent rises in the price of oil has presented us with enormous challenges," said Mr. Lotoala Metia, Minister of Finance, Tuvalu. "Our government has committed our country to ambitious energy targets which we hope will reduce our dependence on fossil fuels."

Highlighting the ecologically "fragile and vulnerable" status of Pacific small island developing States (SIDS), Permanent Representative of the Government of Fiji to ESCAP, Ratu Meli Bainimarama, said "our small size, limited resources, geographic dispersion and isolation from markets, places us at a disadvantage economically and prevents economies of scale."

Given these "unique vulnerabilities", the Finance Minister of Kiribati said the international community must provide the sub-region with new and additional support to deal with climate change.

LINKIN PARK AND MUSIC FOR RELIEF TO BRING SOLAR POWER TO UGANDA HEALTH CLINICS

Building on its Power the World initiative to bring solar lights to homes in Haiti, the Grammy-Award winning band Linkin Park has launched a new campaign to bring solar power to health clinics in Uganda and encouraging fans to sign a pledge to support Sustainable Energy For All.

With 1.3 billion people living without access to electricity, health care in energy-poor regions is severely compromised. Clinics and hospitals often function in the dark at night, or close their doors. Among those most affected are mothers in need of emergency obstetric care and their newborns. Most energy-poor regions, including Uganda, are at a crisis point in maternal and neonatal mortality.

To bring solar power to health clinics in Uganda, LinkinPark, through their non-profit organization Music for Relief, is working with We Care Solar, a nonprofit that designs and manufactures the Solar Suitcase, a high-efficiency solar energy system that fits in a carry-on suitcase. Designed for medical settings, the Solar Suitcase provides health workers with reliable lighting, mobile communication devices and power for medical devices. The suitcase is now used in 17 countries, including Uganda. Linkin Park will be featuring the Solar Suitcase at upcoming concerts.

"The dark is no place to practice medicine," said LinkinPark lead vocalist Mike Shinoda. "It's unimaginable to think of a mother delivering in the dark, or having a C-section by the light of a cell phone, but that's what's happening. Solar power enables health workers to do the work they were trained to do. It allows women and babies to get the care they need...and survive childbirth."

Reliable electricity is an often-overlooked intervention in the fight to reduce maternal mortality, said We Care Solar co-founder Dr. Laura Stachel, an obstetrician who since 2008 has researched maternal mortality in Africa. "Improved training, equipment, and medical supplies are all necessary to reduce maternal mortality," said Dr. Stachel. "But health care workers can't take full advantage of these interventions without reliable power." She added, "Without power and light at night, mothers are dying from obstetric complications that are routinely treated in the United States."

If the world temperature rises by more that 1.5 degree Celsius the Caribbean's low-lying counties and small island states will be at serious risk of economic hardship, poor health, and environmental degradation from rising sea levels, severe weather, coastal erosion and coral and sea life deterioration.

Caribbean Community Climate Change

WARMING TURNS TUNDRA TO FOREST

In just a few decades shrubs in the Arctic tundra have turned into trees as a result of the warming Arctic climate, creating patches of forest which, if replicated across the tundra, would significantly accelerate global warming.

Scientists from Finland and Oxford University investigated an area of around 100,000 km^2, known as the northwestern Eurasian tundra, stretching from western Siberia to Finland.

Surveys of the vegetation, using data from satellite imaging, fieldwork, and expert observations from indigenous reindeer herders, showed that in 8-15% of the area willow (Salix) and alder (Alnus) plants have grown into trees over 2 metres in height in the last 30-40 years.

Previous models assessing the potential impact of forestation have suggested that the advance of forest into Arctic tundra could increase Arctic warming by an extra 1-2 degrees Celsius by the late 21st Century.

A report of the research is published in the journal Nature Climate Change.

" It's a big surprise that these plants are reacting in this way," said Dr Marc Macias-Fauria of Oxford University's Department of Zoology and the Oxford Martin School, first author of the paper. "Previously people had thought that the tundra might be colonised by trees from the boreal forest to the south as the Arctic climate warms, a process that would take centuries. But what we've found is that the shrubs that are already there are transforming into trees in just a few decades."

"The speed and magnitude of the observed change is far greater than we expected," said Professor Bruce Forbes of the Arctic Centre, University of Lapland, corresponding author of the paper.

The change from shrubs to forest is important as it alters the albedo effect – the amount of sunlight reflected by the surface of the Earth.

In the Arctic spring and autumn much of the time shrubs are covered under a blanket of white, light-reflecting snow. In contrast, trees are tall enough to rise above the snowfall, presenting a dark, light-absorbing surface. This increased absorption of the Sun's radiation, combined with microclimates created by forested areas, adds to global warming: making an already-warming climate warm even more rapidly.

The northernmost foothills of the Polar Ural mountains on the southern Yamal Peninsula in West Siberia, Russia: willow thickets have a greyish metallic canopy and stand out in the forefront and background, located mostly in concave areas. Alder, with a dark green canopy, stands out clearly against both willow and the other tundra vegetation.

Photo credit: BC Forbes.

MINING: BIG PROGRESS BUT NEW CHALLENGES AS SECTOR SEARCHES FOR SUSTAINABILITY

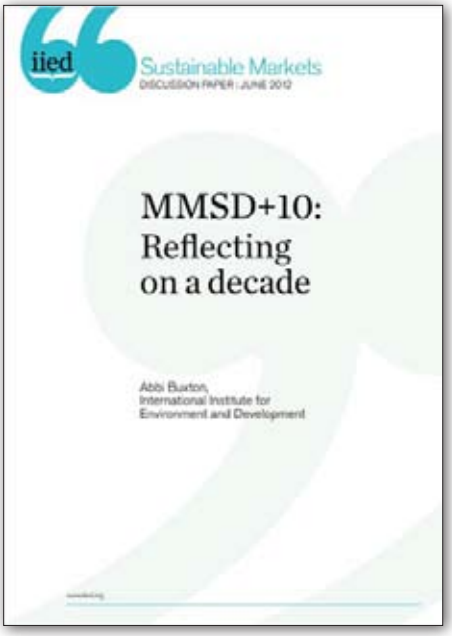
The mining and minerals industry has made major advances towards sustainability but the sector faces new challenges as governments in the global South reassert control over their natural resources yet lack the capacity to ensure mining can contribute to sustainable development.

These are among the findings of a 10-year review — published by the International Institute for Environment and Development. It urges the sector to move from improving its standards in principle to implementing them in practice. It highlights new opportunities for governments and the mining industry to work together and engage with communities and other stakeholders to improve the sector's performance.

Researcher Abbi Buxton reviewed progress the mining sector has made over the past ten years, since its leading companies joined NGOs in calling for the Mining, Minerals and Sustainable Development initiative to provide a landmark independent review of the sector's role in sustainability and set standards for it to meet. She will share its findings at IIED's Fair ideas conference in Rio de Janeiro on 16-17 June.

"The 2002 MMSD report was a game-changer," says Buxton. "For the first time, mining executives committed to act to maximise their sector's contribution to sustainable development, and they adopted the MMSD agenda as a robust and credible way to do this. Ten years on, however, the results are mixed and new challenges have emerged."

Buxton's report shows how the International Council on Mining and Metals – an umbrella organisation of leading companies such as Rio Tinto and Anglo American -



- has succeeded in implementing many of MMSD's recommendations for industry. But complementary measures proposed for governments, the small scale mining sector and communities have not matched this success.

"Some of the world's biggest mining companies have undergone major shifts in terms of their understanding of and commitment to sustainable development, and what they can do to contribute to it," says Buxton. "They have made major improvements in their environmental policies at a strategy level and have a gained a better idea of what good practice looks like. The challenge that remains is to implement these policies on the ground."

The report notes that despite the improvements larger companies have made, the capacity needed to make this happen is still lacking, particularly in mid-tier and smaller companies and in governments and communities. Bad practice persists despite good intentions across the industry.

DISCIPLINE AND PUNISHMENT

by
Barbara King,
Parent Educator

At the Trinidad and Tobago Peace Festival recently held in Trinidad, my attention was captured by a poster at the SERVOL* booth which posed the question: "How would you discipline your child if you had no hands?" In the course of my adventures in parent education discipline is the aspect of parenting that causes the most concern for parents. They don't know what to do with today's children. They complain of having to say the same thing "over and over and over again"; of children boldly talking back; of not knowing how to deal with behaviour they would have been soundly beaten for; and situations that are new to parenting, for example, the challenges posed by technology.

In the previous week I had been working with a group of parents from Farm Road in Curepe, East Trinidad. What these parents came to realise is that they didn't know the difference between discipline and punishment. As far as they were concerned (like many parents worldwide) the two things are the same. The words are used synonymously.

In fact, discipline is best defined as mental and moral training. It is essentially, programmed guidance that helps a child develop internal self-control, self-direction and efficiency. True discipline involves teaching; guiding; facilitating the development of responsible, high-

functioning adults. It is at the heart of the purpose of parenting.

A child who has been well taught or guided is able to think and act in an appropriate manner; to understand the logical consequences of his actions; to make wise decisions when dealing with problems; observe common rules and laws, and live by universally accepted values.

To punish, on the other hand, is defined by the Oxford dictionary as: to inflict a penalty or sanction on (someone) as retribution for an offense, especially a transgression of a legal or moral code.

The focus of attention of punishment is "wrong" behaviours and retribution or vengeance. Punishment requires external control over a person by force or coercion.

True discipline involves teaching; guiding; facilitating the development of responsible, high-functioning adults. It is at the heart of the purpose of parenting.

Undoubtedly teaching and guiding children sometimes requires imposing penalties, which traditionally have mostly consisted of inflicting physical pain or verbal admonishments, both of which can leave scars. Studies have shown that physical punishment, such as: hitting, slapping and verbal abuse, are not effective. While such punishment may seem to get fast results, in the long term it is more harmful than helpful.

Physical punishment and verbal abuse can discourage and embarrass children and result in low self-esteem and fear of authority figures. Some experts argue that it also promotes physical aggression in children by showing them that violence is acceptable and that "might makes right." Ill-conceived punishments actually deprive the child of the very important inner process of facing his own behaviour and the real-world experience of dealing with the natural consequences of his or her actions.

Thankfully, the days of punishing children by making them kneel on graters; hold up rocks for long periods; making them stand in the hot sun or tying them to furniture have gone - for the most part.

Now the era of cuffing, beating with belts and whacking with sticks must end. As a result of education and the abundance of information readily available, we are evolving mentally and emotionally.

Our methods of nurturing the leaders (they will all be leaders in some way) of the future must also evolve. We cannot inflict physical and emotional abuse on our children and question why there is so much violence on our streets.

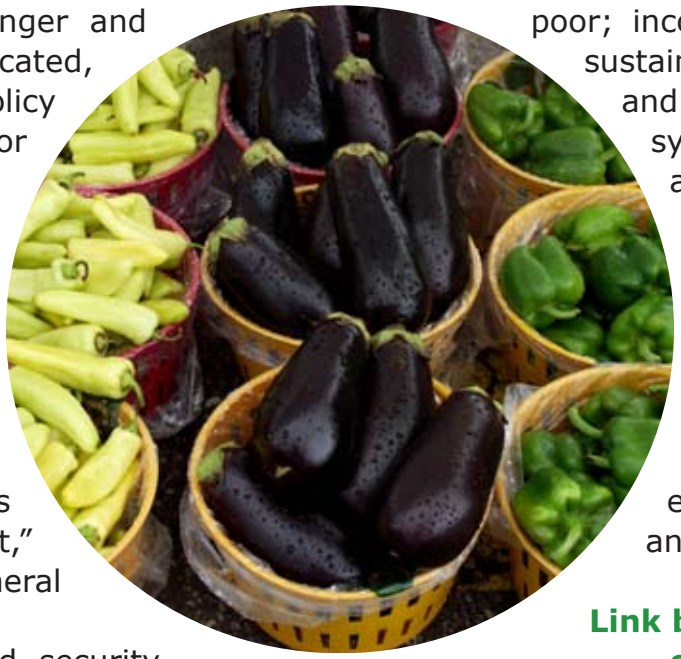
*SERVOL - Service Volunteered for ALL… a voluntary organisation.

Barbara King is a founder of T&T Innovative Parenting Support. She is a facilitator of Parent Education programmes and provides counselling and support group services through The Parent Support Centre, Arima, Trinidad. Tel: (868) 664-1520

No sustainable development without hunger eradication

On the path to Rio+20, FAO calls for a future with both healthier people and healthier ecosystems

Sustainable development cannot be realized unless hunger and malnutrition are eradicated, FAO said in a policy document prepared for the Rio+20 Summit.



"We cannot call development sustainable while this situation persists, while nearly one out of every seven men, women and children are left behind, victims of undernourishment," said FAO Director-General José Graziano da Silva.

"The quest for food security can be the common thread that links the different challenges we face and helps build a sustainable future. At the Rio Summit we have the golden opportunity to explore the convergence between the agendas of food security and sustainability to ensure that happens," he added.

One of the great flaws in current food systems is that despite significant progress in development and food production hundreds of millions of people are hungry because they lack the means to produce or purchase the food they need for a healthy and productive life, according to FAO's report.

"Improving agricultural and food systems is essential for a world with both healthier people and healthier ecosystems," it says.

The report, Towards the future we want: end hunger and make the transition to sustainable agricultural and food systems, urges governments to establish and protect rights to resources, especially for the poor; incorporate incentives for sustainable consumption and production into food systems; promote fair and well-functioning agricultural and food markets; reduce risks and increase the resilience of the most vulnerable; invest public resources in essential public goods, especially innovation and infrastructure.

Link between hunger and environment

The report stresses that hunger reduction and sustainable development are irrevocably connected, and that better governance of agriculture and food systems is key to achieving both targets.

Agriculture and food systems are already major users of resources. For example, food systems consume 30 percent of the world's energy. The crop and livestock sectors use 70 percent of all water withdrawals.

Three fourths of the world's poor and hungry live in rural areas and most of them depend on agriculture and related activities for their livelihoods. Forty percent of the world's degraded lands are in areas with high poverty rates. "Hunger puts in motion a vicious cycle of reduced productivity, deepening poverty, slow economic development and resource degradation," the report says.

Access to natural resources such as land, water or forests — is essential for the 2.5 billion people who produce food for their own consumption and income.

The farmers who operate the 500 million small farms in developing countries face various resource limitations resulting in insufficient access to food and nutrition. They need clear tenure rights to promote equitable access to and sustainable management of resources like land and water.

Towards sustainable food production and consumption systems

Food consumption and production systems must achieve more with less. On the consumption side, we need to shift to nutritious diets with a smaller environmental footprint, and reduce food losses and waste throughout the food system.

FAO estimates that global food losses and waste amount to 1.3 billion tonnes per year — roughly one-third of the world food production for human consumption — and correspond to more than 10 percent of the world's total caloric energy consumption.

On the production side, soil, water and nutrient depletion, greenhouse gas emissions, pollution and the degradation of natural ecosystems must be targeted, the report said. Benefits provided by nature such as clean air and water (ecosystem services) need to be protected and harnessed to achieve sustainable growth.

More with less

Agriculture must produce more food but with fewer resources like energy and water. FAO is promoting an eco-system approach called Save and Grow to agriculture that draws on nature's contribution to agricultural growth, for example, soil organic matter, water flow regulation, pollination and natural predation of pests — and applies appropriate external inputs at the right time and in the right amount to improved crop varieties that are resilient to climate change and use nutrients, water and external inputs more efficiently.

Feeding 9 billion people

In 2050 there will be an expected global population of 9 billion, with increased incomes and rising food demand.

Pressure on the world's agricultural and food systems and the resources they use will grow. Worse, unless purposeful action is taken, the increase in food production of 60 percent needed to meet effective demand will still leave behind over 300 million people who are expected to suffer from chronic hunger in 2050 because they will remain without the means to access food.

The only way to ensure their food security is by creating decent jobs, paying better wages, giving them access to productive assets and distributing income in a more equitable way.

FAO believes that feeding all the of the earth's population is possible if bold policy decisions are taken on enhancing poor people's access to food, levels of food waste and how agriculture is used for non-food purposes.

"We must bring them into society, complementing support to smallholders and income generation opportunities with the strengthening of safety nets, cash for work and cash transfer programmes that contribute to strengthening of local production and consumption circuits, in an effort that must contribute to our sustainable development goals," said Graziano da Silva.

FAO believes that feeding all the of the earth's population is possible if bold policy decisions are taken on enhancing poor people's access to food, levels of food waste and how agriculture is used for non-food purposes. All depends on the choices made today in managing agricultural and food systems, the report said.

Improved governance is essential

FAO's new policy paper calls for improved governance of the food and agriculture system as a prerequisite for a sustainable future. Part of the debate around good governance will also need to decide who pays for these costs.

The paper describes a fair and effective governance systems as one which is transparent, participatory, results-focused and accountable — at the global, regional, national and sub-national levels. The report cites the reformed Committee on World Food Security, which now includes a large number of stakeholders including governments, civil society, international organizations and the private sector as one of the models that could be followed.

FAO calls upon the governments attending Rio+20 to commit themselves to reducing hunger and malnutrition more quickly; to use the voluntary guidelines on the right to food and land tenure for achieving food security and equitable sustainable development; to support the implementation of technical and policy approaches to agricultural development that integrate food security and environmental objectives.

It also wants governments: to ensure that costs and benefits of the transition to sustainable food production and consumption systems are shared equitably; to adopt integrated approaches to achieving sustainable agriculture and food systems; to implement governance reforms to ensure polices are carried out and commitments are fulfilled.

IPCC asks Greenhouse Gas Inventories Task Force to develop guidelines

Dr Rajendra Pachauri,
Chair of the IPCC

Experts at the Intergovernmental Panel on Climate Change (IPCC) are to draw up new guidance to enable countries to measure the impact on greenhouse gas emissions from agriculture, forestry and changes in land use more accurately.

The IPCC asked its Task Force on National Greenhouse Gas Inventories (TFI) to review and update its guidance on greenhouse gas emissions and removals from land use, land use change and forestry (LULUCF), which includes the impact of forestry, deforestation, agriculture, and the management of wetlands and peat lands, by October 2013.

The decision, taken at a meeting of the IPCC's governing body, the Panel, in Geneva on 6-9 June, was in response to an invitation by Parties to the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC). In this invitation, the Parties to the Kyoto Protocol asked the IPCC to review and if necessary revise its Good Practice Guidance on LULUCF issued in 2003 that may require changes to ensure consistency with decisions agreed by the UNFCCC in Durban at the end of 2011.

All Parties to the UNFCCC are required to prepare their national inventory of anthropogenic greenhouse gas emissions and removals – emissions and removals due to human activity – including those arising from LULUCF, according to guidelines developed by the IPCC.

Climate policy and global climate negotiations rely on a robust scientific foundation to produce sound results. The IPCC provides policy-makers with regular assessments of climate science and its potential impacts, as well as assessments of the possibilities for mitigating climate change. The estimation of emissions and removals of greenhouse gases is one important basis for climate mitigation. The IPCC provides de facto international standards for such estimation, though highly technical work, while offering flexibility to take different national circumstances and capacities into account.

"For this purpose the IPCC has developed methodologies, which must benefit from assessments using the most recent scientific literature available today on subjects including forest management, harvested wood products and wetland draining and rewetting.

The required update of IPCC methodologies will provide policy-makers with the most valid guidance and practices available to report on their LULUCF emissions appropriately and as required under the second commitment period of the Kyoto Protocol," said Dr Rajendra Pachauri, Chair of the IPCC.

The decision by the Panel follows the launch in May by the Task Force of new software to enable countries to report national greenhouse gas inventories more accurately and comprehensively, in line with the latest IPCC greenhouse gas inventory guidelines updated in 2006.

The UNFCCC had earlier invited the IPCC to produce supplementary guidance on wetlands, which will also be completed by October 2013.

The Gaia Hypothesis and the Environment

By Jo-Anne Nina Sewlal

The Gaia Hypothesis named after Gaia, the Greek goddess of the Earth, and formulated by chemist James Lovelock states that, "the temperature and composition of the gases on earth's surface are actively controlled by life on the planet." In other words the abiotic or non-living component of the environment is regulated by the growth and metabolism of the biotic (living) components.

So the Gaia hypothesis shows how both living and non-living components of the environment work together for maintaining relatively homeostatic conditions on the planet necessary to sustain life. From an environmental perspective, this hypothesis focuses on the areas of the levels of oxygen in the atmosphere, ocean salinity and global temperature, just to name a few.

This hypothesis is based on four main observations, the first is that the atmosphere is extremely dynamic in terms of temperature however, its composition is stable. Over the course of its lifetime, this planet has supported life for 3.8 billion years despite increased solar intensity and the variable exchange of matter. Also the conditions on the Earth's surface at present are ideal for supporting dominant species. Finally there have been great disturbances in the planet's history all of which it has recovered from.

The relatively constant salinity of the world's oceans can be taken as evidence of this theory. The level of salinity is necessary as most cells of most of the organisms that live there cannot tolerate salinity levels above 5%. However, theoretically the salinity should be much higher due to the salts that wash into them from rivers. A suggestion for the regulation of salinity may be the formation of salt plains throughout the planet's history, which are created by bacteria that fix heavy metals and ions during their life processes.

Another piece of evidence of the Gaia hypothesis is the regulation of gases in the atmosphere. Like oceanic salinity, the composition of gases in our atmosphere needs to be fairly stable in order to support life on this planet.

One of the gases crucial for life for many organisms is oxygen. The amount of oxygen present in the atmosphere (21%) is believed to come about through the advent of photosynthesis 2.5 billion years ago. Evidence of this is seen in as red bands in rocks as it combined with iron forming rust.

However, if the amount of oxygen were to exceed 30% this would not be very good as fires would start with every lightening strike that hit the vegetation. One possible mechanism for oxygen regulation has been the production of methane by bacteria which combine with oxygen to produce carbon dioxide.

Another important gas in our environment is carbon dioxide. Most people think that this is the source of our worries as it is considered

a "greenhouse gas" and is one of the factors responsible for global warming. However, carbon dioxide is needed in our atmosphere to regulate our planet's temperature. Without it we would be very cold and devoid of many of the organisms we know.

It is estimated that about 3.5 billion years ago the sun's energy has increased by 25% to 30%. However, computer-generated climatic models suggest that such low solar radiation would produce a global temperature between -10 to -52 oC. Therefore if the temperature had to be maintained at the average global temperature of 15 oC as it is today, carbon dioxide levels had to be much higher in the past.

Therefore some mechanism must have existed to remove this extra carbon dioxide from the atmosphere when solar radiation levels increased. This mechanism of removal was the conversion of carbon dioxide into fossil fuels such as oil, coal and natural gas.

This has led to the question of how biodiversity on a whole influences the Gaia hypothesis, which has resulted in two schools of thought. The first is called the, "species redundancy" hypothesis proposed by Australian ecologist Brain Walker.

This hypothesis proposed that most of the species in the ecosystem contributes very little to the overall stability of the ecosystem, so that only a few key species play a big role in ecosystem stability.

The second hypothesis is the "rivet popper theory" proposed by Paul and Anne Ehrlich in the "rivet popper theory", where although on a plane many rivets are present when one pops out other start to pop out. Therefore many other species are needed for these key species to be present. These other species may for example act as food or they may be predators that regulate populations of competitor species.

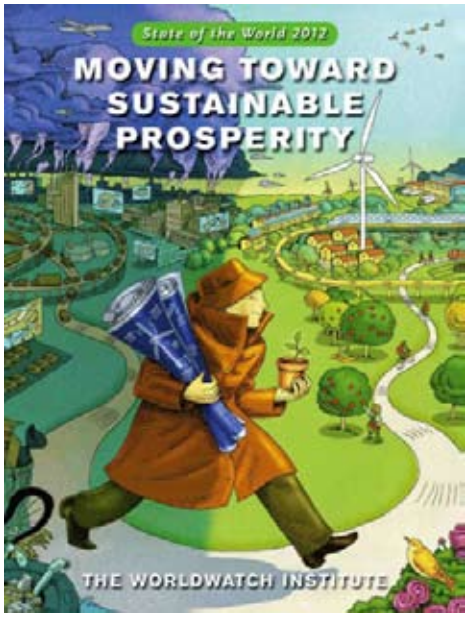
So although this hypothesis was at first not widely accepted, it is now a component of many areas of Earth system and geophysiological sciences. However, the message it conveys is very important, which is both the biotic and abiotic are necessary for the equilibrium and maintenance of an environment capable of sustaining life.

Jo-Anne Nina Sewlal (BSc., MPhil., FLS., AMSB.) works at the Department of Life Sciences, University of the West Indies.

Time Running Out to Ensure Sustainable Prosperity for All

Worldwatch's State of the World 2012 maps out a new vision of the good life but cautions that accelerating ecological shifts will make this difficult to attain.

Over the last 50 years, the world's middle and upper classes have more than doubled their consumption levels, and an additional 1 to 2 billion people globally aspire to join the consumer class.



But the planet cannot maintain such increases in resource demand without serious consequences for both people and ecosystems, concludes the Worldwatch Institute in ***State of the World 2012: Moving Toward Sustainable Prosperity***. The book, the 29th in a series that Worldwatch began in 1984, stresses that we must act quickly to redefine our understanding of the "good life" and redouble our efforts to make that life sustainable.

"The Industrial Revolution gave birth to an economic growth model rooted in structures, behaviours, and activities that are patently unsustainable," says Worldwatch Senior Researcher Michael Renner, co-director of State of the World 2012. "Mounting ecosystem stress and resource pressures are accompanied by increased economic volatility, growing inequality, and social vulnerability. It is difficult to avoid the conclusion that the economy no longer works for either people or the planet."

Instead, we need to reprioritize basic needs and pursue true sustainable prosperity: development that allows all human beings to live with their fundamental needs met, with their dignity acknowledged, and with abundant opportunity to pursue lives of satisfaction and happiness, all without risk of denying others in the present and the future the ability to do the same. This, in turn, means not just preventing further degradation of Earth's systems, but actively restoring them to full health.

The report's 35 contributors describe many of the currently untenable social and economic patterns and explore opportunities for creative alternatives on sustainability topics ranging from agriculture, communication technologies, and biodiversity to "green" construction, local politics, and global governance.

"There won't be much point in revisiting the Rio+20 conference in another 20 years to try to figure out what went wrong," says Worldwatch President Robert Engelman.

"We know enough right now about the state of the world to see clearly that we have to change the way we live and the way we do business. Working out new paths towards true sustainability will take much more than a conference of governments, though such a gathering can help.

"The task begins with the recognition that perpetual economic and demographic growth aren't possible on a finite planet. We can work with the hope that ecological stability is possible, along with a good life based on health, literacy, strong communities, and access to 'enough' rather than ever more," he added.

China Leads Growth in Global Wind Power Capacity

Global installed wind power capacity continued to grow in 2011, albeit at a slightly lower rate than in 2009 and 2010, according to new research conducted by the Worldwatch Institute for its Vital Signs Online service.

The world now has approximately four times the installed wind capacity that it did in 2005, reflecting the combined effects of falling prices, improved technology, global investment, and various incentive programs.

China led the way with a 43 percent share of global capacity additions in 2011, followed by the United States at 17 percent, India with almost 7 percent, and Germany at 5 percent, writes report author and Worldwatch's Climate and Energy Program Manager Mark Konold.

"China continues to lead the world in wind capacity additions, having increased its capacity a remarkable 40 percent since 2010," said Konold. "But a gap remains between this installed capacity and the amount of wind power that is actually available for use in the country. Because of grid connection challenges and other issues, China is struggling to use all of the electricity generated by its turbines."

Despite large increases in installed wind power capacity, several Chinese provinces, including Inner Mongolia and Gansu, have actually lost a significant portion of their generation capacity because of technical problems. Over the next five years, China plans to invest more than US$400 billion to make improvements to its electrical grid that will enable it to fully integrate its total installed wind capacity by 2015.

In 2011, the United States accounted for approximately 17 percent of global wind power capacity additions. Although the country generated 27 percent more electricity from wind in 2011 than in 2010, wind power still accounts for less than 3 percent of total U.S. power generation, according to the report.

Konold credits much of the growth in U.S. wind power capacity to the federal Production Tax Credit (PTC), which helped to finance approximately 4,000 megawatts of new capacity by reducing corporate income tax by 2.2 cents for every kilowatt-hour produced.

The report also discusses wind power developments in the European Union, where Germany regained its position as regional leader for installed capacity. Currently, wind accounts for almost 8 percent of the country's electricity consumption. Although Spain added only a third of total EU capacity since 2008, wind power accounts for almost 16 percent of the country's electricity consumption. Economic instability has had some negative impacts on European wind power, however, pushing future growth projections down and potentially hampering investment.

Worldwide, wind power prices fell to $1.2 million per megawatt in the first half of 2011, mainly because of improvements in supply chain efficiency and economies of scale. Competition from Chinese manufacturers and their excess capacity to build machines and flood the market also played a role. In addition, the capacity factor of wind turbines (the ratio of actual output to nameplate capacity) continues to rise as better technologies enter the market, further driving down turbine costs. Combined, these factors are expected to bring down the cost of wind energy 12 percent by 2016, making onshore wind cost competitive with coal, gas, and nuclear power.

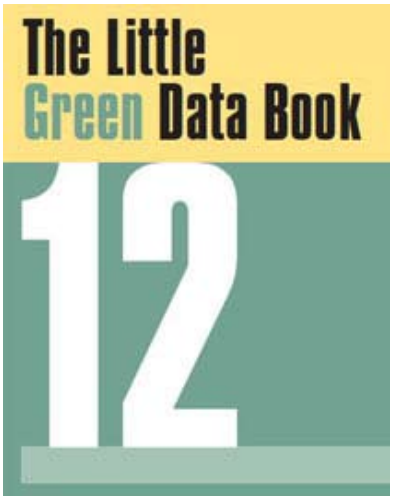
World Bank Releases Little Green Data Book 2012

New marine indicators highlight decline in the world's oceans

The World Bank released its annual compilation of environmental data for more than 200 countries, providing up-to-date information on agriculture, forests and biodiversity, energy and emissions, water and sanitation, environment and health and oceans.

The World Bank's Vice President for Sustainable Development Rachel Kyte said the Little Green Data Book 2012 was an important addition to the toolkit for countries to measure, value and manage their natural capital.

Among many other sustainability measures, the Little Green Data Book includes an Adjusted Net Savings indicator—also known as "genuine savings"—which calculates the true rate of savings in an economy after taking into account investments in human capital, depletion of natural resources and damage caused by pollution. It also includes an Adjusted Net National Income indicator, which provides a broader measure of national income that accounts for the depletion of energy, mineral and forest resources.



"The information in the Little Green Data Book can help policymakers, communities and other stakeholders take into account the value of natural resources and their role in development,"Ms. Kyte said.

This year's Data Book introduces a new set of indicators on the marine environment - including the percentage of country's territorial waters covered by marine protected areas, coral reefs and mangroves as well as volume of capture fisheries and aquaculture.

"Over-exploitation and poor management of marine resources have resulted in lost opportunities to develop livelihoods, heightened risks to global food security, and diminished economic opportunities for the world's poorest," Ms. Kyte said. "Wealth from seafood, nature-based tourism, coastal protection, carbon storage and a vast array of marine ecosystem services can only be provided by a healthy living ocean."

The Bank estimates that global fisheries wealth, if better managed, could increase from US$120 billion to US$900 billion, with the potential for the greatest gains in Asia. Marine fisheries are particularly important for Small Island Developing States (SIDS) and many coastal communities.

The Little Green Data Book's focus on oceans this year illustrates the need for countries to "measure and manage" their natural resources. For many low-income countries, natural capital is a critical asset, making up nearly 36 percent of their total wealth. The poorest communities depend on ecosystems such as forests, rivers and soil productivity for their daily existence. As these countries grow, pressure on land and water increases, threatening ecosystems and livelihoods in countries with few resources to cope with the loss.

"Your attitude is your altitude.
It determines how high you fly."
Anonymous -

Imfolozi kudu

The male kudu has distinctive twisted horns and a striped grey, rather than red, coat, and a shaggy mane, like this specimen here. Kudu are capable of clearing a 5-foot fence from a standing start, and can break the back of a wild dog or jackal with their kicks.

Photograph by Eric Magni

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