



# planet

EDNA MOLEWA FU CHENGYU JOHN ASHE BRAULIO DIAS

THE MAGAZINE OF THE UNITED NATIONS ENVIRONMENT PROGRAMME — SEPTEMBER 2013



## *Building Inclusive Green Economies*

**SOUTH-SOUTH COOPERATION FOR SUSTAINABLE  
DEVELOPMENT AND POVERTY ERADICATION**





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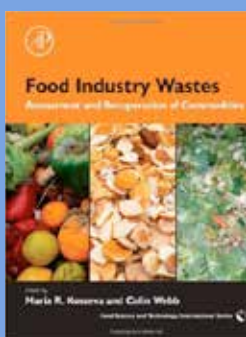
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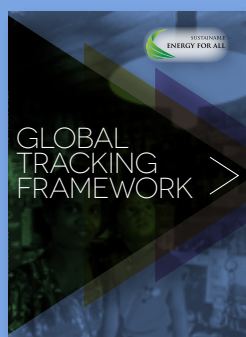
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## Food Industry Wastes: Assessment and Recuperation of Commodities

ISBN-10: 0123919215  
ISBN-13: 978-0123919212

Food Industry Wastes: Assessment and Recuperation of Commodities presents emerging techniques and opportunities for the treatment of food wastes, the reduction of water footprint, and creating sustainable food systems. Written by a team of experts from around the world, this book provides a guide for implementing bioprocessing techniques. It also helps researchers develop new options for the recuperation of these wastes for community benefit. More than 34 million tons of food waste was generated in the United States in 2009, at a cost of approximately \$43 billion.



## Global Tracking Framework

The reports framework for data collection and analysis will enable us to monitor progress on the SE4ALL objectives from now to 2030. It is methodologically sound and credible. It produces findings that are conclusive and actionable. In many respects, what you measure determines what you get. That is why it is critical to get measurement right and to collect the right data, which is what this report has done. It has charted a map for our achievement of sustainable energy for all and a way to track progress. Let the journey begin!



## South-South Cooperation: Africa on the Centre Stage (International Political Economy)

ISBN-10: 0230248853  
ISBN-13: 978-0230248854

This book critically analyses the ways in which Africa has shifted from the periphery of global trade, international relations and politics to the center of the world stage because of its existing and potential economic prowess and the purchasing power that the continent has to offer.



## South-South Cooperation in Education and Development

ISBN-10: 0807749214 |  
ISBN-13: 978-0807749210

How real is the collaboration between developing countries? Focusing on educational reform, this book turns the cutting-edge topic of South-South cooperation inside out with a set of challenging and diverse studies that explore what this concept means in practice. An impressive list of contributors examines the role of bi- and multilateral development agencies such as the World Bank, UNESCO, and UNDP; regions such as Africa, Latin America, and the Middle East; and countries such as Brazil, China, India, Japan, Jordan, Turkey, and South Africa.

**Resource Efficiency: Economics and Outlook for China**

ISBN No: 978-92-807-3318-1

China's rate of economic development and social progress in recent decades has been extraordinarily rapid. As is generally the case when a nation industrializes and urbanizes, China's rapidly improving material standards of living have come with a greatly increased per capita demand for natural resources, and a corresponding increase in the environmental pressures associated with extracting, processing, and using these natural resources.

**Renewables 2013: Global status report - Key findings 2013**

REN21 convenes international multi-stakeholder leadership to enable a rapid global transition to renewable energy. It promotes appropriate policies that increase the wise use of renewable energy in developing and developed economies. Open to a wide variety of dedicated stakeholders, REN21 connects governments, international institutions, non-governmental organisations, industry associations, and other partnerships and initiatives. REN21 leverages their successes and strengthens their influence for the rapid expansion of renewable energy worldwide.

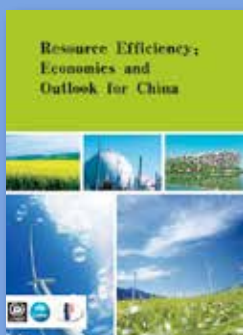
**Integrating REDD+ into a green economy transition: Opportunities and challenges**

ISBN-10: 0123919215

This paper outlines a rationale for integrating REDD+ within the green economy transition and initiates thinking on how this might be achieved. It brings together the existing literature to consolidate conceptual issues, presents key examples of progress, and highlights the potential challenges and opportunities of including REDD+ in the transition to a green economy. Intended to support the discussions of the Global Symposium on REDD+ in a Green Economy, held in Indonesia in June 2013, the target audience of this paper is the communities of practice both in REDD+ and green economy; this includes policy-makers, civil society organisations and academia.

**Moving Towards a Climate Neutral UN: The UN system's footprint and efforts to reduce it - 2012 Edition**

This fourth edition of Moving Towards a Climate Neutral UN is further testament to the progress that we have made towards measuring, reporting and reducing the UN's climate and environmental footprint. At the same time, we still have a long way to go. At the Rio+20 Conference in June 2012, Member States asked the UN to integrate sustainable development considerations more fully into our management practices. UN leaders are strongly moving in this direction.



**GEO-5 for Business: Impacts of a Changing Environment on the Corporate Sector**

ISBN No: 978-92-807-3344-0

GEO-5 for Business is written for business leaders who are responsible for ensuring that risks and opportunities are understood, addressed, and turned into long-term competitive advantage for their companies. The report assesses the operational, market, reputational, and policy implications of environmental trends on 10 business sectors. It is based on information derived from existing science, business, policy, and other literature. It also includes brief real-world examples that illustrate the nature of some of these risks and opportunities.



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## South South Cooperation Exchange Mechanism

The South-South Cooperation Exchange Mechanism, focusing on environment related issues, provides a platform for practitioners, governments, donors, communities and academia with a wealth of knowledge regarding replicable solutions implemented in the "south".



# Reflections

**Achim Steiner**  
**UN Under-Secretary-General and**  
**UN Environment Programme (UNEP)**  
**Executive Director.**



UNEP is proud to be hosting the United Nation's Global South-South Development Expo 2013 at its headquarters in Kenya—the first time in the history of this event that it is taking place in the developing world.

The increasing levels of trade, cooperation and initiatives between the nations of the global South reflect the rapid geo-political changes of our time. Indeed the Expo - organized around the theme 'Building Inclusive Green Economies', and taking forward many of the outcomes of the Rio+20 Summit - will showcase how solutions to 21<sup>st</sup> century sustainability challenges are now increasingly being born and developed in the South.

The Partnership for Action on Green Economy (PAGE) - in which 30 developing countries will be assisted over the next seven years by UNEP, the International Labour Organization, the UN Industrial and Development Organization and the UN Institute for Training and Research - is part of that drive as is the UN Development Programme's new centre with Brazil in Rio de Janeiro announced at last year's Summit

UNEP is also assisting in building the capacity of countries, including Small Island Developing States, to make a transition to the green economy, working with CARICOM, and with the support of the European Commission. Direct support to three pilot countries is being put in place: these include St Lucia, which is evolving necessary fiscal and policy reforms across areas ranging from solar power and rainwater harvesting to sustainable bio-ethanol production.

Namibia, Nepal and Peru are collaborating under a UNEP and UN Conference on Trade and Development initiative—supported by Germany-- to maximize the economic, employment and environmental opportunities from biotrade in, for example, aromatic and medicinal plants, thus offering a lifeline to those struggling to overcome poverty in, often far flung, rural communities.

The Global Efficient Lighting Partnership is a public-private initiative involving UNEP, industry partners Philips and Osram and the National Lighting Test Centre in China.

Meanwhile, in the Middle East and North Africa, the en.lighten initiative - as it is called - is supporting 16 countries in making the switch to energy efficient lighting: it has the potential to cut energy costs by an estimated \$3 billion a year, while simultaneously reducing greenhouse gas emissions.

A further Green Economy initiative involving the Energy Centre in Kumasi, Ghana, is working on how best to increase exports of solar power in West Africa. And the Government of The Netherlands and the European Commission have been supporting the UN in speeding up the sharing of knowledge between countries in Africa on how a green economy can be realized within differing developmental landscapes.

It is estimated that Southern trade now accounts for 47 per cent of the global trade, with South-South trade making up at least half of this total. It represents a great opportunity for progressing the Millennium Development Goals and delivering a focused post-2015 sustainable development agenda. The Expo, to which we thank the Government of China and others for their support, affords a real opportunity for those looking for answers to pressing challenges to meet and learn from those who have already seized the opportunities that they present. As Executive Director of UNEP, I and my staff welcome you to our home here in East Africa where together we can write the next chapter in the transition to inclusive Green Economies.



PHOTO COURTESY <http://www.godo.com/au/activity/NATU100>

South Africa - an emerging market with an abundant supply of natural resources - ranks as the world's third most mega-biodiverse country. It recognises the need to balance economic and other development goals with environmental sustainability to benefit present and future generations.



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# Green growth



**EDNA MOLEWA**  
Minister of Water and Environmental Affairs,  
South Africa.

The United Nations Conference on Sustainable Development (Rio+20) identified the Green Economy as one of the tools to achieve sustainable development and the eradication of poverty. Transitioning towards it is a common undertaking between interested countries, with each choosing an appropriate approach in accordance with national sustainable development, strategies and priorities. Considering it can provide options for policy making, but should not be a rigid set of rules.





PHOTO BY RANDY MONTAYA



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PHOTO COURTESY WORKING FOR WETLANDS

In May 2010, two years before Rio+20, South Africa convened its first National Green Economy Summit with the participation of government, private sector, civil society, academia, NGOs and labour organizations. This committed the country to pursue and explore opportunities in a green economy, initiating various countrywide interventions. It was agreed that Government alone cannot manage and finance a just transition and that the private sector and civil society must play fundamental roles.

South Africa views a green economy as a sustainable development path based on addressing the interdependence between economic growth, social protection and natural ecosystems. Exploring opportunities to support the transition is linked to many policies, strategies and plans including: the 2030 National Development Plan endorsed by Cabinet in 2012; the 2020 New Growth Path endorsed by Cabinet in 2011; the 2014 National Strategy for Sustainable Development (NSSD1) endorsed by Cabinet in 2011; the National Climate Change Response Policy endorsed by Cabinet in 2011; and the Industrial Policy Action Plan.

Building on the NSSD1 and the National Development Plan the strategic priorities are: enhancing systems for integrated planning and implementation; sustaining ecosystems and using natural resources efficiently; a just transition towards a green economy; building sustainable communities; and responding effectively to climate change through mitigation and adaptation.

Nine focus areas for green economy have been prioritised as (1) Resource conservation and management; (2) Sustainable waste management practices; (3) Water management; (4) Environmental sustainability: greening & legacy programmes for major events and tourism, research, skills, financing and investments; (5) Green buildings and the built environment; (6) Sustainable transport and infrastructure; (7) Clean energy and energy efficiency; (8) Agriculture, food production and forestry and (9) Sustainable consumption and production.

Interventions include publishing the South Africa Green Economy Modelling Report (SAGEM). Developed in partnership with the United Nations Environment Programme, and with support from the

United Nations Development Programme, it was commissioned at the United Nations Framework Convention on Climate Change COP 17 in December 2011 and is based on the same model that underpins the 2011 UNEP Green Economy Report. It was developed to explore the transition to a green economy for South Africa, with special attention to the country's ability to meet low carbon growth, resource efficiency and pro-job development targets and sought to present a modelling process, and test both the targets in national policies' and the effects of investing in a green economy in South Africa.

The SAGEM has been used to simulate green investment scenarios aimed at promoting economic growth, job creation and a transition towards low carbon development and resource efficiency in comparison to the baseline scenario. Four scenarios were selected based on the existing targets in policy documents concerning natural resource management, energy, agriculture and transport. Identifying and selecting scenarios was based on criteria that necessitated the use of targets, planned expenditure for projects and speculative



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assumptions on specific interventions. The modelling identifies possible options and opportunities for achieving the national targets.

For example the report found when modelling natural resource management – which represents the environmental and biodiversity protection programmes - that investing in the green economy will contribute additional restored land without reducing agricultural land requirements. Similarly a target-specific scenario has revealed that employment opportunities can be created for 701,000 people by 2030 through green economy interventions.

The four scenarios for the green economy simulated report reveal that it does indeed stimulate economic growth, with investments increasing growth in real GDP by over two per cent by 2030, relative to 2012 while helping to reduce greenhouse gas emissions. Prioritising investments in energy sector will also increase potential employment opportunities in the green economy.

Although synergies do exist, it should be noted that specific simulated interventions do not achieve all the government targets simultaneously. Some investment

allocations tend to provide greater employment, while others tend to reduce emissions more. So the modelling can be used to test different investment allocation options depending on which indicators are the highest priority.

The Department of Environmental Affairs and its stakeholders have committed to continuing initiatives that would increase stimulation of green economy investments. It is taking responsibility and leadership to demonstrate our government's unwavering commitment to cut harmful CO2 emissions by implementing simple measures to mitigate against the effects of global warming and climate change. It has already embarked on a zero emission Green Cars initiative aimed at cutting transport carbon emissions so as to achieve eco-friendly and sustainable future mobility. It procured a fleet of electric cars and the Government intends to ensure that all its departments and state organs change to them.

The South African Government has also established a national Green Fund with an initial capitalisation of R 1.1 billion (US\$110 million) to support green initiatives to assist South Africa's

transition to a low carbon, resource efficient and climate resilient development path delivering high impact economic, environmental and social benefits. Its primary aim is to provide catalytic finance to facilitate investment in green initiatives – including funding green economy project initiation and development, research and development, and capacity building initiatives. It thus helps to unlock barriers and supports incubating ideas and moving them along the innovation value chain. The Department is the Fund's custodian and it has appointed the Development Bank of Southern Africa as the implementing agent.

South Africa also fully realises the importance of international action to transform and diversify the global economy towards a sustainable low carbon development trajectory. The Green Economy and green financing present opportunities to cooperate and share experiences with other developing countries. Such initiatives could include capacity building and skills development, sharing of best-practices, environmental research and development, green economy initiatives, sustainable development, biodiversity - and promoting regional integration in Africa.



**FU CHENGYU,**  
CEO, SINOPEC

# Business Challenge

Global climate change has had a significant impact on the natural ecosystems of the Earth, our common home, and poses a serious threat to the human environment. Companies are duty-bound to address it and to reduce pollution and emissions.

Sinopec - China's largest producer and supplier of refined oil and petrochemical products - has helped the people meet their needs for food, clothing, transportation and housing over the past 30 years. It now supplies 60 per cent of domestic demand for oil products and 30 per cent of it for chemical products. Along with promoting economic development and improvement in living standards, it has achieved rapid business growth. In 2012, revenues reached \$428.2 billion, ranking it fourth on the Global Fortune 500.

The most important challenges now facing the world are the environment, clean water, food and energy security, while the gap between rich and poor poses the greatest obstacle to sustainable development.

Sinopec was one of the first companies to join the United Nations Global Compact, and has made green and low-carbon growth one of its major corporate priorities. It has joined the UNGC LEAD Program and the UN Caring for Climate initiative, and strives to take the global lead in sustainable development and to become a model enterprise in this field. During the Rio+20 UN Conference on Sustainable Development, it made 10 voluntary commitments, including the development of a sustainability strategy. In November 2012, it released its Environmental Protection Report, the first of its kind among Chinese industrial companies, unveiling its environmental protection objectives and the major tasks of its 12th Five-Year Plan. And last year Sinopec started its Clean Water and



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Clear Sky Campaign, under which the company will invest about 22.6 billion Chinese Yuan during the last three years of the 12th Five-Year Plan period to further upgrade product quality and cut emissions, bringing significant improvements to the environment in the surrounding regions, while promoting the establishment of an ecologically responsible civilization.

Sinopec currently operates in more than 50 countries, with one-third of its total assets and one-fourth of its revenues coming from overseas. As it promotes overseas development, it adheres to the principle of serving local people, protecting the environment, and enhancing local economic development and social progress.

By investing a total of \$12 billion in Brazil, for example, we at Sinopec have created 20,000 jobs, and paid over \$300 million in taxes. We are happy and proud to be part of the effort to improve the living conditions of the local people and support local economic and social development while making every effort to mitigate any impact on the environment from our projects and to protect sea animals and plants.

To take another example, Addax - a Sinopec subsidiary with operations in a number of countries in Africa and the Middle East - established the Sinopec-Addax Petroleum Foundation to help coordinate activities promoting health, education and environmental public welfare in the developing regions of its territory.

One old Chinese proverb says that draining the pond for fish will leave no fish for fishing: we resolutely pledge not to incur this kind of damage to the environment. Another says that the trees of the ancestors provide shade for their descendants: Sinopec will take as its rule a commitment to sustainable development and to socially responsible corporate citizenship so that it can contribute to economic prosperity and social progress everywhere that it operates.



# Collaborating change



**JOHN ASHE**  
President 68th session of the United Nations General Assembly

Reaching new and longstanding development goals will increasingly require closer collaboration among developing countries. South-South solidarity generates fresh ideas, technologies and partnerships, and often grows into strong diplomatic alliances, enabling developing countries to collaborate more closely and influence global governance. South-South connections based on trade and investment have grown exponentially in recent years. These deepening economic ties have led to new opportunities

Over the past two decades, the world has witnessed dramatic global change and regional transformations, bringing new, unprecedented and increasingly complex socio-economic and environmental threats and challenges to the fore. Responding to new threats and existing challenges will be difficult, testing our individual and collective abilities - and, more importantly, requiring new forms of collaboration, innovation and partnership. South-South Cooperation can build innovative and inclusive partnerships that contribute to the broader global development agenda, while addressing nationally-driven development goals.



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and policy options, empowering poor countries and improving living conditions throughout the South. Essentially, South-South cooperation is a bottom-up development strategy. More than ever, developing countries are turning to one another for peer learning and collective action and bargaining, searching for innovative strategies that reduce poverty and address other development challenges.

Standing at the crossroads of the global development agenda and the establishment of the post-2015 development framework, countries of the global South are attempting to revitalize their mechanisms for development and to make investment more attractive. Governments, private sector and other organizations are introducing innovations in their structure, practices, capacities, and the ways they mobilize and deploy human capital, information, technological and financial resources. Under such circumstances, using development tools and investment appropriately can play a crucial role. A centrally-facilitated source of best practices, knowledge exchange, and policy development - fully functioning within the framework of the United Nations and the Member States - can contribute towards an enabling environment for social and economic growth. In this context South-South Cooperation Initiatives play a role assisting in capacity building and directly facilitating cooperation and communication among all relevant stakeholders at national, sub-regional, regional and global levels.

Cooperation can facilitate communication and improve coordinating investment and development in both the public and private sectors. Knowledge-sharing can enhance the speed and efficiency of operations by streamlining processes, lowering costs, and improving research capabilities and data availability. The key to unlocking the full potential of South-South Cooperation lies in figuring out how best to scale up and replicate knowledge-sharing and disseminate innovative practices related to concrete development goals.

The drivers of the current phase of South-South relations are countries such as China, India, Brazil and South Africa, which have a wealth of experience, knowledge and homegrown technology, enabling them to make significant socio-economic gains. They have been willing to share knowledge and practices with developing world partners in the spirit of South-South solidarity. Yet despite many commendable achievements, much remains to be done, with 1.2 billion people still living in extreme poverty. Uneven progress toward achieving the Millennium Development Goals underscores the need for stronger South-South partnerships. South-South cooperation must be promoted more vigorously as a means of transferring experiences, knowledge, and technical know-how in such strategic areas as science, technology and innovation. Due to relatively similar levels of development, collaboration among Southern countries is particularly beneficial in this regard.

New means of South-South development finance, directed toward the South's enormous infrastructure needs, must also be welcomed and supported. About 1.4 billion people still do not have reliable electricity, 900 million lack access to clean water and 2.6 billion do not have adequate sanitation. Reliable estimates indicate that infrastructural spending will have to rise from \$800 billion to around \$2 trillion annually in the coming decades to achieve long-term poverty reduction and inclusive growth. South-South partnerships, complementing traditional forms of aid, can become significant sources of development finance. The spectacular growth of developing countries' foreign currency reserves, estimated at over \$7 trillion, as well as their sovereign wealth funds, provide enormous opportunities. South-South interest-free and concessional loans have financed massive infrastructural projects including roads, railways, ports and airports, as well as initiatives in other sectors in many developing countries, particularly in Africa.

Collective problem-solving is essential. Such complex development challenges as environmental degradation, food insecurity, climate change, communicable diseases and natural resource management cut across regional and national boundaries, often requiring a collaborative response. South-South cooperation offers great potential for policy coordination and targeted sub regional and regional programmes, including cross-border initiatives for providing public goods. South-South

solidarity gains real meaning when countries pool resources to design neighbourhood policies for providing physical infrastructure, effective regulatory frameworks, human resource development and the management of supply chains. Such concerted efforts are essential in creating an environment that attracts domestic and foreign investors, and leads to valuable investment, job creation, poverty reduction and fulfilling a wide range of development needs.

South-South partnerships also have a significant role in democratising governance. They enable developing countries to forge alliances and formulate common positions on issues of shared interest at global fora, where they can collectively negotiate for better economic opportunities, access to global markets, debt forgiveness, and public goods and services. During climate change negotiations, for example, South-South cooperation enabled developing countries to push for international support in adopting mitigation and adaptation policies, while negotiations on intellectual property rights have empowered least developed countries to win concessions on providing affordable HIV/AIDS antiretroviral drugs to millions of poor people.

South-South cooperation expands the landscape of partnerships needed to realize development aspirations embedded

## South-South cooperation expands the landscape of partnerships needed to realize development aspirations embedded in the Millennium Development Goals and any future development agenda.

in the Millennium Development Goals and any future development agenda. As developing countries continue on the path of poverty eradication and sustainable development, more concerted efforts will be needed to unleash the full potential of South-South relationships. The annual Global South-South Development Expo offers significant opportunities to bring together national governments, multilateral agencies, the private sector and civil society organizations as exhibitors showcase proven development solutions, forge new partnerships and strengthen existing ones.

Now more than ever, there are exciting opportunities for developing countries to share, transfer and exchange knowledge, information and technologies that benefit the aspirations and needs of fellow developing countries. The real benefit of South-South Cooperation lies not only in sharing the best practices but in then applying shared knowledge to transformation processes relevant

to countries' specific needs. Lessons learnt and experiences shared by and amongst developing countries strengthen human and institutional capacity and enhance investment delivery, while improving the efficiency and productivity of governance processes. The anticipated outcomes of South-South collaboration are strengthened cooperation and a shared sense of commitment and partnership towards attaining agreed global sustainable development goals and nationally-driven and context-specific ones. It offers both a means of partnering that enables developing countries to be the agents of their own development transformation and the potential for improving livelihoods and human well-being in the post-2015 development agenda.



PHOTO COURTESY: UNDP





**US\$4 trillion** South–South merchandise exports in 2011 reached US \$4 trillion, or a quarter of the world’s exports. In the past two decades, all developing regions have significantly increased their exports to the South. Source: UNCTAD

Since 2008/2009, the South exports more to other developing countries than to the North.

2013 is a symbolically important year for the global economy. In 2013, the emerging markets’ combined GDP will surpass that of the developed ones, according to estimates from the World Bank.

South–South trade as a whole is an example of regional specialization: Asia exports manufactured goods and Africa and Latin America export commodities to Asia. Fuels dominate Africa’s exports to the Latin America, while basic food items are the main exports from Latin America to Africa.

**BRIC** The BRIC countries were initially a group of four large, developing countries - Brazil, Russia, India and China – later joined by South Africa. BRICS are distinguished from a host of other promising emerging markets by their demographic and economic potential to rank among the world’s largest and most influential economies in the 21st century (and by having a reasonable chance of realizing that potential).

**40%** The four original BRIC countries comprise more than 2.8 billion people or 40 per cent of the world’s population, cover more than a quarter of the world’s land area over three continents, and account for more than 25 percent of global GDP.

A country’s population and demographics, among other factors, directly affect the potential size of its economy and its capacity to function as an engine of global economic growth and development. As early as 2003, Goldman Sachs forecasted that China and India would become the first and third largest economies by 2050, with Brazil and Russia capturing the fifth and sixth spots.

From 2000 to 2008, the BRIC countries’ combined share of total world economic output rose from 16 to 22 per cent. Together, the BRIC countries accounted for 30 per cent of the increase in global output during the period.

To date, the scale of China’s economy and pace of its development has out-distanced those of its BRIC peers. China alone contributed more than half of the BRIC countries’ share and greater than 15 per cent of the growth in world economic output from 2000 to 2008.

**6%** Africa’s economy is growing faster than any other continent, according to the African Development Bank (AfDB). A new report from the African Development Bank said one-third of Africa’s countries have GDP growth rates of more than 6 per cent.

The continent’s middle class is growing rapidly - around 350 million Africans now earn between \$2 and \$20 a day.

The share of the population living below the poverty line in Africa has fallen from 51 per cent in 2005 to 39 per cent in 2012.

The majority (over 90 per cent) of South–South manufactured exports come from Asia. Latin America claimed 6 per cent and Africa’s share is 2 per cent. This has been a consistent pattern for the last decade.

**The share of the population living below the poverty line in Africa has fallen from 51 per cent in 2005 to 39 per cent in 2012.**

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Most of us have heard of the Great Wall of China. Much less well known is its Green Wall, but in the long run the latter could have as much, if not more, impact. The Green Wall is a perfect example of ecosystem based adaptation (Eba) at work and could become the model for a similar project proposed for Africa's Sahara desert.

## Background

Over a period of more than 2500 years, China constructed and maintained its Great Wall to repel invasions from forces to the North. This wall – despite covering more than 21000 km – was often unsuccessful in holding back the northern attackers.

China has now built a more successful wall, a 'Green Wall', 436 km long, that is holding back thousands of hectares of sand dunes from within the second largest sand desert in the world – the Taklamakan Desert of Xinjiang Uygur Autonomous Region in northwest China.

This new Green Wall comprises a dense plantation of irrigated, indigenous, desert plant species adjacent to the highway that cuts through the centre of the desert.

The air temperature of the Taklamakan Desert has increased as a result of climate change and is predicted to rise by several more degrees over ensuing decades – with poorly understood impacts on the desert ecosystem and water regimes. It is, however, likely that sands will become increasingly mobile as top soils become drier as a result of warming.



# The Green Wall in the heart of the Taklamakan Desert



PHOTO: COURTESY WIKIPEDIA

## The problem

The Taklamakan Desert is the world's second largest shifting sand desert (after the Sahara), covering 337,000 square kilometres, and lying in the rain shadow of the Himalayas. The Tarim Desert Highway that dissects the desert from north to south was completed in 1995 to transport the oil and gas from the centre of the desert.

Sand persistently encroached on the road and the Xinjiang Institute of Ecology and Geography Research (XIEG) consequently undertook research for the oil and gas industry to determine how indigenous plants could be used to create a barrier to the sand movement.

The Taklamakan Desert Research Station (TDRS) was established in 2003 to build on scientific research. Applied research at this station – which has the harshest climate, in terms of heat and aridity in the world – was undertaken to determine which species could tolerate the extremely saline groundwater of the Taklamakan Desert.

In certain places in this desert, the groundwater has a salinity approaching that of seawater, and irrigation with such water would prohibit the growth of most plants on earth.

The TDRS overcame this problem by testing the growth of 173 species of plants under the desert climate and under irrigation with saline water. Of these, only 88 species were able to grow well under the harsh environmental conditions. Three plant genera from the 88 species were selected as having optimal characteristics for the construction of the Green Wall, namely Calligonum, Haloxylon and Tamarix.

## The Solution

The answer to the problem was based on 50 years of scientific research conducted by the Xinjiang Institute of Ecology and Geography Research (XIEG) within the Chinese Academy of Sciences. This research, driven by the demands of communities and industry, was conducted by numerous research stations – including those from the Chinese Ecosystem Research Network.

China has recently started sharing its experience and research know-how in ecological restoration and climate change adaptation with developing countries via the joint UNEP-NDRC global project “Enhancing Capacity, Knowledge and Technology Support to Build Climate Resilience of Vulnerable Developing Countries” funded by the Special Climate Change Fund of Global Environment Facility.

The good practices and technologies can be shared and transferred to Africa, in particular in support that continent's Great Green Wall of the Sahara and the Sahel (GGS) which needs to go far beyond simple tree planting.





# Saving mangrove forests



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Coastal mangrove forests, uniquely adapted over centuries, play a crucial role in protecting shorelines. The ecosystem services they provide and the support they give people living and working on coasts worldwide are worth at least \$1.6 billion a year. However, despite their importance, they are being lost rapidly and urgent action is needed to protect them.

PHOTO COURTESY: laststands,kennedy/warner

dependent on mangroves. Thus, food security for many indigenous coastal communities is closely linked to the health of mangrove ecosystems. As much as seven per cent of the carbon dioxide reductions required to keep atmospheric concentrations below 450 ppm could be achieved simply by protecting and restoring mangroves, salt marshes and sea-grass communities. Mangroves sequester up to 25.5 million tonnes of carbon per year and contribute more than 10 per cent of essential organic carbon to the world's oceans.

## The solution

Since the 2004 Indian Ocean tsunami, there has been a general increase in the awareness of the importance of mangrove ecosystems; efforts to conserve, protect and restore them can be seen in Bangladesh, India, Indonesia, Myanmar, Seychelles, Sri Lanka, Pakistan, Thailand and Vietnam.

The Ministries of Environment and Natural Resources of Guatemala, Honduras and Nicaragua, in collaboration with UNEP have embarked on sustainable mangrove management, raising awareness of the critical role mangroves play in areas that are constantly threatened by the risk of hurricanes and sea level rise.

As the negative impacts of climate change, including rising sea levels, become more evident, the economic value of coastal wetlands for protection will also increase as the need for buffering services becomes more critical. While market pressures push for mangroves to be cleared for aquaculture and urbanization, coastal land managers must consider not only the value of the services that mangroves provide, but also their potential value in the future.

Governments in the south have often compared notes on the issue, particularly lessons learned. Countries such as Tanzania and Malaysia have placed all mangroves in forest reserves under state ownership. In some locations in Australia, local policies of "no net loss" have placed specific limitations on future mangrove clearance.

These strategies will be effective in the long term if backed by strong political will, enforcement measures and penalties for non-compliance.

## The problem

Increasing population in coastal areas has spurred the widespread clearing of mangroves. Over-exploitation for fuel wood and timber production has degraded about 26 per cent of mangrove forests around the world. Shrimp aquaculture has contributed to about 38 per cent of global mangrove loss and other types of aquaculture account for approximately another 14 per cent.

In India, more than 40 per cent of the mangrove area on the western coast has been converted to agriculture and urban development. While direct anthropogenic impacts are the biggest threat to mangrove ecosystems, changing climates probably will pose even greater risks in the future.

### WHY SAVE MANGROVES?

Mangroves are an important bulkhead against climate change: they afford protection for coastal areas from tidal waves and cyclones and are among the most carbon-rich forests in the tropics. In the face of rising sea levels and changing climates, coastal buffering against negative impacts of wave action will become critical and will play an important role in climate change adaptation.

Located largely in tropical and sub-tropical regions, mangroves provide shoreline protection and an array of ecosystem services. They support nutrient and organic-matter processing, sediment control for other inshore habitats (e.g. seagrass beds and coral reefs), and a source of wood for coastal communities.

As a habitat for commercially valuable marine species, it is estimated that almost 80 per cent of global fish catches are directly or indirectly



# Altering economic geography



**YIPING ZHOU**  
Yiping Zhou, Director, UN Office for South-South Cooperation

South-South cooperation originated in the early 1950s. Many developing countries, emerging from colonial rule, began questioning the fairness of international economic and political relations, collectively advancing proposals to reform global governance. The 1955 Bandung conference - where newly independent African and Asian states started to lay out the principles of solidarity and peaceful coexistence among developing countries - led to the formation, in 1961, of the Non-Aligned Movement (NAM). The founding of the Group of 77 (G77) followed three years later, uniting developing countries in articulating and promoting their common interests at major international economic and political forums: its annual ministerial meetings are instrumental in shaping the South-South development agenda globally and within the United Nations system.

Since the early 1960s developing countries have also fostered subregional and regional economic integration through such entities as the Central American Customs and Economic Union

and the Association of South East Asian Nations (ASEAN), aimed at helping to expand market size, generate scale economies and lay the foundation for more systematic integration of production structures across countries in each region of the global South. However, developing countries' lack of adequate physical and communications infrastructure and the similarity of their commodity exports inhibited the anticipated South-South trade.

By the 1970s many developing countries had gained political independence, raising great optimism about their ability to usher in a more just international economic order. As their numbers increased, they began pressing for change in the international economic system shaped during the colonial period, and for increased institutional capacity in the United Nations system to respond to their economic and social needs. G77 and NAM activism led to the adoption of the UN General Assembly resolutions on the New International Economic Order in 1974

and the establishment of a Working Group to examine ways of intensifying technical cooperation among developing countries. The 1978 UN Conference on technical cooperation among developing countries in Buenos Aires provided a strategic framework of South-South cooperation for the first time, and adopted a plan of action aimed at fostering national and collective self-reliance in Southern countries by promoting cooperation in all areas - supplementing, not supplanting, cooperation with developed ones.

The 1980s proved more challenging. The shift in the US and OECD countries' macro-economic policies led to a quantum jump in the cost of capital worldwide which - coupled with policy and implementation errors - forced many developing countries into high indebtedness and severe economic decline, if not negative growth rates. Their previous gains in reshaping the global agenda were reversed and little attention was paid to South-South cooperation.

In the late 1980s and 1990s, dissolution of the Soviet Union and the end of the



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PHOTO: TECHNOSENSE

Cold War made globalization politically feasible and added urgent imperatives for South-South cooperation, while the phenomenal growth of large multinational firms and the new information and communications technologies opened up unprecedented opportunities for it. China, among other countries, adopted an export-led approach to growth, attracting enormous foreign investment in manufacturing, which was incorporated into regional production chains serving global markets. East Asian manufacturing and exports boomed, massively importing commodities from Africa and Latin America to feed their factories.

As a result, South-South cooperation has expanded to unprecedented levels over the past two decades. Trade among developing countries went up from 38 per cent of their total exports in the early 1990s to 56 per cent in 2011. By then, too, South-South trade accounted for a quarter of world trade compared to only 13 per cent in 2001. South-South development assistance grew by 78 per cent between 2006 and 2008 to an

estimated \$12 to \$15 billion. South-South foreign direct investment (FDI) grew at about 20 per cent per annum between 1996 and 2009, and now accounts for around 10 per cent of total FDI flows. The South has also witnessed spectacular growth in its national foreign currency reserves - from £4.2 trillion to \$7 trillion between 2008 and the end of 2011 - and sovereign wealth funds.

Continuous economic growth and transformation of Southern countries since the early 1990s - while growth in the North has declined - has shifted global economic geography. The new economic heft of the largest developing countries brought inclusion in meetings of the leading industrialized countries, and led to the formation of the Group of 20 as the pre-eminent forum for global consultation on international economic matters. Southern nations have emerged as make-or-break players in trade and climate negotiations. Many also possess an entire range of modern technical competencies, with centres of excellence that have increased their national and collective self-reliance.

South-South cooperation has come a long way. Despite much unfulfilled rhetoric, it has generated many of the anticipated benefits. It has been a major factor in the decades-long fall of poverty levels in Asia and Africa and the creation of a new middle class on both continents. It has become a complementary modality supporting the development of poor countries, and underpins the buoyant intra-South trade that has changed the geography of international economic relations and made developing countries the drivers of global growth. In a dynamic world working to reorganize itself in the face of economic, political and social crises, and tectonic shifts in economic performance and potential, it has become a key factor of stability and hope.

The challenge ahead is to assist countries at the lowest level of development, whose basic concerns and needs have not changed during these global transformations. The main aim of South-South cooperation must now be to address equitable participation of Least Developed Countries in the world economy and to build their capacity to deal effectively with a range of severe internal problems.

Developing countries look to the United Nations for support for South-South initiatives. At the 2009 United Nations High-level Conference of South-South cooperation, they particularly sought it for establishing and or strengthening South-South centres of excellence - and to help enhance closer collaboration between them, especially at national and regional levels, to improve South-South knowledge sharing, networking, mutual capacity-development, information and best practices exchanges, policy analysis and coordinated action on major issues of common concern. The High-level Committee on South-South Cooperation is the subsidiary body of the UN General Assembly that provides overall policy guidance on South-South and Triangular cooperation in the United Nations system - with the backing of its Secretariat, the United Nations Office for South-South Cooperation, which is mandated to promote and coordinate such work on a global and United Nations system-wide basis. The Office analyses trends, emerging issues, and opportunities to promote South-South cooperation; builds new partnerships with civil society and the private sector; manages various intergovernmental South-South trust funds; follows up the decisions of major Group of 77 conferences and summits; and organizes the annual United Nations Day for South-South Cooperation. It supports all South-South partners through its Multilateral South-South Support Architecture—the Global South-South Development Academy, the Global South-South Development Expo and the South-South Global Assets and Technology Exchange.





**BRAULIO DIAS**  
Executive Secretary, Convention on  
Biological Diversity (CBD)

# Natural Development

“Aid architecture”, as the Rio +20 Conference noted, “has changed significantly in the current decade”. Middle-income parties and other new aid providers are more influential in multilateral negotiations, and developing countries are organized in regional initiatives, and accept partners rather than donors. South-South cooperation, made in the spirit of solidarity, is creating new modalities of cooperation and increasing - and diversifying - the flow of resources. Meanwhile, the interplay of development assistance with private investment, trade and new development actors provides new opportunities for aid to leverage private resource flows. In place of the previous first, second and third worlds, there are now regional multi-polar spheres of influence, with several Southern countries becoming hubs for South-South and triangular exchanges and being sought for joint ventures with Northern partners. So-called BRICS and middle-income countries have provided the largest growth in consumption and economic well-being (if not wealth) in Humanity’s history over the last 20 years, rescuing some 700 million people from poverty.

Although this often brought significant environmental costs, many lower-impact and biodiversity-based solutions have also been developed in the South, many of them adaptable to large-scale replication. Southern multinational corporations are now global players, and many have innovative environmental and social approaches and standards. The challenge is to identify the best approaches and solutions and support the most expedient and cost-effective way of mainstreaming the UN’s Strategic Plan on Biodiversity for 2011-2020 and its associated Aichi Targets into national development paths.

More than 80 per cent of the world’s biodiversity exists in the South, but most of the technological and financial means of managing, using and restoring its resources are still largely owned by the “North”. Lack of access to these critical means for protecting and using biodiversity has presented many Southern countries with a significant challenge. And the economic crisis has caused many developed countries (and, especially, specific communities within them) to face degraded living conditions and ecosystems.

The growing capacity of the South is also visible in the Convention’s Consortium of Scientific Partners (CSP), a network of 24 globally known institutions with a solid track record in scientific and technical expertise - including eight “centers of excellence” from developing countries - established in 2006 to “promote the effective implementation of the CBD through the organization of training and education activities focusing on policy, technical and scientific issues”. At its last meeting members highlighted the opportunity for the Convention to better realise the potential of these institutions’ individual and collective strengths, by expanding its membership in developing countries, mapping the activities/strengths of members both geographically and sectorally (including an inventory/register of skills and tools) and making better use of CBD events. So the CBD Secretariat proposes to cooperate with the Consortium to strengthen developing country membership and make it an effective platform for South-South and triangular, as well as traditional North-South, cooperation.

Some 70 per cent of the CBD’s Parties are developing countries, containing



PHOTO: press room/cb-undp





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80 per cent of the world's biodiversity conservation hotspots according to the Critical Ecosystem Partnership Fund. The Inter-Governmental Panel on Climate Change says that 10 per cent of the Earth's species risk extinction for every degree of global mean temperature increase under a "business as usual" scenario (with some groups going extinct much faster), recalling comparisons with cataclysmic past extinction events. And, as the Millennium Ecosystem Assessment and the Global Biodiversity Outlook Third Report showed, the most significant threats to biodiversity, and greatest rates of loss, are in developing countries.

UNEP's "The Economics of Ecosystems and Biodiversity" report indicates that the current rate of biodiversity loss may reduce the poorest countries' GDP by more than half by 2030. Tourism, for example, is arguably the Caribbean's most significant industry, but coral reef degradation, widespread urban development, and climate change threaten several of its most attractive assets. If Caribbean beaches and coral reefs are not protected and degrade, the number of tourists may fall. The report estimated that wetlands provide humanity with services estimated around US \$3.4 billion per year: yet half the world's wetlands have disappeared since 1900. Global fisheries capture more than 80 million tonnes of fish per year with an estimated value of US \$80 billion, generating around 35 million direct jobs: yet over 70 per cent of

the world's fish stocks are either fully exploited or depleted.

Developing countries share many challenges in institutional circumstances, capacity to implement programmes, and vulnerability to environmental disasters and degradation. Yet they also have an increasing number of experts, scientists and specialists, with an expanding reservoir of intellectual capital and innovations. They also strongly need to put biodiversity to economic use sustainably. Thus many integrated solutions for conservation and sustainable use of biodiversity are to be found in the South.

South-South cooperation began to be discussed at the CBD in 2006 at the request of South Africa. The Secretariat - in collaboration with developing country Parties, experts, UNEP and UNDP - supported the development of a Multi-Year Plan of Action on SSC on Biodiversity for Development, adopted in 2010, in the first South-South Cooperation Forum, by the 131 Parties from the Group of 77 and China. In a CBD decision, Parties welcomed the Plan for South-South Cooperation as "an important contribution to the Strategic Plan for 2011-2020" and called for support for implementing it. The next year, Parties asked the Secretariat to identify coherent and integrated approaches for enhanced support and promotion of scientific and technical cooperation, and to support the establishment of a capacity-building network of national and

regional centers of excellence. They also requested support in match-making, catalyzing and facilitating partnerships and regional pilot initiatives for technology transfer and scientific and technological cooperation, and agreed to reassess progress on these issues in June 2014. The message is clear: South-South and triangular cooperation is a key approach to implementing the Convention on Biological Diversity (CBD).

Biodiversity is the strategic natural capital for developing countries as they progress towards a greener economy. Many Southern countries have developed solutions for harmonizing biodiversity and economic development from their long histories of managing biological resource and co-existing with nature. I hope that the solutions presented at the Global South-South Development Expo 2013 in Nairobi this November, will become both a reservoir of knowledge and a source of inspiration for all of us, responsible - as we are - for finding practical ways to contribute to our planet's sustainability and well-being.



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# 2013 SEED awards

Seed Awards Honour Low Carbon Projects in Africa and Female Entrepreneurs

BIODEGRADABLE plates implanted with organic seeds to provide food after use in Colombia, a social media website to promote car-sharing in Vietnam, certified cocoa for speciality markets, and affordable sanitary pads made from banana waste, are just some of the 34 winners of the UNEP-backed 2013 SEED Awards.

The awards identify and support innovative social and environmental start-up enterprises in developing and emerging economies, which can tackle key sustainable development challenges at community level.

Other award winners include Uganda's 'Nuru Energy', which sells generators powered by pedals via a micro-franchise scheme, and provides reliable, clean, sustainable power to off-grid households., and 'MoWoza' – a mobile phone application providing traders in Mozambique with fast information on prices, payments, and deliveries - credited with empowering female entrepreneurs.

As in previous years, the 2013 SEED Awards placed a special focus on Africa, with 20 Awards being made to enterprises in Ethiopia, Morocco, Mozambique, Namibia, South Africa, Tanzania and Uganda. This is part of a larger project entitled 'Stimulating the Green Economy in Africa', which is funded largely by the European Union, and a separate project funded by the Government of Flanders to grant a further two Awards in the South African provinces of Free State, KwaZulu Natal and Limpopo.

Reflecting the growing need to encourage climate-smart enterprises at the grassroots level, a further 10 SEED Low Carbon Awards are being made to social and environmental enterprises that focus on mitigation and adaptation to climate change. These Awards are funded mainly by the International Climate Initiative of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.

Two SEED Gender Equality Awards complete the line-up. UN Women and UNIDO are funding enterprises that are women-led, or owned, and prioritise gender equality or women's empowerment as a core objective. The Gender Equality Winners will also be supported by the SEED Associate Hogan Lovells, the international law firm.

Each winner will receive from SEED a package of individually-tailored support for their businesses, access to other supporting institutions and technical assistance, and a financial contribution of US \$5,000 to meet their most pressing needs. In an effort to raise the profile of the projects on an international level, all the 2013 SEED winners will be honoured at a high-level award ceremony at UNEP headquarters in Nairobi, Kenya, during a special SEED Symposium on Green Entrepreneurship taking place during the Global South-South Development Expo this October.

The 2013 call for proposals saw applications from 85 countries, representing the collaborative efforts of non-governmental organisations, women and youth groups, labour organizations, public authorities, international agencies and academia.

Most of the applications were in the agricultural and rural development sectors, as well as in energy and climate change, and ecosystem management. Many entries at the same time addressed micro-enterprise development, IT applications, and education and training.

Achim Steiner, UN Under-Secretary-General, UNEP Executive Director: "Once again we see through the SEED Awards the innovation and dedication to green and inclusive business models that is happening at the local level. It is not simply economic imperatives that drive these entrepreneurs, but trying something not tried before and making a difference -to their communities and the environment. Equitable green economic growth has to become a cornerstone of the post 2015 development agenda and the SEED Winners demonstrate how this transformative process is working at the grassroots. We need their insights and experience so we can build an environment that will encourage others to follow suit."

The winners were selected by the independent SEED International Jury of experts.

The SEED initiative was founded in 2002 by UNEP, UNDP and IUCN to contribute towards the Millenium Development Goals and the commitments made at the Johannesburg World Summit on Sustainable Development.

Further details about all SEED Winners can be found on the SEED website at [www.seedinit.org](http://www.seedinit.org)



# Eco-friendly gadgets

Eco-friendly shouldn't have to mean eco-ugly. These gadgets are as easy on the eye as they are on the environment.

[switchlightingco.com](http://switchlightingco.com)

## Switch bulb



Ever since traditional bulbs went the way of the dodo, the hunt has been on for a low-energy alternative that sheds lovely light and won't cost the earth. The Switch LED bulb could be the answer. Not only does it look good turned on – with a warm, skin-flattering glow – but it's also a stunner when turned off. An aluminium structure and a liquid cooling system allows this bulb to light the way for 25,000 hours without burning out. It's so pretty, we may go blind just staring at it.

[convar.com](http://convar.com)

## Bytepac



Space: everyone needs more of it. Especially on a computer. But external cases can be pricey, and who wants a wobbly pile of mismatched boxes and tangled cables? BytePac rehomes your old (or new) hard drives in eco-friendly cardboard, turning them into usable external drives and making archiving easy (they all line up on a shelf). Various designs are available, including a plain version which you can attack with a marker pen. The price nets you three boxes and a USB connection kit.

[biolitestove.com](http://biolitestove.com)



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Eco-friendly chemicals, hi-tech machines and bio-degradable garbage disposal bags are being used to ensure the cleanliness of New Delhi's Metro stations. Delhi Metro Rail Corporation (DMRC) decided this year to re-work its cleaning and housekeeping practices by using advanced and hi-tech machineries and is conducting specialised training programmes for its staff to ensure the entire system is clean and hygienic round-the-clock.

New housekeeping contracts for all Metro stations are being awarded. They will make sure dust-free sweeping and cleaning operations are undertaken. Bio-degradable garbage disposal bags and eco-friendly cleaning chemicals and reagents will be used for cleaning operations. Presently, DMRC deploys around 3,500 housekeeping personnel at its 137 stations. On average 20-25 persons are deployed per station.

## Biolite Campstove



Unlike traditional camping stoves, which burn liquid or gas fuel from disposable canisters, this earth-helper uses nature's cast-offs to cook your beans, all the while turning that heat into electricity to charge your gadgets via USB. The Biolite burns sticks, pine cones and other natural fuels, packs down to the size of a water bottle and weighs just 935g. Now you can commune with nature and still get enough juice into your tablet to watch Bear Grylls: Born Survivor over dinner.

[idcook.com](http://idcook.com)

## ID Cook CookUp200



With the solar-powered CookUp200, there's no need to mess around with dirty charcoal and damp matches. This barbie's metre-wide reflective dish focuses the sun's rays, generating 200°C of heat to pummel your burgers into succulently-seared submission. There's room on the grill to feed five party-goers, and it can be assembled in 10 minutes without tools. You really do need proper barbecue weather, though – the winterr drizzle won't get your sausages sizzling.

SOURCE: [www.pc.authority.com](http://www.pc.authority.com)

○.....

United Nations Secretary-General Ban Ki-moon recently announced the appointment of **Ibrahim Thiaw** of Mauritania as Assistant Secretary-General and Deputy Executive Director of the United Nations Environment Programme (UNEP).

“I saw our world change before my very eyes: I saw people suffering, animals dying, forests disappearing, land drying up... I thought we had to do something about it.”



Mr Thiaw, who succeeds Amina Mohamed of Kenya, brings to the position more than 30 years of experience in the fields of environment and sustainable development, coupled with his knowledge of UNEP and multilateral processes.

Mr Thiaw told Our Planet his interest in environmental issues began when as a small boy growing up in Mauritania he witnessed at first hand the effects of the devastating Sahelian droughts of the late 1960s and early 1970s.

“I saw our world change before my very eyes: I saw people suffering, animals dying, forests disappearing, land drying up... I thought we had to do something about it,” he explained in an interview.

That desire motivated Mr Thiaw to go and study in Morocco rather than in France. “Morocco because of its own links to the Sahara and the region it shared with Mauritania, had similar ecological issues to deal with... When I returned, we decided to train more people in Mali, Algeria and Morocco and I saw at first hand the benefits of south south cooperation,” he said.

Mr Thiaw served for 10 years in his country’s Ministry of Rural Development. Subsequently, his professional career has spanned the full spectrum of practical work at national and regional levels to leading global programmes, including experience of United Nations inter-agency and intergovernmental processes.

Given his background, Mr Thiaw is a strong advocate of south south cooperation, but believes the time has come to move beyond traditional areas of bi-lateral cooperation and reflect the changing dynamics of the global economy and new emerging trade patterns.

“The world is changing, most of the emerging economies are in the south... Africa has one billion people and has had sustained growth over the last 10 years. South south means business too now, not just not cooperation. It must now reflect the entire spectrum of activities and ties from local authorities to local authorities, city to city, bank to bank and so on,” he said.

Mr Thiaw joined UNEP in 2007 as Director of the Division of Environmental Policy Implementation (DEPI). Prior to joining UNEP, Mr. Thiaw worked for 15 years for the International Union for the Conservation of Nature (IUCN) where he served in different positions, including Acting Director-General and Regional Director for West Africa.

Born in 1957 at Tekane in Mauritania, Mr. Thiaw is married with three children.

“Improved community stewardship of the environment has led to a marked decline in destructive land practices.”



“Policymakers across the world are realizing that through cost-effective actions ..... major reductions in short-lived climate pollutants can be achieved.”



**Pati Ruiz Corzo**, who has been named a 2013 Champions of the Earth winner, is a grassroots environmental campaigner credited with securing the future of one of Mexico's most critical ecosystems, and supporting the livelihoods of disadvantaged rural communities.

Martha Isabel Ruiz Corzo, better known as 'Pati', 60, is the director of Grupo Ecológico Sierra Gorda I.A.P., committed to the conservation of the Sierra Gorda Biosphere Reserve – Mexico's most ecologically diverse protected area and described as a "green jewel" in the heart of the country.

The reserve is heralded as a model of public-private ecosystem management, where eco-tourism, waste management, and conservation projects provide income for hundreds of local residents, as well as securing the future of a rich habitat once threatened by deforestation and unregulated development.

The Champions of the Earth prize, the UN system's highest environmental accolade, is awarded annually to leaders from government, civil society and the private sector, whose actions have had a positive impact on the environment. It is organized by the United Nations Environment Programme (UNEP).

Ten years after Ms. Ruiz Corzo, her husband, and local residents established the Sierra Gorda Ecological Group, they successfully lobbied the Mexican Government to grant the area Biosphere Reserve status in 1997. It remains the only case in Mexico of a protected area resulting from a grassroots initiative.

Today, over 380,000 hectares of forest and other ecosystems are afforded special conservation status. Improved community stewardship of the environment has led to a marked decline in destructive land practices, and resulted in some 13,000 hectares of regenerated woodland over the past 15 years. Once-threatened species which inhabit the reserve's 14 distinct ecosystems, including jaguar, butterflies, and aquatic life, are increasing in number.

*"A love for the Earth, safeguarding the sacred fabric of Nature, promoting individual and collective efforts, being alert to emergencies, and a maintaining the commitment, creativity and passion to relieve the weight that our society places on the planet; this is what continues to inspire my work," said Ms. Ruiz Corzo.*

*UN Under-Secretary General and UNEP Executive Director, Achim Steiner said: "The transformation of the Sierra Gorda Biosphere from a critically threatened ecosystem to a living example of conservation through green economic development and community action is testament to Pati's inspirational work over the past three decades."*

More information on the Sierra Gorda Biosphere Reserve is available at: <http://sierragorda.net/en/reserva-de-la-biosfera-sierra-gorda/>

**Veerabhadran Ramanathan** is an atmospheric scientist whose landmark research showed that cutting emissions of 'black carbon' or soot can significantly lessen the impacts of climate change, improve the health of millions of rural poor, and avoid crop losses.

A distinguished Professor of Climate and Atmospheric Sciences at Scripps Institution of Oceanography, University of California at San Diego and UNESCO Professor of Climate & Policy, TERI University, New Delhi, India – he co-led an international research team that in 1997 first discovered the climate impact in Asia of widespread air pollution, known as the atmospheric brown cloud (ABC).

He recently received a 2013 Champions of the Earth award, the UN's highest environmental accolade, in recognition of his ground-breaking work.

Further studies by Prof. Ramanathan and fellow researchers highlighted the effects of growing levels of black carbon, sulfates, ozone and other pollutants emitted by cities, industry, and agriculture – termed the 'brown cloud' – which warm the atmosphere by absorbing sunlight, and are contributing in particular to the accelerated melting of Himalayan glaciers.

Brown clouds can also disturb tropical rainfall and regional circulation patterns such as the South Asian monsoon and reduce agriculture yields, potentially affecting over a billion people on the subcontinent.

The research underlined that cutting emissions of black carbon, methane, hydrofluorocarbons (HFCs), and other substances collectively known as short-lived climate pollutants (SLCPs), with life times of a decade or less, along with mitigation of CO2 emissions, can reduce the rate of warming by as much as half in the coming decades.

Prof. Ramanathan says: "Policymakers across the world are realizing that through cost-effective actions such as reducing methane emissions from natural gas and oil production, and capturing from waste dumps, or phasing out products' HFCs, major reductions in short-lived climate pollutants can be achieved, with significant add-on benefits for health and food security. As the science shows, fast action on black carbon, methane and HFCs – coupled with major cuts in carbon emissions – can make a critical contribution to achieving low carbon, resource-efficient, and inclusive development for all."



**DINGDING TANG**  
Director General of the  
Department of International  
Cooperation, Ministry of  
Environmental Protection, China

# Expanding horizons

From the UN Conference on the Human Environment in Stockholm to “Rio+20”, the international community has never ceased to search for a global solution to environment and development issues. We have reaffirmed our confidence, over the years, in nations’ joint endeavors to tackle global environment and development challenges: but we have also encountered setbacks in our cooperation due to differences in stages of national development. One principle, however, has been clear: that developing and developed countries have a common but differentiated responsibilities for the cause of the environment and development.

Nations have continued to explore South-South environmental cooperation in light of their respective development realities: seeking win-win results through such global collaboration has become a mainstream trend. This is now an integral part of international environmental cooperation, a pivotal approach towards sustainable development and a strategic complement to South-North environmental cooperation.

After many years of unremitting efforts, developing countries have gained a greater voice in the international community and their global influence has increasingly been growing larger. Yet, at the same time, they are also facing severe challenges in ecological damage and environmental pollution through their undeveloped scientific and technological capabilities and through depending excessively on natural resource exploitation. South-South cooperation has therefore naturally become an important approach for mutual support, exchanges and experience sharing among developing nations as they strive towards sustainable development.

As a developing country itself, China has to address tremendous environment and development challenges. Its priority is to strike a balance between environmental protection and economic growth, focusing on domestic economic and social progress on one hand and actively engaging itself in the international trend of green development on the other. In the long run, China aims to achieve a green



transition of its mode of development mode and to materialize an ecological civilization.

China has been a firm participant in, and supporter of, South-South environmental cooperation and green development. In this, it has followed the principles of equality and mutual benefit, of being results-oriented, and of pursuing





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long-term cooperation and common development.

During the “Rio+20” Summit in June 2012, the Chinese government committed \$6 million to the Trust Fund of the United Nations Environment Programme (UNEP) to help build up the environmental capacities of developing nations. As a leading global environmental

organization, UNEP serves as an essential platform for South-South environmental cooperation and the first projects supported by this fund have already been launched. We are convinced that our contribution to the Trust Fund is just a start. China will continue to leverage the platform UNEP provides to expand the scope and depth of South-South environmental cooperation.

Our government established the China-ASEAN Environmental Cooperation Centre in 2010, as an institute for regional cooperation, and especially South-South environmental cooperation. It has developed a cooperation strategy and action plan jointly with ASEAN member states and the ASEAN Secretariat, and has achieved substantial results in high-level environmental policy dialogue, in environmental industry and technological exchanges, in joint policy research and personnel exchanges and in capacity building.

Beyond Southeast Asia, China has also carried out effective cooperation on environmental capacity building with other regions, including Africa, Central Asia, the Arabian countries and Latin America. Since 2006, over 1000 senior officials of environment and development from these regions have been invited to China for exchanges and training programs with the funding support of the Chinese government. China is thus committed to establishing regional platforms to explore new models of environmental cooperation.

China has also concluded and signed more than 50 international environmental agreements, established national management mechanisms and developed or revised relevant domestic laws. It has made every effort effectively to implement these international agreements and has contributed to global environmental protection. In the spirit of candid cooperation, China cooperated with SAARC, GMS and African countries on the Biodiversity Convention, on chemicals management and on convention implementation capacities, thus demonstrate its readiness to address global environmental challenges together with other developing nations and to share knowledge and experience to strengthen capacity building and promote better implementation of international environmental conventions.

Looking into the future, we would like to propose the following:

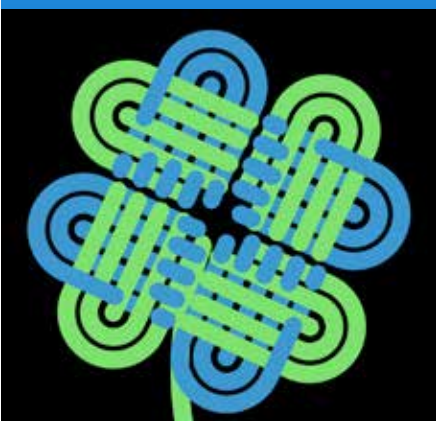
(1) Strengthening Policy Dialogue and Promoting Mutual Understanding and Support.

As South-South environmental cooperation continues to deepen, the nations could step up policy dialogue and exchanges on green development and the transition to green economies, promote mutual understanding and support and raise the level of cooperation.

(2) Developing Information Sharing Platforms to Strengthen Capacity Building.

Many developing countries are close geographically, enjoy cultural and historic ties, or have followed similar development paths – so they have rich knowledge and experience to share amongst themselves. The establishment of information sharing platforms will better enhance environmental management capacities of these countries, especially those with similar economic conditions.

(3) Expanding Cooperation Channels and Advancing Pragmatic Cooperation. While pushing South-South environmental cooperation, one should not neglect the importance of South-North cooperation which it beneficially complements. So it is wise to expand horizons, and to encourage more stakeholders – and especially traditional donor countries - to participate in South-South environmental cooperation, and carry out tripartite cooperation among South-North-South, so as earnestly to push forward the cause of global sustainable development.



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# Reimagining the future

Anyone who has ever lived on an island will appreciate the significant role the ocean plays in how people go about their lives. As countries converged last year at the Rio+20 summit, focused on the concept of the green economy, many Small Island Developing States (SIDS) were re-visioning the concept as the “blue economy” more closely to reflect their situation.



**KATE BROWN**  
Head, Global Island Partnership

The Government of Seychelles, a champion of the concept, has identified the blue economy as seeking “improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.” It added; “It re-affirms the same principles of low carbon, resource efficiency and socially inclusivity (as the green economy), but it is fashioned to reflect the circumstances and needs of countries whose resource base, for the future, is marine”.

BOAT : UNITED NATIONS PHOTO  
TURTLE: ©SHUTTERSTOCK





Championing the blue economy arises from countries which have long defined themselves not just as small island developing states but as large ocean developing ones. The ‘small island’ name emphasizes their relatively tiny land areas and populations, and limited land-based natural resources. SIDS, however, have long argued that they are custodians of huge ocean areas.

Ambassador Ronald Jumeau of Seychelles, Chair of the Steering Committee of the Global Island Partnership, recently explained during an UN ocean expert meeting: “We are the ocean people: we live off and by the oceans and to varying degrees on and for them. The oceans define who we are and the coastal and marine environment is an integral part of our island lifestyle. Our islands may be small in land area, but we morph into large ocean states when our exclusive economic zones are factored in.” Tuvalu’s Exclusive Economic Zone (EEZ), for example, is 27,000 times the size of its land area. The Republic of Kiribati has the world’s 13th largest EEZ while, in all, SIDS are the custodians of 15 of the 50 largest ones on the planet.





Within the partnership, island countries are leading significant south-south cooperation efforts in each of the three SIDS regions – the Indian Ocean, Caribbean and Pacific. In the Pacific, Palau, the Republic of Marshall Islands, the Federated States of Micronesia, Guam and Northern Mariana Islands have committed to having 20 per cent of its near-shore marine and 30 per cent of its terrestrial areas under effective management by 2020. This commitment, known as the Micronesia Challenge, in turn inspired leaders of nine Caribbean countries and territories, including Puerto Rico and the British Virgin Islands, to make their own declaration - the Caribbean Challenge - to protect 20 per cent of their coastal areas by 2020. In the Indian Ocean, Seychelles has made an initial blue economy commitment to designate 30 per cent of its coastal zone as marine protected areas - with 15 per cent of the coastal zone as no take zones if it can achieve a debt swap- and is reaching out to the SIDS and other countries of the east coast of Africa to form the Western Indian Ocean Coastal

Island people have also long understood the need for cooperation. Cooperation between islands and regions is essential to overcome their capacity, scale and geographic challenges, which have been well recognized by the United Nations. It is equally vital in dealing with the capacity of SIDS to manage and benefit from these huge ocean areas in a way that doesn't damage their sustainability.

The partnership encourages all islands, regardless of size or political status, to take bold steps towards greater sustainability. It provides a global platform that enables them to work together to develop such solutions to development priorities as the green and blue economies, and to support high-level commitments and actions that will advance them.

The perspective that islands must strive towards sustainability is a core reason that President James A. Michel of Seychelles and President Tommy E. Remengesau Jr. of Palau together called for an international partnership of islands to enable the cooperation necessary to halt global biodiversity loss, address the threat of climate change and ensure a sustainable future for island people and the planet. The resulting Global Island Partnership – GLISPA focuses on the green and blue economies in the context of conservation and sustainable livelihoods.



The partnership encourages all islands, regardless of size or political status, to take bold steps towards greater sustainability.

Challenge. These large-scale regional initiatives are now looking at what the evolving focus on the blue economy over recent years means for the commitments they have already made – and at what more they can advance.

All these cooperation and partnership efforts are driven by high-level political leadership and cooperation in each region with large-scale conservation and funding commitments to drive genuine and measurable impact and change. The commitments provide a beacon of inspiration to encourage further political leadership and action, and to leverage the political motivation to improve implementation. The countries and supporting partners are both inspiring and learning from each other about how to develop this type of cooperation initiative and how to make significant progress on implementation, in a tangible example of south-south cooperation at a very high level in each country. Each of the commitments has as its essence



**GLISPA**  
*Global Island Partnership*  
A partnership for all islands, regardless of size or political status, to take bold steps towards greater sustainability and conservation of island resources.

[LEARN MORE](#) >



GLOBAL ISLAND PARTNERSHIP



**Partnerships**  
*Success Stories*  
Partnerships allow SIDS to overcome challenges that are too difficult or complex for one country, organization or sector to address alone.

[LEARN MORE](#) >

the concept of islands helping themselves and helping each other. As a partnership of island country partnerships, GLISPA helps share their solutions to encourage them to be scaled and replicated among them.

The United Nations has declared 2014 the International Year of Small Island Developing States, thus providing an opportunity for SIDS to demonstrate their solutions and successes - and where they

need further help to achieve their development aspirations sustainably. In September 2014, Samoa will host the third international meeting on the sustainable development of SIDS, presenting a further opportunity to continue to demonstrate cooperation and partnership initiatives that help SIDS move forward on a blue economy: indeed the Government of Samoa is making partnerships, in all their various forms, the meeting's theme. ■



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# Suzanna Owiyo

She calls what happened to her “unexpected responsibility” and it has led the Kenyan singer-songwriter, Suzanna Owiyo, to **fight food waste** in Nairobi’s Marikiti Market, press for women’s empowerment and education and prepare to campaign against **poaching** rhino and elephant.

Growing up near Kisumu, on the shores of Lake Victoria she has been steeped in music from an early age, thanks to her grandfather, who played the Nyatiti, a Kenyan lyre. After winning many trophies for her school in provincial and national competitions she studied at the Kenya Conservatoire of Music in Nairobi and was then asked to compose a theme song for the opening ceremony of Kisumu’s centennial celebrations in 2001. She performed ‘Kisumu 100’ in front of a crowd of 60,000 people, and a star was born.

“When I started my career in music it was purely entertainment combined with fun”, she told Our Planet. “Things started changing when I began working on my own compositions, which **were issue-oriented**. I focussed on the daily happenings of life and my surroundings – and on the fact that a number of our socio-economic activities are affecting the sustainable use of natural resources.

“Kisumu 100 was in praise of the beautiful city on the lakeside, but it is affected by a number of environmental issues. The **water hyacinth** that has invaded the lake in which Kisumu has such pride, for example, is sustained by poor land use upstream and effluents that pour into the lake.

“It was quite easy for me to put this into a song: I’m better placed to share **issues affecting society** through my **music**. I call this ‘unexpected responsibility’. I didn’t see it coming! But I have no regrets.”

The music with a message took her to performing at the Nobel Peace Prize Concert in Oslo in 2004, when fellow Kenyan Wangari Maathai won the honour, and to the Nelson Mandela concert in London’s Hyde Park to mark his 90th birthday in 2008. And it led, last February, to her being designated a Kenyan National Goodwill Ambassador for UNEP.

Attending this year’s UNEP Governing Council, she was inspired by the launch of its campaign on food waste: “Think: Eat: Save: Reduce your Food Print” She set up a “sister campaign” - **Soko Bila Waste, “every little thing counts”** - which started by targeting markets, which produce more than 2000 tonnes of organic waste every day in Nairobi County alone. On World Environment day she persuaded Kenyan women personalities to trade places with female vendors as part of a cleanup exercise.

“I believe that cutting down the amount of food that goes to waste on farms, in transit to markets, and within markets, restaurants and households is key to addressing food security and hunger in our continent. The most important thing is to sensitize all actors in food value chains who contribute a lot to waste. This will then lead to change of behaviour and attitudes on **how we handle food** – and help come up with new innovative approaches to waste reduction. Such action would mean that more food would be available to more people at the same production levels, sustainable production with less harm to the environment”.

She has long campaigned for **educating girls**. “Investing in girls”, she says, “**is a key to breaking the cycle of poverty** and improving the lives of girls, boys and everyone in their communities, because household livelihoods depend on women”. She is determined, in her UNEP role, to “engage and sensitise the public to the importance of changing their habits and adopting the lifestyle and culture of sustainability.

“The most important thing is the message” she adds “committing yourself to relaying positive messages to your fans because they look up to you, and trust each and every word you cough!”





# United Nations Environment Programme

## VALUE FOR MONEY



### EFFICIENT AND EFFECTIVE

- UNEP's overhead costs cut from 8.5 per cent (2006-2007) to 7.7 per cent (2014-2015)
- Staff productivity: ratio of staff to funds invested improving from 2.4/ US\$1 million (2012-2013) to 1.8/ 1 US\$ million (2014-2015)
- Since 2008 member states have increased their voluntary contributions to UNEP by 52 per cent
- 100 per cent of UNEP member states rated UNEP effective in keeping the world situation under review (source: UN Office of Internal Oversight Services – OIOS, Programme Evaluation of UNEP 2013)
- 88 per cent of UNEP member states rated UNEP effective in providing policy advice on environmental issues based on sound science assessment (source: UN OIOS, as above)
- MOPAN, an informal network of 16 donor nations, concluded that UNEP has made considerable progress in becoming a more results-oriented organization. (MOPAN assessment of UNEP 2011)



► **The Montreal Protocol/ Multilateral Fund** has cut ozone depleting substances by

# 98%

– over 20 million skin cancer and 130 million eye cataract cases prevented; trillions of dollars in reduced health care costs, climate benefits equal to 135 Gigatonnes of CO<sub>2</sub>.

[http://ozone.unep.org/new\\_site/en/montreal\\_protocol.php](http://ozone.unep.org/new_site/en/montreal_protocol.php) and <http://www.multilateralfund.org/default.aspx>



► **Global Environment Outlook-5** GEO reports are UNEP's most authoritative assessment on the state of the planet which in 2012 informed Rio+20 negotiations: over 5,000 articles and

# 280,000

visits to GEO-5's web site in the month of June 2012 with spin-off reports for cities, youth and business.

<http://www.unep.org/GEO/geo5.asp>



### ► Poverty - Environment Initiative (PEI)

This joint UNDP-UNEP initiative has assisted nearly

# 30 Countries

since 2008 incorporating targeted investments in national development plans and budgets. 50 countries expressing interest to participate in a new five year phase launched in 2013.

<http://www.unpei.org/>



► **Fast Climate Action** - UNEP has over

# 10 years

built the scientific case for fast action on short-lived climate pollutants. Climate and Clean Air Coalition launched in February 2012: now a multi-million dollar initiative with over 60 country and non-country members.

<http://www.unep.org/ccac/>



► **UNEP-led Partnership for Clean Fuels and Vehicles** finalized the near global elimination of lead in fuel—a phase-out worth

# \$2.4 trillion

in reduced premature deaths, heart disease and brain damage in up to 18 million children. Phasing-down sulphur in fuels now underway.

<http://www.unep.org/transport/pctv/>



► UNEP's **Global Green New Deal** helped focus \$460 billion of an estimated

# \$3 trillion

of stimulus packages on green investments, and saw UNEP's Green Economy report and initiative become a major theme in the Rio+20 summit. UNEP has since worked with 25 countries on a Green Economy transition. Partnership for Action on Green Economy launched in 2013 with 30 developing countries requesting support.

<http://www.unep.org/greeneconomy/> and [http://www.unep.org/pdf/G20\\_policy\\_brief\\_Final.pdf](http://www.unep.org/pdf/G20_policy_brief_Final.pdf)



► **New International Mandates for UNEP** in 2012 – Member states selected UNEP to host Secretariats for

- International Science-policy Platform on Biodiversity and Ecosystem Services (IPBES)
- 10 Year Framework of Programmes for Sustainable Consumption and Production (Rio+20 Summit)
- Climate Technology Centre Network (UNFCCC Conference of Parties).

[www.unep.org/climatechange/ctcn/](http://www.unep.org/climatechange/ctcn/)

► **Funding Support for UNEP Broadens** with a first-time pledge of \$6 million from Brazil and \$6 million from China at the

# Rio+20



Summit, while the Russian Federation's contribution has tripled in the past two years.