UNEP

BUILDING INCLUSIVE GREEN ECONOMIES

SUCCESS STORIES FROM SOUTH-SOUTH COOPERATION

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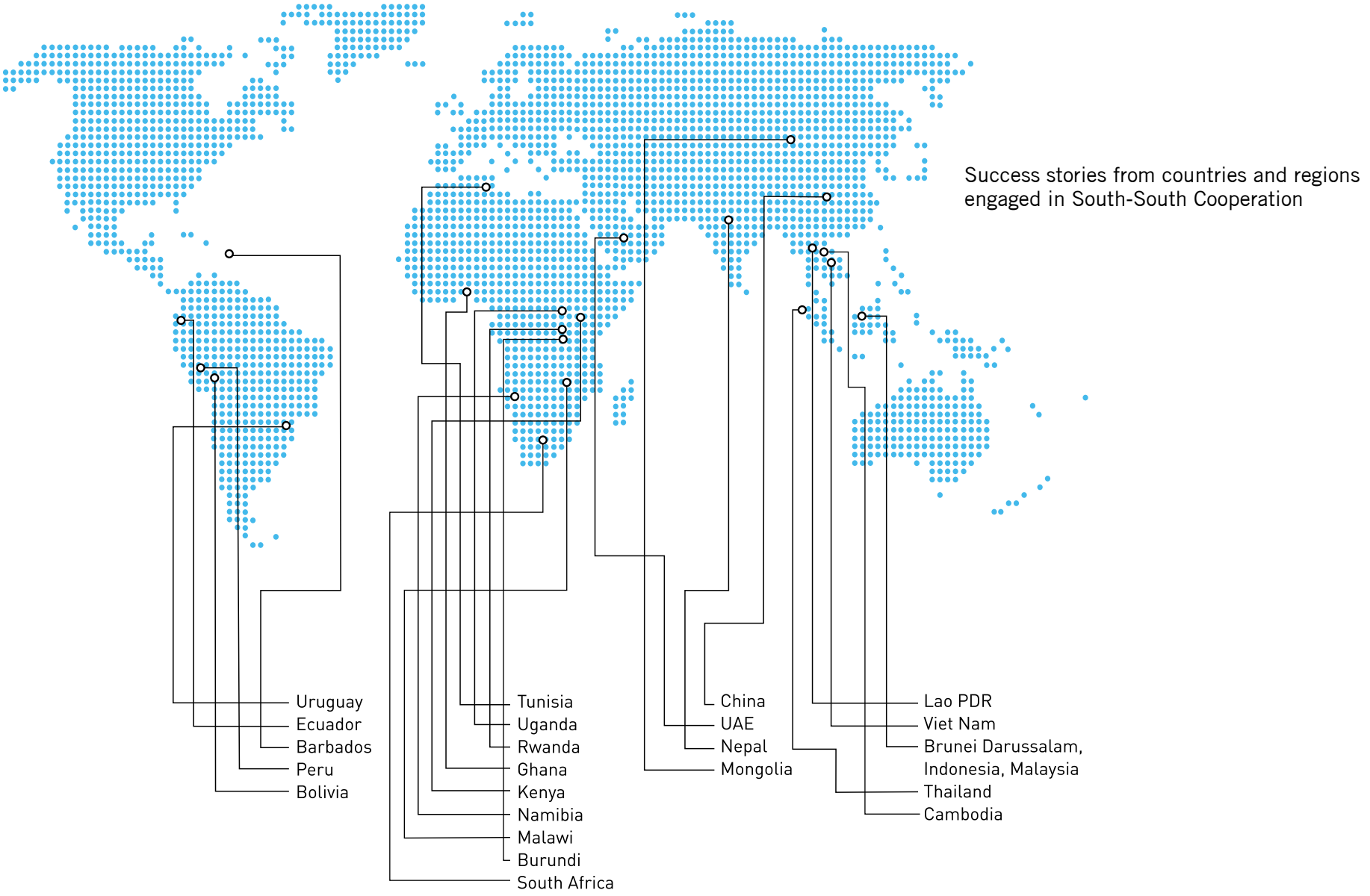
Success stories from countries and regions engaged in South-South Cooperation
Uruguay
Ecuador
Barbados
Peru
Bolivia
Tunisia
Uganda
Rwanda
Ghana
Kenya
Namibia
Malawi
Burundi
South Africa
China
UAE
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Brunei Darussalam,
Indonesia, Malaysia
Thailand
Cambodia

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Foreword

UNEP is increasingly inspired by the global commitments from countries, as well as tangible examples of cooperation between governments and the private sector, to accelerate the transition to an inclusive, low-carbon green economy.

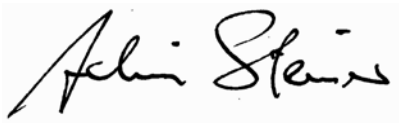
While the world is facing unprecedented population growth, greenhouse gas emissions and economic inequality that can challenge all nations but particularly developing countries and economies in transition, many of these countries are responding by establishing new alliances, bold strategies and innovative solutions that are enabling them to adapt and thrive in the 21st century.

Whether it is China's pioneering partnerships with business to build model green cities under its new eco-civilization approach, or regional efforts by African countries to green key economic sectors like agriculture and energy, these efforts demonstrate the potential benefits that can be achieved – from the creation of green jobs and energy efficiencies to greater food security and general well-being.

South-South Cooperation can be a catalyst for delivering environmental capacity building and technology support to developing countries and regions in the South that wish to make a transition to a green economy. Such cooperation is also critical for replicating and scaling up these successful initiatives.

On behalf of the United Nations and its partners, UNEP is proud to host the 2013 South-South Development Expo, which will explore "Inclusive Green Economies: South-South Cooperation for Sustainable Development and Poverty Eradication". This publication highlights some of the examples that will be presented at the Expo, as well as a host of other initiatives that bear witness to the enormous potential in the South to contribute to our global development agenda.

By working together, we can achieve the Future We Want.



Achim Steiner
UNEP Executive Director
United Nations Under-Secretary General


By working together, we can achieve the Future We Want

1 Introduction

Drawing on shared economic, environment and social aspirations, South-South Cooperation is increasingly playing a key role in identifying solutions to today's sustainable development challenges, as well as delivering new ideas and resources to advance the global transformation to an inclusive green economy. Moreover, it is widely recognized as an effective way for countries to advance their green economies.

At the United Nations Conference on Sustainable Development (Rio+20) meeting in 2012, the final declaration, *The Future We Want,* called on the UN System and other international organizations to assist developing countries, and especially least developed countries, in developing resource efficient and inclusive economies through capacity building, including through South-South Cooperation.

Following that decision, in February 2013, the UNEP Governing Council adopted a resolution, recognizing the "different approaches, visions, models and tools available to each country, in accordance with its national circumstances and priorities, to achieve sustainable development."

More specifically, the resolution calls on UNEP to collect such "initiatives, endeavours, practices and experiences on these different approaches, including green economy in the context of sustainable development and poverty eradication," and share them with countries.

To a large extent, UNEP has already begun this work through its Green Economy Initiative. Since 2009, it has been providing the latest economic research, policy advice and fiscal tools to countries, as well as facilitating dialogues and training. Just recently, UNEP and three other UN agencies launched the Partnership for Action on Green Economy (PAGE) to ensure that countries receive a full range of assistance as they develop their green economy strategies.

This report highlights how the partnerships between countries in the South are contributing to a global paradigm shift. It provides a snapshot of a myriad of projects and activities that are sparking new concepts, financing, technology, standards and momentum for change.

The report shows how countries and other actors are pursuing initiatives to green key sectors of the economy – from agriculture and energy to manufacturing and waste – while sharing their knowledge and experiences with others, so they can also reap the benefits as well.

More importantly, the experiences presented are being scaled-up and replicated, thus positioning other developing countries on a more sustainable development pathway.

As the UNEP Green Economy Report (2011) found, an investment of 2 per cent global GDP across 10 key sectors could spur a paradigm shift towards a more sustainable future. However, the report also underscored that these investments must be catalysed and supported by targeted public investments, policy reforms and regulation changes.

Green Super Rice

In all of these examples, we see how enabling conditions play a role in their success. In Tunisia, an innovative financial mechanism has provided incentives for households to switch to solar-powered water heaters, and in Kenya the government's attractive feed-in-tariffs have encouraged key industries to become more energy efficient, while delivering energy to rural communities.

In another case, we learn about the impact of Vietnam's cleaner production centre is having on small and medium enterprises there, as well as in the neighbouring countries of Cambodia and Lao PDR. After providing training there, an extended network has been created that promotes resource-efficiency and safer working conditions in the region. Investing in the waste sector is also critical for a green economy transition, as it can contribute to economic growth while addressing pro-poor issues linked to the environment. A related story in Uruguay depicts how a new national packaging law is being implemented, and how it is serving as good practice on waste management in the region.

Another regional success story looks at the UNEP-supported East African standard for organic produce. As a result of five countries working together, they have profited from new market access as well as significant environmental and social benefits. This initiative has now sparked interest in creating similar standards for the continent as well as in the Pacific region.

Protecting the environment and its valuable ecosystem services is the focus of the Heart of Borneo Initiative, where extractive industries and population pressures threaten the largest intact expanse of tropical forest in Southeast Asia. Through a multi-stakeholder effort, Brunei, Indonesia and Malaysia have adopted a green economy approach for Borneo that values the island's natural capital as a key component of its development plan, while recognizing its global contribution to reducing climate change.

These success stories are further supported by several examples of UNEP projects contributing to an inclusive, low carbon future. For instance, the United Arab Emirate's Blue Carbon Demonstration Project is part of a global effort to determine the role of coastal habitats in mitigating climate change; and Ghana is fostering renewable energy in the region. An e-waste initiative in West Africa that developed new capacity to handle the growing volume of discarded and often hazardous electronic equipment is now being considered throughout the continent; and Barbados' leadership on building a socially inclusive green economy is now serving as a model for a Caribbean-wide initiative.

As the host of the 2013 United Nations South-South Development Expo in Nairobi, Kenya, UNEP is committed to fostering these strategic partnerships between the public and private sectors as well as with civil society. As shown throughout this publication, South-South Cooperation demonstrates the richness and creativity of countries of the South and promises to provide even greater opportunities for advancing the global agenda on sustainable development.

Tunisia's PROSOL initiative proves profitable and popular

2 Renewable en

South and East Mediterranean countries represent more than 9% of the world's solar thermal installed capacity, with Turkey accounting for the largest share at 67% .

Under the umbrella of the Mediterranean Investment Facility (MIF), UNEP and the Italian Ministry of the Environment, Land and Sea (IMELS) have established new financial mechanisms to support renewable energy and energy efficiency systems throughout the Mediterranean and Balkan regions. Through a multi-stakeholder approach, the initiative has successfully reached out to the utility companies, local banks, national policymakers, suppliers and installers.

The MIF found that Tunisia, with its warm and sunny climate, had the potential to meet 70 to 80 per cent of its hot water demand by using solar water heaters (SWHs). However, since the 1980s, several policy-supported efforts had failed to convince residential households to make the switch from their heavily subsidized fossil-powered hot water systems to renewable solar systems until the MIF proved it could be financially feasible.

In 2005, the MIF joined together with the Tunisian National Agency for Energy Conservation (ANME) to create PROSOL, taken from the French expression "Programme solaire", which set up an innovative financial mechanism that enticed households make the switch to SWHs.

PROSOL provided financial support to local households through a combination of grants that includes a VAT exemption, customs duty reductions and bank loans with reduced interest rates for repayments. It ensured that the repayment of the loans were included in the regular bills from the state electricity utility STEG, which has also lowered the risk for local banks which were willing to finance SWH projects with reduced interest rates. Moreover, this allowed customers to compare the size of the monthly instalments for repayment to their earlier electricity bills.

PROSOL Tunisia

In addition to facilitating the financing, PROSOL ran an effective awareness-raising campaign, encouraging households to install SWH systems. It worked with suppliers and installers, providing them with an accredited scheme, as well as monitoring procedures, to ensure the quality and reliability of the SWH systems. It also implemented a capacity building strategy with local financial institutions and technology providers to enhance their long-term knowledge and expertise.

The result was that between 2005 and 2012, PROSOL helped more than 165,000 households obtain solar water heaters for their domestic water use. More importantly, it created a significant savings for government in terms of fuel subsidies and to households in terms of energy costs, while reducing GHG emissions at the same time.

The initial cost of the programme, financed through a grant from IMELs, totalled US$2.5 million but it raised approximately US$211 million over this seven-year period. As a consequence, consumers' demand for fossil fuel subsidies for water heaters dropped by US$15.2 million for the period (2005-2010). By the time SWHs reach their lifespan in 2025 this would be equivalent to US$101 million in savings for the government. Furthermore, this project has created 3,000 new direct jobs and 7,000 indirect jobs.

In 2012, more than 986m^2 of SWH panels were installed, or equivalent to 24,328 SWHs, compared to only 100m^2 in 2002. As a result the Tunisian government has set an ambitious target to install 900,000 m^2 of solar collectors by 2016. Thus, the PROSOL financing facility has proven to be a model for how international, national and local partners can work together to address critical barriers preventing widespread deployment of renewable energy technology, and create a more sustainable market by strengthening the capacity of local stakeholders.

Similar programmes are now underway in Egypt, the former Yugoslav Republic of Macedonia, Montenegro and Morocco. In Egypt, the programme is focused more on the tourism sector, while in Montenegro, the programme targets both the residential and hotel sector. In Morocco, the same financial mechanism is being used to expand the use of Compact Fluorescent Lamps.

PROSOL Tunisia

Concurrently, a new web management tool developed by UNEP under the GEF-funded Global Solar Water Heating Market Transformations and Strengthening Initiative (GSWH) aims to share the lessons from the development and implementation of SWH programmes in six countries: Albania, Algeria, Chile, India, Lebanon and Mexico.

In the same manner as the Tunisian experience, such initiatives are framed to overcome common barriers, such as finance and technology, or policy and regulations, in the hope of accelerating the development of the SWH market and transition to a low-carbon future.

"The Mediterranean region is endowed with a significant market potential and could become a frontrunner in the development of solar water heating and cooling technologies in several application areas," according to the 2012 market assessment report by the association Observatoire Méditerranéen de l'Energie (OME). It was followed by a Solar Thermal Action Plan for the Mediterranean region, which was published by the GEF, UNDP and UNEP in late 2012.

For more information:
http://www.solarthermalworld. org/node/3301

UNEP trade project in Ghana promotes regional energy cooperation in West Africa

The International Energy Agency (IEA) estimates that 1.3 billion people, mainly in Sub-Saharan Africa, are without access to electricity. According to the World Bank, regional power pools can be a key tool in tackling this 'energy poverty' as they mitigate commercial, political, and regulatory risks, foster cost-efficient electricity production, allow for the shared use and financing of energy infrastructure (i.e. plants, grids) and facilitate regional economy-of-scale capacities that would be oversized for an individual country. The latter aspect is especially crucial for fostering national renewable energy capacities to maturity, and eventual cost-competitiveness with fossil sources.

In 2000, ECOWAS countries established the West African Power Pool (WAPP), as formalized cooperation platform that aims to integrate the national power system operations into a unified regional electricity market. It is estimated that there is significant market potential for scaling up regional electricity trade in the WAPP region. To foster inter-WAPP trade opportunities, UNEP is implementing the GE-TOP Ghana project with The Energy Center (TEC) in Kumasi/Ghana.

The project aims to foster solar electricity exports from Ghana to other WAPP countries, and is expected to enhance the regional energy integration envisaged under WAPP. The project supports Ghana's (renewable) energy targets and regional energy integration through targeted analysis and concrete policy recommendations. UNEP's Green Economy Scoping Study (GESS) identified the electricity sub-sector in Ghana as important driver of the national economy, with implications for poverty reduction and environmental protection. The GESS specifies renewable energy investments, research and capacity development, and energy efficiency and conservation measures as key actions by which the electricity sector can enhance the national Green Economy transition. In this vein, the GESS quotes Ghana's "National Energy Policy 2010", which aims to double national electricity production capacity to 5000 MW by 2015, with 10 % generated from renewable sources, and to scale up power exports by 2020. The key policy tool for the creation of Ghana's "Energy Economy" is the Renewable Energy Law 2011, which aims to de-risk renewable energy investment by means of a feed-in-tariff, and related investment guarantees. Due to this favorable national policy framework and the country's comparative advantage in renewable energy generation, transmission and know-how, UNEP identified Ghana as front-runner for regional green energy cooperation.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Greening agriculture opens new market access opportunities

3 Agriculture

An estimated 80% of the world's 1.6 million organic farmers live in developing countries. According to IFOAM, Uganda has the second largest number of organic producers – 187,893 – behind India, but significantly ahead of Mexico, Ethiopia, Tanzania and Peru.

Agriculture is a major contributor to the economy in terms of employment, GDP and exports in most developing countries. Greening the agriculture sector has produced significant social, economic and environmental benefits, especially for millions of smallholder farmers in developing countries by bringing them into global supply chains of organic and sustainable products.

The East African Community (EAC) has developed a regional standard for organic agriculture, overruling the existing national standards. As a result, producers have gained better access to consumer markets. The common standard has helped East African countries to cater to the rapidly growing demand for organic products, mainly in the European Union. It has also helped to reduce the costs of certification and to create the capacities needd for organic production.

All five members of the EAC – Burundi, Kenya, Rwanda, Tanzania and Uganda – are highly dependent on the agriculture sector which employs about 80 per cent of the region's population. With a combined GDP of US$84.7 billion, agriculture makes up between 24 and 44 per cent of their respective national economies. Moreover, 50 per cent of all of the certified organic land in Africa is found in three of these countries – Kenya, Tanzania and Uganda.

In 2005, the UNEP-UNCTAD Capacity Building Task Force on Trade, Environment and Development (CBTF) launched an initiative called Promoting Production and Trading Opportunities for Organic Agricultural Products in East Africa. At the time, there were more than five different public standards and several private and international standards being used in the region. The proliferation of standards posed significant problems for local farmers, including high compliance costs. Moreover, the various schemes caused an obstacle to regional trade and limited cooperation among organic traders at a time when demand outstripped supplies.

To address these challenges, it was decided jointly by EAC member states, UNEP and UNCTAD that a regional

The organic market continues to be one of the fastest growing retail industries, and worth an estimated US$59.1 billion in 2011.

organic standard would be beneficial for boosting production and trade of organic products. Over the next two years, a strategic partnership with the International Federation of Organic Agriculture Movements (IFOAM) was created, and with the assistance of the national organic movements, the CBTF facilitated a region-wide process of technical cooperation between countries, which included intensive public consultations with a broad range of stakeholders.

A regional public-private sector working group was also established with members from bureaus of national standards, organic movements (NGOs) and certification bodies (private sector), which further developed and tested the draft standard. Finally, in 2007, the EAC Council of Ministers adopted the East Africa Organic Products Standard (EAOPS). It was the second regional organic standard after that of the European Union, and the first ever to be developed through a region-wide public-private-NGO partnership.

The success of the initiative is largely attributed to the inclusiveness of the process. It was guided by national governments, and its development and pilot testing was led by national NGOs and the private sector. It received technical assistance from UNEP, UNCTAD and IFOAM, and was financed by the European Commission. The governments played a key role by giving the process credibility and raising public acceptance of the standard. In addition, there was joint ownership moving forward with the EAC.

The cooperation between countries on EAOPS inspired additional financial support for the organic sector in the region. A three-year Swedish government-funded project was launched in 2008 to increase consumer awareness about the organic label and to strengthen the EAOPS certification process. The funding was specifically focused on building certification capacity in the region, assisting with implementation and the practical use of the standard, and demonstrating the impacts of organic agriculture.

The cooperation between EAC member states also inspired Africa wide cooperation on greening the agriculture sector. The African Union Summit Heads of State and Government has adopted a decision on organic farming, building on the EAC initiative. The decision, which was passed in 2011, requests the African Union and the New Partnership for Africa's Development (NEPAD) to initiate and provide guidance for an AU-led coalition of international partners to establish an African organic farming platform based on available best practices; and, provide guidance in support of the development of sustainable organic farming systems.

At an East African Organic Conference held in Tanzania in July 2013, the Head of Regional Development Cooperation for Sweden confirmed that support for organic agriculture continues to gain momentum and, following the AU decision, interest in exploring a possible continent-wide organic standard.

The experience and lessons in the EAC have also influenced other regional initiatives. Following the EAC example, the Pacific Organic Standard was adopted in 2008 by 10 countries and territories, as well as Australia and New Zealand. Like the EAC initiative, its aim is to increase organic production and exports, as well as avoid duplicating standards in the region.

Promoting organic agriculture and the use of sustainability standards for certification are just a few options for greening the agriculture sector, but through South-South collaboration, we have seen that it can deliver significant environmental, social and economic benefits. A more in-depth analysis of the benefits and challenges can be found in the UNEP Green Economy Report (2011).

For more information:
www.unep.ch/etb/publications/insideCBTF_OA_2008.pdf
www.unep.ch/etb/publications/Organic%20Agriculture/OA%20Synthesis%20v2.pdf

Namibia, Nepal and Peru learn about the benefits of BioTrade

Over the last decade, the BioTrade sector (consisting of the trade of biodiversity-derived goods and services under the criteria of environmental, social and economic sustainability) has experienced a shift from being a niche market to a mainstream one, with natural product sales growing five times faster than those of conventional products.

In response to this trend, leading brands of cosmetics, food and pharmaceuticals have begun replacing synthetic and artificial components with natural ingredients. Businesses continue shifting their corporate strategies in response to global consumer trends by becoming more 'eco-friendly' and investing in natural substitutes.

This exponential growth in the BioTrade sector holds great potential for export-led economic growth in biodiversity-rich countries of the South, potentially resulting in employment creation and poverty reduction, while providing an opportunity for environmental conservation and investments in ecosystem conservation and regeneration.

South-South Cooperation is vital not only for successful implementation of the Nagoya Protocol on Access and Benefit-sharing but also to ensure stability in prices for BioTrade products and avoid overexploitation of the biodiversity resources.

It is in this context that Nepal, Namibia and Peru launched the Capacity Building for BioTrade (CBBT) project with support from UNEP. Under the initiative, the three countries examined the common challenges that they face in promoting BioTrade and actions that are needed to overcome these challenges.

The common challenges identified include:

- a capacity gap among local producers to adhere to different quality and certification standards to gain the trust of international consumers and access to premium prices in the international markets;
- complex, diversified and continuously changing food safety requirements in importing countries;
- inadequate infrastructure, leading to high transport costs, energy shortages, insufficient water supply and lack of capacity in the public sector, impair efficient production and commercialization of BioTrade products;
- lack of coordinated investment into the sector;
- barriers to accessing financing and credit; and,
- higher interest rates for BioTrade businesses where credit is offered.

The initiative also identified a number of unsustainable practices that lead to the depletion of the resource base of BioTrade in the three countries.

Looking forward, Namibia, Nepal and Peru also identified common measures to advance the BioTrade sector. These included: establishing a legal and policy framework conducive for BioTrade; capacity building of enterprises and infrastructure development; providing guarantees to investors to increase and improve access to finance; research and development for improvement of production processes and products; raising awareness globally; and, facilitating international cooperation on BioTrade.

The analysis and findings of the initiative in the three countries are documented as country studies and are available at: www.unep.org/greeneconomy

Valuing partnership and nature – the Heart of Borneo experience

4 Ecosystems

The HoB Initiative is a voluntary, transboundary, tri-government collaborative effort to facilitate conservation and sustainable development. It aims to improve the welfare of those living on the island and save the forests and biodiversity of Borneo from destruction and degradation.

In 2007, the governments of Brunei Darussalam, Indonesia and Malaysia committed to conserve and sustainably manage 220,000km^2 of contiguous tropical forest on the island of Borneo in an area now widely known as the Heart of Borneo (HoB). It is the largest intact transboundary expanse of tropical rainforest remaining in Southeast Asia. In addition to its rich biodiversity and endemic species, such as the orang-utan and the critically endangered Sumatran elephant, HoB is also home to one million indigenous peoples who depend on forests for their livelihoods and well-being.

Today, the HoB Declaration is supported under important regional and international agreements, such as: the Association of East Asian Nations (ASEAN); Brunei Darussalam-Indonesia-Malaysia-The Philippines East ASEAN Growth Area (BIMP-EAGA); Asia-Pacific Economic Cooperation (APEC); and the United Nations Convention on Biological Diversity (UNCBD). However, despite these endorsements and the governments' achievements, the HoB Initiative continued to be challenged by illegal logging and other unsustainable land use and M-development.

By 2010, governments realized that in order to bring about the transformative changes required, a broader programme encompassing a variety of actors and sectors was needed – one that would also address sustainable livelihood issues alongside more traditional land and conservation efforts. Thus, the concept of developing a green economy across the whole of the HoB was agreed on by the three governments.

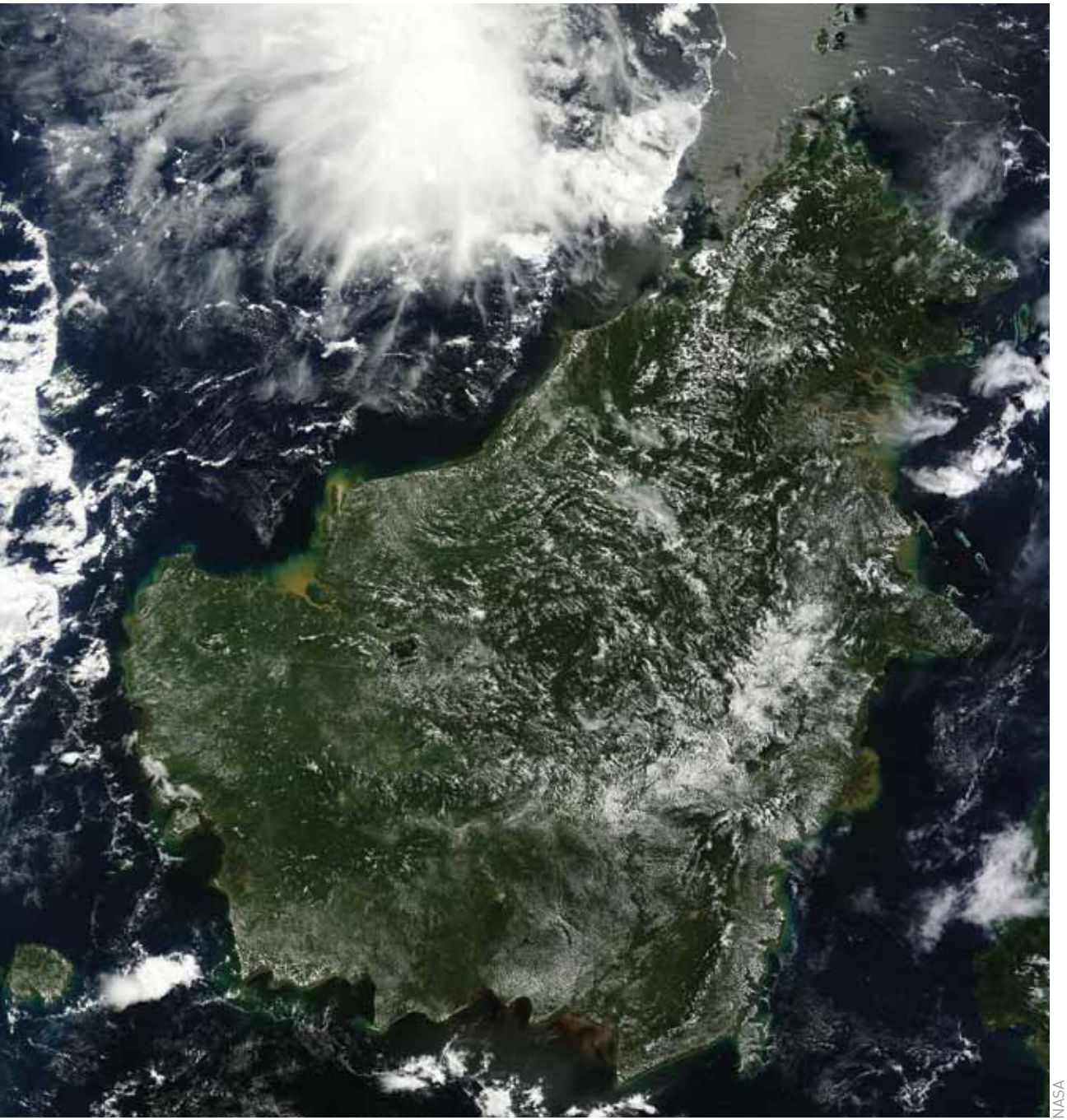
The World Wide Fund for Nature (WWF) via its Heart of Borneo Global Initiative (HoBGI), which works in partnership with national offices in Indonesia and Malaysia on the ground, has been a key advocate and facilitator. With support from these governments, it has brought together several partners to design a programme to support the transition towards a green economy in which the natural capital values of HoB help define their green growth development.

The economy of Borneo is largely dependent upon primary (i.e.

MHolland

extractive) sectors, such as palm oil, pulp and paper, timber and coal mining, which have been slow to adopt sustainable management standards. Meanwhile, there is a growing demand for land conversion for agriculture and development, which are having a serious impact on the region's natural habitats and the valuable ecosystems services. Moreover, this large forest area plays a vital role in the global effort to mitigate climate change and actively supports the UN-led effort REDD (Reducing Emissions from Deforestation and Forest Degradation).

Each of the three countries has created a unique governance structure for the area in order to fulfil its obligation under the HoB Declaration. They have also jointly developed a trilateral Strategic Plan of Action, and each country has formulated its own specific HoB Strategic Plan of Action or Project Implementation Framework. Several donors and partners are supporting ongoing actions to deliver tangible conservation results in HoB across the three countries.



NASA

Some of the South-South Collaboration successes between the three countries include:

- initial implementation of national plans of action of Indonesia, Malaysia, and Brunei;
- establishment of multi-ministerial governance bodies, including representatives from agencies relevant to the environment and economic development; and
- continued dialogue and engagement between law enforcement, customs, and judiciary agencies to coordinated programmes to reduce illegal wildlife traffic.

Economic growth ambitions, both national and regional, often overshadow environmental priorities and development plans. While the green economy approach offers an antidote to this, the benefits of this approach are continually highlighted to ensure government buy-in and engagement.

In 2012, UNEP and The Economics of Ecosystems and Biodiversity (TEEB) contributed to a WWF report, The Heart of Borneo: Investing in Nature for a Green Economy, which showcased the value of HoB's ecosystems as well as the environmental costs and forgone revenues from their destruction. It also demonstated that valuing natural capital actually supports building local economies.

Translating the green economy approach from strategy to concrete outcomes will take time. It is therefore critical that this vision is embraced by governments and industry alike, in order to lead to the overall protection and sustainable development of the HoB.

Equally important is the ability of South-South partners and institutions to embrace this paradigm shift, from the current business-as-usual models of development to those that embrace natural capital

AGEDI - Rob Barnes, GRID-Arendal

Blue carbon project builds capacity in the UAE

In the United Arab Emirates, Abu Dhabi is hosting a Blue Carbon Demonstration Project throughout 2013 as a means to better understand carbon sequestration and other services provided by coastal ecosystems. Blue carbon refers to the important role coastal vegetation plays in naturally storing GHGs. When these fragile habitats are destroyed, carbon is released into the atmosphere, contributing to global warming.

The one-year demonstration project is being facilitated by the Abu Dhabi Global Environmental Data Initiative, with support from GRID-Arendal, as well as UNEP-WCMC, Forest Trends and a group of world-class carbon scientists.

The project is studying the correlation between the storage of carbon in the ground beneath mangrove trees, seagrass meadows and saltwater marshlands in relation to climate change. It aims to promote the sustainable management of coastal blue carbon ecosystems through approaches focused on climate change adaptation and mitigation, sustainable tourism, recognition and valuation of coastal ecosystem services, and sustainable management practices.

The study is the first of its kind in the region. The results are expected to be published later this year and shared with decision makers responsible for protecting coastal ecosystems in the Emirates.

Locally, the project is enhancing capacity to measure and monitor carbon in coastal ecosystems and to manage the associated data. It is also exploring options to ensure that the values of these natural habitats are incorporated into future policies and management plans.

Internationally, the experience gained from the project will help guide other Blue Carbon projects and international efforts such as the Global Environment Facility's Blue Forests Project. It is also contributing to the production of new tools and methodologies, and enhancing blue carbon cooperation and training. Early this year, scientists from Indonesia and Madagascar visited Abu Dhabi to undergo training and share information about similar projects in their respective countries. A Blue Carbon Portal has been created for stakeholders to share their activities and latest findings, to promote an exchange between the community-based projects and at the global level.

For more information:
http://bluecarbonportal.org

Viet Nam shares clean production with region

5 Manufacturing

The Viet Nam Cleaner Production Centre (VNCPC) has become a leading organization in providing Clean Production (CP) services to companies, especially to small and medium enterprises (SMEs), in both Viet Nam and the region.

Since its establishment in 1998, the VNCPC has been assisting companies in identifying problems that affect their environmental and economic performance, and in defining potential resource efficient solutions as well as feasible options for implementation.

Globally, the manufacturing sector is responsible for around 35 per cent of the energy use, more than 20 per cent of carbon dioxide emissions and over a quarter of the primary resource extraction. It also accounts for up to 17 per cent of the world's health problems related to air pollution and 23 per cent of the employment.

Moreover, more than 90 per cent of the world's businesses are SMEs, and 63 per cent of these are estimated to have a significant impact on industrial pollution, according to the Association of Chartered Certified Accountants 2012 report, *Embedding Sustainability in SMEs.*

Therefore, there are significant win-win opportunities that can be realized in the transition to a green economy if manufacturing industries introduce resource efficiency and productivity improvements. Such changes in the industry's management -- from the selection of raw materials to adoption of cleaner technologies – could reduce pollution and emission costs, create savings and process benefits, while at the same time increasing employment.

Initially, the Viet Nam Centre focused on cleaner production, but it progressively extended its expertise to related fields. Its expertise now includes sustainable product innovation, corporate social responsibility (in cooperation with the International Labour Organization (ILO)), financial engineering (via a Green Credit Line scheme financed by the Swiss Government), and implementation of Multilateral Environmental Agreements.

The implementation of cleaner production measures in

manufacturing processes has not only improved the environmental performance of the enterprises through the reduction of energy, water, raw material consumption and waste generation, but it has also ensured safer working conditions and promoted new job opportunities linked to the environmental service sectors (i.e. waste recycling, environmental technology manufacturers, etc.).

Examples of these achievements include over 20 different capacity building workshops and several conferences around the region. Two CP projects implemented in 2012 produced a savings of 1,462 tonnes of CO_2 emissions and 37,660 m^3 of wastewater.

By working with SMEs, the Centre has helped the private sector engage in new markets, for example, those related to sustainable goods and services, and introduced them to sustainable public procurement regulations, eco-labels and green global value chains.

Over time, the Centre has progressively become the reference institution for CP dissemination in other neighboring countries, and similar programmes are now operating in Cambodia and Lao PDR, through a South-South technical exchange. The Centre has provided training to technical experts in Cambodia and Lao PDR on how to disseminate CP practices and build capacity in local institutions. In addition, it is enhancing knowledge sharing in the region.

To date, the Centre has successfully assisted more than 500 enterprises in various industrial sectors throughout Viet Nam, as well as enterprises in Lao PDR and Cambodia to implement cleaner production measures.

UNEP has played a role in expanding the Centre's dissemination model, which now includes projects associated with sustainability at product level, such as: Cleaner Production for Better Product and Sustainable Product Innovation (SPIN). Similar approaches may be replicated with cutting edge technologies and eco-innovation.

The VNCPC is a positive example of how South-South Cooperation is increasing capacities and environmental standards of regional businesses. It also provides an excellent dissemination mechanism for innovation in resource and energy efficiency processes and technology given the high technical understanding of the local context. The success of this model is highlighted by the fact institutions, such as Cleaner Production Centers and their associated networks, are now active in 50 countries.

Key partners include the European Union, ILO, the Swiss Government, the United Nations Industrial Development Organization (UNIDO) and UNEP, among others.

Mongolia's cement sector invests in energy efficiency

Investing in energy efficiency through cleaner production (CP) is a strategy that prevents waste and emissions and assists companies to improve energy efficiency, reduce GHG emissions and reduce costs. It is an investment that creates greener economies and change systems thinking, creating efficiencies and savings that were not originally foreseen.

Through the UNEP-implemented Greenhouse Gas Emission Reduction from Industry in Asia and the Pacific (GERIAP) project, more than 40 companies from the cement, chemicals, ceramics, iron and steel, and pulp and paper sectors in nine Asian countries (Bangladesh, China, India, Indonesia, Mongolia, Philippines, Sri Lanka, Thailand and Viet Nam) became more energy and cost efficient by adopting cleaner production techniques.

By choosing strategic interventions in the production process, the GERIAP project demonstrated that high Returns on Investment (ROI) and short payback periods could be achieved, along with high environmental and carbon emissions savings.

With UNEP's assistance, Eral Cement LTD, a cement producer in Darkhan, Mongolia, identified various high-level options to reduce energy and materials waste. One such option was to implement a better dust emission removal and control system at the gypsum feeding point to the cement mill. The simple exercise of installing 12 electro motors at the strew conveyors meant that the whole system was better sealed off, increasing efficiency and reducing loss of raw materials. Investment costs were US$2,210 with annual net savings of US$14,400. The payback period was less than two months. Each year 4,500 tonnes of coal is saved and the net reductions in carbon dioxide are estimated at 11,007 tonnes per year.

Jo Mabel

As one of the fastest growing economies in the world, Mongolia aims to ensure this growth goes hand in hand with a green economy. Mongolia is the first country to join the Partnership for Action on Green Economy (PAGE) – a major new initiative to assist the global transition to a green economy.

UN Photo

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Packaging for a greener future in Uruguay, Ecuador and Peru

6 Waste

The growth of the waste market, increasing resource scarcity and the availability of new technologies are offering new opportunities. Each year, an estimated 11.2 billion tonnes of solide waste are collected, contributing to 5% of global GHG emissions.

Recycling in all its forms employs 12 million people in Brazil, China and the United States.

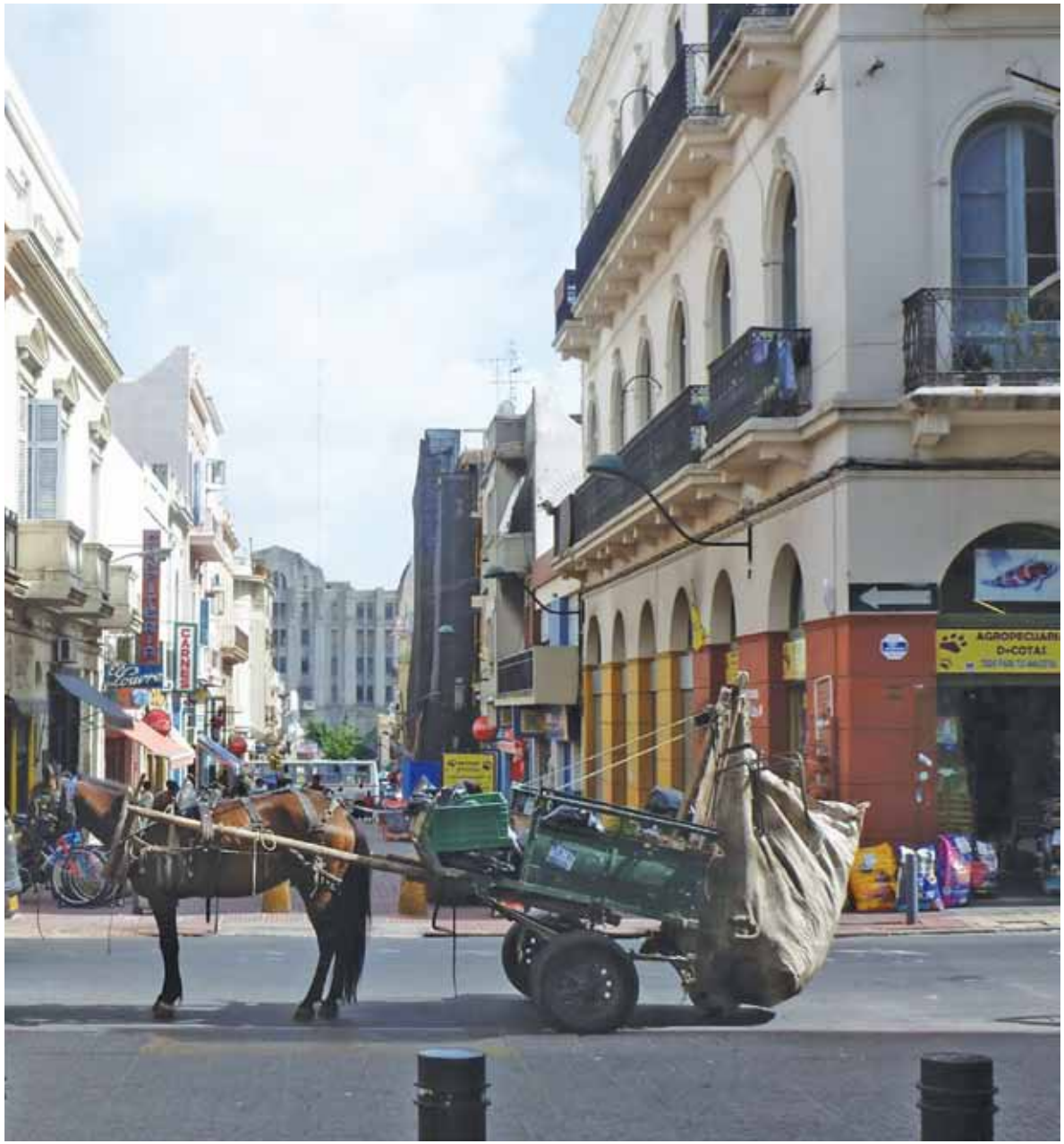
A new packaging law in Uruguay that has successfully demonstrated the links between improved health, environment and jobs is now considered a model of regional best practice and, as a result, is being replicated in other Latin American countries.

In 2010, a change to Uruguay's waste management systems, with the introduction of the Packaging Law, created an entry point for the global Poverty-Environment Initiative (PEI). The move was meant to support the country's efforts to mainstream the legislation through a set of activities that highlight the environmental and social benefits of greening the waste sector. The activities included an innovative survey of 1,200 households to determine poverty–environment linkages, a review of social programs and relevant national legislation on solid waste and social inclusion, technical assistance to recycling cooperatives to review installed capacities, and the current limitations of such groups to scale ongoing experiences.

Encouraged by the positive results of these activities and keen to utilize the country's improved capacity, the Ministry of Social Development applied a six-fold budget increase over five years (from US$350,000 in 2010 to US$2.15 million in 2014) to support the integration of PE linkages into development policies for poverty, environment and waste management initiatives.

PEI then scaled up that plan by providing key technical support for the planning and budgeting process of "Montevideo Management Plan for the Recovery of Non-returnable Packaging Waste". With an annual budget of US$5 million, the plan – involving the ministries of Environment and Social Development, the Municipality of Montevideo and the private sector – is focused on non-returnable packaging recovery through clean circuits in the capital.

By 2014, the goal is to recover 20 per cent of packaging waste and cover 60 per cent of the population, generating 128 new jobs for informal waste sorters. The country is also collecting specific data on main poverty-environment linkages relevant to the long-term

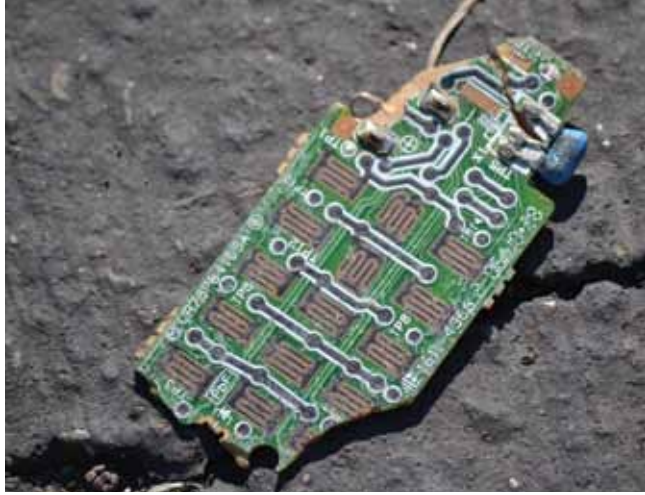


development of the poorest households affected by exposure to toxic waste.

Inspired by this success, other Latin American countries have initiated their own poverty-environment mainstreaming processes. For example, the National Secretariat of Planning and Development in Ecuador and the office of Planning and Budget of Uruguay have developed an implementation workplan under a bilateral framework agreement. It calls for expanding bilateral relations with specific areas of cooperation and defined activities to strengthen institutional capacity for poverty-environment mainstreaming, through the exchange of experiences and expertise, training and knowledge, research, and discussion forums.

In Peru, a new PEI programme builds directly on the Uruguayan experiences, and seeks to mainstream poverty and environment into public planning initiatives through the solid waste management system. With support from five Peruvian governmental actors, the project aims to incorporate poverty and social inclusive pro-poor indicators into the national and regional information management system as one of its main objectives.

West Africa spurs a call to action on e-waste



The United Nations estimates that domestic consumption makes up the majority (up to 85 %) of e-waste produced in West Africa.

The penetration rate of personal computers in Africa has increased by a factor of 10 in the last decade, while the number of mobile phone subscribers has increased by a factor of 100.

The world's rapidly growing information and communications technologies (ICT) has revolutionized the way we live, creating unprecedented demands for the latest products, as well as new challenges for our health and environment.

The result of this new technology is that out-of-date computers, printers, mobile phones, pagers, digital cameras, refrigerators, toys and televisions are often disregarded or dumped – to the tune of 40 million tonnes a year globally, according to UNEP. This problem is further exacerbated by industrialized countries, which ship significant volumes of unsuitable equipment for re-use to developing countries, further contributing to locally-generated e-waste.

Electronic equipment often contains hazardous substances (e.g., heavy metals such as mercury and lead, and endocrine disrupting substances, such as brominated flame retardants). Burning e-waste is a major source of dioxin emissions, a persistent organic pollutant that travels over long-distances and bio-accumulates in organisms through the global food chain. In addition, the CO_2 emissions from the mining and production of the rare metals used in the equipment is estimated to be more than 23 million tonnes each year.

On the flip side, this electronic equipment also contains materials of strategic value, such as indium and palladium, and precious metals such as gold, copper and silver. If these materials are recovered and recycled, they can provide a valuable source of secondary raw materials, while reducing pressure on scarce natural resources and minimizing their environmental footprint. It is also well-documented that such recycling programmes can create new jobs.

To address these challenges, the Basel Convention, which regulates the transboundary movements of e-waste, initiated a four-year programme in West Africa to tackle waste generated by electrical and

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electronic equipment called WEee. The programme coordinated efforts with stakeholders in the region to enhance environmental governance, and to create favourable social and economic conditions for partnerships and small businesses in the recycling sector.

More specifically, the programme focused on:

- improving the information on flows of e-products and e-waste imported into West African countries;
- increasing the capacity of partner countries to manage the end-of-life e-equipment and e-waste at the national level;
- investigating the feasibility of establishing environmentally sound materials recovery operations; and
- enhancing the capacity to monitor and control transboundary movements of e-waste and illegal traffic.

Numerous training workshops and outreach activities were organized between 2009 and 2012. At a regional kick-off meeting in Ghana, a needs assessment was undertaken on the capacity, cooperation, legal powers and enforcement practices in Benin, Egypt, Ghana, Nigeria and Tunisia. The training resulted in a capacity building programme to support the enforcement of relevant information and regional legislation related to the import of e-waste in African countries.

A "train the trainers" programme on inspection and enforcement was held in Europe in 2010, in which 19 African officials, including many government officials, participated. Then in 2011, national training workshops on inspection and enforcement were held with environment officials, customs officers, police and port authorities in select countries. These activities highlighted the impacts of illegal imports of e-waste on human health and the environment.

Thereafter, participating countries decided to create a regional network to continue sharing information on enforcement, followed by the launching of the first Pan-African Forum on E-waste was hosted by UNEP in 2012, with support from the government of Kenya, and private companies, including Dell, HP, Nokia and Philips. The Forum identified options for creating a framework approach for e-waste, which was applicable in the African context. It also provided a platform for establishing or strengthening national, regional and international collaboration. It was attended by participants from over 35 countries, including representatives from 20 African states, four states outside of Africa, 13 intergovernmental organizations and UN agencies, 14 academic institutions, 22 civil society organizations, and 22 private companies.

At the Forum, a "Call for Action" on e-waste in Africa was adopted, which outlines a common vision and a set of priorities to support the development of a regional approach for the legal transboundary movements and the environmentally sound management of e-waste for the African continent. This includes protecting human health and the environment, and promoting opportunities for social and economic development, as well as provisions to continue capacity building and training.

Key partners: Coordinated by the Secretariat of the Basel Convention, the programme involved: the Basel Convention Regional Centres in Nigeria, Egypt and Senegal; the Swiss Federal Laboratories for Materials Science and Technology (EMPA); the Institute for Applied Ecology (the Öko-Institut); and, the EU Network for Implementation and Enforcement of Environmental Law (IMPEL), in cooperation with the Partnership for Action on Computing Equipment (PACE). Financial support for the programme was provided by the European Commission, the governments of Norway and United Kingdom, and the Dutch Recyclers Association (NVMP).

Source: This case study is an updated excerpt from the *Where are WEee in Africa?* report, produced by the Secretariat of the Basel Convention (2011).

New technologies and incentives are fuelling local economies

7 Enabling cond

Mauritius, which consumes 10 times more electricity per capita than Kenya, produces half of its electricity from cogeneration facilities.

A new cogeneration processing plant at the James Finlay Ltd tea estate in Kenya provides more efficient energy, helps reduce their carbon footprint and reduces costs.

Cogeneration, or combined heat and power (CHP), uses biomass to feed a power plant, which simultaneously generates electricity and thermal heat. This technology is up to 80 per cent more efficient compared to conventional plants - as it captures the wasted energy as useful heat.

With this efficiency, excess power generated can be used to supply national or local power grids. Power purchase agreements, or feed-in tariffs as they are called, create conditions for businesses to sell independently generated electricity back to the grid, and in many cases receiving a premium from the utility. Efforts to maximize electricity production output to the grid encourage enterprises to invest in larger cogeneration facilities, while at the same time increasing their efficiency and reducing their dependence on carbon-intensive fossil fuels.

A joint initiative between international organizations and a Kenyan non-government organization, the Cogen for Africa project is helping private-sector agro-processing enterprises, like James Finlay, realize the potential economic and environmental benefits of efficient cogeneration systems throughout the region.

The initiative has drawn on technical and policy expertise of Mauritius, where over half the country's electricity comes from biomass-fed cogeneration facilities. One of the key drivers of the island's success has been the introduction of feed-in-tariffs for its sugar companies, which sell their excess electricity back to the national grid. This experience has

AFREPREN/FWD

given prospective investors and policy makers in Kenya and elsewhere in East Africa confidence to try to replicate the scheme. As a result, feed-in-tariffs have been developed in Malawi, Tanzania and Uganda, and Ethiopia is also considering implementing a similar model.

Moreover, the Cogen initiative is now working with other companies in the tea industry, as well as the sugar industry. In the case of Uganda, the latest high-tech cogen facility is not only helping meet the energy needs of the country's largest sugar factory, the Kakira Sugar Company, but also providing excess clean electricity to the national grid, in place of more costly, fossil fuel-based electricity. Thus, this innovative technology is being adopted by others in the same industry as well as those in other sectors.

While companies can learn from the policy and technical successes of others, governments and non-government organizations have a key role to play. In this instance, the Kenyan nongovernmental organization, AFREPREN/FWD, was responsible for sharing the Mauritius experience with enterprises in the region.

Attracting international support has also been instrumental in fostering feed-in-tariffs in the region. These donors have co-financed the feasibility studies, which means companies were more willing to invest as they shared some of the financial risk.

Moving forward, further South-South collaboration through sub-regional groups, such as the East African community and the Southern African Development Community (SADC), could provide a supportive environment for replicating and scaling-up these innovative initiatives.

Key partners: The Cogen for Africa initiative is supported by a group of international organizations, including the African Development Bank, Global Environment Facility and UNEP, as well as AFREPREN/FWD.

For more information:
http://www.unep.org/south-south-cooperation/case/casedetails.aspx?csno=56

James Finlays Tea Estate

James Finlays Tea Estate

Poverty-Environment linkages strengthen interregional exchanges

The Poverty-Environment Initiative (PEI) of UNDP and UNEP is a global programme that supports country-led efforts to mainstream poverty and environment linkages into national development and subnational development planning.

A regional workshop on "Improving Public and Private Investment for Pro-Poor Environment and Climate Outcomes" was held in Vientiane, Lao PDR, in June 2010. Participants representing finance, planning, local government and environmental government agencies from across the Asia-Pacific region reviewed different approaches in managing public and private investment for poverty reduction and sustainable natural resource management, as well as climate change.

The results helped inform the development of country programmes, as well as inspired efforts to support interregional cooperation on these issues under the umbrella of the joint UNDP-UNEP Poverty-Environment Initiative (PEI).

Thus, the following year, a delegation from Rwanda was invited to visit three Asian countries - Lao PDR, Nepal and Thailand. With a national focus on private sector development and poverty alleviation, Rwanda was interested to learn more about potential entry points that would support private sector development, as well as to share some of its experiences concerning environmental public expenditure, fiscal reform, valuation of integrated ecosystem services and poverty-environment indicators. In addition, Rwanda presented its innovative new finance mechanism for environmental sustainability and climate resilience (FONERWA) or National Climate and Environment Fund as it is now known.

During the visit to Lao PDR, government officials and national stakeholders from both countries exchanged expertise on local development planning, the sustainable management of private and public investments, and the greening of budget processes. The Rwandan FONERWA model offered Lao officials some insight on their own efforts to create a system for monitoring and evaluating the social and environmental impacts of investments. Today, this system is now operational in Lao PDR through the Ministry of Planning and Investment (MPI) and the Ministry of Natural Resources and Environment (MoNRE).

During the Nepal exchange, Nepalese officials learned more about

Rwanda's work on implementing a public environment expenditure review (PEER). This peer-to-peer exchange contributed to Nepal's pioneering work on climate change expenditure and later its climate change budgeting work (Climate Public Expenditure and Institutional Review or CPEIR), which has now been replicated in several other PEI countries in the region.

In Thailand, government officials were interested to learn more about Rwanda's policy advocacy work, as well as its effective communication materials. Lessons were later incorporated into national efforts there.

Conversely, Rwanda also benefitted from this experience. Specifically, the participants learned about some practical ways to mainstream poverty-environment issues into private sector investments and performance, ensuring they consider the needs of the poor. The experience has shown that although the cultural contexts are different for each country, they can still realize substantial benefits from sharing their development challenges and approaches.

New project explores different country approaches to sustainable development

The *Future We Want* endorses the green economy as an important vehicle for achieving sustainable development. It also acknowledges that there are other national approaches that are guiding countries' efforts in how to build low carbon, resource efficient and inclusive economies.

Based on these outcomes, in February 2013, UNEP was asked to "collect such initiatives, endeavours, practices and experiences of different approaches, visions, models and tools, and to disseminate them and facilitate information sharing among countries, so as to support them to promote sustainable development and poverty eradication."

Tianhong Huang

Thus, a new project, entitled "Enhancing South-South Cooperation - Building the Capacity of Developing Countries to Promote Green Economies," was initiated to contribute to this effort. The project will provide a forum for developing countries to share their experiences and initiatives. More specifically, it will seek to examine four unique approaches: Bolivia's *Bien Vivir* (Living Well), China's Ecological Civilization, South Africa's Green Economy and Thailand's Sufficiency Economy. The project will also study how the different concepts are being integrated into national policy frameworks and what kind of impact they are having both at the national and local level.

Barbados leads the way on green economy in the Caribbean

Over the past few years, Barbados has led the way in finding solutions for the increasing economic and environmental pressures that the Caribbean is facing. Since the international financial crisis in 2008, countries in the region have experienced rising unemployment and a decline in key economic sectors, such as tourism and agriculture. At the same time, the region is also facing escalating costs from environmental degradation, sea-level rise and unsustainable resource use.

Already at the beginning of the 21st century, the government of Barbados identified its overreliance on imported fossil fuels as an important challenge for development. The National Strategic Plan of Barbados (2006-2025), therefore, set a target to increase the country's renewable energy supply.

The Green Economy Scoping Study: Barbados Synthesis Report (2012), that was produced by an inter-ministerial steering committee analyzed five key economic sectors – agriculture, fisheries, building, transport and tourism, as well as four cross-cutting issues – waste, water, energy and land, putting forward recommendations to advance its green economy agenda. Some of the recommendations included:

- introducing green standards in the management of energy, solid waste, water and land under an overarching policy framework to promote sustainability in the building industry; and
- adopting and promoting new energy and resource efficiency policies for hotels, and establishing new heritage and nature-based tourism sites.

The tangible impact of the study after only one year includes the reduction of customs duties on the importation of electric cars and hybrid vehicles, as well as an introduction of a "green levy" in the 2012 budget.

The Barbados example is becoming a model for the Caribbean. To assist more countries in their efforts to achieve national goals of sustainable development and poverty reduction, UNEP in collaboration with CARICOM and with financial support from the European Commission, is implementing a Caribbean Green Economy Initiative (CGEI). The initiative is providing direct support to three pilot countries, and capacity building support to the whole region.

The experiences of Barbados to use fiscal policies to transition to a greener economy is also extremely pertinent to the countries in the region and has potential to become a model for small islands in other regions of the world, such as the Pacific.

Conclusion

9 Conclusion

As these case studies and examples show, developing countries are responding to the challenges of sustainable development and building green inclusive economies through South-South and Triangular Cooperation. Often with the aid of governments, businesses, donors and civil society, they are embarking on new and ambitious initiatives that are delivering renewable energy and greater energy efficiencies, cleaner production and improved recycling, healthier ecosystems and greater economic, environmental and social benefits for their communities.

Whether it is through carrying out capacity building and training or applying new standards and technologies, all of these cases underscore the importance of partnerships. Political leadership and support is key at all levels, but establishing the right enabling conditions is also critical for the long-term success of these projects.

Moving forward, UNEP plans to continue to foster South-South Cooperation wherever possible in its programme of work. Through sharing information and lessons learned, it hopes to create a deeper understanding and appreciation of the challenges and opportunities ahead.

As the report demonstrates, there are many pathways leading to a green economy, and every contribution brings us a step closer to a sustainable future.

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