

2012 Annual Report



1972-2012:
Serving People
and the Planet



United Nations Environment Programme



UNEP ANNUAL REPORT 2012

The mission of the United Nations Environment Programme is to provide leadership and encourage partnership in caring for the environment by inspiring, informing and enabling nations and peoples to improve their quality of life without compromising that of future generations.

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MESSAGE FROM THE UNITED NATIONS SECRETARY-GENERAL



BAN KI-MOON
UN SECRETARY-GENERAL

In the past decade, the number of people living in extreme poverty has been reduced by half. Yet, too many people remain poor, hungry and vulnerable to easily preventable disease, and the environmental base that will improve their opportunities for prosperity is under unprecedented threat. No longer can we afford to recklessly consume resources that grow ever scarcer. No longer can we carelessly pollute and degrade fragile ecosystems. No longer can we ignore the threat posed by climate change. No longer can we undermine our future to satisfy short-term needs.

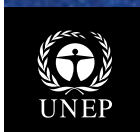
To address all these issues, we must create an irreversible momentum. The Rio+20 United Nations Conference on Sustainable Development was therefore a welcome step in the right direction. World leaders agreed to establish a set of universal sustainable development goals, which will build on the Millennium Development Goals and become an integral part of the post-2015 development framework. They also agreed to strengthen the institutional framework for sustainable development, including reinforcing UNEP as the leading global environmental authority.

The conference adopted a ten-year Framework of Programmes on Sustainable Consumption and Production, to be hosted by UNEP, and recognized the need to go beyond gross domestic product as a measure of progress. It also acknowledged the role that green economy policies can play in poverty reduction, economic growth and environmental care.

The broad range of work highlighted in this Annual Report demonstrates how UNEP uses its expertise and experience in working with governments, UN bodies and other actors for sustainability. With the increased authority bestowed on it by Rio+20 and – most recently – by the UN General Assembly decision to allow full participation of all 193 UN Member States at the UNEP Governing Council in February 2013, I expect UNEP to play a key role in creating the future we want.

A handwritten signature in black ink that reads "Ki Moon Ban". The signature is written in a cursive, flowing style.

TO CELEBRATE UNEP'S FORTIETH ANNIVERSARY, STANLEY JOHNSON WROTE A HISTORY OF THE ORGANIZATION, PACKED WITH FASCINATING ANECDOTES, QUOTES AND PICTURES.



UNEP THE FIRST 40 YEARS

A NARRATIVE

BY STANLEY JOHNSON



1

2012: YEAR IN SUMMARY





ACHIM STEINER
UNEP EXECUTIVE DIRECTOR



UNEP



AMINA MOHAMED
UNEP DEPUTY EXECUTIVE DIRECTOR

2012 – A RESOUNDING ENDORSEMENT OF ENVIRONMENTAL GOVERNANCE

History was made in 2012 with the first institutional reform of the environment programme of the UN since the Stockholm UN Conference on the Human Environment established UNEP in 1972.

At Rio+20, Heads of State and governments decided to strengthen and upgrade UNEP. This was followed by the adoption of a resolution at the 67th session of the UN General Assembly later in the year.

This transformation – in our 40th anniversary year – was not only a vote of confidence in the mission and work of UNEP but also a signal that the environmental pillar of sustainable development and its anchor institution have moved from the fringes and far more into the centre of nations' aspirations for The Future We Want.

It is also a tribute to the former Executive Directors and staff who nurtured UNEP and directed it from a small secretariat of around a dozen people, housed initially above a supermarket in downtown Nairobi, to the truly global institution we see today.

When member states meet at UNEP's Governing Council in February 2013 they will also meet as a forum with universal membership for the first time.

Meanwhile, discussions are already underway on providing UNEP with increased funding from the UN Regular Budget in order to meet the challenges and opportunities, including those possible through a transition to an inclusive Green Economy in the context of sustainable development and poverty eradication.

Additional funding that is stable and predictable will assist in the request from governments for increased support to countries at the national and regional level through enhanced capacity building and technology support.

UNEP – with its long history of working with partners from governments, the UN family, cities, the scientific community, businesses and civil society – is entering a new phase that can better serve the needs of a growing global population.

In short, as a result of reforms put in place in the last six or so years and those delivered at Rio+20 in 2012, UNEP is better placed to deal with the realities of and real opportunities for a sustainable 21st century.

Leading the Charge



The transportation sector, particularly heavy diesel vehicles, is a significant source of black carbon, which the Climate and Clean Air Coalition aims to tackle

UNEP's growing global relevance did not stop with its expanded membership and mandate.

Heads of States in Rio requested UNEP to act as the Secretariat of a **10 Year Framework of Programmes (10 YFP) for Sustainable Consumption and Production** – a global framework of action to enhance international cooperation and innovation and thus accelerate the shift towards sustainable consumption and production in both developed and developing countries.

UNEP has also been asked to establish and administer a Trust Fund to support Sustainable Consumption and Production under the 10YFP implementation in developing countries and economies in transition.

The framework will contribute to decoupling resource use and environmental degradation from economic growth, as well as provide capacity building and technical support to developing countries.

In February 2012, UNEP and an initial group of six governments launched the **Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC)** – the first global effort to treat short-lived climate pollutants (SLCPs) such as black carbon, methane and some hydrofluorocarbons as a complementary effort.

Compelling scientific evidence indicates that fast action to reduce these pollutants, especially methane and black carbon, has the potential to slow down the warming expected by 2050 by as much as 0.5°C. UNEP pioneered work on black carbon over a decade ago with its **Atmospheric Brown Cloud project** – underscoring UNEP's role as the agency that highlights emerging issues and prompts concrete action. Less than a year after its establishment, 26 States, the European Commission, five intergovernmental organizations and 18 non-governmental organizations have joined the coalition.

At the UN Climate Change Conference (COP18) in Doha, a UNEP-led consortium was selected by the parties of the UNFCCC to host the **Climate Technology Centre and Network (CTCN)**. The CTCN aims to accelerate the transfer of technology and expertise to developing countries in order to reduce greenhouse gas emissions and improve resilience to the impacts of climate change.



These new initiatives, each of which has the potential to mitigate climate change with multiple additional environmental, economic and social benefits, add to the dozens of international agreements UNEP hosts, convenes and runs. Alongside the hundreds of other partnerships and collaborations we maintain across the globe, the breadth and scale of UNEP's reach and relevance has received increasing recognition by the international community.

Finally, individual states are signalling growing confidence in UNEP by developing stronger links in terms of partnerships and voluntary funding. China and Brazil, for example, pledged US\$6 million, demonstrating that emerging and developing countries are increasingly evolving their long-standing understanding of the importance of the environmental dimension of sustainable development. UNEP also signed an agreement with the Russian Federation to implement a broad range of priorities in the areas of environmental management and better use of natural resources – an important milestone in our gradually evolving cooperation.

The Voice of the Environment

There is no doubt that, with such unprecedented backing, UNEP is set in the coming years to become an even stronger voice for environmental stewardship. Already in 2012, we raised this voice to highlight the challenges the world faces in the years ahead and point to the action that must be taken to ensure we face these challenges head on.

Just before Rio+20, UNEP released the fifth edition of the **Global Environment Outlook (GEO-5)** – the UN's most comprehensive study on the state of the global environment. It assessed 90 of the



The GEO-5 report placed renewed focus on the drivers of environmental change, such as population growth

world's most important environmental goals, and found that significant progress had only been made in four. The report warned that if humanity does not urgently change its ways, several critical thresholds may be exceeded – beyond which abrupt and irreversible changes to the life-support functions of the planet could occur.

However, GEO-5 also demonstrated that meeting sustainability targets by the middle of the century is possible if current policies and strategies are changed and strengthened, and gave many examples of successful policy initiatives, including public investment, green accounting, sustainable trade, the establishment of new markets, technological innovation and capacity building. It also pointed out that where international treaties and agreements have tackled goals with specific, measurable targets, they have demonstrated considerable success.

In the run-up to November's UN Climate Change Conference (COP18) in Doha, UNEP launched the **2012 Emissions Gap Report**. The study found that the world is off track on keeping greenhouse gas emissions at the level

they need to be in 2020 to provide a chance of holding global average temperature rise below 2°C this century. However, the report pointed out that around 17 gigatonnes of CO₂ equivalent could be saved in sectors such as buildings, power generation and transport.

UNEP also sparked wide debate with **Policy Implications of Warming Permafrost** – a report released at Doha that called for expected greenhouse gas emissions from permafrost, which covers almost a quarter of the northern hemisphere and is beginning to melt, to be accounted for in climate-prediction modelling.

Of equal importance was UNEP's **Global Chemicals Outlook**, which provided Green Economy-style analysis on the costs to economies of inaction in respect to chemicals hazards. The first comprehensive report of its kind, it followed renewed commitments by countries at Rio+20 to the 2020 target on the sound management of chemicals that was originally set at the World Summit on Sustainable Development in 2002.

The report recognized that chemicals are major contributors to national and world economies, but that sound management throughout their lifecycle is essential to avoid significant and increasingly complex risks to human health and ecosystems, as well as substantial costs to national economies.

This landmark work was launched during the third International Conference on Chemicals Management (ICCM3), held in Nairobi and organized by the **UNEP-hosted Strategic Approach to Chemicals Management (SAICM)**. Delegates extended a Trust Fund that has provided over US\$31 million to improve the management of potentially hazardous chemicals in 105 countries,

once again demonstrating UNEP's capacity to link emerging science with practical implementation support.

Tackling the Challenge

Aside from tracking and highlighting areas of environmental concern, UNEP in 2012 took firm action in a number of areas. We are already moving forward on the Rio+20 outcomes in partnership with governments, other agencies in the UN system, civil society, local authorities and business in those areas that are ripe for fast action.

Rio+20 gave the green light for multilateral work on **Green Economy in the context of sustainable development and poverty eradication**. Rio+20 provided UNEP with a license to respond to countries interested in developing the concept of an inclusive Green Economy and to engage in partnership with others to help them meet their needs.

UNEP is taking forward this call, establishing a **Partnership for Action on a Green Economy (PAGE)**, which will be launched with the International Labour Organization (ILO), United Nations Industrial Development Organization (UNIDO) and the United Nations Institute for Training and Research (UNITAR). Additional UN agencies will be engaged in due course. This builds upon and expands UNEP's Green Economy advisory services, which are already supporting over 20 developing countries across a variety of sectors – be it agriculture, transport or the built environment – make the shift to an inclusive, low-carbon future.

A study carried out in conjunction with the ILO, the International Organization of Employers (IOE) and the International Trade Union Congress (ITUC) estimates that a Green



© Riccardo Gangale

Rio+20 further strengthened the Green Economy agenda to help advance a low-carbon, resource-efficient future

Economy transformation could generate 15 to 60 million additional jobs globally over the next two decades and lift tens of millions of workers out of poverty. This is firm evidence that a transition to an inclusive Green Economy need not come at the expense of economic development.

The Sustainable Development Goals (SDGs) now being developed as a result of Rio+20 represent a real opportunity of uniting the agendas of developing countries with the responsibilities and impacts of developed ones. In short, the SDGs can be a global framework that could make every nation accountable on how we all move forward to deliver a sustainable century.

There are many areas where UNEP has a unique valued-added here, not least in the systematic assessment of achieving internationally agreed goals. Other areas include Green Economy

indicators – looking beyond Gross Domestic Product (GDP) as a measure of wealth through, for example, **The Economics of Ecosystems and Biodiversity**.

As part of this work, UNEP in partnership with the UN University's Human Dimensions Programme on Global Environmental Change launched a new growth indicator for national economies, called the Inclusive Wealth Index. The index shows governments the true state of their nation's wealth and the sustainability of its growth, as GDP often ignores the rapid and largely irreversible depletion of natural resources that will seriously threaten the future lives and livelihoods of generations to come.

Other areas where UNEP is taking forward the Rio+20 outcomes include promoting corporate sustainability reporting, sustainable procurement and new indicators for a Green Economy in

collaboration with governments and many UN partners, academics and civil society groups.

We also evolved relationships with business, financial institutions and investors with initiatives aimed at promoting the sustainable use of natural resources by taking into account the economic value of the ecosystem services and biodiversity they provide. UNEP's **Finance Initiative** celebrated 20 years of partnership with the financial sector at Rio+20. **The Natural Capital Declaration, Environmental Risk in Sovereign Credit, Principles for Sustainable Insurance, and International Sustainable Public Procurement** initiatives brought hundreds of diverse stakeholders together for the same end. These initiatives followed on from the establishment in April of the Intergovernmental Science–Policy Platform on Biodiversity and Ecosystem Services (IPBES), for which UNEP has hosted the interim secretariat.

Also at Rio+20, the landmark **World Congress on Justice, Governance and Law for Environmental Sustainability**, which gathered the world's top judges, prosecutors, and auditor generals, adopted a set of guiding principles for the Advancement of Justice, Governance and Law for Environmental Sustainability. GEO-5 said that weak environmental laws and poor accountability contribute to the lack of progress on environmental goals. To address this challenge, UNEP then established a nine-member advisory council that includes Chief Justices, senior judges, auditors and legal academics. The Council will provide strategic guidance to the international community in improving the legal foundations for achieving international environmental goals, and overcoming legal barriers to inclusive sustainable development.

We are also entering a new and exciting phase of our work in which we strive to engage more

in promoting important issues, with major preparatory work having taken place on two initiatives.

As part of its scientific assessment on sustainable management of natural resources and environment sustainability, the **International Resource Panel** is looking to develop the scientific analysis on decoupling food production and consumption from food waste and food loss. Achieving Sustainable Consumption and Production (SCP) patterns in the agri-food sector is vital for sustainable development, a fact highlighted by evidence that over 30 per cent of food is wasted or lost around the globe, as UNEP's **Avoiding Future Famines: Strengthening the Ecological Basis of Food Security through Sustainable Food Systems** showed.

In order to galvanize action and engage the public and business on SCP, UNEP is planning to launch an international initiative on food waste dovetailing with existing initiatives such as the UN Food and Agricultural Organization's Save Food initiative.

Food waste and food loss are a food security issues and for many an ethical one – given the fact that every apple or sheaf of wheat wasted or lost also represents a waste of chemicals, fertilizers, land, water and energy, this is very much an environmental sustainability and economic theme too.

The **Think.Eat.Save. Reduce Your Footprint** Campaign will be formally launched in early 2013 with the Food and Agriculture Organization (FAO) and others partners. It supports the UN Secretary-General's Zero Hunger initiative.

There are many other highlights of an extraordinary year for UNEP and the environmental agenda, which are detailed throughout the following chapters of the 2012 Annual Report.

Progress is Possible



The work of the Montreal Protocol to halt the depletion of the ozone layer shows that the world can work together to bring positive change

In summary, there is no question that the scale of the environmental challenges facing the world today is massive – so much so that there is a temptation amongst many to be fatalistic. Yet history has shown that when everybody pulls together in the face of a threat, quick and clear success can be forged.

Hailed as the most successful treaty in UN history, the **Montreal Protocol on Substances that Deplete the Ozone Layer** celebrated its 25th anniversary in September this year. The Protocol, for which UNEP serves as Secretariat, has enabled reductions of more than 98 per cent of all global production and consumption of controlled ozone-depleting substances and oversaw the global phase-out of chlorofluorocarbons by 2010. With implementation of the Protocol's provisions, the ozone layer should return to pre-1980 levels by 2050 to 2075. Thanks to controls implemented under the Protocol, the global community will

be spared millions of cases of skin cancers and cataracts – in addition to trillions of dollars in health care.

This example should inspire us all to work harder to tackle the challenges posed by climate change, ecosystem degradation, unsustainable lifestyles and harmful substances.

And even though it can be easy to become frustrated, there is a great deal of positive environmental change occurring nationally, regionally and internationally that can be accelerated and scaled-up.

Never before has there been so much awareness of the risks we are all running. Increasingly we are seeing the emergence of catalytic policies and initiatives aimed at sustainably managing our environment for future generations – not just from UNEP, but from governments, local authorities, cities, businesses, non-governmental organizations and the public. Some of these may take years to bear fruit, but their very existence shows that International Environment Governance is far more firmly on the map than perhaps it has been in recent years.

With a stronger UNEP serving as the beating heart of these transformations, the goal of a truly sustainable world may no longer be always just over the horizon, but within our grasp.

Two handwritten signatures in black ink. The top signature is 'Achim Steiner' and the bottom signature is less legible but appears to be another official's name.



UNEP YEAR IN NUMBERS

Greenhouse gas emissions could reach **58** gigatonnes annually in **8** years if no action taken

50 members in the Climate and Clean Air Coalition

The Global Fuel Economy Initiative targets **50%** increase in fuel efficiency of global fleet by 2050

Over 6,000 institutions in 109 developing countries can access **17,000+** scientific journals, books and databases through OARE, a public-private partnership led by UNEP

Permafrost contains **1,700** gigatonnes of carbon

The Atmospheric Brown Cloud programme cut black carbon emissions by **70%** in pilot projects

Between **50** and **90%** of logging in key tropical countries carried out by organized crime

Doubling the market share of public transport can avoid emissions of **550 million** tonnes of CO₂ by 2025

Warming permafrost could ultimately account for **39%** of total emissions

Energy-efficient lighting can bring annual CO₂ reductions of **490 million** tonnes

Over **50%** of humanitarian projects in Sudan had an environmental component

Geothermal expected to generate **30%** of Kenya's additional power over next **20** years



The Japan tsunami produced **6.15 million** tons of debris in one city, equal to 103 years of normal waste

Of **90** internationally agreed goals and objectives assessed in GEO-5, only significant progress in 4

Low-lying pacific islands can lose **18%** of GDP due to climate change

56 countries have requested support from the Poverty-Environment Initiative

Between 1906 and 2006, Africa's glaciers lost **82%** of land area

Over last 25 years, **25%** of global land area has seen productivity hit due to soil carbon loss

Over **120** universities are members of the Global Universities Partnership on Environment and Sustainability

The Resource-Efficient and Cleaner Production programme operates in over **50** countries

World Environment Day reached **54 million** people on social media

Deforestation of 28, 247 hectares in Kenya's water towers between 2000 and 2010 cut water availability by **62 million** m³ annually

19 million visitors to unep.org in 2012

Over **1.2 million** children entered UNEP's painting competitions in 2012

UNEP YEAR IN NUMBERS

The Termit and Tin
Toumma reserve
in Niger is the
largest protected
area in Africa at
97,000 km²

Aichi Biodiversity
Target 11 calls
for **17%** of
world's land area
and **10%** of
marine areas to be
protected by 2020

140,000+
chemicals on the
market

Conflict resolution in DR
Congo's Kahuzi-Biega National
Park cut illegal activities by
40%

GRASP's Act Now for
Orangutans campaign reached
2.9 million
people online

More than **25%** of global
disease burden can be attributed
to environmental factors,
including chemical exposure

Benefits from global phase-out of leaded fuel
amount to **US\$2.45 trillion**

Natural Capital depletion
represents annual cost of over
US\$1.5 trillion

Land degradation
has occurred on
50% of
West Africa's Sahel

25 years of
Montreal Protocol
saw reductions
of **98%** of
production and
consumption of
ozone-depleting
substances

173
governments,
82 NGOs, **15**
intergovernmental
organizations work
with SAICM



SAICM Quick Start Programme supported **145** projects in over 100 countries

Green economy transformation could generate up to **60 million** new jobs over next 20 years

Energy-efficiency gains of **20%** possible in Serbia over next 10 years

Siemens saves **4 million** tonnes of CO₂ annually through wind power

More than **100** partners in UNEP Global Mercury Partnership

1.3 billion tonnes of food produced for human consumption, one-third of total, wasted annually

Mexico's Grupo Bimbo saved **338,400** m³ of water through footprint-reduction measures

48 new GEF projects approved in 2012, at total funding of **US\$345.4 million**

UN peacekeeping missions can save up to **32%** in energy costs through simple changes

UNEP secured **US\$22.3 million** for environmental recovery projects in 2012

More than **34** UN agencies have adopted greenhouse gas emission reduction strategies

16 countries with National Programmes and **46** total partner countries in UN-REDD

Out of UNEP's **22** expected accomplishments, **18** have shown good progress

PROGRAMME EVALUATION OF UNEP: UN OFFICE OF INTERNAL OVERSIGHT SERVICES

1st Comprehensive Evaluation Since 1996. To be published in 2013, based on surveys of close to 330 staff and 20 member states, and interviews with 247 staff and stakeholders in 2012 (currently in draft form).

UNEP has performed strongly in the last four years, as evidenced by a 52 per cent increase in voluntary contributions since 2008 and the support it received for strengthened governance in the 2012 Conference on Sustainable Development.

Despite its relatively small size, UNEP has successfully leveraged its expertise and strategic partnerships to spearhead important environmental efforts such as the green economy initiative the protection of biodiversity and chemicals management.

There are opportunities to achieve even greater results, through both programmatic and structural improvements and enhanced efficiencies—UNEP's senior leadership should continue its current positive path of reform.

UNEP has facilitated access to timely and relevant science-based information on key environmental challenges and opportunities—all Governing Council (GC) survey respondents rated UNEP effective in keeping the world environmental situation under review.

Users of UNEP's assessments rated them highly.... In particular, the GEO reports, which provide science-based information on the state of the environment, were regarded by key stakeholders as being of high technical quality, unique in the environmental field and a long-standing contribution of the organization.

The commissioning of internal reports such as the UNEP Evaluation Office Formative Evaluation, the Task Team Report, and the Review of the Needs and Potential of Regional Offices, demonstrates that current UNEP leadership values continuous inquiry and reflection for its change management processes.

The GEO reports have had direct impact on informing government policy.... with GEO5, UNEP further increased the report's utility by producing and distributing specialized and targeted publications that support environmental priority setting and policy-making.



UNEP has effectively promoted and catalyzed international action on the green economy... it was adopted as one of the Rio+20 themes in June 2012, where it found prominent expression in the conference declaration.

UNEP's progress in promoting the coherent implementation of the environmental dimension of sustainable development within the United Nations system has been challenged by unclear and overlapping roles among United Nations entities.

UNEP has effectively guided regional and national environmental policy formulation and contributed to positive environmental outcomes.

Some UNEP initiatives, such as the Partnership for Clean Fuels and Vehicles (PCFV) and the OzoneAction programme supporting the Montreal Protocol, have had a direct impact on improving the state of the environment and human health.

UNEP has been critical to the development of environmental norms and standards, although coordination with MEAs could be strengthened.

Through numerous smaller-scale initiatives, UNEP has delivered valued policy advice and capacity development.

UNEP...still needs to focus further on its work programme and strengthen internal processes and regional offices.

UNEP has made progress in developing stronger programme planning and management processes to become a fully results-focused entity.

UNEP has provided valued capacity development services, but has not been adequately strategic in planning for and managing these services.

UNEP has been an effective champion for bringing the environment to the forefront of global debate and a strong catalyst for international action.



2

CLIMATE CHANGE



ADDRESSING THE CLIMATE CHANGE CHALLENGE

The climate change sub-programme focuses on strengthening the ability of countries, particularly developing nations, to integrate climate change responses into national development processes.

RESULTS TARGETED

Mitigation

Support countries to make the transition to low-emission development pathways and a green economy by assessing emissions-reduction opportunities, phasing out obsolete technologies, facilitating access to finance (including stimulating private sector involvement) and promoting the scaling up of clean and renewable energy sources and energy efficiency through policy, technology and investment choices.

Adaptation

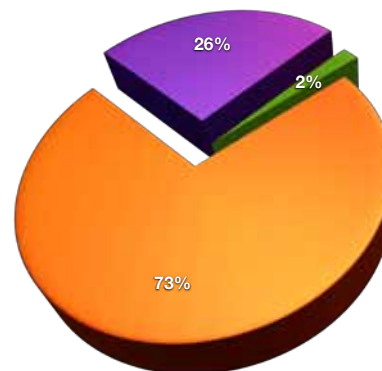
Assist countries to reduce their vulnerabilities and increase their resilience to the impacts of climate change by supporting them in the production of sound knowledge, the use of ecosystem services and ecosystem management, and the integration of adaptation into development planning and policies.

Reducing Emissions from Deforestation and Forest Degradation (REDD)

Support countries to develop transformative REDD+ strategies, finance approaches and institutions, and test innovative REDD+ pilot projects that include multiple benefits in areas such as biodiversity and livelihoods. This

Total Expenditure 2012

\$US51.65 million, 86% of allocations



- Environment Fund: US\$13.29 million
- Regular Budget Expenditures: US\$0.9 million
- Trust Funds and Earmarked Contributions: US\$37.46 million

work includes promoting consultations among stakeholders, including indigenous peoples and forest-dependent communities, and engagement with the private sector to demonstrate the potential for REDD+ to be a catalyst for the green economy.

Science

Draw on strengths as a science-based organization; facilitate the development of climate change assessments – including for new and emerging issues – and climate impacts research to inform policies; and support countries in the development of their own climate science expertise.

Outreach

Improve the general understanding and awareness of climate change, ensuring that national policymakers and negotiators, trade unions, youth, civil society and the private sector have access to relevant, clear and understandable climate change information.

WARMING CLIMATE

One of UNEP's key roles is to provide data to policymakers to allow them to understand the challenges the world faces and bridge the science-policy gap. Two high-profile reports this year highlighted that the global community is off track in efforts to have a chance of keeping a global temperature rise under 2°C this century, and pointed to areas where decisive action can make a difference.

Growing Emissions Gap

The Emissions Gap Report 2012, coordinated by UNEP and the European Climate Foundation, found that greenhouse gas emissions levels are already above where they need to be in 2020 to stay in line with a likely chance of holding global average temperature rise below 2°C this century. Yet concentrations of warming gases like carbon dioxide are still increasing in the atmosphere – up around 25 per cent since 2000.

If no swift action is taken, emissions are likely to reach 58 gigatonnes in eight years' time, said the report, which involved 55 scientists from more than 20 countries. Previous assessment reports have underlined that emissions need to be on average at around 44 gigatonnes or less in 2020 to set the stage for even bigger reductions needed. This gap is larger than that in the 2010 and 2011 assessments.

However, the report, which was released just prior to the Doha Climate Change Conference in November, pointed out that around 17 gigatonnes of CO₂ equivalent could be saved in sectors such as buildings, power generation and transport.



UNEP Executive Director Achim Steiner.

While governments work to negotiate a new international climate agreement to come into effect in 2020 they urgently need to put their foot firmly on the action pedal by fulfilling financial, technology transfer and other commitments under the UN climate convention treaties

The Neglected Threat of Warming Permafrost

The permafrost that covers almost a quarter of the northern hemisphere contains 1,700 gigatonnes of carbon and could significantly amplify global warming should thawing accelerate. Yet these potential emissions have not been factored into climate-prediction modelling.

Policy Implications of Warming Permafrost, a UNEP report released at the Doha Climate Change Conference in November, alerts climate-treaty negotiators and policymakers of the need to take account of warming permafrost in the climate change equation.

Should the permafrost begin to warm, organic matter stored in the frozen soil would thaw and decay, releasing CO₂ and methane into the



©Michael Fritz.

A scientist standing in front of an ice-rich permafrost exposure on the coast of Herschel Island, Yukon Territory

atmosphere and beginning a feedback loop that is irreversible on human timescales.

Warming permafrost could emit 43 to 135 gigatonnes of CO₂ equivalent by 2100 and 246 to 415 gigatonnes by 2200. Permafrost emissions could ultimately account for up to 39 per cent of total emissions. Warming permafrost is also likely to radically alter ecosystems and cause costly infrastructural damage due to unstable ground.

The report recommended a special Intergovernmental Panel on Climate Change study on permafrost and the creation of national monitoring networks and adaptation plans to deal with potential impacts.

UNEP'S MITIGATION AND ADAPTATION

UNEP is working tirelessly to both mitigate climate change caused by rising Greenhouse Gas emissions and assist communities in the developing world adapt to climate change

impacts. Engaging with partners at all levels across the globe and putting programmes into action on the ground, UNEP is at the forefront of efforts to protect the lives and livelihoods of future generations.

Cleaning Up to Help the Climate

In February 2012, UNEP and six governments launched the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC) – the first global effort to treat short-lived climate pollutants (SLCPs) such as black carbon, methane and some hydrofluorocarbons as a collective challenge.

Compelling scientific evidence indicates that fast action to reduce these pollutants, especially methane and black carbon, has the potential to slow down the warming expected by 2050 by as much as 0.5°C. Action can also prevent more than two million premature deaths each year and annual crop losses of more than 30 million tonnes.

Less than a year after its creation, 26 States, the European Commission, five intergovernmental organizations and 18 non-governmental organizations have committed to mitigating SLCPs to protect human health and the environment and slow the rate of climate change in the near term as partners in the Coalition. About US\$16.4 million has been pledged to the CCAC Trust Fund.

The CCAC partners are engaged in seven initiatives aimed at scaling-up concrete actions to spark significant reduction of SLCPs:

- Reducing Black Carbon Emissions from Heavy Duty Diesel Vehicles and Engines;



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Brick kiln in Afghanistan

- Mitigating SLCPs and Other Pollutants from Brick Production;
- Mitigating SLCPs from Landfills and Municipal Solid Waste;
- Promoting SLCP National Action Planning (NAP);
- Promoting HFC Alternative Technology and Standards;
- Accelerating Methane and Black Carbon Reductions from Oil and Natural Gas Production;
- Financing Mitigation of SLCPs.

UNEP's Division of Technology, Industry and Economics in Paris hosts the Secretariat of the Coalition.

UNEP has also launched a new initiative in Mexico, funded by the Global Environment Facility (GEF). The project aims to develop and implement a more comprehensive and sustainable Low Emissions Development Strategy for Mexico through an integrated assessment of short-lived climate pollutants, and the development and demonstration of targeted mitigation policies.

PIONEERING WORK ON BLACK CARBON

UNEP's Atmospheric Brown Cloud (ABC) Programme has pioneered the science on black carbon over the previous decade, with observation stations providing data for sound cutting-edge science. To link science to policy, two pilot mitigation studies have been carried out in India and Kenya – where indoor air pollution from black carbon is a major killer – to demonstrate the benefits of improved cook stoves and solar lighting systems. Recorded benefits include:

- 70 per cent reduction in black carbon emissions;
- 50 per cent reduction in daily energy cost;
- 50 per cent reduction in biomass need, with positive impacts for women and the environment.

Year of Sustainable Energy for All

Within the context of the Year of Sustainable Energy for All, UNEP in 2012 ran many catalytic initiatives in energy efficiency, renewable energy and climate financing.

UNEP's projects work toward the 2030 objectives of universal access to energy, doubling the share of renewables in the global energy mix, and doubling the rate of improvement of energy efficiency – goals set by UN Secretary General



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Geothermal can play a key role in the global energy mix

Ban Ki-moon in his Sustainable Energy for All (SE4All) initiative. Political leaders at Rio+20 widely endorsed sustainable energy for all and more than 50 developing countries have committed themselves to the initiative.

UNEP organized the Africa Roll Out during its Governing Council Special Session held in February in Nairobi, showcasing practical examples that can meet the objectives on the continent, such as the African Rift Geothermal Development Facility set up by UNEP and the Global Environment Facility (GEF). Geothermal is expected to generate 30 per cent of Kenya's additional electricity over the next 20 years.

A regional UNEP project (Cogen for Africa) to promote renewable energy through the generation of biomass-based power primarily from agricultural waste has successfully achieved large-scale production. So far Efficient Cogeneration Systems with generation capacities equivalent to 20.8MW of have been constructed and commissioned, in Kenya

and Uganda, and another 90MW is under construction at a total investment of US\$31.68 million. Funded through GEF and other partners, the project has already exceeded initial plans.

In a Global Action Agenda, high-impact opportunities in 11 action areas have been identified, ranging from appliance efficiency to innovative finance. More than 150 commitments for action have been inspired, amongst which are partnerships between UNEP and the private sector such as the Global Fuel Economy Initiative and the en.lighten initiative.

Global Fuel Economy Initiative

The Global Fuel Economy Initiative – set up by UNEP with the International Energy Agency, the International Transport Forum, the International Council for Clean Transportation and the FIA Foundation – targets improving the fuel efficiency of the global fleet by at least 50 per cent by 2050.

The initiative supports close to 20 countries in Africa, Asia, Latin America and Central and Eastern Europe to implement policies that target inefficient cars, provide tax breaks to efficient cars, regulate used vehicles imports, and require labels informing consumers about emissions and fuel consumption. By adapting the technologies and standards from developed to developing countries, annual emissions of around two gigatonnes of CO₂ can be avoided from 2025.

En.Lighten Initiative



Energy-efficient bulbs are a cost-effective approach to climate change mitigation

The transition to energy-efficient lighting is one of the most straightforward and cost-effective approaches to mitigating climate change, with potential annual CO₂ reductions of 490 million tonnes – equivalent to the emissions of Italy and Denmark. The en.lighten initiative accelerates the transformation to environmentally sustainable lighting technologies through a coordinated global strategy and technical support, and had the following successes in 2012:

46 countries joined as partners, and phase-out activities began in 14 countries;

New Country Lighting Assessments highlighted the energy, financial and CO₂ savings potential for the domestic, commercial and street lighting sectors in 150 countries;

A newly created global policy map analyzed the readiness of countries to embark on a transition to energy-efficient lighting;

The new Efficient Lighting Toolkit provided a centralized resource that provides guidance for countries to transform to efficient lighting;

The private sector association, Global Off-Grid Lighting Association (GOGLA), and en.lighten joined forces to promote modern, efficient off-grid lighting solutions.

The initiative is a public-private partnership between UNEP, OSRAM AG, Philips Lighting and China's National Lighting Test Centre, with the support of the GEF.

Policy and Energy Financing

Feed-in Tariffs (FITs) are an example of policy measures that leverage private-sector investments, falling under SE4All's identification of 'energy planning and policies' as an enabling action area. UNEP has analyzed key elements in the design and policy context to assist decision makers to implement FITs and adapt them to their needs. A network of FIT practitioners has been set up, and the findings are supporting Trinidad and Tobago in setting their policy framework.

In 'Finance and risk management', another of the enabling action areas, UNEP is working on financing the use of clean technologies, especially in developing countries. By

covering some of the start-up costs, and reducing the perceived project risks, public money can mobilize private finance for new clean-tech concepts.

UNEP brings the public and private sector together with the common goal of cost-effective clean-tech implementation. In the Taizhou region of China, UNEP supported the regional bank with a market study, business plan and training for energy-efficient technologies. Within two months, the bank had disbursed 20 energy-efficiency loans amounting to over US\$2 million.

In Africa, UNEP is funding preparatory costs and mentoring project planners from Inspired Evolution, which manages a specialized clean tech investment fund of US\$90m, including US\$5m focused on seed-scale investments.

PROMOTING LOW-CARBON SOCIETIES IN CENTRAL ASIA

UNEP and the Korea International Cooperation Agency (KOICA) agreed to cooperate in the implementation of a new project, under the 2011 East Asia Climate Partnership. The project aims to facilitate transfer of cleaner energy technologies and their market development in Central Asia by promoting improved policies and regulations, the development of national clean technology plans, and the establishment of energy performance standards. Since the project began, five nations agreed to develop action plans on solar thermal and solar PV.

25 Years of Protecting Health and Climate



Hailed as the most successful treaty in UN history for achieving universal ratification and meeting its targets ahead of schedule, the Montreal Protocol on Substances that Deplete the Ozone Layer celebrated its 25th anniversary on 16 September.

The Protocol, ratified by 197 countries, has enabled reductions of more than 98 per cent of all global production and consumption of controlled ozone-depleting substances. The Protocol also oversaw the global phase-out of chlorofluorocarbons (CFCs) by 2010. Global observations have verified that atmospheric levels of key ozone-depleting substances are falling. With implementation of the Protocol's provisions, the ozone layer should return to pre-1980 levels by 2050 to 2075.



UN Secretary-General
Ban Ki-moon.

Among the considerable number of multilateral agreements agreed between states over the past 40 years, the ... Montreal Protocol stands out

Thanks to controls implemented under the Protocol, the global community will be spared millions of cases of skin cancers and cataracts. Direct healthcare savings in the US alone are estimated at US\$4.2 trillion. Because ozone-depleting substances are also greenhouse gases, the reduction in the production and use of these substances yielded a net integrated reduction of approximately 25 billion tonnes of CO₂-equivalent between 1990 and 2000.

The Protocol is now moving towards the phase-out of consumption and production of Hydrochlorofluorocarbons (HCFCs), which have adverse effects on ozone protection and the global climate, in developing countries.

UNEP hosts the Secretariats for both the Montreal Protocol and the Vienna Convention for the Protection of the Ozone Layer. As an implementing agency of the Multilateral Fund, UNEP assists 148 developing countries to achieve and sustain compliance with Montreal Protocol obligations. UNEP's project portfolio consisted

of 450 Multilateral Fund projects and its specifically targeted and unique region-based Compliance Assistance Programme provided about 700 compliance assistance services at the national level.

UN REDD PROGRAMME

Retaining and enhancing forest cover can yield multiple benefits for biodiversity conservation and ecosystem services, as well as climate regulation. In 2012, UNEP and the UNEP World Conservation Monitoring Centre (UNEP-WCMC), through the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN REDD), led efforts to work directly with countries. They identified and mapped these benefits, and developed and piloted decision-support guidance and tools for REDD+ planning.

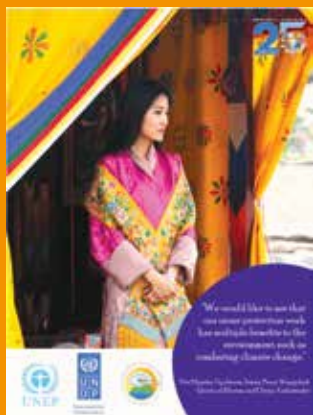
A major focus in Indonesia was building capacity for REDD+ planning at the sub-national level. The UN-REDD Programme provided information and materials to support capacity building among provincial government staff and other stakeholders to design REDD+ activities.

In the Democratic Republic of the Congo (DRC), technical support was provided for the development of a safeguards information system, testing of land-use planning tools and the valuation of ecosystem services. Spatial decision-support software was also piloted to assist DRC to integrate REDD+ with its broader development objectives.

UN-REDD supported Panama's National REDD+ programme to map and value

QUEEN OF BHUTAN, OZONE AMBASSADOR

Her Majesty
Gyaltsuen Jetsun
Pema Wangchuck,
Queen of the
Kingdom of
Bhutan, received
an Ozone
Ambassador
certificate from UNEP OzonAction
on 16 May 2012 in Thimpu, Bhutan.



ecosystem services to demonstrate the economic value of different forest-based land-use options. Lessons from this work were described in a UN-REDD policy brief. A workshop in Cambridge, UK, with participants from more than ten UN-REDD countries, provided a further opportunity for South–South exchange and learning on multiple benefits.

UN REDD is a joint programme between UNEP, the Food and Agriculture Organization (FAO) and the UN Development Programme (UNDP).

Determining Technology Needs

UNEP and the UNEP Risø Centre are assisting 36 developing countries in implementing Technology Needs Assessments (TNAs) to identify and prioritize new equipment, techniques, services, capacities and skills needed for the reduction of greenhouse gas emissions and reduction of vulnerability of key sectors and livelihoods to climate change. The ultimate goal is to establish National Technology Action Plans (TAPs) that prioritize technologies, recommend an enabling framework for the diffusion and implementation of these technologies and facilitate identification of appropriate technology transfer opportunities and relevant financing sources.

In 2012, Seven TAPs were finalized and project ideas identified; 18 more TAPs were completed by the end of the year and the rest should be completed early 2013. Several project ideas will be financed and are expected to move towards national implementation.

In December, the parties of the UNFCCC selected a UNEP-led international consortium as the host of the Climate Technology Centre and Network (CTCN). The CTCN aims to accelerate the transfer of technology and expertise to developing countries in order to reduce greenhouse gas emissions and improve resilience to changing weather patterns, drought, soil erosion, and other impacts of climate change. The consortium includes the UN Industrial Development Organization, Asian Institute of Technology (Thailand), Bariloche Foundation (Argentina), Council for Scientific and Industrial Research (South Africa), The Energy and Research Institute (India) and others, making it a truly global enterprise.

Building on the TNA and TAP experiences, UNEP is supporting seven countries to develop mitigation options in the form of Nationally Appropriate Mitigation actions that are integrated into low-carbon development strategies. This is done through a project on Facilitating Implementation Readiness for Mitigation funded by Denmark.

To support and guide national activities, UNEP in 2012 published five guidebooks:

- *Mitigation in the building sector;*
- *Mitigation in the agricultural sector;*
- *Barrier analysis and enabling framework;*
- *Financing resources: mitigation;*
- *Financing resources: adaptation.*



Sustainable Mobility

Moving towards greener societies is not just environmentally friendly, but also economically and socially sound. Doubling the

UNEP's next Partnership for Clean Fuels and Vehicles' (PCFV) campaign, following on from the successful global phase-out of lead in petrol, is the mitigation of diesel sulphur particulates – the Dump Dirty Diesels campaign. The new Clean Air Campaigns Patron is Mr Patrick Makau, Kenyan athlete and marathon world record holder. Mr Makau is well aware of the impact that breathing clean air has on health and physical performance. He supports the work of the PCFV and is turning his sights on the high levels of diesel emission particulates that impact cities like his country's capital, Nairobi. Mr Makau also supports UNEP's Share the Road Programme, recognizing the contribution that non-motorized transport makes to maintaining lower levels of emissions.

market share of public transport would only increase urban transport energy consumption marginally, saving the equivalent of around 170 million tonnes of oil and avoiding the emission equivalent to around 550 million tonnes of CO₂ in 2025.

Let's Travel Together



More than 20 train, metro, bus, and carpooling companies across Europe joined forces with UNEP in a campaign to promote sustainable transport choices among commuters. Part of UNEP's GreenUp initiative, the Let's Travel Together campaign was launched at the Rio+20 conference in Brazil, and encouraged commuters to share their cars with friends, use public transport and take other actions to reduce carbon emissions from vehicles. Sustainable transport tips reached up to half a million Facebook users in July 2012. Citizens could also virtually jump on the Green Train and win free tickets to travel sustainably in Europe.

Share the Road

Another initiative, Share the Road, recently saw substantial success in supporting the drive towards non-motorized transport (NMT) policy development in East Africa. Share the Road's goal is to catalyze policies in government and donor agencies for systematic investments in walking and cycling road infrastructure, linked with public transport systems. Kenya's adoption of an NMT policy is the first major advancement for the programme; the policy requires all urban roads, both new or undergoing upgrading, to incorporate NMT facilities. Uganda is also finalizing a national NMT policy, and initial work in Rwanda and Burundi has revealed strong national incentives to adopt solid NMT policies and associated practices.

Share the Road has contributed towards solid strategy development and implementation of case study projects that ensure systematic investments in walking and cycling road infrastructure. Share the Road, in conjunction with the Kampala Capital City Authority (KCCA), and other key partners including UN Habitat, are working towards the first major Car Free and NMT 'friendly' zone in Kampala's Central Business District.

Sustainable Tourism/Green Passport Campaign



Rio+20 saw hundreds of delegates flying to Brazil from across the world. To help minimize the carbon footprint, UNEP partnered with the Government of Brazil to produce a new

smart phone application, which provided information on 400 environmentally friendly sites and tourism services around Rio de Janeiro, and a Green Passport travel guide that was disseminated in Portuguese, English and Spanish by Rio hotels to more than 60,000 people.

The Green Passport Campaign, an initiative promoted by the Global Partnership for Sustainable Tourism, aims to introduce travellers to some of the things they can do to make tourism sustainable. Through travel guides, websites and other activities, the campaign helps tourists minimize their carbon footprint by choosing the least polluting form of transport, finding low-impact accommodation options, improving their energy efficiency at destinations, offsetting the inevitable carbon emissions of their trip, and providing sustainability tips to help improve livelihoods in host communities. It provides five phases to support travellers: planning my trip, getting there, getting around, before going back, and after my trip.

Adaptation Fund

Established under the Kyoto Protocol, the Adaptation Fund finances projects and programmes to assist developing countries to adapt to climate change.

UNEP assisted Tanzania, Madagascar and Cambodia to apply for funds and implement projects through the Adaptation Fund. UNEP supported countries in the Asia and Pacific Region in the accreditation of National Implementing Entities (NIEs) for direct access to the Fund. UNEP also supported the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden Region (PERSGA) to prepare an application for accreditation.



Mangrove rehabilitation helps communities adapt to climate change

Adapting to Climate Change in Africa

Africa is particularly vulnerable to the impacts of climate change, given its reliance on rain-fed agriculture, limited supply of freshwater, widespread poverty and disease, weak institutions, variable access to information and technology, complex disasters and conflicts, and inadequate access to basic services. Decisive action on climate change and building capacity for adaptation are therefore key priorities for sustainable development in Africa.

Africa Adaptation Knowledge Network

The Africa Adaptation Knowledge Network, facilitated by UNEP under the umbrella of the

Global Adaptation Network, functions as a knowledge hub on adaptation. It promotes cooperation and collaboration in seeking solutions to climate change impacts using experiences and lessons learned from the implementation of actions in other locations.

To facilitate the sharing of lessons on climate change adaptation, UNEP convened over 120 representatives from 20 African countries, non-governmental organizations and UN Agencies in April 2012. Recommendations for improving the capacity of communities, governments and organizations were formulated and agreed to by the participants. The outcomes are serving as public goods for countries that share similar risks and require similar solutions in Africa and beyond.

UNEP GEF Climate Change Adaption

With UNEP's technical assistance, African nations are making progress in accessing adaptation finance in Africa, particularly through the GEF-administered Least Developed Countries Fund (LDCF) and Special Climate Change Fund (SCCF). UNEP is assisting Djibouti, The Gambia, Tanzania, Lesotho, Comoros and Rwanda to implement their National Adaptation Programme of Action (NAPA) priorities to increase their resilience to climate change impacts.

Fourteen African countries have requested assistance in accessing further adaptation funding and building on the successful implementation of ongoing projects. Certain countries such as Tanzania, Comoros and Rwanda are now seeking to access funds for a second or third UNEP-supported LDCF project.

For instance, in the project 'Implementing NAPA priority interventions to build resilience in the most vulnerable coastal zones in Djibouti', 20 hectares of mangroves have been cleaned and a mangrove nursery has been established. This has provided employment and enhanced income to local people (four times the minimum daily wage) and aims to reduce coastal erosion and floods from sea-level rise.

Adapting to Climate Change-Induced Water Stress in the Nile Basin

In 2012, vulnerability assessments and reports on land cover, rainfall and evapotranspiration regimes in the Nile Basin from 2001-2010 were conducted. Climate and socio-economic scenario models were created for the impact of climate variability and change on the water

balance components, as well as the impact of land use/cover change on the water balance components and its quality.

In Uganda and Ethiopia, two demonstration sites have been implemented. In Uganda, local communities' capacities have been enhanced through involving them in the preparation of a long-term climate change and integrated water resources management action plan. In Ethiopia, a demonstration project assembled knowledge on perceptions, and generated baseline information that is used to determine future climate impacts and formulation of adaptation response actions.

Addressing Food Security in Mozambique

The Xai-Xai District of Mozambique located along the lower Limpopo, where the river empties into the Indian Ocean, is an area subject to floods, regular sea water intrusion and prolonged droughts – hitting rain-fed agriculture, fishing and livestock keeping. Extensive patches of mangrove, which provide a wide range of ecosystem services and are an important nursery ground for fish, have been destroyed by about 2000 floods recorded in the area.

UNEP supported the Centre for Sustainable Development of Coastal Zones to increase food security and the income of local communities, and to ensure the recovery and sustainable future use of the mangrove ecosystem. This involved introducing fish farming, crab farming and mangrove reforestation. The implementation of the fish and crab farming has increased the local community's climate-change resilience.



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Wind farms are among the projects being backed

African Carbon Asset Development

With support from UNEP's African Carbon Asset Development (ACAD) Facility, Nigeria's largest indigenous oil and gas company, Oando PLC, launched a pilot scheme in April 2012 to address a huge need for cleaner cooking fuels. It formed a new subsidiary to retail redesigned cylinders with integrated stove-tops that can be refilled with clean liquid petroleum gas, and set up new distribution and after-sales service chains. So

far, 48,000 units have been sold in nine Nigerian states, replacing inefficient kerosene or biomass-burning cook stoves used throughout the country. The programme intends to reach five million homes within five years.

Funded by the German Federal Environment Ministry and structured as a partnership between UNEP, the UNEP Risø Centre, Standard Bank and private project sponsors, ACAD has worked with Oando since 2010 to establish an emission baseline, defining the market and

financial viability of the program, and co-financing the validation of the programme under the UN Clean Development Mechanism (CDM).

All of the 15 projects supported to date by ACAD are at various stages of validation or registration with relevant carbon markets. Three have already been registered to generate carbon credits. Among those, the Lake Turkana Wind Power project in Kenya has achieved financial closure. ACAD provided critical support to get the project registered under the CDM. Construction is now expected to begin in 2013.

UNEP's climate finance programmes such as ACAD have made a real difference by building the skills and understanding of financial institutions on carbon finance, supporting entrepreneurs with seed capital and improving the access of end-users to clean energy technologies through practical micro-credit schemes. Together, they are helping to realize the abundant low-carbon investment opportunities in Africa.

Ecosystem-Based Adaptation in Mountains

Ecosystem-Based Adaptation in Mountain Ecosystems is a joint programme between UNEP, the UN Development Programme and the International Union for the Conservation of Nature (IUCN). The project aims to strengthen the capacities of Nepal, Peru and Uganda to strengthen ecosystem resilience for promoting ecosystem-based adaptation (EBA) options and to reduce the vulnerability of communities, with

particular emphasis on mountain ecosystems. The work is being supported by the German environment ministry.

Work in the three countries is steadily progressing. For example, Uganda is currently showcasing the EBA Fast-Track approach to project implementation through the construction of a community gravity-flow scheme to carry water from rivers in three Ugandan villages.

In 2012, a workshop on EBA in Mountain Ecosystems in Berlin provided practical recommendations for the Mountain EBA Programme, including definitions of vulnerability, adaptive capacity, and resilience for use in the project. The Ecosystem Based Adaptation Flagship website, which showcases the EBA work and the partnership, went live.

UNEP has collaborated with the GEF Secretariat, UNDP and other agencies to develop practical and policy-related guidelines for implementing the EBA approach in GEF projects.

Environment monitoring stations were installed in 2012 at Askole, Urdukas and Concordia in the Karakorum ecosystem – a mountain range straddling the borders of Pakistan, India and China – to collect data and information which will be made available to local stakeholders and managers



3

DISASTERS AND CONFLICTS



MINIMIZING THE THREATS AND IMPACTS OF CRISES

UNEP aims to minimize threats to human wellbeing from the environmental causes and consequences of disasters and conflicts.

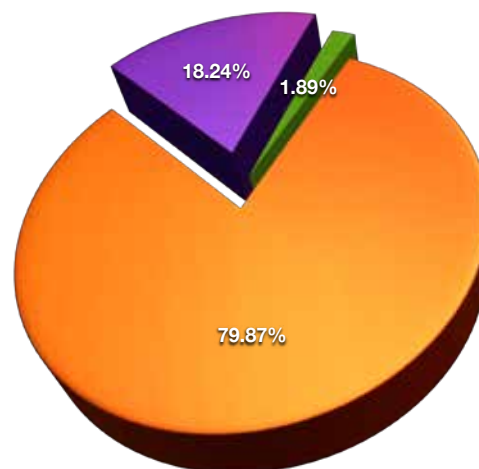
UNEP supports member states to address environmental degradation and the mismanagement of natural resources as underlying risk factors for conflicts and natural hazards. UNEP focuses on integrating environmental concerns into risk-reduction policies and practices.

In the aftermath of a crisis, vital natural resources are often degraded or destroyed, leaving entire communities vulnerable. Assessments to gauge the risks posed by these environmental impacts on human health, livelihoods and security form the foundation of UNEP's response.

UNEP also uses environmental assessments to develop recovery programmes that address environmental needs and priorities and support peacebuilding strategies and long-term sustainable development.

TOTAL EXPENDITURE 2012

\$US15.9 million, 100% of allocations



- Environment Fund: US\$2.9 million
- Regular Budget Expenditures: US\$0.3 million
- Trust Funds and Earmarked Contributions: US\$12.7 million



3

DISASTERS AND CONFLICTS

RESULTS TARGETED

Enhanced environmental management capacity of member states to reduce the risks of man-made and natural disasters.

Rapid and reliable environmental assessments, upon government request, following disasters and conflicts.

Improved environmental management and sustainable use of natural resources through the implementation of sound policies and practices in post-conflict and post-disaster situations.



Afghanistan is considered one of the world's most vulnerable countries to the impacts of climate change

A DECADE IN AFGHANISTAN

UNEP has been operational in Afghanistan since 2002, making it the longest-running in-country programme by the Post-Conflict and Disaster Management Branch. From the beginning, UNEP has been building local capacity in environmental management and spearheading institutional development in this landlocked and fragile nation.

Practical action – carried out in close collaboration with the National Environmental Protection Agency (NEPA) and key ministries – includes environmental policy and planning, natural resource management guidance and advice on global environmental agreements and initiatives such as climate change adaptation and biodiversity protection.

As a result of UNEP engagement, the Government of Afghanistan, through NEPA, launched a US\$6 million climate change initiative in October 2012. This pioneering scheme, to be implemented by UNEP and funded mainly by the Global Environment Facility (GEF), aims to help communities that are vulnerable to the effects of climate change, such as drought, and to build the capacity of Afghan institutions to address climate change risk.

The scheme will be implemented in four locations and will include improved water management and use efficiency; community-based watershed management; improved terracing, agroforestry and agro-silvo pastoral systems; climate-related research and early warning systems; improved food security; and rangeland management. Watershed management activities at village level will include tree-planting, the terracing of slopes and the gathering of wild seeds to re-plant over-grazed mountainsides. Education and the development of vocational skills for the communities also play a key role.

Additionally in 2012, a breakthrough in the design of clean stoves and other household appliances that will improve indoor air quality for thousands of households in Bamyan Province was engineered by UNEP, in conjunction with local partners. This will provide employment in a job-starved region, in addition to protecting the rangelands, a vital component of Afghanistan's biodiversity.

UNEP is active in policy development and implementation, chairing the Environment and Sustainable Livelihoods Working Group, a UN policy forum for all issues related to the environment, natural resources and sustainable livelihoods. In this same vein, a UN-European

Union policy document will also be published in the first half of 2013 on how natural resource management can support peacebuilding in Afghanistan. This is particularly relevant following the recent trillion-dollar mineral discovery that is threatening to create further conflict as rival groups vie for mineral wealth control. The document is also intended to encourage the UN family to incorporate natural resource management into peacebuilding programmes.

Biodiversity conservation in the Central Highlands region remains a significant component of UNEP's work in Afghanistan. Together with the Food and Agriculture Organization (FAO), the World Food Programme (WFP), local communities, civil society and provincial elders, UNEP is working to demonstrate how upper catchment ecosystem management can be implemented in Afghanistan. These landscape-scale environmental management projects promote stability and cooperation, bringing communities together in the management and conservation of a common resource.

In many of its activities, UNEP teams up with UNDP, FAO and WFP and is the UN environmental focal point for the United Nations Assistance Mission in Afghanistan (UNAMA) as well as for many other international and national coordination mechanisms.

TOWARDS A SECURE FUTURE FOR A CENTRAL AND EASTERN EUROPEAN TRI-NATIONAL LAKE

The transboundary water basin of Druksiai/Drisviaty Lake is shared by Lithuania, Belarus and Latvia. In addition to being part of NATURA 2000 – an

EU-wide network of protected areas – the basin is an environmental and security hotspot due to nuclear waste storage and repository facilities in parts of the region. Addressing the potential environmental and security challenges of the basin requires the procurement of accurate data, stakeholder exchange and advanced training. For example, the GeoIQ information management system is the first tool of its kind, enabling the exchange of timely information about the basin, with visual aids and analysis. In addition, information related to the climate conditions and water quality and quantity, including use and demands for water, will help improve the management of resources now that all countries are providing comprehensive assessments.

HAITI AND THE DOMINICAN REPUBLIC: An opportunity to manage natural resources together

The border zone between Haiti, the poorest country in the Western Hemisphere, and the Dominican Republic, a middle-income country, faces persistent environmental degradation and ongoing depletion of natural resources. The environmental and natural resource problems in the area surrounding the 380-km border increase vulnerability to disasters, and fuel tensions between the two nations. Many of the issues and pressures are inextricably linked to the economic, social and environmental imbalances between the two countries.

Paradoxically, the ecological interconnections between transboundary watersheds provide a unique opportunity to build confidence and cooperation in order to improve natural resource management and promote sustainable development between the neighbouring

countries. As a result, UNEP is undertaking a comprehensive environmental assessment of the border zone, at the request of Haiti and the Dominican Republic. During 2012 three data collection missions were carried out in more than 25 field sites, covering the entire border zone and the two capital cities, Port-au-Prince and Santo Domingo.

Despite positive natural resource management initiatives and largely conflict-free relations between communities in the border zone, many of the findings are alarming. In some areas on the Haitian side, up to 75 per cent of rural farming families in degraded areas are suffering from moderate to severe food insecurity. On the Dominican side, illegal tree cutting for charcoal is a serious problem, resulting in deforestation and violent clashes between illegal charcoal makers and Dominican authorities. Finally, the uncontrolled and unexplained rise of the water level of Lake Azuei continues, flooding border posts, farmland and the main road connecting the capitals of the two countries. The final report by UNEP, to be published in 2013, will propose national and local recommendations to improve the management of the environment and natural resources in the border zone.

UNEP has also been actively involved in Haiti in the creation of reforestation brigades and the restoration of vegetation cover across the transboundary watersheds of the Masacre and Pedernales rivers. This project is being implemented with the ministries of environment of the two countries, as well as the UN Development Programme and the World Food Programme.

In 2012 UNEP's in-country team continued its support of Haitian government agencies and other stakeholders to catalyze sustainable recovery and development initiatives following the 2010 earthquake. UNEP's efforts include

its leading role in the Côte Sud Initiative, a partnership of more than 15 organizations focused on ecosystem management and aid coordination in the country's South Department. UNEP is also currently implementing a major new energy project which aims to enhance and develop energy access in the South Department of Haiti, home to over 700,000 people.

MANAGING WATER RESOURCES IN SUDAN



© Albert Gonzalez Farran / UNAMID

Water is a key focus of UNEP's work in Sudan and South Sudan

UNEP, through its largest in-country programme - the Sudan Integrated Environment Project (SIEP) - has continued to support the Governments of Sudan and South Sudan to achieve peace, kick-start recovery and promote development on an environmentally sustainable basis.

Most notably, UNEP has supported the government in the development of a national Integrated Water Resource Management (IWRM) vision, and has been promoting a number of IWRM activities, including the construction of small dams for water supply, the implementation of ground water recharge and carrying out capacity building to support drought contingency planning in camps and cities. Drought contingency planning has been expanded to cover all 23 camps for Internally Displaced Persons in Darfur which are vulnerable to drought. Routine ground water monitoring is now being undertaken at 64 well sites in Darfur, and UNEP is also supporting South Darfur to develop a natural resource management policy.

As a complement to the IWRM work, UNEP is engaged with civil society to promote community-level environmental management, through the development and expansion of Community Environmental Action Plans (CEAPs) in Sudan. In addition to the three CEAP sites already established in North Darfur, four other sites were identified — three in North Darfur and one in West Darfur. In South Darfur, UNEP continues to build the capacity of the Forest National Corporation to replicate the CEAP process in three sites.

UNEP has also spearheaded the development of a screening tool that aims to encourage humanitarian organizations to consider the environment in its planning processes. As a result, in 2011 over 50 per cent of all humanitarian projects in Sudan incorporated some environmental components into their projects. In 2012 this screening tool was also expanded within Sudan and to South Sudan and Afghanistan. It has also been profiled in the Global Consolidated Appeals Process as a successful initiative.

In partnership with the US-based Tufts University, UNEP is monitoring and analyzing trade and markets in Darfur to understand how conflict affects livelihoods. Furthermore, UNEP is undertaking research to identify how best to support regional livelihoods, economic recovery and peacebuilding and has expanded market monitoring to West Darfur, with six national organizations now monitoring 11 markets in the region. A publication entitled *On the Hoof: Livestock Trade in Darfur* was released in late 2012 documenting the livestock trade in Darfur, a central component of most livelihoods in Darfur.

UNEP is also supporting the Higher Council for Environment and Natural Resources (HCENR) to develop a National Adaptation Plan under the UN Framework Convention on Climate Change. Through this project, HCENR has been assessing the vulnerability of Sudan's water resources, agriculture and public health to climate change. In addition, UNEP has assisted HCENR in the development of a national REDD+ strategy. Finally, following a request from the Government, UNEP is supporting the development of a national wetlands inventory in Sudan.

In South Sudan, 95 percent of forests are community forests, meaning that they are on communal land. As a result, UNEP is currently piloting two community forestry projects in Central and Eastern Equatoria states. A national consultative workshop was held in September to bring together all stakeholders in the forestry sector and to raise awareness on community forestry in the country. The concept has been well received by national counterparts, including the Ministry of Agriculture, Forestry, and Cooperatives and Rural Development (MARFCRD).



The 2011 tsunami wreaked havoc in Japan's coastal towns

MANAGING DISASTER DEBRIS AFTER THE JAPANESE EARTHQUAKE & TSUNAMI

A year after a massive earthquake and tsunami struck Japan in March 2011, killing just over 19,000 people and unleashing the world's worst nuclear crisis in a quarter century, a group of international experts in post-disaster waste management were invited to the Tohoku region, the main affected area, on a two-week information exchange mission with local authorities.

Due to its location, extent and intensity, the Tohoku tsunami created one of the most challenging disaster debris management operations in recent history. Boats, trees, concrete bridges, tsunami gates, trains, automobiles, houses, supermarkets and schools were swept away and converted into disaster waste. In the city of Ichinomaki, for example, the tsunami produced an estimated 6.15 million tons of debris, which was equivalent to 103

years of solid waste production in that city in normal circumstances.

Due to its established expertise in environmental technology and recently developed capability in waste management, the UNEP International Environmental Technology Centre (IETC) joined the Post-Conflict Disaster Management Branch (PCDMB) to organize the mission to document waste management operations in Tohoku. The team of experts from UNEP and other organizations met local officials in affected regions, visited waste management and debris recycling facilities, and shared the latest information and experiences with individuals involved in the clean-up. The UNEP team noted the efficiency with which the Japanese authorities and communities responded to the clean-up, and produced a report aimed at sharing the methods used, the lessons learned and the expert opinions in order to assist other vulnerable countries in preparing for disaster debris management following a natural disaster.

The report, released at Rio+20, highlighted the unprecedented challenge faced by Japan: with over 29 million tonnes of debris on land and an unknown quantity in the Pacific Ocean, this will be the most costly disaster debris management effort in history, costing over US\$10 billion.

Among its observations, the experts concluded the following:

- Having a contingency plan in place enabled cities to initiate disaster debris management quickly, thereby speeding up overall recovery;
- Clear instructions from the central government (or agency) at an early stage facilitated standardization of approaches;
- Without substantial financial support and technical back-up, local municipalities were not able to cope with such disasters;
- Sorting the debris into a reasonable number of categories at an early stage maximized recycling.

CLEANING UP OIL CONTAMINATION IN Ogoniland, NIGERIA

Following UNEP's major scientific study of pollution in Ogoniland in the Niger Delta, the Government of Nigeria announced in July 2012 that it will proceed with a widespread clean-up of the oil-rich area based on UNEP's findings and recommendations. The clean-up will reportedly be conducted under a new Nigerian government initiative – the Hydrocarbon Pollution Restoration Project – and the government has indicated it will define the scope, actions and financing of the project.

Released in August 2011, UNEP's *Environmental Assessment of Ogoniland* had proposed an initial sum of US\$1 billion to cover the first five years of clean-up operations; however the report estimated that countering and cleaning up the pollution and catalyzing a sustainable recovery of Ogoniland could take 25 to 30 years and would require long-term financing.



Contaminated water in Ogoniland

Since handing over its report, UNEP has signalled its willingness to be a partner in the environmental restoration of Ogoniland, in conjunction with the government, the traditional rulers, the people of Ogoniland and the oil industry.

ASSESSING THE AMMUNITIONS DEPOT EXPLOSIONS-BRAZZAVILLE, CONGO

On 4 March 2012, a series of violent blasts tore through a military arms depot near Brazzaville, Republic of Congo, killing over 250 people and wreaking environmental havoc within a 1.5 km radius of the weapons warehouse. More than 3,000 individuals were hurt and some 20,000 displaced.

On 5 March 2012, an official request for international assistance was made by the United Nations Resident Coordinator to the Office for the Coordination of Humanitarian Affairs (OCHA). Two days later, OCHA deployed four United Nations Disaster Assessment Coordination (UNDAC) trained experts to coordinate the international support. The team also had an integrated environmental component under the auspices of the UNEP/OCHA Environment Unit to assess the secondary

impacts on industrial facilities, to provide scientific information about the extent and nature of contamination and exposure to chemical agents, and to assist the relevant authorities in decision-making and priority-setting.

Fortunately, no industrial facilities posed a secondary risk such as vulnerability to chemical spills or explosions, nor was there a threat of additional contamination to the surrounding soils and water. Furthermore, no significant amounts of heavy metals or explosive agents migrated across the city. However, the exercise allowed the UNDAC team to issue recommendations on the development of a Disaster Waste Management plan, in addition to the implementation of medium- and long-term actions such as a detailed assessment of the vulnerability of populations to these types of disasters and improved environmental contingency planning.

DISASTER RISK REDUCTION

Following Rio+20, Disaster Risk Reduction (DRR) has been identified as key to promoting sustainable development and disaster resilience.

In 2012, UNEP focused on capacity building and developing new knowledge products related to DRR. Together with the Partnership for Environment and Disaster Risk Reduction (PEDRR), UNEP strengthened its National Training Course on Ecosystem-Based Disaster Risk Reduction, which primarily targets policymakers and planners in government. The training was delivered to the Governments of Georgia, Armenia and Azerbaijan in May, building on previous trainings undertaken in Sri Lanka and India. A training of trainers was also delivered in the Asia-Pacific region.

A Masters of Science Elective Course on Environment, Disasters and Disaster Risk Reduction has also been developed and is being

pilot tested by ten universities around the world. UNEP will work over the coming months to further disseminate the MSc course through global and regional university networks.

Finally, over 2012-2015 UNEP, in collaboration with the European Commission, will pilot test four community-level ecosystem-based disaster risk reduction (Eco-DRR) initiatives, with a view towards scaling up field tested approaches and establishing evidence-based advocacy to influence national policy and planning processes.

ASSISTING COUNTRIES TO PREPARE FOR ENVIRONMENTAL EMERGENCIES

Disasters – including industrial/technological accidents, chemical and oil spills, earthquakes, floods, and wild land and forest fires – can have severe secondary impacts with immediate implications for the health of local populations as well as for those involved in the rescue efforts. Disasters can also result in the destruction of ecosystems and wildlife.

While the UN system benefits from well-established mechanisms to respond to emergencies and humanitarian crises, there is a need to enhance the national capacity for emergency preparedness and response planning, particularly in vulnerable low- and middle-income countries. Consequently, the Joint UNEP/Office for the Coordination of Humanitarian Affairs Environment Unit has developed the Environmental Emergencies Centre (EEC), a free online tool aimed at increasing the capacity of high-risk, low- and middle-income countries to respond to environmental emergencies. Acting as a virtual resource, the EEC hosts numerous

tools, guidelines and reports, provides relevant environmental emergency updates and supports discussion and the sharing of documentation. The EEC also facilitates national level workshops.

Several training platforms have been developed on preparing for and responding to environmental emergencies, consisting of eLearning modules and corresponding classroom packages. Training platforms include Beyond Response: better preparedness for environmental emergencies, Introduction to Industrial Accidents: prevention preparedness and response, Disaster Waste Management: best practices and tools, introduction to the Flash Environment Assessment Tool, and Mainstreaming Environment in Humanitarian Response. While the EEC is currently live, it will not be formally launched until May 2013.

PROVIDING SAFE DRINKING WATER IN DR CONGO

In the Democratic Republic of Congo only an estimated 26 per cent of the population has access to safe drinking water, leaving over 50 million people vulnerable to water-borne illness and disease. The deteriorated state of the country's water infrastructure – undermined by years of underinvestment and conflict – and a rapidly growing population have contributed to a marked decline in water supply coverage. As a result UNEP will implement the first water catchment management project in DR Congo, and aims to play a critical role in providing safe drinking water to the nation's capital city, Kinshasa. The project – developed in 2012 and scheduled to start in 2013 – will be accompanied by a complementary pilot project promoting ecosystem-based disaster risk reduction through integrated catchment management.

UNPRECEDENTED RESEARCH ON PEACEBUILDING AND NATURAL RESOURCE MANAGEMENT

In April 2012, UNEP - in collaboration with the Environmental Law Institute, the University of Tokyo and McGill University - formally launched a series of six books on natural resources and peacebuilding focused on high-value natural resources; land; assessment and restoration of natural resources; water; resources for livelihoods; and resource governance. The series documents and analyzes post-conflict natural resource management successes, failures and ongoing efforts in more than 55 conflict-affected countries. In their diversity and number, the books represent the most significant collection to date of experiences, analyses and lessons in managing natural resources to support post-conflict peacebuilding.

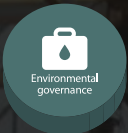
ENVIRONMENTAL RESOURCES MONITORING IN LEBANON

As a result of the bombing of El-Jiyyeh power station in Lebanon in 2006 and subsequent massive oil spill, a project funded by the Government of Greece, through Hellenic Aid, was initiated to improve environmental monitoring in Lebanon. The project will address four components: improved understanding, management, and monitoring in the coastal zone; development of a land-use management strategy in Lebanon's coastal zone to enhance socio-economic opportunities; improved understanding of air quality in Lebanon through the implementation of an air quality monitoring system; awareness raising and dissemination of project results.



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DISASTERS AND CONFLICTS



4

ENVIRONMENTAL GOVERNANCE



STRENGTHENING GOVERNANCE

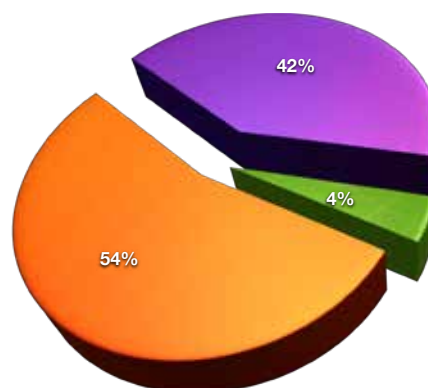
UNEP helps governments and regional institutions place environmental sustainability at the heart of their development policies by providing accurate and timely environmental data and information, thus supporting international decision-making processes.

In addition, UNEP catalyzes international efforts to implement internationally agreed environmental objectives including through Multilateral Environmental Agreements [Achievements of UNEP-administered conventions in the biodiversity and chemicals and wastes clusters are reflected in the chapters on Ecosystem Management and Hazardous Wastes respectively].

UNEP also helps governments to strengthen and develop their policies, laws and institutions in the field of environmental governance, and develops tools and processes for environmental management.

TOTAL EXPENDITURE 2012

\$US52.9 million, 89% of allocations



- Environment Fund: US\$22.1million
- Regular Budget Expenditures: US\$2.2 million
- Trust Funds and Earmarked Contributions: US\$28.6million



Environmental governance

4

ENVIRONMENTAL GOVERNANCE

RESULTS TARGETED

The UN system, respecting the mandates of other entities, progressively achieves synergies and demonstrates increasing coherence in international decision-making processes related to the environment, including those under multilateral environmental agreements.

UNEP works to enhance the capacity of member states to implement their environmental obligations and achieve their environmental goals through strengthened laws and institutions.

National development processes and UN country programming processes increasingly prioritize environmental sustainability in the implementation of their programmes of work.

UNEP works to improve access by policymakers and national and international stakeholders to sound science and advice.

THE YEAR OF INTERNATIONAL ENVIRONMENTAL GOVERNANCE

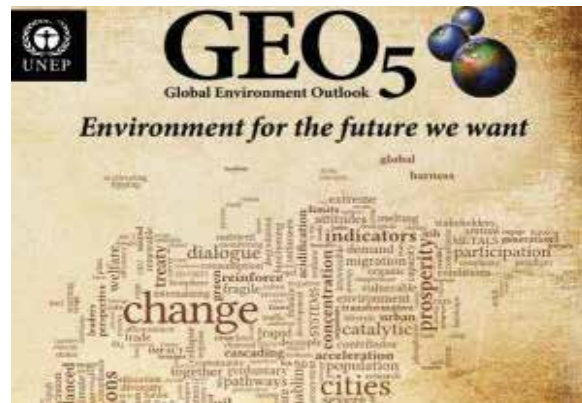
In 2012, the year of Rio+20, the international community delivered strong backing for International Environmental Governance as a key tool for putting the world on the pathway to a sustainable future by, among many other actions, agreeing to strengthen and upgrade UNEP. UNEP played a pivotal role in this process, from engaging and mobilizing Major Groups, creating new partnerships to better deliver on our core objectives, and delivering key reports and recommendations to Member States that serve to outline the challenges faced and illuminate the way forward.

GLOBAL ENVIRONMENTAL OUTLOOK 5



UNEP's Global Environmental Outlook (GEO) is a consultative, participatory process that builds capacity for conducting integrated environmental assessments to report on the state, trends and outlooks of the environment. GEO is also a series of products that informs environmental decision making and aims to facilitate the interaction between science and policy.

UNEP produced the fifth in its series of GEO reports prior to Rio+20. The latest edition was welcomed as the definitive report on the state of the environment and an important substantive



contribution to the high-level debate in Rio. Wide support and recognition for the GEO was evidenced in the Rio+20 outcome document in relation to promoting a strong science-policy interface and providing environmental information to support informed decision making.

90 internationally agreed goals and objectives assessed:

Significant progress in only 4

Some progress in 40

Little or no progress in 24

Further deterioration in 8

No assessment in 14 due to lack of data

The report found that the world remains on an unsustainable path despite over 500 internationally agreed goals and objectives to support the sustainable management of the environment and improve human wellbeing. It analyzed 90 key environmental goals and objectives and found that significant progress had only been made in four – eliminating the production and use of substances that deplete the ozone layer, removal of lead from fuel, increasing access to improved water supplies and boosting research to reduce pollution of the marine environment.

GEO-5, which called for a renewed focus on addressing the drivers of environmental change,

VITORIA GASTEIZ, EUROPEAN GREEN CAPITAL 2012

Between 2006 and 2009, UNEP provided technical support to the city of Vitoria Gasteiz, Spain, as part of the GEO process. Building on UNEP's foundations, Vitoria Gasteiz developed action plans and strategies in climate change mitigation, transport and sustainable mobility. As a result, the city was named as European Green Capital 2012.

said meeting sustainability targets by the middle of the century is possible if current policies and strategies are changed and strengthened, and gave many examples of successful policy initiatives, including public investment, green accounting, sustainable trade, the establishment of new markets, technological innovation and capacity building. GEO-5 also pointed out that where international treaties and agreements have tackled goals with specific, measurable targets – such as the bans on ozone-depleting substances and lead in petrol – they have demonstrated considerable success.

An estimated 4945 articles and reports referencing GEO-5 were published by leading media in all regions, including major newswires and international news outlets of reference.

The report was produced over three years in a process that involved more than six hundred experts worldwide, who collated and analyzed data from every region. It was released in Chinese, with funding from the Elion Green Foundation, and also spawned the following reports: *Measuring Progress – Environmental goals and gaps*, *GEO-5 Summary for Policy Makers*, *Keeping Track of our Changing Environment*, and *GEO-5 for Local Government*.

INFLUENCING POLICY AND ENGAGEMENT AT RIO+20 AND BEYOND



UN Secretary General Ban Ki-moon speaks at Rio+20, where delegates called for UNEP to be strengthened and upgraded

Major Groups

Major Groups participated in building a better understanding of the Rio+20 process, making it one of the most participatory processes in the history of the United Nations. Rio+20 initiated a number of new partnerships between UNEP and Major Groups, including cooperation with the World Resources Institute and The Access Initiative on Principle 10, The Green Economy Coalition, the International Trade Union Confederation and others.

At the regional level, UNEP supported preparatory meetings and consultations with Major Groups. In Africa and Asia and the Pacific, the meeting focused on the Green Economy in the context of poverty alleviation and international environmental governance.



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ENVIRONMENTAL GOVERNANCE

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Felix Dodds, former Director of "Stakeholder Forum for our Common Future"

"UNEP's Major Groups and Stakeholders Branch played a very significant role in mobilizing stakeholders for Rio – working closely with UNDESA's Major Groups Unit. We could not have achieved the outreach and impact we did without their support"

In West Asia, UNEP's work with Major Groups focused on Rio+20 and the 18th Conference of the Parties of the UN Framework Convention on Climate Change (UNFCCC), increasing the participation of civil society organizations from the Arab region in the first UNFCCC COP to take place in the region. In Europe, UNEP organized a meeting on the role of youth in Rio+20 themes, such as sustainable development governance, the Green Economy and employment.

Apart from Rio+20-related topics, the regional consultation with Latin American and Caribbean Major Groups centred on the UNEP Governing Council and the Global Major Groups and Stakeholders Forum.

At Rio+20, UNEP engaged the private sector through the event 'Inspire Invest Innovate', organized jointly with the UN Global Compact. Through multi-stakeholder participation in the Marrakech Process, UNEP also encouraged Major Group involvement in the advancement of Sustainable Consumption and Production initiatives and the elaboration of a proposal for the 10-Year Framework of Programmes on Consumption and Production (10YFP) adopted at Rio+20 (see Chapter 7 on Resource Efficiency for more details).

MoU with EU's Committee of the Regions

UNEP signed a Memorandum of Understanding (MoU) with the European Union's Committee of the Regions – which is tasked with putting forward local and regional points of view on EU legislation – at Rio+20. Cities are responsible for consuming 75 per cent of the Earth's natural resources, so purchasing and policy decisions at a local level can assist the drive towards a Green Economy. The agreement sets out five priority areas: multilevel environmental governance; Green Economy and resource efficiency; climate change mitigation and adaptation; biodiversity and ecosystems management; and decentralized cooperation for development.

Rallying the Regions

In 2012, UNEP supported regional and sub-regional ministerial forums. This promoted increased coherence in international decision-making processes related to the environment. Achievements include UNEP-facilitated policy dialogue and priority setting on key issues such as the Institutional Framework for Sustainable Development, International Environmental Governance and the Green Economy at major regional ministerial and other environmental forums on Rio+20, thereby influencing discussions and outcomes on sustainable development.

Using its convening powers at the sub-regional and regional levels, UNEP assisted a number of countries and sub-regions in strengthening and establishing institutional mechanisms for cooperation on transboundary natural resources. For instance, UNEP's assistance has led to the establishment of a new strategic partnership of the Organization of the Black Sea Economic Cooperation (BSEC), which contributed to the development of the Joint Declaration on Climate Change and Green Economy for the region.

Eye on Earth

The Eye on Earth Summit (Abu Dhabi, 2011) convened the Eye on Earth Community, which embraces governments, UN agencies, funds and programmes, and Major Groups that have agreed to collaborate on initiatives aimed at facilitating access to the data needed to monitor the state of the global environment and building capacities. The Eye on Earth community contributed to the Rio+20 outcome document by focusing attention on the need to integrate economic, environmental and social data in support of sustainable development. The Rio+20 outcome document also called for the establishment of the Eye on Earth network. Ten Eye on Earth side events were organized at the conference and the Environment Agency – Abu Dhabi (EAD) provided generous sponsorship for the UNEP Pavilion. A joint EAD-UNEP secretariat was established at Rio+20.

LAW AND ENVIRONMENT



UNEP PEOPLE – Bakary Kante, Director of UNEP's Division of Environmental Law and Conventions (DEL/C), at The World Congress

At Rio+20, over 250 of the world's Chief Justices, Attorneys General and Auditors General came together for the first time to declare their

commitment to build and support the capacity of courts and tribunals, prosecutors, auditors and other related stakeholders to implement environmental law and facilitate exchanges of best practices in order to achieve environmental sustainability. The World Congress on Justice, Governance and Law for Environmental Sustainability, which some commentators said was among the most encouraging and progressive work of Rio+20, adopted a set of guiding principles for the Advancement of Justice, Governance and Law for Environmental Sustainability.

These principles are being promoted globally through initiatives by the World Congress members, along with UNEP and the partners of the Congress. The declaration adopted at the World Congress also entrusted UNEP with leading the engagement of Chief Justices, Attorneys General, Heads of Jurisdiction, Chief Prosecutors and Auditors General to establish a powerful global voice for the advancement of law, justice and governance for environmental sustainability.

ENHANCEMENT OF COUNTRIES' JUDICIAL CAPACITY

UNEP cooperated with the Asian Development Bank to organize a Roundtable for ASEAN Chief Justices on Environment and a South Asia Conference on Environmental Justice. Judges championed environmental justice and shared a common vision on the role of the judiciary in tackling key regional environmental challenges. As a result, a Green Bench was established in the Supreme Court and in several High Courts in Pakistan. The Supreme Court of Malaysia is considering the establishment of a similar court institution.



Environmental
governance

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ENVIRONMENTAL GOVERNANCE

In organizing the Congress, UNEP partnered with global and regional organizations active in the area of environmental law and sustainable development, including the World Bank, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), INTERPOL, the International Organization of Supreme Audit Institutions – Working Group on Environmental Auditing (INTOSAI - WGEA) and the Organization of American States (OAS). In December, UNEP followed up by establishing the International Advisory Council for the Advancement of Justice, Governance and Law for Environmental Sustainability. The nine-member advisory council includes Chief Justices, senior judges, auditors and legal academics. Led by UNEP, it will provide strategic guidance to the international community in improving the legal foundations for achieving international environmental goals, and overcoming legal barriers to inclusive sustainable development.

SOUTH-SOUTH COOPERATION EXCHANGE MECHANISM

In May 2012, UNEP launched the South-South Cooperation Exchange Mechanism as a critical step to advance the role of South-South Cooperation in UNEP's Programme of Work and beyond. The Exchange Mechanism is an interactive online platform that provides case studies, best practices and lessons learned in solutions generated in environmental and sustainable development issues such as water, energy, agriculture and biodiversity.

Case studies featured include: building a Green Economy in the Heart of Borneo; the

establishment of the Caribbean Biological Corridor as a Framework for Biodiversity Conservation, Environmental Rehabilitation and Development of Livelihood Options in Haiti, the Dominican Republic and Cuba; and the development of sustainable agricultural production systems for organic farmers in Costa Rica and Benin.

As a follow up to the Rio+20 outcomes related to South-South Cooperation, UNEP will continue to use the Mechanism to support the implementation of the Bali Strategic Plan for Technology Support and Capacity building.

COMBATTING TRANSNATIONAL CRIME



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Criminal cartels are gaining a growing foothold in illegal logging

Environmental crime is one of the most profitable forms of criminal activity, with INTERPOL estimating the value of global wildlife crime at billions of dollars a year. The

World Bank states that illegal logging costs developing countries US\$15 billion in lost revenue and taxes.

Environmental crimes include illegal trade in wildlife; smuggling of ozone-depleting substances; illicit trade of hazardous waste; illegal, unregulated, and unreported fishing; and illegal logging and trade in timber. Environmental crimes pose a security threat and have a negative impact on sustainable development and the rule of law. The involvement of trans-border organized criminal groups – motivated by vast financial gains, a low risk of detection and weak

conviction rates – is fuelling corruption and money laundering.

In March, INTERPOL and UNEP convened national leaders of environmental, biodiversity and natural resources agencies, as well as departments with law enforcement responsibility from over 70 countries, to create government support for this issue. INTERPOL member countries were urged to increase cooperation with Multilateral Environmental Agreements and mandated inter-governmental organizations like UNEP to facilitate information and intelligence exchange as well as strategic and tactical planning.



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ENVIRONMENTAL GOVERNANCE

GREEN CARBON: BLACK TRADE

A joint report by UNEP and INTERPOL found that between 50 to 90 per cent of logging in key tropical countries is carried out by organized crime and threatens efforts to combat climate change and deforestation, conserve wildlife and eradicate poverty.

Green Carbon: Black Trade found that the illegal trade is worth up to US\$100 billion annually, and hampers the Reducing Emissions from Deforestation and forest Degradation (REDD) initiative – one of the principal tools for catalyzing positive environmental change, sustainable development, job creation and reducing emissions.

INTERPOL and UNEP, through its GRID Arendal centre in Norway, have established a pilot-project called LEAF (Law Enforcement Assistance to Forests) funded by the Norwegian Government agency NORAD to develop an international system to combat organized crime in close collaboration with key partners.

“The threat posed to the environment by transnational organized crime requires a strong, effective and innovative international law enforcement response to protect these natural resources and combat the corruption and violence tied to this type of crime, which can also affect a country’s stability and security” - Ronald K. Noble, Secretary General of INTERPOL.

CITES – AT THE INTERSECTION OF TRADE, ENVIRONMENT AND DEVELOPMENT



©UNEP Grid Arendal/Peter Prokosch

Demand for ivory and rhino horn drove a spike in poaching in Africa in 2012

Rio+20's outcome document recognized the important role of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in achieving sustainable development, thus reinforcing its contribution towards the conservation and sustainable use of biodiversity.

Range states are experiencing a spike in the illegal killing of African elephants and rhinos and the related trade in ivory and rhino horn. CITES is working with affected states to combat this trade. A video, *Rhinos Under Threat*, was produced by CITES and UNTV to highlight the challenges posed by criminal gangs. The video was launched at the Good Planet Film Festival at Rio+20.

In 2013, UNEP and CITES will undertake an outreach initiative which aims to reduce demand for illegally obtained elephant ivory and rhino horn in consuming markets. The initiative is a joint collaboration that draws upon CITES mandate and expertise and UNEP's communications and outreach capacity.

CITES works closely with the partners of the International Consortium on Combating Wildlife Crime (ICWC) to bring more coordinated support to national wildlife law enforcement agencies and wildlife enforcement networks. ICWC partners launched the ICWC Wildlife and Forest Crime Analytic Toolkit to strengthen national enforcement capacities, and is implementing it in several states.

2012 also saw the first CITES-related Global Environment Facility (GEF) project to strengthen wildlife forensic capabilities to protect rhinos in South Africa. The US\$3 million project was championed by the CITES Secretariat and developed in cooperation with the Department of Environmental Affairs of South Africa and UNEP.

Partnering with the International Tropical Timber Organization, Pacific Regional Environment Programme and Caribbean Fishery Management Council, CITES helped build scientific capacity in countries exporting wildlife, and in particular timber species, so that they are better able to ensure that international trade is conducted at biologically sustainable levels.

This year also saw a total of 71 proposals to amend the CITES Appendices covering hundreds of species – including sharks, the manta ray, the polar bear, the poison dart frog – for consideration at 16th meeting of the Conference of the Parties to CITES, which comes in 2013.

Finally, CITES approached universal membership with 176 current members.

EMERGING ISSUES



UNEP Year Book 2012

The UNEP Year Book series presents key developments from the year, a snapshot of key environmental indicators and highlights select emerging issues in detail. The 2012 edition spotlighted the “benefits of soil carbon” and “the decommissioning of nuclear power plants”.

Over the past 25 years, a quarter of the global land area has suffered a decline in productivity due to soil carbon losses. The report says that a new focus to effectively manage soil carbon would constitute a significant step towards sustainable development. A tangible outcome of the process was that the author group convened to write on this issue is now working as an informal international scientific group of experts, supported by the Scientific Committee on Problems of the Environment.

The report also pointed to considerable geographical differences in cost and expertise for handling nuclear decommissioning. The scale of the task ahead will require national and international regulation, extensive funding,

innovative technology and large numbers of trained workers. New nuclear power plants should be designed from the start for safe and efficient decommissioning.

Foresight process: 21 Issues for the 21st Century

The UNEP Foresight Report – led by UNEP’s Chief Scientist – provided a list of 21 emerging environmental issues covering the major themes of the global environment. UNEP’s Foresight Panel consists of 22 internationally recognized members of the scientific community from 16 developing and industrialized countries.

The panel concluded that the top issue facing the planet is *Aligning Governance to the Challenges of Global Sustainability*. Current international environmental governance, with its maze of interlocking multilateral agreements, is believed to be ill-equipped to meet the risks and deliver the opportunities for the 21st century.

The second most pressing emerging issue is *Transforming Human Capabilities for the 21st Century: Meeting Global Environmental Challenges and Moving towards a Green Economy*. A wide-ranging upgrade is needed in the skills and education of the global workforce if the opportunities of the Green Economy are to be seized.

Ranked third is *Ensuring Food Safety and Food Security for 9 Billion People*. Although food security is a longstanding issue, the world needs to confront a new set of challenges such as climate change, competition for land from bioenergy production and heightened water scarcity.



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ENVIRONMENTAL GOVERNANCE

Global Environmental Alert Service: Taking the pulse of the planet: Connecting science with policy

UNEP's Global Environmental Alert Service (GEAS) is a mechanism for identifying and communicating early warning information on environmental threats. GEAS bulletins reach approximately 250,000 users globally through its website, email service, partners, listservs and social media. GEAS has been referenced in scientific journal articles and newspapers and is regularly published in the journal *Environmental Development*.

Some of the issues covered in 2012 include *Gas fracking - can we really squeeze the rocks?*; *Measuring glacial change in the Himalayas*; *Africa without ice and snow*; and *The end of cheap oil: a threat to food security*. To cite one example: *Africa Without Ice and Snow* highlighted that between 1906 and 2006, Africa's glaciers (on Mount Kenya, Kilimanjaro and the Ruwenzori mountains) lost about 82 per cent of their area, and even the largest have become fragmented. The shrinking of these glaciers is likely to result in reduced river flows, disruption of livelihoods of communities that depend on aquatic ecosystems they support, and loss of tourism revenues.

POVERTY-ENVIRONMENT INITIATIVE

The joint UNDP-UNEP Poverty-Environment Initiative (PEI) is a global programme that supports country-led efforts to mainstream poverty-environment linkages into national development policy and planning processes in almost 30 countries in four regions. The poverty-



Waste in Maputo, Mozambique. PEI activities have resulted in activities to promote bans on plastic and the use of alternatives

environment development challenge is addressed through an integrated, programmatic approach drawing on the complementary advantages of its two host organizations.

PEI mainstreams poverty-environment issues into development policy frameworks by linking them with priority policy interests such as economic growth, job creation and poverty reduction. It also integrates key issues such as gender equality and climate change adaptation. PEI is a flagship example of joint UNDP-UNEP programming and represents a working example of One UN.

Since its scale up in 2008, the PEI has responded to increasing demand for support, with 56 countries lodging requests. It has delivered many successes, including joint efforts which have:

Strengthened country institutional frameworks for planning, policy making, budgeting and reporting to deliver on Sustainable Development in 28 countries. For example in Uruguay, PEI support formalized status for marginalized groups in the informal waste management and recycling sector. The Ministry of Social Development then applied a six-fold budget increase over five years to support the integration of Poverty-Environment (P-E) linkages into its waste management initiatives, and the President's Office institutionalized this approach and scaled it up to national level.

Integrated sustainable development principles and environmental management issues – and increasingly climate issues – into planning in 19 countries. For example in Tajikistan, after successfully integrating P-E objectives and indicators into the development plans and funds of 14 districts, the Ministry of Economic Development and Trade independently replicated the P-E mainstreaming approach in a further six districts and four municipalities.

Delivered on country priorities around key themes such as: climate change governance, building blocks for a green economy, ecosystems and human wellbeing, and chemicals and waste management. For example, Lao PDR is increasingly considering the environment and the needs of the poor by promoting quality and sustainable private and public investments.

Provided innovative tools to implement the integrated PEI programmatic approach. In 2012, Climate Public Expenditure and Institutional Reviews proved to be key tools in advancing the P-E and climate mainstreaming agenda in Asia-Pacific and Africa. For example, the Ministry of Finance of Bangladesh introduced a climate element, with indicators, in the 2013 budget.

In response to Member States' increasing demand, PEI developed a joint proposal for the continuation of PEI from 2013 to 2017. The joint proposal continues the P-E mainstreaming push; includes four regional strategies; further integrates the gender and human rights-based approach; and makes provision for the long-term sustainability of P-E mainstreaming, including through strengthened partnerships with the private sector and civil society. At the same time, P-E issues, approaches and capacities will be increasingly mainstreamed into the two host agencies to ensure that poverty reduction occupies a central place in the UN's drive for environmental sustainability, and vice versa.

SUPPORTING COUNTRIES AND CITIES



Commuters disembark from ferry in Dar es Salaam, Tanzania. UNEP's country reports spotlight issues such as urbanization in the city

UNEP provided capacity building and technical support for various national reports, such as the following:

Rwanda Atlas: Draws attention to environmental hotspots in Rwanda where human activity has led to environmental degradation and showcases the results of successful policy interventions that have mitigated and in some cases reversed negative environmental impacts.

Dar es Salaam City Environment Outlook: Provides a better understanding of environmental challenges such as urbanization and proposes options for action.

Kenya Wetlands Atlas: Provides visual evidence of the extent and severity of the changes taking



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place in Kenya's wetlands spanning thirty years. Changes have resulted from agricultural encroachment; urban growth; altered hydrology and modified and degraded coastal areas.

Adaptation to climate change-induced water stress in Nile basin: This assessment examines the water stress factors in the basin such as precipitation patterns and the current status and future projections of available quantities of surface and groundwater.

Democratic People's Republic of Korea Environment and Climate Change Outlook: Reports on the state of environment, identifies emerging issues and policy options for action to improve environmental management in the DPR of Korea. Priorities include increasing the efficiency of natural resource use, restoring degraded ecosystems, and introducing new technologies and practices that minimize air, land and water pollution.

PACIFIC ENVIRONMENT AND CLIMATE CHANGE OUTLOOK

Using the same methodology as the GEO-5, the *Pacific Environment and Climate Change Outlook* found that Island communities in the Pacific Ocean are facing unprecedented challenges to their economies and environment from the impacts of climate change. Sea-level rise, tropical cyclones, floods and drought – combined with pressures from unsustainable fishing practices and coastal development – are rendering the livelihoods of some 10 million people increasingly vulnerable. Low-lying islands in particular could face projected losses of up to 18 per cent of GDP

due to climate change. The report recommends enforcing legislation, improving the availability of environmental data, and strengthening environmental institutions to help meet the major climate change challenges facing the Pacific region. The report was prepared by the Secretariat of the Pacific Regional Environment Programme with UNEP support.

BIOSAFETY CLEARING HOUSE

UNEP, with the support of the Global Environment Facility (GEF), is building global capacity for effective participation in the Biosafety Clearing House (BCH). The project directly implements the Cartagena Protocol on Biosafety; has potential to be replicated with other Multilateral Environmental Agreements; and promotes regional and sub-regional collaboration, networking and exchange of experiences. The project developed new biosafety training materials in five UN languages; an innovative virtual learning environment; and a regional system of training of trainers, which encourages the adoption of biosafety training materials into national academic curricula and supports countries regarding their obligations to the Cartagena Protocol.

LINKING HUMAN RIGHTS AND THE ENVIRONMENT

Environmental sustainability and the promotion of human rights are increasingly intertwined goals, and foundations for strengthening the three dimensions of sustainable development. A joint report from the Office of the High Commissioner for Human Rights (OHCHR)

and UNEP – launched within the framework of Rio+20 – demonstrated how the integration of human rights and environmental policies can address the impact of environmental degradation, and encourage a greener economy that recognizes that healthy ecosystems are a precondition for poverty reduction and an opportunity for economic growth.

LECRDS GUIDEBOOK

Low-Emission and Climate-Resilient Development Strategies (LECRDS) are long-term, cross-sectoral visions that provide a contextual framework and vision for more specific economic growth, poverty and inequality reduction, climate change mitigation and adaptation goals. The LECRDS guidebook, launched in 2012, focuses on the legal measures that can achieve these goals. It provides the means for countries to develop a legal and regulatory climate change framework to integrate national and regional piecemeal measures across all climate-related sectors.

GLOBAL UNIVERSITIES PARTNERSHIP ON ENVIRONMENT AND SUSTAINABILITY (GUPES)

In the lead-up to Rio+20, UNEP launched the Global Universities Partnership on Environment and Sustainability (GUPES). Over 120 universities from five different continents are currently members of the GUPES network. GUPES is the result of a consultative process in partnership with other UN bodies, and aims to increase the

mainstreaming of environment and sustainability practices and curricula into universities by supporting innovative approaches to education - in line with the UN Decade of Education for Sustainable Development.

THE GREEN MESSAGE



Indian organization Hand in Hand mobilized 570 volunteers to create a massive Rangoli carpet based on environmental themes

World Environment Day

World Environment Day (WED) is the single biggest day for positive action on the environment worldwide. Activities take place year round but climax on June 5. Through WED, UNEP is able to personalize environmental issues and enable everyone to realize not only their responsibility, but also their power to become agents for change in support of sustainable and equitable development.

The 2012 global observance was hosted by Brazil, which made WED a pre-event of Rio+20 and helped to focus international attention on the Green Economy in the context of poverty alleviation –



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the theme both of WED and the Rio+20 Summit. The five-day celebration in Brazil was capped by an event hosted by President Dilma Rousseff in Brasilia where she announced a number of major national environmental initiatives.

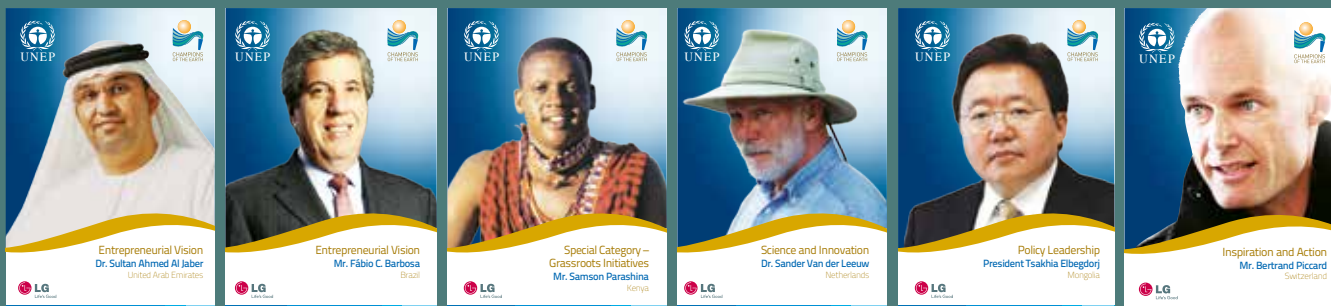
Also in 2012, UNEP's Goodwill Ambassadors – who have a combined social media reach of almost five million people – threw their weight behind the WED Challenge. Brazilian supermodel Gisele Bündchen and American actor Don Cheadle were joined by Vampire Diaries star Ian Somerhalder, who in 2013 will be officially unveiled as UNEP's newest Goodwill Ambassador, to record Public Service Announcements encouraging their massive following to pledge an environmental activity. Chinese actress Li BingBing and French photographer, journalist and reporter Yann Arthus-Bertrand promoted UNEP's cause in their

roles as ambassadors, while Indian Environmental Economist Pavan Sukhdev was in late 2012 named as the newest addition to the roster.

On June 5, WED became one of the top ten trending topics on Twitter, and recorded a reach of 9.8 million individuals. Over 220,000 blog posts were written about WED, while between May and June 10, over 43 million impressions were recorded on Facebook.

Five exciting and innovative projects from Kenya, India, Colombia, Australia and Bangladesh were named as the winners of the WED challenge. Other high-profile activities included the Rhythms del Mundo Rio+20 Album, created and positioned as the official album of both WED and Rio. Artists included Bob Dylan, U2, Sting, Groove Armada, Arctic Monkeys & others.

Champions of the Earth



Champions of the Earth, which was launched in 2005, is the UN's flagship environmental award. To date, it has recognized 51 individuals and organizations for their leadership, vision, inspiration and action on the environment. Six individuals were named UNEP Champions of the Earth 2012 in June, and given their awards at a gala in Rio attended by UNEP Goodwill Ambassador Gisele Bündchen and Executive

Director Achim Steiner. The 2012 laureates included: Mongolia's President Tsakhia Elbegdorj, Brazilian banker Fábio C. Barbosa, renewable energy entrepreneur Dr. Sultan Ahmed Al Jaber, renowned Swiss aeronaut Dr. Bertrand Piccard, Dutch Scientist Dr. Sander van der Leeuw and Kenyan Maasai conservationist Samson Parashina. All were recognized for action and leadership that had a positive impact on the environment.



UNEP PEOPLE – Nick Nuttall, head of the Division of Communications and Public Information, carries the Olympic torch on behalf of UNEP at London 2012.

Sport and the Environment

UNEP's role in advising the sporting world has gone from strength to strength since it signed an agreement with the International Olympic Committee (IOC) in 1994. UNEP has advised on integrating sustainability concerns into Athens 2004, Torino 2006, Beijing 2008 and Vancouver 2010 as well as creating partnerships with other organizations such as the Indian Premier League. In 2012, a year in which the green credentials of the London Olympics brought the need for sustainable measures at sporting events into sharp focus, this role ratcheted up several notches.

UNEP provided dozens of recommendations to the Organizing Committee of the Sochi 2014 Olympic Games on the integration of environmental considerations in the preparation and staging of the games. An agreement was signed with Brazil to provide a similar service for the 2014 World Cup and 2016 Summer Olympics, and UNEP's review of South Africa 2010's green performance was released, providing a host of lessons that can be applied to future mass sporting events. Additionally, UNEP remains engaged with partners such as the International

Motorcycling Federation and PUMA to advance public awareness of the need to live more sustainable lifestyles.

Youth and the Environment Engaging Youth through Creativity

UNEP organizes two major international painting competitions to ensure that the next generation grows up with environmental considerations firmly in mind.

The Chinese Children's Painting Competition, co-organized by UNEP and the Luo Hong Environment Foundation and implemented by Chinese enterprise Holiland, received over 620,000 entries in 2012 under the theme "The Green Homeland in My Mind". In the five years since the competition started, 46,966 teachers have received environmental training and nearly 12.6 million children have participated in the painting competition. The programme has also attracted partners from the private sector, such as Beijing International Airport, Wal-Mart and Panasonic.



© Diana Fan, 13, from the US
Winner of 21st International Painting Competition



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The International Children's Painting Competition awarded the winners at a ceremony in Brazil and launched its 22nd edition under the theme of Water. The Competition is organized annually by UNEP and the Japan-based Foundation for Global Peace and Environment (FGPE), Bayer and Nikon Corporation. More than 630,000 children from over 100 countries took part in the 21st competition.

Tunza

The Tunza programme targets children and youth through regular publications, conferences and engagement. 2012 saw four magazines in English, French, Spanish and Russian, addressing issues such as food and the Green Economy. A special edition of UNEP's authoritative report on the state of the environment, GEO-5, was created for youth. The Tunza network activated to promote participation in World Environment Day and the Youth Blast Conference at Rio+20. Over 1,000 youths from 123 countries took part in the conference, which provided the platform to build a global youth for environment programme.



UNEP People — Karishma Thethy, Sarah Cheroben and Bernard Muinde were named UNEP's UN Volunteers of the Year in 2012.



An exhibit at the UN Pavilion in Expo 2012 – UNEP

Exhibiting for the Environment

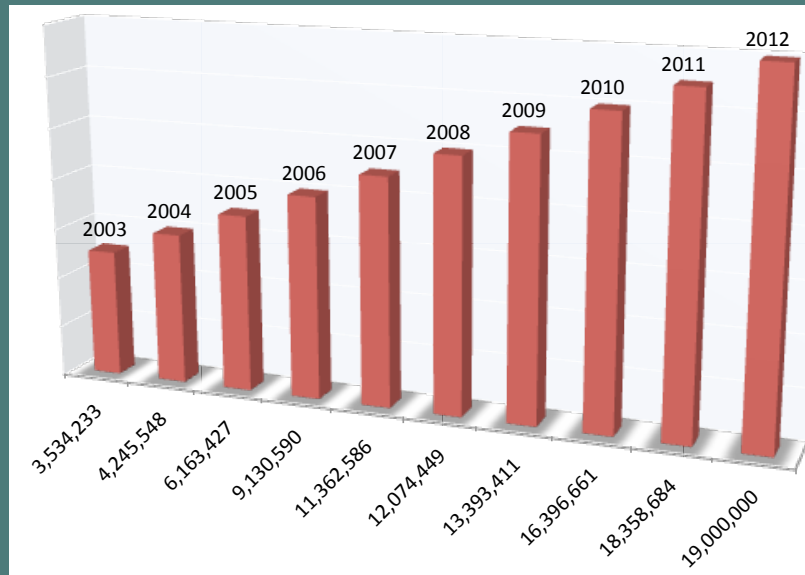
The UN Pavilion at Expo 2012 in Yeosu, Republic of Korea, welcomed 8,000 visitors each day between May 12 and August 14 2012. The UN pavilion, which was coordinated by UNEP, highlighted, under the theme Oceans and Coasts: Connecting our Lives, Ensuring our Future, the work of 24 UN bodies and international organizations through a specially designed 'space tunnel', quizzes, film screenings, workshops and a diverse calendar of exhibitions and events.

The Rio+20 pavilion, which showcased the work of UNEP and Abu Dhabi's Environment Agency's Eye on Earth initiative is now setting new Green Economy standards for a temporary structure. The pavilion, which received significant funding from the environment agency, is to become a resource-centre for the Brazilian cooperative Coope Liberdade, which is pioneering recycling, waste management and job generation among the young and the disadvantaged in Rio de Janeiro.

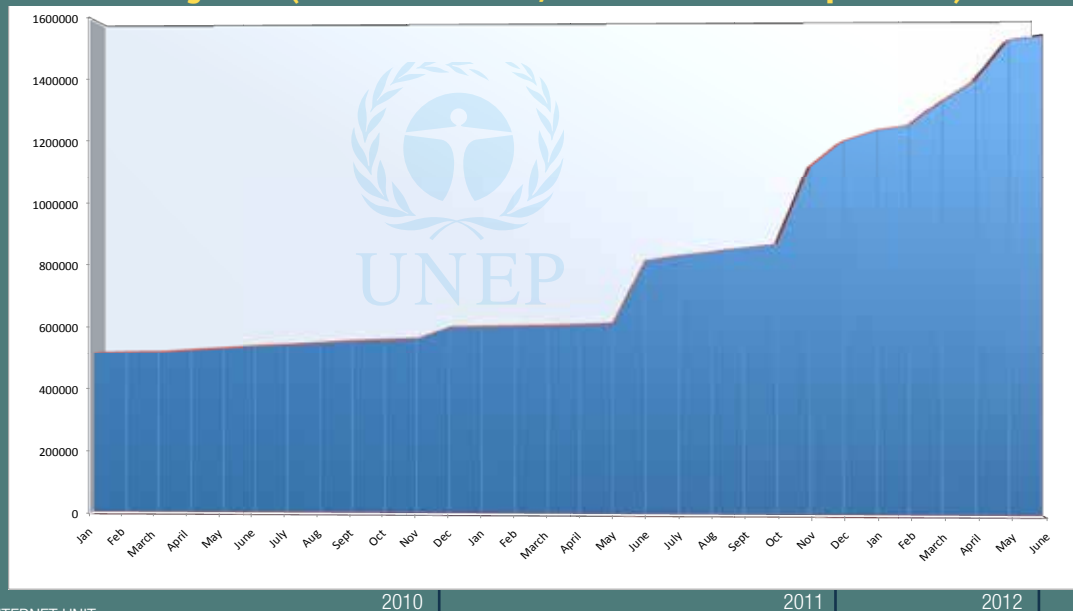
ONLINE INFLUENCE

UNEP's websites are designed to target a range of audiences: from governments, key influencers and policymakers to journalists, students, children and youth. Since the first UNEP website was launched in 2003, the depth and scope of information available has grown to over 90,000 pages across multiple languages, recording an estimated 19 million visits in the year 2012. In 2012, UNEP publications were downloaded over 60 million times.

UNEP.ORG VISITS



Social media growth (includes Facebook, Twitter and Chinese platforms)



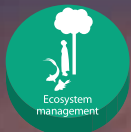
SOURCE: UNEP INTERNET UNIT



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MAINTAINING ECOSYSTEM SERVICES FOR HUMAN WELLBEING

UNEP aims to ensure that countries utilize the ecosystem approach to improve human wellbeing.

UNEP provides three core services to governments:

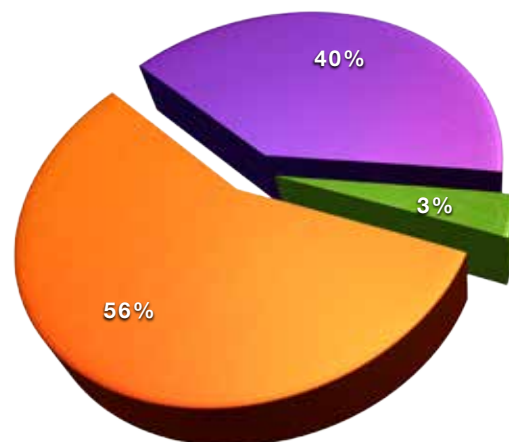
Building the capacity of governments around the critical role sustainably managed ecosystems play in supporting social and economic development.

Assisting governments at local, national and regional scales to determine which ecosystem services to prioritize based on their economic and developmental needs.

Assisting governments to incorporate the ecosystem approach into their national and developmental planning and investment strategies.

TOTAL EXPENDITURE 2012

\$US31.9 million, 88% of allocations



- Environment Fund: US\$12.9 million
- Regular Budget Expenditures: US\$1.1 million
- Trust Funds and Earmarked Contributions: US\$17.9million



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RESULTS TARGETED

Countries and regions increasingly integrate an ecosystem-management approach into development and planning processes.

Countries and regions acquire the capacity to use ecosystem management tools.

Countries and regions begin to realign their environmental programmes and financing to tackle the degradation of selected priority ecosystem services.



Ecosystems bring multiple benefits to economies – Erichon/shutterstock.com

UNDERSTANDING THE VALUE OF ECOSYSTEMS AND BIODIVERSITY

In 2012, UNEP launched a renewed push to persuade governments, businesses and communities to consider the social and economic value of biodiversity and ecosystem services when planning and making decisions concerning the use of natural resources.

Intergovernmental Science–Policy Platform on Biodiversity and Ecosystem Services

In April 2012, the Intergovernmental Science–Policy Platform on Biodiversity and Ecosystem

Services (IPBES) was established to address gaps in the science-policy interface on biodiversity and ecosystem services. As of October 2012, the platform had 94 country members. UNEP played a substantial role in facilitating the establishment of IPBES, since 2008 providing the Interim Secretariat that has led the intergovernmental and multi-stakeholder processes.

UNEP is working with the Food and Agriculture Organization, the UN Development Programme and the UN Educational, Scientific and Cultural Organization to create a joint proposal to co-host the IPBES Secretariat, which will be based in Bonn, Germany. UNEP's World Conservation Monitoring Centre (UNEP-WCMC) has provided substantive support to the discussions on the work programme, and the first plenary will take place in January 2013 to finalize the institutional arrangements of the platform and enable the early commencement of its work.

Inclusive Wealth Index – A New Balance Sheet for Nations



At Rio+20, UNEP and United Nations University's International Human Dimensions Programme on Global Environmental Change (UNU-IHDP) launched a new indicator that looks beyond the traditional economic yardstick of Gross Domestic Product (GDP) to include a full range of assets such as manufactured, human and natural capital.

The index shows governments the true state of their nation's wealth and the sustainability of its growth, and highlights that the world's fixation on economic growth ignores a rapid and largely irreversible depletion of natural resources that will seriously harm future generations.

The Inclusive Wealth Index looked at changes in inclusive wealth in 20 economic powerhouses from 1990 to 2008.

The *Inclusive Wealth Report*, which introduced the index, called on nations to invest in renewable natural capital and to incorporate the IWI within planning and development ministries to encourage the creation of sustainable policies.

Over the period assessed, natural resources per-capita declined by:

33 per cent in South Africa

25 per cent in Brazil

20 per cent in the United States

17 per cent in China

E-RISC: A New Angle on Sovereign Credit Risk

The E-RISC (Environmental Risk in Sovereign Credit) project investigated sovereign credit risk from natural resource risks and environmental impacts. The project explored to what extent natural resource risks can have an impact on a country's economy and thus its ability to pay its debts. With more than \$US40 trillion of outstanding sovereign debt, it is one of the most important asset classes for investors around the world. Results gave a first insight into how factors such as resource prices, ecosystem degradation and climate change impact national economies, and provided a sense of how these criteria can be factored into sovereign credit risk models.



The Natural Capital Declaration

The Natural Capital Declaration (NCD), a finance-led initiative to integrate natural capital considerations into lending, investment and insurance decisions, was launched at Rio+20 and is signed up to by 40 CEOs of financial institutions. The NCD has four core commitments to: build an understanding of dependencies on natural capital; embed natural capital in financial products and services; report or disclose on the theme of natural capital; and account for natural capital in accounting frameworks. UNEP's Finance Initiative is planning to develop a strategy to guide financial institutions to implement the four commitments.

The Economics of Ecosystems and Biodiversity Initiative (TEEB)

The UNEP-hosted TEEB is a major international initiative to draw attention to the global economic

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Wetlands play a vital role in supporting human life and biodiversity

benefits of biodiversity, to highlight the growing costs of biodiversity loss and ecosystem degradation, and to draw together expertise from the fields of science, economics and policy to enable practical actions moving forward.

At the eleventh meeting of the Conference of the Parties to the Convention for Biological Diversity (CBD) in October, TEEB released a draft report for public consultation highlighting the role that wetlands play in supporting human life and biodiversity and calling for this role to be recognized and integrated into decision-making as a vital component of the transition to a resource-efficient, sustainable world economy. The final report, developed under the auspices of the Ramsar Secretariat in close cooperation with the CBD Secretariat, is to be published on World Wetlands Day 2013.

At the meeting and beyond, TEEB also launched a new European Commission-funded project aimed at supporting TEEB implementation in five developing countries in Africa, Asia and Latin America over a three-year period; a series of guides focusing on the Aichi Targets, a set of 20 biodiversity goals agreed by governments under the CBD in 2010; the *Nature and its Role in the Transition to a Green Economy* report; and the TEEB for Business Coalition, which aims to achieve a shift in corporate behaviour to preserve and enhance the earth's natural capital.

The Ecological Basis of Food Security

The debate on food security has largely revolved around availability, access, utilization and stability as the four pillars of food security, barely touching on the resource base and ecosystem services that prop up the whole food system. Safeguarding the underlying ecological foundations that support food production, including biodiversity, will be central if the world is to feed over nine billion people by 2050.

The *Avoiding Future Famines: Strengthening the Ecological Basis of Food Security through Sustainable Food Systems* report increased the focus on crucial aspects being undermined by overfishing, unsustainable water use, environmentally degrading agricultural practices and other human activities. It framed the debate in the context of the green economy, making recommendations on food production and consumption practices that ensure productivity without undermining ecosystem services. The publication was a collaborative effort between UNEP and the International Fund for Agricultural Development (IFAD), the Food and Agriculture Organization (FAO), the World Bank, the World Food Programme (WFP) and the World Resources Institute (WRI).

Montane Forests in Kenya

Based on years of research, UNEP and the Kenya Forest Service released *The role and contribution of montane forests and related ecosystem services to the Kenyan economy* – a report that showed deforestation deprived Kenya's economy of \$US68 million in 2010, far outstripping revenue injected from forestry and logging each year.

Kenya's five water towers feed filtered rainwater to rivers and lakes and provide over 75 per cent of



A woman plants a seedling in Kenya's Mau Forest Complex

the country's renewable surface water resources. Aside from timber and fuel they also bring benefits to the agriculture, forestry and fishing sectors; the electricity and water sectors; the hotels and accommodation sector; and the public administration and defence sector.

Yet between 2000 and 2010, deforestation in the water towers amounted to an estimated 28,427 hectares, leading to reduced water availability of approximately 62 million cubic metres per year.

UNEP, with funding from UN REDD, organized a national dialogue that brought together Kenyan policymakers to discuss how to move forward. Encouragingly, the Kenyan government has already recognized the value of its forests. More than 21,000 hectares of forestland have been repossessed, and 10,000 hectares have been rehabilitated in the Mau Forest Complex.

UNEP is also supporting the government to reduce pressure on Kenya's forest resources through promoting alternative livelihoods, strengthening local institutions and raising awareness among different stakeholder groups.



UNEP PEOPLE – Development Economist Thierry Oliveira, whose work on Kenya's forests is to be expanded to other countries

In addition, four Water Resource Users Associations have been trained on water resource governance and river bank and spring protection to improve governance of the forest reserve. Forest rangers and community forest scouts have been trained on forest fire management. Over 1.5 million seedlings have been planted in degraded forest areas, with 30 wood lots established in schools around the Maasai Mau forest reserve.



FOREST CERTIFICATION FOR ECOSYSTEM SERVICES

In 2012, UNEP Global Environment Facility and the Forest Stewardship Council (FSC) started Forest Certification for Ecosystem Services (ForCES) in Chile, Indonesia, Nepal and Vietnam. This landmark project looks at changes needed so that FSC can become a leader in certification of ecosystem services, which are an important tool in encouraging communities to conserve resources. The project enables forest managers and owners to benefit from new business models and access current or potential markets to increase their income and strengthen good forest management. FSC and partner organizations will research, analyze, and field test innovative ways to evaluate and reward the provision of critical eco-system services, such as biodiversity conservation, watershed protection and carbon storage/sequestration.

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©Thomas Rabeil/SCF

Addax crossing the Termit & Tin Toumma National Nature Reserve, Niger

CONSERVING BIODIVERSITY AND ECOSYSTEMS

Convention on Migratory Species

The Convention on Migratory Species (CMS) contributes to the development of critical site networks for avian, marine and terrestrial migratory species to preserve biodiversity and ecosystem functions.

Exploring migration corridors in Africa

In Ethiopia, white-eared kobs were tagged with radio tracking and satellite collars during a CMS-supported expedition to better understand the migration of an estimated one million of these antelopes between Ethiopia and South Sudan. This unique migration corridor rivals that of the Serengeti in terms of richness in biodiversity. The data obtained will be used to set up a wildlife corridor and include key migration passages within the boundaries of Ethiopia's Gambella National Park.

Global conservation plan for sharks

Since migratory sharks cross the high seas and territorial waters, closer collaboration between countries is needed to tackle over-fishing and other threats. Through the Memorandum of Understanding on the Conservation of Migratory Sharks (MoU), CMS concluded the first global instrument dedicated to migratory sharks. Signatories to the MoU adopted a conservation plan and agreed to exchange information.

Africa's largest protected area for desert species

CMS's largest-ever conservation project aims to reintroduce and conserve endangered



UNEP PEOPLE – Diane Klaimi is the focal point for Biodiversity MEAs in the Regional Office for West Asia.

desert antelopes in the Sahelo-Saharan region. Longstanding efforts culminated in Niger declaring the establishment of the Termit & Tin Toumma National Nature and Cultural Reserve in March 2012. At 97,000 km² it is the largest single protected area in Africa. It will provide protection to some of the world's most-endangered desert species such as the Addax antelope, the Barbary sheep and the Saharan cheetah. Local communities have benefited from healthcare campaigns, school education and the introduction of sustainable land-use practices. Politicians, governmental institutions, oil companies, local communities and civil society are working together to implement the management plan of the Reserve.

Convention on Biological Diversity (CBD)

The outcome of Rio+20 reaffirmed the importance of the CBD for advancing sustainable development, and the importance of implementing the Strategic Plan for Biodiversity 2011-2020 and achieving the Aichi Biodiversity Targets.

At its second meeting, held in New Delhi in July, the Intergovernmental Committee for the Nagoya Protocol (ICNP) agreed on a raft of recommendations relating to entry into force and implementation of the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization.

The eleventh meeting of the Conference of the Parties (COP 11) to the CBD and the sixth meeting of the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety convened in Hyderabad, India, in October.



UNEP PEOPLE – Braulio Ferreira de Souza Dias, who was appointed as Executive Secretary of the CBD Secretariat in early 2012

At COP 11, developed countries agreed to double international flows of resources to support developing states to meet the goals of the Strategic Plan. All parties agreed to substantially increase domestic funding in support of biodiversity. The conference also saw the launch of the Hyderabad Call for Biodiversity Champions, a programme that will accept pledges from governments and organizations in support of the Strategic Plan.

The COP also noted scientific efforts to classify a diverse list of marine areas, some renowned for containing 'hidden treasures' of the plant and animal world, as ecologically or biologically significant. The COP requested that the list be transmitted to the UN General Assembly for use in its work on oceans and the Law of the Sea. The COP also encouraged the use of voluntary guidelines for the consideration of biodiversity in environmental impact assessments and strategic environmental assessments in marine and coastal areas.

COP 11 also saw the launch of the NBSAP Forum, a community that offers countries support in transforming and implementing their National Biodiversity Strategies and Action Plans. The Forum is a partnership between the CBD Secretariat, UNEP, the UN Development Programme, governments, and other bodies. Many of the CBD's activities were funded by the Global Environment Facility, the Japan Biodiversity Fund and the Lifeweb Initiative.



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management

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Spain-UNEP Partnership for Protected Areas in support of the CBD LifeWeb Initiative



Sea turtles are among the endangered species marked for action

The Spain-UNEP Partnership for Protected Areas aims to support the creation and improvement of the management of protected areas, and support the UNEP mandate to manage ecosystems through appropriate and innovative governance systems, thus contributing to human wellbeing, and poverty eradication. Some 22 protected areas in Latin America and the Caribbean, Africa, Asia and the Pacific are benefiting from this partnership.

In Mauritania's Cap Blanc Satellite Reserve, home to endangered monk seals, trained conservation agents have improved surveillance, and sustainable fishing guidelines have been created with local fishermen. A regional analysis and mapping of climate change and anthropogenic risks to endangered sea turtles along Africa's

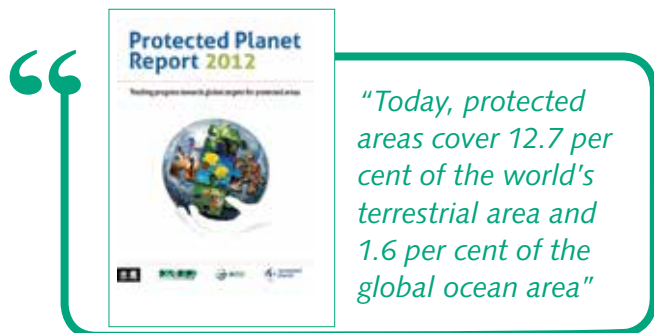
Atlantic coast got underway in a project that will guide priority conservation actions. Other projects include ensuring the protection of great apes and elephants inside the Nouabale Ndoki National Park in Republic of Congo and conflict resolution work in Kahuzi-Biega National Park area in the Democratic Republic of Congo, which has reduced illegal activities in an important corridor area by 40 per cent.

A UNEP project aims to improve the effective management and governance of protected areas in Takamanda National Park in Cameroon, Lossi Odzala Interzone in the Republic of Congo; and Kahuzi-Biega in DR Congo. These areas are home to large mammal species that are critically endangered.

In the Gunung Leuser National Park in Indonesia, activities are focused on support to park authorities in law enforcement, orangutan protection and rainforest rehabilitation, and to local communities in ecotourism; one of the project's activities on reforestation is expected to contribute to a National Rehabilitation Strategy.

Activities targeted the development of sustainable use of biodiversity and ecosystems through the economic valuation of services provided in the Volcán Barú National Park in Panama, and La Montaña Conservation Area in El Salvador. In the Wider Caribbean and Eastern Pacific, where there are over 32 species of marine mammals, a mapping exercise on critical mammal habitats and migration routes and threats from human activity formed the basis for future work in establishing protected areas.

Protected Areas



Protected areas support healthy ecosystems and threatened species, and provide a multitude of benefits to people, including clean water, food security and climate regulation.

The Aichi Biodiversity Target 11 calls for 17 per cent of the world's terrestrial areas and 10 per cent of marine areas to be conserved through equitably managed protected areas by 2020. The *Protected Planet Report 2012* comprehensively tracks progress towards that target for the first time, providing essential information on the status and trends in global biodiversity protection.

Compiled by UNEP's World Conservation Monitoring Centre (UNEP-WCMC), in cooperation with the International Union for the Conservation of Nature and other partners, the Protected Planet Report will be produced biennially until the Aichi targets are renewed in 2020.

Pan-European 2020 Strategy for Biodiversity

The Pan-European 2020 Strategy for Biodiversity, approved on May 15 2012, has set in motion a new phase of regional cooperation that aims at halting biodiversity loss. This strategy takes global biodiversity goals and defines regional measures for implementation, making it a blueprint for

progress in the pan-European region. The strategy brings together 55 countries to coherently tackle issues that go beyond the lines of national borders.

The strategy provides an informal platform for pan-European countries to exchange views, expertise and experiences and boost the mainstreaming of policies aimed at addressing the underlying causes of loss (including the removal of biodiversity-harmful subsidies by 2020) and reducing pressure on biodiversity (including a dramatic reduction in the rate of decrease of natural habitats). The strategy has already contributed to the Aichi Target to enhance the benefits of ecosystem services through ecosystem restoration.

GRASP



The Great Apes Survival Partnership (GRASP) is a unique alliance of member nations, UN agencies, research institutions, conservation organizations and private supporters charged with conserving great apes and their habitats in Africa and Asia.

Faced with declining populations and dwindling forests, GRASP set law enforcement, habitat protection and political advocacy as its top priorities at a meeting of its council in



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November. The council also agreed to address disease threats, conflict-sensitive conservation, and Green Economy as other areas of focus.

“Great apes face an uncertain future, and it will take the collective effort of GRASP to ensure their long-term survival,” said GRASP coordinator Doug Cress. “These priorities get to the very heart of the issues that have pushed chimpanzees, gorillas, bonobos and orangutans so much closer to extinction.”

GRASP manages over 20 projects, ranging from wildlife health monitoring in Congo to reforestation efforts in Sumatra. GRASP is preparing the first-ever report on the illegal trade in great apes, and embraced internet programmes through the Act Now for Orangutans campaign, which reached an on-line audience of 2.9 million, and the development of the ApeAPP mobile phone application. Established in 2001, GRASP’s secretariat is co-hosted by UNEP and the United Nations Educational, Scientific and Cultural Organization (UNESCO).

OCEANS, COASTLINES AND LAKES

The Arctic under Climate Pressures: An Agenda for Change

Arctic Agenda 2020 kicked off in 2012, aiming to make governance reforms for the sustainable development of the Arctic in the Russian Federation. The Programme will help bring about firmer institutional arrangements for shared resources of transboundary marine ecosystems, energy efficiency improvement and renewable



Glacier Front in the Russian Arctic

energy development. The Programme also aims to catalyze dialogue with other Arctic countries and develop a mechanism to promote investments.

Driven largely by the combined forces of climate change and globalization, the Arctic environment is changing rapidly. This leads to potentially significant regional and global impacts. UNEP is engaged in Arctic 2020 to assist governments in reversing harmful environmental trends. Other Global Environment Facility implementing agencies involved are the World Bank, the European Bank for Reconstruction and Development (EBRD) and the United Nations Development Programme (UNDP). The Russian counterparts for Arctic Agenda 2020 include the Ministry of Natural Resources and Environment, the Ministry of Economic Development and regional authorities and institutions from the Russian Arctic.

Addressing Sea-Level Rise and Coastal Erosion

Coastal ecosystems, communities and economies in developing countries in the East Asian Seas face the threat of sea-level rise and coastal erosion destroying coastal habitats like mangroves and turning cultivated farmland into salt marshes. The rural poor are the most vulnerable, as they have few resources to adapt. UNEP launched the Regional Programme on Coastal Erosion in

January 2012 to strengthen the sustainability, resilience and wise management of these coastal resources and associated ecosystems. Under the project, which is implemented by the Coordinating Body on the Seas of East Asia, national assessments on vulnerabilities to coastal erosion will be undertaken. A menu of potential pilot interventions in priority areas and associated roadmap will be developed. The project is funded by the Korea International Cooperation Agency and the Yeosu Organizing Committee, and is implemented in Cambodia, Indonesia, Malaysia, Philippines, Thailand and Vietnam.

Mangrove Ecosystems in the Caribbean

UNEP works to promote sustainable use of marine and coastal resources through the inclusion of ecosystem services in integrated coastal management plans and land-use planning at the national and local levels. UNEP has assisted in harmonizing legislation on mangrove ecosystems in Guatemala, created a toolbox for coastal planning in Nicaragua's Pearl Lagoon municipality, and undertaken an economic valuation of Honduras' Jeannette Kawas coastal lagoon. Local communities have benefited through the support of alternative livelihood activities, ranging from ecotourism to honey production.

Collective Commitment to the Caspian

The Caspian Sea is unique, featuring 400 endemic species such as the famous Caspian seal and Caspian sturgeon. The Caspian Day Festivities brought together non-governmental organizations, schools, youth organizations, and other stakeholders to clean up the shores of the sea, which is facing the challenges of unprecedented

growth in oil and gas exploration, exploitation and transport. This annual event commemorates the 2006 entry into force of the Framework Convention on the Protection of the Marine Environment of the Caspian Sea (The Tehran Convention). In 2012, National Public Participation Strategies were launched by the Caspian States: Azerbaijan, Islamic Republic of Iran, Kazakhstan, Russia and Turkmenistan. This first-time launch of these strategies signals a more active involvement of civil society to attain a common goal of a healthy Caspian Sea, and involves closer collaboration among national governments and UNEP.

Global Land-Oceans Connections Conference



UNEP organized the inaugural Global Land-Oceans Connections Conference and the Third session of the Intergovernmental Review meeting (IGR-3) on the implementation of the Global Programme of Action for Protection of the Marine Environment from Land-Based Activities (GPA) in Manila, Philippines. Over 400 scientists, experts and policymakers discussed current and emerging issues in the marine and coastal sector with a view to provide science-based recommendations for the IGR-3 meeting.

At the IGR-3, representatives of 64 governments and the European Commission adopted the Manila Declaration on furthering the work of the GPA with a focus on nutrients, marine litter and wastewater, also incorporating key elements of a draft Programme of Work for the GPA Coordination Office. The Global Partnership on Marine Litter, launched 18 June at a side-event at Rio +20, is under further development and the Global Partnership on Nutrient Management continues its work to address the nutrient challenge.



Ecosystem management

5

ECOSYSTEM MANAGEMENT



Yangtze River bend at Yunnan

Nature Conservation and Flood Control in the Yangtze River Basin, China

The Global Environment Facility Yangtze Project was created to mitigate flood events through rehabilitation and conservation of ecosystem functions, while also enhancing conservation and sustainable use of globally important biological resources and strengthening greenhouse gas sequestration. The project was implemented by UNEP and executed through the Foreign Economic Cooperation Office of the Ministry of Environmental Protection in the People's Republic of China. The final evaluation in 2012 found

that a prompt and strong impact was achieved. The project brought ecosystem improvements, increased income for the local population and changed attitudes with regards to environmental management – both at the local and regional environmental management levels.

Global Partnership on Nutrient Management

Evidence suggests that increases in population and per-capita consumption of energy and animal products will exacerbate nutrient losses, pollution levels and land degradation, further threatening the quality of our water, air and

soils, affecting climate and biodiversity. It is estimated that the 70 per cent increase in food production needed by 2050 to ensure global food security, as well as changing diets, will require intensification of food production and fertilizer use. As such, the move towards a Green Economy needs to embrace a new focus on effective nutrient management.

UNEP, as the Secretariat of the Global Partnership on Nutrient Management, brings together governments, international organizations, scientists, industry and non-governmental organizations to address these challenges. A number of field projects (e.g. Chilika Lake in India, Manila Bay and Laguna de Bay in the Philippines) are under implementation to demonstrate solutions to nutrient over-enrichment of coastal waters.

Green Economy in a Blue World

The Green Economy approach applies equally well to the Blue World – the oceans and coasts that make up more than 70 per cent of the Earth's surface. UNEP's *The Green Economy in a Blue World* report showed how taking a Green Economy approach in fisheries, maritime transport, marine-based renewable energy, coastal tourism, ocean nutrient pollution and deep-sea minerals can be beneficial in terms of equity, employment, improved resource efficiencies and maintaining natural capital.

Two Minutes on Oceans with Jim Toomey

UNEP partnered with syndicated cartoonist Jim Toomey – of Sherman's Lagoon fame – to develop six two-minute videos intended to raise

awareness of the importance of oceans and the coastal environment, hitting topics such as True Ocean Values, Marine Litter, Nutrient Runoff and Ocean Acidification. The videos use animation and humour to explain in clear language the role oceans play in our lives and our survival. The first video was launched on the occasion of World Oceans Day in Washington, DC. It was also shown at Rio+20 and at the UN Pavilion at the World Expo in Yeosu, Republic of Korea.

MOUNTAINS



Significant Move for Mountains in the "Future We Want"

Following long-term efforts with the global mountain community, mountains were included in the Rio+20 outcome document. This provides a mandate for future global action in mountain areas and emphasizes the importance of regional cooperation in mountain regions. The support of the Permanent Secretariat of the Alpine Convention, the Carpathian Convention countries and the EU Commission were instrumental in achieving this success.

The Carpathian Convention fosters the sustainable development and protection of the Carpathian region. UNEP serves as Interim Secretariat of the Carpathian Convention, supporting the Czech Republic, Hungary, Poland, Romania, Serbia, Slovak Republic and Ukraine in the Convention's implementation. Besides the Alpine Convention, the Carpathian Convention is the only existing



Ecosystem
management

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ECOSYSTEM MANAGEMENT



Mountain ecosystems are now on the agenda

multilateral environmental agreement for the protection and sustainable development of a mountainous region.

Public and Private Sectors Join Forces for Alpine Carpathians Corridor

An agreement between the Slovak and Austrian national and regional authorities and leading motorway companies has established a framework for future cooperation on transport and infrastructure, agriculture and nature protection, and spatial planning. The agreement was facilitated by UNEP/Vienna – Interim Secretariat of the Carpathian Convention – supporting the EU-funded Alpine Carpathian Corridor (ACC) project to re-establish the ecological corridor between the Alps and the

Carpathian mountains. In-depth research on reducing the impact of highway infrastructure has been conducted and results are being incorporated into the construction of wildlife passages, investment strategies and spatial planning instruments.

Land Health and Natural Resource Accounting in West African Drylands

UNEP published a series of reports on West African drylands related to land health surveillance (with the World Agroforestry Centre) and environmental accounting of natural resources (with the University of Florida).

Results from remote sensing analysis of vegetation and rainfall trends in the West Africa Sahel suggest that vegetation growth has

The Global Environment Facility-funded project, Stimulating Community Initiatives in Sustainable Land Management, is improving and upscaling local innovation in sustainable land management by communities in the drylands of Africa. Activities have taken place in Ghana, Morocco, South Africa and Uganda. By mid-2012, the quality of the resources at the disposal of communities had been improved by 10 per cent across the sites that have been identified in the project. In Ghana, composting is resulting in higher food production. In Uganda, conservation agriculture is improving the resilience of communities. In South Africa, communities are improving the quality of forests while at the same time accessing firewood and poles.

not kept pace with increases in rainfall during recovery from the droughts in the early 1980s, indicating land degradation has occurred on over 50 per cent of the region. Field surveys in the Segou Region of Mali revealed critically low soil fertility levels and widespread soil health degradation associated with current cultivation practices. Large investments in fertilizers and organic nutrient inputs and natural resources management will be required to mitigate this serious threat to food security and agro-ecosystem health.

UNEP reports on environmental accounting provided detailed figures for 134 national economies, with a special focus on five dryland countries of the West Africa Sahel (Burkina Faso, Mali, Mauritania, Niger, and Senegal). Globally, natural capital depletion was observed to represent an annual cost of over US\$1.5 trillion. Soil erosion cost society around US\$640 billion annually, double the next most important losses from deforestation, over-fishing and over-use of water resources. The economies of the five West African countries were found to be strongly reliant on natural capital flows while simultaneously depleting their natural capital, rendering them extremely vulnerable to potential shocks. Large and immediate investments in sustainable natural resource management are vital to the economic and environmental security of these countries.

GREENING THE COCOA INDUSTRY

UNEP, with Global Environment Facility funds, is aiming to change production practices in major cocoa-producing countries in Africa, Asia and Latin America, such as Cote d'Ivoire, Indonesia and Brazil. The project also targets business practices in cocoa and chocolate companies in order to prompt the industry to conserve biodiversity in its production landscapes, provide greater long-term stability to all value chain participants and increase income for smallholder farmers. The project has officially launched in three new countries, bringing the total of cocoa-producing countries target for action to ten. Fast engagement of the private sector and the work of the Rainforest Alliance – the implementing partner – with key cocoa institutions have put the project on track to meet its goals, such as having 750,000 hectares under cocoa production using improved production practices by 2013.



Ecosystem
management

5

ECOSYSTEM MANAGEMENT



6

HARMFUL SUBSTANCES AND HAZARDOUS WASTE



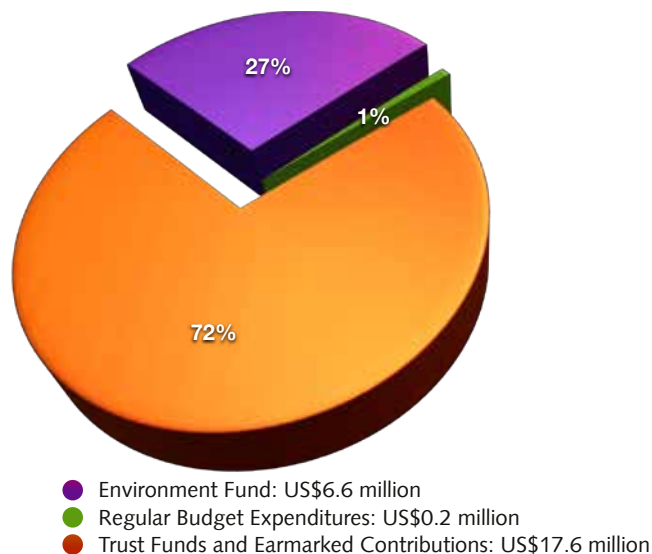
SOUND MANAGEMENT OF CHEMICALS AND HAZARDOUS WASTE

UNEP's objective is to minimize the impact of harmful substances and hazardous waste on the environment and people. UNEP achieves this through four core services:

- **Scientific assessments:** UNEP conducts global assessments of the environmental fate and exposure pathways of harmful substances, and raises awareness of these findings to help governments and others take action.
- **Legal instruments:** UNEP assists governments to develop appropriate policy and control systems for harmful substances of global concern.
- **National implementation:** UNEP provides the tools, methodologies and technical assistance to help States design, finance and implement national programmes that improve assessment and management of harmful substances and hazardous waste.
- **Monitoring and evaluation:** UNEP promotes best practices, assisting States to monitor, evaluate and report on the progress of their national programmes.

TOTAL EXPENDITURE 2012

\$US24.4 million, 92% of allocations



RESULTS TARGETED

States and other stakeholders have increased capacities and financing to assess, manage and reduce risks to human health and the environment posed by chemicals and hazardous waste.

States and other stakeholders have available to them coherent international policy and technical advice for managing harmful chemicals and hazardous waste in a more environmentally sound manner, including through better technology and best practices.

Appropriate policy, legislation and control systems are developed for harmful substances of global concern, in line with international obligations and the mandates of relevant entities.

FACTS AND FIGURES

Of the estimated 140,000+ chemicals on the market today, only a fraction has been thoroughly evaluated to determine their effects on human health and the environment.

Poor management of volatile organic compounds is responsible for global economic losses estimated at US\$236.3 billion.

140,000+
chemicals on the market

Between 2005 and 2020, the accumulated cost of illness and injury linked to pesticides in small-scale farming in sub-Saharan Africa could reach US\$90 billion.

Estimates suggest that up to 75 per cent of the e-waste generated in Europe and approximately 80 per cent of the e-waste generated in the United States goes unaccounted for.

Independent estimates of the benefits from the global phase-out of leaded fuel amount to US\$2.45 trillion, or four per cent of global annual GDP



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Chemicals require sound management at all stages, from production to use to disposal

GLOBAL CHEMICALS OUTLOOK

UNEP's major *Global Chemicals Outlook* report recognizes that chemicals are major contributors to national and world economies, but that sound management throughout their lifecycles is essential to

avoid significant and increasingly complex risks to human health and ecosystems, as well as substantial costs to national economies. These risks are compounded by the progressive 'chemical intensification' of developing country economies arising from the steady shift in the production, use and disposal of chemical products from developed countries to emerging and developing nations, where safeguards and regulations are often weaker.

The report provides examples demonstrating that the poor management of chemicals and waste is incurring multi-billion-dollar costs worldwide – most of which are not borne by manufacturers or others along the supply chain, but by social welfare systems or individuals.

The report also highlights the benefits available through the introduction of sound chemicals and waste management that can support ecosystems by reducing pollution; reducing associated financial and health burdens; and improving livelihoods through the development of green technologies and jobs.

The report outlines global trends in chemicals production and use, and their economic implications. This provides a basis for establishing effective measures that governments can take to deliver on the commitments they made at the Rio+20 summit. These commitments are to the 2020 goal of sound chemicals management through coherent and efficient legal systems, safer alternatives to hazardous chemicals in products, the prevention of illegal dumping of toxic wastes and an increase in the recycling of waste, among other measures.

STRATEGIC ALLIANCE FOR THE IMPLEMENTATION OF THE LIBREVILLE DECLARATION

The Libreville Declaration on Health and Environment in Africa represents the umbrella framework through which African countries and their development partners address environmental determinants of human health and ecosystems integrity.

Implementation of the Libreville Declaration is being scaled up, with more countries receiving technical and financial support to complete Situation Analysis and Needs Assessments (SANAs), develop National Plans of Joint Actions (NPJAs), undertake assessments of inter-sectoral actions and develop proposals for resource mobilization. In addition to 12 previously completed assessments, Benin, Mozambique and Sierra Leone completed the SANA process in 2012, while 15 others are ongoing.

The SANAs and NPJAs have generated a number of projects and programmes. In 2012, Kenya, Gabon, Ethiopia, Mali and Sierra Leone documented best practices and positive outcomes on health and environment inter-sectoral actions. These reports provide evidence of effective inter-sectoral collaboration between health, environment and other sectors in addressing the top ten priorities agreed upon in a ministerial meeting in Luanda in 2010.

Also in 2012, a proposal to establish an African Programme to Reduce Chemical Risks Posed to Human Health and the Environment was formally endorsed by ministers of environment at the 14th African Ministerial Conference on the Environment.



STRATEGIC APPROACH TO INTERNATIONAL CHEMICALS MANAGEMENT

The Strategic Approach to International Chemicals Management (SAICM) is a voluntary, multi-sectoral and multi-stakeholder global initiative that aims to achieve the goal set out in the Johannesburg Plan of Implementation that, by 2020, chemicals will be produced and used in ways that minimize significant adverse effects on human health and the environment. The nature of chemicals use, production and disposal requires concerted efforts across sectors. The involvement of all stakeholders is seen as key to achieving the objectives of the Strategic Approach, as is a transparent and open implementation process and public participation in decision making. Overall, 173 governments, 82 non-governmental organizations, including industry, and 15 inter-governmental organizations have nominated focal points to the Strategic Approach.

In 2012, UNEP hosted the third International Conference on Chemicals Management (ICCM3) in Nairobi, bringing together policymakers,

businesses, civil society organizations, academia and inter-governmental organizations to review and guide ongoing activities on priority chemicals-policy issues. At the meeting, delegates renewed the call for action and strengthened commitment to implement actions on emerging policy issues, including lead in paint, chemicals in products, hazardous substances within the life cycle of electrical and electronic products, nanotechnology and manufactured nanomaterials and perfluorinated chemicals.

Strengthened commitment on emerging policy issues included agreement for UNEP to develop a proposal for a voluntary international programme for information on chemicals in products along the supply chain and throughout their life cycles. Building on activities that have taken place between 2009 and 2012, the aim of the voluntary international programme would be to guide the availability of, and access to, relevant information on chemicals in products among all stakeholder groups. ICCM3 also agreed to implement new cooperative actions on endocrine-disrupting chemicals, substances that affect the endocrine (hormonal) system and may therefore interfere with important developmental processes in humans and wildlife. UNEP and the World Health Organization plan to launch a joint report on endocrine-disrupting chemicals in 2013.

WHO estimates more than 25 per cent of the global burden of human disease can be attributed to environmental factors, including human exposure to chemicals. In this context, ICCM3 adopted a strategy for strengthening the engagement of the health sector in the implementation of SAICM. The principal aim of the strategy is to provide an agreed intergovernmental approach to strengthening the engagement of the health sector in the sound management of chemicals and thereby increase the likelihood of meeting the 2020 goal.

SAICM Quick Start Programme

The SAICM Quick Start Programme (QSP) Trust Fund provides support to countries to build foundational capacities in sound chemicals management. ICCM3 recognized the value of the small-scale funding provided through the QSP and agreed that its Trust Fund should be extended to 2015. Since its establishment in 2006, the QSP has provided financial and technical resources to 145 projects in over 100 countries, including 54 least-developed countries and/or small island developing states.

Fifty-two projects have already completed activities, thereby increasing the capacity of countries to manage chemicals in a way that significantly reduces adverse effects to human health and the environment. With total awarded funds ranging from US\$50,000 to US\$250,000 per project, the QSP has assisted countries in the development of national chemicals profiles, country-specific risk assessment methodologies, development of chemicals legislation, and mainstreaming of sound chemicals management into national development plans. It has also brought improved coordination among all relevant groups involved in the implementation of sound

chemicals management, as well as increased awareness and the formulation of policies and legislations aimed at regulating the production, use, handling and disposal of chemicals. In addition, the QSP has helped to mobilize at least US\$40.8 million, including contributions to the Trust Fund and in-kind contributions from project implementers and executing agencies.

Two examples of projects funded through the QSP are shown below.

PROTECTING WORKERS FROM CHEMICALS IN LATIN AMERICA

In Latin America, labour unions have improved efforts to protect workers from unsound chemicals management by providing them with training tools and raising awareness of the risks associated with exposure to hazardous substances. The catalytic effect of this project extended to other trade unions that have adopted the training programme on chemicals management as part of their regular training schedule, now funded by the unions.

PREVENTING CHEMICAL ACCIDENTS AND PREPARING FOR EMERGENCIES

As a response to SAICM's Global Plan of Action calling for measures to improve chemical accident prevention and preparedness (CAPP), UNEP has been leading an international initiative to improve CAPP in fast-growing economies and developing countries. Through SAICM Quick Start Programme funding, UNEP in 2012 supported new CAPP improvements in Sri Lanka and Tanzania.

CHEMICALS SAFETY

As well as the work detailed above under SAICM, UNEP maintains strong links with the chemicals industry to help promote the sound management of chemicals. After successful side events with the International Council of Chemicals Associations (ICCA) at Rio +20, UNEP is now partnering with the association in a new regional project aimed at promoting chemical safety management in Africa.

The two-year project will focus on capacity building and cross-border road transport of hazardous substances. UNEP's partnership with the ICCA centres on the shared goal of the development and implementation of effective chemicals management regimes by business and institutions. This means working with small and medium enterprises, harmonizing legal systems regarding chemicals management, fostering stronger stakeholder dialogue on emerging issues and undertaking pilot projects. Under this partnership, UNEP and the ICCA have joined forces in capacity-building workshops in Bangkok, Beijing, Shanghai, Manila, and Nairobi. New joint pilot projects are being initiated in Africa and Vietnam.

MERCURY

Mercury, in its many forms, is highly toxic and poses a threat to human health and the environment. The metal accumulates in ecosystems and living organisms, and can be particularly damaging to the fragile nervous systems of young humans and animals. The metal is used widely in industry – from light bulbs to artisanal mining – and is emitted by human activities such as coal combustion and non-ferrous metal production. As such, it requires careful management.



Coal combustion is a major emitter of mercury

Mercury negotiations

At the 25th session of the UNEP Governing Council in February 2009, governments agreed on the need to elaborate a global legally binding instrument on mercury and mandated UNEP to convene and support an intergovernmental negotiating committee. Negotiations commenced in Stockholm in June 2010, followed by meetings in Chiba, Japan and Nairobi, Kenya in 2011, continued in Uruguay in 2012, and were expected to be completed in Geneva in January 2013. Following the conclusion of the negotiations, the convention will be open for signature at a diplomatic conference to be held in Japan in October 2013.

Action to reduce mercury risks is undertaken by the UNEP Global Mercury Partnership, which has grown to more than 100 partners and now works across eight partnership areas. Three leading examples of projects are set out below.

Coal Combustion

UNEP's work with the International Energy Agency's Clean Coal Centre on mercury emissions from coal combustion fills a major

gap in global information on one of the largest anthropogenic sources of mercury emissions. It provides information from China, India, South Africa and Russia – four developing and transition economy countries that are among the most significant users of coal in power generation. The first measurement-based inventories of mercury emissions from coal combustion in the power sector were produced, pulling together information on the mercury content of coals and smoke stack emissions, and information on pollution control systems. Mercury reduction projects in Russia demonstrated cost-effective means to reduce mercury emissions by over 60 per cent at existing plants. Detailed guidance and an interactive computer programme have been produced to help national officials and industry technical managers to estimate emissions and test potential reduction options.

Storage and Disposal

Many countries are already phasing out the use of mercury products – such as thermometers and blood-pressure machines – but require help in developing options for the disposal of the products they ‘retire’.

In the Latin American and Caribbean region, mercury supply may exceed demand by 2013. In 2012, UNEP supported Argentina and Uruguay to find environmentally sound solutions for the storage and disposal of excess mercury, including identifying existing hazardous waste facilities that could serve as temporary storage facilities for mercury and identifying relevant regulatory frameworks. Both countries developed National Action Plans for the environmentally sound management of mercury and mercury wastes.

Artisanal and Small-scale Gold Mining



Small-scale gold mining has significant health impacts from mercury

Two key documents were released in 2012 in support of developing countries and countries with economies in transition to address artisanal and small-scale gold mining (ASGM). The first – *Reducing Mercury Use in Artisanal and Small Scale Gold Mining: A Practical Guide* – provides information for policymakers, miners and civil society on the technologies used in ASGM. The guide distinguishes those worst practices that result in mercury releases and promotes better practices that reduce or eliminate mercury use from the sector. The second – *Analysis of formalization approaches in the artisanal and small-scale gold mining sector based on experiences in Ecuador, Mongolia, Peru, Tanzania and Uganda* – recognizes that the informal nature of the sector in many countries can be a significant barrier to engaging with miners and promoting better working practices. The publication provides case studies of experiences in establishing sound legal frameworks for the ASGM sector.

MONITORING PERSISTENT ORGANIC POLLUTANTS



POPs monitoring in Senegal

To deal with Persistent Organic Pollutants (POPs), timely and accurate data on their presence in the environment is required. Thus UNEP supports analytical capacity building for global monitoring of the pollutants, with funding from the Global Environment Facility (GEF) and other sources.

In 2011/2012, UNEP generated results from 30 countries by measuring the concentrations of POPs in ambient air using passive air samplers. This monitoring, the first of its kind for many participating countries, found high levels of POPs in the Pacific Islands and Africa. PCB levels were high in Havana, Cuba; Samoa had a strong concentration of dioxins; and DDT was found at elevated levels in most African and some Pacific Island nations. These activities have been supported by expert laboratories, and funding came from the Global Environment Facility and the SAICM Quick Start Programme.

Regional projects for POPs laboratory capacity building and generation of POPs data as part of the Global Monitoring Plan under the Stockholm Convention have been cleared by the Global Environment Facility, and projects are expected to be funded in Africa and the Latin American and Caribbean Group (GRULAC) region.

Additionally, work on POPs newly listed under the Stockholm Convention has confirmed for the first time the presence of polybrominated flame retardants such as polybrominated diphenyl ethers (PBDEs) in the ambient air in 11 countries in GRULAC. PBDEs are persistent, bioaccumulative, and toxic to humans and the environment.

Also newly listed are perfluorooctane sulfonate (PFOS) and perfluorooctanoate (PFOA), which are persistent, widely present in humans and the environment, have long half-lives in humans, and can cause adverse effects in laboratory animals, including cancer and developmental and systematic toxicity. These chemicals are members of a wider group of perfluorinated chemicals (PFCs) that are used in a wide range of applications such as clothing, furniture and food packaging because they impart 'non-stick' and stain resistant properties.

The worldwide presence and potential risks from exposure to PFCs make these chemicals an emerging policy issue recognized by the International Conference on Chemicals Management in 2009. The global mandate to address PFCs was reinforced at ICCM3 in September 2012. As a result, the Organisation for Economic Co-operation and Development and UNEP have established a Global PFC Group under the auspices of SAICM to raise awareness of PFC issues, to exchange information and develop knowledge on regulatory approaches, scientific insights, and alternatives to PFCs and awareness raising.

DEVELOPING ALTERNATIVES TO DDT



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Mosquitoes cluster on human skin

An innovative project, Demonstrating and Scaling Up Sustainable Alternatives to DDT for the Control of Vector Borne Diseases in Southern Caucasus and Central Asia (Georgia, Kyrgyzstan, Tajikistan), funded by the GEF and other partners, undertook field trials to test the effectiveness of non-chemical alternatives like the release of gambusia fish into waters, netting of windows and doors and beds, plug-in repellents, and environmental management. Preliminary results show that only a few mosquito larvae could be detected in the area where gambusia fish had been released, indicating that the parent generation has been eaten by the fish.

BASEL, ROTTERDAM AND STOCKHOLM CONVENTIONS

In 2012, The Basel, Rotterdam and Stockholm convention secretariats successfully merged into one secretariat as a result of the party-led synergies process. The new structure is intended to increase cooperation, coordination and



UNEP PEOPLE – Kerstin Stendahl, Deputy Executive Secretary of the Basel, Rotterdam and Stockholm Conventions.

efficiency among the three conventions so that cost-effective services to parties are improved.

Significant progress was made under a Basel Convention subsidiary body to complete a framework on the environmentally sound management of hazardous and other wastes for the 'country-led initiative'.

For the first time since the Rotterdam Convention entered into force in 2004, the Convention's Chemical Review Committee recommended adding a hazardous pesticide formulation (containing paraquat dichloride) to the prior informed consent list, continuing to ensure that countries' right to know and safely trade chemicals are respected.

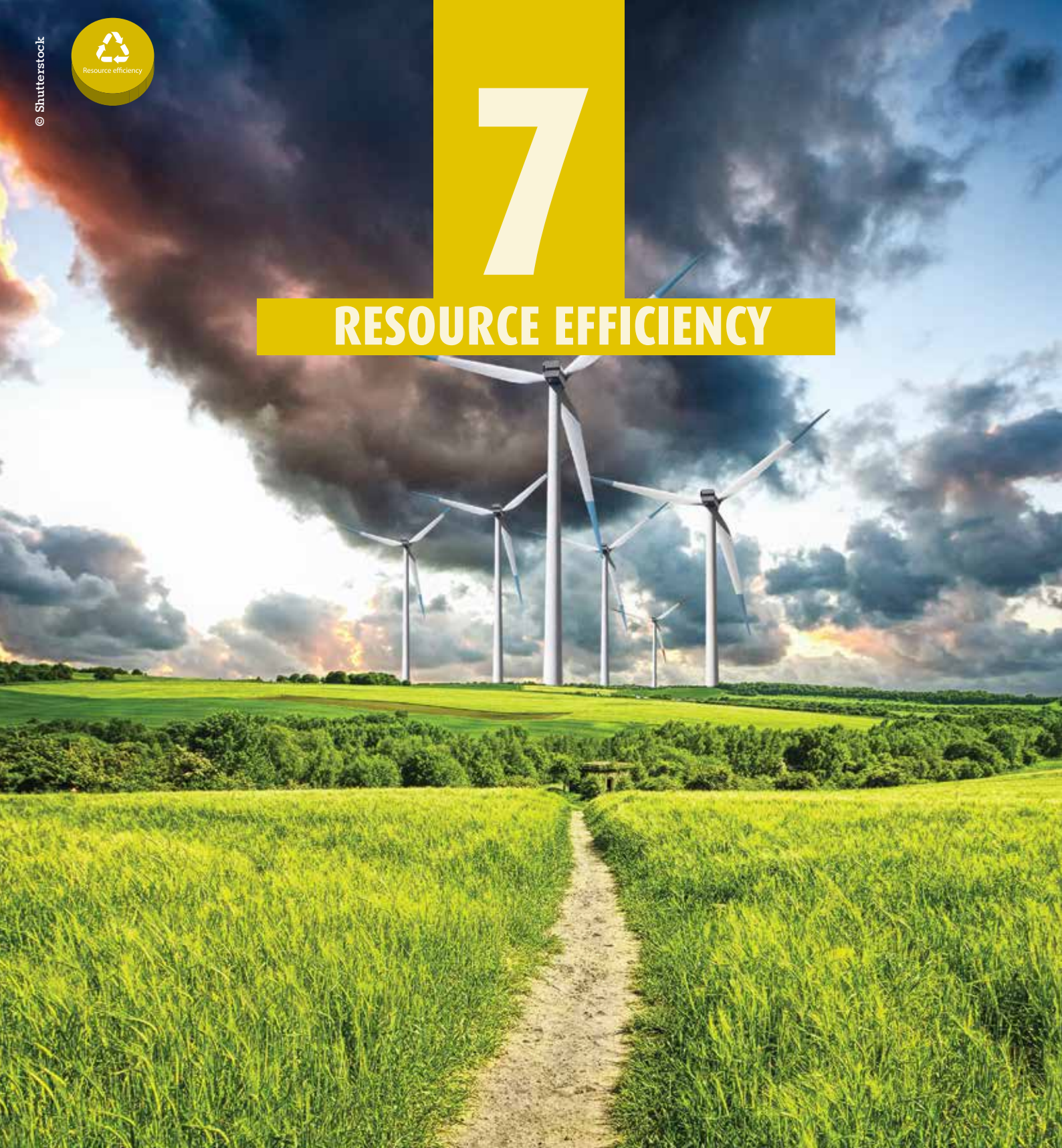
Parties to all three conventions benefited from increased use of information and communication technology to support capacity building and outreach on a global scale. The webinars programme was expanded to all three conventions with twice weekly online seminars, while a new Twitter service was launched to increase transparency and information exchange.

Overall, the synergies process has strengthened the Secretariat's ability to support parties in implementing their obligations under the three conventions. Progress on synergies was commended in the Rio +20 outcome, *The Future We Want*, for increasing coordination and cooperation among chemicals and waste conventions. The three conventions will continue to contribute to sustainable development and international environmental governance.



7

RESOURCE EFFICIENCY



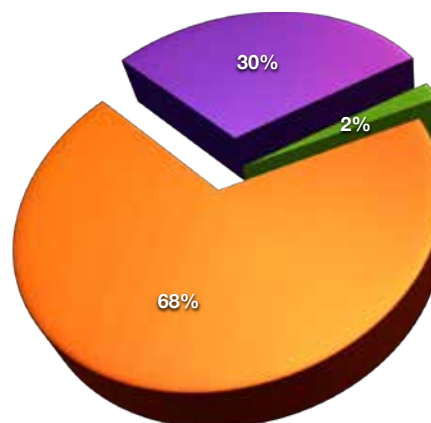
ACCELERATING THE TRANSITION TO RESOURCE-EFFICIENT SOCIETIES

UNEP aims to ensure that natural resources are produced, processed and consumed in a more environmentally sustainable way in which environmental impact is decoupled from economic growth and social co-benefits are optimized. UNEP's work focuses on four key areas:

- Conducting assessment of trends in the extraction and use of resources in the global economy;
- Supporting governments at the national and local levels in developing and implementing national policies, including regulatory and economic instruments, as well as voluntary measures;
- Applying insights from scientific and macroeconomic analyses to identify investment opportunities for sustainable business models and enhancing the efficiency of resource-intensive industries and supply chains in key target sectors;
- Raising awareness and influencing the purchasing choices of individual and institutional consumers as well as changing the way that enterprises and consumers design, produce, use and dispose of goods and services.

TOTAL EXPENDITURE 2012

\$US25.9 million, 86% of allocations



- Environment Fund: US\$7.7 million
- Regular Budget Expenditures: US\$0.5 million
- Trust Funds and Earmarked Contributions: US\$17.7 million



RESULTS TARGETED

Enhanced understanding of the resource flows and their related environmental impacts along global value chains, as well as the potential for decoupling economic growth from environmental degradation

Improved capacity of governments and public institutions to manage key resource challenges, and integrate resource efficiency in their policies

Increased uptake in resource efficiency management practices and investments over product life-cycles and along supply chains.

Better informed consumers favouring more resource-efficient and environmentally friendly products.

THE 10-YEAR FRAMEWORK OF PROGRAMMES ON SUSTAINABLE CONSUMPTION AND PRODUCTION



At Rio+20, Heads of State reaffirmed that promoting sustainable patterns of consumption and production is one of the three overarching objectives of, and essential requirements for, sustainable development by adopting the 10-Year Framework of Programmes on Sustainable Consumption and Production (10YFP). UNEP was designated as the Secretariat of the 10YFP, which will establish and administer a Trust Fund. This signals trust in and recognition of UNEP's expertise and previous work on the Marrakech Process. The 10YFP is a global framework of action to enhance international cooperation and innovation to accelerate the shift towards sustainable consumption and production (SCP) in developed and developing countries. The framework will contribute to decoupling resource use and environmental degradation from economic growth, provide capacity building and facilitate access to technical and financial assistance to developing countries.

An initial and non-exhaustive list of 10YFP programmes was agreed by governments,

building on the work of the Marrakech Process Task Forces. The programmes focus on: consumer information; sustainable lifestyles and education; sustainable public procurement; sustainable buildings and construction; and sustainable tourism, including ecotourism.

As part of the 10YFP, UNEP will launch the Global SCP Clearing House early in 2013. This dynamic and harmonized information platform includes 17 thematic and regional communities, a database on SCP initiatives, E-Library, news and events, working groups, and a directory of experts. A board of ten governments will guide implementation of the framework, and national and stakeholder focal points will be nominated to coordinate action.

The SWITCH-Asia programme promotes Sustainable Consumption and Production across Asia. As part of its second-year activities, the programme finalized a study on the policy status and needs on SCP in 19 Asian countries and implemented a comprehensive programme of capacity-building seminars, often held alongside technical workshops and other activities at sub-regional and national levels. UNEP organized these events by establishing tailor-made partnerships with the most appropriate institutions from the Asia region. About 150 senior policymakers participated in the seminars. UNEP will aim to ensure that policies, capacity building activities and information and awareness raising tools developed under SWITCH Asia, and extensions of this programme to other regions, will be effectively contributing to the 10YFP.

INTERNATIONAL RESOURCE PANEL: LINKING SCIENCE AND POLICY

Economic prosperity and the wellbeing of humanity and the environment depend on the way in which society uses and cares for natural resources. The International Resource Panel (IRP), established in 2007, provides independent, coherent and authoritative scientific assessments on the sustainable use of natural resources. Since its inception in 2007, its reports have served as a basis for policy documents at all levels by providing inspiration for national and regional level policy processes and discussions.

At Rio +20, the Panel released its synopsis report: *Responsible Resource Management for a Sustainable World: Findings from the International Resource Panel*, presenting the main conclusions of its assessments to date, which include Decoupling Economic Growth from Environment Degradation, Metal Stocks in Society, Recycling Rates of Metals, Priority Products and Materials, and Assessing Biofuels. The synopsis report clearly highlights the Panel's significant contribution to the science of resource efficiency.

2012 also saw the publication of *Measuring Water Use in a Green Economy*, and tangible progress made with several assessment reports to be launched over the coming months, covering issues such as City-level Decoupling, Sustainable Land Management, Decoupling in Practice, Metals Environmental Impacts, Recycling Technologies, and Trade-offs in Green-House-Gas Mitigation Technologies.

As part of outreach efforts, the Panel organized an International Seminar on Resource Efficiency and Decoupling Approach in Bangkok, which provided an opportunity for scientists and experts to present policymakers with the Panel's key findings and engage in a dialogue on ways in which public policy may help to achieve the desired vision for a more sustainable future in Asia. This is the first in a series of events planned in the region.

UNEP's work on bioenergy is a telling example of the science-to-policy interface. It also shows how long-term programmatic support influenced the thinking of key players in governments, industry and UN agencies, and was instrumental in setting bioenergy policies and sustainability standards.

Based on a report by the IRP and a series of workshops and papers pointing to upcoming issues in bioenergy, the Bioenergy Programme developed a set of tools and resources that made it an active and respected partner in international forums. These forums include the Global Bioenergy Partnership, where UNEP helped develop 24 sustainability indicators that are now being piloted.

Together with the Food and Agriculture Organization, the Bioenergy Programme developed a Bioenergy Decision Tool, which provides guidance for policymakers on issues relevant to national policy and project assessments in the context of licensing.



GREEN ECONOMY



The green economy in the context of sustainable development and poverty eradication was one of the two themes of Rio+20. Before and after the conference, UNEP pushed forward with its pioneering work on the green economy, which focuses on advisory services to national governments and producing new research and partnerships.

In response to the call at Rio+20 to support countries in their transition to a green economy, UNEP, together with ILO, UNIDO and UNITAR, is establishing a Partnership for Action on Green Economy (PAGE). With initial support from Norway and the Republic of Korea, this initiative will build upon and expand existing green economy activities, providing a vehicle to pool resources and deliver coherent support to countries.

Global Workforce to Benefit from Green and Decent Jobs

As part of UNEP's efforts to advocate shifting to a green economy, it is not only focusing on the potential for green and decent jobs, but also on the benefits to the environment and society as a whole.

A report produced by the International Labour Organization (ILO), UNEP, International Organization of Employers (IOE) and International Trade Union Congress (ITUC) estimated that a green economy transformation could generate 15 to 60 million additional jobs



Five million jobs have been created in renewable energy sectors such as solar power

globally over the next two decades and lift tens of millions of workers out of poverty.

The study, *Working towards sustainable development: Opportunities for decent work and social inclusion in a green economy*, examines the impact that greening the economy can have on employment, incomes and sustainable development in general. It found that eight sectors in particular will play a central role: agriculture, forestry, fishing, energy, resource-intensive manufacturing, recycling, building and transport.

At least half of the global workforce – the equivalent of 1.5 billion people – will be affected by the transformation to a green economy, according to the study. Already, tens of millions of new jobs have been created. In emerging economies and developing countries, the gains are likely to be higher because nations can leapfrog to green technology rather than replace obsolete resource-intensive infrastructure.

5 million jobs in renewable energy today – twice the figure from 2006 to 2010

3 million green jobs in Brazil – 7 per cent of all formal employment

Net employment gains of up to 2 per cent possible

Further gains will require enabling policies that promote and implement sustainable production processes at the level of business, and extend social protection, income support and skills training measures to ensure that workers are in a position to take advantage of these new opportunities.

Under the auspices of the Green Jobs Initiative, UNEP and its partners will continue to promote green jobs and decent work as it engages with governments and business alike, and urges them to implement coherent policies and effective programmes that contribute to a green economy transition.

Green Economy Advisory Services Support Dialogue and Action

In Africa, Asia, Europe, Latin America and West Asia, UNEP's Green Economy Advisory Services is conducting macroeconomic assessments of over 20 national economies and specific economic sectors in an effort to help nations transition to a green economy.

As every country and region must define its own pathway towards a green economy, UNEP is working closely with national experts, UN agencies and other partners to offer governments a suite of tools and options that will best meet their needs.



UNEP PEOPLE – Asad Naqvi, from the Green Economy team

In Mexico, UNEP – together with the Ministry of Natural Resources (SEMARNAT) and the National Institute of Ecology and Climate Change (INECC) and other partners – is supporting a Green Economy Scoping Study to accelerate the country's sustainable development plans. The study is a crucial element of a larger framework for cooperation between UNEP and Mexico, which aims to facilitate development strategies for a low-carbon economy. Led by government, civil society and the private sector, the study assesses the different fiscal and economic policy mixes needed to encourage investment in select key sectors, stimulate inclusive growth, create green jobs and improve environmental sustainability and economic competitiveness.

In Asia, the Philippines is one of many countries where UNEP is assisting with the development of national green economy plans. In this case, the Philippines scoping study examines the status of the country's natural assets and serves as a guide for the government to move forward.

In Africa, at the 14th African Ministerial Conference on the Environment, over 40 countries adopted the Arusha Declaration on Africa's Post Rio+20 Strategy for Sustainable Development, which urges them to capitalize on the opportunities presented by the Rio+20 outcomes. This includes the initiation of an African green economy partnership to provide support to member states, and implement activities as a vehicle for poverty eradication, decent jobs creation and sustainable development.

In Europe, UNEP is supporting the governments of Montenegro and Serbia to demonstrate the socio-economic and environmental benefits of a green economy approach, while making the case for energy efficiency, expanding the use of renewable energy and increasing organic agriculture.



Wide stakeholder participation has led to solid data collection and a thorough consultation process has shown positive results in all sectors. For example, the Serbian study indicates that investments aimed at an energy efficiency improvement of 20 per cent by 2030 would yield returns within 7 to 10 years. The Montenegro study shows that increasing the domestic supply chain for tourism would result in the creation of up to 16,000 jobs.



In Azerbaijan – one of the world’s fastest growing economies – UNEP worked jointly with the National Academy of Science to conduct a Green Economy Scoping Study that identifies green economy opportunities, including using the country’s fossil fuel revenues to begin financing its transformation.

UNEP has also provided technical and financial support to civil society groups in Ukraine and the Russian Federation to develop their Green Economy Scoping Studies. Russia’s current economic growth, vast natural resources and global political influence means it could become a leader in the global transition to a green economy.

Greening the Black Sea Region

UNEP has played an active role in greening economies in the Black Sea region, which

encompasses 12 countries in all. UNEP has provided technical inputs on the green economy and financed a synthesis report, which analyzed the individual positions of the 12 member states of the Black Sea Economic Cooperation in preparation for Rio+20, and helped create a regional vision for the wider Black Sea region, for members to consider in light of the Rio+20 outcomes on green economy.

Surge in Youth Involvement Signals Hope for a Green Economy

Rio+20 maximized the contributions and growth of the youth movement in environmental issues. A European youth meeting, organized by UNEP, brought together 60 participants focusing on their potential contributions on a national level as well as the green economy in the context of employment and job creation. UNEP also organized three events on the green economy and youth employment in partnership with the International Labour Organization (ILO) in the lead up to, and during, Rio+20.

INTEGRATING SUSTAINABILITY CONCEPTS INTO BUSINESS



Sustainable development can only be achieved if we re-orient ourselves towards a more balanced, inclusive and green economy. A key part of this involves achieving greater engagement and transparency from the private sector.



© Jeffrey Sauger/General Motors

Metal scraps move along a conveyor belt for recycling at the General Motors Transmission Plant in Warren, Michigan

Business Case for the Green Economy

Businesses making the transition towards the green economy are already reaping rewards worth millions of dollars in savings and high return on investment, while benefiting consumers, communities and the environment, according to a 2012 UNEP report: *The Business Case for the Green Economy: Sustainable Return on Investment*.

The report, which underpinned a UNEP/UN Global Compact CEO level panel at Rio+20, uses compelling economic and scientific data

Siemens produces half of the installed capacity of offshore wind turbines worldwide (2,000MW), saving about 4 million tonnes of CO₂ annually. It has recently announced an investment of 150 million to offshore wind R&D and the expansion of its wind business.

Grupo Bimbo in Mexico saved approximately US\$700,000 and 338,400 m³ of water in 3 years through its footprint-reduction strategy.

General Motors saved more than US\$30 million in 6 years through its resource productivity programme, and reduced waste volume by 40 per cent.

and a wide-ranging collection of case studies to demonstrate the advantages of the green economy in action. Companies investing in sustainable innovation to increase resource efficiency and responsibly managed operations ahead of formal regulatory frameworks are achieving competitive advantage and positioning themselves to capture future markets.

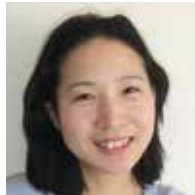
Corporate Sustainability Reporting

UNEP is among the UN agencies supporting the implementation of paragraph 47 of the Rio+20 outcome document on the promotion of corporate sustainability reporting. Together with the Global Reporting Initiative, it has become the Secretariat for the government-led 'Group of Friends of Paragraph 47', which aims at recognizing and encouraging the role that governments play in the promotion of sustainability reporting practices through a variety of mandatory and voluntary instruments. The group focuses on the identification and dissemination of policy and market regulation best practices in corporate sustainability reporting, as these will create enabling conditions for business to contribute to sustainable development.

Sustainable Finance

A sustainable financial sector is needed to act as the backbone to a green economy. UNEP is supporting the implementation of paragraphs 255-257 of the Rio+20 outcome document on the development of a global strategy for the financing of sustainable development. Following its position paper on the topic released at Rio+20, UNEP Finance Initiative has now released a broader discussion paper entitled *Creating the "New Normal": Enabling the Financial Sector to Work for Sustainable Development*.





*UNEP PEOPLE – Yuki Yasui,
Interim Head of the Finance
Initiative*

At Rio+20, 27 leading insurers, representing over US\$5 trillion in assets, signed the Principles for Sustainable Insurance. The Principles represent the first global sustainability framework for the insurance industry, taking into account the fundamental economic value of natural capital, social capital and good governance. Developed by the UNEP Finance Initiative, these Principles complement other UN-supported global frameworks that promote sustainable business practices, such as the Principles for Responsible Investment and UN Global Compact Principles.



*UN Secretary-General
Ban Ki-moon.*

The Principles for Sustainable Insurance provide a global roadmap to develop and expand the innovative risk management and insurance solutions that we need to promote renewable energy, clean water, food security, sustainable cities and disaster-resilient communities

To align the banking sector's lending activities with the goals of sustainable development it is key that sustainability be integrated at the core of lending decisions. Questions on the impact of

loans on the environment and society and how to engage clients in avoiding and mitigating any such risks are becoming fundamental – not just in greening business and the economy, but in keeping business and the economy stable and resilient. An extensive training programme by the UNEP Finance Initiative and its training partners provided the know-how and skills to answer such questions. In 2012, UNEP FI hit the mark of 3000 risk analysts, credit managers and investment officers trained in more than 70 countries.

ROLE OF CITIES AND BUILDINGS



Sao Paulo is one of many cities to join the Global Initiative for Resource Efficient Cities

UNEP's work on cities will be further strengthened under the umbrella of the Global Initiative for Resource Efficient Cities (GI-REC), which was launched at Rio+20. Cities with populations of 250,000 or more are invited to join the initiative, which aims to attract 200 members by 2015. The GI-REC was developed in recognition of the growing role of city leaders to contribute to sustainability by improving resource efficiency, reducing carbon emissions, minimizing environmental risks and enhancing

ecosystems. The GI-REC focuses on research, policy support, and networking between cities. The initiative has already been backed by a broad range of international institutions and city networks such as UN-HABITAT, the World Bank, Local Governments for Sustainability (ICLEI) and the International Institute for Environment and Development (IIED). Several cities have already come on board, including Sao Paulo (Brazil), Malmö (Sweden), Heidelberg (Germany), Quezon City (Philippines), Gwangju (South Korea). National interest has been expressed by Japan, Brazil, France and the United States.

UNEP's Sustainable Buildings and Climate Initiative (UNEP-SBCI) developed the Common Carbon Metric (CCM), a globally applicable protocol and tool to measure energy consumption and report greenhouse gas emissions from building operations. Given the potential for such a protocol, the International Organization for Standardization (ISO) adopted the CCM as the basis for a new international standard. In 2012, UNEP-SBCI conducted a second pilot test of the CCM and ISO advanced its CCM-based work through the standard-making process. A final international standard is expected in 2014.

UNEP-SBCI launched in 2012 a Task Force on Greening the Building Sector Supply Chain to identify opportunities for and barriers to achieving greater energy and resource efficiency throughout the sector supply chain. The task force, which includes a number of public and private building sector stakeholders, will focus on design and construction processes as well as material and product flows to identify interventions targeting reductions in carbon, water usage, material and energy consumption and waste generation from the building sector.

FOOD SECURITY



Farmers plant rice in Thailand - Peerakit Jirachethakun /shutterstock.com
Cities – Celso Diniz/shutterstock.com

As the world faces greater food stress in face of a swelling population and increasing land pressure, food security is an issue that must be addressed. UNEP is addressing the role of the environment in food security, with a campaign on Food Waste set to be launched in 2013.

UNEP, the International Rice Research Institute and a host of governments and companies in 2012 launched the Sustainable Rice Platform. Rice production is key to food security and is the world's most consumed grain. It is unique in that approximately 95 per cent of rice is produced and consumed in the same country. Aggregating sustainable production practices into a standard is fairly simple, but ensuring adoption in a sector with minimal market incentive is more complicated. Over the next four years, the standard and adoption models will be developed concurrently to develop a model of production that can be taken up by farmers and the whole supply chain.



The campaign aims to sensitize the public on the environmental consequences of the food that is lost and wasted every year. According to UNEP's report, *Avoiding Future Famines: Strengthening the Ecological Basis of Food Security through Sustainable Food Systems*, an estimated one-third of food produced for human consumption is lost or wasted, amounting to 1.3 billion tonnes per year. UNEP's campaign will highlight that food waste has other consequences that are less obvious, with the resources used to produce and transport the wasted food – such as water and transport – also used in vain. The campaign will be run in support of with the Food and Agriculture Organization's 'SaveFood' Initiative.

UNEP also partnered with the FAO to implement a long-term programme of activities focusing on delivering sustainable food systems. This programme focuses on four thematic areas ranging from information accessibility for farmers to consumer behaviour, and includes up-scaling sustainable production at the country level. It is driven by the FAO/UNEP Agri-food Task Force on SCP. This Task Force is made up of governments, non-governmental organizations, research institutions, representatives of the private sector, and UN agencies. It will work to catalyse the uptake of sustainable food production through partnership building, and tool and standard development.

MOVING TOWARDS MORE SUSTAINABLE LIFESTYLES

As resource efficiency gains are being absorbed by unsustainable consumption patterns, it is key to place increased emphasis on trying to address consumption patterns and changing lifestyles.

Advancing product sustainability information through the life-cycle approach

Providing understandable and verifiable information on product sustainability is needed to guide consumers – both individual and institutional – in their purchasing decisions, and to improve resource efficiency and sustainable practices along supply chains. Life-cycle methodologies and approaches are key to help advance product sustainability and product sustainability information. 2012 saw the launches of Life-cycle sustainability framework and Greening the Economy Through Life Cycle Thinking, which marks ten years of work by the UNEP/SETAC Life Cycle Initiative. This publication provides a glimpse into the current practice of life cycle approaches, combined with a retrospective of the related activities of the Initiative that have pushed the agenda forward.

Eco-labelling

In 2012, UNEP completed a project that helped developing countries seize the opportunities eco-labels present in reducing the environmental impact in manufacturing industries, while increasing international competitiveness and market access. The sectors selected were textile, pulp and paper, footwear and TV sectors in Brazil, India, China, Ethiopia, Mexico, Kenya, South Africa. At the global level, the project worked to promote greater cooperation and mutual recognition. The project positioned eco-labelling as a market opportunity that can also bring resource efficiency and reduced environmental impact benefits, rather than a 'green barrier' to emerging economies. Thanks to the involvement of Brazil, a follow-up project

was initiated that saw regional cooperation between Argentina, Brazil, Chile, Paraguay and Uruguay. Its objectives are to evaluate and advance strategies for regional cooperation on eco-labelling and to promote the role of sustainable public procurement.

Sustainable procurement



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UNEP is assisting Mauritius to sustainably procure commodities such as paper

Governments have a key role to play as regulators and policymakers can put into place policies that are conducive to more sustainable consumption patterns, such as sustainable public procurement.

In 2012, UNEP strengthened its work in this area and concluded its Capacity Building for Sustainable Public Procurement project, aimed at assisting seven pilot countries (Tunisia, Lebanon, Mauritius, Costa Rica, Uruguay, Chile and Colombia) in the development and implementation of sustainable public procurement policies, through the methodology developed by an international expert group

led by Switzerland (the Marrakech Task Force on Sustainable Public Procurement). In Mauritius, the project led to the development and adoption by the Prime Minister of an SPP National Action Plan to be implemented over the 2011-2015 period. With UNEP's support, Mauritius is currently developing the necessary product criteria and guidelines needed to sustainably purchase the seven prioritized product groups: paper, IT equipment, vehicles, cleaning products/services, furniture, food and catering services, and construction works. The aim of the Procurement Policy Office is that 100 per cent of procurement contracts pertaining to these prioritized goods and services include sustainability criteria by 2015. More countries will be targeted from 2013.

As a result of the conclusion of the Marrakech Task Force on SPP, and in response to the request from various stakeholders for a platform to meet and discuss the various issues surrounding SPP, UNEP launched an International Sustainable Public Procurement Initiative (SPPI) at Rio+20.

This partnership regroups over 40 governments, local authorities, business actors and civil society organizations interested in collectively promoting the supply and demand of sustainable products through SPP. Since Rio+20, UNEP and the SPPI participants have developed a set of governance rules and a work plan, which will be implemented over the 2013-2014 biennium. Activities focus on improving the knowledge on SPP to increase its effectiveness as an SCP and green economy enabling tool. A number of activities also support the implementation of SPP on the ground through enhanced collaboration between stakeholders and better access to capacity-building tools.



8

UNEP AT THE HEART OF THE ENVIRONMENT



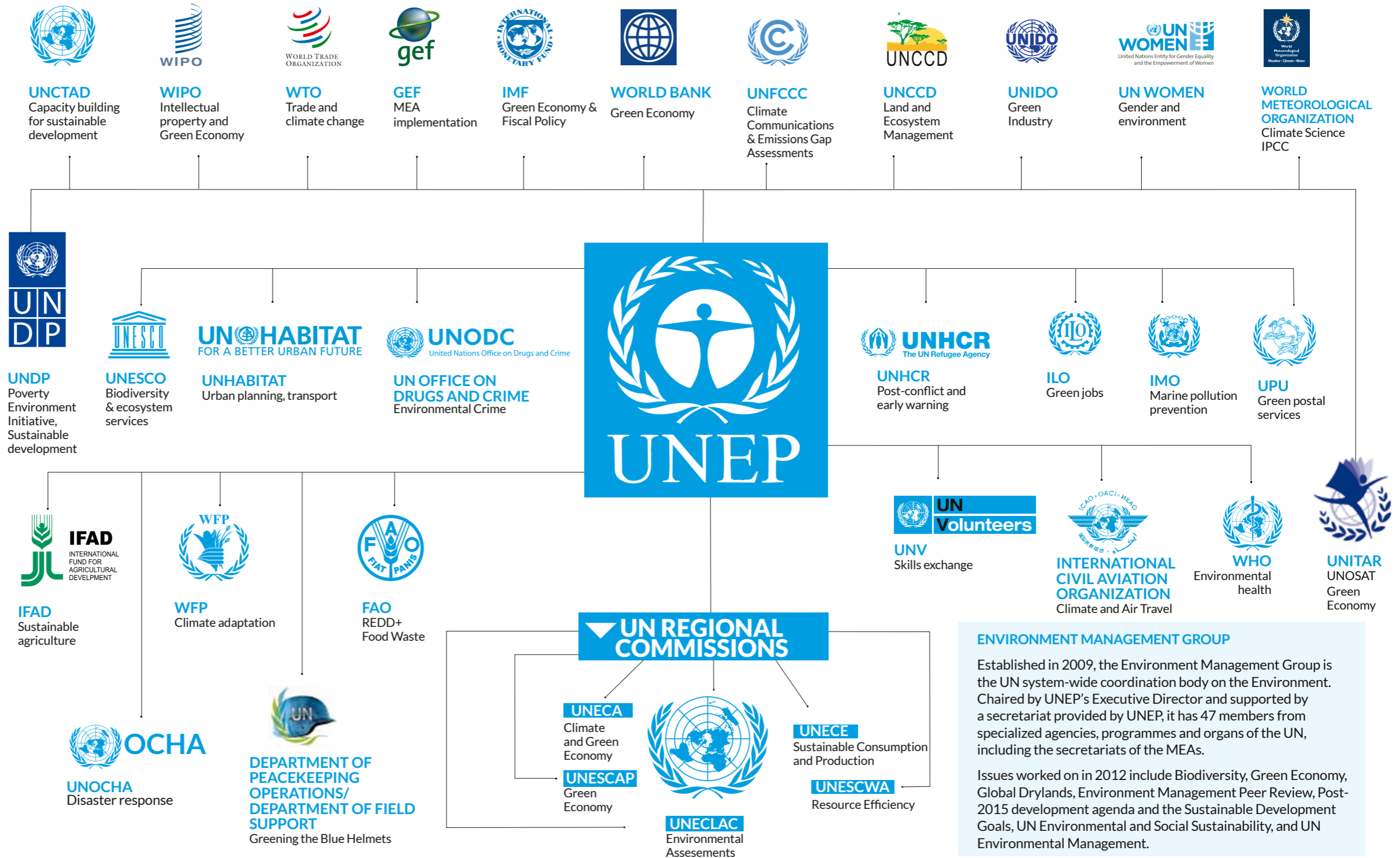
UNEP IN THE UN- System-wide partnerships for the Environment

UNEP'S MANDATE

Established in 1972, UNEP's mandate is "to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations".

UNEP's mandate was expanded and rearticulated by the Nairobi Declaration adopted in 1997 to be the "leading global environmental authority that sets the global environmental agenda, that promotes the coherent implementation of the environmental dimensions of sustainable development within the United Nations system and that serves as an authoritative advocate for the global environment".

UNEP achieves this mandate by working on a daily basis with myriad UN agencies, collaborating centres, official partners and governments. These collaborative arrangements ensure that UNEP's core work and themes resonate far beyond the direct resources at the organization's command. The following section presents examples of such collaborations, although many more can be found throughout the earlier chapters of this report.



ENVIRONMENT MANAGEMENT GROUP

Established in 2009, the Environment Management Group is the UN system-wide coordination body on the Environment. Chaired by UNEP's Executive Director and supported by a secretariat provided by UNEP, it has 47 members from specialized agencies, programmes and organs of the UN, including the secretariats of the MEAs.

Issues worked on in 2012 include Biodiversity, Green Economy, Global Drylands, Environment Management Peer Review, Post-2015 development agenda and the Sustainable Development Goals, UN Environmental and Social Sustainability, and UN Environmental Management.

GREENING THE BLUE

Efforts to measure and manage the UN's environmental impacts have been under way since 2007 and the past year saw further progress. In April 2012, the Sustainable United Nations (SUN) initiative delivered to the UN Environment Management Group the third edition of *Moving Towards a Climate Neutral UN*, which revealed the UN's greenhouse gas emissions for 2010 and efforts carried out in 2011 to reduce them.

In June, as part of the SUN campaign Greening the Blue, all UN staff members were invited to make pledges to 'green' an aspect of their behaviour at work, through a 'Pledgeathon' in support of World Environment Day. Later that month the work of greening the UN was given added impetus when member states at Rio+20 called on the UN system to improve the management of its facilities and operations by taking into account sustainable development practices, building on existing efforts and promoting cost effectiveness.

The concrete impacts from the work of the campaign can be seen in the visibility and coordination of UN-wide efforts in areas such as making buildings more energy efficient. Since SUN was established, more than 34 UN agencies have adopted greenhouse gas emissions reduction strategies and four more are developing sustainable public procurement plans. The Greening the Blue website showcases 47 case studies and more than 130 stories of best practice from across the whole UN system. A collaborative approach has enabled UN agencies to build greenhouse gas management capacity faster than would have been possible individually, provided system-wide tools, resources and training at a fraction of

commercial costs, and facilitated individual and collective opportunities for awareness-raising and behavioural change.

GREENING THE BLUE HELMETS



© Anthony O'Mullane / UNIFIL

Peacekeeping missions are going green

In May 2012, UNEP released *Greening the Blue Helmets: Environment, Natural Resources and UN Peacekeeping Operations*, a flagship report based on two years of research and analysis conducted in collaboration with the UN Department of Peacekeeping Operations (DPKO) and the UN Department of Field Support (DFS). The report reviews the environmental management of peacekeeping operations; showcases resource-efficient practices, technologies and behaviours; and identifies areas where further improvements are needed. It also examines the role of peacekeeping missions in stabilizing countries where conflicts have been financed by natural resources or driven by grievances over their use, and how peacekeepers can capitalize on the peacebuilding potential of natural resources.

According to the report, UN peacekeeping missions can save between 15-32 per cent in energy costs (representing US\$50 to 100 million) through behavioural changes and adoption of simple solutions such as energy-efficient lighting and appliances. Up to 42 per cent can be saved in water consumption, and waste to landfill can be reduced by up 88 per cent. There are also opportunities for handing over green technology and infrastructure, such as sanitary landfills, when the mission closes.



UNEP Executive Director Achim Steiner.

There has been little progress in systematically considering and documenting how natural resources can support, advance or undermine the aims of a peacekeeping mission so this report is the first attempt to understand the links and identify good practices and gaps

UNEP worked with the Peacekeeping Training Programme of the UN Institute for Training and Research and the International Institute for Sustainable Development to develop training modules for peacekeepers based on the contents of the report. These will be made available to all peacekeeping training centres – including in Egypt, Nigeria, Rwanda, Ghana, Kenya, South Africa, and Fiji – in 2013.

The report received an overwhelmingly positive response from the peacekeeping operations, the UN system and member states. Capitalizing

on this positive momentum and using the report as a blueprint, UNEP, DPKO and DFS have developed a five-year technical cooperation framework aimed at further improvement of environmental and natural resource management of peacekeeping operations.

MAINSTREAMING ENVIRONMENTAL SUSTAINABILITY IN THE UNDAFS

The UN Development Assistance Framework (UNDAF) is the mechanism that allows UN agencies at the country level to work together to support national development priorities. It serves as a strategic and programmatic framework for the UN's collective response in each country.

UNEP has supported over 65 UNDAFs by participating in UNDAF meetings, strengthening country analysis with environmental data and information, and training UN Country Teams in mainstreaming environmental sustainability and climate change.

In 2012, UNEP conducted training sessions in Bhutan, Madagascar and Togo in order to enhance the capacity of the UN Country Teams and their national partners for mainstreaming environmental sustainability and climate change. Training for UNEP staff on country-level programming was also conducted as part of the UNEP-wide Results Based Management in Bangkok, Geneva, Manama, Nairobi, Panama City and Paris.

UNEP also provided support in the formulation of National Environmental Summaries in

Belize, Costa Rica, Cote d'Ivoire, Jordan and Madagascar. In addition, UNEP supported the UNDAF formulation in Belize, Cape Verde, Costa Rica, Cote d'Ivoire, Cuba, Democratic Republic of Congo, Jordan, Kenya, Indonesia, Moldova, Nepal, Thailand and Vietnam. As a result, greater priorities were placed on issues related to environmental sustainability and climate change in the UNDAFs in these countries.

Engagement in the UNDAF process has helped channel UNEP's support to countries stipulated in its Programme of Work in a coherent and coordinated manner. Through the UNDAF process, UNEP is seen as a strategic partner that can provide unique technical expertise on the environment and climate change.

UNEP in 2012 successfully advocated to include non-resident agencies (NRAs) – of which UNEP is one – as part of the UN's Delivering as One at the country level. The Tirana Outcome Document now calls for the systematic inclusion of NRAs in the UN Country Team processes.

MDG-F KNOWLEDGE MANAGEMENT

As the convenor of the Environment and Climate Change window, UNEP provides technical and expert support to 17 Joint Programmes in Afghanistan, Bosnia and Herzegovina, China, Colombia, Ecuador, Egypt, Ethiopia, Guatemala, Jordan, Mauritania, Mozambique, Nicaragua, Panama, Peru, Philippines, Senegal and Turkey.

In 2012, UNEP held 16 virtual sessions called 'Weeks in Focus' to promote knowledge sharing and mutual learning as well as to deliver expert support to the Joint Programmes. As a result of these interactive online sessions, UNEP has extracted and documented about 50 lessons learned from the Joint Programmes, which are now accessible online. In addition, a selection of these lessons learned has been published in a booklet entitled *Seeds of Knowledge*, which was launched on 1 December 2012 at the Doha Climate Change Conference.

The knowledge management project supported the Joint Programme teams to consider and plan exit strategies to ensure that their work would assist government policies and programmes aimed at supporting the sustainable and efficient use of natural resources.

The MDG-F joint programmes are strong examples of how the UN works as One. All the Joint Programmes were comprised of various UN Agencies, called in to contribute their comparative advantages and technical expertise. Strongly linked with government counterparts, non-governmental organizations, stakeholders and other partners on the ground, these Joint Programmes facilitated efforts to work collaboratively as One UN. For example, UNEP worked with the UN Development Programme, the Food and Agriculture Organization, the World Health Organization and the Global Environment Facility to set up a climate change monitoring system in the basin areas of Tabasara and Chucunaque in Panama.

RESOURCE EFFICIENT AND CLEANER PRODUCTION PROGRAMME

In 2012, the joint UNEP-UN Industrial Development Organization (UNIDO) Resource Efficient and Cleaner Production (RECP) Programme which is operational in 50 countries, welcomed 28 regular members and 10 observer members to the newly established RECPnet - a formalized network of RECP expert institutions across the globe. In partnership with the European Commission, UNEP also launched the project 'Resource Efficiency and Eco-innovation in Developing and Transition Countries', which will put decoupling into action and operationalize eco-innovation technical and policy-related skills at national level. The global project targets intermediaries – RECP expert institutions - who work with small and medium-sized companies to bring about change in the key value chains of agri-food, chemicals and metals.

UN-REDD

The United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD) was launched in September 2008 to assist developing countries to build capacity to reduce emissions and to participate in a future REDD+ mechanism. REDD+ refers to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries.

The UN-REDD Programme builds on the convening power and expertise of its three Participating UN Organizations: the Food and Agriculture Organization, the UN Development Programme and UNEP. The collaboration between the three agencies occurs in the context of the inter-agency management of the programme, delivery of national programmes in REDD+ countries, and across all five substantive areas of work – measurement, reporting, and verification; governance; stakeholder engagement; multiple benefits of REDD+; and positioning REDD+ as a catalyst for transformations to a green economy.

By 31 December 2012, the UN-REDD Programme had 46 partner countries. Sixteen of these, including Cambodia, Panama and Tanzania, have had funding requests to support their National Programmes approved. In countries with National Programmes, UNEP works in collaboration with FAO and UNDP to support processes for REDD+ readiness and contributes to the development of national REDD+ strategies. Guided by principles of country ownership and leadership, the Programme provides technical advice on the work areas outlined above. In certain countries, which are also members of the World Bank's Forest Carbon Partnership Facility and/or the Forest Investments Program, the UN-REDD Programme also works in partnership with the World Bank.

For specific 2012 achievements, please see the Climate Change chapter of this report.



*– UN Office of Internal
Oversight Services, Programme
evaluation of UNEP, 2012*

*Partnerships have been fundamental
to UNEP in overcoming its institutional
limitations and have played a critical role
in the delivery of its work programme*

UNEP GLOBAL PRESENCE



UNEP DIVISIONS

- DCPI
- DELC
- DEPI
- DEWA
- DGEF
- DRC
- DTIE

UNEP REGIONAL OFFICES, LIAISON OFFICES AND COUNTRY OFFICES

- **ROA : NAIROBI**
 - ADDIS ABABA
- **ROAP: BANGKOK**
 - BEIJING
- **ROE : GENEVA**
 - BRUSSELS
 - MOSCOW
 - VIENNA
- **ROLAC : PANAMA CITY**
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NEW YORK

SECRETARIATS

- BASEL CONVENTION
- CARPATHIAN CONVENTION
- CBD
- CITES
- CMS
- MFS
- OZONE SECRETARIAT
- ROTTERDAM CONVENTION
- STOCKHOLM CONVENTION
- TEHRAN CONVENTION
- CCAC
- IOYFP
- AMCEN
- SAICM
- IPBES
- CTN (LOCATION TBC)

REGIONAL SEAS CONVENTIONS AND ACTION PLANS SECRETARIATS

- CAR/RCU
- COBSEA SECRETARIAT
- EAF/RCU
- MAP/RCU
- NOWPAP/RCU
- WACAF/RCU

COLLABORATING CENTRES

- BASE
- GRI
- GRID
- UCC-WATER
- URC
- WCMC
- BCA CSB
- GELC
- FRANKFURT SCHOOL OF FINANCE & MANAGEMENT

www.unep.org

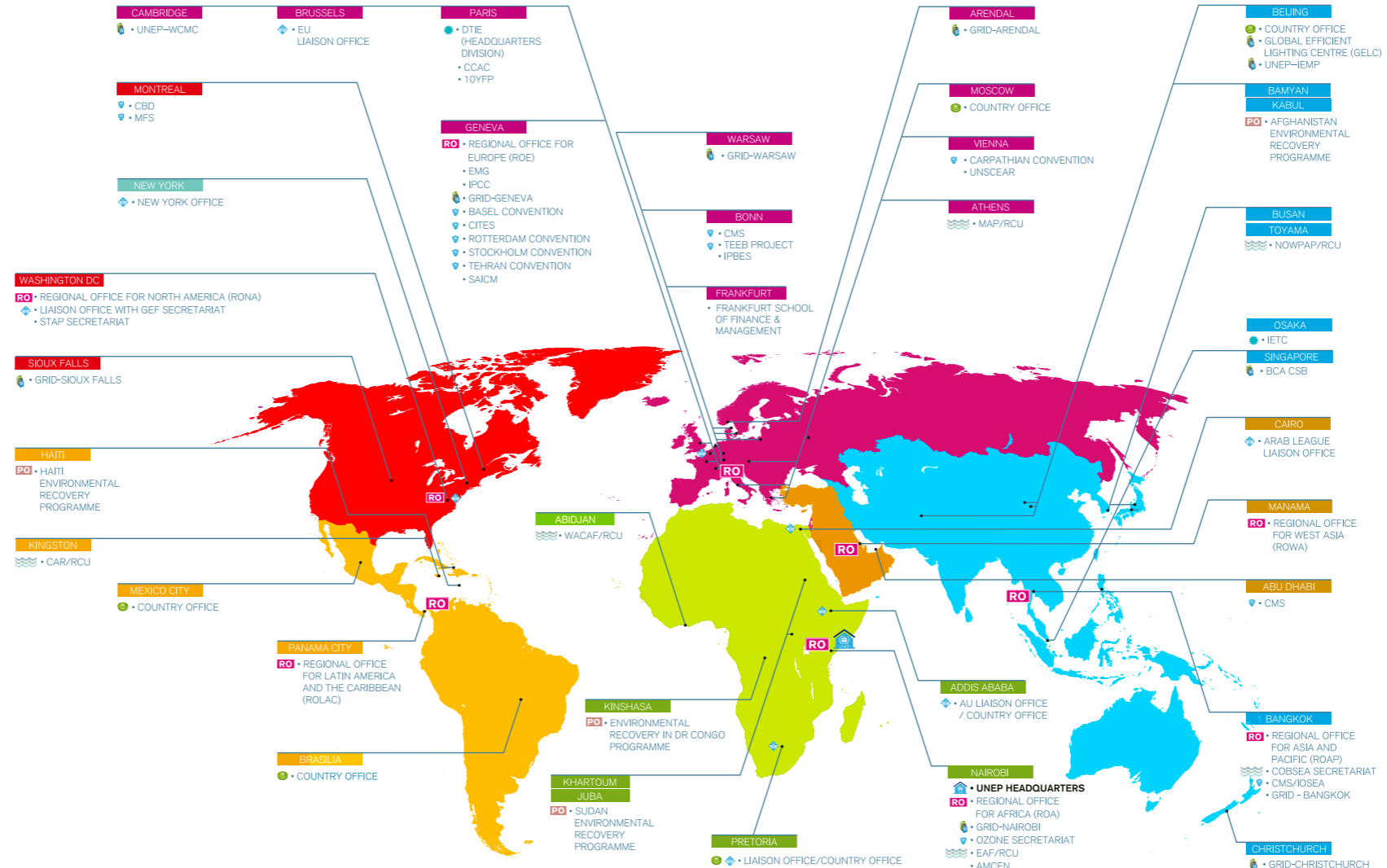
*ALL LOCATIONS ACCURATE AS OF DECEMBER 2012

ICONS

- UNEP HEADQUARTERS
- COUNTRY OFFICE
- REGIONAL OFFICE
- LIAISON OFFICE
- COLLABORATING CENTRE
- CONVENTION SECRETARIAT
- DTIE
- PROJECT OFFICE
- REGIONAL SEAS CONVENTIONS AND ACTION PLAN SECRETARIAT

REGIONS

- AFRICA
- ASIA AND PACIFIC
- EUROPE
- LATIN AMERICA AND THE CARIBBEAN
- NORTH AMERICA
- WEST ASIA



ACRONYMS

- IOYFP: 10-Year Framework of Programmes on Sustainable Consumption and Production
- AU: African Union
- AMCEN: African Ministerial Conference on the Environment
- BASE: Basel Agency for Sustainable Buildings
- BCA CSB: BCA Centre for Sustainable Buildings
- CCAC: Climate and Clean Air Coalition
- CAR/RCU: Caribbean Regional Coordinating Unit/Cartagena Convention
- CBD: Convention on Biological Diversity
- CEP: Caspian Environment Programme
- CITES: The Convention on International Trade in Endangered Species
- CMS: Convention on Migratory Species
 - AEW: Agreement on the Conservation of African-Eurasian Migratory Waterbirds
 - ASCOBANS: Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas
 - EUROBATS: Agreement on the Conservation of Populations of European Bats
 - IOSEA: Indian Ocean-South East Asia Marine Turtle MoU
- COBSEA: Coordinating Body on the Seas of East Asia
- CTCN: Climate Technology Centre and Network
- DEWA: Division of Early Warning and Assessment
- DEPI: Division of Environmental Policy Implementation
- DTIE: Division of Technology, Industry and Economics
- DRC: Division of Regional Cooperation
- DELC: Division of Environmental Law and Conventions
- DCPI: Division of Communications and Public Information
- DGEF: Division of Global Environment Facility Coordination
- EAF/RCU: Eastern African Regional Coordinating Unit/Nairobi Convention
- EMG: Environmental Management Group
- EU: European Union
- FAO: Food and Agriculture Organization of the UN
- FRANKFURT: Frankfurt School of Finance & Management
- GEF: Global Environment Facility
- GRI: Global Reporting Initiative
- GRID: Global and Regional Integrated Data
- GELC: Global Efficient Lighting Centre
- IETC: International Environmental Technology Centre
- IPCC: Intergovernmental Panel on Climate Change
- IPBES: Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
- MAP: Mediterranean Action Plan/Barcelona Convention
- MFS: Multilateral Fund Secretariat
- NOWPAP: Northwest Pacific Action Plan/Regional Coordinating Unit
- PCDMB: Post-Conflict and Disaster Management Branch
- ROA: Regional Office for Africa
- ROAP: Regional Office for Asia and Pacific
- ROE: Regional Office for Europe
- ROLAC: Regional Office for Latin America and the Caribbean
- ROWA: Regional Office for West Asia
- RCU: Regional Coordinating Unit
- ROE: Regional Office for Europe
- RONA: Regional Office for North America
- SBC: Secretariat of the Basel Convention
- STAP: Scientific and Technical Advisory Panel of the Global Environment Facility
- SAICM: Strategic Approach to International Chemicals Management
- TEEB: The Economics of Ecosystems and Biodiversity
- UCC-WATER: UNEP Collaborating Centre on Water and Environment
- UNEP-HEMP: UNEP International Ecosystem Management Partnership
- UNSCEAR: United Nations Scientific Committee on Effects of Atomic Radiation
- URC: UNEP Rise Centre on Energy, Climate and Sustainable Development
- WACAF: West and Central Africa Regional Coordinating Unit/Abidjan Convention
- WCMC: World Conservation Monitoring Centre



UNEP AND THE GREEN ECONOMY - FOUR DECADES IN DEVELOPMENT



THE WIDER UNEP FAMILY

UNEP collaborates with a wide range of external partners as a means of extending its reach and expertise, and strengthening the science-policy interface. From short-term partnerships with industry, to long-term collaborations with other scientific bodies, UNEP has a major presence on every continent and in every field of environmental work, as the non-exhaustive map shows. The two centres highlighted below are examples of how UNEP works with partners.

UNEP World Conservation Monitoring Centre

The UNEP World Conservation Monitoring Centre (UNEP-WCMC) helps UNEP put authoritative information about biodiversity and ecosystem services at the centre of decision-making. Its core role is to source, verify and collate data on biodiversity, interpreting this information to provide assessments and policy analysis.

The Centre was established in 2000 and was formalized as UNEP's 'Specialist Biodiversity Information and Assessment Centre' in 2003. With around 80 scientists provided by the collaborating agency, the Centre makes a significant contribution to global understanding of biodiversity and ecosystem services. The Centre's Director and Deputy Director are UNEP staff who maintain the Centre's strong connections to other parts of UNEP and ensure its work feeds directly into the Programme of Work. The Centre's resources are frequently called upon by a wide constituency, including the biodiversity-related Multilateral Environmental Agreements.

UNEP-WCMC has provided support to the Secretariat of and Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) for almost 30 years, managing the database of around 30,000 species covered by CITES. This information provides a reliable and trustworthy resource for management, scientific and enforcement authorities in each country, as well as the general public. In parallel with its contributions to UNEP's own programme, the Centre provides specialist services to a range of partners, ranging from national governments to businesses.

Frankfurt School – UNEP Collaborating Centre

One of the challenges faced by developing countries and emerging economies is a lack of experience of the local finance community and their reluctance to become involved with clean technology investments.

Clean energy is a sector that is often unfamiliar to local banks and so is associated with high perceived risks and inappropriate financial structures. To address this challenge, UNEP is able to draw upon its own technical experts as well as those of the Frankfurt School of Finance & Management (FSFM). FSFM is the UNEP Collaborating Centre for Climate and Sustainable Energy Finance, which focuses on finance issues in the specific areas of sustainable energy and climate change.

The support provided by FSFM is carefully focused to ensure greatest impact. Its energy activities are exclusively devoted to the consideration of financing mechanisms for renewable energy and energy efficiency. The Frankfurt School can use its experience of more than 300 finance sector technical assistance projects in more than 60 countries worldwide.

New Partnerships

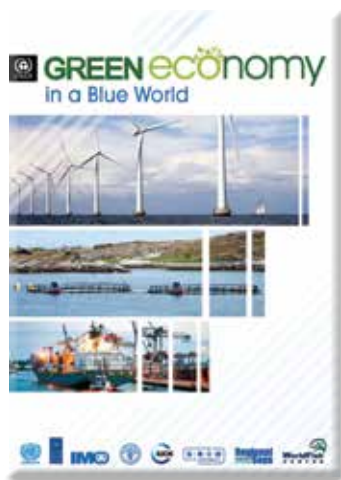
UNEP's newly formed Partnerships Committee approved partnerships with the following organizations in 2012:

- China Entrepreneurs Union;
- Elion Green Foundation;
- Frankfurt School of Finance and Management;
- Henley Media Group Limited;
- Jinhua Water Purifying Company Limited;
- Majid Al Futtaim Group;
- Microsoft Corporation;
- PUMA SE;
- Siemens AG;
- Stockholm Environment Institute;
- Sustainable Energy Africa;
- WWF (Kenya);
- YOOX Group S.p.A.;
- ZOI Environment Network.

8



2012 UNEP PUBLICATIONS



Green Economy in a Blue World: Synthesis Report

This report highlights ways to reduce the environmental impact and improve the environmental, economic and social sustainability of traditional and emerging ocean-oriented economies. The chapters that follow show where fisheries, tourism and maritime transportation can take steps to reduce their impact on the marine environment.

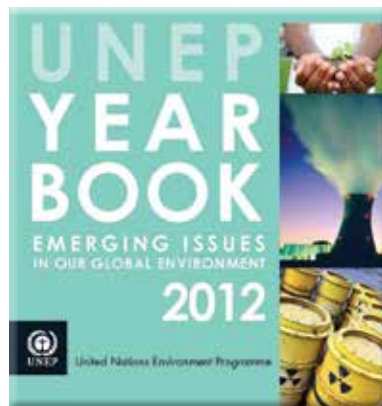
ISBN No: 978-82-7701-097-7

A practical framework for planning pro-development climate policy

MCA4climate is a major new UNEP initiative providing practical assistance to governments in preparing their climate change mitigation and adaptation plans and strategies. It aims to help governments, particularly in developing countries, identify policies and measures that are low cost, environmentally effective and consistent with national development goals. It does this by providing a structured approach to assessing and prioritizing climate-policy options, while taking into consideration associated social, economic, environmental and institutional costs and benefits. In doing so, it seeks to counter the widely held perception that tackling climate change is costly, highlight the potential developmental benefits of addressing climate change and encourage action to that end.

UNEP Year Book 2012: Emerging Issues in our Global Environment

The UNEP Year Book 2012 shows that the world is experiencing an exceptional level of ecological



extremes. However, scientists and policy makers have been making headway on addressing some of the most pressing environmental issues.

The 2012 Year Book presents the most important events and developments from the year, gives a picture of the status of key environmental indicators, and also highlights two emerging issues in detail: the benefits of soil carbon and the decommissioning of nuclear power plants. The Year Book is intended to strengthen the science-policy interface by informing interested parties about the most relevant environmental issues.

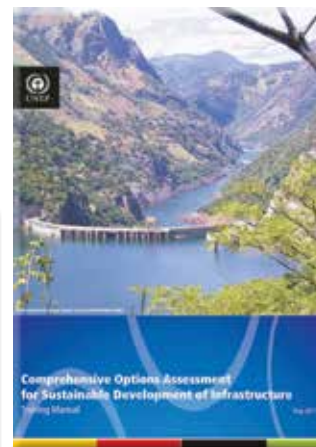
ISBN No: 978-92-807-3214-6

Comprehensive Options Assessment for sustainable development of infrastructure

In infrastructure development internationally, there is a growing emphasis on considering environmental and social factors on an equal footing with the more traditional technical, economic and financial factors. This manual advocates a structured, participatory and transparent process of assessing options to meet needs for infrastructure that captures the views and inputs of all key stakeholders.

Accordingly, the purpose of this training manual is to present Comprehensive Options Assessment (COA) in a format that will promote training for sector leaders and managers. It draws from the body of work related to COA that has flowed from the World Commission on Dams (WCD), the DDP and other contemporary frameworks for assessment of policy, programme and project options.

ISBN No: 978-92-807-3442-9





Resource book on IWRM Planning Approach for Small Island Developing States (SIDS)

This Resource Book makes the case for IWRM Guidelines specific to SIDS, and argues that unlike traditional models, SIDS desiring to implement IWRM need not start with expensive and time-consuming institutional reforms. They can start small, using pressing water-related issues as “entry points”, and fine-tuning their IWRM strategies from experience. This pragmatic approach towards sustainable water management promotes co-ordinated development and management of water, land and related resources without compromising the sustainability of vital ecosystems.

The publication contains numerous case studies of best practices of IWRM in SIDS, and a practical and logical framework of activities at various levels—national, watershed, and community. It puts forward a SIDS IWRM Planning Cycle and Methodology, a framework with three important pillars: stakeholder participation; continuous sensitization and public awareness; and the creation of scenarios.

ISBN No: 978-92-807-3254-2

Releasing the Pressure: Water Resource Efficiencies and Gains for Ecosystem Services

This document discusses the need to balance short-term water productivity gains – in particular in agriculture – with the long-term role that water flows provide for maintaining sustainable landscape ESS, and serving multiple benefits to human well-being.

ISBN No: 978-92-807-3340-5

Changing Taiga: Challenges for Mongolia's Reindeer Herders

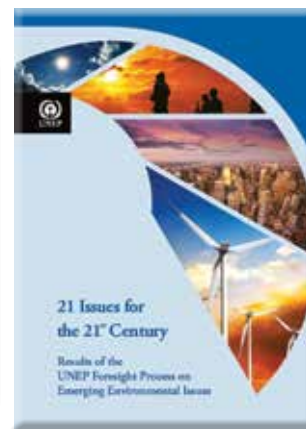
Mongolia's reindeer herders and their taiga homeland are today facing unprecedented challenges from unregulated mining, forest logging, loss of access to natural resources, tourism, and climate change. The Dukha herders and their ancestors have lived for centuries in this fragile transition region on the edge of the steppes, practising an ancient



and unique form of reindeer husbandry and helping to conserve the region's unique biodiversity. Yet this system of reindeer husbandry, with its close relationship between man and reindeer, is under threat.

This publication addresses the current state of reindeer husbandry of northern Mongolia and presents recommendations from the Mongolian reindeer herders for improving the sustainability of reindeer herding and the management of pastures and their homeland.

ISBN No: 978-82-7701-101-1



21 Issues for the 21st Century: Results of the UNEP Foresight Process on Emerging Environmental Issues

The UNEP Foresight Report contains a description of the 21 emerging environmental issues identified through the UNEP Foresight Process.

The process, which was led by the UNEP Chief Scientists with support from UNEP Division of Early Warning and Assessment, involved the identification of emerging issues by UNEP colleagues and a Foresight Panel comprising of 22 distinguished members of the scientific community cutting across a wide spectrum of environmental related disciplines and world regions; the debating and prioritization of the identified issues by the Foresight Panel; the scoring of prioritized issues via an electronic consultation (survey) involving more than 400 scientists worldwide; and a further debating and ranking of the final list of issues by the Foresight Panel, putting into consideration the outcome of the electronic consultation.

The process resulted in a list of 21 emerging environmental issues tagged 21 Issues for the 21st Century covering the major themes of the global environment including food, land, freshwater, marine, biodiversity, climate change, energy, waste, and technology; as well important cross-cutting issues ranging from the need for better environmental governance, to the need for human behavioral change towards the environment.





Global Outlook on Sustainable Consumption and Production Policies: Taking action together

The Global Outlook on Sustainable Consumption and Production (SCP) Policies, developed by the United Nations Environment Programme (UNEP) with the financial support of the European Commission, provides a non-exhaustive review of policies and initiatives that are promoting the shift towards SCP patterns. This report identifies examples of effective policies and initiatives being implemented worldwide. It reviews 56 case studies ranging from global multilateral agreements and regional strategies to specific policies and initiatives and shows progress achieved in promoting SCP, highlighting best practices and offering recommendations to scale up and replicate these important efforts worldwide.

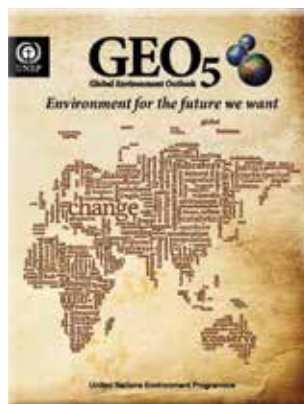
ISBN No: 978-92-807-3250-4

Measuring Water use in a Green Economy

Water is an essential resource for virtually all aspects of human enterprise, from agriculture via urbanization to energy and industrial production.

This report analyzes the different ways for quantifying and accounting for water flows and productivity within the economy (including environmental needs). Based on data from the literature, the report provides the current state of knowledge of the different indicators and tools for quantifying water productivity and highlights why this is important for developing robust allocation and management systems that preserve the natural capital. It is therefore an important piece of work to inform the discussions on decoupling economic growth from water use and impacts and the debate on resource productivity indicators going beyond GDP and carbon that underpin a green economy.

ISBN No: 978-92-807-3220-7



The Fifth Global Environment Outlook (GEO-5)

In 1995, in support of UNEPs unique mandate within the UN system to keep under review the world environmental situation, (GA resolution 2997 of December 1972), the UNEP Governing Council requested a new, comprehensive report on the state of the world environment (Decision 18/27 C). The tool that UNEP employs to do this is the Global Environment Outlook or GEO. GEO is a process of conducting a global integrated environmental assessment that delivers the best available scientific findings to policy makers so that they can make informed decisions. In this way, the assessment bridges the science and policy realms.

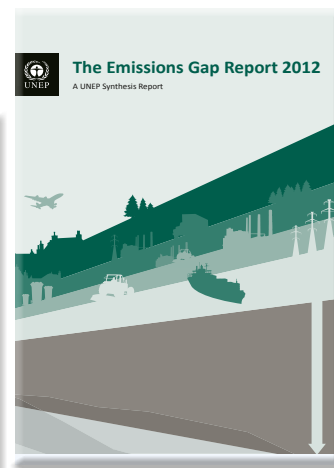
The 25th session of the UNEP Governing Council, through Decision 25/2: III, requested the Executive Director to undertake a comprehensive integrated global assessment, the fifth report in the Global Environment Outlook series, GEO-5

ISBN No: 978-92-807-3177-4

The Emissions Gap Report - 2012

The Emissions Gap 2012 is a follow-on to the UNEP 2010 and 2011 reports on the global emissions gap: The Emissions Gap: A Preliminary Assessment and the Bridging the Emissions Gap respectively. The 2012 report reviews current and projected national and global emissions and provides an updated estimate of the size of the emissions gap. The report goes further to provide information on possible implications of not bridging the gap, while also providing an update on the estimates of the mix of measures that could potentially help bridge the gap. In order to encourage positive thinking on the national, regional and global levels with respect to bridging the emissions gap in 2020, the report reviews examples of best practice policies being implemented by countries and conditions for success on a sector-by-sector basis.

ISBN: 978-92-807-3303-7





The Business Case for the Green Economy: Sustainable Return on Investment

Environmental stresses are increasingly affecting the financial bottom line of companies all over the world. It makes sense that as we switch to a more resource efficient and Green Economy - one in which economic growth, social equity and human development go hand-in-hand with environmental security - business and industry will be a key driving force. This publication makes the business case showing the tremendous opportunities that business can capitalize on by transitioning to a more resource - efficient Green Economy.

The Business Case for the Green Economy is primarily targeted at a corporate audience, with recommendations for policy makers. Business has long been a leader of change - with its ability to innovate, conceptualize and develop solutions in the form of new products and services - and has a crucial role to play in the transition.

ISBN No: 978-92-807-3280-1

Green Economy in a Blue World

The world's oceans and coasts - the Blue World - are the cornucopia for humanity. They provide us with food, oxygen and livelihoods.

ISBN No: 978-82-7701-104-2

Blue Carbon - First Level Exploration of Blue Carbon in the Arabian Peninsula

Healthy natural coastal ecosystems, such as mangrove forests, saltwater marshlands and seagrass meadows, provide a vast array of important co-benefits to coastal communities around the world, including throughout the Arabian Peninsula. These benefits include ecosystem services such as a rich cultural heritage; the protection of shorelines from storms; erosion or sea-level rise; food from fisheries; maintenance of water quality; and landscape beauty for recreation and ecotourism. In a Blue Carbon context these ecosystems also store and sequester potentially vast amounts of carbon in sediments and biomass.

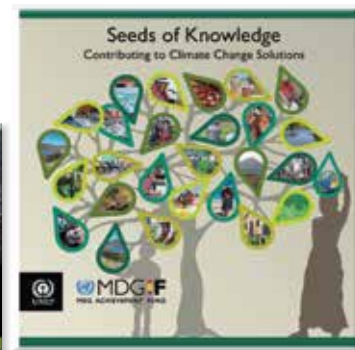
ISBN: 978-82-7701-100-4



Green Carbon, Black Trade: Illegal logging, tax fraud and laundering in the world's tropical forests

This report Green Carbon, Black Trade by UNEP and INTERPOL focuses on illegal logging and its impacts on the lives and livelihoods of often some of the poorest people in the world. It underlines how criminals are combining old - fashioned methods such as bribes with high - tech methods such as computer hacking of government web sites to obtain transportation and other permits. The report spotlights the increasingly sophisticated tactics being deployed to launder illegal logs through a web of palm oil plantations, road networks and saw mills.

ISBN No: 978-82-7701-102-8

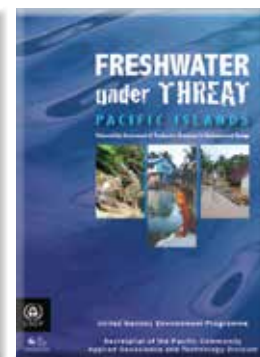


Seeds of Knowledge - Contributing to Climate Change Solutions

This booklet presents 24 case studies from 17 countries on grassroots solutions to the impacts of climate change. These solutions come at a critical time. As never before the world is in a race against time to act on climate change or face cataclysmic natural disasters. Heat waves, droughts and flooding, we have seen them all. While vulnerability to climate change poses risks to all communities, the impacts are likely to be tilted against many of the world's poorest regions, which have the least economic, institutional and technical ability to adapt and cope. Seeds of Knowledge aims to show that grassroots, community-led responses are already playing an essential role in building resilience to climate change across all regions of the world. With the right levels of investment and support, such initiatives can be scaled up and become a central component in reducing climate risks and supporting the transition to an inclusive Green Economy.

ISBN No: 978-92-807-3307-5





SIDS-Focused Green Economy: An Analysis of Challenges and opportunities

The Earth Summit in Rio de Janeiro in 1992 marked the first time that the special characteristics of SIDS were paid significant attention and were recognized as a distinct group. In 1994, the first Global Conference on the Sustainable Development of SIDS was held in Barbados, under the auspices of the United Nations. It resulted in the adoption of the Barbados Programme of Action (BPOA), which recognized the unique and particular vulnerabilities of SIDS and identified the sustainable development challenges SIDS face. The BPOA explicitly identified key areas requiring urgent action.

ISBN No: 978-82-7701-105-9

Sustainable, Resource Efficient Cities: Making it Happen!

This publication aims to formulate a broader framework of integration which is required for cities to transition to sustainable, resource - efficient development and to realize green urban economic growth trajectories that are equitable and sustainable. It frames the question of urban sustainability in a conceptual foundation and language that places human development objectives at the heart of urban sustainability transitions. It presents a set of policy positions and recommendations within a strategic framework that is derived from this understanding.

ISBN: 978-92-807-3270-2

Avoiding Future Famines: Strengthening the Ecological Basis of Security through Sustainable Food Systems

The UNEP food security report provides a synthesis of the current knowledge on how best to ensure a secure food system and avoid potential famines. The report, which is divided into two parts, provides an analysis of the ecological basis for food security together with an analysis of current practices that are undermining this ecological basis. The report further provides an analysis of ways of revitalizing the ecological basis with consideration for the green economy, including economic reforms and sustainable consumption and production.

ISBN: 978-92-807-3261-0

Freshwater under Threat – Pacific Islands

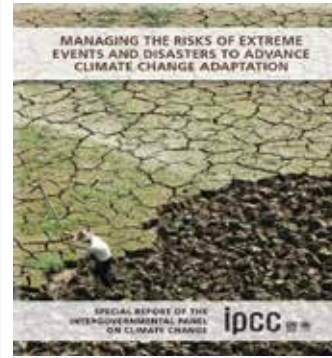
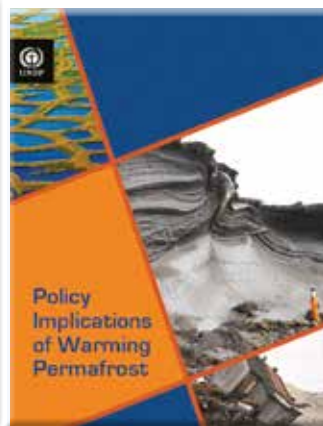
The 14 Pacific Island Countries (PICs) are home to over 9 million people, speaking about 1,200 languages, with the majority (80%) of Pacific islanders living in rural areas. These Pacific Island countries have about 1,000 islands covering a land area of just over half a million square kilometres, spread across 180 million square kilometres of ocean, containing three internationally recognized biodiversity hotspots. This Assessment argues that the greatest vulnerability is reflected in the lack of water resources in low-lying islands, exacerbated by limited human, financial and management resources, and increasing population densities. This new focused analysis for selected islands also concludes that the Pacific island nations' economies, fragile ecosystems and peoples' livelihoods are particularly vulnerable to climate variability and change pressures. Evidence - based options are presented to address resource, development, environment and management pressures and to target the reduction of these vulnerabilities.

ISBN: 978-92-807-3132-3

Measuring Progress: Environmental Goals & Gaps

This publication reviews and illustrates, in a succinct manner, the world's progress towards meeting international environmental goals for a set of critical issues. It also highlights gaps in our ability to measure progress, including the absence of clear numerical targets and important data gaps on many issues. Despite the large number of international environmental goals, the international community has made very uneven progress in improving the state of the environment. In general, more progress has been made on goals that have specific, measurable targets. This publication is based on findings of the fifth Global Environment Outlook (GEO-5).

ISBN: 978-92-807-3260-3



Policy Implications of Warming Permafrost

The UNEP "Policy Implications of Warming Permafrost" report describes the current and potential future status of permafrost and makes policy recommendations to address the impacts of permafrost degradation in a warming climate. Climate projections in the fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) do not account for carbon dioxide and methane emissions from thawing permafrost. The report recommends commissioning a special report on permafrost emissions from the IPCC, creating national permafrost monitoring networks and developing national adaptation plans for future permafrost degradation.

ISBN: 978-92-807-3308-2

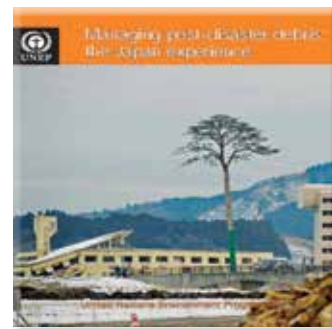
The Role and Contribution of Montane Forests and Related Ecosystem Services to the Kenyan Economy

The report makes the case for the importance and contribution of Kenya forest to key economy sectors as well as human well-being using valuation and economic modelling and further argues the contribution of forest and forest-related ecosystem services needs to be reflected in the system of national accounts of Kenya.

ISBN: 978-92-807-3273-3

Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation

The Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX) was approved and accepted by the Intergovernmental Panel on Climate Change (IPCC) on 18 November 2011 in Kampala, Uganda. SREX integrates expertise in climate science, disaster risk management, and adaptation to inform discussions on how to reduce and manage the risks of extreme events and disasters in a changing climate. The report evaluates the role of climate change in altering characteristics of extreme



events; and it assesses experience with a wide range of options used by institutions, organizations, and communities to reduce exposure and vulnerability, and improve resilience, to climate extremes.

ISBN: 978-11-076-0780-4

Managing Post-Disaster Debris: The Japan Experience

In March 2011, a massive earthquake off the north-east coast of Japan triggered a tsunami that created an unprecedented volume of debris. The debris management operation along the Tohoku coast is the largest of its kind in the world. In order to share international experiences in disaster debris management and to document the lessons from the Japanese experience, a UNEP international expert team visited the Tohoku area in early 2012.

Financing Renewable Energy in Developing Countries: Drivers and Barriers for Private Finance in sub-Saharan Africa

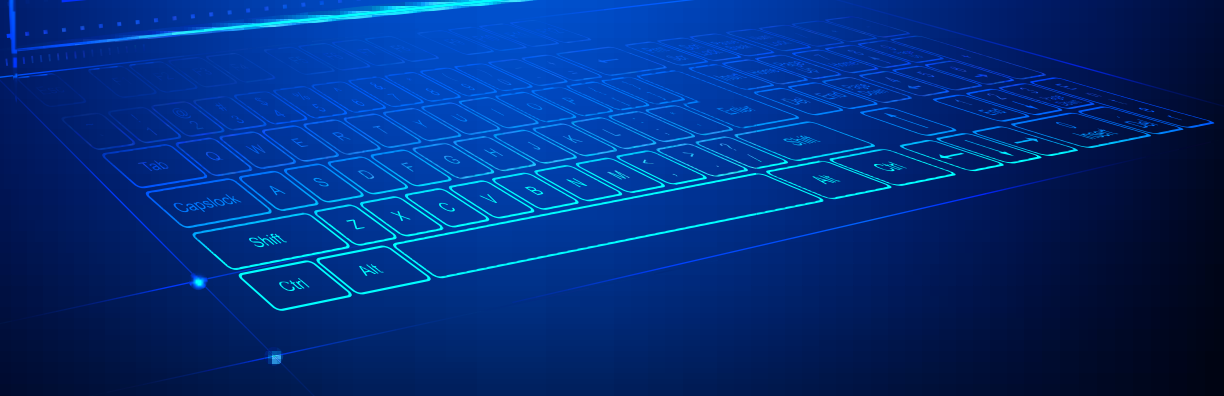
This UNEP FI report outlines how current obstacles to the scaling-up of sustainable energy solutions in Africa - namely cost, infrastructure, and risk - can be tackled with the involvement of private finance. The report's conclusions and recommendations to sub-Saharan Africa and international policy-makers are based on a survey of 38 financial institutions.



9

ORGANIZATIONAL STRUCTURE AND FINANCE

12.0914	98.03	2.00%
79.0276	37.28	7.40%
26.2081	10.54	1.62%



ORGANIZATIONAL STRUCTURE AND FINANCE

UNEP's mandate and focus are determined by its Governing Council, which in 2012, prior to the move to universal membership called for at Rio+20 and approved by the UN General Assembly in December, comprised 58 Member States.

Member States to the Governing Council are elected by the UN General Assembly for four-year terms, taking into account the principle of equitable regional representation.

In 2012, there were 16 seats for African states, 13 seats for Asian states, six seats for Eastern European states, 10 seats for Latin America and Caribbean states, and 13 seats for Western European and other states. As of February 2013, the UNEP Governing Council will meet under universal membership.

The Committee of Permanent Representatives (CPR), made up of government delegates assigned to monitor UNEP's work, is a subsidiary of the Governing Council. The mandate of the CPR includes reviewing, monitoring and assessing the implementation of Governing Council decisions,

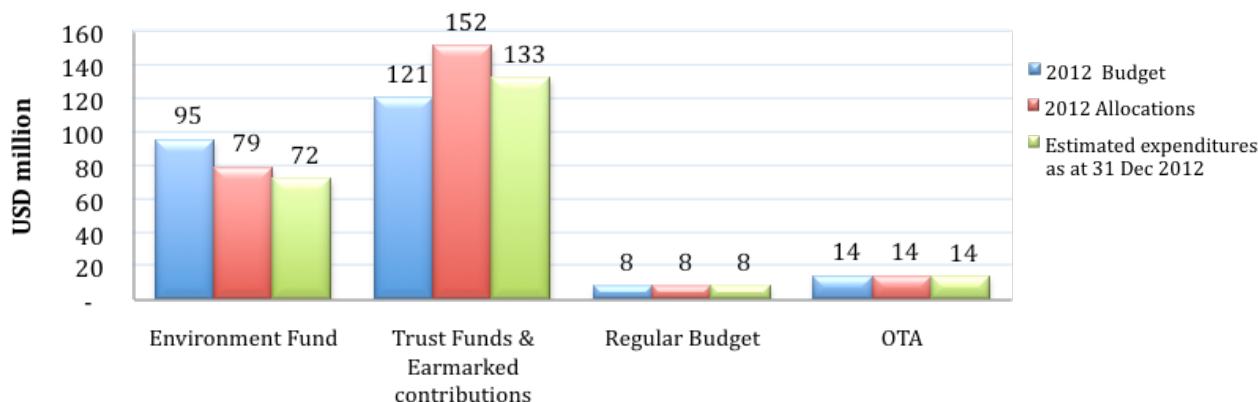
reviewing the UNEP Programme of Work (POW) and budget and its subsequent implementation, and preparing draft decisions for consideration by the Governing Council.

Further information, which will be updated to reflect the new operational considerations, is available at www.unep.org/resources/gov

UNEP FUNDING IN 2012¹

UNEP's total planned biennial budget for 2012-2013 – comprising the Environment Fund, Trust Funds and Earmarked Contributions, the UN Regular Budget and Programme Support Cost (OTA) – was approved by the Governing Council at a level of US\$474 million (equal to US\$237 million a year for 2012 and 2013). In 2012 UNEP received US\$2 million from the UN Development Account (ROA), increasing the 2012 budget to US\$239 million.

Total expenditure for the reporting period amounted to US\$227 million (approximately 94 per cent of the approved budget). Allocations for trust fund and earmarked contributions include projects designed to deliver the current Programme of Work (POW) as well as projects from previous biennia.



1. All figures are provisional and subject to revision.

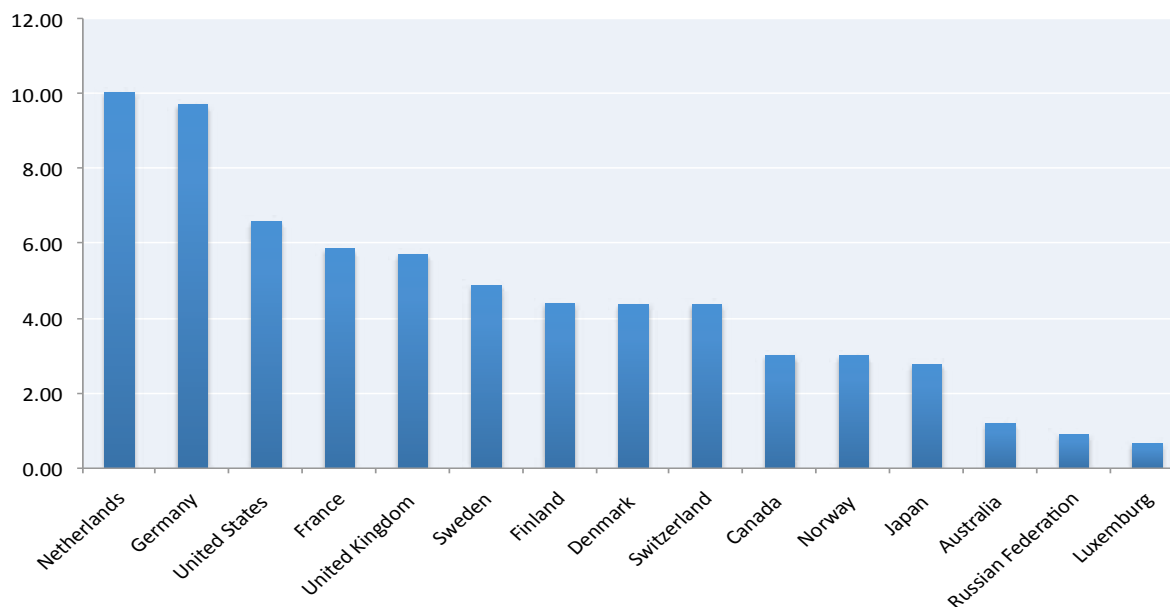
Financial overview of UNEP's POW for 2012 by source of funding

A UN General Assembly resolution in December 2012 calls for UNEP to receive more secure, stable, adequate and increased financial resources from the regular budget of the UN and through voluntary contributions. However, governments, UNEP's main contributors, are facing budget constraints due to the financial crisis, which also impacted the Environment Fund contributions of a limited number of countries. Despite the global financial challenges, most countries did maintain their level of contributions in 2012, with some even increasing their contribution and a number of developing countries contributing for the first time. In line with prior years' trends, the organization received around US\$72 million for the Environment Fund in 2012.

When added to the US\$13 million balance carried forward from the previous biennium, this gives total available resources of US\$85 million. This indicates a shortfall of approximately 11 per cent in Environment Fund resources against the approved budget of US\$95 million. This funding gap represented a significant challenge in managing programme implementation. Although extra-budgetary funding (Trust Funds and Earmarked Contributions) available to UNEP in aggregate terms exceeded the planned budget for the POW in 2012, much of this funding is tied to specific projects brought forward from previous biennia.

UNEP has received contributions from donors totaling US\$257 million for the Environment Fund, Trust Funds and Earmarked Contributions. This excludes Programme Support Costs (PSCs), which are internally generated, and the 2012 Regular Budget allocations from UN headquarters. Income

ENVIRONMENT FUND TOP 15 DONORS IN 2012 (US\$ MILLIONS)



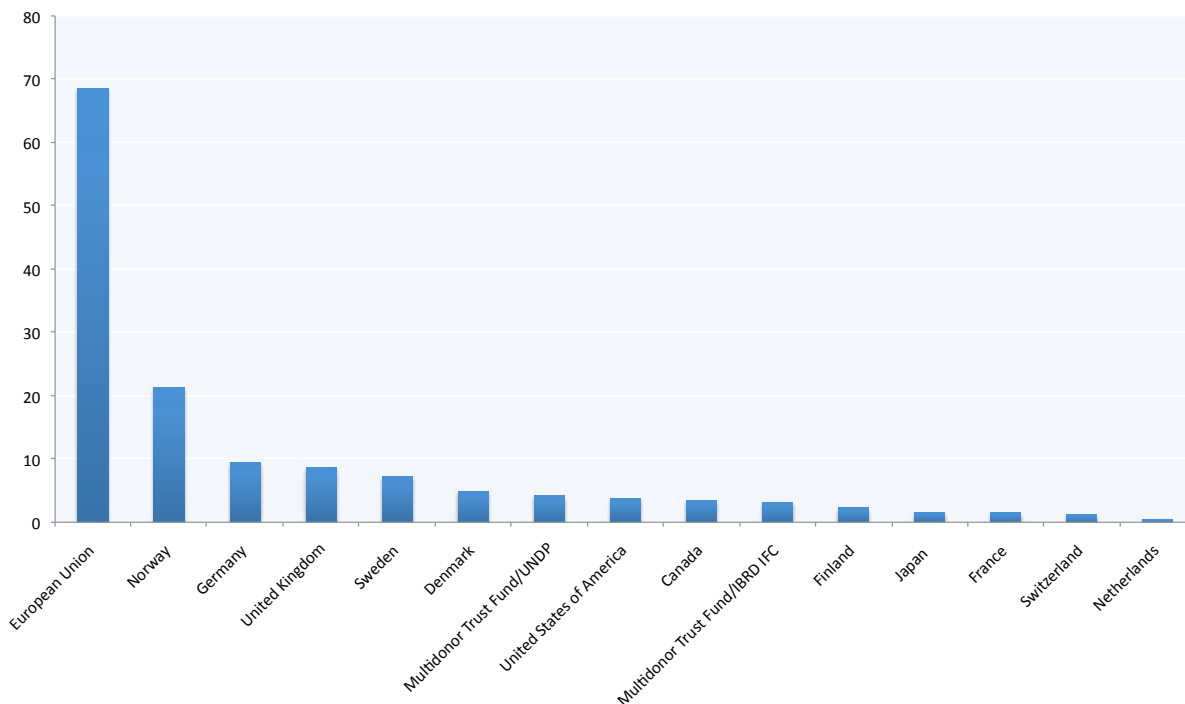
received from Trust Funds directly supporting UNEP's POW total US\$113 million, a significant achievement in portfolio terms compared to the budget estimate of US\$79 million. Income received from Earmarked Contributions supporting UNEP's POW total US\$42 million, equal to the budget estimate.

With 12 months of the 2012-2013 biennium remaining, some POW outputs are at risk as a result of the shortfall in Environment Fund resources for projects designed to deliver those POW outputs. Alignment and replanning of existing projects, and prior years unspent balances to thematic areas, will assist in meeting some of the funding gaps for some of the expected accomplishment/outputs in 2012-2013.

UNEP's dependency on its top 15 donors to the Environment Fund, who contributed about 93 per cent of the total in 2012, remains a challenge in terms of volatility and prudent financial management of the POW implementation. This challenge is being addressed as part of the efforts to strengthen UNEP and its financial basis as well as by reaching out more to non-governmental donors and partners.

Governing Council Decision 26/9 mandated UNEP to limit its post costs for the 2012-2013 biennium to US\$61 million per year within the total approved Environment Fund budget of US\$191 million. UNEP reduced its post costs from US\$60 million to US\$57 million for 2012. UNEP further committed to cut 58 posts (from 531 to 473 posts) by 2012. This goal was achieved.

EARMARKED CONTRIBUTIONS AND TRUST FUNDS TOP 15 DONORS IN 2012 (US\$ MILLIONS)



* UNDP and World Bank are not donors but act as a channel of multidonor trusts funds.

Contributions to UNEP's Environment Fund (in USD)

	Country	2012 Pledges/ Estimates	2012 paid		Country	2012 Pledges/ Estimates	2012 paid
1	Afghanistan	1,225	1,225	56	Madagascar	999	999
2	Andorra	39,474	39,474	57	Malaysia	40,000	40,000
3	Angola	1,200	1,200	58	Maldives	2,000	2,000
4	Antigua and Barbuda	1,000	-	59	Mauritius	5,000	5,000
5	Argentina	70,000	70,000	60	Mexico	350,000	350,000
6	Armenia	2,500	2,500	61	Micronesia (Federated States of)	760	760
7	Australia	1,201,645	1,201,645	62	Moldova	950	-
8	Austria	523,520	523,520	63	Monaco	26,437	26,437
9	Bangladesh	653	653	64	Mongolia	1,000	-
10	Barbados	2,500	2,500	65	Morocco	15,621	15,621
11	Belarus	16,000	-	66	Namibia	1,750	1,750
12	Bhutan	1,145	1,145	67	Netherlands	10,017,600	10,017,600
13	Bosnia/Herzegovina	4,000	4,000	68	New Zealand	230,000	-
14	Bulgaria	17,000	17,000	69	Nicaragua	1,000	-
15	Burkina Faso	5,646	5,646	70	Niger	900	-
16	Burundi	640	-	71	Norway	3,000,000	3,000,000
17	Cambodia	2,000	2,000	72	Pakistan	10,964	10,964
18	Canada	3,000,000	3,000,000	73	Panama	10,000	10,000
19	China	500,000	500,000	74	Papua New Guinea	1,000	-
20	Colombia	50,000	50,000	75	Peru	19,000	19,000
21	Congo	850	-	76	Philippines	19,000	19,000
22	Costa Rica	3,814	3,814	77	Poland	150,000	150,000
23	Croatia	33,000	33,000	78	Portugal	50,000	-
24	Cyprus	44,000	-	79	Republic of Korea	308,930	308,930
25	Czech Republic	49,845	49,845	80	Romania	95,000	95,000
26	Denmark	4,371,852	4,371,852	81	Russian Federation	900,000	900,000
27	Dominica	1,000	-	82	Rwanda	950	950
28	Ecuador	7,600	7,600	83	Samoa	450	-
29	Egypt	25,000	25,000	84	Saudi Arabia	132,752	-
30	Estonia	13,974	-	85	Serbia	17,000	17,000
31	Ethiopia	1,600	1,600	86	Sierra Leone	140	-
32	Fiji	4,481	4,481	87	Singapore	50,000	50,000
33	Finland	4,395,180	4,395,180	88	Slovakia	55,000	55,000
34	France	5,850,000	5,850,000	89	Slovenia	86,000	-
35	Gambia	1,000	1,000	90	South Africa	63,000	-
36	Georgia	3,000	3,000	91	Sri Lanka	5,100	5,100
37	Germany	9,696,293	9,696,293	92	St Kitts & Nevis	475	475
38	Guatemala	2,900	-	93	Suriname	1,000	-
39	Guyana	1,005	1,005	94	Sweden	4,882,142	4,882,142
40	Honduras	1,000	-	95	Switzerland	4,358,546	4,358,546
41	Hungary	10,000	10,000	96	Thailand	24,487	24,487
42	Iceland	34,000	-	97	Timor-Leste	950	950
43	India	100,000	-	98	Togo	900	-
44	Indonesia	59,000	59,000	99	Trinidad and Tobago	13,000	13,000
45	Iraq	3,800	3,800	100	Tunisia	8,700	-
46	Ireland	470,000	470,000	101	Turkey	425,000	425,000
47	Japan	2,779,194	2,779,194	102	Tuvalu	900	-
48	Kazakhstan	22,975	22,975	103	Uganda	5,000	-
49	Kenya	30,000	30,000	104	United Arab Emirates	40,000	40,000
50	Kuwait	200,000	-	105	United Kingdom of Great Britain and Northern Ireland	5,707,440	5,707,440
51	Lao People's Democratic Republic	2,000	-	106	United States of America	6,587,000	6,587,000
52	Lesotho	9,975	9,975	107	Vietnam	7,500	-
53	Liechtenstein	9,000	-	108	Zimbabwe	1,000	1,000
54	Lithuania	23,000	23,000		TOTAL	72,093,142	71,075,586
55	Luxembourg	660,313	660,313				

Senior Management Team



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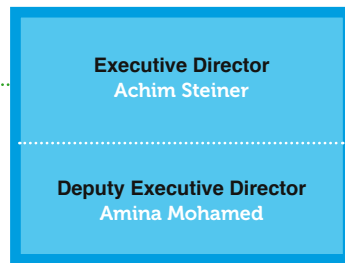
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PARK, YOUNG-WOO
 Director, Regional
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John Scanlon

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Elizabeth Mrema (2012); Bradnee Chambers (from February 1, 2013)

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Marco Gonzalez

Secretariat of the Multilateral Fund for the Implementation of Montreal Protocol (MFS)
Maria Nolan

Secretariat of the Basel, Rotterdam and Stockholm Conventions
Jim Willis

KEY:

EO: Executive Office

IETC: International Environmental Technology Centre

OIC: Officer in Charge

STAP: Scientific and Technical Advisory Panel

UNSCEAR: United Nations

Scientific Committee on the Effects of

Atomic Radiation

WCMC: World Conservation

Monitoring Centre

GLOSSARY OF COMMONLY USED ACRONYMS

CCAC	Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants
CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species
CMS	Convention on Migratory Species
CTCN	Climate Technology Centre and Network
EMG	Environment Management Group
FAO	Food and Agriculture Organization
GEF	Global Environment Facility
GEO-5	Fifth edition of the Global Environmental Outlook
HFCs	Hydrofluorocarbons
ILO	International Labour Organization
MEA	Multilateral Environment Agreement
OCHA	Office for the Coordination of Humanitarian Affairs
PEI	Poverty-Environment Initiative
POP	Persistent Organic Pollutant
SCLP	Short-lived Climate Pollutant
REDD	Reducing Emissions from Deforestation and Forest Degradation
TEEB	The Economics of Ecosystems and Biodiversity
UNDAF	UN Development Assistant Frameworks
UNDP	UN Development Programme
UNEP-WCMC	UNEP World Conservation Monitoring Centre
UNEP FI	UNEP Finance Initiative
UNESCO	UN Educational, Scientific and Cultural Organization
UNFCCC	UN Framework Convention on Climate Change
UNU-IHDP	UN University's International Human Dimensions Programme on Global Environmental Change
WHO	World Health Organization

A TRIBUTE TO ANGELA CROPPER

UN Secretary-General Ban Ki-moon

I was deeply saddened at the passing of Angela Cropper. As one of the world's leading environmental policy experts, she was a valuable contributor to high-level processes at the cutting edge of sustainable development

Achim Steiner, UN Under-Secretary General and UNEP Executive Director

Her personal integrity and professional leadership inspired countless individuals and institutions, whom she supported and served in the most humble and selfless manner one could imagine. Angela represented the spirit of multilateralism and the ideals of the United Nations at their best

The Cropper Foundation.

Angela Cropper had a lasting impact on her friends and colleagues; as a role model to many of those with whom she came into contact and as mentor to the many young people with whom she worked. Her passing is a tremendous loss to Trinidad and Tobago, the Caribbean and the global community

Angela Cropper, the former Deputy Executive Director of UNEP, passed away in November 2012 following a long battle with cancer.

Ms. Cropper joined UNEP as UN Assistant Secretary-General and Deputy Executive Director in February 2008, serving in that position until 2011, when she was appointed as Special Advisor to the Executive Director.

Ms. Cropper brought to UNEP a wealth of experience in environmental policy, analysis and negotiations, combined with an inspiring motivation and vision to bring about inclusive sustainable development and a fairer share of the world's natural resources.

A national of Trinidad and Tobago, Ms. Cropper began her career as an economist. She later held senior positions with the Caribbean Community and Common Market Secretariat (CARICOM) and the International Union for the Conservation of Nature (IUCN), followed by positions as interim Executive Secretary of the UN Convention on Biological Diversity and as Senior Advisor on Environment and Development with the United Nations Development Programme.

Ms. Cropper received numerous awards for her advocacy work in equity, peace and sustainable development, at both international and local levels. In 2000, Angela and her husband John Cropper established The Cropper Foundation, a not-for-profit organization which aims to promote inclusive sustainable development and the equitable use of natural resources. Encouraging partnerships and facilitating innovative projects are among the Foundation's aims.

To leave a tribute, please visit <http://angela.cropper.muchloved.com/>



Maxwell Gomera, Deputy Director UNEP-
World Conservation Monitoring Centre

Of all the good things that defined Angela, perhaps the most remarkable was the way she treated people with respect and empathy and made each person feel special. She combined a sharp, penetrating intellect, a deep commitment to her work and outstanding care for fellow human beings

Jim Leape, Director General,
WWF International.

We will miss her leadership, integrity, authority and commitment to move forward in spite of all the obstacles and her outstanding ability to engage us all. We are deeply saddened by her passing but at the same time grateful for the legacy she has left

Global Reporting Initiative

Her true leadership and grace have left a mark on the Governmental Advisory Group and GRI as a whole. We will continue to follow the generous guidance she has given us over the years. She will stay with us in our thoughts

Yuna Obiero, UNEP
Executive Office.

She aimed for the skies and applied the highest possible standards one could ever strive to reach. She was exigent with herself and compassionate with others. She always gave and gave of her very best – even unto death





“
A Green Economy means no more business as usual. It's a new way forward—an economy that is good for people, business and the planet. And it should happen by design not by default.”

Don Cheadle



WORLD ENVIRONMENT DAY | 5 JUNE
Green Economy: Does it include you?
www.unep.org/wed



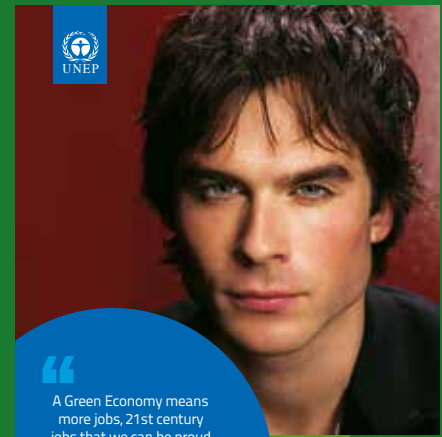



“
Millions of women and children are dying from dirty cook stoves.... billions of dollars are spent on subsidizing the destruction of our fish stocks. We need a clean, more progressive economy.”

Gisele Bündchen




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“
A Green Economy means more jobs, 21st century jobs that we can be proud of...that give young people decent options.”

Ian Somerhalder



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UNEP would like to express its appreciation and respect for the commitment to the environment shown by its Goodwill Ambassadors in 2012



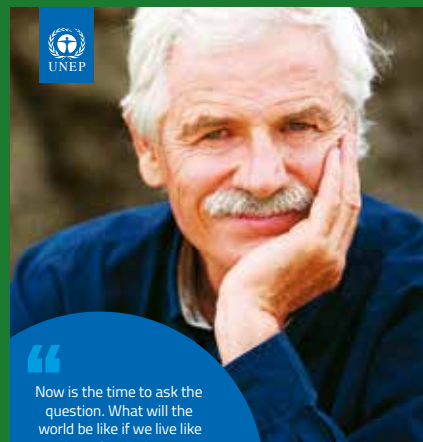



“
The Rio+20 Earth Summit is happening this June. World leaders will gather to decide on our future, our fate. They can't do it on their own—they need to know the game's up and a game-changer is needed.”

Li Bing Bing




WORLD ENVIRONMENT DAY | 5 JUNE
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“
Now is the time to ask the question. What will the world be like if we live like we have for the last 200 years? Aren't we ready for a Green Economy? Can we ignore the next big idea?”

Yann Arthus-Bertrand




WORLD ENVIRONMENT DAY | 5 JUNE
Green Economy: Does it include you?
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“
Governments and business need to understand that our ecosystems, biodiversity and natural resources are the backbone of our economies and their value should be integrated into decision making.”

Pavan Sukhdev

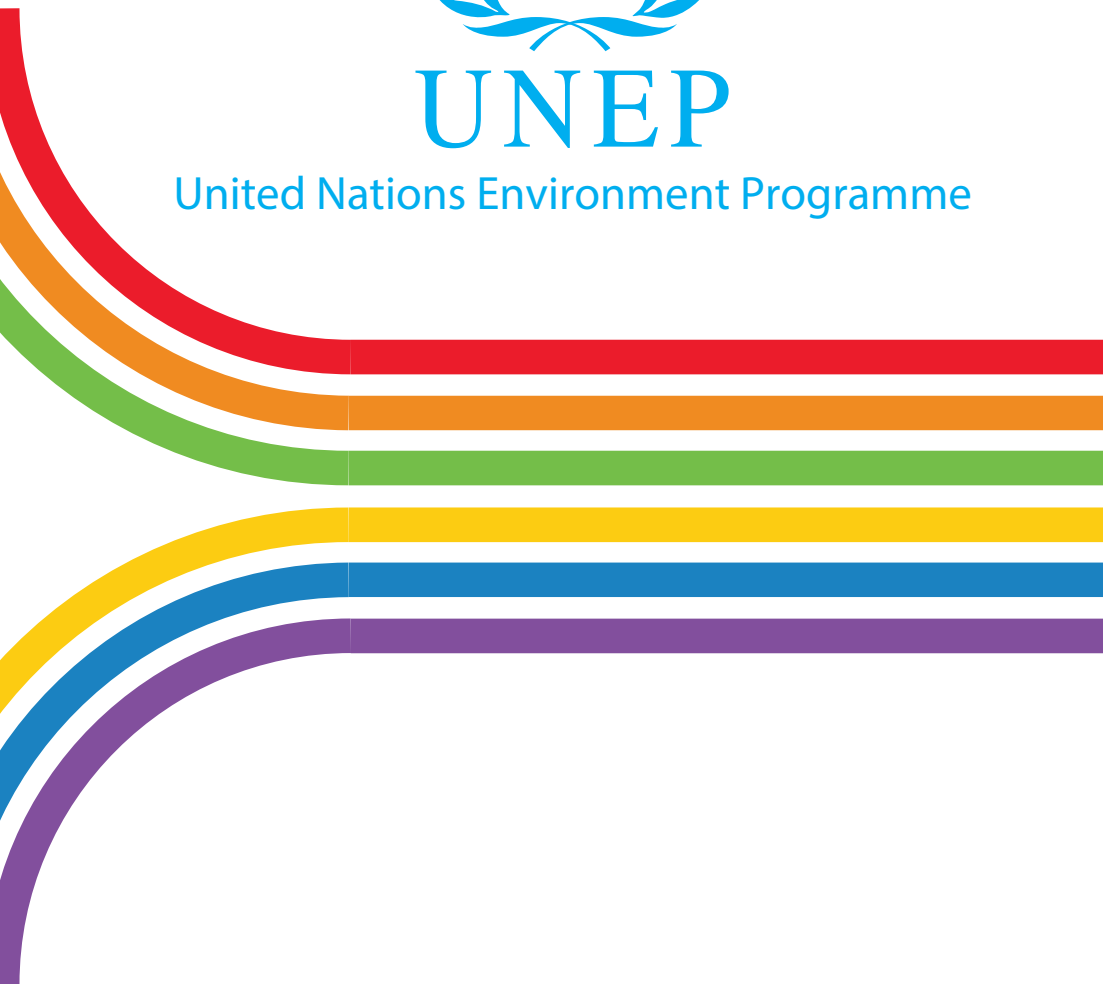


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