



UNEP

United Nations Environment Programme

ANNUAL REPORT 2013



UNEP

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Programme, 2014

Publication: UNEP 2013 Annual Report
Job Number: DCP/1792/NA
ISBN: 978-92-807-3380-8

* All dollar (\$) amounts refer to US dollars.

* The term 'one billion' in this report refers
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The mission of the United Nations Environment Programme (UNEP) 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

In the four decades since its creation, the United Nations Environment Programme has worked to provide a bridge between emerging science on a wide range of environmental issues and strong policies that will support sustainable development. As awareness has grown of the role of the environment in human wellbeing, and the critical challenges it faces, UNEP has steadily gained audience and authority.

Last year, the voice of the environment gained more resonance. UNEP's Governing Council met under universal membership for the first time and, despite an era of financial tightening, the UN General Assembly increased the Programme's regular budget. The message was clear: international environmental governance is a priority and UNEP needs adequate resources to fulfil its mandate.

In late 2013, the UNEP Emissions Gap Report showed that the world is off track on efforts to reduce greenhouse gas emissions to the level required to give a reasonable chance of keeping global temperature rise below 2°C this century. Less than two years remain for Governments to agree on a new climate deal that will come in force by 2020, and I count on UNEP and all partners within and beyond the UN system to work for increased ambition and action to avert the worst consequences of climate change.

The next two years are also critical for defining a post-2015 development agenda. UNEP and its partners have demonstrated that well-functioning ecosystems are essential for sustainable social and economic progress. UNEP is assisting countries to understand the importance of factoring natural capital into national economic accounting and policymaking. Much work remains in all regions in translating understanding to action.

These issues will be foremost in the minds of ministers attending the first UN Environment Assembly at UNEP headquarters in June, but they can take heart from the example of the Minamata Convention on Mercury. Adopted in late 2013, this first new multilateral environmental agreement in almost a decade provided new proof that consensus can be reached.

UNEP played a key role in providing the science on the harmful effects of mercury and bringing nations together over four years of negotiations. The timing of this treaty was no coincidence: a stronger UNEP means stronger environmental governance, and I believe many more such successes lie ahead. The world is ready for a paradigm shift in environmental stewardship, and I expect the new UNEP to be at the centre of this transformation.

BAN KI-MOON
FEBRUARY 2014

2013 HIGHLIGHTS

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



01

AT RIO+20, the international community agreed to work on a set of universal sustainable development goals as part of a post-2015 agenda that will address environmental, social and economic sustainability in a way that is more cohesive, focused and measurable. In order to play a defining role in this process, the United Nations system must work more closely than ever—with a clear understanding that the discourse has changed from protecting the environment from development, to integrating environmental concerns into development. Put simply, there can be no sustainable development without concerted and accelerated action on the environment.

UNEP serves as a leading global environmental authority and the environmental voice of the UN, corraling the system's resources to ensure that the necessary transformative action on the

environment takes place. As such, every aspect of our work—bolstered by inspiring partnerships that encompass the UN system, member states, intergovernmental organizations, civil society and the private sector—feeds into the sustainable development agenda.

Allow me to elaborate. The negative impacts of climate change, such as disruption to agriculture from increasingly unpredictable rainfall, will affect livelihoods, primarily in developing nations. Conflicts and natural disasters, which are expected to become more common as climate change worsens, degrade and destroy the environmental resource base that supports human life. Over-exploitation of natural resources degrade ecosystems and diminish the services they provide, such as food, water, pollination and climate regulation. Unsound use, production and disposal of chemicals can hinder development by affecting water supplies, food security and

productivity. Unsustainable production and consumption, such as the one third of all food squandered each year, waste resources that must be more carefully marshalled as the world population heads towards nine billion by 2050.

Strong environmental governance is essential to address these challenges and thus ensure a swift and smooth transition to an inclusive Green Economy, which will be fundamental to attaining long-term sustainable development. Encouragingly, 2013 provided clear signals that international environmental governance is reaching new heights of reach, clarity and strength.

UNEP held its Governing Council under universal membership for the first time. In 2014, member states will meet for the first time as the United Nations Environment Assembly (UNEA), under the overarching theme of "Sustainable Development Goals

“2013 provided clear signals that international environmental governance is reaching new heights of reach, clarity and strength.”

and the Post-2015 Development Agenda, Including Sustainable Consumption and Production. The importance of this assembly cannot be overstated, as it accords environmental issues similar status to those of peace, security, finance, health and trade. Mandated to determine policy and catalyze international action, the body represents a global vehicle for driving political and strategic work on environmental priorities.

Perhaps just as significant was the signing by 94 countries of the Minamata Convention on Mercury after four years of UNEP-supported negotiations. This convention, the first new Multilateral Environmental Agreement for almost a decade, not only gives new impetus to efforts to reduce emissions of the toxic metal, but shows that agreement can be reached on pressing environment challenges—an example that is especially pertinent as the world works toward a new climate deal to be agreed by 2015.

Equally encouraging for the close cooperation that will be required across the UN system to define and implement the post-2015 agenda, many key inter-UN and global initiatives either gained traction or got underway in 2013.

As UNEP's *Emissions Gap Report 2013* warned that greenhouse gas emissions in 2020 are likely to be far above the level needed to keep global temperature rise below 2°C this century, the Climate Technology Centre and Network (CTCN) began its programme of accelerating the transfer of environmentally sound technologies to developing nations. Just one month after the official beginning of operations, 35 countries had nominated focal points to the CTCN, which is led by UNEP in collaboration with the UN Industrial Development Organization (UNIDO) and 11 other research and development bodies.

Another significant step in addressing climate change came with strong backing for the United Nations Collaborative Initiative on

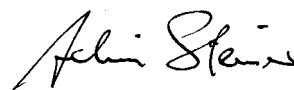
Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD) at the UN Framework Convention on Climate Change meeting in Warsaw. Financial pledges and the adoption of a 'rulebook' for REDD+—which promotes the sustainable management of forests and the enhancement of forest carbon stock—pave the way for real progress in mitigating climate change. Added to the above, the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants saw its membership grow to over 80 Member States and partner organizations, with financial commitments exceeding \$30 million and multiple initiatives in progress.

In the area of resource efficiency, the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns (10YFP), hosted by UNEP, prepared to launch its first five programmes. UNEP also pushed forward on the Partnership for Action on Green Economy (PAGE)—a partnership with UNIDO, the International Labour Organization, and the United Nations Institute for Training and Research. PAGE will support 30 countries over the next seven years to build strategies that generate jobs, promote clean technologies, and reduce environmental risks and poverty.

To promote ecosystem management, UNEP and partners have spearheaded a movement to incorporate the value of nature—natural capital, as it is known—into economic and developmental policies. In 2013, the movement rose to a new level. The UNEP-hosted Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, with 115 member states, established an ambitious five-year work programme and agreed to develop a set of fast-track assessments. The Economics of Ecosystems and Biodiversity (TEEB) initiative, meanwhile, has already demonstrated the

negative economic impact of unsustainable management of ecosystems, and more nations took the message on board last year. Bhutan, Ecuador, Liberia, the Philippines and Tanzania have initiated studies to assess and value their natural capital, while others such as Brazil, Germany, the Netherlands, Norway and Sweden have expressed interest in TEEB scoping studies.

These are just some of the examples of the many collaborative initiatives undertaken by UNEP and its partners in 2013, and many more are highlighted in this report. Much hard work lies ahead. However, these transformative efforts show that the will to change the way the humanity manages the environment, which UNEP has spent over four decades fostering, is now clear and present. I believe these initiatives prove conclusively that the world understands we are on a journey that must be taken together, and I invite every interested organization to join us as we move ever-faster towards a truly sustainable future.



ACHIM STEINER

01 – UNEP Executive Director Achim Steiner (2nd left) at the signing of the Minamata Convention on Mercury, one of the key successes of 2013. Also pictured, from l to r: Nobuteru Ishihara, Minister of Environment, Japan, Ikuo Kabashima, Governor of Kumamoto Prefecture, and Katsuaki Miyamoto, Mayor of Minamata.

2013: THE ENVIRONMENT IN NUMBERS

Facts and figures from 2013 reports and campaigns by UNEP and partners

01 JANUARY

Global Mercury Assessment 2013: Mercury use in small-scale gold mining threatens the health of **15 MILLION** people in **70 COUNTRIES**.

Think.Eat.Save Campaign: **ONE THIRD** of all food production gets lost or wasted, totalling **1.3 BILLION TONNES**.

02 FEBRUARY

Partnership for Action on the Green Economy: UN agencies pledge to assist **30 COUNTRIES** in transition to Green Economy

UNEP Year Book 2013: Arctic summer ice cover reached record low of **3.4 MILLION SQUARE KILOMETRES** in 2012, **18 PER CENT** below the previous recorded minimum in 2007.

03 MARCH

Stolen Apes: Nearly **3,000 GREAT APES** lost from the wild each year through illegal activity.

Elephants in the Dust: At least **17,000 ELEPHANTS** were illegally killed in Africa in 2011.

04 APRIL

Natural Capital at Risk: Top 100 environmental externalities cost **\$4.7 TRILLION** a year.

Global Wind Energy Council Annual Market Update: Global installed wind power capacity reached **282.5 GW** in 2012, a **19 PER CENT** increase over the previous year.

05 MAY

Global Tracking Framework: About **1.2 BILLION PEOPLE** don't have access to electricity and 2.8 billion have to rely on wood or other biomass to cook and heat their homes.

Green Economy and Trade: Global market for organic food and beverages projected to grow to **\$105 BILLION** by 2015, compared to **\$62.9 BILLION** in 2011.

06 JUNE

Global Trends in Renewable Energy Investment 2013: **\$244.4BN** invested in renewable energy in 2012.

Smallholders, Food Security and the Environment: Supporting smallholder farmers can lift **1.4 BILLION PEOPLE** living on under **\$1.25 A DAY** out of poverty.

07 JULY

The Global Climate 2001–2010: Average land and ocean-surface temperature for 2001–2010 estimated at **14.47°C**, the warmest decade since the start of modern measurements in 1850.

en.lighten: West African leaders pledge to switch the region to efficient lighting, which would save **2.4 TERAWATT HOURS** and **\$220 MILLION** each year.

08 AUGUST

Resource Efficiency—Economics and Outlook for China: China's consumption of primary materials per capita has increased from **31 PER CENT** of the world average levels in 1970 to over **162 PER CENT**.

South African Green Economy Modelling: Improving the management of natural resources and investing in the environment could create **170,000 ADDITIONAL JOBS** in South Africa.

09 SEPTEMBER

Food Waste Foodprint: Food that is produced but not eaten adds **3.3 BILLION TONNES** of greenhouse gases to the planet's atmosphere each year.

Intergovernmental Panel on Climate Change Assessment: **95–100 PER CENT** probability that most of planet's warming since 1950 has been due to human influence.

10 OCTOBER

Minamata Convention on Mercury: **92 COUNTRIES** and European Union sign up to new treaty.

International Lead Poisoning Prevention Week of Action: Childhood lead exposure contributes to an estimated **600,000 NEW CASES** of intellectual disabilities each year.

11 NOVEMBER

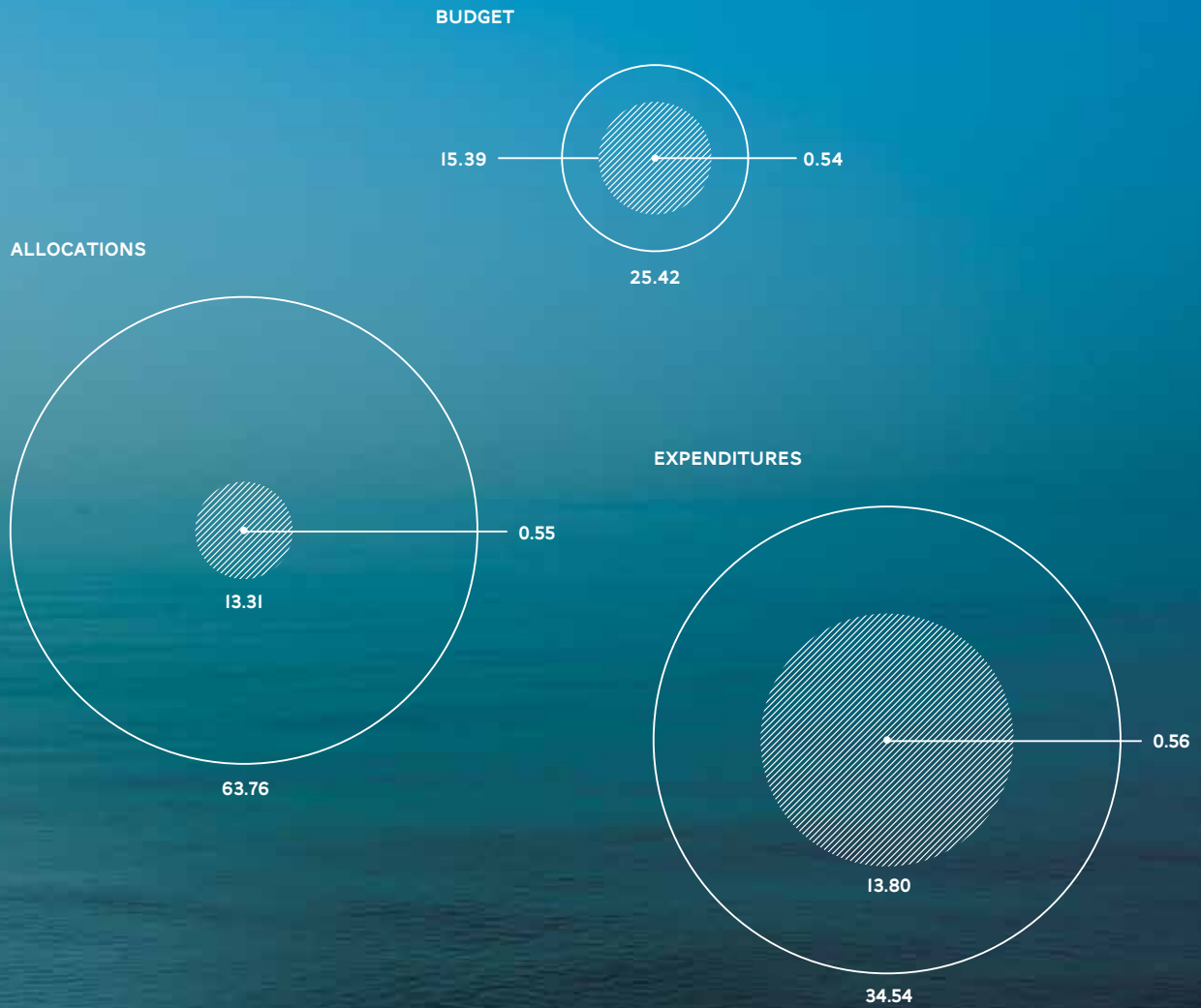
Emissions Gap Report 2013: 2020 emissions likely **8 TO 12 GIGATONNES OF CO₂** equivalent above recommended level to keep Emissions Gap Report 2013: world below **2°C** temperature rise.

Africa Adaptation Gap Report: African adaptation costs could reach **\$350 BILLION**

12 DECEMBER

INTERPOL Operation: **240 KG OF ELEPHANT IVORY** seized and **660 PEOPLE** arrested during operation combatting ivory trafficking across Southern and Eastern Africa.

The Arab Region: Atlas of Our Changing Environment: **1,746 THREATENED SPECIES** in the region, the majority critically endangered.



EXPENDITURE IN 2013

The 2013 total budget for the Climate Change sub-programme was \$41.3 million. Total allocations issued were \$77.6 million. Total expenditure was \$48.9 million, 63 per cent of allocations.

All figures in \$ million

FUND SOURCES

- Environment Fund
- Trust Funds and earmarked contributions
- Regular budget

CLIMATE CHANGE

Minimizing the scale and impact of climate change

RESULTS ACHIEVED AGAINST EXPECTED ACCOMPLISHMENTS

Achievement: ● Full ● Partial ○ Unachieved

EA (A) ADAPTATION ●

Increased number of countries that integrate adaptation, including an ecosystem-based approach, into their national development plans with the assistance of UNEP

BASELINE (2011)	TARGET (2013)	ACTUAL
4	8	9

EA (B) CLEAN ENERGY ●

Increased number of countries implementing energy plans, including low-carbon alternatives, with explicit renewable energy or energy efficiency policies with the assistance of UNEP

BASELINE (2011)	TARGET (2013)	ACTUAL
4	12	31

EA (C) ENERGY FINANCE ●

Increased level of national investment in clean technology projects and projects related to adaptation and mitigation supported by UNEP that are implemented with international climate change funding with the assistance of UNEP

BASELINE (2011)	TARGET (2013)	ACTUAL
\$200 million	\$300 million	\$432 million

EA (D) EMISSION REDUCTION FROM DEFORESTATION AND FOREST DEGRADATION ●

(i) Increased number of countries implementing sustainable forest management plans, including plans to reduce emissions from deforestation and degradation (REDD plans), with the assistance of UNEP

BASELINE (2011)	TARGET (2013)	ACTUAL
5	10	17

(ii) Increased percentage of land being managed to reduce emissions from deforestation as a result of the implementation of sustainable forest management plans, including REDD plans, with the assistance of UNEP

BASELINE (2011)	TARGET (2013)	ACTUAL
0	5	3

EA (E) SCIENTIFIC AND OUTREACH ●

(i) Increased number of sector-specific local, national and regional development plans that incorporate climate-related assessment with the assistance of UNEP

BASELINE (2011)	TARGET (2013)	ACTUAL
12	14	12

(ii) Increased number of findings or results from UNEP climate change work reported in press and media with the assistance of UNEP

BASELINE (2011)	TARGET (2013)	ACTUAL
1,650	1,850	34,005

There can no longer be any doubt that climate change is the major, overriding environmental issue of our time. It is a growing crisis that is already affecting our ability to support virtually every element of human wellbeing and sustainable development, from economic growth to food security. Shifting weather patterns, for example, threaten food production through increased unpredictability of rainfall; rising sea levels contaminate coastal freshwater reserves and increase the risk of flooding; and extreme weather events, predicted to become more frequent and severe, can cause devastation. UNEP works to mitigate and adapt to climate change by assisting governments and businesses to reduce emissions, and by helping nations and communities most likely to be affected develop ways to become more resilient to changing conditions.

Strengthening climate change science

Each year, UNEP and its partners further develop and expand on the science that highlights the causes and impacts of climate change, and 2013 was no exception. The [latest assessment](#) by the Intergovernmental Panel on Climate Change—established in 1988 by UNEP and the World Meteorological Organization—concluded that warming of the climate system is unequivocal and human-influenced, and continued emissions of greenhouse gases will cause further warming and changes. UNEP's *Emissions Gap Report 2013* demonstrated that even if nations meet their current climate pledges, greenhouse gas emissions in 2020 are likely to be 8 to 12 gigatonnes of CO₂ equivalent above the level that would provide a likely chance of remaining on the least-cost path to keeping the world below a 2°C target temperature rise this century. Separately, the *Africa Adaptation Gap Report* detailed the corresponding financial burden: adaptation costs for Africa could reach \$350 billion per year by 2070 should the 2°C target be significantly exceeded, while the cost would be \$150 billion lower per year if the target were to be met.

Pushing the climate change agenda

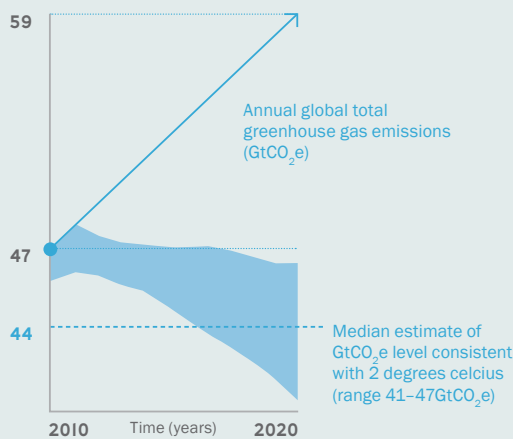
Looking at the headline figures highlighted in the above reports—which also provide recommendations in the key areas where emissions can be cut—it may seem the action on emissions that UNEP has long advocated for is not being taken. However, 2013 saw the international community, through UNEP-led initiatives both new and established, demonstrate increased commitment to tackling this pressing challenge.

While climate negotiations are focused on agreeing a global climate deal by 2015, UNEP supported several substantive pushes on the climate change agenda in related and complementary areas, including through the private sector.

Firstly the [Climate Technology Centre and Network \(CTCN\)](#)—the operational arm of the UN Framework Convention on Climate Change (UNFCCC) Technology Mechanism, led by UNEP in collaboration

HOW TO BRIDGE THE GAP RESULTS FROM SECTORAL POLICY ANALYSIS*

Shaded area shows likely range of GtCO₂e (≥66%) to limit global temperature increase to below 2°C during the 21st century.



Based on results from *Bridging the Emissions Gap Report 2011*

Range for sectors to limit global temperature increase.

Power
2.2–3.9 GtCO₂e

Industry
1.5–4.6 GtCO₂e

Transport*
1.7–2.5 GtCO₂e

Buildings
1.4–2.9 GtCO₂e

Waste
about 0.8 GtCO₂e

Forestry
1.3–4.2 GtCO₂e

Agriculture
1.1–4.3 GtCO₂e

*including shipping and aviation

with the UN Industrial Development Organization and 11 other international research and development bodies—[officially opened for business](#). The CTCN aims to reduce emissions and improve climate resilience in developing nations by accelerating the transfer of environmentally sound technologies that can improve the lives and livelihoods of millions of people in developing countries. Some 35 countries had nominated focal points for the CTCN by December 2013, showing that interest and expectations are strong.

An equally significant step was strong backing for REDD+ at the UNFCCC Conference of the Parties in Warsaw. REDD+ is a mechanism for payments to reduce emissions from deforestation and forest degradation, as well as conserve, manage and enhance existing forest carbon stocks. Deforestation and forest degradation account for nearly 20 per cent of global greenhouse gas emissions, so REDD+ is seen as one of the most cost-effective ways to reduce emissions and minimize global temperature rises. The adoption of a 'rulebook' for REDD+ in Warsaw paves the way for full implementation of activities,

and \$280 million in pledges from the US, Germany, Norway and the UK at the meeting brings the total pledges to \$6.27 billion.

The United Nations Collaborative Initiative on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries ([UN-REDD](#))—jointly implemented by the Food and Agriculture Organization (FAO), the UN Development Programme (UNDP) and UNEP—supports REDD+ readiness efforts in 49 partner countries in Africa, Asia-Pacific and Latin America. For example, in Tanzania—where forests and woodlands support the livelihoods of 87 per cent of the rural poor—UNEP-WCMC worked with the government and FAO under UN-REDD to provide training in open-source Geographic Information System software and developed a set of maps on carbon stocks, ecosystem services, and drivers of deforestation to support decision-making on where and how REDD+ might be implemented.

Another key development is the German government's commitment of funding to a Green Climate Fund (GCF) Readiness Programme, managed by UNEP in collaboration with UNDP and the World

“As founding members of the Climate and Clean Air Coalition, Sweden and the United States are pleased that the Coalition, as a complement to the work on long-lived climate pollutants, is already working to catalyse significant global reductions of short-lived climate pollutants. We agreed to redouble our efforts and invite others to join to take full advantage of the Coalition’s potential.”

Joint statement from US President Barack Obama and Swedish Prime Minister Fredrik Reinfeldt.

Resources Institute. The GCF was established by the Conference of Parties to the UNFCCC in 2010 to become the main global fund for financing mitigation and adaptation measures in developing countries. So far, five countries have been supported in the inception phase, with assistance to nine planned in total.

The short-term challenge

Outside the formal UNFCCC process, the UNEP-hosted [Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants \(CCAC\)](#) provides an opportunity for quick gains through reducing Short-Lived Climate Pollutants. Scientific evidence indicates that action to reduce these pollutants, in particular methane and black carbon, could slow down the warming expected by 2050 by as much as 0.5°C and provide health, as well as food and energy security, co-benefits.

In its second year, the coalition grew to 75 partners and approved ten high-impact initiatives in areas such as municipal solid

waste, cookstoves and domestic heating and brick production. Coalition partners have pledged more than \$46 million to the CCAC Trust Fund. This increased political and financial commitment has catalyzed action: for example, Nigeria is creating a national planning agency for energy efficiency, dedicated to the coalition’s agenda. One area of focus for the coalition is dirty diesel fuels, a source of black carbon and according to new research largely responsible for approximately 3.2 million premature deaths annually.

Contributing to sustainable energy

Another element of UNEP’s work on mitigating climate change comes in the form of promoting efficient and renewable energy, in particular its contribution to the [Sustainable Energy for All Initiative \(SE4ALL\)](#)—the Secretary-General’s initiative to provide, by 2030, universal access to modern energy services, double the global rate of improvement in energy efficiency and double renewable energy.



“Governments . . . have delivered a set of decisions that will make a significant impact in reducing emissions from deforestation and forest degradation in developing countries and catalyse actions in this critical area of addressing climate change.”

Christiana Figueres, Executive Secretary of the UN Framework Convention on Climate Change (UNFCCC).

01 – [The Emissions Gap Report 2013](#) outlined action in specific areas to cut emissions by 2020.

02 – REDD+ activities to reverse deforestation in countries like Kenya can reduce emissions.



03

IN FOCUS

Switching on to Efficient Lighting

SOMETIMES THE TASK of combating the emissions that cause climate change seems complex and overwhelming, yet simple measures by individuals, businesses and governments can make a massive difference. One such achievable measure lies in the switch to efficient lighting.

If all inefficient lamps worldwide were replaced with energy-efficient devices, global electricity demand would be cut by 5 per cent and greenhouse gas emissions would drop by an estimated 490 million tonnes of CO₂ annually—equivalent to shutting down 250 large coal-fired power plants.

Progress towards this ideal situation is well under way. Some 55 countries have joined the [en.lighten initiative](#), a public-private partnership between UNEP, OSRAM AG, Philips Lighting and the National Lighting Test Centre, with the support of the [Global Environment Facility](#) and the Australian Government. These nations have committed to strategies to phase-out inefficient lamps by 2016 and activities have begun in 27 countries, including Chile.

In August 2013, Chile adopted a National Efficient Lighting Strategy. The strategy follows the elements of the en.lighten integrated policy approach, including minimum energy performance standards;

monitoring verification and enforcement activities; and the environmentally sound management of lighting products.

“The first axis of the energy strategy is precisely energy efficiency,” said Undersecretary of Energy, Sergio del Campo Fayet. “Facing the challenge of energy efficiency has a particular value for the country, given the limited resources to produce electricity.”

The benefits are clear. A transition away from inefficient incandescent lamps to more efficient lighting would save Chile an estimated \$486.4 million each year in energy costs, cutting 2.8 terawatt hours of electricity and 1.2 million tonnes of CO₂—the equivalent of taking 300,000 mid-size cars off the road.

Similar transformations are taking place across the globe. The Economic Community of West African States (ECOWAS) established a framework to phase-out inefficient incandescent lamps between 2016 and 2020, with savings estimated at \$220 million in electricity costs annually, and a comparable regional partnership strategy between eight countries in Central America has been adopted.

Many more countries are expected to join the fold to realize the significant energy, financial and CO₂ savings potential of phasing out inefficient lighting in all sectors with innovative technologies such as light emitting diodes and controls. 🔗



GLOBAL FUEL ECONOMY INITIATIVE

Fuel economy improvements can save \$2 trillion over the next decade.

Source: Global Fuel Economy Initiative Working Paper 9.

03 – Constanza Garay lit by a LED light bulb installed in her makeshift home in the Lo Espejo district of Santiago.

04 – A street in Santiago, Chile, lit by LED lighting.

05 – The UN City in Copenhagen, where the Danish government and UNEP Risø Centre have opened an Energy Efficiency Hub in support of SE4ALL.

05

2012 investment in renewable energy: \$244.4 billion

China's renewables investment in 2012: Up 22 per cent to \$67 billion

Investments in South vs North: \$112 billion vs \$132 billion

Cost of solar photovoltaic technology dropped by one third

Source: Global Trends in Renewable Energy Investment 2013 Report

Cooperation with SE4ALL deepened with the establishment of the [Energy Efficiency Hub \(EE Hub\)](#) at the UN City in Copenhagen. The Danish Government is supporting UNEP and the UNEP Risø Centre to establish and manage the hub, backed by an international advisory panel. Two existing UNEP initiatives were praised as key contributions to SE4ALL in 2013, the first being the [en.lighten](#) initiative, which aims to put in place policies phasing out all inefficient incandescent lamps by 2016 (see In Focus article for details).

The second key contribution to SE4ALL is the [Global Fuel Economy Initiative \(GFEI\)](#), which is working towards doubling of the fuel economy of the global car fleet—from an average of eight litres per 100 kilometres to four litres by 2050. In 2013, a GFEI status report showed that Organisation for Economic Cooperation and Development (OECD) countries are on the way to reaching this target. 2013 saw the number of GFEI country projects increase to 20, supporting governments and their partners to put in place fuel economy policies.

UNEP also works on sustainable energy outside of its involvement with SE4ALL. For example, the [Seed Capital Assistance Facility \(SCAF\)](#) is designed to assist entrepreneurs in developing nations overcome financing challenges. The Facility—operated

along with the Asian Development Bank and the African Development Bank, and funded by the Global Environment Facility (GEF) and the UN Foundation—offers support to clean-energy-focused investment fund managers willing to include a seed investment window within their overall investment strategy. Agreements are in place with six clean-energy investment funds, supporting 52 projects. By the end of 2013, UNEP had mobilized investments of approximately \$432million. Two projects are at the construction phase, including the [Red Cap Kouga Wind Farm](#)—one of Africa's largest wind farms, with a potential of up to 300MW. Based on such progress, the UK Department for International Development (DFID) agreed to support a SCAF II facility, which will make UNEP a key partner with the commercial investment community.

Building climate resilience

While UNEP strives to reduce the speed and scale of climate change, working with countries to build resilience to the inevitable transformations in climate must remain a major focus.

UNEP is supporting 34 developing countries in implementing concrete adaptation projects, and has pioneered ecosystem-based adaptation (EbA) options to enhance



06 – Through the African Carbon Asset Development Facility, UNEP supported Nafa Naana, a social enterprise in Burkina Faso that gets fuel-efficient stoves to rural communities, thus reducing forest degradation and indoor air pollution and its related health risks.

07 – A UNEP adaptation project introduced fish farming in Mozambique's Xai-Xai district.

community resilience and ecosystem functions. For example, in Mozambique a UNEP-backed project restored mangroves and introduced fish and crab farming to build resilience in the Xai-Xai district, an area prone to coastal erosion and flooding. Food security for the community depending on the ecosystem's services has improved as a direct result. 2013 also saw the launch of a joint project with the National Development and Reform Commission of China to build climate resilience using an ecosystem-management approach in three pilot countries, Mauritania (desert ecosystems), Nepal (mountain ecosystems) and Seychelles (coastal ecosystems).

UNEP is expanding its EbA work to other ecosystems and urban and agricultural areas and, at the first African conference on food security and climate change adaptation, key regional decision makers [backed an EbA approach](#) as a means of ensuring food security. The African Ministerial Conference on Environment (AMCEN) later adopted this decision. African agriculture is highly vulnerable to climate change and even in the scenarios of lower-end temperature rise projections, crop yields are expected to drop 10 to 20 per cent by 2050, highlighting the need for innovative new solutions.

In 2013, UNEP and UNDP, with funding from the Global Environment Facility, initiated a global programme to advance National Adaptation Plans (NAPs)—seen as the main mechanism for moving the enhanced adaptation agenda forward. The NAP Global Support Programme (GSP) provides support to all Least-Developed Countries (LDCs), and also contains a component providing one-on-one technical support to LDCs requesting it. To date, 25 LDCs have already requested such support.

Last year, UNEP also assisted nine countries and two regions to complete vulnerability and impact assessments, including six city-level assessments used by governments. For instance, in Nepal's Panchase area an assessment helped partners design EbA interventions to enhance ecosystem services benefiting local communities. In addition, the



07

[Regional Gateway for Technology Transfer and Climate Change Action in Latin America and the Caribbean \(REGATTA\)](#) provided technical assistance to 18 countries on a range of critical challenges, facilitated technology transfer among over 6,000 decision makers and practitioners, and supported the development of more than a dozen pilot projects in eight countries.

Since UNEP's programme to support countries' direct access to the Adaptation Fund (AF) began in 2010, 19 countries and one regional entity have been supported towards accreditation of their National Implementing Entities (NIEs). Nine countries and one regional entity submitted NIE applications to the AF Board and two countries' NIEs were accredited. Partnerships were developed with six microfinance institutions in two countries in Latin America, and investment decision-making processes were created for financing EbA actions by small-scale farmers. Privately financed investments have begun to flow. Public policy opportunities are being identified in order to catalyze large-scale EbAs.

Moving forward

The initiatives highlighted here demonstrate that international cooperation can be scaled up, and are in many ways the beginning of accelerated efforts to address a major global challenge that cannot be ignored. 2014

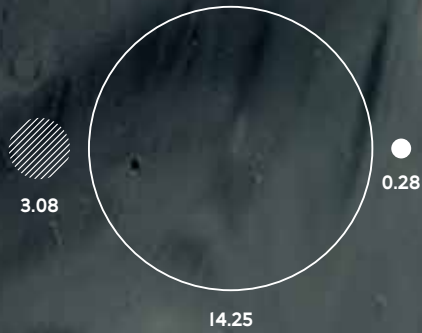
promises to be a crucial year in the journey to the new climate agreement, which will enter into force by 2020. UNEP will play its part both in providing the science to reinforce the evidence base that shows we must act, swiftly and decisively, and in driving forward with the many initiatives that show so much promise in mitigating and adapting to climate change.

These are just some of the highlights of the sub-programme, with many more initiatives under way. For more information, please consult the [Programme Performance Report 2012–2013](#) and the comprehensive list of projects under the Climate Change sub-programme, which can be found on the Annual Report 2013 website: www.unep.org/annualreport/2013

BUDGET



ALLOCATIONS



EXPENDITURES






EXPENDITURE IN 2013

The 2013 total budget for the Disasters and Conflicts sub-programme was \$25.1 million. Total allocations issued were \$17.6 million. Total expenditure was \$16.1 million, 91 per cent of allocations.

All figures in \$ million

FUND SOURCES

-  Environment Fund
-  Trust Funds and earmarked contributions
-  Regular budget

DISASTERS AND CONFLICTS

Ensuring post-crisis environmental recovery

RESULTS ACHIEVED AGAINST EXPECTED ACCOMPLISHMENTS

Achievement: ● Full ● Partial ○ Unachieved

EA (A) RISK REDUCTION ●

Increased investment in initiatives using national environmental management capacities for risk reduction with the assistance of UNEP

BASELINE (2011) 11% increase over Dec 2009 figures (\$2.6 million)

TARGET (2013) 50% increase over Dec 2009 figures

ACTUAL 758% (\$22.3 million)

EA (B) POST-CRISIS ASSESSMENT ●

Increased percentage of inter-agency post-crisis needs assessments and national recovery plans that identify, prioritize and cost environmental needs with the assistance of UNEP

BASELINE (2011)	TARGET (2013)	ACTUAL
75%	90%	85%

EA (C) POST-CRISIS RECOVERY ●

Increased percentage of the total long-term relief and post-crisis recovery funding focused on environment and natural resource management and associated livelihood projects with the assistance of UNEP

BASELINE (2011) 68% increase over Dec 2009 figures (\$15 million)

TARGET (2013) 100% increase over Dec 2009 figures

ACTUAL 333% (\$65 million)

Since the start of the new millennium, the world has witnessed over 40 major conflicts and 2,500 disasters, killing millions and affecting over 2 billion more. Not only do these tragic events destroy infrastructure, cause displacement and undermine human security, they degrade or destroy natural resources such as water, land and forests essential for communities to recover. Environmental degradation and the mismanagement of natural resources are themselves risk factors for sparking renewed cycles of conflict and can result in further environmental damage, thus undermining stability and opportunities for sustainable development.

UNEP aims to minimize such threats to human wellbeing by supporting governments to reduce risk factors through better policies, carrying out post-crisis assessments, and building recovery programmes that address environmental needs, support peacebuilding and promote long-term sustainable development. Since 2008, the organization has provided post-crisis assistance in over 20 countries.



01

TYPHOON HAIYAN6,201 people killed,
4.1 million displaced

550,928 homes destroyed

\$447 million damage to
agriculture and fisheriesSource: National Disaster
Risk Reduction and
Management Council,
Philippines**Addressing the environmental
impact of natural disasters**

Natural disasters such as Typhoon Haiyan, which struck the Philippines in November 2013, can instantaneously wreak havoc on a nation, triggering massive financial loss and leaving death and destruction in their wake. In a few short days, the typhoon claimed thousands of lives, flattened homes and businesses, devastated fishing grounds, destroyed agricultural fields and plantations, and contaminated water sources.

Immediately after Typhoon Haiyan struck, the [Joint UNEP/OCHA Environment Unit \(JEU\)](#) deployed an Environmental Field Advisor (EFA) to the UN Disaster Assessment and Coordination effort to identify and address emerging environmental concerns. The EFA was embedded in the overall humanitarian response for six months to ensure environmental concerns were being addressed. The unit also deployed a specialist with oil-spill expertise following a major spill of an estimated 800,000 litres of heavy oil in Estancia, Ililo, Western Visayas. The deployment was facilitated through the European Union Civil Protection Mechanism to support remediation efforts.

Easing the conflict burden

Conflicts often erode institutions charged with managing the environment and cause direct environmental damage that can cripple a country's ability to recover. However, the environment and natural resources, if well managed, can be used to ensure prosperous and inclusive economic growth, improve social cohesion and strengthen political stability. In 2013, UNEP continued to promote rehabilitation and recovery activities in countries that have seen their environments affected by a legacy of war.

In the Democratic Republic of Congo, which has suffered from years of armed conflict, an estimated 74 per cent of the nation's population—51 million people—do not have access to safe drinking water. As a result, thousands die each year from water-borne diseases. In early 2013, the Healthy Villages and Schools programme, the government's main initiative to provide safe drinking water to rural and peri-urban populations, reached some 3,000 villages. This operation, with support from UNICEF, is now being scaled up: \$136 million is earmarked to target an additional 6,000 villages and 1,250 schools over the next five years. To support the programme, UNEP sent a team that included experts from the Swiss Spiez Laboratory



02



03



01 – Typhoon Haiyan left devastation in its wake, with huge environmental impacts.

02 – Volunteers clean up oil from a major spill in Estancia, Philippines, after Typhoon Haiyan.

03 – Access to clean drinking water is a major challenge in many rural areas of the Democratic Republic of Congo.

04 – UNEP is assisting post-conflict Afghani communities to build environmental resilience into planning.

05 – The unregulated charcoal trade has been identified as a major driver of deforestation in the Haiti-Dominican Republic border zone.

04

and the India Institute of Technology to test drinking water quality in high-risk areas such as the Katanga Copperbelt mining region, the epicentre of a cholera outbreak. Based on the results and other assessments, UNEP designed a water quality analysis and sampling strategy that will support the expansion of the project.

In countries such as South Sudan and Afghanistan, where cycles of violence have contributed to the degradation of the natural resource base, UNEP is working with the government to improve environmental management and promote sustainable livelihoods. UNEP has been supporting the South Sudan Ministry of Agriculture and Forestry to strengthen forest management on communal lands since 2012. In a country where deforestation rates are among the highest in the world, UNEP's pilot community forest project covers more than 2,000 square kilometres and engages more than 60,000 rural people. Initial assessments—prior to the violence that broke out at the end of 2013—indicated that forests are still being cleared for agriculture and charcoal. UNEP aims to address this problem by developing simple forest management plans. In Afghanistan, UNEP is testing field interventions to build environmental and climate resilience in three regions. Working directly with local communities, government,

and civil society partners, these interventions link rural livelihoods, climate change, disaster risk reduction, natural resource management, and village- and valley-level environmental planning.

Defusing tensions

UNEP also works to defuse tensions over natural resources before they can develop, and as such has been working with Haiti and the Dominican Republic to promote effective transboundary natural resource management.

Following the release of a [landmark study](#) on the 380-kilometre border region—carried out by the two governments, UNEP, the World Food Programme, and the United Nations Development Programme—Haiti and the Dominican Republic agreed to work together on countering environmental degradation along the border. The report identified four key issues: poverty and food insecurity on the Haitian side of the border; soil erosion, deforestation and a degraded marine environment; weak governance; and economic and resources inequalities. Recommendations—including increasing vegetation cover, promoting sustainable agriculture and regulating the charcoal trade—are to be implemented at an estimated cost of \$136 million over a five-year period.



05

“Haiti is keen to address the problems in the border area. We recognize that the transboundary charcoal trade, soil erosion, and a reduction in land productivity are complex challenges that need to be focused on urgently.”

Haitian Environment Minister
Jean François Thomas.



06

IN FOCUS

Supporting Livelihoods and Peace in North Darfur

OVER THE PAST half-century, Sudan's Darfur region has experienced rapid population growth, periodic drought and, since 2003, a devastating conflict that has forced over two million people to flee. The concentration of displaced people in nearby camps, coupled with the region's rapid population growth, has put further pressure on vital natural resources such as land, water and forest resources.

As this fragility and scarcity of resources contributed to conflict in the first place, worsening the natural environment that so many depend on is neither sustainable nor supportive of economic recovery and peace. In an effort to address this, UNEP, together with the European Union and the Darfur Regional Authority, in 2013 launched a three-year, €6.45 million project to support recovery by making natural resources more accessible to conflict-affected populations on a sustainable basis.

"Conflict over land for agriculture and pasture is one of the root causes of conflict in Darfur," said Remko Vonk, team leader of the Wadi El Ku Project (WEK). "Approaching this issue from the grassroots level is important to understand what is really happening."

The project initially aims to reach 86,000 residents from farming, pastoralist and agro-pastoralist communities in the wadi (a valley or seasonal riverbed). The project's inception phase has involved research to pin

down the challenges and design appropriate interventions. The problems, the project team found, are many and varied.

"Wadi water is not utilized properly as many of the water systems are outdated or non-existent," said Aisha Abdulsadiq Abdelmajied from the CBO Women's Development Network, which represents more than ten communities in Wadi El Ku. "Firewood availability is also an issue, requiring travelling long distances and often raising vulnerability risks for women."

According to Mohamed Bashar Abdulrahman from the Voluntary Network for Rural Development, these natural-resource problems are a primary reason for inter-community issues.

"Scarcity in terms of agricultural land has led to conflict within the communities. Limited water has also led to increased tensions within communities," he said. "Grazing land is also limited and is known to cause tension between pastoralists and farmers. Improved dam structures and better irrigation systems are vital for these communities."

Working with the International NGO Practical Action and a committee of Darfuri technical experts, UNEP is supporting a mix of soil, water and forest conservation measures that will boost sustainable natural-resource decision making in Wadi El Ku, and contribute towards economic and livelihood recovery. Hopes are high that a rapid impact can be made in Wadi El Ku and, if operating conditions and budget allow, the project will expand to reach many more people. 🌱





06 – A boy draws water in the Wadi El Ku region of Darfur.

07 – Water and land for agriculture and pasture is a major cause of conflict in Darfur.

08 – Women have a key role to play in rebuilding conflict-hit countries.

08

Also in Haiti, UNEP provides funding and technical support to EarthSpark International, an organization that improves access to affordable energy. Over 80 per cent of Haiti's population is off-grid, relying on candles, kerosene and torches with disposable batteries.

EarthSpark International formed a Haitian brand known as Enèji Pwòp (Clean Energy) to provide access to small-scale solar products and efficient cookstoves. Enèji Pwòp has, since 2010, expanded from one store to 102 retailers across the country, selling 6,751 products and benefitting nearly 35,000 Haitians. Solar-lighting products directly replace kerosene, candles and charcoal, resulting in household savings of over \$5 per month. With UNEP support, EarthSpark is aiming to establish an economically sustainable national-scale social enterprise with over 300 sales agents.

Policy, education and awareness

Complementing its on-the-ground initiatives, UNEP also works on policy, education and awareness. Last year saw the launch of several reports and initiatives that will improve understanding of how the environment can support community resilience and development, and promote sustainable peace.

In November, UNEP and partners released *Women and Natural Resources: Unlocking the Peacebuilding Potential*. Women in conflict-affected countries play a critical role in the use

and management of natural resources: they are the primary providers of water, food and energy at the household and community levels and are often the key producers and traders of natural resources. The report finds that not empowering women in natural resource management can undermine recovery from conflict. For example, research shows that giving women farmers the same access to assets and finance as men could increase yields on farms by up to 30 per cent. In conflict-affected countries, where women's roles in agriculture expand, this could raise agricultural output and strengthen recovery and food security.


To target root causes of disaster risk and promote environmental solutions, UNEP and the Centre for Natural Resources and Development (CNRD) [launched an innovative graduate course](#) on Disasters, Environment and Risk Reduction, funded by the European Union and Germany's Federal Ministry for Economic Cooperation and Development. The course combines ecosystems studies with disaster risk management and climate change adaptation and can be taught within a wide range of masters programmes. Within six months of the launch, 19 universities in 15 countries were delivering the course, including institutions in Indonesia, Egypt and Germany.

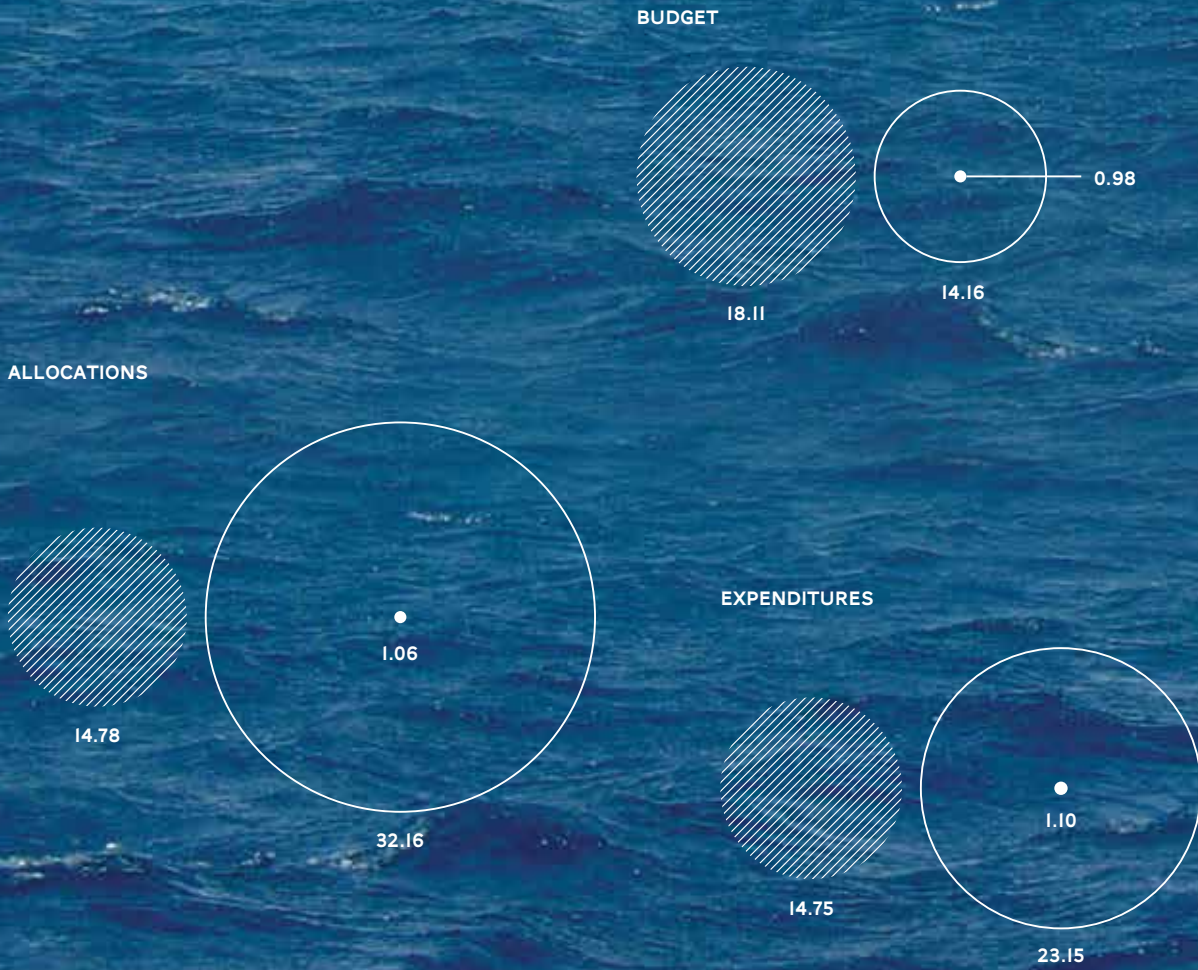
UNEP also launched a book entitled *The Role of Ecosystems in Disaster Risk Reduction* in collaboration with the United Nations University and the IUCN Commission on Ecosystem Management. The book is the

first of its kind to present an overview on the topic, combining both scientific research and practitioners' experiences. As a timely and comprehensive publication on enhancing climate and disaster resilience, the book has received endorsements from the World Bank as well as key civil society and academic institutions.

Finally, a [website](#) providing users with free access to dozens of case studies as well as teaching and training materials on the role of natural resources in peacebuilding was launched on the International Day for Preventing the Exploitation of the Environment in War and Armed Conflict.

In 2014, UNEP will continue promoting sound natural resource management to help minimize the risks of disasters and conflict around the world, and thus contribute to a more sustainable future.

These are just some of the highlights of the sub-programme, with many more initiatives under way. For more information, please consult the [Programme Performance Report 2012–2013](#) and the comprehensive list of projects under the Disasters and Conflicts sub-programme, which can be found on the Annual Report 2013 website: www.unep.org/annualreport/2013 






EXPENDITURE IN 2013

The 2013 total budget for the Ecosystem Management sub-programme was \$33.3 million. Total allocations issued were \$48 million. Total expenditure was \$39 million, 81 per cent of allocations.

All figures in \$ million

FUND SOURCES

-  Environment Fund
-  Trust Funds and earmarked contributions
-  Regular budget

ECOSYSTEM MANAGEMENT

Supporting human wellbeing through healthy ecosystems

RESULTS ACHIEVED AGAINST EXPECTED ACCOMPLISHMENTS

Achievement: ● Full ● Partial ○ Unachieved

EA (A) CAPACITIES TO INTEGRATE ECOSYSTEMS MANAGEMENT INTO DEVELOPMENT ●

Increased number of national and regional development planning processes that consider ecosystem services as a component for sustainable development with the assistance of UNEP

BASELINE (2011)	TARGET (2013)	ACTUAL
14	19	22

EA (B) BUILDING CAPACITIES TO USE ECOSYSTEM MANAGEMENT TOOLS ●

(i) Increased number of countries addressing ecosystem degradation through the application of UNEP-supported ecosystem management tools with the assistance of UNEP

BASELINE (2011)	TARGET (2013)	ACTUAL
10	20	23

(ii) Increased number of terrestrial or aquatic ecosystems managed to maintain or restore ecosystem services with the assistance of UNEP

BASELINE (2011)	TARGET (2013)	ACTUAL
8	18	17

EA (C) ECOSYSTEM SERVICES & FINANCING ○

Increased number of national and regional planning instruments that include commitments and targets to integrate ecosystem management at the national, regional and sectoral levels with the assistance of UNEP

BASELINE (2011)	TARGET (2013)	ACTUAL
6	16	6*

*Actual target value is the same as the baseline value due to absence of data

Ecosystems—the complex interdependent webs of living organisms and natural resources—play a critical role in supporting human wellbeing and driving economic growth through the valuable services they provide such as food, water for drinking and irrigation, pollination and climate regulation. Yet human society has systematically undermined these natural allies, treating forests, arable land and rivers as though they are inexhaustible.

As climate change begins to bite, altering weather patterns and putting more pressure on ecosystems, sustainable management of these natural resources will become ever more crucial. There is no doubt that the post-2015 sustainable development agenda cannot be achieved without healthy and functioning ecosystems. UNEP assists governments to ensure that their ecosystems are conserved and sustainably managed to ensure long-term human wellbeing and economic growth.



“There’s an old saying: We measure what we treasure. Though we profess to treasure biodiversity, most nations have yet to devote or acquire the resources needed to properly measure and assess it along with the value of ecosystem services. Correcting that is a priority assignment from the world community to IPBES.”

Dr. Zakri Abdul Hamid,
Chair of IPBES.

01

We measure what we treasure

A large part of UNEP’s work lies in providing science and support to assist governments in incorporating the value of nature—natural capital, as it is known—into economic and developmental policies, thus creating long-term sustainable growth through conservation of these resources.

Rio+20 placed natural capital higher on the global agenda in 2012, with UNEP and partners launching two high-profile initiatives: the *Inclusive Wealth Report*, which looked beyond the limited yardstick of Gross Domestic Product and showed that growth in many countries is coming at the expense of dwindling natural resources; and the *Natural Capital Declaration*, through which 40 financial institutions have now pledged to build into investment decisions an understanding of how nature props up the world economy.

The movement gained momentum in 2013 as the UNEP-hosted *Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)*, established just prior to Rio+20, moved towards implementation. IPBES, which now has 118 member states, established an ambitious five-year work programme and pledges were made totalling more than half of the

total \$43.5 billion required at a meeting in Turkey in December 2013. The body agreed to develop a set of fast-track assessments on pollination and food production, land degradation and invasive species, all of which will begin in 2014, as part of its mandate to provide decision makers with scientifically credible and independent information.

While IPBES is starting its work, *The Economics of Ecosystems and Biodiversity (TEEB)*, requested in 2007 by the G8 plus five developing countries, has already demonstrated the economic damage unsustainable management of natural resources inflicts on the global economy. A report by Trucost on behalf of the *TEEB for Business Coalition* in April 2013 estimated the top 100 environmental externalities (a consequence of an industrial or commercial activity that is not reflected in the cost of the goods or services involved) cost around \$4.7 trillion a year in terms of greenhouse gas emissions, loss of natural resources, and the loss of nature-based services.

Adding to the evidence base, a *February 2013 TEEB* study initiated by the Ramsar Convention on Wetlands revealed that half of the world’s wetlands have been destroyed since the beginning of the nineteenth century—to make way for intensive agriculture, urbanization and industrialization—because they are essentially economically invisible.

TOP FIVE ENVIRONMENTAL EXTERNALITIES



1. EASTERN ASIA
Coal power generation

Cost, impact: \$361 billion, greenhouse gases



2. SOUTH AMERICA
Cattle ranching and farming

Cost: \$312 billion, Land use



3. EASTERN ASIA
Iron and steel mills

Cost, impact: \$216 billion, greenhouse gases



4. SOUTHERN ASIA
Wheat farming

Cost, impact: \$214 billion, water



5. NORTHERN AMERICA
Coal power generation

Cost, impact: \$201 billion, greenhouse gases

Source: Natural Capital at Risk:
The Top 100 Externalities of Business

01 – Nature provides all manner of services to humanity, such as timber and nurseries for fish in mangrove ecosystems.

02 – Healthy ocean ecosystems are essential for sustainable development.



“La Montañona is the lung of Chalate, and the source of water for the 60,000 inhabitants who live in the seven municipalities that make up the community association of La Montañona. It is a treasure for Chalate and it is therefore a big responsibility for us to take care of the forest.”

Rosa Cándida de Menjivar, Mayor of Las Vueltas, La Montañona.

02

Attitudes are changing, however, thanks to the work of UNEP, TEEB and many others. Nations such as Brazil, Germany, the Netherlands, Norway and Sweden have initiated studies to assess and value their natural capital, while others such as Bhutan, Ecuador, Liberia, the Philippines and Tanzania have expressed interest in undertaking TEEB scoping studies. The Conference on the Gaborone Declaration for Sustainability in Africa in October agreed to begin assigning monetary value to the benefits provided by natural resources, including ecosystems such as forests, grasslands, and coral reefs. UNEP has begun implementing the development of a forest resource account in Gabon and intends to complete the work by December 2014.

Incentives can pay dividends

Payment for Ecosystem Services, incentives offered to farmers or landowners for sustainable land management, is an important tool for policymakers who wish to conserve their natural capital. UNEP work such as [The Project for Ecosystem Services \(ProEcoServ\)](#) in 2013 further built the case for how ecosystem services can be integrated with conventional development planning and processes through pilot projects in Trinidad and Tobago, Chile, Vietnam, South Africa and Lesotho. Also, in Senegal—where forest cover declined by 2.3 per cent, or

about 40,000 hectares per year, from 2000 to 2005—UNEP [helped design](#) a taxation scheme and compensation mechanism to contribute to sustainable management of forest ecosystems.

Water is life

So many of the world’s natural treasures lie in seas, oceans and inland water systems, and UNEP addresses the health of these systems in many different ways. For example, the UNEP [Regional Seas Programme](#) addresses the degradation of the world’s oceans and coastal areas through promoting their sustainable management and use. More than 143 countries participate in 18 Regional Seas Conventions and Action Plans, and in 2014 a host of awareness-raising events are planned to celebrate the 40th anniversary of the programme and accelerate the shift to healthier and more productive oceans. [The Global Programme of Action for the Protection of the Marine Environment from Land-based Activities \(GPA\)](#) in 2013 targeted major threats to the health, productivity and biodiversity of the marine and coastal environment resulting from human activities on land. Through efforts such as the Global Partnership on Nutrient Management, the Global Wastewater Initiative and the Global Partnership on Marine Litter, the GPA focused on reducing pollution from nutrients,

wastewater, and marine litter. Work in 2013 saw the Northwest Pacific Action Plan (NOWPAP) on Marine Litter strengthen regional cooperation among China, Japan, the Republic of Korea and Russia, and, with support from the GPA, develop three reports on marine litter, including [Best Practices for Prevention of Marine Litter Input from Land-based Sources in the NOWPAP Region](#).

The Spain-UNEP Partnership on Protected Areas in Support of LifeWeb, which contributes to the Aichi Biodiversity Target 11 of the Convention on Biological Diversity (by 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, conserved through protected areas), is another important initiative, and it has been active in Africa, Latin America and the Caribbean and Asia for three years. One 2013 highlight was a study in the Conservation Area La Montañona, El Salvador, which estimated the benefits of ecosystem services in the area at \$90 million and also trained farmers in environmentally friendly production methods.

In a step forward for the Aichi Biodiversity Targets, Haiti, after technical support from UNEP, last year created its first nine marine protected areas (MPA). Haiti was previously the only Caribbean country without a single marine protected area. The establishment of this new MPA network will also set the foundation to boost growth, reproduction and biodiversity as well as support the



03

IN FOCUS

Georgia leads the way in valuing its natural capital

GEORGIA, NESTLED AMONG the soaring Caucasus Mountains, is one of nature's gems. Spiked with towering snow-covered peaks, over 40 per cent of its territory is covered by forests and it boasts over 26,000 rivers, 260 lakes and bubbling thermal and mineral springs. Small wonder it belongs to one of 34 globally significant "biodiversity hotspots" identified by Conservation International.

These rich natural resources are not just pleasing to the eye, however. The ecosystem services they provide serve as a powerful engine of economic growth in sectors such as agriculture, energy, tourism, mining, and forestry. For example, Georgia's agriculture sector—so dependent on irrigation and fertile soil—employs 53 per cent of the workforce and is the main vehicle for rural development. Georgia recognized the importance of these services when it embraced The Economics of Ecosystems and Biodiversity (TEEB), partnering with UNEP and the WWF to carry out a [scoping study](#) that in October 2013 identified the dependence of these five key sectors on natural capital.

"Most of these services are considered free and, therefore, they are not seen or are undervalued in decision-making," said Khatuna Gogaladze, Georgia's Minister of Environment and Natural Resources Protection. "Unsustainable use of this capital, or investments aiming at short-term revenues, could cause significant loss and irreversible degradation of these natural resources, which in turn will definitely destroy the principles of sustainable development and prevent economic growth of the country in the long-term."

Ms. Gogaladze identified the main threats facing her country's ecosystems as destruction



04

and degradation of habitats by infrastructure development, logging, degradation of water systems, pollution and overgrazing—in line with the findings of the TEEB study. While Georgia's economy has enjoyed strong growth, posting a 6.2 per cent increase in Gross Domestic Product (GDP) in 2012 according to the National Statistics Office, the minister feels traditional growth indicators do not take the damage into account.

"The true value of natural capital and the important economic contributions of ecosystems are not fully captured by GDP, as ecosystem services are predominantly public goods with no markets and no prices," she said. "So, their loss is often not detected by our current economic indicators and incentive systems, and unsustainable use of natural resources can even result in an increase of a country's GDP while it actually becomes poorer."

"By including the value of the environment into wealth estimates and macroeconomic indicators, such as GDP, governments can ensure that their development strategies deliver sustainable and inclusive growth," she added. While the scoping exercise was only intended to set the stage for a full study, Ms. Gogaladze said the results had been incorporated in the National Biodiversity Strategy and Action Plan of Georgia for 2014-2020. Ms. Gogaladze said she expected TEEB to help develop policies oriented towards sustainable development and bring economic benefits in the medium- and longer-term.

"It is in the interests of both developed and developing countries to start incorporating natural capital into their national development policies and national accounts to make enlightened policy decisions," she said. "We think that Georgia can be an example for other countries to engage in the TEEB process." 🌱



05

development of sustainable blue tourism. UNEP will support the government to implement the new network.

Then UNEP through the Secretariat of the Coordinating Body on the Seas of East Asia (COBSEA) assisted Cambodia, China, Indonesia, Philippines, Thailand and Vietnam in facing challenges of coastal erosion and sea-level rise. The project developed a resource document, which helped countries introduce basic concepts of coastal and marine spatial planning and into existing procedures and processes.

The moral obligation

Preserving biodiversity and ecosystems is not just about maintaining economic value, as humanity has a moral responsibility to minimize the harm its expansion causes to other life forms. UNEP hosts three Multilateral Environmental Agreements (MEAs) that contribute to this goal: the Convention on Migratory Species, the Convention on Biological Diversity, and the Convention on International Trade in Endangered Species of Flora and Fauna. 2013 highlights from the conventions can be found on page 36 of this report.


Alongside the conventions, the [Great Apes Survival Partnership \(GRASP\)](#)—a global alliance headed by UNEP and the United Nations Educational, Scientific and Cultural Organization (UNESCO)—works to protect great apes and their forest homes in Africa and Asia. In March, GRASP launched *Stolen Apes: The Illicit Trade in Chimpanzees, Gorillas, Bonobos and Orangutans*, the first report to gauge the scale and scope of the black market. Stolen Apes estimated that nearly 3,000 great apes are lost from the wild each year through illegal activity, and established links to other international criminal networks. GRASP

also promoted conflict-sensitive conservation, spearheading projects such as the Tai-Sapo Trans-boundary Initiative between Liberia and Côte d'Ivoire to protect a forest complex that is home to the Western chimpanzee and other endangered species.

Looking forward

UNEP will in 2014 continue to advance global efforts to sustainably manage ecosystems and biodiversity through the advancement of existing initiatives, by for example publishing the next issue of the *Inclusive Wealth Report* to advance governments' understanding of the need for a paradigm shift in how economic growth is measured to include the value of natural capital.

New initiatives will also gather pace: for example on pastoralism, which has received little attention or investment despite being a key ecosystems land-management option practiced on vast tracts of land and contributing to regional and local development. UNEP is partnering with the International Union for Conservation of Nature and the World Alliance of Indigenous Peoples to catalyze policy reforms that will transit pastoralism to an important element of the green economy and allow it to fulfil its social, economic and environmental potential.

These are just some of the highlights of the sub-programme, with many more initiatives under way. For more information, please consult the [Programme Performance Report 2012–2013](#) and the comprehensive list of projects under the Ecosystem Management sub-programme, which can be found on the Annual Report 2013 website: www.unep.org/annualreport/2013 

22,218 great apes, mainly chimps, have been lost from the wild since 2005

Great ape habitat is being lost at the rate of 2–5 per cent annually

By 2030 less than 10 per cent of the current range will remain going by current trends

Source: *Stolen Apes: The Illicit Trade in Chimpanzees, Gorillas, Bonobos and Orangutans*



06

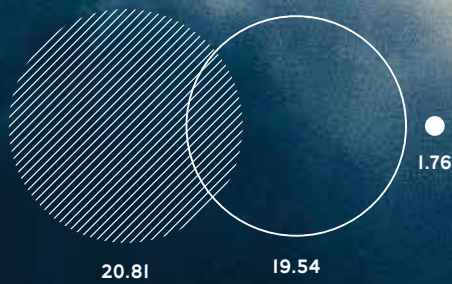
03 – Georgia's Environment Minister Khatuna Gogaladze is committed to valuing the nation's natural capital, which is under threat from infrastructure development and logging.

04 – Habitat degradation is a threat to Georgia's natural capital

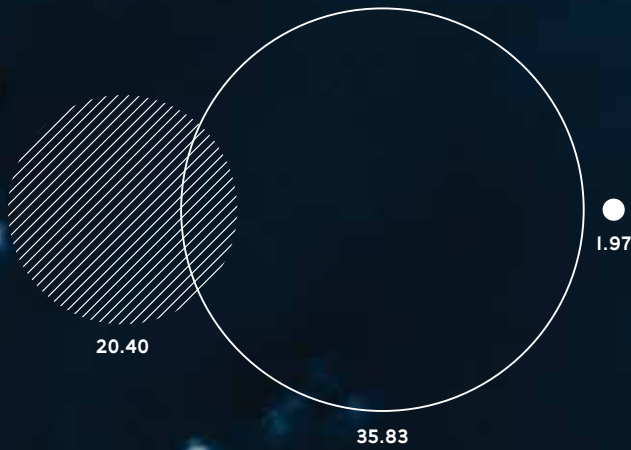
05 – Apes are disappearing from the wild at an alarming rate due to black market activity.

06 – Pastoralism is set to be a new area of focus in 2014.

BUDGET



ALLOCATIONS



EXPENDITURES



EXPENDITURE IN 2013

The 2013 total budget for the Environmental Governance sub-programme was \$42.1 million. Total allocations issued were \$58.2 million. Total expenditure was \$42.6 million, 73 per cent of allocations.

All figures in \$ million

FUND SOURCES

- Environment Fund
- Trust Funds and earmarked contributions
- Regular budget

ENVIRONMENTAL GOVERNANCE

Strengthening global governance in an interconnected world

RESULTS ACHIEVED AGAINST EXPECTED ACCOMPLISHMENTS

Achievement: ● Full ● Partial ○ Unachieved

EA (A) INTERNATIONAL POLICY SETTING ●

(i) Increased number of coordinated approaches to environmental issues targeted by UNEP that are addressed in a complementary manner by other United Nations entities and multilateral environmental agreements

BASELINE (2011)	TARGET (2013)	ACTUAL
10	13	14

(ii) Increased number of inter-agency partnerships and joint initiatives between UNEP and other United Nations entities to tackle complementary environmental issues

BASELINE (2011)	TARGET (2013)	ACTUAL
30	35	34

(iii) Increased number of coordination activities concerning environmental issues addressed under the Environmental Management Group, the Chief Executives Board for Coordination and United Nations Development Group that are being acted upon by partner United Nations entities

BASELINE (2011)	TARGET (2013)	ACTUAL
8	11	17

(iv) Increased number of joint initiatives undertaken by multilateral environmental agreement secretariats and UNEP showing progress towards measurable environmental outcomes

BASELINE (2011)	TARGET (2013)	ACTUAL
25	27	30

EA (B) STRENGTHENING ENVIRONMENTAL LAW ●

(i) Increased number of States implementing laws to improve compliance with environmental goals and targets as agreed at the relevant United Nations summits and conferences and the conferences of parties to multilateral environmental agreements with the assistance of UNEP

BASELINE (2011)	TARGET (2013)	ACTUAL
16	21	22

(ii) Increased number of international organizations that demonstrate progress towards measurable environmental outcomes after applying UNEP policy advice in the area of the environment

BASELINE (2011)	TARGET (2013)	ACTUAL
16	17	18

EA (C) INTEGRATING ENVIRONMENT INTO DEVELOPMENT ●

(i) Number of countries with United Nations development assistance frameworks that integrate environmental sustainability

BASELINE (2011)	TARGET (2013)	ACTUAL
66	76	91

(ii) Number of national and sectoral development policies and other national and sector policy instruments containing objectives, targets and actions to integrate pro-poor environmental sustainability

BASELINE (2011)	TARGET (2013)	ACTUAL
22	25	83

(iii) Number of countries with United Nations development assistance frameworks that show how development goals can be supported through environmental interventions

BASELINE (2011)	TARGET (2013)	ACTUAL
0	3	25

EA (D) SOUND SCIENCE FOR DECISION MAKING ●

(i) Increased number of UNEP-led or UNEP-supported environmental assessments cited in academic writings, leading newspapers and other relevant media

BASELINE (2011)	TARGET (2013)	ACTUAL
62	65	5,120

(ii) Percentage of researchers participating in UNEP environmental assessments who come from developing countries and countries with economies in transition

BASELINE (2011)	TARGET (2013)	ACTUAL
55%	56%	48%

Managing the planet's rich and diverse natural resources and managing environmental threats in a globalized world of interconnected nations, economies and people requires stronger global, regional, national and local responses involving a wide range of actors. Effective environmental governance at all levels is critical to prompt and coordinate responses and UNEP's mandate is to be the leading global environmental authority promoting and strengthening this governance. UNEP delivers expert scientific assessments, and assists member states to implement their environmental obligations and develop their policies, laws and institutions to place environmental sustainability at the heart of development.



01 – An iceberg in Disco Bay, Greenland. Arctic sea ice reached a record low, according to UNEP's Year Book 2013.

02 – A woman works in a seed bank in Nepal, where the Poverty Environment Initiative works to integrate pro-poor environmental sustainability into government policies.

01

International environmental governance stronger than ever

Encouragingly, there are clear signs that international environmental governance has never been higher on the agenda.

Following on from Rio+20, where Heads of State and governments agreed to strengthen and upgrade UNEP, the organization in 2013 held its first Governing Council under universal membership. At that landmark meeting, member states agreed to found a new United Nations Environment Assembly, which will meet for the first time in 2014. UNEP in 2013 also signed new cooperation agreements with China, Iran, Iraq and Russia to support their transitions to a green economy, and a four-year process supported by UNEP resulted in the first new Multilateral Environmental Agreement for almost a decade, the Minamata Convention on Mercury (see Harmful Substances chapter for details).

Bringing science to policymakers

Effective sustainable development policies and programmes are not created in a vacuum, however, and UNEP has for years been providing cutting-edge science to governments to assist them in bridging the science-policy gap. Despite UNEP's best efforts, access to quality data and sound knowledge has been constrained by many factors, including lack of investment and mechanisms for regular data sharing. In an effort to change this situation, UNEP has developed *UNEP Live*—a cutting-edge, dynamic platform to share environmental science and research in a timely manner. *UNEP Live* uses global services combined with regional, national and local data to identify key and emerging environmental issues and support integrated assessments and policy analysis.

UNEP Live is being developed in phases and will underpin UNEP's assessment work, such as its *Global Environment Outlook* series and the *UNEP Year Book*. The tenth edition of the Year Book focused on rapid change in the Arctic and minimizing chemical risks; highlighting, for example, that the extent of Arctic sea ice was at a record low in September 2012 and that a coordinated international response will be needed to deal with the repercussions of continued melt.

Strengthening multilateral environmental agreements

Once the science establishes the need for action, governments can act both unilaterally and in a more internationally coordinated fashion through Multilateral Environmental Agreements (MEAs), which serve to rally nations around issues of global importance. In 2013, UNEP targeted more coherence in international environmental governance by working to coordinate and integrate more closely the work of key MEAs. In the chemicals and waste arena, for example, progress was achieved through a country-led process that identified ways of strengthening long-term sound management of chemicals and waste through increased synergies in the Basel, Rotterdam and Stockholm conventions (see page 34 for details).

UNEP also works on enhancing the ability of states to implement their obligations to these conventions—including through the European Union-funded African, Caribbean and Pacific (ACP) MEA Implementation Project, which in late 2013 moved to its second phase. Work was carried out in relation to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS) to the Convention on Biological Diversity, which is yet to enter into force pending a certain number of



02

ratifications. UNEP also partnered with the China-ASEAN Environmental Cooperation Centre and ASEAN Centre for Biodiversity to bring ASEAN countries and China's national biodiversity strategies and action plans (NBSAPs) in line with Aichi Targets set in the Strategic Plan for Biodiversity 2011-2020 under the Convention on Biological Diversity. UNEP also provided technical assistance for the development and effective implementation of environmental law: for example, assisting South Sudan in developing general environmental legislation and sectoral law.

Aside from ongoing support to the MEAs it hosts, UNEP runs [InforMEA](#), an information portal that assists Parties to enhance implementation. The collaboration currently includes 43 international legal instruments from 17 MEA Secretariats.

UN working together to integrate environment into development planning

Support to nations on creating stronger environmental governance comes in many other forms, one of them a coordinated UN approach to include the environment in national development processes. One of the tools for doing so is the UN Development Assistance Framework (UNDAF), which allows UN agencies to work together at the country level to support national development priorities. In 2013, UNEP supported the development of 11 UNDAFs, provided assessments and related environmental data and information to five UN country teams, and provided capacity building for country teams and national partners in seven

other countries. For example: in Myanmar, UNEP's long-standing partnership with UN HABITAT resulted in a four-year joint programme on climate-change adaptation funded by the European Union.

Then the [Poverty-Environment Initiative \(PEI\)](#), a joint programme between the UN Development Programme and UNEP, continued to support the integration of pro-poor, environmental sustainability objectives into policy. PEI last year launched a new phase (2013-2017) featuring deeper and more effective engagement in the 20 existing PEI countries, together with new poverty-environment processes in Guatemala, Indonesia, Mongolia, Myanmar, Paraguay and Peru. More than 80 development plans and policies have been greened by countries working with PEI and policy mainstreaming has brought increased budgets for poverty-environment objectives in 11 countries. For example, Malawi has raised the budget of the Ministry of Environment and Climate Change Management by one third.

A third key inter-UN project, [The Environment and Security Initiative \(ENVSEC\)](#), last year marked ten years of working to transform common environmental risks in the pan-European region into cooperation and joint management of resources. More than 150 projects on environment and security have been implemented in Central Asia, Eastern Europe, South Eastern Europe and South Caucasus, and approximately 170 million people have benefited.

Efforts by governments and the UN system do not form the whole picture, however. Civil society, business and other sectors can and do contribute to environmental governance, and UNEP's Major Groups and Stakeholders Branch seeks to engage and draw upon the experience and knowledge of these important groups: some 288 organizations were accredited to UNEP through this branch by December 2013. Major Groups in 2013 sought to boost engagement with civil society even further, and is designing a new process to ensure that the stakeholder-engagement policy reflects the views, needs and aspirations of both governments and civil society. UNEP's Committee of Permanent Representatives started discussing the draft policy at the end of 2013 and it is expected to be endorsed by the UN Environment Assembly in June 2014.

The benefits of such engagement were made clear when more than \$450 million was pledged between investors, green businesses, governments and other parties at

“UNEP has accomplished establishing a high-level forum for discussing environmental problems; encouraged governments to take action by signing Multilateral Environmental Agreements on all major issues. Now the focus should shift towards enforcing these agreements, and here Supreme Audit Institutions have a role to play through their professional reviews of governments' budget execution and policy results.”

Alar Karis, Auditor General of Estonia.

the 2013 [Global South-South Development Expo](#), held at UNEP's headquarters in Nairobi. South-South cooperation is the exchange of resources, technology and knowledge between developing countries, and this cooperation was strong at the expo: agreements were made on projects ranging from building organic fertilizer factories and clean energy projects in Kenya to solar power plants in Uganda to green businesses for women in Egypt.

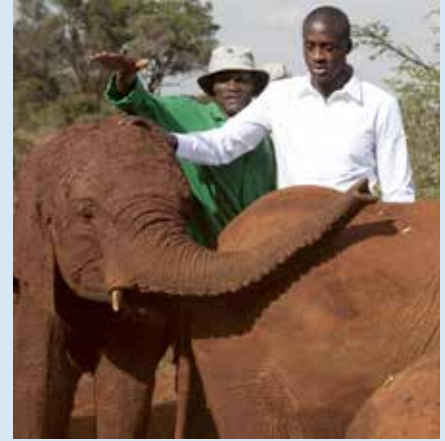
Linking law and the environment

Perhaps nothing better demonstrates the complex nature of environmental governance than the fight against environmental crime, which pulls together the need for good governance, appropriate legislation, respect for the rule of law, strong institutions such as customs and enforcement, and the implementation of, and adherence to, MEAs.

Work has been ongoing for many years—including through [the Green Customs Initiative](#), which in 2014 celebrates a decade of training customs officers in detecting the illegal trade in goods regulated under conventions—but rule of law for the environment is now gathering further acceptance and support at all levels. At Rio+20, over 250 Chief Justices, Attorneys General and Auditors General adopted a set



03



04

IN FOCUS

High-Profile Figures Join the Fight Against Illegal Wildlife Trade

TWO INTERNATIONAL STARS last year joined a coordinated international push to combat the illegal ivory trade that sees thousands of African elephants slaughtered each year, boosting efforts to reduce demand.

Yaya Touré, an inspirational footballer for Manchester City and his national side Côte d'Ivoire, was unveiled as a UNEP Goodwill Ambassador in October. He [immediately pledged to play his part](#) in fighting the recent spike in poaching.

"Côte d'Ivoire's national team is named 'The Elephants' after these magnificent creatures that are so full of power and grace, yet in my country alone there may be as few as 800 individuals left," Touré said. "Poaching threatens the very existence of the African elephant and if we do not act now we could be looking at a future in which this iconic species is wiped out."

Increased poaching and loss of habitats are decimating African elephant populations, especially in Central African countries, according to a report entitled [Elephants in the Dust – The African Elephant Crisis](#), released in Bangkok in March at the meeting of the Convention on International Trade in Endangered Species (CITES). [Elephants in the Dust](#)—produced by UNEP, CITES, the International Union for Conservation of Nature (IUCN), and the Wildlife Trade Monitoring Network (TRAFFIC)—says that the illegal ivory trade has tripled since 1998.

Criminal networks are responsible for the illegal trafficking of ivory between Africa and Asia. Large-scale seizures of ivory destined for Asia have more than doubled since 2009 and reached an all-time high in 2011. The UN estimates that over 17,000 elephants were illegally killed in monitored sites in 2011 alone. Overall figures may be much higher. The extent of the killings now far exceeds the natural population growth rates, putting elephants at risk of extinction, especially in Central and Western Africa.

The international community is looking at measures to address the crisis—including improved law-enforcement, strengthened national legislative frameworks, and training of enforcement officers. The African Elephant Action Plan, through the UNEP-coordinated African Elephant Fund, is running 11 projects covering 37 African range states, including activities such as constructing fences in natural reserves to mitigating human-elephant conflict, to training park rangers to combat violent poachers.

However, reducing demand provides another avenue for action. The [Wild and Precious exhibition](#)—which has been on show in Shanghai, China, and Nairobi, Kenya—is bringing the message that buying illegal ivory, and other wildlife products, encourages the deaths of many endangered species. Li Bingbing, one of China's most popular celebrities with 20 million followers on Chinese social media networks, also last year [lent her influence](#) to the cause.

"Many consumers in Asia do not realize that by buying ivory, they are playing a role in the illegal wildlife trade and its serious consequences," she said. "As global citizens, we need to take responsibility by learning more about the potential impacts of our lifestyle choices." 

“The theft of natural resources . . . is rapidly emerging as a new challenge to poverty eradication, sustainable development and a transition towards an inclusive Green Economy. INTERPOL along with United Nations bodies such as the UN Office on Drugs and Crime is at the forefront of the response to this challenge and UNEP is committed to supporting their work and the evolution of the rule of law into the realm of environment and sustainability.”

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

Wildlife crime alone is estimated to be worth \$15–20 billion annually and is recognized as the fourth largest global illegal trade behind illegal drugs, human trafficking and the trade in armaments.

Source: INTERPOL

03, 04 – UNEP Goodwill Ambassadors Li Bingbing and Yaya Touré travelled to Kenya to highlight the increase in elephant poaching.

05 – Transboundary environmental crime is a growing concern, and the Green Customs Initiative has trained officers in how to deal with many illegal substances of environmental concern.



05

of guiding principles for the Advancement of Justice, Governance and Law for Environmental Sustainability. Efforts to tackle environmental crime—be it the smuggling of ozone-depleting substances, the illicit trade in hazardous waste, or the trade in endangered species—have since moved forward apace.

In November 2013, for example, three international and regional networks joined forces for the first time to combat illegal shipments of chemicals and waste in Asia, including the Regional Enforcement Network for Chemicals and Waste (REN), the Environmental Network for Optimizing Regulatory Compliance on Illegal Traffic (ENFORCE), and the Asian Network for Prevention and Control of Illegal Transboundary Movement of Hazardous Wastes. Asia is one of the main destinations for dumping hazardous waste and the world’s largest producer and consumer of ozone-depleting substances. UNEP has improved the capacity of more than 500 frontline enforcement officials and enhanced cooperation for effective enforcement of chemical and waste MEAs at regional and national levels. UNEP supported the World Customs Organization’s DEMETER III Operation, which targeted illicit maritime consignments of hazardous and other waste from Europe and other regions to the Asia Pacific region. Over 7,000 metric tonnes of illegal waste were seized, including hazardous waste, used vehicle parts and tyres, textiles, and e-waste.

Additionally, UNEP and INTERPOL have been working together on the [Law Enforcement Assistance for Forests](#) project to combat illegal logging carried out by

organized crime. Cooperation deepened in other areas, such as the worrying increase in elephant poaching, during the first High-Level Compliance and Enforcement Meeting between the two bodies at UNEP headquarters in Nairobi.

Towards stronger governance

Over the next few years, UNEP expects the trend of improved environmental governance to continue and accelerate, particularly in the areas of chemicals and waste and environmental crime. Speedy ratification of the Minamata Convention will allow the international community to pull together and end the health threats posed by mercury, and the first-ever UN Environment Assembly has agreed to place the illegal trade in wildlife and timber high on its agenda—a clear signal that governments are looking beyond national borders to think globally on this key issue. Stronger governance will require the support and expertise of governments, organizations, the private sector and committed individuals. UNEP, moving into a period in which it is expected to have expanded resources and influence, aims to redouble its efforts to bring together these diverse actors and achieve the goal of a world working as one towards conserving the environment.

These are just some of the highlights of the sub-programme, with many more initiatives under way. For more information, please consult the [Programme Performance Report 2012–2013](#) and the comprehensive list of projects under the Environmental Governance sub-programme, which can be found on the Annual Report 2013 website: www.unep.org/annualreport/2013

UNEP PARTNERSHIPS IN THE UN SYSTEM

ENVIRONMENT MANAGEMENT GROUP

Established in 2001, the **Environment Management Group** is the UN-wide system 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 2013 include Biodiversity, Green Economy, and UN Environmental Management. Chemicals management was approved as a new issue for cooperation for 2014–2015.

THE SUSTAINABLE UN FACILITY

The Sustainable UN facility (SUN) was created in 2008 to support the implementation of the UN Climate Neutral Strategy, which asks UN entities to measure and reduce greenhouse gas emissions and to consider common options for offsetting. In 2013, SUN obtained approval for a Strategic Plan on Environmental Sustainability Management (EMS) in the UN by providing the business case for environmental management in the UN system.

As a result, in April 2013 the UN's highest coordination system, the Chief Executives Board, agreed that all UN entities should develop and implement a plan on EMS. Since 2007, virtually all UN entities have undertaken actions to reduce their environmental footprint, more than 10 UN organizations have an emission reductions strategy in place, six organizations are partial or fully climate neutral, and five have taken steps towards implementing an EMS.



Note: Text below the organization name refers to the area of cooperation with UNEP, not to the organization's full mandate.

UNEP-ADMINISTERED GLOBAL CONVENTIONS IN 2013

CONVENTION ON MIGRATORY SPECIES AND ITS INSTRUMENTS

The Convention on Migratory Species (CMS) in 2013 worked on a series of initiatives to conserve terrestrial, aquatic and avian migratory species. In India, for example, CMS assisted the Indian government to stop the massive hunting of the Amur falcon by tagging the birds to track their migration to southern Africa and raise awareness among local communities of the international importance of the stopover site in Nagaland. Another key project was a study outlining how to make railways and fences more permeable to the critically endangered Saiga antelope in Central Asia. The species' numbers plummeted from one million to less than 50,000 in the 1990s, and recovery is being hampered by infrastructure projects blocking migration routes.

Looking forward, a **Single Species Action Plan** for the conservation of the Grey crowned crane is being developed under the African-Eurasian Waterbird Agreement (AEWA). The birds, found in 15 eastern and southern African countries, have faced a dramatic decline over the past decades and are now listed as endangered on the IUCN Red List.

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES

In a **defining moment of the 40-year history** of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the 16th meeting of the Conference of the Parties agreed new ways to ensure legal, sustainable and traceable trade in species of precious fauna and flora. The Conference brought hundreds of new timber species under CITES controls, along with a number of tortoises and turtles and a wide range of other plant and animal species. Significantly, five shark species and all manta rays were also brought under the global CITES trade regulation regime. On an operational level, the CITES Strategic Vision was extended from 2013 to 2020. It was also amended to include references to the contribution that CITES will make towards the implementation of the relevant outcomes of Rio+20 and achievement of the Strategic Plan for Biodiversity 2010–2020, including relevant Aichi Biodiversity Targets (adopted at COP10 of the Convention on Biological Diversity). Finally, the United Nations General Assembly proclaimed 3 March, the day of the adoption of CITES, as World Wildlife Day to celebrate and raise awareness of the world's wild fauna and flora.

THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEplete THE OZONE LAYER

Adopted in 1987, the Montreal Protocol is hailed as the most successful treaty in UN history, having been universally ratified and having met its targets. Implementation of the Montreal Protocol has resulted in the reduction of global production and consumption of ozone-depleting substances (ODS) by over 98 per cent. The remaining ODS, mainly hydrochlorofluorocarbons (HCFCs), will be phased out over the next two decades in favour of alternatives that are both ozone and climate friendly. Since ozone-depleting substances are also greenhouse gases, it has been estimated that the Montreal Protocol resulted in cutting emissions equivalent to more than 135 billion tonnes of CO₂. In this context, the parties are considering the management of climate damaging hydrofluorocarbons (HFCs), which are used as replacements for some HCFCs. Global observations continued to show decreases in levels of ODS in 2013.

With implementation of the Protocol's provisions, the ozone layer is expected to return to pre-1980 levels by around the middle of this century. With this, the global community will avoid millions of cases of skin cancer and eye cataracts, in addition to saving trillions of dollars in healthcare.

THE CONVENTION ON BIOLOGICAL DIVERSITY

In 2013, achievement of the goals of the Strategic Plan for Biodiversity 2011-2020 and its **Aichi Targets** continued in the context of the **United Nations Decade on Biodiversity**. Progress was made towards entry into force of the **Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization** to the Convention on Biological Diversity. In 2013, 15 more countries deposited their instrument of ratification.

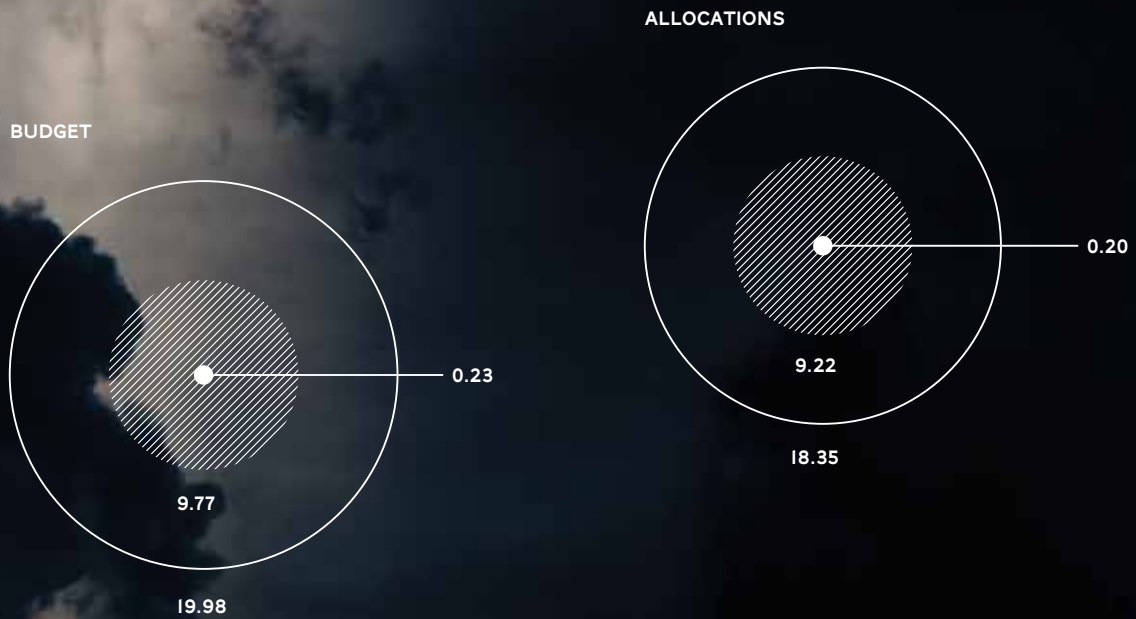
The Protocol comes into force 90 days after the deposit of the 50th instrument of ratification. 2013 also marked the tenth anniversary of the entry into force of the **Cartagena Protocol on Biosafety**. Its Nagoya – Kuala Lumpur Supplementary Protocol on Liability and Redress reached 20 ratifications the halfway mark for entry into force. Support to the Strategic Plan for Biodiversity 2011-2020 was further developed with the emergence of the **NBSAP Forum**. This joint initiative of the Secretariat of the CBD, UN Development Programme and UNEP provides an online space for the exchange of experiences around the creation and updating of National Biodiversity Strategies and Action Plans (NBSAPs). The **Biodiversity Champions Initiative**, launched in 2012, picked up speed with seven more initiatives added, including a pledge by the Maldives to work towards attaining Biosphere Reserve status.

BASEL, ROTTERDAM AND STOCKHOLM CONVENTIONS

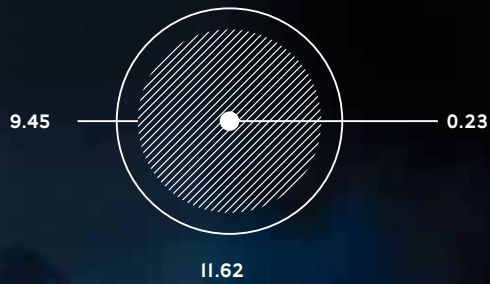
In a milestone of the synergies process between multilateral environmental agreements, the Basel, Rotterdam and Stockholm conventions held their first-ever joint ordinary meetings of the parties in April and May 2013 to foster cooperation and collaboration between the conventions.

The conferences of the parties of the three conventions worked in joint contact groups to promote implementation and strengthen the management of harmful substances throughout their life-cycle. They took more than 50 substantive decisions to fortify protection to health and environment offered by the conventions. The Parties to the Stockholm Convention agreed to list hexabromocyclododecane (HBCD) in Annex A to the Convention, making it the 23rd persistent organic pollutant to be listed. The Parties to the Basel Convention adopted a framework for the environmentally sound management of hazardous and other wastes, and agreed to develop technical guidelines on transboundary movements of e-waste, the fastest growing hazardous waste stream globally. The Parties to the Rotterdam Convention agreed to add the pesticide Azinphos-methyl and the industrial chemicals PentaBDE, OctaBDE and PFOS to Annex III of the Convention. ♻️

UNEP also administers 6 of the 18 Regional Seas Conventions, which are covered elsewhere in this report.



EXPENDITURES






EXPENDITURE IN 2013

The 2013 total budget for the Harmful Substances and Hazardous Waste sub-programme was \$30 million. Total allocations issued were \$27.8 million. Total expenditure was \$21.3 million, 77 per cent of allocations.

All figures in \$ million

FUND SOURCES

-  Environment Fund
-  Trust Funds and earmarked contributions
-  Regular budget

HARMFUL SUBSTANCES & HAZARDOUS WASTE

Ensuring sound management of chemicals and hazardous waste

RESULTS ACHIEVED AGAINST EXPECTED ACCOMPLISHMENTS

Achievement: ● Full ● Partial ○ Unachieved

EA (A) SOUND MANAGEMENT AT NATIONAL LEVEL ●

(i) Increased number of countries and stakeholders implementing policies in sound management of chemicals and hazardous waste with the assistance of UNEP

BASELINE (2011)	TARGET (2013)	ACTUAL
162	172	171

(ii) Increased number of countries that have incentives, including market-based incentives and business policies and practices promoting environmentally friendly approaches and products aiming at reduced releases of and exposures to harmful chemicals and hazardous waste with the assistance of UNEP

BASELINE (2011)	TARGET (2013)	ACTUAL
49	56	49

(iii) Increased support to developing countries to assess, manage and reduce risks to human health and the environment posed by chemicals and hazardous waste

BASELINE (2011)	TARGET (2013)	ACTUAL
65	76	76

EA (B) INTERNATIONAL POLICY AND TECHNICAL ADVICE ●

(i) Increased number of Governments and other stakeholders showing reductions in harmful substances and hazardous waste as a result of applying UNEP guidelines and tools on assessment, management and replacement of hazardous chemicals and waste management with the assistance of UNEP

BASELINE	TARGET	ACTUAL
40	72	72

(ii) Increased number of international subregional and regional organizations applying UNEP guidance on harmful substances and hazardous waste with the assistance of UNEP

BASELINE	TARGET	ACTUAL
0	8	10

(iii) Increased number of intergovernmental, regional and national policymaking processes that consider, address and monitor the environmental, economic, social and human health impacts of harmful substances and hazardous waste with the assistance of UNEP

BASELINE (2011)	TARGET (2013)	ACTUAL
98	108	240

EA (C) POLICY AND CONTROL SYSTEMS FOR HARMFUL SUBSTANCES OF GLOBAL CONCERN ●

(i) Agreement is reached at the international level on the means of addressing mercury with the assistance of UNEP

BASELINE (2011)	TARGET (2013)	ACTUAL
N/A	1	1

(ii) Increased number of countries with control systems and policies being implemented to meet their international obligations with regard to harmful substances and hazardous waste with the assistance of UNEP

BASELINE (2011)	TARGET (2013)	ACTUAL
498	560	529

(iii) Increased number of countries showing reductions in harmful substances and hazardous waste as a result of their control systems and policies with the assistance of UNEP

BASELINE (2011)	TARGET (2013)	ACTUAL
20	30	76

Human society is increasingly dependent on chemicals in products for economic development and improving livelihoods. However, such gains must not come at the expense of human health and the environment. Unsustainable use, production and disposal of chemicals can also hinder development by affecting water supplies, food security and productivity. Reducing hazards and improving chemicals management are undoubtedly an essential component of the transition to an inclusive Green Economy.

UNEP works towards these goals through providing scientific assessments, bringing together the international community to address global challenges, and assisting governments to develop appropriate policies for monitoring and controlling harmful substances and hazardous waste.

Mercury falling

UNEP in 2013 made progress across the board on harmful substances and hazardous waste, in particular through its instrumental role in delivering the first new global convention on environment and health for close to a decade—not only setting the stage for concerted action on a major challenge, but delivering fresh momentum to intergovernmental cooperation on the environment.

After four years of negotiations, sparked at UNEP's 25th Governing Council meeting in 2009, 92 countries and the European Union signed up to the [Minamata Convention on Mercury](#), which aims to reduce emissions of the toxic metal and phase out products that contain it. Mercury is a powerful neurotoxin that, once emitted, causes global contamination of ecosystems, animals and the human food chain. The treaty, adopted in Kumamoto, Japan on October 10, is named after the place where thousands of people were poisoned by mercury-tainted industrial wastewater in the mid-20th century, leading to crippling symptoms that became known as Minamata disease. The major highlights of the convention include a ban on new mercury mines, the phase-out of existing ones, control measures on air emissions, and international regulation of informal artisanal and small-scale gold mining. The United States was the first to ratify the treaty, the initial step towards the 50 ratifications needed to bring the treaty into force.

UNEP has been actively engaged in bringing the science of mercury poisoning to policy implementation for a decade—from its role in the [Global Mercury Partnership](#), which galvanizes on-the-ground action, to convening the Minamata negotiations to reports such as the [Global Mercury Assessment](#)—and so fittingly hosts the secretariat for the new convention.

Providing the science, policy and implementation support needed to turn the convention into concrete action will be a key part of UNEP's work in 2014 and beyond. UNEP is already tackling the challenge of reducing mercury in many of the ways specified in the convention: working on the phase down of dental amalgam in East Africa, assisting Panama and Mexico to [deliver national action plans](#) on environmentally sound waste management and interim storage of excess mercury, and assisting small-scale gold miners in Indonesia to reduce their mercury usage.

UNEP'S 2013 GLOBAL MERCURY ASSESSMENT

Coal burning and deforestation release about 735 tonnes of mercury annually to air and water

Production of metals (include mining, smelting and production) releases to air about 348 tonnes per year

Small-scale gold mining accounts for over 35 per cent of mercury emitted into the air and threatens the health of 10-15 million miners in more than 70 countries

Man-made releases to air and water have doubled mercury in the top 100 metres of the world's oceans over the last 100 years

"The Minamata Convention will protect people and improve standards of living for millions around the world, especially the most vulnerable."

United Nations Secretary-General Ban Ki-moon.



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Taking the lead on lead

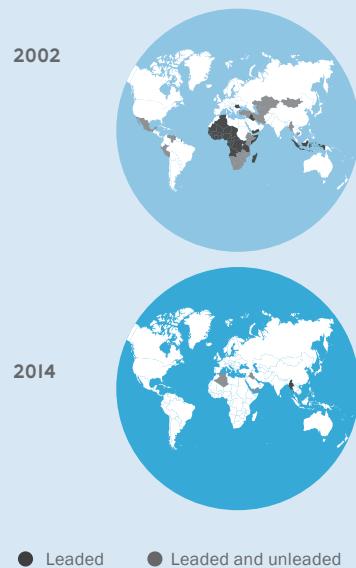
UNEP's history has shown that international cooperation, through global partnerships and conventions such as Minamata, can bring rapid and remarkable results. For example UNEP, through the [Partnership for Clean Fuels and Vehicles \(PCFV\)](#), has supported the near elimination of leaded fuels worldwide. When the PCFV was launched in 2002, about half of the countries around the world still used leaded petrol. As of October 2013, this had dropped to only six.

In 2013, UNEP entered into an agreement with a regional partner to develop a clean fuels road map for West Asia and North Africa, which includes eliminating lead from petrol in Algeria, Yemen and Iraq. Algeria stopped leaded petrol production in two of its refineries in 2013, with the third expected to halt production in 2015.

Lead, however, remains a concern. It has been over 90 years since the League of Nations called for a ban on lead in paint, yet children and pregnant mothers in the

GLOBAL LEAD PHASE OUT

When the PCFV was launched in 2002, about half of the countries around the world still used leaded petrol. As of October 2013, this dropped to only six.





02

developing world are still exposed to high levels of the toxin through unsafe paints.

The [Global Alliance to Eliminate Lead Paint \(GAELP\)](#), a joint initiative between UNEP and the World Health Organization, in October organized the International Lead Poisoning Prevention Week of Action to raise awareness of the issue through dozens of events across the globe. As part of the event, a [UNEP study](#) revealed that enamel decorative paints in developing countries often contain dangerous levels of lead. Most paints tested did not meet regulatory standards established in highly industrialized countries and some were found to contain lead levels between 16 and 160 times the most-common regulatory limit of 600ppm.

While this highlights the scale of the challenge, it is important to note that 30 nations have phased out lead paint and the knowledge imparted by this report has alerted policymakers to the need for further action. GAELP has set a target of 70 countries by 2015, and work will continue apace to reach this goal by raising awareness, encouraging governments to legislate against lead paints and promoting alternatives to lead.

Sound management of chemicals

Tackling the chemicals challenge is not just about discouraging their use, however. Most chemicals are around to stay and so need to be managed. At the World Summit on Sustainable Development in 2002, governments agreed that by 2020 chemicals should be used and produced in ways that minimize adverse effects on human health and the environment. Over the past two years, UNEP has assisted over 20 countries in the sound management of chemicals. However, the consistent and adequate

“Lead poisoning remains the number one environmental health concern for children globally, and lead paint is a major flashpoint for children’s potential lead poisoning.”

Dr. Maria Neira, WHO Director for Public Health and Environment.

TAKING THE LEAD ON LEAD

Childhood lead exposure contributes to 600,000 new cases of intellectual disabilities each year

An estimated 143,000 deaths result from lead poisoning each year

Economic impact of childhood lead exposure: 977 billion international dollars per year for all low- and middle-income countries

Source: World Health Organization

01 – UNEP Executive Director Achim Steiner and Japanese Minister of Environment Nobuteru Ishihara lay flowers at the Opening of the Diplomatic Conference for the Minamata Convention on Mercury.

02 – Kenyan graffiti artists painted murals using lead-free paint at UNEP’s headquarters during the International Lead Poisoning Prevention Week of Action.

03 – Some 3.5 billion people are without access to crucial waste management services, creating a significant source of human exposure to chemicals and other hazardous materials.



03

funding required to manage chemicals has until now been lacking. At UNEP’s Governing Council in February 2013, after a complex three-year process of uniting member states, governments officially endorsed an integrated approach to financing the sound management of chemicals and waste. This was a breakthrough in global efforts to increase the political priority accorded to the issue; UNEP expects to see rapid increases in sustainable and adequate financing, and aims to increase the number of countries that have appropriate legislation and economic instruments in place.

One of the key bodies working to attain the 2020 goal is the UNEP-hosted [Strategic Approach to International Chemicals Management \(SAICM\)](#). Through its Quick Start Programme (QSP), SAICM has supported 104 countries in their efforts to improve chemical safety. As of December 2013, the QSP Trust Fund had received pledges of \$35.7 million and sponsored 159 projects. As a result, nations such as Cambodia, Uganda, and the Former Yugoslav Republic of Macedonia have incorporated the sound management of chemicals into national development plans and budgets. Also, last year UNEP worked with Sri Lanka under the programme to improve the country’s Chemical Accident Prevention and Preparedness following three high-impact industrial chemical accidents. UNEP is also working with the International Council of Chemical Associations (ICCA), and in 2013 started pilot projects to promote chemical safety management in Africa. Ghana and Kenya will serve as the pilots for two years, and the projects have already attracted widespread interest from the public, private and academic sectors.

Work is also carried out through the Basel, Rotterdam and Stockholm conventions on



04

IN FOCUS

Reducing Mercury Impacts in Small-Scale Gold Mining

DESPITE KNOWING FULL WELL the dangers of mercury, millions of small-scale gold miners across the globe continue to use the metal to separate gold from ore—usually because they have little other choice.

The mercury is mixed into ore and combines with the gold in a compound that can easily be scooped out and squeezed into a small bar of amalgam. This is then burned so that the mercury evaporates, leaving behind the gold. The dangerously toxic mercury vapour is often inhaled by the miners and their families, since these activities are usually conducted in their homes, or by the owners of gold shops who will process the amalgam for the miners before buying.

“When you burn off the amalgam ... your head will feel like it’s going to explode and you’ll find it hard to breathe,” says Bapak Amit, a gold miner from Central Kalimantan, Indonesia.

However, introducing miners to simple recycling technologies can dramatically reduce the impact of mercury on human health and the environment. Amit is one of many who have benefited from a joint project between UNEP, the Blacksmith Institute and Yayasan Tambuhak Sinta, with funding from the US Environmental Protection Agency, to train miners to use better recovery techniques.

The project also carried out awareness-raising events on the dangers of mercury and brought together representatives from across the sector and government to develop a national

strategic plan. The end result is that mercury releases were reduced by an estimated 3,000 kg in one year.

Amit now uses a retort, a device which takes the mercury vapour up through a pipe and allows it to condense in a water tray. This means the toxic fumes are not released and the mercury can be used many times over, protecting the health of the miner and also bringing financial benefits.

“I wasn’t even afraid of burning the amalgam inside my shed. It felt safe, as there were no symptoms like feeling hard to breathe,” says Amit. “If there’s smoke it’s just the heat, the mercury stays in.”

In Indonesia, mercury costs 1,800,000 Rupiah (about \$150) per kilogramme. According to Abdul Samsuri, who runs a gold shop called Toko Huda, a kilogramme of amalgam can contain up to 500g of mercury. On average, he recovers around one kilogramme of mercury each month from the amalgam he burns.

Samsuri, who supports his wife and two daughters through his business, used to suffer from frequent headaches before beginning to use a water-box condenser, which traps the mercury fumes in a plastic box and condenses them back into the liquid form.

“It’s good for our health and the mercury can be recycled,” he says. “If they (miners) want to buy it we sell it cheaper; if they ask for it free, we give it to them.”

The savings in mercury point to the huge benefits that could be achieved by making such technologies an integral part of the small-scale mining process across Indonesia and the globe, thus helping nations to meet their obligations under the Minamata Convention. ♻️



04 – An Indonesian woman pans for gold while her family looks on.

05 – Indonesian customs officers inspect an illegal shipment of ozone-depleting substances.

05

THE MONTREAL PROTOCOL AND OZONATION

The Montreal Protocol on Substances that Deplete the Ozone Layer is widely considered to be the most successful international environmental agreement, reducing global production and consumption of Ozone Depleting Substances (ODS) by over 98 per cent.

Created in 1991, UNEP's Ozone Action Programme assists 148 developing countries and countries with economies in transition to comply with the Montreal Protocol.

In the early 1990s, a black market trade in Chlorofluorocarbons (CFCs) and other ODS arose as an unintended result of Montreal Protocol controls. As the reduction schedules for HCFCs and methyl bromide draw near, and as worldwide supplies of these chemicals become scarce, the incidence of smuggling is expected to rise again.

Hydrochlorofluorocarbons (HCFCs) have global warming potentials between 700 and 2,300 times that of CO₂.

The UNEP Ozone Action Informal Prior-Informed Consent (iPIC) mechanism began in 2006 to prevent illegal and unwanted trade in ODS by improving implementation of national licensing systems. There are 89 members of iPIC, including major producing/exporting countries such as China and those in the European Union.

In 2013, UNEP Ozone Action launched the iPIC online secure platform to provide participating countries with real-time access to iPIC data.

Of the 138 cases reported through iPIC in 2012, more than 30 per cent were rejected, preventing illegal or unwanted trade in almost 1000 tonnes of ODS, including CFCs, HCFCs and carbon tetrachloride.

chemicals and hazardous wastes. UNEP hosts the joint secretariat for the conventions and assists nations to meet their obligations (highlights of the conventions can be found in the section on Multilateral Environmental Agreements on page 34).

Additionally, waste streams are a significant source of human exposure to chemicals and other hazardous materials, yet some 3.5 billion people are without access to crucial waste management services. UNEP's International Environmental Technology Centre (IETC) and the UN Institute for Training and Research in 2013 released *The Guidelines for National Waste Management Strategies: Moving from Challenges to Opportunities* to drive the process of rectifying this situation, and has already begun implementing the guidelines in Asia. Cambodia and Myanmar have already requested IETC's assistance in developing their respective national waste management strategies, and many others are under consideration.

Staying on the ball


While tackling emerging and major challenges, it is also important not to lose momentum on issues that have been around for years and are perceived to have been largely solved.

The levels of ozone-depleting substances in the upper stratosphere have stopped increasing as a result of 26 years of successful work from the UNEP-hosted Montreal Protocol on Substances that Deplete the Ozone Layer. Chlorofluorocarbons, which caused serious damage, were phased out in 2010; however, the Protocol still requires the phase out of hydrochlorofluorocarbons (HCFCs), another culprit commonly used

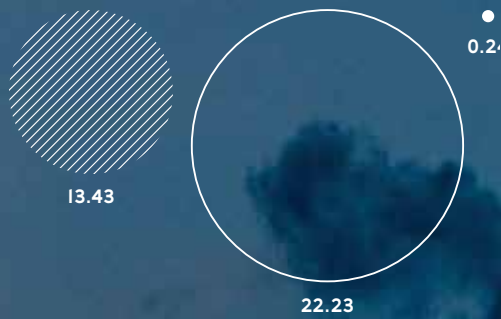
as a refrigerant in air-conditioners, as well as other substances such as methyl bromide.

Under the [Ozone Action Compliance Assistance Programme](#), UNEP runs a number of initiatives aimed at assisting developing countries to meet their obligations. In West Asia, for example, UNEP and the UN Industrial Development Organization are promoting low-Global Warming Potential Refrigerants, while in Jamaica UNEP is working with the government to replace methyl bromide and ensure Jamaica's full compliance with the 2015 deadline.

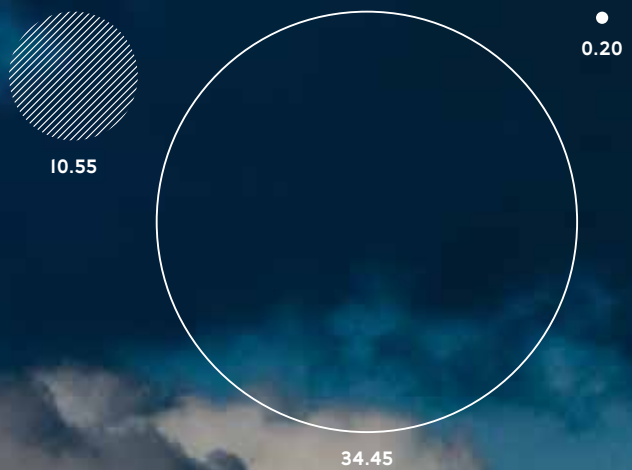
UNEP will continue to stride forward in tackling the many issues currently facing the world in managing chemicals, and keep a watchful eye on emerging issues to incorporate them into its programme of work.

These are just some of the highlights of the sub-programme, with many more initiatives under way. For more information, please consult the [Programme Performance Report 2012–2013](#) and the comprehensive list of projects under the Harmful Substances and Hazardous Waste sub-programme, which can be found on the Annual Report 2013 website: www.unep.org/annualreport/2013 

BUDGET



ALLOCATIONS



EXPENDITURES






EXPENDITURE IN 2013

The 2013 total budget for the Resource Efficiency sub-programme was \$36 million. Total allocations issued were \$45.2 million. Total expenditure was \$26.6 million, 59 per cent of allocations.

All figures in \$ million

FUND SOURCES

 Environment Fund
  Trust Funds and earmarked contributions
  Regular budget

RESOURCE EFFICIENCY

Accelerating the transition to resource-efficient societies

RESULTS ACHIEVED AGAINST EXPECTED ACCOMPLISHMENTS

Achievement: ● Full ● Partial ○ Unachieved

EA (A) BRIDGING SCIENCE AND POLICY ●

Increased number of UNEP-associated scientific assessments, analytical reports and scarcity alerts used and referenced by a specified number of target Governments and public and private sector organizations

BASELINE (2011)	100,000 downloads, 25 references
TARGET (2013)	200,000 downloads, 50 references
ACTUAL	1,000,000 downloads, 145 references

EA (B) TAKING POLICY ACTION ●

Increased number of Governments and other public institutions implementing policies, economic instruments and initiatives for resource-efficiency improvements and introducing environmentally sustainable aspects into their economies

BASELINE (2011)	TARGET (2013)	ACTUAL
10	20	21

EA (C) INCREASING SUSTAINABLE BUSINESS PRACTICES IN KEY SECTORS ●

Increased number of businesses adopting and investing in resource-efficient management practices and technologies and cleaner and safer production methods

BASELINE (2011)	TARGET (2013)	ACTUAL
60	70	82

EA (D) STIMULATING MORE SUSTAINABLE PRODUCTS AND LIFESTYLES ●

(i) Increase in the sales of targeted resource efficient and environmentally friendly products, goods and services

BASELINE (2011)	\$52 billion (third party certified organic foods) 160,000 certifications with ISO 14001
TARGET (2013)	\$60 billion (third party certified organic foods) 180,000 certifications with ISO 14001
ACTUAL	\$62.9 billion 250,972 certifications with ISO 14001 as of 2011

(ii) Increased number of Governments, companies and consumer groups with access to and making use of recognized tools and communications made available through UNEP-supported initiatives when making purchasing decisions with respect to more resource efficient and environmentally friendly products, goods and services

BASELINE (2011)	TARGET (2013)	ACTUAL
20	40	59

Humanity's current production and consumption patterns are depleting the planet's resources and are in part responsible for significant environmental degradation that will impact long-term economic growth and sustainability, and contribute to global inequalities. With the population set to grow from seven to nine billion by 2050, bringing increased demand, inefficient and wasteful production and consumption of natural resources cannot continue.

UNEP's Resource Efficiency sub-programme aims to ensure that natural resources are exploited in a more environmentally sustainable way, decoupling them from economic growth and optimizing the benefits to society.



01

Boosting the evidence base

In order to provide evidence on the benefits of moving towards resource efficiency, science needs to give a better understanding of how production and consumption patterns impact our resources and offer more sustainable options. Much of this stronger science comes from the [International Resource Panel \(IRP\)](#), established in 2007. From 2012 to 2013 alone, more than 120 references to the use of IRP findings by governments, banks and regional organizations were recorded, highlighting the panel's relevance.

The IRP in 2013 released three scientific assessments to prompt further policy action. *City-level Decoupling: Urban Resource Flows and the Governance of Infrastructure Transitions* showed how investing in sustainable infrastructure and resource-efficient technologies in cities can deliver economic growth with lower rates of environmental degradation and greenhouse gases, and improved wellbeing. *Metal Recycling: Opportunities, Limits, Infrastructure and Environmental Risks and Challenges of Anthropogenic Metals Flows and Cycles* laid out how improved recycling practices of complex products containing metals are needed to cut primary mining's environmental impacts and significant energy consumption. The International Resource panel findings are complemented by regional and national assessments on material flows and resource productivity, with UNEP reports on China and Latin America and the Caribbean released in 2013.

The right tools in the right hands

Even with the right information, decision makers need access to the appropriate tools and methodologies to develop resource-efficient policies. UNEP runs many initiatives to ensure this is the case.

Work on the [10-Year Framework of Programmes on Sustainable Consumption and Production Patterns \(10YFP\)](#), adopted at Rio+20 and hosted by UNEP, gathered pace in 2013 ahead of the launch of its first five programmes. In addition to 110 countries appointing a national focal point to support implementation, hundreds of key individuals met around the globe to lay the groundwork for action on Sustainable Public Procurement, Consumer Information, Sustainable Tourism, Sustainable Buildings and Construction, and Sustainable Lifestyles and Education. SWITCH-Asia, an EU-funded project aimed at supporting sustainable consumption and production, backed this process as it took its own steps toward accelerated implementation, such as the establishment of a centre in Pakistan.

In 2008, UNEP launched its Green Economy Initiative to re-focus the global economy from brown to green in order to prompt real growth, combat climate change and trigger an employment boom. In just six years this seed has grown into part of the global discourse in every level of government, business and society. UNEP is taking the movement forward with the [Partnership for Action on Green Economy \(PAGE\)](#)—a partnership with the International Labour Organization, the United Nations Industrial Development Organization and the United Nations Institute for Training and Research. PAGE, launched as a response to Rio+20's outcomes, will support 30 countries over the next seven years to build strategies that generate jobs, promote clean technologies, and reduce environmental risks and poverty.

In June, Mongolia [signed up](#) as the first PAGE country and committed to policies that will place it on a green development path. Also, the UAE is holding the first PAGE conference in Dubai in March 2014 to consider how greener economies can contribute to the post-2015 sustainable development agenda.

GREEN ECONOMY SUCCESSES

Egypt: 60,000 tonnes of CO₂ saved each year through vehicle scrapping and recycling programme

Kenya: Feed-in Tariff policy expected to stimulate 1300 MW of renewable energy capacity

Brazil: Green urban planning in Curitiba made fuel usage 30 per cent lower than in other major cities

Source: UNEP Green Economy reports

“As populations in emerging economies adopt similar technologies and lifestyles to those currently used in OECD countries, global metal needs will be three to nine times larger than all the metals currently used in the world.”

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



02

“Environmental issues have been high on the priority agenda for Mongolia. For the last seven or eight years we have had great growth, and it is important that we build in good basics of green growth and green economy.”

Mongolia's Environment and Green Development Minister Sanjaasuren Oyun.



03

As a result of UNEP's advisory services on green economy and sustainable consumption and production, governments' capacity to manage resources and integrate sustainability have been strengthened in 42 countries over the last two years, with ten—including China, Barbados and South Africa—adopting or implementing related policies.

There are many other policy-support programmes in place, such as on trade: the *Green Economy and Trade – Trends, Challenges and Opportunities* report identified sustainable trade opportunities in six key economic sectors. UNEP is now conducting **national-level pilot projects** in Ghana, Peru and Vietnam to identify and assess opportunities in solar energy, BioTrade products, and aquaculture.

In the face of rapid urbanization, there is an additional need for coordinated action on urban sustainability. In this respect, the Global Initiative for Resource Efficient Cities carried out a survey in more than 100 cities to better understand cities' needs and perceptions of resource efficiency. UNEP and UN-Habitat are also cooperating on incorporating urban perspectives into environmental policymaking at all levels and are developing a joint position on resilience and resource efficiencies in the urban context, building on the comparative advantage of the agencies.

Bringing the private sector on board

Assisting the private sector to understand how resource scarcities will damage businesses is equally key. As part of this

process, UNEP launched *GEO-5 for Business: Impacts of a changing environment on the corporate sector*. The report makes the business case for companies to factor into strategies the costs and opportunities of environmental changes. By the end of the year it had been downloaded 572,060 times, highlighting the business community's growing engagement. Meanwhile, the government-led **Group of Friends of Paragraph 47 of the Rio +20 Outcome Document**, for which UNEP and the Global Reporting Initiative acts as secretariat, continued to promote corporate sustainability reporting. In 2013, the group's government members rose from four to nine.

Small and medium-sized enterprises (SMEs) play a pivotal role in economies. **The Global Network for Resource Efficient and Cleaner Production** increased its membership by 30 per cent, with 55 participant institutions from 34 countries, demonstrating its relevance in assisting SMEs. UNEP is also strengthening its role in the dissemination of practices and technologies for eco-innovation, as featured in a recent roundtable in Hanoi, Vietnam, which engaged over 300 Asian and European experts to identify resource efficient and eco-innovative solutions along agri-food value chains.

In the wake of the global financial crisis, there is growing recognition that the financial system must be sustainable in the way it enables the transition to a low-carbon, green economy. The **UNEP Finance Initiative (UNEP FI)**, a partnership between UNEP and over 200 institutions including banks, insurers and fund managers, works towards this goal. In 2013 the number of insurers, insurance market bodies and international organizations backing

RICE

Uses 34–43 per cent of the world's irrigation water

Is responsible for 5 to 10 per cent of global methane emissions

Represents more than 20 per cent of the daily calories of 3.5 billion people

Source: The Sustainable Rice Platform

01 – The International Resource Panel in 2013 highlighted the huge potential in recycling metals from e-waste.

02 – Mongolia, the first country to sign up to the Partnership for Action on the Green Economy, also played global host to World Environment Day 2013, which was themed around the *Think. Eat. Save* campaign to reduce food waste. Hundreds of other celebrations took place across the globe in cities like Portland, US and Brussels, Belgium.

03 – UNEP is targeting sustainable production of rice, one of the world's major food crops.



04 – Caborca, one of Mexico's most-famous cowboy boot manufacturers, called on the services of UNEP-trained consultants to green its operation and comply with the EU Ecolabel requirements. "With the change of culture seen in this project, we can reduce the consumption of resources because we have changed our thinking," said Luis Angel Sanchez-Ramirez, General Director of Caborca.



05 – UNEP Goodwill Ambassador Gisele Bündchen shows off a *Think.Eat.Save* t-shirt before her appearance on The Today Show.

FOOD WASTE

One third of all food production gets lost or wasted, totalling 1.3 billion tonnes

In industrialized nations, retailers and consumers discard around 300 million tonnes of edible food

This is more than the total net food production of Sub-Saharan Africa, and could feed the estimated 900 million hungry people in the world

Source: Food and Agriculture Organization

05

The **Principles of Sustainable Insurance** more than doubled to 67—including insurance companies representing over \$8 trillion in assets.

At UNEP FI's **Global Roundtable in Beijing** in November 2013, over 400 key individuals met to give stronger impetus to increasing the sustainability of the financial industry. Following on from the roundtable, UNEP agreed to launch an **18-month inquiry**, stretching to mid-2015, to map current best practice, catalyze new thinking, and lay out a series of options for advancing a sustainable financial system.

Food production also has a major environmental impact, and within this sector the cultivation of rice provides livelihoods for more than one-fifth of the world's population. The **Sustainable Rice Platform (SRP)**, co-convened by UNEP and the International Rice Research Institute, is developing a farm-level methodology for sustainable rice production and incentive mechanisms for its uptake, to be pilot tested over the next two years.

Finally, in the building and construction sector, the **Sustainable Buildings and Climate Initiative** supported reporting on building energy efficiency initiatives in seven countries as part of assisting in the evolution of building sector policies.

Changing consumption patterns

Resource efficiency gains in all of the above sectors can be negated by unsustainable consumption patterns, however, and so UNEP strives to prompt consumers at

all levels to think more carefully about their practices and implement changes.

As institutional consumers, public authorities can play a transformative role in changing their own procurement practices. While four UNEP-supported countries are implementing their Sustainable Public Procurement (SPP) actions plans, the **International Sustainable Public Procurement Initiative** launched at Rio+20, gathering 61 organizations and countries, is supporting the uptake of SPP practices worldwide. Agreements are under preparation with nine countries to further support work on SPP and ecolabelling.

Another important project is taking place in Brazil, the host of the FIFA 2014 World Cup and the 2016 Olympic and Paralympic Games. Among many activities, a new edition of UNEP's Green Passport Campaign is being developed for the World Cup to promote responsible consumption among fans. UNEP is also assisting the government to incorporate sustainable procurement into the events.

Providing understandable and verifiable information on product sustainability is also needed to guide consumers; hence a major effort to build the capacities of public authorities and stakeholders on environmental footprinting was undertaken, which resulted in strengthened capacities in 18 countries. Already, Indian stakeholders have developed a national Life-Cycle Analysis roadmap.

On a public awareness level, UNEP, along with the Food and Agriculture Organization and around 30 other partners, launched *Think.Eat.Save – Reduce Your Foodprint*,

a major campaign targeting the reduction of food waste and loss across the supply chain. UNEP and its partners held dozens of events at which meals made from food thrown away for cosmetic reasons were served—including at the UNEP Governing Council.

Moving forward

The next few years promise to be exciting as the developing initiatives, such as the 10YFP, PAGE and UNEP FI's work with the financial sector, gain momentum and begin to deliver on their programmes. Through these and other efforts, UNEP will continue to encourage the international community in the direction of production and consumption that is truly sustainable, thus helping to ensure that the citizens of the world have fair and equitable access to the resources at our disposal.

These are just some of the highlights of the sub-programme, with many more initiatives under way. For more information, please consult the **Programme Performance Report 2012–2013** and the comprehensive list of projects under the Resource Efficiency sub-programme, which can be found on the Annual Report 2013 website: www.unep.org/annualreport/2013

06 – A bowl of strawberries is allowed to rot as part of the One Third photo exhibition designed to draw attention to food waste.



IN FOCUS

UNEP Helps Bank of America Reduce Food Waste

REDUCING THE 1.3 BILLION tonnes of food wasted or lost each year requires everybody to do their part to transform cumulatively the power of individual action into a global movement that fundamentally changes how we use our natural resources.

The *Think.Eat.Save* campaign works with organizations across the globe to bring about this transformation, and in 2013 partnered with Bank of America to focus its environmental employee engagement programme, My Environment, on the challenges of global food waste. The bank chose to focus on the issue as it provides an opportunity to bring about rapid positive benefits for the environment, and ties in with its goal to divert 70 per cent of waste from landfill.

“My Environment offers ongoing educational opportunities to help our employees learn more about environmental challenges and identify actions they can take to address them, and equally importantly, provides an array of programmes and volunteer events designed to support those actions,” said Alex Liftman, Bank of America’s Global Environmental Executive.

UNEP provided the bank, which has operations in over 40 countries and employs 242,000 people, with training on how to reduce food waste and packaging—

such as buying the right amount of food and storing it properly, making the best use of purchases and leftovers, and understanding the difference between “use by” and “best by” dates.

“The session brought to light the fact that every grain of rice we waste can collectively feed an entire population,” said Gaston D’Souza, an employee who works in Mumbai, India. “The numbers shown were staggering and not something I knew about. I have started to make sure that my family only cooks what we can consume and moreover if there are leftovers that we eat it the following day or make sure we mix and match to create a new dish.”

As a result, 2,500 employees participated in 63 “waste less” lunches held in 17 countries on Earth Day, saving an estimated 226 kilograms in the first instance and, more significantly, changing employees’ long-term attitudes to how they buy and consume food.

“I now think about the amount of food I pack to reduce waste, the container and utensils I can reuse and how I can recycle items I have to purchase,” said Kym McLean, an employee from Charlotte, North Carolina, the United States. “The ‘waste less’ lunch invoked a lifestyle change in me.”

The momentum has continued with employees regularly hosting “waste less” meals at work and home. Additionally, employees have volunteered with food rescue programmes or hosted subsequent educational events on food waste. The bank will sponsor further “waste less” lunches on World Food Day in 2014, helping more employees to become better environmental stewards. ♻️

GOODWILL AMBASSADORS

UNEP would like to express its appreciation for the commitment to the environment shown by its Goodwill Ambassadors and Patrons in 2013.



YANN ARTHUS-BERTRAND
Goodwill Ambassador



LI BING BING
Goodwill Ambassador



GISELE BÜNDCHEN
Goodwill Ambassador



DON CHEADLE
Goodwill Ambassador



ANGÉLIQUE KIDJO
Patron for Music
& Environment



PATRICK MAKAU
Patron for Clean Air



LEWIS PUGH
Patron for Oceans



SUZANNA OWIYO
Goodwill Ambassador, Kenya



IAN SOMERHALDER
Goodwill Ambassador



PAVAN SUKHDEV
Goodwill Ambassador



YAYA TOURE
Goodwill Ambassador



ERIC WAINAINA
Goodwill Ambassador, Kenya



BUDGET PERFORMANCE

UNEP's planned budget for 2013—based on the Environment Fund, Trust Funds and Earmarked Contributions, and the UN Regular Budget, and excluding Programme Support Costs—was \$207.7 million. Overall budget allocations were \$274.4 million. Total expenditure was \$194.6 million, 71 per cent of allocations.

All figures in \$ million

FUND SOURCES

Environment Fund
 Trust Funds and earmarked contributions
 Regular budget

FINANCIAL AND MANAGEMENT PERFORMANCE

Executive direction and management results

RESULTS ACHIEVED AGAINST EXPECTED ACCOMPLISHMENTS

Achievement: ● Full ● Partial ○ Unachieved

EA (A) RELEVANCE OF UNEP'S WORK ●

Percentage of Governments that rate relevance and impact of UNEP work (such as in support of the Bali Strategic Plan) as satisfactory

BASELINE (2011)	TARGET (2013)	ACTUAL
80	80	80

EA (B) ENVIRONMENTAL LEADERSHIP IN UN SYSTEM ●

Increased number of topics of global environmental concern are the focus of a coordinated approach within the United Nations system, with coherent and complementary actions carried out by UN entities

BASELINE (2011)	TARGET (2013)	ACTUAL
3	6	6

EA (C) USE OF SCIENCE ●

Increased number of initiatives included in the work of UNEP showing the strengthened use of science in the implementation of its programme of work

BASELINE (2011)	TARGET (2013)	ACTUAL
5	10	50

EA (D) ACCOUNTABILITY ●

Increased percentage of audit and investigation recommendations and findings on UNEP performance acted upon

BASELINE (2011)	TARGET (2013)	ACTUAL
70	80	100

EA (E) GEOGRAPHICAL REPRESENTATIVENESS AND GENDER BALANCE OF STAFF ●

(i) Increased percentage of women appointed to posts at the P4 and above levels

BASELINE (2011)	TARGET (2013)	ACTUAL
35	45	38

(ii) Improved percentage of personnel from under-represented Member States in posts in the Professional and management categories

BASELINE (2011)	TARGET (2013)	ACTUAL
15	15	31

EA (F) EFFICIENCY IN STAFF RECRUITMENT ○

Reduced average number of days taken to fill a vacant extra budgetary post (measured by the time between the announcement to the appointment)

BASELINE (2011)	TARGET (2013)	ACTUAL
200	120	175

EA (G) SERVICING MEETINGS OF GOVERNING BODIES ●

Reduced percentage of UNEP-organized meetings of the Committee of Permanent Representatives and the Governing Council give rise to negative comments on the meeting agenda, document distribution or other logistical matters

BASELINE (2011)	TARGET (2013)	ACTUAL
15	12	1.9

EA (H) IMPLEMENTATION OF EVALUATION FINDINGS ●

Percentage of accepted evaluation recommendations on UNEP performance at the sub-programme level are implemented by the organization.

BASELINE (2011)	TARGET (2013)	ACTUAL
80	85	80

EA (I) QUALITY OF PROGRAMME PLANNING AND PERFORMANCE REPORTING ●

(i) Increased level of satisfaction expressed by the Committee of Permanent Representatives with the relevance of the programme planning and performance documents of UNEP to its mandates

BASELINE (2011)	TARGET (2013)	ACTUAL
70	80	89

(ii) Level of satisfaction expressed by the Committee regarding the format, clarity and accuracy of UNEP programme documents

BASELINE (2011)	TARGET (2013)	ACTUAL
70	80	87

EA (J) FINANCIAL MANAGEMENT ●

Low numbers of adverse audit findings related to financial matters

BASELINE (2011)	TARGET (2013)	ACTUAL
0	0	0

EA (K) MOBILIZATION OF FINANCIAL RESOURCES ●

Increased percentage of resources required for the year mobilized to implement the programme of work within the first half of the year

BASELINE (2011)	TARGET (2013)	ACTUAL
50	50	66

For more details and analysis of financial and overall performance, please download the *Project Performance Report 2012-2013* from the Annual Report 2013 website: www.unep.org/annualreport/2013

CHAMPIONS OF THE EARTH

United Nations Environment Awards

PIONEERS AND TRAILBLAZERS whose work has had a significant and positive impact on the environment were given the UN'S highest environmental accolade, the **Champions of the Earth Award**, at New York's Museum of Natural History in September.

Recognized for providing powerful tools to monitor and scope the state of the environment, co-founder and Vice President of Google Earth, Brian McClendon, and Geographic Information System (GIS) pioneer, Jack Dangermond, were among the laureates. Other winners of UNEP's 2013 Champions of the Earth Award were: Janez Potočnik, EU Environment Commissioner; Carlo Petrini, the founder of the Slow Food Movement; Izabella Teixeira, Minister of Environment, Brazil; Veerabhadran Ramanathan, Professor at the Scripps Institution of Oceanography, UCSD, and Martha Isabel Ruiz Corzo from the Sierra Gorda Biosphere Reserve in Mexico.

"Leadership and vision will be the hallmarks of a transition to an inclusive Green Economy in developed and developing countries alike," said UN Under-Secretary General and UNEP Executive Director, Achim Steiner. "This year's Champions of the Earth are among those who are putting in place the actions, policies and pathways to scale-up and accelerate such transformations."

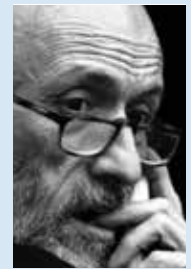
Champions of the Earth, which was launched in 2005, is the UN's flagship environmental award. To date, it has recognized 59 individuals and organizations for their leadership, vision, inspiration and action on the environment. The list of previous Champions laureates include Mongolian President Tsakhia Elbegdorj, Mexican President Felipe Calderon, Chinese actress and environmental advocate Zhou Xun, the Women's Environment & Development Organization (WEDO) and global music legend Angélique Kidjo. 🌱



01



02



03



04



05



06



07



**CHAMPIONS
OF THE EARTH**

01 – Jack Dangermond,
Entrepreneurial Vision Winner

02 – Izabella Teixeira, Policy
Leadership Winner

03 – Carlo Petrini, Inspiration &
Action Winner

04 – Veerabhadran Ramanathan,
Science & Innovation Winner

05 – Martha Isabel Ruiz Corzo,
Inspiration and Action Winner

06 – Janez Potočnik, Policy
Leadership Winner

07 – Brian McClendon,
Entrepreneurial Vision Winner

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