

United Nations Environment Programme



MEDIUM TERM STRATEGY 2018-2021

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A woman walks through a field of flowers used to make bio-diesel in Thrace near the town of Xanthi, Greece. PHOTO: REUTERS

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INTRODUCTION

A father and daughter at an urban vegetable garden in the Iztapalapa district, Mexico. PHOTO: REUTERS

In September 2015, the General Assembly adopted the 2030 Agenda for Sustainable Development (2030 Agenda) and its 17 Sustainable Development Goals, which cut across disciplines, sectors and institutional mandates.

The new agenda acknowledges the **integrated nature of the many challenges that humanity faces**, from gender inequality to inadequate infrastructure and from youth unemployment to environmental degradation. In the preamble to the 2030 Agenda, world leaders affirmed that they were determined to protect the planet from degradation, including through sustainable consumption and production, sustainable management of its natural resources and urgent action on climate change, so that it could support the needs of present and future generations.

A synthesis report of the United Nations Secretary-General on the post-2015 sustainable development agenda states that the 2030 Agenda represents a truly universal and transformational course for sustainable development.

Achieving the 2030 Agenda will require a **new paradigm** for sustainable development in which work on issues such as health, education and, critically, the environment, is no longer conducted in silos, but is intrinsically linked. Over 86 targets in the **2030 Agenda** are concerned with environmental sustainability, including at least one in each of the 17 Goals.

Within this framework, the medium-term strategy of the United Nations Environment Programme (UNEP) for the period 2018 - 2021 is informed by relevant resolutions and decisions of the United Nations Environment Assembly, the General Assembly and the UNEP Governing Council, and by the strategies and plans of multilateral environmental agreements and other internationally agreed environmental goals.¹ Taking these directives as its starting point, UNEP will exercise its leadership role in the United Nations system and with other partners on environmental matters, which will entail promoting coherence in the way the United Nations system integrates the environment into sustainable development. Within its mandate, UNEP will also support countries in their efforts to become more environmentally sustainable, while balancing the integration of the economic and social dimensions of sustainable development.

The medium-term strategy sets out an analysis of the significant environmental challenges that the world will face in the coming years (section 2). Climate change remains a pressing issue and must be addressed through enhanced adaptation and a reduction in greenhouse gas emissions. Equally important is resilience to industrial accidents, conflicts and natural disasters, which are becoming more frequent and more damaging with the warming climate. Biodiversity is key to maintaing healthy and productive ecosystems, which in turn are necessary for conserving flora and fauna, and to providing a large range of ecosystem services such as drinking water and secure food systems. There is a need to make better use of our natural resources for economic and social growth, to improve management of waste and chemical products and set up effective laws, policies and institutions to govern actions that affect the environment. There is also a need to monitor the state of the planet's health in order to gain a better understanding of the full extent of the challenges faced.

The medium-term strategy recognizes that achieving the environmental objectives of **sustainable development takes time**. It acknowledges this important lesson by defining an ambitious 2030 vision for UNEP (section 3) and aligning itself with the principles contained in the outcome document of the United Nations Conference on Sustainable Development, entitled "The future we want", as well as the 2030 Agenda. The comparative advantage of UNEP in this work is to provide an environmental lens through which to view, understand and advise on sustainable development.

Section 4 defines how decisions will be made through the operating principles of UNEP. The focus of the work of UNEP in the coming years is outlined in sections 5 and 6, which are organized into thematic subprogrammes that chart the path towards realizing the UNEP vision for 2030, while section 7 sets out the business model of the organization. The strong focus of UNEP on results is mirrored by its approach to evaluation, as detailed in section 8. Such measures will ensure that UNEP is better positioned to address environmental challenges and ultimately build a healthier, more sustainable world for all.

Endnotes:

¹ Also known as global environmental goals. The compilation of the goals is ongoing and available at http://geg.informea.org/

SITUATION ANALYSIS

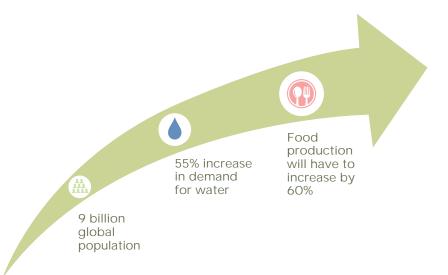
Mountain landscape in Afghanistan where, since 2002, UNEP has taken an active role in laying the foundations for sustainable development, working with the government and other stakeholders to overcome serious land and resource degradation. PHOTO: UNEP

FIGURE 1: Expected increase in demand for food and water by 2050²

The world environment is continuously evolving and UNEP must operate within that context. Many of our most pressing environmental challenges are driven by large, transformative global forces that impact everyone on the planet.

Resource efficiency and changing demographics

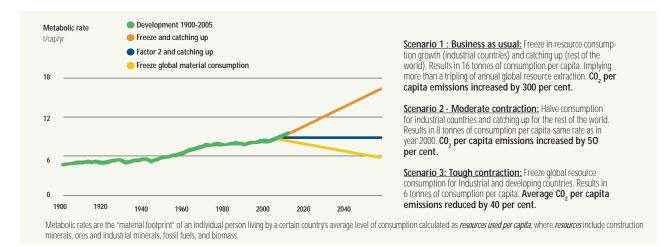
By 2050, population growth will put further pressure on the planet's ecosystems and the goods and services they provide. Growing food and water scarcity will make it even harder for people living in developing countries to eat a healthy diet, access clean water and practice good hygiene (figure 1).



Growing demographic pressures,

compounded by patterns of over-consumption, will deplete our supply of natural resources and increase waste production, resulting in negative social, health and economic consequences. Escalating resource use is causing significant environmental pressure to the extent that **a business-asusual scenario could more than triple global resource extraction and per capita CO₂ emissions by the middle** of the twenty-first century (figure 2).³ The depletion of natural resources will hinder long-term economic growth, while exacerbating global inequalities. At the same time, intensive mining, logging, agribusiness and oil and gas extraction could – if poorly managed – increase the risk of environment degradation and pollution, potentially triggering tensions in local communities.

FIGURE 2: Implications of per capita resource consumption in three growth and development models



Urbanization is another important driving force for environmental change. The urban population, as a proportion of the overall population, is expected to rise to 70 per cent by 2050,⁴ by which time the world's cities will be generating **75 per cent of global waste and greenhouse gas emissions** (figure 3). However, a more concentrated population presents a strategic opportunity to improve environmental sustainability, as more people can be more easily reached.

FIGURE 3: Current impact of cities in global greenhouse emissions, global waste and total population



2050

By 2050, greenhouse gas and global waste from cities will be 75% of the global total (at current rates)

Climate Change

Climate change continues to be one of the most pervasive and threatening issues of our time, with far-reaching impacts in the twenty-first century.⁵ Temperature changes and sea-level rise are already affecting human well-being in many places, including coastal zones and small island developing States.⁶ According to data set out in the fifth edition of the UNEP *Global Environment Outlook* (GEO-5) and the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, **climate change is also putting significant pressure on ecosystems.** Climatic variations and extreme weather events can also lead to large social and economic costs. Taking urgent action on climate change will therefore remain critical in the period 2018–2021 and beyond.

Since 2000 more than, **1.1 million** people have been killed by natural disasters and **2.7 billion** people affected

Climate change is expected to have major and unprecedented **social and economic implications** on where people can settle, grow food, build cities, and rely on functioning ecosystems for the services they provide. The effects are likely to hit women harder than men, particularly in developing countries, given that women represent the majority of the world's poor and are often more socially excluded. Since 2000, natural disasters have killed more than 1.1 million people and affected another 2.7 billion, with floods, droughts and windstorms the most frequent events.⁷

Climate change could sharply increase the number of people forced from their homes as a result of land degradation and extreme weather events, which in turn can increase environmental pressures in the areas they flee to. The UNEP *Adaptation Gap Report 2014* stated that even if global greenhouse gas emissions are cut to the level required to keep the rise of global temperature below 2°C in the twenty-first century, the **cost of adapting to** *climate change in developing countries* is likely to reach two to three times the previous estimates of \$70 billion -\$100 billion per year by 2050.⁸

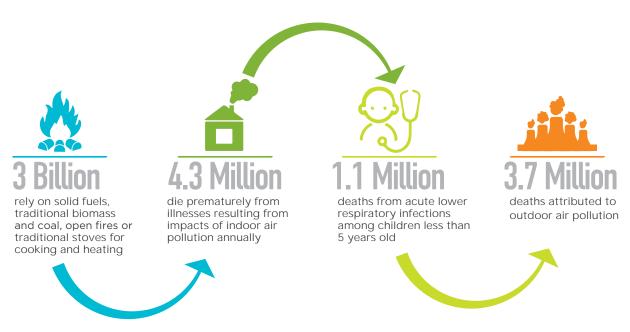
Member States meeting at the twenty-first session of the Conference of Parties to the United Nations Framework Convention on Climate Change in Paris in December 2015 adopted a universal agreement aiming to strengthen the global response to the threat of climate change in the context of sustainable development and efforts to eradicate poverty. It sets the world on a course to a zero-carbon, resilient, prosperous and fair future. The Paris Agreement will capitalize and accelerate the momentum created by the intended nationally determined contributions submitted by Member States and the remarkable momentum from non-State actors. The Emissions Gap Report 2015 of UNEP assessed 119 intended nationally determined contributions that countries submitted to the secretariat of the Framework Convention on Climate Change by 1 October 2015. It found that efforts to tackle climate change, including those taken before the Paris agreement was adopted and before the full implementation of the intended nationally determined contributions, could cut up to 11 GtCO₂e from projected emissions in 2030, which is around half of the total required to reach the global emission level (42 GtCO₂e in 2030) consistent with a likely chance of staying below the "safe" level of a global temperature rise of 2°C by 2100 °. There continues to be an unprecedented level of global recognition of climate change and a growing willingness to take significant action through the Convention to combat climate change and its impacts, including by non-State actors¹⁰ and through clean energy use.

Chemicals, waste and air quality

Cancer, diabetes, heart disease and other non-communicable diseases, many of which are associated with air and water pollution, are on the rise. Brazil, Russia, India, China and South Africa alone account for 40 per cent of the global burden of disease. In almost all countries, per capita **health-care expenditure is rising faster than per capita income**; in some countries, health-care expenditure will increase from 20 per cent to 30 per cent of gross domestic product by 2024.

How is this an environmental challenge? Better and sound management of chemicals and waste and improved water and air quality can significantly lower disease rates, especially among vulnerable groups. For example, by 2030, measures taken by the Montreal Protocol on Substances that Deplete the Ozone Layer may prevent up to two million cases of skin cancer globally per year. Reducing environmental stress will reduce health risks in vulnerable groups, but this can only be achieved through an **integrated approach**, with partners **across the environment and health sectors working together**.

FIGURE 4: Air pollution and its effects on human health



Climate change is not the only major concern regarding the planet's atmosphere. Figure 4 shows other factors related to air pollution. The figures given are more than double those of previous estimates and confirm that air pollution is among the world's largest environmental health risks.¹¹ A study by the Organisation for Economic Cooperation and Development found that, in 2010, the cost of air pollution in China was approximately \$1.4 trillion, while Europe lost around \$140 billion to \$230 billion due to reduced air quality in 2009. In its resolution 1/7, on strengthening the role of UNEP in promoting air quality, the United Nations Environment Assembly

Estimated at **20-50 million** tonnes per year, e-waste is becoming

a major environmental challenge.

recognized the importance of addressing the issue of air pollution in a manner that integrated the environmental, social and economic dimensions of sustainable development.

Chemicals that need sustained attention are those addressed under the chemicals and waste-related Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade and Stockholm Convention on Persistent Organic Pollutants; the Minamata Convention on Mercury; and the Strategic Approach to International Chemicals Management, including persistent organic pollutants, pharmaceuticals and other chemicals that disrupt hormone systems. Similarly, industrial chemicals and hazardous and other wastes, including electronic waste (e-waste), require continued efforts. As the fastest-growing waste stream in the world, estimated at 20-50 million tonnes per year,¹² e-waste is becoming a major environmental challenge.¹³ Emerging data show that the costs of using and producing harmful chemicals is quite high in terms of economic costs, health impacts, environmental degradation and effects on development planning. In its resolution 1/5, on chemicals and waste, the United Nations Environment Assembly affirmed that a new approach was needed to minimize the risks of novel technologies and chemicals.14

Healthy and productive ecosystems

We must help the planet to become more resilient to change by **sustainably managing forests**, **combating desertification**, **addressing land degradation**, **halting biodiversity loss and, more broadly, by protecting, restoring and promoting the sustainable use of terrestrial ecosystems**. These have all been identified as priority issues by the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets of the Convention on Biological Diversity,¹⁵ and the 10-year strategic plan to enhance the implementation of United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (2008 - 2018).

Oceans face significant threats, such as overfishing, climate change and pollution.¹⁶ Marine debris is found in all parts of the ocean and is harming wildlife, fisheries and coastal economies, which poses a potential health risk to humans given that plastic and harmful chemicals ingested by marine wildlife and seabirds can be transported through the food chain. Microplastics¹⁷ are also increasingly used in a wide range of goods, such as toothpastes and facial cleaners.¹⁸ **The UNEP Regional Seas Programme and the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities** are leading the response to the United Nations Environment Assembly resolution 1/6 on marine plastic debris and microplastics.



According to the *Global Biodiversity Outlook 4*,¹⁹ pressures on biodiversity will continue to increase at least until 2020 and, as a result, biodiversity will continue to decline. The Global Risks Perception Survey 2014 highlighted that three of the top ten risks over the next ten years will be environmental, with one of the top three being biodiversity loss. The degradation of freshwater and marine ecosystems will increasingly affect biodiversity²⁰ and the provision of important goods (such as food, water, fibre and fuel) and services (such as nutrient cycling, purification, flood and climate regulation) that sustain human existence and livelihoods.²¹

GEO-5 and other key scientific reports such as *Global Biodiversity Outlook 4* indicate that unsustainable exploitation of resources, compounded by climate change and pollution of the air, land and water, including habitat changes and the spread of invasive alien species, will result in substantial biodiversity loss. This will negatively affect the status and functioning of ecosystems and the provision of ecosystem services, with subsequent impacts on food security, livelihoods and poverty reduction efforts. Examples are the collapse of fisheries, the alteration of hydrological cycles and the loss of species used for medicinal purposes.



Part of a shipment of rhino horns seized by Hong Kong Customs and Excise Department is displayed during a news conference in Hong Kong. PHOTO: REUTERS

Ocean acidification is another major challenge to the environment. Rising CO₂ levels in the atmosphere are affecting the acidity of oceans, which in turn, when paired with warmer sea temperatures and human-induced stresses, makes tropical reef ecosystems vulnerable to collapse.²² Meeting the Aichi Biodiversity targets²³ will contribute to the broader global priorities addressed by the 2030 Agenda, namely reducing hunger and poverty, improving human health and ensuring a sustainable supply of energy, food and clean water.

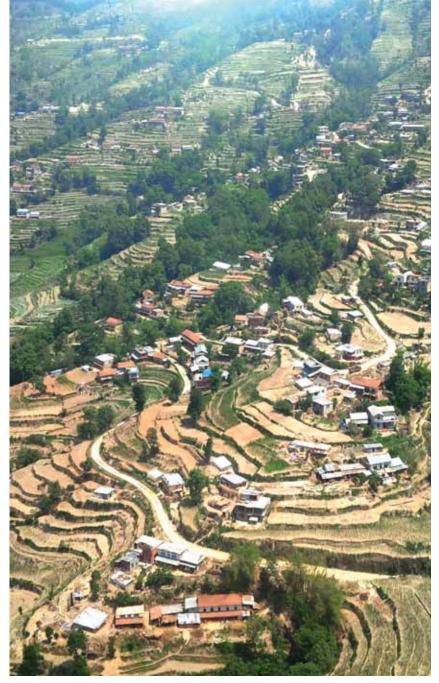
Environmental governance

Illegal trade in wildlife has risen to crisis levels for some species, with close to **25,000 elephants killed in 2013** alone.²⁴ An increase in transnational crime, which also comprises illegal logging and fishing, affects governance efforts and hinders socioeconomic development. **Violent conflict can be triggered, financed and prolonged by disputes over natural resources and leave devastating environmental legacies.** Illegal logging, trafficking in waste, corruption poaching and the associated illegal trade are symptomatic of the failures in natural resources governance and enforcement. Member States, through the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the International Criminal Police Organisation and the United Nations Convention against Transnational Organized Crime, are increasingly partnering to eradicate this problem. In response, the United Nations Environment Assembly at its first session adopted **resolution 1/3 to address illegal trade in wildlife** and its adverse effects on ecosystems and livelihoods, which was endorsed by the General Assembly at its seventieth session.

To effectively address environmental priorities at any level, adequate and effective governance structures

Adequate and effective governance structures; normative and policy foundations are important to effectively address environmental priorities

and normative and policy foundations are essential. Aligning environmental governance structures to the challenges of global sustainability and integrating social, environmental and economic objectives in sustainable development policies have been identified by scientists as the number one issue for the twenty-first century.²⁵ At the United Nations Conference on Sustainable



Mountain village in Nepal where UNEP has provided remote and real-time advice to the Government, international agencies, and the UN system on dealing with the environmental issues linked to the April 2015 earthquake. PHOTO Rene Nijenhuis OCHA/UNEP

Development, the Heads of State and Government and high-level representatives acknowledged that **"good governance** and the rule of law, at the national and international levels, as well as an enabling environment, are essential for sustainable development".26 The importance of participation and involvement of major groups and stakeholders has been recognized through Rio Principle 10 and subsequent guidelines and resolutions,²⁷ as has the need to involve all institutions and actors in promoting environmental sustainability and combating violations of environmental law.²⁸ Effective implementation and compliance with multilateral environmental agreement commitments will continue to be high on the agenda of UNEP during the period 2018-2021.

Keeping the environment under review

Earth systems are being pushed to their biophysical limits and there is evidence that those limits are either close to being reached or have already been exceeded. They include changes to the bio-geochemical cycles (especially nutrients such as nitrogen and phosphorus), biodiversity loss and climate change.

Half of the Sustainable Development Goals have an environmental focus or address the sustainability of natural resources. At least one target in each of the 17 Goals concerns environmental

sustainability, meaning that progress on one cannot be achieved if there is no progress on others. Goals with an environmental focus include Goal 6 (ensure availability and sustainable management of water and sanitation for all), Goal 7 (ensure access to affordable, reliable, sustainable and modern energy for all), Goal 9 (build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation), Goal 11 (make cities and human settlements inclusive, safe, resilient and sustainable), Goal 12 (ensure sustainable consumption and production patterns), Goal 13 (take urgent action to combat climate change and its impacts), Goal 14 (conserve and sustainably use the oceans, seas and marine resources for sustainable development) and Goal 15 (protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss). For the other Goals, a healthy environment is essential for their achievement.

To track progress towards these and other global environmental goals, UNEP established six regional environmental information networks (REIN) and developed a common approach within the **Global Environment Outlook (GEO) for** indicator-based reporting and assessment to keep the environment under review. The biennial REIN meetings and regular GEO assessments could play an important role in delivering the evidence base for reviewing progress on the environmental dimension of sustainable development. If a four-yearly cycle is adopted for the Global Sustainable Development Report, the United Nations Environment Assembly would be able to ensure an effective review of the environment dimensions of the Goals through the regular GEO regional and global assessment processes. Necessary tools and follow-up on the **link between science** and policy will be developed to provide guidance on global norms and standards for keeping the environment under review, to strengthen science-policy partnerships and to ensure prompt action on emerging issues and thematic follow-up and review.

Other factors at play

The world faces a number of environmental risks, but addressing these alone will not be enough to build a healthy planet. Understanding the **gender dimensions** of the environment is key to conserving biodiversity and implementing the 2015–2020 Gender Plan of Action under the Convention on Biological Diversity. As key managers of land and resources, women and men – each in their own way – contribute to the conservation of biodiversity and are central to the success of biodiversity and are for 60-80 per cent of all food production in developing countries, gender often

remains overlooked in decision-making regarding access to and use of land and biodiversity resources. **Empowering women to participate as equals in decision-making** related to information sharing and generation, education and training, and policy development will assist efforts in biodiversity conservation.

Those issues affect the environment and have consequences on the social and economic dimensions of sustainable development. The environmental agenda is as much integrated within its own arena as it is across dimensions. Issues are connected thematically as well as across geographical areas. Both political and scientific priorities in the regions have directly informed this global analysis for a bottom-up approach. The annex sets out a summary of consultations that took place through regional environmental forums and UNEP regional offices and the outcomes of the regional environmental information network conferences.

While different approaches can facilitate sustainable development, the complex and interconnected nature of the three dimensions of sustainable development requires a shift to addressing the social, economic and environmental dimensions in an integrated manner.

Endnotes:

- Alexandratos, World Agriculture Towards 2030/2050: The 2012 Revision. ESA Working paper No. 12-03, 2012.
- 3 United Nations Environment Programme (UNEP), Decoupling Natural Resource Use and Environmental Impacts from Economic Growth, A Report of the Working Group on Decoupling to the International Resource Panel, 2011.
- 4 Department of Economic and Social Affairs, World Urbanization Prospects, 2014.
- 5 UNEP, 21 Issues for the 21st Century: Result of the UNEP Foresight Process on Emerging Environmental Issues, 2012.
- 6 Intergovernmental Panel on Climate Change, Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, 2014.
- 7 United Nations System Task Team on the Post-2015 United Nations Development Agenda, Disaster Risk and Resilience, Thematic Think Piece, Inter-Agency Secretariat of the International Strategy for Disaster Reduction, World Meteorological Organization, available at
 - http://www.preventionweb.net/files/27462_20120607unttpostmdgthinkpieceondrra.pdf
- 8 UNEP, The Adaptation Gap Report 2014. Nairobi, 2014.
- 9 UNEP, The Emissions Gap Report 2015. Nairobi, 2015.
- 10 United Nations Framework Convention on Climate Change, Gender and Climate, 2015.
- 11 World Health Organization, "7 million premature deaths annually linked to air pollution", 2014. http://www.who.int/mediacentre/news/releases/2014/air-pollution/en/
- Robinson, "E-waste: An assessment of global production and environmental impacts", 2009.
- 13 Lundgren, The Global Impact of E-Waste: Addressing the Challenge, 2012.
- 14 UNEP, 21 Issues for the 21st Century: Result of the UNEP Foresight Process on Emerging Environmental Issues, 2012.

- 15 Convention on Biological Diversity, Aichi Biodiversity Targets.
- 16 World Wide Fund for Nature, Living Blue Planet Report, 2015.
- 17 "Microplastics" include plastic particles with an upper size limit of 5mm in diameter. (UNEP Year Book: Emerging Issues in our Global Environment, 2014).
- 18 UNEP, Plastics in Cosmetics, 2015.
- 19 Convention on Biological Diversity, Global Biodiversity Outlook 4: A mid-term assessment of progress towards the implementation of the Strategic Plan for Biodiversity 2011–2020, 2014.
- 20 UNEP Year Book: Emerging Issues in our Global Environment, 2014.
- 21 Millennium Ecosystem Assessment, 2005.
- 22 Convention on Biological Diversity, Global Biodiversity Outlook 3, 2010.
- 23 See www.cbd.int/sp/targets/.
- 24 UNEP Year Book: Emerging Issues in our Global Environment, 2014.
- 25 UNEP, 21 Issues for the 21st Century: Result of the UNEP Foresight Process on Emerging Environmental Issues, 2012.
- 26 United Nations Conference on Sustainable Development, "The future we want. Our common vision", 2012.
- 27 See, for instance, the Guidelines for the Development of National Legislation on Access to Information, Public Participation and Access to Justice in Environmental Matters, adopted by the Governing Council of the United Nations Environment Programme at its ninth special session (http://www.unep.org/civil-society/Portals/24105/documents/Guidelines/GUIDE-LINES_TO_ACCESS_TO_ENV_INFO_2.pdf and United Nations Environment Assembly resolution 1/13.)
- 28 United Nations Environment Programme Governing Council decision 27/9, on advancing justice, governance and law for environmental sustainability.



VISION 2030

General Assembly summit adopts the 2030 Agenda for Sustainable Development. Photo: UN

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UNEP aims to reduce environmental risks and increase the resilience of societies and the environment as a whole, while also responding to the challenges highlighted in the situation analysis.

This will not only foster the environmental dimension of sustainable development but also bring socioeconomic benefits. The period 2018-2021 will provide a stepping stone for UNEP to realize the vision for 2030.

Environment in sustainable development

The challenge of UNEP in the 2030 Agenda is to **develop and enhance integrated approaches to sustainable development** – approaches that will demonstrate that improving the health of the environment will bring social and economic benefits.

An effective, integrated approach will ensure that the environment underpins prosperity; that environmental degradation does not result in large social and economic costs; and that all countries and all sectors of society stand to benefit, including across generations. Together with other internationally agreed environmental goals, the universal, inclusive and integrated scope of the 2030 Agenda offers UNEP a 15-year window of opportunity. UNEP will enable countries to balance environmental, social and economic objectives while promoting social development, sustained and inclusive economic growth and environmental protection for the benefit of all

The full integration of the environmental, social and economic dimensions of sustainable development must take three factors into account. First, **sustainable natural resource use** is increasingly critical to



Labourers collect rice saplings in Karjat, India. PHOTO: REUTERS

economic and social development. Second, the regular review by UNEP of the state of the environment shows a reduction over time of social and economic costs as a result of gradual improvements in environmental sustainability. Third, compared to the rest of the population, marginalized and vulnerable groups enjoy greater social and economic benefits from the integration of environmental considerations into development planning. Such an integrated approach results in a more equitable distribution of resources, leading to healthier men, women and children.

In an effort towards achieving the 2030 Agenda, UNEP will work with local economies and partners such as the United Nations Human Settlements Programme (UN-Habitat) in promoting healthy cities. UNEP will, within its mandate, also take a lead with partners on tackling challenges presented with transboundary resources such as marine issues.

Science is fundamental in providing answers to some of the most pressing sustainability issues of the twenty-first century. Strengthening the science-policy interface to inform society of the risks and opportunities of new developments is therefore at the heart of the work of UNEP across the organization.

The United Nations Conference on Sustainable Development recognized the green economy as a pathway to achieving sustainable development and poverty eradication. Building on this, an inclusive green economy is **low-carbon**, **efficient and clean** in production, but also inclusive in consumption and outcomes, resulting in improved human well-being and social equity, while significantly increasing environmental resilience and reducing environmental risks and ecological scarcities.²⁹ Through the 2030 Agenda, Member States resolved to create conditions for **sustainable**, inclusive and sustained economic growth, while also considering the different levels of national development and capacities. They also stated the importance of working to build a dynamic, sustainable, innovative and people-centred economy that would particularly promote youth employment and the economic empowerment of women.³⁰ While the focus of UNEP is on the environmental dimension of sustainable development through partnerships, an inclusive green economy also brings social and economic benefits. It does this by adopting a more inclusive approach and encouraging investment in skills for future capacity, creating new jobs, providing livelihoods and reducing the risk of poverty. It goes beyond allocation and production aspects of the economy to include social aspects such as consumption and distribution. The approach proposes a more strategic allocation of resources to green sectors and the greening of brown sectors; more sustainable consumption; efficient, cleaner and safer production; and greater equity in the outcomes through public policies related to production and consumption decisions. It recognizes that there are many and diverse pathways to environmental sustainability.

UNEP will deliver on the three dimensions of sustainable development for improved environmental outcomes through inclusive green economy pathways. An inclusive green economy acknowledges the centrality of the environment to human well-being and explores the critical role of finance, technology, sustainable trade and institutions in creating the necessary conditions for addressing environmental and social challenges for sustainable development.

The drivers of reducing environmental degradation are largely in the realm of **governance, policy space and the institutions** that support governance and



Volunteers, including children, pick up trash along the seashore during a clean up drive at Freedom Island in Las Piñas City, Manila, Philippines. PHOTO: AFP

policy decisions. This is where an inclusive green economy approach, together with a range of enabling conditions, can achieve environmental sustainability.

Lessons learned

UNEP is a learning organization and will continue to improve by identifying opportunities through a blend of internal and external reviews, including an evaluation of the medium-term strategy for the period 2014-2017. Key lessons learned and opportunities for improvement from previous medium-term strategy periods are defined below:

A better planning horizon: many outcomes deriving from support by UNEP become visible after sustained engagement of ten or more years. However, UNEP must manage resources and report progress towards these results in a shorter-term programme of work period. As well as supporting the implementation of the 2030 Agenda, UNEP will focus on longer-term results by using an outcome map approach where the medium-term strategy sets out outcomes and impacts that UNEP will achieve by 2030, as well as outcomes for each intervening mediumterm strategy period.

Greater integration within UNEP and collaboration with other organizations: sustainable development is a universal agenda; it compels society to think in terms of shared responsibilities for a shared future. Success is unlikely to come from any single player working on its own. It demands integration, a collaborative approach and policy coherence, both internally and externally. UNEP has enshrined these valuable lessons in operating principles. Internally, UNEP will better integrate how it works across its subprogrammes to be universal in application and provide a strategic regional presence. Externally, UNEP will create synergy through strategic partnerships and better integrate normative frameworks.

Improved results-based budgeting facilitates better prioritization:

the changing and increasingly complex operating context is creating new demands for the deployment of a planning and budgeting process that is agile and can





UNEP works with partners to protect wildlife especially endangered species such as the Pangolin above. PHOTO: ALFRED WEIDINGER

enable better resource use. UNEP is now seeking to create a stronger linkage between inputs, outputs and outcomelevel results in strengthening the budget and continuing the journey towards results-based budgeting.

Better-synchronized planning cycles will improve the speed of delivery: while sequential planning allows for the medium-term strategy and programme of work to be clearly defined before a project portfolio can be confirmed, a tandem development will improve delivery speed. UNEP will develop its project portfolio in tandem with the medium-term strategy and programme of work.



A municipal employee carries out preventative maintenance and repairs on a BiciMad public electric bike share station in Madrid, Spain. PHOTO: AFP

Endnotes:

- 29 UNEP, Uncovering Pathways Towards an Inclusive Green Economy, 2015. http://web.unep.org/greeneconomy/sites/unep.org.greeneconomy/files/ige_narrative_summary.pdf
- 30 Outcome document of the United Nations summit for the adoption of the post-2015 development agenda, "Transforming our world: the 2030 Agenda for sustainable development", especially paras. 3, 9, 27 and 33. http://www.un.org/pga/wp-content/uploads/sites/3/2015/08/120815_outcome-document-of-Summit-for-adoption-of-the-post-2015-development-agenda.pdf.

OPERATING PRINCIPLES

Solar panels of a bioclimatic house and windmills on the grounds of the Institute of Technology and Renewable Energy (ITER) outside Santa Cruz, on the Spanish Canary Islands. PHOTO: REUTERS

Operating principles define the approach to achieving the 2030 vision of UNEP. Like signposts, the five principles guide the way UNEP approaches its work and the choices it makes. The business model sets out the manner in which UNEP will coordinate and focus its actions based on those principles.

UNIVERSAL IN APPLICATION

Through the medium-term strategy, UNEP aims to be globally coherent and locally responsive, for a truly universal approach, as a "one size fits all" approach will not work. UNEP will be globally coherent in its normative work and leadership role as the global environmental authority that sets the global environmental agenda. It will be locally responsive by recognizing the principle of national ownership and taking into account differing national realities, capacities and levels of development, whilst respecting national policies and priorities. UNEP will provide flexible support to Member States in the implementation of their national environmental aspects and recognizing their interlinkages, so as to achieve sustainable development in all its dimensions towards a common future.

RESULTS-BASED MANAGEMENT

UNEP will continue to strengthen planning and delivery processes, based on the progressive use of results-based management and strategic partnerships. UNEP will also build on lessons learned in previous medium-term strategy cycles, and strengthen the connections and synergies among subprogrammes both through internal arrangements for planning, delivery and budgeting, and performance indicators. Where possible, UNEP will collect sex-disaggregated and age-disaggregated data to inform project design and monitor project progress and achievements. UNEP work in specific regions, subregions and countries will provide a particularly fertile terrain for ensuring coherence in the implementation of its planned results across subprogrammes.

OPERATING PRINCIPLES

SYNERGY THROUGH STRATEGIC PARTNERSHIPS

A universal UNEP strategy will work through strategic partnerships for sustainable development. For UNEP, inclusive and strategic partnerships will be a key feature of implementation at all levels: global, regional, national and local. Transformative partnerships will be built on common principles and values, a shared vision and shared goals, placing people and planet at the centre of sustainable development. Issue-based coalitions and platforms that integrate diverse stakeholders, including central and local governments, major groups, stakeholders and the private sector are key to implementation, monitoring and accountability.

STRATEGIC REGIONAL PRESENCE

A strengthened strategic regional presence will propel the work of UNEP towards regional and global consensus and policy coherence on key issues relating to the environmental dimension of sustainable development. UNEP will tailor its work to the needs of regions and countries to address their diverse environmental challenges, varying vulnerability to climate change and disasters and different degrees of environmental governance capacity. UNEP will also take into account environmental change and trends and their impacts on the three dimensions of sustainable development. A strengthened strategic regional presence will also enable UNEP to foster effective and relevant partnerships, including through South-South and triangular cooperation and with the wider United Nations system at regional, subregional and country levels through the United Nations "Delivering as one" initiative.

GREATER INTEGRATION OF NORMATIVE FRAMEWORKS

As part of a coordination role in the United Nations system, UNEP will work with other entities to integrate environment-related, normative frameworks in their respective thematic and/or functional areas. Simultaneously, UNEP has the responsibility to model good practice and drive the achievement of gender equality and other rights-based frameworks in its environmental-related activities, including assessments and analyses, norms, guidelines and methods. The outcome document of the United Nations Conference on Sustainable Development, entitled "The future we want", and the 2030 Agenda provide unique opportunities to broadly engage and highlight the centrality of such normative frameworks in the overall sustainable development agenda. Guided by its Policy and Strategy for Gender Equality and the Environment, UNEP will incorporate a gender lens in all its programmes and operations.

PRIORITY & & PROPOSED OUTCOMES

A rainbow forms over the Ulu Baram rainforest in the Borneo state of Sarawak, Malaysia. PHOTO: AFP

Priority Areas

The situational analysis constitutes the basis for determining the UNEP strategic focus and priority areas for the medium-term strategy for the period 2018-2021. While priorities and trends differ from region to region, there are common issues across all regions that will align the organization to the same broad areas of focus as in the medium-term strategy for 2014-2017, with a few refinements. The areas of focus are as follows:



The outcomes proposed in the next page lay out how UNEP applies a long-term vision in each of those priority areas for a 2030 impact.

Proposed Outcomes

Environmental impact takes many years to achieve. Therefore, UNEP is adopting a more **results-focused, longer-term outcome**³¹ planning approach, aligned to the target date for the 2030 Agenda. Using outcome maps,³² the medium-term strategy outlines the logical chain of results to move from the current situation to outcomes and impacts in 2030.³³ Figure 5 provides an overview of the Goals to be targeted by UNEP subprogrammes. The strengthening of our results-based approach and the connection between the programmatic outcomes of UNEP will enable UNEP to chart the critical outcomes to support countries to achieve environmental sustainability. The adoption of two biennial programmes of work and budget in the broader context of a four-year medium-term strategy will outline steps towards achieving the longer-term impact for the adoption of a flexible approach towards incorporating emerging issues and different regional outlooks in the outcome maps. These programmes of work and budget would be reviewed every two years as part of the existing programme of work development cycle.

The objective for each subprogramme defines the intention, whilst the outcome maps outline the UNEP 2030 outcomes and impacts; the logical progression of outcomes to achieve the UNEP 2030 outcomes and impacts; and the outcomes to be achieved in the period 2018-2021. **Impact indicators** in the outcome maps explain how environmental change would be measured in 2030 and beyond, and are beyond the capacity of UNEP alone.



UNEP



FIGURE 5: Overview of SDGs targeted by UNEP subprogrammes



CLIMATE CHANGE Targets: 1.5, 7.2, 7.3, 13.1, 152



RESILIENCE TO DISASTERS AND CONFLICTS Targets: 1.5, 11.5.1,11.b,13.1,16.1.2, 16.6, 17.3, 17.6, 17.14



ENVRONMENTAL GOVERNANCE Targets: 1.4, 10.2, 11.6, 12.4, 14.c, 15.6, 15.8, 15.9, 15.a, 15.c 16.3, 16.6-7, 16.b, 17.9, 17.14 and 17.16



HEALTHY AND PRODUCTIVE ECOSYSTEMS Targets: 1.b, 2.1, 2.4, 3.3, 6.3, 6.5, 6.6, 7.2, 11.4, 11.6, 11.a, 12.6, 12.7, 12.8, 13.3, 14.1, 14.2, 14.3, 14.4, 14.5, 14.6, 14.c, 15.1-9, 15a, 17.5, 17.14, 17.19



RESOURCE EFFICIENCY Targets: 4.7, 8.4, 9.5, 12.1-3, 12.6-8, 12.a, 17.19



CHEMICALS, WASTE AND AIR QUALITY Targets: 3.9, 6.3, 7.a, 11.6, 12.4, 12.5



ENVIRONMENT UNDER REVIEW Targets: 1.5, 2.4, 3.9, 4.7, 5.a, 6.3, 6.6, 7.2, 7.3, 8.4, 9.4, 10.7, 11.5-7, 12.3-5, 13.1, 14.1, 14.3, 14.5, 15.1-5, 15.c, 16.4, 16.10, 17.6, 17.7, 17.18, 17.19

Endnotes:

- 31 "Outcomes" are the uptake, adoption or use of a UNEP intervention that is observed as a change of behaviour, attitude, condition, knowledge or skill. Negotiated and agreed outcomes become expected accomplishments.
- 32 "Outcome maps" are a logical chain of outcomes that lead to a long-term goal.
- 33 "Impacts" are the ultimate ambition to be realized and represent environmental change. They are linked to the Sustainable Development Goals (https://sustainabledevelopment. un.org/post2015/transformingourworld).

CLIMATE CHANGE

100

A field of dead almond trees is seen next to a field of growing almond trees in Coalinga in the Central Valley, California, United States. PHOTO : REUTERS

A Alaria

Transitioning to low-emission economic development, enhancing adaptation and building resilience to climate change

By 2030, **countries are more resilient** to the adverse impacts of climate change and greenhouse gas emissions are **signifi-cantly reduced**, including emissions from deforestation and forest degradation. To realize this 2030 vision, national adaptation plans must be institutionalized and progressively implemented. At the same time, Governments will need to adopt strategies to reduce their emissions and increase their investments in renewable energy and energy efficiency. Forest loss and forest degradation will need to be reduced, and forest conservation and restoration will need to be enhanced.

The work of UNEP towards this vision will be organized around three results streams: climate change adaptation and resilience; mitigation and clean energy; and reducing emissions from deforestation and forest degradation in developing countries and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries (REDD-plus). The work of UNEP on climate change is shaped by the decisions of the Conference of the Parties to the United Nations Framework Convention on Climate Change and complements the work of the Convention, while being guided by sound science, particularly from the Intergovernmental Panel on Climate Change. This work will also contribute to the achievement of the Goals, specifically Goal 7 (energy), Goal 13 (climate change) and Goal 15 (biodiversity).

UNEP and its partners³⁴ will lead global support to vulnerable countries, helping them transition from urgent and immediate



A frog is seen on ground cracked by drought in the Las Canoas Lake, north of the capital Managua, Nicaragua. PHOTO : REUTERS

adaptation responses to medium- and long-term national adaptation plans that **integrate ecosystem-based approaches** to adaptation. In subsequent mediumterm strategy cycles, UNEP and its partners will support these countries as they institutionalize, implement and monitor their national adaptation plans. UNEP will promote the greening of national adaptation plans while scaling up, expanding and collecting more evidence on successful ecosystem-based adaptation that has taken into account gender-differentiations. This information will be captured and disseminated through **UNEP-led knowledge networks**, such as the Global Adaptation Network and its regional wings. UNEP will work with



Workers clean solar concentrator panels (solar parabolic dish) at the Tapi solar food processing unit at Kapodra village, India. PHOTO: REUTERS the United Nations Development Programme, the Food and Agriculture Organization of the United Nations, the International Union for Conservation of Nature and other partner organizations to ensure that ecosystem-based adaptation pilots are brought to scale and institutionalized.

In supporting Member States in the formulation and implementation of low-greenhouse gas emission development strategies by 2020, as agreed in the Paris Agreement, UNEP and its partners will also work to improve energy efficiency and increase the use of renewable energy. UNEP will strengthen and expand public-private partnerships in line with the United Nations Secretary-General's Sustainable Energy for All initiative and Goal 7, and continue to engage with non-state actors and support local initiatives while supporting the implementation of the Lima-Paris Action Agenda. UNEP will provide guidance on sound policy and investment choices by promoting the development and transfer of technology through the Climate Technology Centre and Network, to facilitate access to finance and build readiness to deploy funding effectively. UNEP will also support countries as they update and implement their nationally determined contributions as required by the Paris Agreement, helping them to lower their emissions of greenhouse gases and other pollutants by reducing energy intensity

Endnotes:

34 National adaptation plans partners include the United Nations Development Programme, the United Nations Institute for Training and Research, the Food and Agriculture Organization of the United Nations, the World Meteorological Organization, the German Agency for International Cooperation, the Programme of Research on Climate Change Vulnerability, Impacts and Adaptation, the Least Developed Countries Expert Group, the Adaptation Committee and the Global Water Partnership. **and demand** in sectors such as lighting, appliances, equipment, buildings and transport.

UNEP and its REDD-plus partners, the Food and Agriculture Organization and United Nations Development Programme, will help countries to meet the Warsaw Framework for REDD-plus,³⁵ giving a particular focus to Goal 15 on biodiversity, non-carbon benefits and REDD-plus finance and private sector engagement. Beyond REDD-plus, UNEP will contribute to **improving the management of carbon stocks** in all terrestrial ecosystems for stronger environmental and gender co-benefits. In all of its work, UNEP will apply a gender lens in order to achieve better outcomes.

The climate change subprogramme will achieve its objective, provided that Member States meet their commitments under the United Nations Framework Convention on Climate Change and seek the support of UNEP in doing so. Achieving the objective also depends on the availability of funding to help countries transition to low-emission economic development and enhance their adaptation and resilience to climate change. To achieve far-reaching changes, UNEP will **engage in partnerships** that leverage climate finance and scale up the methods, tools, assessments and pilots of UNEP.

35 The Warsaw Framework for REDD-plus sets out the conditions for accessing results-based payments for REDD-plus, including having a national strategy or action plan, a national forest reference emission level and/or forest reference level, a national forest monitoring system and a system for providing information on how the REDDplus safeguards, agreed by the United Nations Framework Convention on Climate Change in Cancun in 2010, are being addressed and respected.



Climate Change Outcome Map

Objective:

Countries increasingly transition to low-emission economic development and enhance their adaptation and resilience to climate change

2030 IMPACT



Reduced vulnerability to adverse climate change impacts and maintained climate-resilient development trajectories

Indicators:

- 1 Number of people benefiting from vulnerability reduction interventions;
- 2 Type and extent of physical and natural assets strengthened and/or better managed to withstand the effects of climate change.



Reduced emissions consistent with a 1.5/2°C stabilization pathway

Indicators:

- 1 Emission reductions of greenhouse gases and other pollutants from renewable energy and energy efficiency;
- 2 Share of gross domestic product invested in energy efficiency and renewable energy.

FUTURE MTS PERIODS



Reduced forest emissions and enhanced forest carbon stocks contributing to national sustainable development

Indicators:

- 1 Emission reductions from reduced deforestation and forest degradation;
- 2 Enhanced carbon stock.

Countries have implemented one cycle of the national adaptation planning process that integrates ecosystem-based adaptation and leads to climate-resilient development

Countries institutionalize the national adaptation planning process, which integrates ecosystem-based adaptation, monitors and reports on progress Countries invest over half of the national energy sector budget in low-emission technologies, including in renewable energy and energy efficiency

Countries institutionalize economy-wide investment in lower-emission technologies, including for energy efficiency and renewable energy

2018-21

Countries reduce deforestation and forest degradation and enhance the conservation of forests

Countries achieve sustainable forest management through REDD+ policy approaches, positive incentives, including through results-based payments



Countries increasingly advance their national adaptation plans, which integrate ecosystem-based adaptation



Countries increasingly adopt and/or implement low greenhouse gas emission development strategies and invest in clean technologies



Countries increasingly adopt and implement forest -friendly policies and measures that deliver quantifiable emissions reductions and social and environmental benefits

RESILIENCE TO DISASTERS AND CONFLICTS

110.11

Residents stand on electric wires to stay on high ground while others wade in neck-deep flood waters caused by Typhoon Ondoy in Cainta Rizal, east of Manila, Philippines. PHOTO: REUTERS Preventing and reducing the **environmental impacts of disasters and conflicts, while building resilience** to future crises

By 2030, the threats to health and livelihoods from the environmental causes and consequences of disasters and conflicts will be significantly reduced. Realizing the 2030 vision requires countries to systematically use **best-practice environmental management** to prevent and reduce the impacts of disasters and conflicts.³⁶ It also means that Member States, supported by the international community, will need to respond to such environmental emergencies in a robust way and be in a position to implement appropriate sustainable practices rapidly after a crisis.

The medium-term strategy for the period 2018–2021 will focus on integrating best-practice environmental approaches into the **key prevention, response and recovery policies and plans** of countries and the international community at the request of affected Member States. Subsequent medium-term strategy cycles will broaden, embed and institutionalize these approaches in order to deliver the 2030 impact, in line with the Sustainable Development Goals.

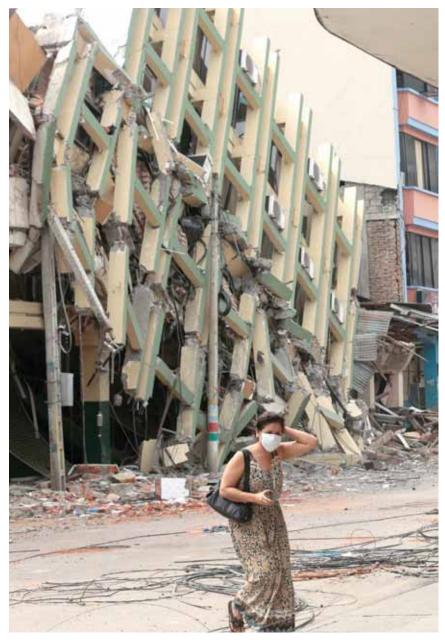
The Sendai Framework for Disaster Risk Reduction 2015–2030 provides the justification and context for the prevention work of UNEP, recognizing that sustainable ecosystem management is an important mechanism for reducing risks from natural and technological disasters by buffering impacts and avoiding long-term environmental threats to health and livelihoods.

In addition, the Joint UNEP/OCHA Environment Unit, a partnership between



A seaplane releases water on a wildfire near the town of Berango, Northern Spain. PHOTO: AFP

UNEP and the Office for the Coordination of Humanitarian Affairs established in 1995, provides an entry point to the humanitarian community, enabling UNEP to respond rapidly to environmental emergencies and to improve the environmental performance of the humanitarian sector in line with General Assembly resolution 46/182, on the strengthening of the coordination of humanitarian emergency assistance of the United Nations. Over the past 15 years, UNEP has worked in some of the world's most seriously conflict- and



A destroyed building after the April 2016 earthquake hit the town of Portoviejo, Ecuador. PHOTO: AFP

disaster-affected countries, and during this time UNEP has developed a track record of supporting recovery through improved environmental management.

UNEP will work in **partnership with Governments, the private sector and the international community, in accordance with respective mandates**, helping them to address disasters and conflicts by providing technical, science-based advice to demonstrate how preparedness and improved environmental management reduce risks; to assess environmental impacts of crisis; and to catalyse more effective and sustainable responses.

Critical drivers for the success of the subprogramme are the effective expansion of partnerships and the scaling-up and appropriate tailoring of successful pilot approaches from local to regional scales. Success also rests on the continued political support of national and international stakeholders. Risks include an increase in uncontrollable factors such as extreme weather and deteriorating ecosystems.

Endnotes:

36 The work of UNEP in this area encompasses disasters (whether natural or man-made) and armed conflicts that have severe environmental consequences.



Resilience to Disasters and Conflicts Outcome Map

Objective:

Countries increasingly prevent and reduce the environmental impacts of disasters and conflicts, while building resilience to future crises*

2030 IMPACT



Best practice environmental management approaches prevent and reduce the impacts of disasters and conflicts*

Indicator:

1 Resilience of the poor and those in vulnerable situations to disasters and conflicts.*



Countries rapidly respond to and recover from the environmental impacts of disasters and conflicts*

Indicators:

- Improvement in Environmental Performance Index score for countries in the first five years post-crisis;
- 2. Number of countries with defined institutional responsibilities and multi-stakeholder coordination mechanisms for crisis response and management.

FUTURE MTS PERIODS

Countries use natural resource and environmental management to prevent and reduce the risks of disasters and conflicts*

Environmental risk reduction approaches are institutionalized, particularly in countries that are most vulnerable to disasters and conflicts* Countries and the international community respond to emergencies in a robust and environmentally sustainable way

Improved environmental sustainability in humanitarian action and joint United Nations post-crisis response and recovery plans

2018-21

Post-crisis countries have robust and effective environmental institutions and policies in place

Post-crisis countries integrate environmental considerations during recovery from crisis

Countries and international partners integrate environmental measures for risk reduction in key policies and frameworks Emergency response and post-crisis recovery plans integrate environmental considerations to increase the sustainability of recovery



Crisis-affected countries adopt key environmental and natural resource governance policies and sustainable practices as a contribution to recovery and development

* The work in this area encompasses disasters (whether natural or man-made) and armed conflicts that have severe environmental consequences.

HEALTHY AND PRODUCTIVE ECOSYSTEMS

The son of a fisherman carrying a basket full of squid at a fishing harbour in the city of Chennai, Southern India. PHOTO: REUTERS

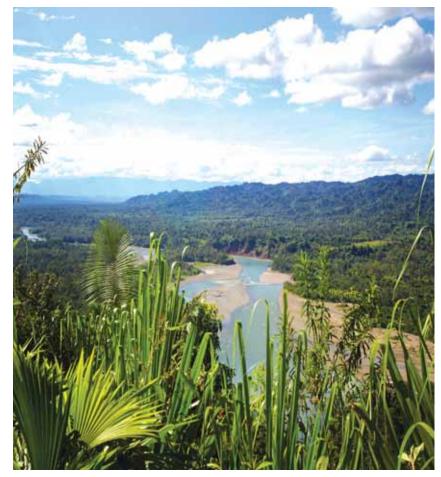
Managing ecosystems **to protect and restore** their long-term functioning and **supply of goods and services**

By 2030, biodiversity conservation and integrated ecosystems management will result in **healthier marine, freshwater and terrestrial ecosystems** that provide benefits such as clean water, secure food supply, climate change mitigation and adaptation, and aesthetic value, supporting the well-being of men, women and children.

To realize this 2030 vision, the subprogramme on healthy and productive ecosystems seeks to align the growing need for ecosystem goods and services with **biodiversity conservation and the** long-term functioning of ecosystems. The expected accomplishments are closely linked to the Sustainable Development Goals and the goals and targets of the Strategic Plan for Biodiversity 2011-2020,37 the Aichi Biodiversity Targets and other ecosystem-related multilateral environmental agreements.³⁸ The baseline and progress towards the 2030 outcome and impact will be measured through Goal indicators related to biodiversity and the health and productivity of ecosystems.³⁹

The transition to ecosystem management that safeguards biodiversity and the long-term functioning of ecosystems and their contributions to the delivery of the 17 Goals requires long-term engagement and behaviour change across many sectors. UNEP will focus on assisting countries in achieving the Goals, implementing multilateral environmental agreements and both the short- and long-term processes that lead to integrated ecosystem management.

To address the causes of ecosystem degradation and to promote the safeguarding



The Alto Madre de Dios river, part of the Manú Biosphere Reserve, Peru. PHOTO: REUTERS

and restoration of ecosystems, UNEP and its partners will provide countries with tools, best practice and support on crosssector collaboration around ecosystem management. UNEP will also strengthen partnerships⁴⁰ to **institutionalize the ecosystem approach** across society, e.g., in education, monitoring, economic decision-making and cross-sector and transboundary collaboration frameworks.⁴¹ Building on the ground-breaking work of UNEP on the **economics of natural capital and spatially explicit data on** biodiversity and ecosystem services, UNEP will help countries to integrate natural capital into measurements of progress on sustainable development and public and private economic decision-making.

A key driver for successful delivery is the ability of UNEP to build strong partnerships and normative processes across sectors and to generate guidelines and knowledge-exchange that can help countries to manage and restore their



A trevally fish chases fusiliers (Caesionidae fish) near Lankayan Island located in the Sulu-Sulawesi Marine Ecoregion in the Sulu Sea, northeast of the island of Borneo, in the state of Sabah, in Malaysia. PHOTO: REUTERS ecosystems sustainably, taking into account the needs of different genders. The Goals can furthermore inspire countries to broaden their development agendas to include ecosystem health and a sufficient supply of natural resources. Many recent technological advances have further expanded our capacity to deal with big data and increase transparency around the positive and negative ecosystem-related externalities of societal choices.

Key risks are the technical complexity of cross-sector approaches and the long time frame for ecosystem change, which often occurs at a slower pace than economic and political decision-making processes. These risks are countered by the 2030 Agenda, which provides an **opportunity to link ecosystem management to multiple objectives and targets across sectors**, and thus measure integrated ecosystem management against several sectoral targets. The Goals also provide an opportunity to drive a step change in the use of the ecosystem approach, encouraging its use in decision-making across all sectors of society.

Endnotes:

- 37 Convention on Biological Diversity, Strategic Plan for Biodiversity 2011–2020.
- 38 Convention to Combat Desertification, Strategic Vision for 2008–2030 of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Strategic Plan for Migratory Species 2015–2023 of the Convention on the Conservation of Migratory Species of Wild Animals, Strategic Plan for 2009–2018 of the Agreement on the Conservation of African Eurasian Migratory Waterbirds, Strategic Plan for 2016–2024 of the Convention on Wetlands of International Importance, especially as Waterfowl Habitat, Vision for 2022 of the Convention concerning the Protection of the World Cultural and Natural Heritage, Regional Seas Strategic Directions (2017–2020) and the goals and targets of other regional and subregional multilateral environmental agreements.
- 39 As of 30 November 2015, the relevant draft Goal impact level indicators include the following: 2.1.2 Prevalence of population with moderate or severe food insecurity, based on the Food Insecurity Experience Scale; 2.4.2 Percentage of agricultural area under sustainable agricultural practices; 3.3.3 Malaria incident cases per 1,000 person per year; 6.3.1 Percentage of wastewater safely treated, disaggregated by economic activity; 6.3.2 Percentage of receiving water bodies with ambient water quality not presenting risk to the environment or human health; 6.6.1 Percentage of change in water-related ecosystems extent over time; 7.2.1. Renewable energy share in the total final energy consumption (percentage); 11.6.2 Level of ambient particulate matter (PM 10 and PM 2.5); 14.4.1 Proportion of fish stocks within biologically sustainable levels; 14.5.1 Coverage of marine protected areas; 15.1.1 Forest area as a percentage of total land area; 15.2.1 Net permanent forest loss; 15.3.1 Trends in land degradation; 15.4.1 Coverage by protected areas of important sites for mountain biodiversity; 15.4.2 Mountain Green Cover Index; and 15.5.1 Red List Index. These may be complemented by other indicators under the Goal progress monitoring framework once approved and as feasible. At programme of work and budget level, the alignment with Goal indicators is focused on process level indicators, e.g., 15.9.1 Number of national development plans and processes integrating biodiversity and ecosystem services values.
- 40 Partnerships include The Economics of Ecosystems and Biodiversity, the Global Universities Partnership on Environment and Sustainability, the Landscapes for People, Food and Nature Initiative, the Global Coral Reef Partnership, the Global Partnership on Marine Litter, the Global Partnership on Wastewater Management and the Global Partnership on Nutrient Management.
- 41 Collaboration frameworks include regional seas, basin organizations, transboundary conservation efforts and public, private and civil partnerships.



Healthy and Productive Ecosytems Outcome Map

Objective:

Marine, freshwater and terrestrial ecosystems are increasingly managed through an integrated approach that enables them to maintain and restore biodiversity, ecosystems' long-term functioning and supply of ecosystem goods and services

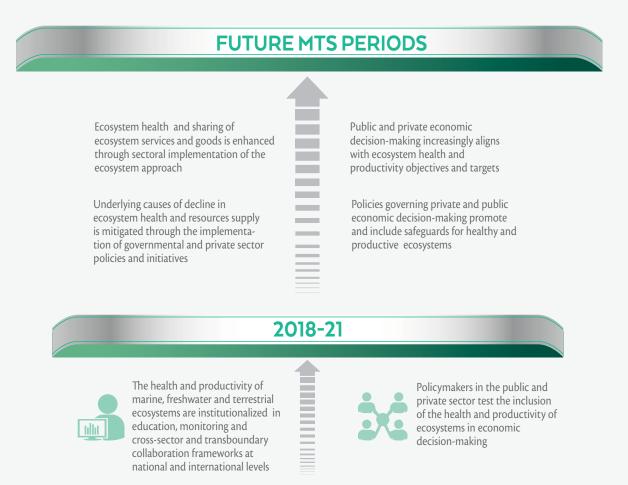
2030 IMPACT



Healthy ecosystems provide a secure supply of ecosystem goods and services for human well-being

Indicators:

1 Trends in the health and productivity of ecosystems, such as in food security, malaria incident cases, coverage of marine protected areas, forest area as a percentage of total land area and water quality not presenting risk to the environment or human health, percentage of change in water-related ecosystems extent over time, Mountain Green Cover Index, Red List Index.



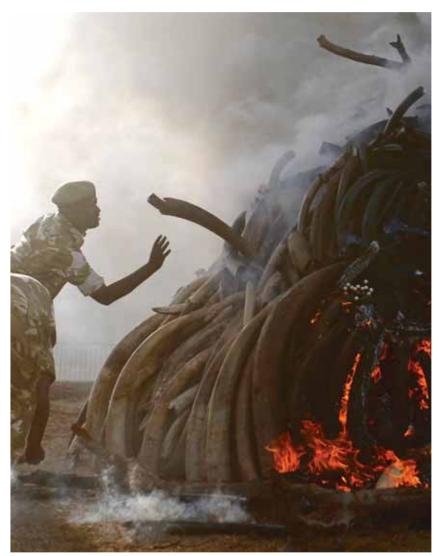
ENVIRONMENTAL GOVERNANCE

Aeriel view of Rio de Janeiro, Brazil. PHOTO: REUTERS Promoting **policy coherence** and **strong legal** and **institutional frameworks** to achieve environmental goals in the context of sustainable development

By 2030, environmental issues are handled in an inclusive, sustainable and coherent manner through integrated policy and effective norms and institutions at all levels of governance. To realize this vision, effective governance responses are needed to address environmental pressures and support the management of Earth's natural resources. Responses will rely on evidence-based and coherent policy direction, adequate normative frameworks, effective institutions, the engagement of stakeholders and the principles of good governance that are enshrined in the concept of rule of law. Such criteria are also critical to the achievement of the 2030 Agenda.

To achieve its 2030 vision, UNEP will help countries to implement the environmental dimension of the 2030 Agenda by partnering with relevant institutions, including United Nations entities, multilateral environmental agreements and other international processes, and by promoting integrated approaches to sustainable development.⁴² Such work will build on the outcomes of the United Nations Conference on Sustainable Development.

UNEP will also support and catalyze efforts to address environmental issues emerging from United Nations Environment Assembly resolutions that require international cooperation. UNEP will support the strengthening of countries' capacities and policy, legal and institutional frameworks for implementing multilateral environmental agreements and the Sustainable Development Goals. It will also promote principles of



Kenya Wildlife Service rangers burn 15 tonnes of ivory confiscated from smugglers and poachers to mark the World Wildlife Day at the Nairobi National Park. PHOTO: REUTERS.

good governance enshrined in the rule of law, including rights-based and participatory approaches, as well as gender-sensitive policies, legislation and capacity development.

UNEP will put in place programmes that respond to country and regional priorities,

increasing its engagement with countries as part of the United Nations Country Teams, including through the 'Delivering as one' approach. UNEP will also build on successful partnerships, including the Poverty-Environment Initiative, and engage with relevant stakeholders – whether in Government, the private sector, or civil



Ka'apor Indian warriors tie up loggers during a jungle expedition to search for and expel them from the Alto. Turiaçu Indian territory, near the Centro do Guilherme municipality in the northeast of Maranhão state in the Amazon basin, Brazil. PHOTO: REUTERS. society – who play a key role in delivering effective environmental governance.

The comparative advantage of UNEP lies in its leading role on the environment; its capacity to convene and build consensus at all levels of governance;⁴³ and its key role in **interagency mechanisms**, including the Environmental Management Group and in promoting the progressive development of environmental law.⁴⁴ UNEP also has a strong history of helping Governments to strengthen their institutions, including for the development and implementation of national legislation, increasingly embedding gender considerations into its work.

Multilateral environmental agreements and internationally agreed environmental goals (particularly the relevant goals, targets and indicators of the 2030 Agenda) provide the normative framework and thematic direction for the work of UNEP on environmental governance. UNEP will focus on relevant targets of Goals 1, 10, 12, 13, 14, 15, 16 and 17.

Recognizing that effective environmental governance influences the achievement of results in all environmental fields, the subprogramme draws upon and contributes to the implementation of all other subprogrammes.

Critical drivers of success include effective partnerships, collaboration among United Nations agencies and the existence of conducive, national-level governance foundations, all based on respect for the rule of law. UNEP will work on the assumption that the United Nations system will successfully foster effective governance beyond the environment, for instance by promoting the rule of law as a principle of good governance, as effective governance cannot be achieved in isolation.

Endnotes:

- 42 In paragraph 89 of "The future we want", Heads of State and Government and high-level representatives recognized the significant contributions to sustainable development made by the multilateral environmental agreements and acknowledged the work already undertaken to enhance synergies among the three conventions in the chemicals and waste cluster. They encouraged parties to multilateral environmental agreements to consider further measures, in these and other clusters, as appropriate, to promote policy coherence at all relevant levels, improve efficiency, reduce unnecessary overlap and duplication and enhance coordination and cooperation among the multilateral environmental agreements, including the three Rio conventions, as well as with the United Nations system in the field.
- 43 Including intergovernmental negotiating processes and the regional environmental ministerial forums.
- 44 UNEP has spearheaded since 1982 the development and review of the Programme for the Development and Periodic Review of Environmental Law, a 10-year strategy that identifies priorities and emerging issues requiring the progressive development of environmental law.



Environmental Governance Outcome Map

Objective:

Policy coherence and strong legal and institutional frameworks increasingly achieve environmental goals in the context of sustainable development

2030 IMPACT



Environmental issues are handled in an inclusive, sustainable and coherent manner, based on integrated policy and effective norms and institutions at all levels of governance * (including global, regional, sub-regional, transboundary and national)

Indicators:

1 Action by the international community demonstrates capacity to achieve the Goals and targets and adhere to international standards embedded in internationally agreed frameworks on sustainable development (including the 2030 Agenda for Sustainable Development), and on the environment (including multilateral environmental agreements) and are based on the environmental rule of law.

FUTURE MTS PERIODS

Environmental goals within the context of sustainable development are being achieved through concerted efforts by the international community, at global, regional, and subregional levels

The international community synchronizes action on the environment for achieving environmental goals in the context of sustainable development

Internationally agreed environmental objectives are being achieved on the basis of adequate legal and institutional frameworks and the contribution of all sectors of societies at global, regional, subregional and national levels

Strong institutions and adequate legal frameworks are in place, with monitoring, compliance and enforcement mechanisms and public participation to implement environmental goals

2018-21



The international community increasingly converges on common and integrated approaches to achieve environmental objectives and implement the 2030 Agenda for Sustainable Development

Institutional capacity and policy and/or legal frameworks enhanced to achieve internationally agreed environmental goals, including the 2030 Agenda for Sustainable Development and its Sustainable Development Goals

CHEMICALS, WASTE AND AIR QUALITY

A farmer sprays pesticide at a paddy field near Indramayu town in West Java province, Indonesia. PHOTO: REUTERS.

Promoting the **sound management** of chemicals and waste, and improving air quality for a **better environment** and **improved human health**

By 2030, the negative environmental and human health impacts from harmful chemicals, hazardous and other waste, and air pollution will be **significantly reduced**, contributing to a cleaner planet for all. This vision builds on the United Nations Environment Assembly resolutions on chemicals and waste and on air quality. By achieving the vision, the subprogramme is expected to contribute significantly to Sustainable Development Goal targets 3.9, 6.3, 7.a, 11.6, 12.4 and 12.5.⁴⁵

To realize the 2030 vision, several conditions must be met. The sound management of chemicals and waste must be integrated into national and sector-based legislation, policies, plans, budgets and strategies, and into fiscal and institutional frameworks. Knowledge of the hazards and risks of chemicals and waste must be increased, and alternatives promoted, including green, sustainable chemistry within the context of environmentally sound management of chemicals and wastes, taking into account gender differentiated data. Waste prevention should be coupled with product design that minimizes the generation, use and disposal of hazardous substances throughout the product life cycle, especially given the bioaccumulation and negative impact of harmful chemicals. In addition, stakeholders should adopt environmentally sound technologies, especially best available techniques and best environmental practices for the sound management of chemicals and waste, which is also meant to enhance sustainable urban development.



A child jumps on the waste products that are used to make poultry feed as she plays in a tannery at Hazaribagh in Dhaka, Bangladesh. PHOTO: REUTERS.

To create the conditions for success, UNEP will work to ensure that national and sector-based laws, standards, policies and plans on chemicals, waste management and air quality are fully grounded in the best-available science and technology. UNEP will help countries to **strengthen and mainstream their knowledge** on endocrine-disrupting chemicals, persistent organic pollutants, heavy metals like mercury and lead, chemicals in products, air pollutants such as particulate matter, e-waste, municipal waste and other waste streams. UNEP will also generate the necessary assessments, tools, methods and guidance, and strengthen institutional capacity to help countries implement strategies to reduce the generation of harmful chemicals, waste and air pollutants and manage these substances and related processes. The role of UNEP in international frameworks will be further capitalized upon to strengthen its work on air quality during the coming years and beyond.

The work of UNEP to **promote better air quality** will support interventions across cities, nations, regions, and the globe that build capacity and promote the adoption of practices, technologies and incentives



Employees push a cart loaded with discarded electronic products at the Coopermiti warehouse in São Paulo, Brazil. PHOTO: REUTERS. to reduce air pollution. UNEP will support monitoring and emissions inventories, as well as efforts to make air quality data more accessible and understandable to the public, to enable cities, countries and citizens to be fully aware of their air quality challenges. Working with stakeholders, UNEP will develop a set of global and regional actions to address key sources of air pollution. The work will put a strong emphasis on reducing air pollutants, e.g. by leveraging partnerships with the private sector to improve air quality.

In its work on chemicals, waste and air quality, the success of UNEP will rely on effectively fostering and strengthening results-based partnerships and multi-stakeholder coordination mechanisms; engaging Governments, the private sector, civil society and other international organizations; and advancing results-based management and communication. Examples of strategic coordination platforms and partnerships include the Global Alliance to Eliminate Lead Paint, the Global Partnership on Waste Management, the Global Mercury Partnership and the Climate and Clean Air Coalition to Reduce Short-lived Climate Pollutants. On air quality, UNEP will cooperate with the Economic Commission for Europe,⁴⁶ the World Health Organization, the World Meteorological Organization and other institutions to capitalize on their expertise and help achieve complementary results.

More specifically, to reduce the negative impacts of chemicals and waste, UNEP will work through multilateral environmental agreements,⁴⁷ regional environmental agreements, the Strategic Approach to International Chemicals Management, and tools such as global and regional outlooks on chemicals and waste. The subprogramme will take forward several resolutions that were adopted at the fourth session of the International Conference on Chemicals Management (the governing body of the Strategic Approach to International Chemicals Management), including the resolutions on chemicals in products and endocrine-disrupting chemicals, among others.

Together with the Inter-Organization Programme for the Sound Management of Chemicals⁴⁸ and other stakeholders, UNEP will continue to strengthen international cooperation in the field of chemical safety. UNEP and its partners will also support international action to achieve the World Summit on Sustainable Development goal for the sound management of chemicals, adopted in Johannesburg in 2002. Considering that the goal expires in 2020, UNEP will work closely with its partners to support the development of a robust post-2020 framework on chemicals and waste management within the context of the 2030 Agenda, which is the key to scaling up and globally expanding successes from a pilot scale action for a healthy and clean world for all.

Endnotes:

- 45 Goal target 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination. Goal target 6.3: By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally. Goal target 11.6: By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management. Goal target 12.4: By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment. Goal target 12.5: By 2030, substantially reduce waste generation through prevention, recycling and reuse.
- 46 Collaboration with the Economic Commission for Europe is critical in the context of the Convention on Long range Transboundary Air Pollution

48 The Inter-Organization Programme for the Sound Management of Chemicals has nine participating organizations: the Food and Agriculture Organization of the United Nations, the International Labour Organization, the United Nations Development Programme, UNEP, the United Nations Industrial Development Organization, United Nations Institute for Training and Research, the World Health Organization, the Organization for Economic Cooperation and Development and the World Bank.

⁴⁷ Relevant multilateral environmental agreements include the Bamako, Basel, Minamata, Rotterdam, Stockholm, and Vienna Conventions, and the Montreal Protocol.



Chemicals, Waste and Air Quality Outcome Map

Objective:

Sound management of chemicals and waste and improved air quality enables a healthier environment and better health for all

2030 IMPACT



Sound management of chemicals leading to reduced negative impacts from chemicals on environmental and human health

Indicators:

- Increased number of Parties to international MEAs on hazardous and other chemicals and waste that meet their commitments and obligations in transmitting information as required by each relevant agreement;
- 2 Reduced levels of mercury, lead, cadmium and selected POPs in human blood and milk, dairy products, meat, fish and shellfish;
- 3 Reduced number of skin cancer cases resulting from ODS-induced UV radiation;
- 4 Reduced amounts of ill-managed chemicals stockpiles.



Prevention and sound management of waste leading to reduced negative impacts from waste on environmental and human health

Indicators:

- Increased percentage of urban solid waste regularly collected and well managed (disaggregated by type of waste);
- 2 Increased number of Parties to international MEAs on hazardous and other chemicals and waste that meet their commitments and obligations in transmitting information as required by each relevant agreement;
- 3 Increased national waste recycling rates in tonnes of material recycled.

FUTURE MTS PERIODS



Improvement of air quality leading to reduced negative impacts from air pollutants on environmental and human health

Indicators::

- 1 Reduced number of deaths due to human exposure to outdoor air pollution levels above the WHO Air Quality Guideline values;
- 2 Reduced levels of ambient particulate matter (PM 10 and PM 2.5);
- 3 Reduced ambient air levels of NOx and SOx;
- 4 Reduced loads of sand and desert storm aerosols in ambient air.

Policies and legal, institutional and fiscal strategies and mechanisms for sound chemicals management mainstreamed with support of UNEP and enforced by countries within the frameworks of relevant MEAs and SAICM Policies and legal, institutional and fiscal strategies and mechanisms for waste prevention and sound management mainstreamed with the support of UNEP and enforced by countries within the frameworks of relevant MEAs and SAICM

Global effort to support countries adopt national air quality standards with the support of UNEP

High-quality data and assessments publicly made available with the support of UNEP

Policies and legal, institutional and fiscal strategies and mechanisms for sound chemicals management developed or implemented in countries within the frameworks of relevant MEAs and SAICM Policies and legal, institutional and fiscal strategies and mechanisms for waste prevention and sound management developed or implemented in countries within the frameworks of relevant MEAs and SAICM

2018-21

National emissions sources identified, policies, legal, regulatory, fiscal and institutional frameworks and mechanisms for the reduction of air pollution developed, institutional capacity built for improved air quality, and air quality assessments done by countries with the support of UNEP

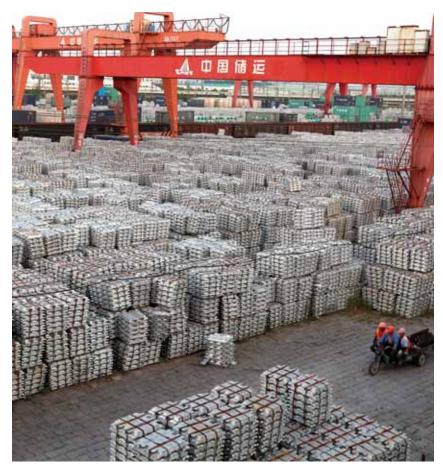
RESOURCE EFFICIENCY

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People work on a construction site in Tokyo, Japan. PHOTO: REUTERS. Promoting sustainable consumption and production and supporting the transition to inclusive green economies

By 2030, there is enhanced and sustained prosperity for all, through circular and more efficient use of the planet's resources and sustainable and equitable consumption, transforming economic structures to be greener and more inclusive. The objective of the resource efficiency49 subprogramme is to support the transition towards sustainable consumption and production, decoupling economic growth from unsustainable resource use and negative environmental impact while improving human wellbeing. This objective is in line with Goal 8 (sustained, inclusive and sustainable economic growth) and Goal 12 (ensure sustainable consumption and production patterns).

To realize the 2030 vision, policies, frameworks and action plans will be needed to support countries as they transition to sustainable development through multiple pathways, including inclusive green economy and sustainable trade, and sustainable consumption and production. Enhanced institutional capacity in the public and private sectors will equip countries to implement inclusive green economy and sustainable consumption and production approaches and invest in a shift towards green economies. Sustainable lifestyles and consumption patterns will increase the demand for sustainable and resource-efficient products and services and will support the demand



Workers ride on a motor rickshaw through an aluminium ingots depot in Wuxi, Jiangsu province, China. PHOTO: REUTERS

side of the decoupling process, taking into account gender-differentiated data.

The strong normative capacities of UNEP, along with its global partnerships, and ability to produce authoritative scientific assessments, policy analysis, knowledge products and tools put the subprogramme in a unique position to steer the global discourse on these issues. UNEP will support the public and private sectors with **policy options and capacity development across sectors and value chains,** including with policy support, assessments and technical assistance on life cycle-based approaches, green investment, adopting sustainable consumption and production patterns, sustainable



Workers sort food waste carried on conveyors at Agri Gaia System, a food waste recycling company in Sakura, Tokyo, Japan. PHOTO: REUTERS. management practices and disclosing sustainability performance. Through targeted engagement with the finance sector, the subprogramme will **support the adoption of sustainable investment practices, decarbonization of investments and financing of green technologies**. Information campaigns and education initiatives will engage all stakeholders in the promotion of sustainable lifestyles.

The subprogramme will draw on its partnerships, projects and flagship initiatives such as the International Resource Panel, the 10-Year Framework Programme on Sustainable Consumption and Production Patterns and the Partnership for Action on Green Economy to deliver this vision and ensure that the 2030 impact is achieved. Through **increased engagement** with United Nations country teams, facilitated by the UNEP regional offices, national green economy and sustainable consumption and production initiatives will be increasingly incorporated into national planning and the United Nations Development Assistance Framework. Partnerships with sister United Nations agencies and other partners will be strengthened to translate UNEP support on assessments, policies and technical and capacity development into country-level action and impact, i.e. the attainment of the Goals by 2030.

While there are strong capacities, partnerships, networks, and delivery platforms in place, delivery of the programme of work will depend on continued and increased donor support. Effective private sector engagement is another crucial element, since financing of the 2030 Agenda as a whole will require financing to the tune of \$5-7 trillion per annum. As a result, the financial system itself must align with the 2030 Agenda. It is further assumed that global economic conditions will remain stable, since new shocks or crises have the potential to derail the achievement of the Goals.

Endnotes:

49 UNEP defines resource efficiency from a life cycle and value chain perspective. This means reducing the total environmental impact of the production and consumption of goods and services, from raw material extraction to final use, recycling and disposal. The overall objective of resource efficiency is being realized through the promotion of inclusive green economy approaches and sustainable consumption and production patterns. Inclusive green economies are low-carbon, have efficient, clean and circular production systems and are inclusive in outcome and consumption. Sustainable consumption and production refers to the use of services and related products that respond to basic needs and bring a better quality of life, while minimizing and decoupling the use of natural resources and harmful materials, as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of future generations.



Resource Efficiency Outcome Map

Objective:

Countries transition to sustainable development through multiple pathways, including inclusive green economy and trade, and the adoption of sustainable consumption and production patterns, increasingly decoupling economic growth from unsustainable resource use and environmental impact while improving human well-being

2030 IMPACT



Sustainable development pathways, including inclusive green economy and trade, and sustainable consumption and production policies, are adopted and implemented

Indicators:

- 1. Percentage reduction of ecological and material footprint of growth;
- 2. Percentage reduction in material footprint/material intensity;
- 3. Percentage increase in energy/material efficiency of growth;
- 4. Number of countries with net increase in inclusive wealth.



Enhanced institutional capacity of public and private sectors to invest in sustainable management practices, including sustainable consumption & production and inclusive green economies

Indicators:

- 1. Percentage increase of gross domestic product invested in green sectors;
- Amount of investments decarbonized;
 Percentage increase in research and develop
- 3. Percentage increase in research and development spending on green technologies;
- Number of public-private partnerships for delivering sustainable consumption and production and inclusive green economy;
- 5. Resource efficiency mainstreamed through value chains.



Sustainable lifestyles and consumptions patterns are increasingly adopted

Indicators:

- 1 Percentage increase of demand for eco-certified products;
- 2 Percentage increase of market share of eco-certified goods and services;
- 3 Food waste halved.

FUTURE MTS PERIODS

Integrated sustainable development pathways, including sustainable consumption and production and inclusive green economy policies and frameworks are implemented, resulting in improved resource efficiency and human well-being and reduced ecological and material footprints

Science-based policies, regulatory and trade frameworks are institutionalized, fully integrating sustainable development pathways, including sustainable consumption and production and inclusive green economy priorities and investment plans Public, private, and finance sectors have significantly increased their investment in sustainable management farmeworks, including sustainable consumption and production, creating greener and more inclusive economies

Public, private and finance sectors institutionalize sustainable management practices in their operations and across supply and value chains Public and private sectors and individual consumers have access to and increasingly consume and demand sustainable goods and services

Multi-stakeholder partnerships lead to the adoption of greener and sustainable consumption decisions and lifestyles, as well as to increased demand for sustainable goods and services

Science-based approaches that support the transition to sustainable development through multiple pathways including inclusive green economy and sustainable trade, and the adoption of sustainable consumption and production patterns at all levels

2018-21

Public, private and finance sectors increasingly adopt and implement sustainable management frameworks and practices Public and private sectors are increasingly aware of and support the adoption of sustainable lifestyles and sustainable consumption patterns

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ENVIRONMENT UNDER REVIEW

Data monitoring in Texas, USA. PHOTO: REUTERS Keeping the **environment under review** to **empower stakeholders** to deliver the environmental dimension of sustainable development

By 2030, Governments and other stakeholders are empowered by **quality environmental assessments and open access to data and information** to deliver the environmental dimension of sustainable development.

To realize this 2030 vision, keeping the environment under review and strengthening the science-policy interface remain at the core of the work of UNEP by providing policy-relevant environmental assessments, identifying emerging issues, assisting in Goal follow-up and review, and issuing early warnings. Shared knowledge about the environmental dimension of sustainable development and key interactions with the social and economic dimensions will continue to inform policy-making and stakeholder action across sectors.

Evidence-based policymaking needs to be informed by robust data and assessments to fully integrate the environmental dimension of sustainable development, resulting in shared prosperity for all within the ecological limits of the planet. Specific topics have been identified for policy action in other subprogrammes, including enhancing resilience, decarbonizing economies, preserving ecosystem services and biodiversity, safely managing chemicals and waste, ensuring urban sustainability and preventing and controlling air, water and soil pollution. **Evidence-based tracking of progress** towards global environmental goals, commitments and frameworks in these and other areas will form the foundation for successful implementation of the 2030



Students pose at a middle school in Dexing, Jiangxi province, China. PHOTO: REUTERS

Agenda for Sustainable Development. Global Environment Outlook **and other indicator-based assessments**, supported by biennial regional environmental information network conferences and UNEP Live,⁵⁰ will continue to inform global and regional processes, guide policy debates and help set the global environmental agenda to facilitate policymaking that integrates environmental information that takes into account gender-differentiated data where possible. Emerging issues, such as microplastics and risks of novel technologies, also need to be brought to the attention of decission makers in a timely manner.

To **promote a strong science-policy interface**, UNEP will strengthen partnerships with networks of scientific experts, such as the Science and Technology



Children planting sea grapes on the coastline of Port-Salut, Haiti. PHOTO: UNEP

Alliance for Sustainable Development and major scientific bodies, including the Intergovernmental Panel on Climate Change and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Collaboration with multilateral environment agreement secretariats will also be strengthened and a broader connection with stakeholder communities will foster wider participation in the generation and dissemination of knowledge. Communities of practice linked to the Global Environment Outlook assessment processes and monitoring of the Goals will contribute timely and accurate knowledge that will further strengthen the science-policy interface. As the global voice and authority for the environment, UNEP will closely work with other United Nations agencies, notably the Department of Economic and Social Affairs, multilateral environmental agreement secretariats

and other relevant bodies to deliver the Global Sustainable Development Report series and thematic reviews to inform high-level political forums.

The subprogramme has a **strong focus on providing support** to countries in the follow-up and review of the 2030 Agenda and broadening the global partnership to build the evidence base for tracking progress towards the environmental dimension of sustainability. Enhancing country capacity to strengthen national reporting systems and share environmental information will enable betterinformed policy-making. In addition, **improved communication and engagement** with citizens, policymakers, media, non-governmental organisations, the private sector and other stakeholders can support informed decision-making and stakeholder action at the national, regional and global levels.

Endnotes:

50 UNEP Live is a dynamic online platform for sharing contextualized data and knowledge to keep the environment under review (http://uneplive.unep.org/).



Environment under Review Outcome Map

Objective:

Governments and other stakeholders are empowered with quality assessments and open access to data and information to deliver the environmental dimension of sustainable development

2030 IMPACT



Evidence-based policymaking informed by robust data and assessments fully integrates the environmental dimension of sustainable development, resulting in shared prosperity for all within the ecological limits of the planet

Indicators:

1 Increase in number of countries fully reporting on environment-related SDG indicators;

2 Increase in policy action taken by countries on the environmental dimension of sustainable development based on the use of environmental data, information and assessments.

FUTURE MTS PERIODS

Policy making and stakeholder action is guided by environmental data and information, resulting in the protection of the environment and increased well-being

Timely, accurate and relevant knowledge informs policy making and stakeholder action to integrate the environmental dimension of sustainable development

2018-21

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Governments and other stakeholders use quality open environmental data, analyses and participatory processes that strengthen the science-policy interface (e.g. GEO, SDG CoPs) to generate evidence-based environmental assessments, identify emerging issues and foster policy action.

BUSINESS MODEL

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First session of the United Nations Environment Assembly (UNEA) in Nairobi, Kenya. PHOTO: UNEP

THE PARTY NAMES

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The success of UNEP will depend on the way it organizes itself to achieve the outcomes in each of the subprogrammes.

> While the operating principles in section 4 define how UNEP will make choices, the business model (figure 6) shows how UNEP will **coordinate and focus actions** to respond to environmental challenges and realize the 2030 vision.

> UNEP will support Governments and other United Nations agencies while leading efforts to leverage impact through **partnerships** and achieve **coherence** and **improve collaboration** on environmental issues across the United Nations System. UNEP will also **monitor and track these impacts** to be able to identify change, adjust its business model, enhance its effectiveness and efficiency and communicate achievements and lessons learnt. These themes will run through all of the subprogrammes of UNEP.

Through **strategic partnerships**, UNEP will catalyze transformative change, leverage impact in the environmental dimension of sustainable development and contribute to the social and economic dimensions of sustainable development.

For example, development banks, health organizations and others can build on the work of UNEP to **improve environmental sustainability** to accrue benefits in the **economic and social dimensions** of sustainable development.

Member States will benefit from the strengthened presence of UNEP in regions and subregions. Supported by the collective contributions of UNEP globally, Member States can engage with UNEP through

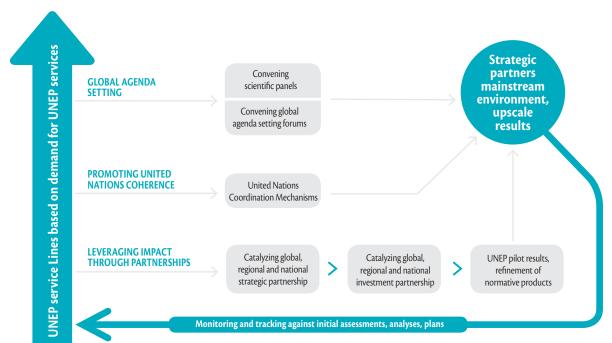


FIGURE 6: UNEP's Business Model



An expert uses a UNEP air quality measuring device, expected to cost up to 100 times less than existing solutions, in Nigeria. PHOTO: UNEP its regional presence to address **the priorities of Member States**. UNEP can make a strategic difference, taking advantage of its environmental leadership and strategic partnerships. **The regional presence of UNEP** will call upon the wider UNEP network expertise to support regional needs.

The medium-term strategy will unfold in each region or across regions through the programme of work, in response to **regions' and countries' priorities**, including national follow-up and support in the implementation of the Goals and targets. Subprogramme coordinators located in the regions, along with regional-level technical, operational and management expertise and leadership are being gradually strengthened to drive strategic engagement, particularly in terms of **upscaling work through partnerships** **at the regional level.** UNEP will strengthen its communications and fundraising expertise in the regions to support regional delivery. The outcomes of the medium-term strategy in the regions will feed into the global monitoring and reporting systems of UNEP to inform intergovernmental forums, networks, partners and platforms at regional and global levels ,as well as UNEP governance bodies.

UNEP service lines are a core element of the business model, which help staff and partners to ensure that their everyday activities are linked in a coherent, consistent manner to the implementation of the strategy. Built on strengths and comparative advantages that create value, the service lines will be central to delivering results in the period 2018-2021 as a step towards 2030 impact.

UNEP SERVICE LINES

Leveraging sound science for policy and decision-making

UNEP will continue to identify science for policy and decision-making to achieve the environmental dimension of sustainable development, integrating social, economic and development considerations to enable policy-relevant responses and responding to resolution 4 of the first session of the United Nations Environment Assembly.

Bringing information from different stakeholders together in data gathering, analysis and assessment processes at the national, regional and global levels and improving scientific robustness through UNEP Live, GEO reports and other processes will remain at the core of the medium-term strategy.

UNEP will continue to:

(1) provide policy-relevant analyses;(2) facilitate science-policy dialogues;(3) contribute to the science-policy interface through supporting agenda-setting.

UNEP Live is a cutting-edge, dynamic platform to collect, process and share the world's best environmental science and research.

Providing technical assistance for strengthened environmental policies, norms and institutions

UNEP will provide technical guidance and support for environmental governance, developing laws and policies, and ensure that these are coherent and can be implemented effectively. This is to ensure that countries have frameworks for environmental laws and institutions in place and that environmental considerations underpin social, economic and development policy, an evolution from previous medium-term strategy periods.

Implementation and enforcement of such laws and policies, including those relating to the implementation of and compliance with the multilateral environmental agreements will better support environmental sustainability

UNEP will also work with partners to advise on development of fiscal, economic and policy tools and frameworks that take the environment into account, facilitating innovative ways of enhancing finance for sustainable development.

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These frameworks and tools should also provide incentives for private sector investments in sustainable development.

Convening for change

UNEP will continue to support existing forums to share knowledge and best practices, facilitate technology transfer and identify innovative solutions to environmental challenges. UNEP, in partnership with United Nations entities, will convene those responsible for social, economic and development policy, influence investment decisions and influence consumer choice. Such an expansion of the constituencies UNEP works with, especially in the economic and social arena, will be a change from previous medium-term strategy periods. A key aim will be to empower the environment sector to mobilize these key constituencies with the support of the convening power of UNEP, within the mandate of UNEP.

Communication for environment

Enhance public advocacy, brand and digital engagement strategies to better inform, influence and mobilize a broad range of relevant stakeholders across sectors.

Enhancing the clarity and consistency of the organization's voice will affect the capacity of UNEP to gain and maintain public and policy attention within the strategic priority areas. The organization is poised to leverage a growing (digital) audience and reach a significantly larger number of stakeholders than it presently does.

The organization is increasingly committed to delivering results that require social mobilization and behaviour and social change communication. By better exploiting digital platforms, by conceiving coherent, evidence-based communication strategies that effectively leverage partnerships and build upon the UNEP network of opinion makers and prominent personalities, particularly by creating and strengthening spaces for conversation with and among youth and millennials.

EVALUATION OF THE STRATEGY

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A scientist cuts a hole in the Arctic ice to hang sonar instruments for research. PHOTO: REUTERS

A prominent feature of the medium-term strategy is its results-based orientation captured in the evaluation plan



UNEP and WFP working together to assist vulnerable communities in Sudan. PHOTO: UNEP

The plan proposes a combination of complementary evaluations at different levels that examine different themes. Project evaluations aim to assess project performance and determine the outcomes and impacts stemming from projects. They identify lessons of operational relevance for future project design and implementation. They also feed into the evaluation of subprogrammes by focusing on the role and performance of UNEP in achieving the set of outcomes and impacts that are specified in a programme framework and presented in the programme of work. Evaluation of expected accomplishments will be undertaken at the subprogramme level; these evaluations will examine the achievement of results, relevance, effectiveness, efficiency and sustainability of the delivery of the subprogramme.

In addition, UNEP conducts a formative evaluation of the design of the programme of work at the start of each medium-term strategy. These assess the causal relationships embedded in the projects within each programme framework and are aimed at determining whether these projects are optimally linked to the expected accomplishments and the higher-level results. Formative evaluations also help with the **identification of performance measures** and **key impact drivers** that managers can use as they implement their projects and programmes. The Evaluation Office will also selectively undertake evaluations of service lines (for example, communications awareness-raising and outreach) or effective approaches for bridging the science-policy interface. The mid-point of the medium-term strategy, namely the end of the biennium 2018-2019, is marked by a **meta-evaluation** of the progress made in implementation, which will take the form of a biennial evaluation synthesis report.

UNEP will conduct an overall evaluation of the medium-term strategy for 2018-2021 at the end of the medium-term strategy period and will assess progress made towards the achievement of the higher-level results outlined in the strategy. The aim is to provide **evaluative evidence** on the effectiveness and efficiency of the implementation and delivery of UNEP; identify challenges in medium-term strategy implementation; and provide lessons and recommendations to guide the future strategic direction of the organization and improve programme formulation and implementation.

BIBLIOGRAPHY

Alexandratos, N. a. (2012). *World agriculture towards* 2030/2050: *the* 2012 *revision*. ESA Working paper No. 12-03. Rome, Food and Agriculture Organization of the United Nations. Retrieved from http://www.fao.org/docrep/016/ ap106e/ap106e.pdf.

Secretariat of the Convention on Biological Diversity (2014). *Global Biodiversity Outlook 4: A mid-term assessment of progress towards the implementation of the Strategic Plan for Biodiversity* 2011–2020. Retrieved from https://www.cbd. int/gbo/gbo4/publication/gbo4-en-hr.pdf.

Secretariat of the Convention on Biological Diversity (2010). *Global Biodiversity Outlook* 3, Retrieved from https://www.cbd.int/doc/publications/gbo/gbo3-final-en.pdf.

Secretariat of the Convention on Biological Diversity (n.d.). Aichi Biodiversity Targets. Retrieved from: https://www.cbd.int/sp/targets/.

Secretariat of the Convention on Biological Diversity (n.d.). "Strategic Plan for Biodiversity 2011–2020". Retrieved from https://www.cbd.int/decision/cop/?id=12268.

Intergovernmental Panel on Climate Change (2014). *Climate Change* 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Retrieved from http://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full.pdf.

Lundgren, K. (2012). *The Global Impact of E-Waste: Addressing the Challenge*. Retrieved from http://www.ilo.org/wcmsp5/groups/public/@ed_dialogue/@ sector/documents/publication/wcms_196105.pdf.

Millennium Ecosystem Assessment Board (2005). *Ecosystems and Human Well-being: Synthesis*. Retrieved from http://www.millenniumassessment.org/documents/document.356.aspx.pdf.

Robinson, B. H. (2009). E-waste: An assessment of global production and environmental impacts. Retrieved from http://www.sciencedirect.com/ science/article/pii/S0048969709009073.

United Nations (2014). The Road to Dignity by 2030: Ending Poverty, Transforming All Lives and Protecting the Planet. Synthesis Report of the Secretary-General on the Post-2015 Agenda. Retrieved from http://www.un.org/disabilities/documents/reports/SG_Synthesis_Report_Road_to_Dignity_by_2030.pdf.

United Nations Convention to Combat Desertification (2007). "The 10-year strategic plan and framework to enhance the implementation of the convention to combat desertification". Retrieved from http://www.unccd.int/Lists/OfficialDocuments/cop8/16add1eng.pdf.

United Nations Conference on Sustainable Development (2012). "The future we want. Our common vision". Rio de Janeiro, Brazil, 20–22 June. Retrieved from https://rio20.un.org/sites/rio20.un.org/files/a-conf.216l-1_english.pdf.pdf.

United Nations, Department of Economic and Social Affairs (2014). *World Urbanization Prospects*. Retrieved from http://esa.un.org/unpd/wup/ Highlights/WUP2014-Highlights.pdf.

United Nations, Department of Economic and Social Affairs (2015). Towards integration at last? The sustainable development goals as a network of targets. DESA Working Paper No. 141 (ST/ESA/2015/DWP/141). Retrieved from http:// www.un.org/esa/desa/papers/2015/wp141_2015.pdf.

United Nations Environment Programme (2011). *Decoupling natural resource use and environmental impacts from economic growth*, A *Report of the Working Group on Decoupling to the International Resource Panel*. Retrieved from http://www.unep.org/resourcepanel/decoupling/files/pdf/Decoupling_Report_English.pdf.

United Nations Environment Programme (2011). *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*. Retrieved from http://www.unep.org/greeneconomy/Portals/88/documents/ger/ GER_synthesis_en.pdf.

United Nations Environment Programme (2012). 21 Issues for the 21st Century: Result of the UNEP Foresight Process on Emerging Environmental Issues. Retrieved from http://www.unep.org/pdf/Foresight_Report-21_Issues_for_ the_21st_Century.pdf

United Nations Environment Programme (2014). *The Adaptation Gap Report* 2014, *Nairobi*. Retrieved from http://www.unep.org/climatechange/adaptation/gapreport2014/portals/50270/pdf/AGR_FULL_REPORT.pdf.

United Nations Environment Programme (2014). "Proceedings of the United Nations Environment Assembly of the United Nations Environment Programme at its first session". Retrieved from http://www.unep.org/unea1/ UNEA_Proceedings.asp.

United Nations Environment Programme (2015). *Plastics in Cosmetics*. Retrieved from http://apps.unep.org/publications/pmtdocuments/-Plastic_ in_cosmetics_Are_we_polluting_the_environment_through_our_personal_ care_-2015Plas.pdf.

United Nations Environment Programme (2015). *The Emissions Gap Report* 2015. United Nations Environment Programme (UNEP), Nairobi. Retrieved from http://uneplive.unep.org/media/docs/theme/13/EGR_2015_301115_ lores.pdf.

United Nations Environment Programme (n.d.). Basel Convention website (Basel Convention: Controlling Transboundary Movements of Hazardous Waste and their Disposal). Retrieved from http://www.basel.int/Home/ tabid/2202/Default.aspx.

United Nations Environment Programme (n.d.). Decisions adopted by the Governing Council/Global Ministerial Environment Forum at its first universal session. Retrieved from http://www.unep.org/gc/gc27/docs/Decisisions_adopted_by_the_first_universal_session_(advance).pdf.

United Nations Environment Programme (n.d.). Stockholm Convention: Protecting Human Health and the Environment from Persistent Organic Pollutants. Retrieved from http://chm.pops.int/default.aspx.

UNEP Year Book: Emerging Issues in our Global Environment 2014. Retrieved from http://www.unep.org/yearbook/2014/PDF/UNEP_YearBook_2014.pdf.

United Nations Environment Programme /Food and Agriculture Organization of the United Nations. (n.d.). Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade. Retrieved from http://www.pic.int/.

United Nations Framework Convention on Climate Change (2015). United Nations Framework Conventions on Climate Change. Retrieved from http://unfccc.int/gender_and_climate_change/items/7516.php.

World Health Organization (2014). 7 million premature deaths annually linked to air pollution. Retrieved from http://www.who.int/mediacentre/news/ releases/2014/air-pollution/en/.

World Wide Fund for Nature (2015). *Living Blue Planet Report*. Retrieved from https://www.worldwildlife.org/publications/living-blue-planet-report-2015.



Regional priorities, trends and emerging issues

The analysis in column 1 (regional environmental priorities) of the table below provides an overview of regional environmental priorities that have been identified by countries through regional environmental forums and have formed an important part of the package of consultations and reviews to develop the mediumterm strategy. The analysis covers all regions. The issues reflected in column 2 (outcomes from the regional environmental information network) and column 3 (emerging issues) of the table below set out the outcomes of the deliberations of six regional environmental information network conferences facilitated by UNEP in early 2015. For each region, the issues and trends were identified through regional consultations held in preparation for the sixth edition of the Global Environment Outlook. The consultations were attended by senior government representatives, regional partners and independent scientific experts.

AFRICA

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REGIONAL ENVIRONMENTAL PRIORITIES ^{51, 52, 53}	OUTCOMES FROM THE REGIONAL ENVIRONMENTAL INFORMATION NETWORK	EMERGING ISSUES
 Sustainably managing and valuing the region's natural capital, while reconciling its wise stewardship with human development needs for the current population and that of future generations Strengthening institutional capacities for environmental management within the context of sustainable development and poverty eradication, including support to a transition to the green economy Enhancing mainstreaming of environmental sustainability, including climate change into national development policies and programmes Building the capacities of countries, subregions and regional institutions to assess and monitor environmental trends and provide credible and up-to-date scientific information and facts on trends in ecosystems services, climate change and other related environmental matters Strengthening coordinated implementation of national obligations and priorities, including policies, laws, implementation of, and compliance with, multilateral environmental agreements Engaging regional, sub-regional and national partners in influencing decisions on environmental sustainability and linkages to economic growth and social development Support research and development for appropriate technologies to improve productivity and efficiency in the utilization of environmental resources and improving human well-being Engaging partners to support the mobilization of technical and financial resources for implementation of programmes, projects and strategic frameworks Adoption and implementation of the African common strategy on illegal trade in wildlife 	 Management of natural capital Land use and management Waste (pollutants) Biodiversity Air quality Freshwater Marine, coastal areas and oceans (blue economy) Energy (renewable production and access) Climate change (adaptation and mitigation) Disasters 	 Data revolution and knowledge economy Changing demography Industrialization (resource efficiency) Climate change (diseases, wild-life migration) Environmental governance Consumer preferences (shifting values and norms) Migration and conflicts

ASIA AND THE PACIFIC



tion	ING ISSUES
 and pollution and drive the development of green and blue economy pathways Maintain biodiversity and sustainable provision of ecosystem services Ensure ecological resilience in order to promote disaster risk reduction and sustainable development Manage chemicals and waste, including ewaste and transboundary issues Manage chemicals and waste, including ewaste and transboundary measures Support integrated approaches to environment and health Use the Goals to mainstream environment in national planning agendas, align environmental governance structures and access financing and technology to support countries in their efforts to prepare for the adoption, implementation Increased vulnerability to impacts of natural hazards and extreme events Increasing, environmentally related health risks Changing demography and lifestyles, and access to basic services Widening of gaps across the land-scape of policies and legislation and their implementation Transposition and their efforts to prepare for the adoption, implementation Mew practing and technology to support countries in their efforts to prepare for the adoption, implementation Mew practing and coests financing and technology to support countries in their efforts to prepare for the adoption, implementation Mew practing and coests financing and technology to support countries in their efforts to prepare for the adoption, implementation Mew practing and coests financing and technology to support countries in their efforts to prepare for the adoption, implementation Mew practing and coests financing and technology to support countries in their efforts to prepare for the adoption, implementation 	a revolution and the knowledge onomy (drones, sensors for monitoring) cural capital valuation art cities (noise, energy, water, green Idings) nsport (decarbonized transport sys- ns) nsboundary issues (pollution, resource

EUROPE

 consumption, while conserving freshwater ecosystems; to enhance the cooperation between farming, planning, energy and transport sectors to ensure that water is shared and managed within sustainable limits Climate change Urbanization Increased life expectancy Food systems Climate change Technological developm Climate change Technological developm 	REGIONAL ENVIRONMENTAL PRIORITIES ⁵⁵	OUTCOMES FROM THE REGIONAL ENVIRONMENTAL INFORMATION NETWORK	EMERGING ISSUES
 environmental agrements; to promote chemical safety by providing policy advice, technical guidance and capacity-building to economies in transition Air quality: to improve air quality and raise awareness of the connection between health and air quality; countries in Eastern Europe, Caucasus and Central Asia to sign and ratify the Convention on Long-range Transboundary Air Pollution protocols Resource efficiency: to reduce the environmental impacts of producing, processing and using goods and services; to mainstream of resource efficiency Resource efficiency: to mainstream of resource efficiency Electronic waste Increasing competition for resources Air quality Freshwater quality and quantity Geopolitical challenges Marine resources (access and designations) Changing regional energ markets and priorities Biota (loss of species and invasive species) Forest dynamics – land/water/biota nexus Recurre efficiency: to reduce the environmental impacts of producing, processing and using goods and services; to mainstream of resource efficiency Electronic waste Risk of epidemics, diseas 	 consumption, while conserving freshwater ecosystems; to enhance the cooperation between farming, planning, energy and transport sectors to ensure that water is shared and managed within sustainable limits Chemicals and waste: to manage chemicals and waste soundly, including the implementation of related provisions in the multilateral environmental agrements; to promote chemical safety by providing policy advice, technical guidance and capacity-building to economies in transition Air quality: to improve air quality and raise awareness of the connection between health and air quality; countries in Eastern Europe, Caucasus and Central Asia to sign and ratify the Convention on Long-range Transboundary Air Pollution protocols Resource efficiency: to reduce the environmental impacts of producing, processing and using goods and services; to mainstream of resource efficiency aspects into sustainable development planning policies and regulatory frameworks Climate change: to improve energy efficiency and the use of renewable energy; to reduce vulnerability and strengthen resilience to climate change impacts through ecosystems-based risk management Biodiversity and ecosystems management: to assess biodiversity and ecosystem values, and communicate these values in all forms of decision-making; to integrate biodiversity considerations into key economic and productive sectors, especially agriculture Cross-cutting priorities: environmental governance; conflict prevention and disaster risk reduction; science-policy interface; transboundary cooperation; and 	 Climate change Urbanization Increased life expectancy Food systems Energy and transportation systems Nano- and biotechnology Air quality Freshwater quality and quantity Marine resources (access and designations) Biodiversity (changing distribution) Land (coastal squeeze, erosion, soil quality) Biota (loss of species and invasive species) Forest dynamics – land/water/biota nexus Nanomaterial and nanoparticles Electronic waste 	 economy Technology transfer Air quality Climate change Technological developments Population growth Increasing competition for resources Geopolitical challenges Changing regional energy markets and priorities Changing land use and land ownership Reduction in species, loss of genetic resources Decline in soil fertility



LATIN AMERICA AND THE CARIBBEAN



REGIONAL ENVIRONMENTAL PRIORITIES ⁵⁶	OUTCOMES FROM THE REGIONAL ENVIRONMENTAL INFORMATION NETWORK	EMERGING ISSUES
 Mitigation and adaptation to climate change impacts, socio-ecosystem resilience 	Mitigation and adaptation to climate change impacts, socio-ecosystem resilience	Opportunities from a greater participation of the private sector in the protection of the private sector in
 thresholds and tipping points) Implementation of multi-scale early warning systems 	 Public expenditure in resilient infrastructure Investment in research and data collection and capacity gaps (to monitor and predict ecological thresholds and tipping points) Implementation of multi-scale early warning systems 	

WEST ASIA PRIORITIES



REGIONAL ENVIRONMENTAL PRIORITIES ⁵⁷	OUTCOMES FROM THE REGIONAL ENVIRONMENTAL INFORMATION NETWORK	EMERGING ISSUES
 Promote peace, security and improved environmental governance, including institutions Enhance climate change adaptation and resilience, disaster risk reduction and response, including on sand and dust storms. Promote efficient management of natural resources, and food-water-energy nexus Maintain biodiversity and sustainable provision of ecosystem services Protect and effectively manage coastal and marine resources Science and Technology Alliance for Global Sustainability Foster sound management of chemicals and waste, including e waste and transboundary issues Promote control and prevention of air pollution, including transboundary measures Mainstream environment into national planning agendas and support countries' transition to the green economy Develop evidence-based sustainable development policies, with clear monitoring and accountability through improved data and statistics Enhance equitable access to finance and technology and promote indigenization of green technologies 	 Peace, security, and the environment Freshwater resources Sustainable use of natural resources Urbanization Integrated waste management Environment and health Biodiversity Environmental governance Regional and international cooperation Climate change (adaptation and mitigation) Desertification 	 Sustainable cities Non-traditional wastes (e-waste, construction illegal dumping) Green economy Coastal erosion, coastal urbanization Wars and conflict Expansion of animal populations Overexploitation of fish stocks Poor capacity to respond to chemical and radiological accidents Rapid increase in unsegregated household waste Opportunities to use new technologies for monitoring and data sharing Food safety threatened due to increased use of pesticides and unregulated chemicals Shale gas extraction (fracking) and associated water use and pollution

NORTH AMERICA



OUTCOMES FROM THE REGIONAL ENVIRONMENTAL INFORMATION **EMERGING ISSUES** NETWORK Sustainable consumption and production Management of low-concentration compounds including pharmaceuticals, nanoparticles, new household products "down the drain chemicals" Effects of non-conventional oil and gas extraction Impacts of climate change and expanded Arctic industrialization on Reducing greenhouse gas emissions indigenous peoples Rapid change in the Arctic and the impacts on social and ecological Emerging opportunity to help address fragmentation through natural systems capital accounting and recognition of ecosystem services Biophysical feedback in the Arctic Geoengineering Adaptation to climate extremes and coastal resilience Advances in battery technology and the potential to boost renewables Habitat loss, fragmentation and degradation Ammonia (NH3) emissions increases Water security: freshwater scarcity, drought, contamination Emerging health concerns, including antibiotic resistance, harmful algal Contaminants of emerging concern blooms Non-point source contamination by nutrients in freshwater and marine Impacts of unconventional oil and gas extraction ecosystems, leading to eutrophication, hypoxia, acidification

- Species redistribution from climate change linked to habitat loss and populations shifts
- The need for distributed energy systems and the move towards remunicipalization
- Alternative metrics for gross domestic product that include environmental health
- Innovation in media for citizens to promote and produce knowledge to
 enable behavioural change

Endnotes:

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- 51 Arusha Declaration, fourteenth ordinary session of the African Ministerial Conference on the Environment: "Africa's post Rio+20 Strategy for Sustainable Development," 10–14 September 2012 in Arusha, United Republic of Tanzania.
- 52 Frequently expressed by countries represented in the African Ministerial Conference on the Environment.

Adaptive governance and inclusive, multi-scale, and multi-sectoral plan-

Implementing natural capital accounting

- 53 Cairo Declaration, fifteenth ordinary session of the African Ministerial Conference on the Environment: "Managing Africa's Natural Capital for Sustainable Development and Poverty Eradication", 2–6 March 2015 in Cairo (Agenda 2063).
- 54 Chair's Summary, First Forum of Ministers and Environment Authorities of Asia Pacific, 19 and 20 May 2015, Bangkok.
- 55 Sources: Informal regional consultation with the Member States at the sixty-sixth session of the Economic Commission for Europe, held on 15 April 2015; European Environment Agency State of the Environment 2015; regional visioning exercise with Regional Office for Europe staff.
- 56 Source: Nineteenth Meeting of the Forum of Ministers of the Environment of Latin America and the Caribbean, Los Cabos, Mexico, 12–14 March 2014.
- 57 Source: United Nations Environment Programme/Regional Office for West Asia visioning process; Arab Forum on Sustainable Development outcome (the Bahrain Document) (5–7 May, Manama); and GEO-6 regional consultation (10–14 May 2015, Amman).



Strategies of Multilateral Environmental Agreements

Multilateral environmental agreements	Strategic documents	Link to the multilateral environmental agreements website and to strategic document
BIODIVERSITY		
Convention on Biological Diversity	Strategic Plan for Biodiversity 2011-2020, including Aichi Biodiversity Targets	http://www.cbd.int/ http://www.cbd.int/sp/ http://www.informea.org/treaties/cbd/
Cartagena Protocol on Biosafety to the Convention on Biological Diversity	Strategic Plan for the Cartagena Protocol on Biosafety for the period 2011-2020	http://bch.cbd.int/protocol http://bch.cbd.int/protocol/issues/cpb_stplan.shtml
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	No separate strategy Key issues taken into account http://www.cbd.int/abs/key-issues.shtml Awareness-raising strategy: https://www.cbd.int/doc/meetings/abs/icnp-01/ official/icnp-01-05-en.pdf Capacity building https://www.cbd.int/recommendation/ icnp/?id=13089 http://www.cbd.int/decision/cop/default. shtml?id=13162	http://www.cbd.int/abs/
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	CITES Strategic Vision: 2008-2020	www.cites.org http://www.cites.org/eng/res/16/16-03.php http://www. informea.org/treaties/cites/
Convention on the Conservation of Mi- gratory Species of Wild Animals (CMS)	Strategic Plan for Migratory Species 2015-2023	http://www.cms.int/ http://www.informea.org/treaties/cms/
Agreement on the Conservation of African-Euroasian Migratory Waterbirds	Strategic Plan 2009 – 2017	http://www.unep-aewa.org/ http://www.unep-aewa.org/en/documents/strategic-plan http://www.informea.org/treaties/aewa/
Agreement on the Conservation of Small Cetaceans of the Baltic., North East Atlantic, Irish and North Seas	No separate strategic plan, applied overall CMS Strategic Plan for Migratory Species 2015-2023 Action plans covering individual species	http://www.ascobans.org/ http://www.ascobans.org/es/documents/action-plans http://www.informea.org/treaties/ascobans/
Agreement on the Conservation of Populations of European Bats (EURO- BATS)	Applied overall CMS Strategic Plan for Migratory Species 2015-2023 Implementation of the Conservation and Man- Agement Plan and Action Plan for EUROBATS (2015-2018)	http://www.eurobats.org/ http://www.informea.org/treaties/ eurobats/
Agreement on the Conservation of Albatrosses and Petrels (ACAP)	Applied overall CMS Strategic Plan for Migratory Species 2015-2023 ACAP Secretariat Work Programme for 2016- 2018	http://www.acap.aq http://www.cms.int/en/legalinstrument/acap,

Multilateral environmental agreements	Strategic documents	Link to the multilateral environmental agreements website and to strategic document
Agreement on the Conservation of Cetaceans of the Black Sea, Mediterra- nean Sea and Contiguous Atlantic Area (ACCOBAMS)	Applied overall CMS Strategic Plan for Migratory Species 2015-2023 ACCOBAMS Strategy for the period 2014-2025 and Action Plan	http://accobams.org/
Agreement on the Conservation of Gorillas and Their Habitats	Applied overall CMS Strategic Plan for Migratory Species 2015-2023 Regional action plans for gorilla protection	http://www.cms.int/en/legalinstrument/gorilla-agreement
Agreement on the Conservation of Seals in the Wadden Sea	Applied overall CMS Strategic Plan for Migratory Species 2015-2023 Strategy 2014-2022	http://www.waddensea-secretariat.org/trilateral-coopera- tion/common-wadden-sea-secretariat http://www.waddensea-secretariat.org/sites/default/files/Meet- ing_Documents/Conference2014/council_declaration_final_5_ feb_2014_incl_annexespdf
International Treaty on Plant Genetic Resources for Food and Agriculture	Strategic Plan for the Implementation of the Benefit-sharing Fund of the Funding Strategy Multi-year programme of work	http://www.planttreaty.org/content/strategic-plan
Convention on Wetlands of International Importance, especially as Waterfowl Habitat	Ramsar Strategic Plan for 2016-2024	http://www.ramsar.org/ http://www.informea.org/treaties/ramsar/
Convention concerning the Protec- tion of the World Cultural and Natural Heritage	Strategic Action Plan for the Implementation of the World Heritage Convention 2012-2022	http://whc.unesco.org/en/convention/ www.whc.unesco/en/globalstrategy http://www.informea.org/treaties/whc/
United Nations Convention to Combat Desertification in those Countries Experi- encing Serious Drought and /or Desertifi- cation, Particularly in Africa	10-year strategic plan 2008–2018	http://www.unccd.int http://www.unccd.int/Lists/SiteDocumentLibrary/10YearSt rategy/Decision%203COP8%20adoption%20of%20The%20 Strategy.pdf

MEAs	Strategic documents	Link to the multilateral environmental agreements website and to strategic document
CHEMICALS AND WASTE		
Minamata Convention on Mercury	Convention not yet in force	http://www.mercuryconvention.org
Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention)	Strategic Framework for 2012–2021 Special Programme to support institutional strengthening at the national level for implementation of the Basel, Rotterdam, Stockholm and Minamata Conventions and the Strategic Approach to International Chemicals Management	http://www.basel.int/ http://www.basel.int/TheConvention/StrategicPlan/ NewStrategicFramework/tabid/1546/Default.aspx http://www.informea.org/treaties/basel/
Convention on Long-range Transboundary Air Pollution	Guidelines for reporting emissions and projections data	http://www.unece.org/env/lrtap/lrtap_h1.html
Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade	Special Programme to support institutional strengthening at the national level for implementation of the Basel, Rotterdam and Stockholm Conventions, the Minamata Convention and the Strategic Approach to International Chemicals Management	http://www.pic.int/ http://www.informea.org/treaties/rotterdam/
Stockholm Convention on Persistent Organic Pollutants	Special Programme to support institutional strengthening at the national level for implementation of the Basel, Rotterdam and Stockholm Conventions, the Minamata Convention and the Strategic Approach to International Chemicals Management	http://chm.pops.int http://www.informea.org/treaties/stockholm/

MEAs	Strategic documents	Link to the multilateral environmental agreements website and to strategic document
CLIMATE AND ATMOSPHERE		
United Nations Framework Convention on Climate Change	Strategy paper for the long-term perspective	http://unfccc.int http://www.informea.org/treaties/unfccc/
Kyoto Protocol to the United Nations Framework Convention on Climate Change	Strategy for post-2012 Kyoto Protocol Agreement	http://unfccc.int/kyoto_protocol/items/2830.php http://www.informea.org/treaties/kyoto/
Vienna Convention for the Protection of the Ozone Layer	Convention itself	http://ozone.unep.org
Montreal Protocol on Substances that Deplete the Ozone Layer	Protocol itself with amendments	http://ozone.unep.org

MEAs	Strategic documents	Link to the multilateral environmental agreements website and to strategic document
SEAS AND OCEANS		
Regional Seas Conventions and Action Plans	Regional Seas Action Plans	http://www.unep.org/regionalseas/ UNEP administered: Black Sea, Wider Caribbean, East Asian Seas, Eastern Africa, South Asian Seas, ROPME Sea Area, Mediterranean, North-East Pacific, Northwest Pacific, Red Sea and Gulf of Aden, South-East Pacific, Pacific, and Western Africa. Partner programmes: Antarctic, Arctic, Baltic Sea, Caspian Sea and North-East Atlantic
Convention for Cooperation in the Protection, Management and Development of the Marine and Coastal Environment of the Atlantic Coast of the West, Central and Southern Africa Region	Work Programme 2015–2016 for the implementation of the Abidjan Convention: http://cop11.abidjanconvention.org/media/ documents/working/COP11.4%20-%20Draft%20 PoW%202015-2016_Eng.pdf	inforMEA: http://informea.org/treaties/abidjan Website: http://abidjanconvention.org
Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean	Mediterranean Strategy for Sustainable Development: http://www.unepmap.org/index. php?module=content2&catid=001017002001	inforMEA: http://informea.org/treaties/barcelona Website: http://www.cep.unep.org/
Amended Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean	Work Programme for the Nairobi Convention 2013–2017: http://www.unep.org/ NairobiConvention/docs/UNEP-DEPI-EAF- COP8-2015-3-en-Approved%20Work%20 Programme%20for%202013-2017.pdf	inforMEA: http://informea.org/treaties/nairobi Website: http://www.unep.org/nairobiconvention/
Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region	Work Plan for 2015–2016: http://www.cep. unep.org/meetings/2014/igm-16-cop-13/	inforMEA: http://informea.org/treaties/cartagena-conv Website: http://www.unepmap.org/
Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Northwest Pacific Region (NOWPAP)	NOWPAP Medium-term Strategy for 2012–2017	http://www.nowpap.org/
Coordinating Body on the Seas of East Asia (COBSEA)	COBSEA World Plan for 2015-2016:	http://www.cobsea.org/Events/Work%20Plan%20and%20Bud- get%20for%20COBSEA%202015-2016%20Biennium_new.pdf
United Nations Convention on the Law of the Sea		http://www.un.org/depts/los/convention_agreements/texts/ unclos/unclos_e.pdf
Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks		http://www.un.org/depts/los/convention_agreements/conven- tion_overview_fish_stocks.htm
Regional fisheries management organization		http://ec.europa.eu/fisheries/cfp/international/rfmo/index_en.htm
Code of Conduct for Responsible Fisheries		http://www.fao.org/fishery/code/en
Other regional bodies relevant to ocean management and other relevant General Assembly resolutions related to the sustainable management of oceans and seas		http://www.un.org/depts/los/general_assembly/general_assem- bly_resolutions.htm



