

OurPlanet



#UNEA2



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OurPlanet

United Nations Environment Programme

May 2016



The Environmental Dimension of the 2030 Agenda



Amina J.
Mohammed
The Africa We Want

Juan Manuel
Santos Calderón
Time to Deliver

Environmental
Champion
Leonardo DiCaprio

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Time to Deliver

Peter M. Christian
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Photo: © GRID-Arendal / Peter Prohoshch

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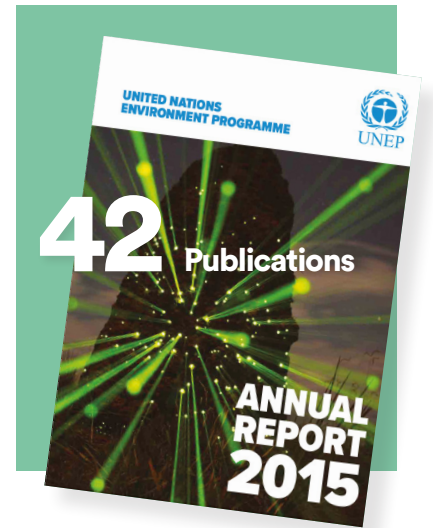
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Photo: © Reuters

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Our Planet

Final Reflections



Achim Steiner

United Nations Under-Secretary-General and UNEP Executive Director

This is the final time I will contribute to Our Planet as Executive Director of UNEP. It's a bittersweet moment. I am sad to leave behind such a tremendous team of colleagues and friends who work so passionately to protect our planet and improve the well-being of its peoples. But I am also very fortunate to have been able to lead, work with and learn from that team over the last ten years. It's a decade that has seen environmental tragedy, turnaround and triumph. UNEP, as the global authority on the environment, has been integral to those stories and successes. So, for my last contribution to Our Planet, I would like to reflect on why three stories give me hope for the future. They stand for countless others I have encountered during these years.

Over the last decade, the world has faced innumerable environmental challenges. Some of these are global concerns, such as climate change, which have far-reaching impacts both geographically and for generations to come. Others are far more localized, but can have an equally drastic impact on lives, livelihoods and nature.

The experience of Ogoniland and the Niger Delta in Nigeria is one example of the latter. Ogoniland has been the site of oil industry operations since the late 1950s, and has a tragic history of pollution from oil spills and oil well fires. While having generated billions of dollars in revenues, it is also the most protracted oil disaster on the planet in terms of complexity. In 2010, at the request of the Nigerian government, UNEP assessed the impacts of this contamination over a 14-month period. The findings, which demonstrated not only extreme damage to the environment but also severe health impacts on the local population, were presented to the Nigerian government alongside recommendations for ecological and livelihoods restoration. All stakeholders accepted the findings of the report and the oil industry committed to setting up a \$1 billion fund for restoration. Ogoniland residents are a long way from recovery, but the turnaround is in process and serves as a first step in correcting a great injustice and ecological disaster.

Another localized environmental incident resulted in global impact. In the 1950s, residents



Never before has the world so emphatically and unitedly committed to putting an environmental imperative at the heart of everything.

sustaining our natural foundations, protecting the environment becomes not an afterthought or side project but a core element of the bottom line. UNEP has enabled, catalyzed and imparted the environmental agenda into the economic discourse in a variety of ways. This is evidenced in the dozens of countries now exploring green economy transitions; the commitment of institutional investors to decarbonize \$600 billion of assets as part of UNEP's Portfolio Decarbonization Coalition; the decision by the Chinese Presidency of the G20 to name UNEP the Secretariat of the G20 Green Finance Study Group; or the numerous private sector partnerships UNEP has mobilized to address everything from transport, chemicals and the illegal wildlife trade to renewable energy and sustainable consumption and production.

The idea of a green economy and sustainable finance are there to support what we might consider the greatest environmental triumphs of the last ten years: the Paris Agreement and the adoption of the 2030 Agenda for Sustainable Development, and its associated Global Goals. Never before has the world so emphatically and unitedly committed to putting an environmental imperative at the heart of everything. These two accords also mark the culmination of 40 years of UNEP and other environmental advocates arguing with sound science and solutions that this is where the environment belongs, that a healthy environment is key to economic development and social equity. The success of these agreements is good reason for optimism about our future. Never before has the world so emphatically and unitedly committed to putting an environmental imperative at the heart of everything.

There is no question that the world faces deeply complex challenges when it comes to sustainable development. And no UN agreements will solve the world's problems in one fell swoop. What these turnarounds and triumphs do show us, though, is what we can accomplish when we work together. At a more fundamental level, they prove that we can work together to solve collective challenges – not always a given when we think of how remarkably diverse our world is. During my tenure I was fortunate to witness

the success of the Montreal Protocol in bringing about a recovery of our planet's ozone layer – an example of a triumph of multilateralism few thought feasible or achievable 30 years ago.

I see the challenges we face less in dire terms and more in possibilities. The world moves forward and gets better by working together. When the world convenes for the second United Nations Environment Assembly (UNEA) this year in Nairobi – itself proof of the growing importance of multilateralism and the environment – countries will be working toward shared objectives and reaffirming the decision at Rio+20 to strengthen and upgrade UNEP, and thus the environmental dimension of sustainable development. The world moves forward and gets better by working together.

The world moves forward and gets better by working together.

Sometimes, progress has come too slowly for some and too late for many communities, ecosystems and species on the brink of extinction. We have paid a high price for a century of what is too narrowly defined as an economic development agenda. But progress comes from collaboration, cooperation and compromise, a necessarily deliberate process in a world of 7 billion people and sovereign nation states. Over the past ten years, I have seen a persevering commitment by people throughout UNEP, the UN, NGOs, governments and the private sector. These are people working tirelessly and passionately to improve the world for the benefit not just of themselves but for all. The world owes them gratitude and respect for their vision, courage and perseverance, often in the face of resistance and recriminations. Their leadership and dedication is what gives me most hope for our future together. ▲

of a small Japanese fishing town called Minamata began suffering from a debilitating and extremely painful condition that ultimately became known as the Minamata disease. The cause was extensive mercury contamination in local waters and Minamata Bay due to industry runoff. After a decision by the UNEP Governing Council in 2009 to develop a global legally binding instrument on mercury and a 2014 diplomatic conference that brought delegates from across the world to Minamata to sign the Convention, we are now very close to having a sufficient number of ratifications for it to enter into force. Our goal is to help prevent more tragedies like what happened in Minamata.

The turnarounds we have witnessed don't just happen in the form of natural recovery. We are now witnessing what may be the greatest environmental reversal in the last decade – not in an ecosystem, but in our economy. In a way we have never seen before, environmental issues are now being captured in economic policies and the financial system. This is critical to what happens next with our planet. When people, policies and markets are fiscally invested in

Ban Ki-moon

Time to Deliver

UNEA-2 must promote a global transformation of attitude and practice.



Ban Ki-moon

*United Nations
Secretary-General*

Two years ago, I was honoured to participate in the inaugural United Nations Environment Assembly, the world's highest-level decision-making body on the environment, comprising all 193 United Nations Member States, and involving major stakeholders from business and civil society. The establishment of the UNEA by the 2012 Rio+20 UN Conference on Sustainable Development marked a coming of age for both UNEP and global environmental governance. It was testimony to the growing recognition that without careful management of the environment we will not succeed in our efforts to reduce poverty, improve global health and secure enduring peace and stability.

Last year, world leaders adopted the 2030 Agenda for Sustainable Development. And, last month, UN Headquarters in New York witnessed the historic signing of the Paris Agreement on climate change. UNEA-2 is an important early way station on the journey we must undertake to implement these landmark investments in a sustainable future for all.

All the topics on the UNEA-2 agenda are critical to global sustainable development, including the environmental rule of law, the illegal trade in wildlife, the protection of ecosystems, the management of natural capital, the pollution of the oceans and sustainable urban development. In caring for and repairing the environment, it will be necessary to take on many vested interests and reject entrenched attitudes. I urge all delegates at UNEA-2 to approach their responsibilities with courage and wisdom, with the knowledge that their decisions will have profound consequences for how the international community

understands and delivers on the environmental dimensions of sustainable development.

UNEA-2 is about action, collaboration and partnership among all sectors of society. It brings together the many partners we need to realize the 2030 Agenda: government officials, civil society representatives and members of the private sector. The number and diversity of those taking part in this year's Assembly already marks an important



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We cannot promote sustainable development unless and until we recognize and address its environmental dimensions.

step towards Sustainable Development Goal 17: “To revitalize the global partnership for sustainable development”. I would like to extend a special welcome to those taking part in the Sustainable Innovation Expo, which is bringing together CEOs, institutional investors, foundations, banks, insurance companies and civil society representatives in a coalition for the SDGs.

Business and investment are critical to achieving the 2030 Agenda. Innovation from the private sector will be key to addressing the many interlinked challenges of global development. This is not simply about what the private sector can do for sustainable development; it is also about what sustainable development can do for the private sector. Trillions of dollars in public and private funds are going to be invested in reaching the SDGs, creating huge opportunities for responsible companies that are ready to deliver solutions. That is the route to ending poverty, increasing opportunity and laying the foundation for sustainable global economic growth.

The UNEA-2 symposium on mobilizing resources for sustainable investments will take up this theme, and

provide companies an opportunity to engage directly with Governments to determine how best to bring their innovations to scale. A second symposium on environment and displacement will build important bridges between the environment and humanitarian communities, bringing together key actors to discuss the role of environmental degradation in the forced displacement of people and communities.

In a very real sense, 2016 is even more important than 2015. This year, we begin the hard work of turning our ambitions into reality. We need all sectors and all nations to work together to combat climate change and promote sustainable development. The UN Environment Assembly has already established itself as the premier forum for global environmental governance. Now, those taking part in UNEA-2 have both the power and the responsibility to promote a global transformation of attitude and practice. The message is clear: we cannot promote sustainable development unless and until we recognize and address its environmental dimensions. We are entering an exciting new era of opportunity. Let us commit to working together to deliver a sustainable future for people and planet. ▲

Juan Manuel Santos Calderón

The Environmental Dimension of Peace

Delivering on the 2030 Agenda in Colombia



Juan Manuel Santos Calderón

President of Colombia

It is not by coincidence that Colombia is placing the protection and sustainable use of our biodiversity at the centre of our long-term development plans. Our natural endowment is among the most diverse in the world: with only 1 per cent of the planet's surface, our territory harbours 10 per cent of all known species and a forest area comparable to the size of Kenya.

Besides being at the heart of Colombia's identity, biodiversity and ecosystem services are essential for developing biotechnology initiatives, energy generation, and maintaining the livelihoods of local communities whose traditional knowledge is deeply rooted in the notion of living in harmony with nature.

Without a doubt, this exceptional wealth and its major role in our economy and our society will demand a sophisticated management approach: one in which we weave the sustainable use and conservation of our biodiversity into the strategies that meet national and local development goals, including poverty reduction, gender equality, and combatting disease. This vision is tightly linked to our priority objective of building a stable and long-lasting peace.

After decades of armed conflict, Colombia is closer than ever to reaching a peace agreement through dialogue. Besides the obvious benefits to a society sick of violence, we expect its environmental dividends to be enormous. Extremely harmful activities that have financed the conflict, such as the illegal extraction of minerals and illicit crops, have resulted in massive deforestation, water pollution and land degradation. All these affect local communities by endangering health, imperiling livelihoods, limiting opportunities, and therefore perpetuating

poverty, particularly in rural areas. Colombia stands before a unique opportunity and we will not waste it.

While the end of the conflict surely represents a tremendous amount of environmental damage that will be avoided, it also represents great policy challenges so that our nation can seize the new development opportunities that will emerge. As such, we focus our efforts in the coming years in promoting sustainable technologies, practices and economic alternatives that will help us to maximize the environmental dividends of peace.

Our implementation efforts are propelled by two key recent international policy achievements with the potential to drive, at last, a global paradigm shift: a decisive and highly ambitious Paris Climate Agreement and a 2030 Sustainable Development Agenda underpinned by 17 integrated goals, all of which concern the human relationship with the environment.

Colombia stands before a unique opportunity and we will not waste it. In line with this universal mandate, we are strongly committed to moving away from environmentally harmful practices and promoting a shift in consumption and production patterns while fostering growth, innovation and increasing wellbeing. In 2015, we adopted a national development plan in which, for the first time, green growth is an integrated guiding vision underpinned by ambitious sustainable development targets.

Our priority aspiration is to reduce deforestation by 27 per cent below 2013 levels, initiate restoration processes in 210,000 hectares and declare 2.5 million hectares of new protected areas by 2018. By 2020, we aim at reaching zero net deforestation in the Colombian Amazon and bringing one million hectares under restoration. By 2030, deforestation in Colombia should have come to a halt and greenhouse gas emissions should be 20 per cent lower than projected levels.

There is a very powerful virtuous cycle in which peace, green growth and the environmental aspects of the 2030 Agenda interact to deliver well-being to our citizens.

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Accomplishing these goals implies considerable investments and a strong commitment from all of society to a profound rural and urban transformation. It will not be easy but we are ready to take on this challenge and lay the building blocks of a more equitable and peaceful society.

There is a very powerful virtuous cycle in which peace, green growth and the environmental aspects of the 2030 Agenda interact to deliver well-being to our citizens. While peacebuilding both enables and demands new development opportunities for those affected by or involved in the conflict, strong green growth policies broaden the range of alternatives available to them while protecting nature and making progress toward the Sustainable Development Goals. At the same time, a healthy environment and more sustainable livelihoods help secure peace by preventing conflict.

Colombia is proving that this cycle can be set in motion on the ground. Sustainable cattle ranching with tangible environmental and economic results, payments for ecosystem services applied to productive lands, well preserved strategic ecosystems, encouraging land restoration experiences, and the sustainable management of

forests, are among the success stories with enormous potential for transformation if replicated on a larger scale.

While the benefits clearly outweigh the costs, effectively promoting green growth policies and paving the way towards sustainable development represent unique challenges for all nations, as they entail profound changes in the way we steer decisions in our broader economy. To us, international support – coordinated under our Sustainable Colombia strategy – will continue to be essential in scaling up our efforts by matching and creating synergies with domestic financial and technical resources.

We all share a common environment that is under growing pressure and yet we have the responsibility to ensure the well-being, health and development of millions of people. My country firmly believes that UNEA will call upon and deliver much needed action on sustainable development. I hope Colombia's message and experiences serve as a reference and enrich discussions at UNEA's forthcoming session, and contribute to the implementation activities of the 2030 Agenda for Sustainable Development. ▲

Peter M. Christian Scoring a Goal

The world is moving towards a fast phase-down of powerful greenhouse gases thanks to Small Island Developing States.



Peter M. Christian
President, Federated States of Micronesia

Last autumn in Dubai, the Parties to the Montreal Protocol, representing every country in the world, agreed to work to amend the treaty in 2016 to phase down the highly potent greenhouse gases called HFCs. With negotiations having started in Geneva in April and expected to be completed later this year, the nations of the world are now on the verge of scoring a major goal for the climate system and for sustainable development worldwide.

For my country and our small island allies, it has been a long journey leading up to this very exciting year. Having recognized the need for much faster action on climate change well over a decade ago, Micronesia, along with Mauritius and Argentina, proposed in 2007 that the ongoing phaseout of HCFCs under the Montreal Protocol be accelerated. We knew this would not only help the ozone layer recover more quickly by reducing ozone-depleting chlorine from the atmosphere, but also that – because HCFCs are also powerful greenhouse gases – replacing them with substances that caused less warming or with systems that used less overall electricity could also greatly reduce global warming impacts. After some discussions of the latest science and the implications of not taking rapid action wherever possible, the other countries supported our proposal, and we succeeded in accelerating the phaseout of HCFCs under the Montreal Protocol in 2007. Despite this first victory, we knew that to minimize climate change and protect vulnerable countries such as ours, much more work still needed to be done. And we knew that at least some of this work could be done using the treaty we had already used so effectively to phase out CFCs and HCFCs. So in 2009 Micronesia became the first country to propose phasing

down HFCs under the Montreal Protocol as well. Like CFCs and HCFCs, HFCs are manmade greenhouse gases manufactured for use largely in the refrigeration and air conditioning sectors. HCFs were initially chosen as replacements given their relative ozone-friendliness compared to CFCs and HCFCs. However, like CFCs and HCFCs, HFCs are extremely powerful in the amount of warming they cause – up to thousands of times more powerful than carbon dioxide. Given our experience with CFCs and HCFCs, we knew that manufacturers could gradually reduce the amounts of HFCs they made and could replace them with newer, safer, and even more effective and more energy-efficient refrigerants. Indeed, the science made clear that if we didn't address the rapid growth in HFCs, HFC emissions could lead to warming of almost half a degree Celsius by the end of the century, with total HFC emissions equivalent to hundreds of billions of tonnes of carbon dioxide emissions.

We knew that to minimize climate change and protect vulnerable countries such as ours, much more work still needed to be done.





Photo: © AFP

We knew that to minimize climate change and protect vulnerable countries such as ours, much more work still needed to be done.

Progress on our HFC proposal was limited at first. We faced objections from a variety of countries for reasons that ranged from financial costs to technological concerns to legal complexities. Over time, however, the scale of the potential, but still totally avoidable, HFC problem became more obvious, and so too did the growing list of technologies and policy options available for preventing it.

Now, despite the initial resistance, the HFC phase-down first proposed by Micronesia and its Small Island Developing State allies enjoys the support of the largest and most powerful economies in the world, both developed and developing. This year in addition to the proposal by my country and its island

state co-sponsors, there are four other proposals to phase down HFCs under the Montreal Protocol, including one from the 54 countries of the African Group, one from the 28 countries of the EU, one from the three North American countries and one from India. Leading roles in the negotiations are also being played by countries from the Middle East and South America, as we all work to identify the safest, most functional, most energy-efficient and most cost-effective options for replacing the climate-warming chemicals we have used in the past.

The final stretch of negotiations on a global phase-down of HFCs is likely to conclude in Vienna this July. Reaching an agreement still requires significant work on complex, inter-related issues, but we are now quite confident that it will be done. This will no doubt be a special moment for our team and our Small Island Developing State allies, who have all persevered in this effort for almost a decade. But as with the Paris Agreement last year, the true victory will be for the climate system and for multilateralism and collective action itself. In the face of many further climate challenges to come, it is essential to remind ourselves that there is no problem we cannot solve if we make an effort together, and there is no effort we cannot make if we choose to make it. I look forward to working with colleagues worldwide to finish this task, and then to joining them again in taking on the many others that lie ahead. ▲

UNEP at Work

Women, Water and Peace



Photo: © UNEP

The Darfur region of Sudan is no stranger to violence. More than a decade of conflict has driven millions of people from their homes, and many have settled in North Darfur's Wadi El Ku, one of the region's largest seasonal riverbeds.

In the last ten years, the population of Wadi El Ku has mushroomed to more than 700,000 people, almost all of whom depend on the local water supply to support their livelihoods. This population growth – coupled with climate change and the misuse of natural resources – has sapped the local groundwater supply and led to widespread deforestation, which has in turn undermined economic recovery.

But UNEP has spent the last three years helping put Wadi El Ku on a path to sustainable growth. UNEP's project in the region – which is supported by the EU and the Government of Sudan, among other partners – aims to improve

the livelihoods of people in the area who have been affected by conflict. One of its major achievements thus far has been to help the community create a "forum" to manage water, the region's most precious resource.

"The forum is a space for governments and communities to discuss key issues around water and find a way forward together," says Magda Nassef, the manager of the project. "Really what we're doing is changing the way people are thinking about natural resource management."

The project is due to wrap up within the next year, but Nassef is confident that the forum will continue to meet. "The government is completely behind this," she says.

The forum is just one of several components of the project, which is also developing a hydrological model of the region; working directly

with 81,000 farmers to help them improve their productivity; and providing trainings based on government priorities.

Nassef and her colleagues knew from the beginning that women, who make up 65 per cent of the local population, would be key to the project's success.

"The workloads in Darfur fall mostly on the shoulders of women – they do pretty much everything from looking after the kids to tilling the lands to working in the market," says Nassef. "They do all the work, but they don't have much of a seat at the table."

So right from the beginning, Nassef and her colleagues devised a strategy to ensure that gender considerations would be integral to the project. They made sure that women were represented in the forum, participated in trainings, and had



“The workloads in Darfur fall mostly on the shoulders of women – they do pretty much everything from looking after the kids to tilling the lands to working in the market.”

a chance to voice their concerns in female-only settings, where they were more likely to speak up.

Focus group discussions conducted last year confirmed that women in the region are now more likely to voice their concerns, and that they have better access to knowledge as a result of their interactions with the project. In one village, women reflected that their men now show them greater appreciation for the many contributions they make to the community. ▲



Amina J. Mohammed The Africa We Want

The environment must be placed at the centre of Africa's growth and transformation to a prosperous sustainable continent.



**Amina J.
Mohammed**

*Minister of
Environment, Nigeria*

"Go softly in the world: if it is harmed, it cannot return." This traditional African proverb reflects an awakening understanding in the continent that the environment is key to unlocking its great potential. So far, despite being filled with vast natural resources, Africa has been unable to harness them to bring about long-lasting peace, prosperity and good governance. But this is beginning to change.

In May 2013, at the African Union's Golden Jubilee – 50 years after the first 33 independent African states met in

Addis Ababa to establish it – the continent's political leadership acknowledged past achievements and challenges and rededicated itself to the pan-African vision of an integrated, prosperous and peaceful continent driven by its own citizens and representing a dynamic global force. The result is Agenda 2063, a remarkable plan of action to consolidate and position Africa's priorities and concerns in the newly emerged Sustainable Development Agenda. The environment, with its associated benefits and risks, should be the gateway to future peace and prosperity. The internationally adopted Sustainable Development Goals have ushered in a new era in development efforts. They integrate the three inextricably intertwined strands of sustainable development – economic, social and environmental – producing a new narrative for development that is universal, inclusive





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The environment, with its associated benefits and risks, should be the gateway to future peace and prosperity.

and context-specific. Their thrust was greatly reinforced in December by the Paris Agreement on climate change, where the world’s nations committed themselves to holding the rise in average temperature to well below 2°C above pre-industrial levels – and to try to limit it to 1.5°C – while embracing the target of zero net emissions of greenhouse gases in the second half of this century.

These two historic agreements set out the world’s commitment to move to an inclusive green economy. Agenda 2063 also reflects this, setting out – as its first Aspiration – “a prosperous Africa, based on inclusive growth and sustainable development”. Its all-inclusive nature captures the essence of what Africa believes is needed to ensure it is not left behind or forgotten. It is a prolific signal of Africa’s understanding of its seriousness to develop and grow the continent.

Both Agenda 2063 and the SDGs are aspirational in outlook, require country-specific actions and are hinged on sustainable development, encouraging integration and mainstreaming into core policy areas. They are also in sync on the pivotal role of the environment: For instance, goal seven of Agenda 2063’s Aspiration one is focused on Environmentally Sustainable and Climate Resilient Economies and Communities, reinforcing several of the SDGs.

As a plan of action for Africa, Agenda 2063 understands the interconnectivity between people, the planet and prosperity as it strives for prosperity and well-being, for unity and integration, for a continent of free citizens and expanded horizons, with freedom from conflict and improved human security. In the past, many of Africa’s problems have been centred on the environment, whether conflicts caused by natural resources that are extractable from the ground, or tussles for power over land. But now the environment, with its associated benefits and risks, should be the gateway to future peace and prosperity.

Africa has achieved much over the past two decades. Its economic growth has averaged 5 per cent to 6 per cent a year. If its current trajectory is maintained, incomes will double in 22 years. Poverty levels are falling for the first time in a generation: The proportion of the continent’s people living on less than \$1.25 a day dropped from 56.5 per cent in



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1990 to 48.5 per cent in 2010. There have been advances in democratic governance, increases in stability and a notable decline in violent conflict.

But much more needs to be done. Despite the progress in reducing the proportion of Africans in poverty, the actual number of poor people has increased, from 290 million in 1990 to 414 million in 2010. Africa not only remains the continent with the highest concentration of the poor, but its share of global poverty rose from 15 per cent to 34 per cent over the same period.

Agenda 2063 warns that, if present trends continue with business as usual, only a “tiny” number of high-growth countries will converge economically with the rest of the world. Per capita incomes will continue to rise, but still fall behind internationally, with nearly one in five of Africans still

“mired in poverty” – while the continent’s share of global GDP “would stagnate at a low level”. It makes clear that “Africa must do business differently and adopt a paradigm shift if current hopes for a better future for the continent are to be realized”.

Placing the environment at the centre of Africa’s green growth is a vital part of this shift. Take energy. Partly due to Africa’s dependence on fossil fuels for generating power, the average continent-wide electricity tariff is some \$0.14 per KWh, more than three times East Asia’s \$0.04.

But Africa has vast renewable resources. It has huge solar and wind power potential, receiving, for example, the highest amount of solar radiation of any continent. It has over 15,000 MW of potential geothermal energy, hydropower that could generate a massive 1,800 Twh a year, and “immense”

Taking climate action will be key to achieving Africa's potential.



Photo: CC BY-NC-ND, Dana Smitte / Worldbank Photo Collection

*Africa, with **60 per cent** of the world's potential arable land, could become an agricultural powerhouse.*

prospects for bioenergy. Agenda 2063 concludes that “ensuring access to clean and affordable energy is a development imperative”.

Taking climate action will be key to achieving Africa's potential. Governments have already begun to grasp the opportunity, Nineteen nations have endorsed the Africa Clean Energy Corridor, which could increase the development of renewable energy projects from their present 12 per cent of the East and Southern Africa Power Pool to at least 40 per cent by 2030. By 2063, says the plan of action, renewables will provide more than half of the continent's energy. Similarly, Africa, with 60 per cent of the world's potential arable land, could become an agricultural powerhouse, while conserving its ecosystems, unique biodiversity, and genetic resources: It is host to five of the 20 global centres of plant diversity. And there is enormous potential in reversing

the land degradation and desertification believed to affect 43 per cent of the continent's land surface. The same goes for tackling the climate change to which Africa is especially vulnerable. As Agenda 2063 points out: “Africa has a huge opportunity to build robust economies with sustained high economic growth rate, while at the same time reducing the immense risks of climate change.” The aim is that, by 2063, “all agricultural and industrial activities will be climate smart and sustainability certified”.

In short, the plan of action aims at a continent where Africans “will have a high standard of living and quality of life and well-being” based on “inclusive growth and sustainable development to enable Africa to reclaim its natural heritage, build prosperous societies, and reduce vulnerability to climate change”. That, to borrow Agenda 2063's subtitle is “The Africa We Want”. ▲

Manuel Pulgar-Vidal

A New Era

Setting the pace of development to ensure better living conditions and the viability of the planet



Manuel Pulgar-Vidal

Minister of Environment, Peru

People are used to celebrating the start of a new year with resolutions for change; with goals for improvement, welfare and progress; with optimism and a constructive and proactive spirit. We do so from our past experiences – evaluating achievements, learning from failures and overcoming frustrations. We assume the present from the achievements and lessons learned, and aim for a better future.

We are now at exactly the same point with the planet. With strong responsibility and conviction, global commitments and important decisions have been taken in the past, particularly over the last five years, and we can therefore look to the future with greater optimism, faith in change and with a clear goal: sustainability.

The Nagoya Protocol and the Aichi Targets and action plan for biodiversity 2011-2020; The Future We Want and strategies for a green economy in June 2012; the first Environmental Assembly of the United Nations, UNEA in June 2014; the Sendai Framework for Disaster Risk Reduction 2015-2030 decided in March 2015; the 2015-2030 Sustainable Development Goals, adopted in September 2015; and last December's Paris Agreement – among other global decisions – define the framework that directs humanity towards a new development paradigm where concepts such as mitigation and decarbonization, adaptation and resilience, clean technologies, sustainable procurement, green jobs, non-conventional renewable energy, climate finance, innovation growth, natural infrastructure and green economy, are the new goals setting the course towards sustainability.

Let us try to explain current times by analyzing the evolution of previous phases that have allowed us to design and define the contents of the new development concept.

We can recognize, identify and explain a first phase, from the beginning of the industrial era and what it represented in progress for humanity, but with mostly negative consequence as accelerated urbanization, demographic transition and the gradual abandonment of the countryside, the use of fossil fuels and the intensive exploitation of natural resources. This phase laid the foundations of the current economic development of the great powers and, in turn, led to territorial ambitions that resulted in two world wars. It was only after World War II – and in the scenario of the reconstruction of Europe and the encouragement to regain trade flows with the negotiation of the General Agreement on Tariffs and Trade (GATT) in 1947 – that the first environmental concerns arose, highlighting issues such as acid rain, transboundary pollution, habitat loss, the intensive use of pesticides and concerns about the dirty dozen.

Two significant milestones mark this phase: the Washington Convention on Protection of Flora, Fauna and Scenic Beauties in the Americas in 1940 – preceded in the late nineteenth century by the creation of the first protected natural areas in the United States – and the 1949 UN Scientific Conference on the Conservation and Utilization of Natural Resources. These highlighted the dynamism that multilateralism gives to the link between environmental, conservation and development concerns.

Yet, during this phase, the emerging environmental concerns were divorced from the development debate amid postwar political tensions, bipolarization and its expression in the so-called Cold War with ideological expressions of the concept of development, the role of government, the private sector and citizens' rights.



Photo: © AFP

We can look to the future with greater optimism, faith in change and with a clear goal: sustainability.



Photo: © AFP

A second phase, beginning with the milestone United Nations Conference on the Human Environment in Stockholm in 1972 could be called the “triumph of multilateralism” or the “role of the summits”. The Stockholm Conference represented the recognition of the basic human right to a healthy environment – and of our responsibility to future generations – linking economic and social development to ensure humanity a favourable living and working environment and creating the necessary conditions to improve the quality of life. This concept, which some called “eco-development”, set us on the way toward the current goal of sustainability – accompanied by the United Nations Environment Programme (UNEP), which was created in one of the conference decisions.

The Stockholm summit catalyzed the global environmental debate and showed the way to subsequent agreements such as the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal and the Vienna Convention for the Protection of the Ozone Layer, today recognized as the most effective in meeting its objectives. It also preceded the most significant milestones in the construction of the concept and objectives of sustainable development – Our Common Future, the report of the commission led by the then Prime Minister of Norway Gro Harlem Brundtland, and the 1992 United Nations Conference on Environment and Development in Rio.

There is much to draw from the movement that the Rio summit started. It gave us many of the rights and key principles of environmental management, such as the precautionary principle, the polluter pays, Principle 10 on citizen participation, the principle of prevention, and the principle of common but differentiated responsibilities, followed the



Photo: © CC BY-NC Geraint Rowland

principle of sustainable development of the Rio Declaration, supplemented by the Agenda 21 action plan. The Rio summit also led to the signing of the biodiversity and climate change

conventions and the channeling of financial resources through the Global Environmental Facility. And it inspired the subsequent 2002 Johannesburg Summit and the linking



Photo: © CC BY-ND - Chetan Karbhari



of the concept of sustainability to the objectives of poverty reduction as well as to the nine Millennium Development Goals for 2015 adopted in 2000, with one aimed at ensuring a sustainable environment. And finally, the Rio meeting in 1992 led to the Rio+20 Summit in 2012, where the roadmap to defining the Sustainable Development Goals was established.

All this developed in a changing political world. Perestroika in the late 1980s marked the beginning of the end of the Cold War and the opening of a new millennium marked by political crisis, financial meltdowns and new threats of global terrorism.

Sustainable development has a great opportunity to become the new concept that can assemble and build the new vision of global and national development. At a time of transition marked by crises – with citizens’ demands for greater well-being and awareness of the environmental and economic effects of our actions – sustainable development is positioned to be the concept that can ensure the viability of the planet and better living conditions, especially for future generations. Perhaps that is why the process for adopting the Sustainable Development Goals as the guide for the 2030 Agenda for Sustainable Development took only about three years, despite long and fruitful discussions.

Today the world is heading not just to achieving the 17 SDGs and their targets, but to a decarbonized economy where we

A new era has begun where sustainability sets the pace of development, and where such concepts as the new climate economy are coined.

are able to avoid exceeding the threshold of an average global temperature increase above 2 degrees Celsius – making efforts not to exceed 1.5 degrees – and to a resilience goal, resulting from our planned and organized actions for adaptation to climate change.

A new era has begun where sustainability sets the pace of development, and where such concepts as the new climate economy are coined. Let’s celebrate what has been achieved, but also further mobilize actions and will to meet our proposed goal, satisfied of what we have decided but ambitious about what we can achieve. The world and future generations will be grateful for it. ▲



The Air We Breathe

An affordable new device prototyped by UNEP could revolutionize air quality measurement in the developing world.

Every year, nearly 4 million people die from outdoor air pollution – that’s more than are killed by AIDS, malaria and tuberculosis combined. Nearly 90 per cent of those deaths occur in low- and middle-income countries, which typically lack the capacity to monitor the quality of their air.

But UNEP has developed a ground-breaking – and affordable – new device to measure air quality, and it’s making the blueprints for the technology available to the public. The agency hopes that the device, which costs up to 100 times less than mainstream solutions on the market, will revolutionize air quality measurement across the developing world.

“Air quality is now being seen by every country as one of the big pressures you have to address because it’s just killing so many people”, says UNEP Chief Scientist Jacqueline McGlade. “There are still huge gaps in air quality measurement. Many, many states simply haven’t been able to afford to install the kind of equipment they need.”

Burgeoning cities around the world – but especially in Africa, India and China – are suffering the consequences of poor air quality, mainly due to

Photo: © CC BY - Nicolò Lazzati



Photo: © CC BY-SA Simon Carr



high levels of particulate matter. Most of that pollution comes from fuel combustion, both from vehicles and stationary sources such as power plants, factories and households.

“Countries that have never been able to measure their air quality before are now coming to us asking for access to this device”

UNEP’s new device, which was launched in 2015, can measure the concentration of particulate matter ranging from 1 to 10 microns in diameter (PM 1 - PM 10), including PM 2.5, considered by the World Health Organization to have the greatest effect on human health.

It also records the concentration of sulphur and nitrogen oxides and can be extended to measure other gases such as ozone. Fitted out with a GPS tracker, the device can pinpoint the source of the pollution it’s measuring.

Keeping the price low was absolutely critical, says McGlade. The device costs between \$1,500 and \$3,000 per unit, which means that many governments and local authorities will be able to establish

low-cost networks of stationary and mobile air monitoring stations around their cities. UNEP has also made the blueprints available to the public, enabling governments, businesses and other stakeholders to produce the units themselves.

“Countries that have never been able to measure their air quality before are now coming to us asking for access to this device”, McGlade says. “So far, more than 30 countries have made requests.”

The UNEP Live platform enables viewing of near real-time monitoring data of air quality from 2,000 stations across the world. However, only a few of those stations are located in developing counties and their setup and calibration varies. Large-scale deployment of the new device could bridge this data gap and help standardize the collection of air quality data around the world.

“By creating an affordable air quality monitoring network, we’re putting information into the hands of citizens – information that can help them bring about real change in their societies”, says McGlade. “It’s a revolution from the bottom up.” ▲

United Nations Environment Assembly: PARLIAMENT OF THE ENVIRONMENT #UNEA2

WHAT IS UNEA?



Parliament
of the
environment



Sets **UNEP's**
agenda



First global platform after
the adoption of the
#2030Agenda for
Sustainable Development
and **#COP21**

UNEA BRINGS TO INTERNATIONAL



193 United Nations
Member States



Prominent members
of **civil society**

WHY UNEA?

Platform for leadership on global environmental policy to:



Build a
sustainable future



Protect the
environment



Safeguard
human health



United Nations Environment Assembly
of the United Nations Environment Programme
Delivering on the 2030 Agenda

23 -27 May 2016
Nairobi, Kenya

AN AUTHORITATIVE AGENDA

TOGETHER THE
GLOBAL COMMUNITY



United Nations
Member States



CEOs and other private
sector representatives



Guardian
of health



Environmental
dimension of **SDGs**



Implementing
#ParisAgreement



**Food
waste**



Illegal trade
in **wildlife**



Biodiversity



Protecting the **environment**
in areas affected by **conflict**



**Waste
management**



Sustainable **consumption**
and **production**



Safeguarding
our **ecosystems**



**Natural capital
management**



**Air
quality**



**Marine
litter**



Madius Tangau Green Innovation

Eco-innovation can create environmentally friendly industries to take advantage of the opportunities opened up by sustainable economies.



Madius Tangau

*Minister of Science,
Technology and
Innovation, Malaysia*

The need to strike a balance between increasing demand for natural resources and environmental sustainability has opened new opportunities for Malaysia to grow economically. Under its eleventh economic plan 2016-2020, a green economy – one that aims to reduce ecological risks and address resource scarcities – has been identified as one of the main drivers for development. In line with this new approach, emphasis is given to innovation for creating more environmentally friendly industries to enable the growth to take place. Thus eco-innovation is to be nurtured, in the spirit of this green economy, to support attaining the 17 Sustainable Development Goals (SDG), especially those related to responsible consumption and production, and action on climate change.

My ministry has introduced various strategies related to the broad scope of eco-design, eco-materials development, cleaner production and eco-labelling so as to substantially promote sustainable development. These collective eco-innovation strategies facilitate industry players, including small and medium enterprises (SMEs), by empowering them to embed green technology into their production practices. “Energizing Industry” – the third strategic thrust of the National Policy on Science, Technology and Innovation (NPSTI) 2013-2020 – is identified as the prime enabler for companies to adopt innovative, green and environmentally friendly approaches. The NPSTI sets out a new and focused policy framework to discover, utilize and optimize the full

potential of science, technology and innovation to achieve our long-term economic, social and environmental goals. Standards and quality benchmarking are crucial to enhancing eco-innovation.

Several initiatives support these eco-innovation strategies. Programmes have been drawn up to address key challenges in propagating eco-innovation, or the adoption of Sustainable Consumption and Production (SCP) at the industry level. The major ones include (i) incentivizing SMEs, who make up about 98.5 per cent of the registered businesses in the country, by providing different forms of financial instruments to encourage uptake of green technologies as producers, suppliers or users; (ii) developing the necessary “soft” infrastructure, such as lifecycle analysis database and software programmes; (iii) capacity building; and (iv) continuous technological development that is market-driven or strategic to the nation’s long-term goals.

Standards and quality benchmarking are crucial to enhancing eco-innovation and appropriate, sufficient, quality adherence programmes are highly important in driving the green economy. Malaysia’s “SME Technology Penetration and Upgrading Programme” (STEP-UP), incorporating technology auditing, aims to intensify the use of innovation, creating healthy competition among SMEs and nurturing niche markets for them, which in turn helps increase productivity and marketability. This programme is steered by SIRIM Berhad, an agency under the Ministry of Science, Technology and Innovation (MOSTI). Since the programme’s inception in mid-2015, more than 150 companies have undergone technical audits, with at least 30 of them also being subjected to additional eco-innovation elements.

Blending itself with global emerging trends, Malaysia has proactively undertaken a Type 1 “Eco-labelling Programme” and recently completed a pilot carbon footprint for it. The programme, which closely adheres to the ISO 14000 series,

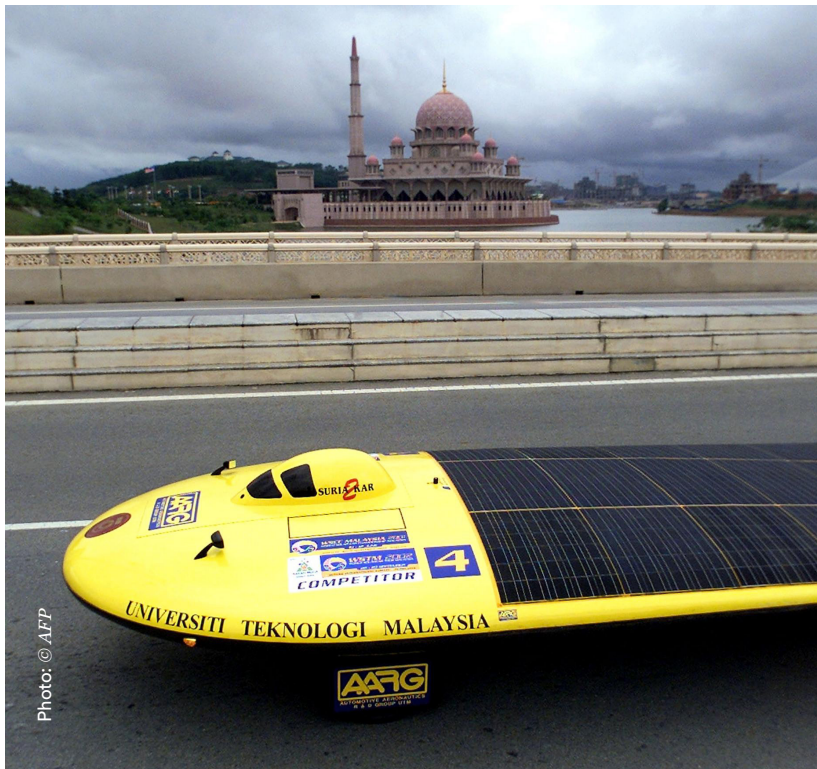


Photo: © AFP



Photo: © AFP

assists companies that have invested in improving the environmental performance of their products and services. Forty documents on product criteria have been developed and are used for eco-labelling certification of more than 60 products covering at least 300 brands.

A “MyHijau Programme” (Malaysia Green Programme) has been developed to ensure the availability of green products and services that conform to international standards and regulations. By December 2015, 1,439 products had obtained green certification, and the target is to certify 5,000 green products by 2020. In addition, a Voluntary Corporate-level Greenhouse Gas (GHG) Emissions Reporting Programme under the purview of the Ministry of Natural Resources and Environment was launched in 2013 to communicate our national environmental stewardship more widely and effectively: in 2015, a total of 50 Pilot Reporting Organizations participated in the programme, which serves as a globally-recognized platform for Corporate GHG reporting, while providing standards, guidance and support measures for the industry.

There is obviously a strong link between eco-innovation and green business. However – while eco-innovation helps drive green business in Malaysia – adopting green technology so rapidly has brought challenges, particularly in terms of financial capacity. The government has addressed this constraint by initiating the Green Technology Financing Scheme (GTFS) under the Ministry of Energy, Green Technology and Water. This unique funding support initially allocated 1.5 billion Malaysian ringgits (\$384 million) but thus was increased to RM3.5 billion (\$896 million) in 2012 to cater for the growing demand. Since its introduction, the scheme has drawn on the participation of 26 financial institutions and successfully supported 227 projects. As of February 2016, RM2.605 billion (\$667 million) has been approved for producers and users of green technology, creating over 3,830 jobs and saving the equivalent of 2.907 million metric tonnes of carbon emissions.

Procurement provides another key business opportunity for the green economy, with the government using its purchasing power to promote the use of environmentally friendly products and services, while regulating the market’s practices. As a start, the government initiated Green Procurement Projects in five selected agencies at an overall cost of RM265 million (\$68 million) as of 2014. Under the Eleventh Malaysia Plan, Government Green Procurement will be made mandatory for all government ministries and agencies. This will create a demand for green products and services, encouraging industries to raise their production standards and quality via eco-innovation and other similar initiatives.

Procurement provides another key business opportunity for the green economy.

The significant role played by eco-innovation in supporting the SDGs is embedded in strategic programmes with different approaches. These programmes are driven equally by policies and market demand, with the ultimate aim of creating a “greener economy” for Malaysia, both in terms of wealth generation and environmental sustainability. MOSTI is the important mediator in this entire eco-innovation value chain, so as to ensure that synergistic alliances across the various ministries and agencies are successfully implemented. A real green Malaysia is perhaps still elusive, but with this current change in approach, a brighter future definitely blooms ahead. ▲

By December 2015, **1,439** products had obtained green certification, and the target is to certify **5,000 green products** by 2020.

Susi Pudjiastuti Catching Crime

Fighting illegal fishing has led to a more sustainable industry, increasing food supplies and well-being.



Susi Pudjiastuti

*Minister of Marine
Affairs and Fisheries,
Republic of Indonesia*

Indonesia, the world's largest archipelago – consisting of approximately 17,000 islands spread across nearly 2 million square kilometres – also holds, at over 80,000 km, its second longest coastline. Sixty per cent of its population lives in the coastal area. So it is no surprise that fishing is one of our biggest economic activities. And soon after Joko Widodo was elected as the President of the Republic of Indonesia, he made a political commitment to reclaim the nation's status as a global maritime axis.

However, the road to regain such status is not, of course, trouble-free. Most of our fish stocks have been depleted due to illegal, unreported, and unregulated (IUU) fishing activities. There are fewer fish to catch and fishing becomes economically unviable. In just one decade from 2003 to 2013, the number of people in fishermen households decreased from 1.6 million to only 800,000. Despite all its pride and treasure, Indonesia was only ranked as the third-largest seafood exporter in South-East Asia. Furthermore, IUU fishing activities have not only affected Indonesia's fish stocks, but also contributed to economic losses of up to \$20 billion per year. A study showed that several fishing grounds in Indonesian seas have been heavily drained.

Grasping the urgency of this situation, the Ministry of Marine Affairs and Fisheries (MMAF) imposed a national moratorium on all vessels built outside Indonesia. Over 1,100 of these "ex-foreign vessels" operating in Indonesian waters are

subject to an analysis and evaluation process. Considering their size and equipment, these vessels have a huge capacity to exploit Indonesia's marine and fisheries resources: Over the last ten years, the frequency and intensity of their activities has made them the major cause of resource depletion.

Immediately following the moratorium, MMAF established the Task Force on Prevention and Eradication of IUU Fishing, responsible for the analysis and evaluation process for all the affected ex-foreign vessels. Through this audit we are able to identify the legal compliance status of companies, the pattern of vessel ownership, their modus operandi (types of violations, including fisheries crime), the roots of the problem and flaws in policy and regulation. The Task Force completed its audit last October and the MMAF has revoked 15 out of 187 business licenses, 245 out of 1,041 fishing licenses and 31 out of 91 reefer licenses. Other results are the suspension of licenses and written warnings to several companies. The vessels overexploited our fisheries resources and created an imbalance in food chains, which damages the whole marine ecosystem.

During the audit, the Task Force found violations and criminal offences committed both onboard these ex-foreign vessels and by the companies that own them. These include predominantly employing foreign crews, fishing outside permitted grounds, using unsustainable equipment, turning off transmitters during operations at sea, illegally transshipping catches to other unknown boats, illegally exporting catches without proper documents, and failing to land some to most of the catch at local ports. Needless to say, all these violations caused much environmental damage to Indonesian waters. The vessels overexploited our fisheries resources and created an imbalance in food chains, which damages the whole marine ecosystem. The MMAF has enacted a regulation prohibiting trawls and seine nets because they do not select for size and species, harming the marine environment.



Photo: © AP

The vessels overexploited our fisheries resources and created an imbalance in food chains, which damages the whole marine ecosystem.

*In just one decade from 2003 to 2013, the number of people in fishermen households decreased from **1.6 million** to only **800,000**.*

The veil over fisheries crimes began to be lifted when the international media and the Task Force learned that over a thousand human trafficking victims had been found in Benjina and Ambon, Indonesia. The Task Force audit also spotted activities with elements of transnational organized crime. For a start, offenders have violated numerous laws, amounting to serious crime, including forging vessel documents, immigration papers and logbooks; marking down the size of ships to get government diesel subsidies; smuggling and illegally trading goods, wildlife and endangered species and illicit drugs; fuelling at sea by illegal suppliers; and finning sharks. These serious offences are generally strategically planned and conducted by more than two people, usually ship owners, field actors, local agents and the manning agencies. Once the crimes have been committed, products of the catch and sales of goods, endangered species and illicit drugs are exported to many countries, causing such offences to operate at an international level. It goes without saying that the motive is to increase profits and financial benefits, while making the minimum compliance effort.

Hence, the elements of transnational organized crime have been found in the fishery business, and should urgently be categorized as such. The offences are serious; crime is strategically planned and conducted by more than two people; it is operated at an international level; and its motive is to gain more profit and financial benefits, with minimum effort in compliance. This issue should be prioritized by the international community since it does not only involve one country, but many.

President Joko Widodo has perceived the urgency of tackling all these IUU fishing activities that lead to crime. He therefore established the Task Force to Combat Illegal

Fishing, appointing the Minister of Marine Affairs and Fisheries as Chief Commander alongside the Deputy Chief of Navy as Operational Chief in Duty, reporting directly to him. This new task force brings together all the relevant institutions in combatting illegal fishing, especially fisheries and fisheries-related crimes, through law enforcement and policy reform by developing a strategic roadmap to improve Indonesia's fishery's governance. So far, 176 vessels have been demolished, including FV VIKING, a notorious stateless vessel sought worldwide by INTERPOL and 13 countries.

This has clearly created benefits for sustainable fisheries development. So far, 176 vessels have been demolished, including FV VIKING, a notorious stateless vessel sought worldwide by INTERPOL and 13 countries. Fish products are now largely available in local markets because local fishermen are able to fish a lot more than in the past, while the government can reduce its expenditure on diesel subsidies. Catches in local fishing ports with local vessels have increased by 62.53 per cent. Bigger catches produce more fish for consumption, solving Indonesia's food security issue, particularly for protein supplies. National fish consumption grew to 41.11kg per person per year in 2015, up from 37.89kg in 2014. Meanwhile the Indonesian Center Bureau of Statistics has shown that fisheries increased to 8.37 per cent of GDP in 2015, up from just 7.35 per cent the year before.

Indonesia is on the right path to gain back its maritime power. But we still have work to do, cases to be settled, policy to be reformed and laws to be enforced. The MMAF is continuously running towards its maritime goals – sovereignty, sustainability and prosperity, to create a better Republic of Indonesia, a big maritime country. ▲

Bautista Rojas Gómez Pedro García Brito Nathalie M. Flores Lighting the Way

Pioneering work to drive high-efficiency LED technology in cities is promoting decarbonization and sustainability.



Bautista Rojas Gómez

Minister of the Environment and Natural Resources, Dominican Republic (Febraban)



Pedro García Brito

Director of Climate Change, Ministry of Environment and Natural Resources, Dominican Republic



Nathalie M. Flores

Technical Coordinator, Directorate of Climate Change, Ministry of Environment and Natural Resources, Dominican Republic

The Dominican Republic emits less than 0.1% of global emissions of greenhouse gases (GHGs), but, as part of an island, the country is very vulnerable to the impacts of climate change through increased temperatures, sea level rise and rainfall variability. Studies have shown that the country is already experiencing the effects of climate change through the increased intensity and frequency of tropical storms. The Dominican Republic has been classified as the eighth country in the world that was most affected by extreme weather events between 1993 and 2012. In view of the above, the country has come up with a set of policies aimed at preserving existing resources, achieving the objectives of sustainable development and increasing the resilience of ecosystems and human communities to the adverse effects of climate change. In all of these policies, consensus and the participation of all sectors of society has been critical.

The country has focused on developing national policies that respond to the environmental dimension of the Sustainable Development Goals, linking national priorities by promoting investment from the private and productive sectors to boost energy efficiency technologies to reduce GHG emissions. The priorities we have promoted include eradicating poverty, promoting food security through sustainable agriculture, guaranteeing a healthy life, and ensuring gender equality as well as equitable and inclusive quality education. The 2030 National Development Strategy (Law No. 1-12) is an immediate response to the international commitments that the country has made, especially through the United Nations Framework Convention on Climate Change. The Strategy is also a mechanism to promote the environmental

dimension of the Sustainable Development Goals, aiming to spur urgent action to combat climate change and its effects, as well as to protect, restore and promote the sustainable use of terrestrial ecosystems and forest management, so as to combat desertification and halt and reverse land degradation and the loss of biodiversity.



Studies have shown that the country is already experiencing the effects of climate change through the increased intensity and frequency of tropical storms.



Photo: © AFP



*The Dominican Republic has been classified as **the eighth country** in the world that was most affected by extreme weather events between 1993 and 2012.*

A key objective supporting the environmental dimension of the Sustainable Development Goals is achieving reliable, efficient and environmentally sustainable energy, which – according to the National Development Strategy – must be achieved by ensuring a reliable supply of electricity at competitive prices, with fair financial conditions and environmental sustainability. This entails achieving affordable, reliable, sustainable and modern energy for all, while promoting sustained, inclusive and continuous economic growth, full and productive employment and universal decent work. It also involves promoting cities and human settlements that are inclusive, safe, resilient and sustainable through the Strategy’s key objectives. These include:

- Encouraging sustainable electricity generation and the implementation of environmental regulations that promote sustainable management practices and mitigate climate change;
- Developing a civic culture that promotes energy savings and the efficient use of electricity; and
- Promoting a civic and business culture of energy efficiency through practices for using electricity rationally and utilizing equipment that promotes conservation and efficient energy use.



Photo: CC BY-NC-ND Worldbank Photo Collection

The fourth axis of the National Development Strategy addresses the environmental dimension of the Sustainable Development Goals, seeking to promote environmentally sustainable production and consumption and help the country adapt to climate change. Specifically, the Strategy states that “a culture of sustainable production and consumption, promoting equity and efficiency, risk management that promotes the protection of our environment and natural resources and also supports an adequate adaptation to climate change” should prevail in the Dominican Republic.

This vision enshrined in our national policy must be met by promoting decarbonization of the economy through using renewable energy sources, and developing markets, energy savings and efficiency and a clean and efficient transport system. The Government adopted an Electricity Sector Reform in 2012, establishing the need for the political, economic and social forces to reach an agreement to solve the structural crisis in the electricity sector while

ensuring predictability in the regulatory and institutional framework, thus enabling the investments in energy generation required by our national development demands.

In this context, the Dominican Republic is pioneering global work to scale up the deployment of high-efficiency LEDs (light-emitting diodes) in cities, in the framework of a Nationally Appropriate Mitigation Action (NAMA) to enable the country to transform its market to high-efficiency lighting in most commonly used applications. This NAMA will also facilitate the implementation of lighting policy instruments to enable the transition, according to priorities set in the Efficient Lighting Strategy adopted by the Dominican Republic and Central America in 2013. It will also help to accomplish the National Development Strategy and the 2030 Sustainable Development Agenda.

The Dominican Republic is working with the Climate Technology Centre and Network and the United Nations



Photo: © CC BY ND Duarte Rosete

*These efforts should achieve an expected efficiency transition for residential, commercial and industrial lighting that will save over **730 GWH** in electricity consumption – **5%** of the national total – every year.*

Environment Programme to design and implement this energy-efficiency NAMA. As a result, the country will establish mandatory minimum energy performance standards for residential, commercial and industrial applications, helping to achieve a permanent and durable transition to high-efficiency technologies.

The Dominican Republic will also create a monitoring, verification and enforcement mechanism to ensure compliance with national standards and prevent the use of low-quality and non-performing products, and set up a sustainable financial scheme to support the deployment of LEDs. Finally, our plans also include ensuring the environmentally sound disposal of lighting products.

As well as responding to national priorities, these efforts should achieve an expected efficiency transition for residential, commercial and industrial lighting that will save over 730 GWH in electricity consumption – 5% of the national total – every year. ▲

The Dominican Republic is pioneering global work to scale up the deployment of high-efficiency LEDs.

UNEP at Work

The Big Picture

UNEP is partnering with IMAX to inspire environmental action around the world.

Photo: © AFP



Photo: CC BY-NC NASA Johnson

Everyone in the environmental community recognizes the urgent challenges facing the planet – but how do you spread the word to a truly global audience?

Earlier this year, UNEP launched a partnership with IMAX Corporation, a Canadian-American company with a network of more than 1,000 large-screen movie theatres in 67 countries. IMAX started off making science films and documentaries but has since expanded into commercial



“IMAX is one of the pre-eminent platforms of storytelling today – on a commercial level, on an entertainment level – and that’s the scale of change required to achieve environmental sustainability.”

the ambitious goals of the 2030 Agenda for Sustainable Development. The organizations will encourage the production of sustainability-themed films on a wide range of issues that lie at the heart of the UN’s efforts to protect the planet, end poverty and ensure peace and prosperity for all.

As part of the partnership, IMAX will launch a series of educational screenings and charitable premieres – called “In Feature” – to showcase sustainability-themed films. It will also encourage the development of films and documentaries to promote the 2030 Agenda, World Environment Day on 5 June, and the UN campaign to end the illegal wildlife trade. The two organizations will also establish an annual young filmmakers’ competition that challenges participants to create short films on issues like climate change, access to clean water and quality education.

“We were really happy to have found UNEP to partner with us,” IMAX CEO Richard Gelfond said during the same panel discussion in March. He added that the collaboration combines UNEP’s expertise and resources with IMAX’s ability to engage a broad global audience in a unique and powerful way.

“If you say, ‘You should be interested in this – this is a problem’, then people are sceptical. But when you look at the big screen and you see it yourself, that has a different feeling”, Gelfond said. “With an IMAX film, rather than being a third-party spectator, in a way you’re a first-party participant.” ▲

movies like *The Avengers*, *Interstellar* and *The Hobbit*. IMAX is now one of the world’s iconic theatre and production companies, and a powerful partner for promoting widespread behaviour change.

“Here’s a platform of communication, of storytelling that has its roots in communicating science – and has now captured imaginations at a universal scale”, said Naysán Sahba, the Director of UNEP’s Division of Communications and

Public Information, during a panel discussion at the University of Southern California’s School of Cinematic Arts in March. “IMAX is one of the pre-eminent platforms of storytelling today – on a commercial level, on an entertainment level – and that’s the scale of change required to achieve environmental sustainability.”

The IMAX-UNEP partnership will use film to promote climate change solutions as well as actions that people can take to work towards

Karmenu Vella Go Circular

*To achieve the Sustainable
Development Goals, we must
change our linear economic model.*



Karmenu Vella

*European
Commissioner
for Environment,
Maritime Affairs and
Fisheries*

The circular economy is a tangible set of solutions – and our best chance of reaching sustainable patterns of production and consumption. The implications are enormous, not just for the way we do business, but also for the jobs of the future and for the natural world that surrounds us.

Take an unlikely example from the seas. An unusually high number of cetaceans have been stranded on Europe's beaches this year. When 13 sperm whales died on the shore near Toenning in Germany in February, post-mortems were inconclusive, but the whales all shared one remarkable feature. Their stomachs were full of plastic pieces of all sizes, from tiny nodules to a 13-metre fishing net.

Whales are astonishing creatures, with the largest brain of any animal ever known. They live in tight-knit social groups, they speak a language we cannot understand, and they can dive more than a kilometre below the waves. Their skeletons are suspended from the ceilings of museums all around the world, and if you stand below these arched structures you are filled with awe. Yet, as a species, we haven't yet learned how to stop our plastic from ending up in the ocean, where it will pollute the water column for decades to come.

This litter is one part of a far larger global problem. Our planet is warming, species are disappearing, and the resources on which we depend are becoming scarcer. If we continue down the path of "make, use, dispose", unwanted side effects are inevitable. At least one third of the world's plastic waste is neither collected nor managed, so it's no surprise that so much ends up in the seas. And it's not just

sea creatures that suffer from this approach; it's difficult to see how we could reach the Sustainable Development Goals with our current economic model. We haven't yet learned how to stop our plastic from ending up in the ocean, where it will pollute the water column for decades to come.

But we can change, as we have done before. Human creativity and innovation are boundless, and we can bring health and prosperity to billions in ways that exploit resources far less. But this requires moving away from our linear economic model to a more circular pattern, where waste becomes a thing of the past.

A circular economy would benefit our environment, but it's also smart economics. The idea is to keep a given resource circulating for as long as possible. That means designing products, processes and services to optimize the use of resources, so that when something reaches the end of its useful life, we re-use, repair, or remanufacture it for another use. Or we recycle the materials it contains and re-inject them into the economy elsewhere.

There are implications for many spheres of activity. We need to build circularity into energy, transport and construction. It means greener agriculture, combating climate change, preserving biodiversity and ecosystem services. We need different business models. And there are major implications for how we control our economies. We need to shift taxes from labour to pollution and resource use, to stop subsidizing activities that harm the environment, and to encourage industry to take a longer-term view and invest in less resource-intensive technologies.

Just two months after the historic agreement to the Sustainable Development Goals in New York, the European Commission put forward a package to enable the transition to a more circular economy. It includes measures for the whole economic spectrum, from design and manufacturing



Photo © AFP

We haven't yet learned how to stop our plastic from ending up in the ocean, where it will pollute the water column for decades to come.

*The EU will invest **€1.3 billion** specifically for environment and climate-related global public goods and challenges by 2020, including, for example, **€154 million** on forests and **€81 million** on water.*

to consumption and recycling. Food waste is an area of particular concern. Sustainable Development Goal 12 – ensuring sustainable consumption and production patterns – includes the target of halving food waste by 2030. The Commission is committed to helping citizens deliver on this target, and action will follow.

Plastics, too, will be under the microscope, with renewed efforts to boost recycling and address the challenges this vital material presents throughout its lifecycle – including, of course, significantly reducing marine litter.

Four months after the launch of the circular economy initiative, the first tangible measures include new rules for fertilizers, making it easier for manufacturers to re-use raw materials that were previously disposed of as waste, and opening up Europe's single market to organic and waste-based fertilizers. The coming months will see many more initiatives in areas such as green public procurement, eco-design, food waste, plastics, water

re-use, chemicals and innovation. These represent many small steps that will, I hope, bring us much closer to the new economy we need.

The EU remains the world's most open market and the world's largest donor of development aid. We are already supporting developing countries towards more sustainable production and consumption efforts. The EU will invest €1.3 billion specifically for environment and climate-related global public goods and challenges by 2020, including, for example, €154 million on forests and €81 million on water.

In a globalized world, we will need to transform our economies globally if the circular economy concept is to achieve its full potential. Europe cannot do it alone. Let's find ways to accelerate those positive trends and make circularity our natural way of thinking. I'm confident that this is the way forward, if we are to keep the commitment we all made last September for a global action on sustainable development. ▲

Naoko Ishii

The Opportunity of the Commons

Naoko Ishii tells Geoffrey Lean of new priorities for her organization and the world economy that conform to the Sustainable Development Goals.



Naoko Ishii

*CEO and Chairperson
of the Global
Environmental Facility*

We know about the “tragedy of the commons”. But how about the opportunity they present? The crisis facing the ultimate global commons – the very conditions that make human civilization and economic prosperity possible – confronts us with the necessity of making our societies and economies more sustainable and less inequitable

One who is determined to exploit the opportunity to achieve transformational change is Ms. Naoko Ishii, the CEO and chairperson of the Global Environment Facility (GEF). She is starting with her own organization – the world’s largest public funder of international programmes to benefit the global environment – aiming to “develop a new way of doing business” through the GEF’s annual \$1 billion disbursement to bring about “system change” And she wants to use the momentum of last year’s adoption of the Sustainable Development Goals (SDGs) and agreement in Paris on combatting climate change to make the green economy a priority for finance ministers.

Ishii herself moved from a finance ministry to take on the GEF leadership in 2012, from being Deputy Vice Minister of Finance in Japan and Executive Assistant to its Prime Minister for Global Environmental Finance. She had previously served as the World Bank’s Country Director for Sri Lanka and the Maldives and had split a 30-year career between the Japanese Government and international financial institutions. An economist, she has published many papers and two award-winning books.

When considering whether to stand in the first open election for the post – she told *Our Planet* – outside “the environmental community”. She set out to “convince

myself” of what the GEF could do, and to find a mission that would “appeal to non-environmentalists like finance ministers and investors who had not yet been converted”.

Lord Stern, the British economist and authority on climate change, persuaded her to fly to Sweden to meet Prof Johan Rockström, Executive Director of the Stockholm Resilience Centre and developer of the concept of “planetary boundaries” to the biophysical processes that determine the stability and resilience of the Earth. Rockström warns that these boundaries are being pushed to the limit: several, including the climate and the integrity of the biosphere, have already been transgressed.

“This was exactly what I was reaching for,” Ishii says, “something really convincing, which clearly tells us that total system change is needed, and is not just for a small environmental circle”.

So she advocated using the “incredible potential of the GEF” to preserve the essential global commons of the Earth’s operating system, within planetary boundaries. Once unanimously elected – partly for her “well-articulated view on the institution’s future role” – she set out to re-order its priorities.

The GEF, which celebrates its 25th anniversary this year, has so far spent some \$14.5 billion – and leveraged an additional \$75.4 billion – for nearly 4,000 projects in 167 countries. These have a high success rate: more than 80 per cent of completed projects during the last funding replenishment cycle received at least a moderately successful outcome rating, exceeding the 75 per cent international benchmark. British and Australian government assessments demonstrated that the GEF delivered value for money invested. But only about 20 per cent of the projects showed evidence of achieving benefits at a system-wide scale.

“The GEF was producing numerous, small projects in a fragmented or isolated way without in total really shifting the needle in the right direction or triggering transformational change”, says Ishii.

“Everything is connected. If one area is in deep trouble it will affect others and lead to disruption to the whole planetary system.”



Photo: © AFP

She therefore concentrated, in her first two years in office, on producing a long-term strategy – the organization’s first – to switch the focus of its operations to addressing “the drivers of environmental degradation” – rather than merely its effects – and to supporting innovative and scalable activities that “deliver the highest impacts, cost-effectively”.

She found the “planetary boundaries framework well suited to the GEF’s mission” since it showed that everything in the global commons of the Earth’s operating system is interrelated, so that different parts of it cannot be addressed in isolation. “Everything is connected”, she explains: “If one area is in deep trouble it will affect others and lead to disruption to the whole planetary system.” So the GEF is now concentrating on moving “entry points” into tackling situations “from consequences to causes” so as “to produce the maximum impact for the amount of money spent, bringing many benefits at once”.

This change of focus naturally met with some resistance because “many people are more comfortable operating in silos”. Also, some countries feared that their own natural resources might be treated as “global commons”.

But increasingly the new integrated approach has won support. One pilot project to implement the new way of thinking sets out to address the underlying causes of land degradation and food insecurity in 12 dryland African countries. By helping smallholder farmers to improve their soils, receive drought-tolerant seeds and maintain and increase the diversity of their operations, it aims both to bring 10 million hectares of productive land under more sustainable agriculture and prevent the emission of greenhouse gasses equivalent to between 10 million and 20 million metric tonnes of carbon dioxide, while also realizing benefits for biodiversity, land restoration and resilience.

Initially she recalls, there was “scepticism about whether this integrated approach would work, but it was mostly African countries who stood up one after the other and said

this is the programme we need on the ground. This gave us a huge sense of assurance.”

“Our new way of doing business is gathering some momentum.” Similarly another pilot programme – to promote urban sustainability in a more integrated way – has been enthusiastically embraced by mayors all over the world. A third pilot concentrates on holistically tackling deforestation in supply chains for soy, beef and palm oil from smallholders and plantations to consumers, and has led to farmers’ associations being formed to implement it.

“So”, says Ishii, “our new way of doing business is gathering some momentum and we feel that what we are doing makes some sense. We hope to do more of this going forward.”

In the meantime she is exploring how to catalyse international action on the global commons in the wake of the Paris Agreement and the adoption of the SDGs – which, she says, have a “huge commonality” with the planetary boundaries approach. She is planning a series of events over the next year to try to create the necessary momentum.

“Shifting to a low-carbon and resilient trajectory”, she has written “will require coordinated, integrated solutions to catalyse the transformation of three key economic systems: energy – how we power our homes, offices and industry, and move goods and people; urban – how we live in cities and build new ones; and land use – how and where we produce food, and what we eat.

“It will be a journey not just to avoid disaster, but to build lasting prosperity. Operating within the planetary boundaries is not just the only way to ensure healthy economies, but has the potential to provide much greater and better-shared growth.” That’s the opportunity of the commons. ▲

Geoffrey Lean, the editor of Our Planet, serves on the advisory committee of the GEF’s ‘Global Environmental Commons – Solutions for a Crowded Planet’ project.

*The GEF has so far spent some **\$14.5 billion** – and leveraged an additional **\$75.4 billion** – for nearly **4,000 projects** in **167 countries**.*

Guy Ryder

Transforming Work

The SDGs open up a new path for growth, the environment and social justice.



Guy Ryder

*Director-General of the
International Labour
Organization*

B The last twelve months have seen the beginning of a profoundly significant evolution in the way economic and social policies are made.

Through adopting the 2030 Agenda for Sustainable Development last September – and then in December the Paris Agreement on Climate Change – heads of state and government have shown a new commitment to integrating the three essential currents of economic development. In a shift of historic significance for the well-being of people and planet, they decided that economic growth shall now be pursued in unison with both environmental protection and social justice. The transformation to a green economy represents great opportunities for job creation.

With these agreements the international community has embraced the good governance approach to policy-making for growth and sustainable development. This new intent is most clearly illustrated in Goal 8 of the 2030 Agenda, to promote inclusive and sustainable economic growth, employment and decent work for all. Looking closer, the deliberate proximity of targets four and five of the Goal make the relationship explicit.

Target four: “{to}improve progressively ... global resource efficiency in consumption and production and endeavour to

decouple economic growth from environmental degradation”; Target five: “{to}achieve full and productive employment and decent work for all women and men...”.

These targets are therefore closely related and mutually supportive. Environmentally sustainable growth requires a transformation of consumption and production patterns. Changing consumption and production implies, and will require, a transformation of the world of work.

This new reality has many profound implications. Let us consider two of them. Firstly, the transformation to a green economy represents great opportunities for job creation. While many may lose their jobs in the movement out of polluting or high greenhouse gas-emitting activities, the transition has the potential for a net gain of up to 60 million new green jobs over the next two decades, according to the ILO’s report, “Working towards sustainable development: Opportunities for decent work and social inclusion in a green economy”. Such a positive outcome, however, will not happen without strong supportive labour market and social protection policies. The ILO’s tripartite constituents of workers, employers and governments have developed a set of Guidelines for a Just Transition towards environmentally sustainable economies and societies for all. Their main purposes are to ensure that all those affected by change will have a voice in managing the transition and to maximize the opportunities for decent work.

The Centenary Green Initiative, one of seven initiatives launched in the lead up to the ILO’s 100th anniversary in 2019, will strengthen our expertise to better to equip world policy makers, business and workers to understand the challenges and opportunities of the coming transition, and help them take up the active role they must play in managing this change and ensuring the outcome is inclusive and fair.

The transformation to a green economy represents great opportunities for job creation.



The 2030 Agenda aims to promote and protect employment, social dialogue, social protection and workers' rights.

Secondly, Agenda 2030 and the Sustainable Development Goals (SDGs) go beyond merely the green transition to call for a transition to more social justice as well. As world leaders declare in their vision statement of the 2030 Agenda: “We envisage a world in which every country enjoys sustained, inclusive and sustainable economic growth and decent work for all”. That is exactly the ILO’s Decent Work Agenda!

Developed through social and political dialogue over more than a decade, the Agenda aims to promote and protect employment, social dialogue, social protection and workers’ rights – in one holistic and mutually reinforcing package. Full employment is not only an end in itself, a source of dignity and livelihoods; it is also a means of generating demand and thus stimulating investment and growth. Social dialogue – the full and equal involvement of employers’ and workers’ representatives in policy development and decision-making – not only informs the process; it also enhances the legitimacy of decisions, both at the workplace and in society at large. Social protection systems for those who fall behind or outside the labour market not only protect against poverty and misery; they also facilitate workers’ mobility and adaptation to changing circumstances. Fundamental principles and rights at work,

as established in ILO conventions, are not only a question of dignity and human rights; they also promote empowerment and real democracy. The 2030 Agenda aims to promote and protect employment, social dialogue, social protection and workers’ rights.

The ILO is committed to supporting Member States in the achievement of Goal 8, and a number of other decent work goals. We are firm supporters of the integrated approach of the 2030 Agenda. The Goals to reduce poverty, promote equality, protect vulnerable and migrant workers, improve education, and promote peace, justice and the rule of law are very much in the domain of the ILO’s mandate. A case in point: our expertise in employment and social policy initiatives will be vital to tackle target one of Goal 13 on Climate Action, “to strengthen resilience and adaptive capacity to climate related hazards and natural disasters in all countries”.

Our almost hundred years of broad experience in skills development, fighting discrimination, strengthening social safety nets and supporting fragile economies will help us serve the overarching ambitions of the 2030 Agenda. In short – with the SDGs and the Paris Agreement in hand, and the Decent Work Agenda at our disposal – we can now jointly pursue Agenda 2030’s “Plan of Action for people, planet and prosperity”, where economic growth, environmental protection and social justice are mutually supportive and pursued together.

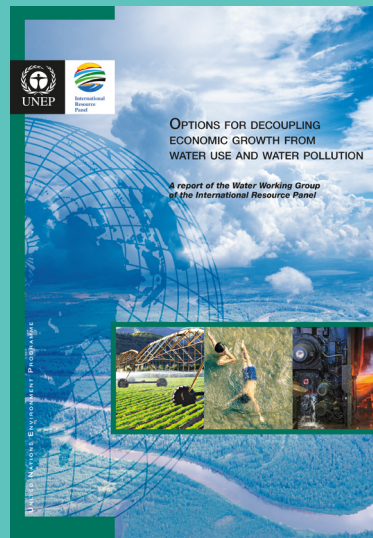
This model is not only a win-win-win approach to sustainable development. It is a precondition for peace – and a liveable planet. ▲

New UNEP Publications



Mesophotic Coral Ecosystems: A lifeboat for coral reefs?

Picture a coral reef – most people will probably imagine brightly coloured corals, fish and other animals swimming in well-lit shallow waters. In fact, the coral reefs that live close to the surface of the sea – the ones that we can swim, snorkel, or dive near and see from space – are only a small portion of the complete coral reef ecosystem. Light-dependent corals can live in much deeper water (up to a depth of 150 m in clear waters). The shallow coral reefs from the surface of the sea to 30–40 m below are more like the tip of an iceberg; they are the more visible part of an extensive coral ecosystem that reaches into depths far beyond where most people visit. These intermediate depth reefs, known as mesophotic coral ecosystems (MCEs), are the subject of this report.



Options for Decoupling Economic Growth from Water use and Water Pollution: A report of the Water Working Group of the International Resource Panel

Global trends point to a relative decoupling of water – that is, the rate of water resource use is increasing at a rate slower than that of economic growth. The Options for Decoupling Economic Growth from Water Use and Water Pollution report provides an independent assessment of technological and policy-relevant tools and approaches that can be used to achieve the decoupling of water resources from economic development while considering environmental and welfare impacts over the full life cycle. To head off a looming water resource crisis, meet global water demand, and sustain economic growth and human wellbeing, global action for decoupling water from economic growth is essential. The report puts forward a package of policy and practical responses based on decoupling strategies to help the forward looking policy-maker in achieving global aspirations for water sustainability.



Improving Efficiency in Forestry Operations and Forest Product Processing in Kenya: A Viable REDD+ Policy and Measure?

This report seeks to assess whether increased efficiency in forestry operations and forest product processing and utilization constitute viable policies and measures to reduce emissions from deforestation and forest degradation (REDD+) for the Government of Kenya, with the potential to attract public and/or private investments to enable REDD+ implementation. In particular, the report focuses on the extent to which efficiency improvements in commercial logging, sawmills, charcoal production, use of charcoal and firewood in cooking stove technology, and wood usage in industrial processes can address supply deficiency in the forest sector, reduce pressures on forests, and ultimately reduce or eliminate net forest carbon emissions.

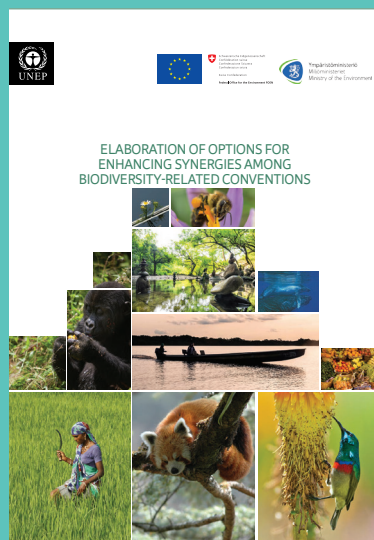


UNEP Annual Report 2015

Available in English, French, Spanish, Arabic, Chinese and Russian

“The year 2015 will be remembered as a turning point for the environmental agenda,” UNEP Executive Director Achim Steiner says. “The international community set pivotal tracks for sustainability by adopting the 2030 Agenda for Sustainable Development, the Paris Agreement on climate change, the Sendai Framework for Disaster Risk Reduction and the Addis Ababa Action Agenda on financing for development – demonstrating a unity of purpose that places us more firmly on the path to a sustainable future,” he adds. UNEP launched its 2015 Annual Report with a number of highlights, including the organization’s specific contributions to COP21 and the Paris Agreement.

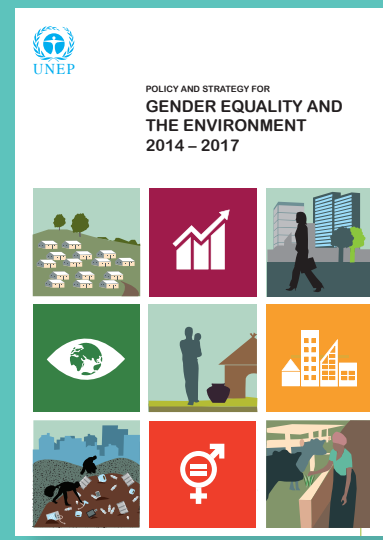
Visit <http://www.unep.org/annualreport/> and download the report in the UN language of your choice.



Elaboration of Options Enhancing Synergies Among Biodiversity-related Conventions

UNEP, through a multi-stakeholder, consultative process, developed a series of options to enhance cooperation and synergies among the biodiversity related multilateral environmental agreements and conventions. Such action has been called for through UNEP Governing Council Decisions, Rio + 20 outcomes and the Governing Bodies of various conventions.

The UNEP ‘Options Paper on enhancing synergies and cooperation among the biodiversity related multilateral environmental agreements’ calls for actions at global, regional and national levels by providing options on several themes such as national biodiversity strategies and action plans, science-policy interface, reporting and indicators, institutional collaboration, capacity building, information management and funding and resource efficiency.



Gender Equality and the Environment 2014 – 2017

This document outlines the linkages between gender equality and the environment, the impacts of gender inequality, how unequal participation in policy- and decision-making stymie effective action on tackling environmental challenges, and opportunities to unlock the untapped potential of both men and women in confronting these challenges. The document will also describe how UNEP, in accordance with its Policy and Strategy, is endeavouring to redress this gender imbalance. It describes how changes in its internal organizational culture, work and engagement with partners and stakeholders will help UNEP to achieve genuine gender equality in the sphere of the environment and sustainable development.

All UNEP publications are available online at:
www.unep.org/publications

Rachel Kyte

Refashioning the Future

We will leave no one behind as we decarbonize the economy.



Rachel Kyte

CEO and Special Representative of the UN Secretary-General, Sustainable Energy for All

2015 marked a remarkable moment in governance for sustainable development. The world gained a set of universally agreed goals, an agreement on how they would be paid for, and another agreement, again universal, that we would manage the global economy so as to limit warming to well below 2°C.

It seemed that, for a moment, we heeded the voices of those who don't have access to energy, water, food, health care or education – and listened to the natural systems with which our lives are entwined as their distress becomes more and more apparent.

Now comes the hard part. Community by community, city by city, country by country, we now need to refashion the future so that we put meaning to the ambitions of low-carbon development and to our belief that, in so doing, we should leave no one behind.

It is the 'All' in Sustainable Energy for All that motivates us the most.

It is the 'All' in Sustainable Energy for All that motivates us the most. We have little time. Our ambition in the Paris Agreement means that we need emissions to peak earlier than currently foreseen in the Intended Nationally Determined Contributions pledged by governments. And the greater focus

put on adaptation in Paris, and on the social contract that the Sustainable Development Goals represent, is predicated on development working for everyone.

The Sustainable Development Goal on energy is what we call a “front-loaded” one. By 2024 – the end of the decade of sustainable energy – we need to have closed the energy access gap if we are to be on track to meet the goals of gender equality, health and education. And of course the energy goal goes hand-in-hand with those on food and water security. At SE4All, it is the “All” in Sustainable Energy for All that motivates us the most. As the price of renewable energy technologies plummets, it is possible to imagine that we can end energy poverty, sustainably closing the energy access gap. The often-cited last mile can actually be the first one using decentralized business models and new public financing and investor interest.

Improving grids and building regional power pools will also remain essential. The flip side of the renewable revolution is a no less critical and necessary transformation in energy productivity. The new generation of super-efficient devices and appliances offers access using much less power than before. In the developed world, in growing cities and growing economies, energy productivity – the savings and energy source so often left on the table – not only offers future competitiveness, but a pathway away from the risk of stranded fossil fuel assets and towards clean air.

We have never managed an energy transition like this before. It will require leadership. It will require partnerships, some not yet even imagined. And, before those partnerships come to be, it will require conversations – so that we don't leave people behind and we deliver our promises with processes that engage those who need to benefit.

This transition will require unlocking finance so it flows more predictably to where it is needed urgently: time is not our friend. This will mean smart and steady regulation and



Photo: © AFP

Community by community, city by city, country by country, we now need to refashion the future.

administration, including strong public management and transparent institutions. Catalytic and coordinated use of public development and climate finance will also be essential. Community by community, city by city, country by country, we now need to refashion the future.

At SE4All we are focused on supporting the many, many countries, city authorities, businesses, financial institutions, multilateral and bilateral development financiers, NGOs, community-led businesses and individuals who have rallied behind the just and prosperous world that the simple notion of sustainable energy for all entails. We are committed to helping them all go further, faster. We will empower leadership, broker conversations and partnerships and unlock finance. We will do this by marshalling the evidence and benchmarking our progress. We will help celebrate success and interrogate our failures to make sure we reach the goal. We will amplify the voices that need to be heard and we will tell stories.

Stories, yes stories. For many decision makers – overwhelmed by priorities, lacking managerial bandwidth, resource constrained, with interest groups beating at the door – there is a Monday morning issue. What to do first and how? With electoral cycles short and media attention constant, delivery is everything.

How can they know that it is possible to bring a community from the edge of conflict with a mini-grid that requires a small subsidy, but nothing compared to the constant payments for polluting kerosene paid through middlemen? How do they understand the success of neighboring countries in bidding out public-private partnerships and receiving renewable energy bids at prices well below the competing fossil fuels? How do they know that another country tweaked regulation and unleashed geothermal exploration? How do they understand that cities with whom they are competing for investment and jobs can claim much cleaner air than they can? How can they know that women, freed from the time burden of searching for biofuels on the edge of displaced persons camps, can be safe from rape and abuse thanks to installing a solar panel, and that there are those who will pay the upfront costs?

All of these things are already happening. We need to replicate and accelerate them, spreading examples of good practice, as we move towards a world with sustainable energy for all. ▲

Marco Lambertini

Protecting People Through Nature

Effectively implementing the SDGs will bring about a great social, economic and environmental transition.



Marco Lambertini

Director General of WWF International

For too long we have been told that conserving the environment comes at the expense of economic opportunities for people. But the world's new commitment to sustainable development clearly shows that humanity is waking up to the fact that social, economic and environmental agendas are intrinsically linked.

The 2030 Agenda, if implemented effectively, should make the change by including initiatives to protect biodiversity, the ocean, freshwater and forests while promoting sustainability in cities and markets. Putting ecosystems at the centre of development planning and managing natural resources in fair and accountable ways will bring economic and social benefits and ensure food, water and energy security for all. Most of the economic output of people living in extreme poverty is derived from nature through farming, fishing and herding, yet the environment is under unprecedented strain from climate change and over-exploitation.

In 2015, we made great progress in creating a blueprint for a sustainable society, as the world came together around the Sustainable Development Goals. This extraordinary universal integrated framework where economy, social development and environment come together for the first time is the result of decades of advocacy and boots-on-the-ground conservation and social development work. Now this ambitious agenda needs translating into green finance, infrastructure and development interventions.

Protecting natural areas and ecosystems is not anti-development – a lesson that is borne out by on-the-ground

experience. Chitwan National Park in Nepal provides one telling example. When the park was established as a World Heritage site in 1984, communities were resettled and their access rights were restricted, creating significant hardship for people who relied on forest resources to live. Deforestation actually increased during this time, and conflict between the park and local people was high until a large buffer zone around the park was established in 1996.

The buffer zone is home to over 300,000 people, many who lead subsistence livelihoods. Now park officials and residents work together to manage natural resources, creating a sense of ownership and responsibility for conservation, which has led to better protection of the park and stabilization of tiger and rhinoceros numbers. This has attracted more tourists, and communities have been able to use their share of the revenue for a number of projects, from building roads and schools to securing drinking water supplies. Shockingly, almost half of all natural World Heritage sites are threatened by harmful industrial activities.

WWF's recent report *Protecting People Through Nature* shows that conserving large areas of habitat, like natural World Heritage sites, increases resilience to natural disasters, supports livelihoods, and provides communities with vital protection against the impacts of climate change.

Shockingly, almost half of all natural World Heritage sites are threatened by harmful industrial activities and operations, such as oil and gas exploration and extraction, mining, illegal logging, construction of large-scale infrastructure, overfishing, and unsustainable water use. This is indicative of the more general growing pressure on natural places and ecosystems.

We should all be alarmed. More than 11 million people – many belonging to some of the world's most vulnerable and marginalized communities – live in and near World Heritage sites and depend on them for food, water, medicine and jobs. That's more than the entire population of Portugal.



Photo: © AFP

Shockingly, almost half of all natural World Heritage sites are threatened by harmful industrial activities.

More than 20 per cent of all natural World Heritage sites are marine-based. Overfishing mainly caused by industrial fishing practices, to take one example, can be catastrophic for marine ecosystems and puts the livelihoods of subsistence fishing communities at risk. In Mauritania, the Imraguen people living in Banc d'Arguin National Park have no choice but to seek alternative food sources as commercial fishing decimates fish stocks and distorts the ecological balance.

However, it is possible to remove the threats. The Tubbataha Reefs Natural Park in the Philippines, for instance, were threatened by overfishing. The government declared a no-take zone and stepped up its efforts to prosecute illegal fishing. As a result, fish numbers rebounded, quadrupling fish stocks and catches for local fisheries; the preservation of the site's marine ecosystems also led to increased tourism and income for local people. Effective management, broad stakeholder engagement, and a clear vision for sustainable development have helped secure the long-term prosperity of the reefs and the livelihoods of local communities.

The well-being of such communities, including indigenous peoples, is being challenged by many of the same forces that threaten nature, such as pressures from extractive industries and infrastructure development. These activities compromise the ability of these places to provide the economic and non-economic benefits that are so fundamental to local populations, as well as to our global community.

Despite the obvious benefits of these natural areas, we still haven't managed to decouple economic development from environmental degradation. This is the deepest challenge and the greatest imperative of our time, and it will require tough choices. Despite the obvious benefits of natural areas, we still haven't managed to decouple economic development from environmental degradation.

Belize is one place that those tough choices will need to be made. The Belize barrier reef is under threat from overfishing, agricultural run-off, unsustainable coastal construction and oil exploration, all made worse by the impact of climate change. More than 50 per cent of the country's population, nearly 200,000 people, is supported by incomes generated through tourism and fisheries. The government is at a crossroads. By investing in development opportunities like sustainable tourism, it could secure the long-term health of the reef, enabling it to continue to support fisheries, provide coastal protection and generate revenues for current and future generations.

Governments, civil society and the private sector need to work together to achieve ecologically sound development that empowers local people, supports responsible business, and provides long-term sustainable economic growth. If we work together to secure the future for the environment, we will also take that first critical step towards true, long-term sustainable development.

This generation faces the daunting challenge but great opportunity to build a sustainable future for all and move toward a society that is less destructive and more equal. Momentum is on our side. The pace and scale of this great transition will determine success or failure.

The Sustainable Development Goals offer a fabulous framework. Now we need to come together to deliver it. We can and we must. Together, because together...everything is possible. ▲

Environmental Champion Leonardo DiCaprio

Humanity's genius can still protect the climate, but we need to tap it fast.

We have reached an essential turning point in our journey to save the planet as we know it. More than 175 global leaders have now signed onto the historic climate agreement reached in Paris last December. Having been at the UN for the signing event on April 22nd, I am filled with hope – but I'm also fighting a growing sense of dread.

Last year was the warmest on record and this year is on track to be even warmer. Scientific facts emerge almost daily showing that, unless we speed up our climate solutions, it won't be possible to reach the Paris goal of limiting warming to well below 2° C above pre-Industrial levels, let alone aiming for a limit of 1.5° C and net zero emissions by mid-century.

I have been travelling all over the world for the last two years documenting how this crisis is changing the natural balance of our planet. I have witnessed cities like Beijing choked by industrial pollution, unprecedented droughts in California, and sea level rise flooding the streets of Miami.

In Greenland and in the Arctic I was astonished to see that ancient glaciers are rapidly disappearing well ahead of scientific predictions. This melting is reducing the reflective white shield of ice and snow that would otherwise send a good deal of incoming solar radiation back into space. That, in turn,

We simply can't afford to let things get so far out of control, especially because the most vulnerable among us cannot wait until 2030 for climate emissions to peak.



Photo: © Reuters



Photo: © Paul Hilton

sets up a very dangerous feedback loop – thawing permafrost releases methane, a super pollutant that is 28 times more potent as a heat-trapping gas than carbon dioxide, exacerbating the warming effect even further.

We simply can't afford to let things get so far out of control, especially because the most vulnerable among us cannot wait until 2030 for climate emissions to peak and start declining. For instance, in India I met farmers whose crops have literally been washed away by historic flooding, making it clear that we are running out of time and that speed must be our new mantra. But what can we do to achieve our goals faster?

We already know how to manage carbon pollution on the “front end” – don't burn the fossil fuels in the first place. Leave them in the ground and move our economies to a clean energy future as fast as possible, tapping the unlimited power of the sun, wind, and tides. Professor Mark Jacobson and his team at Stanford, for example, have shown that the world can move to 100% renewables by 2050, creating millions of jobs and saving thousands of lives in the process.

But as long as anyone, anywhere, is still using fossil fuels, we must also accelerate solutions for the carbon pollution after it's emitted from our vehicles and power plants. Strategies for managing carbon dioxide that's in the atmosphere start with the simple natural

process of photosynthesis, which is already quickly and cheaply removing billions of tons of carbon from the air each year. On my travels however, I saw ancient boreal forests in Canada that have been clearcut and rainforests in Indonesia that have been incinerated. We can stop these practices and stop destroying our grasslands, wetlands and mangrove forests and do more restoration and expansion of all of those ecosystems. This will not only remove carbon from the atmosphere, but will help protect our coasts to adapt to the inevitable sea-level rise and more powerful storm surges too.

Fortunately, many people already understand this and are taking action, which should be a cause for hope. Citizens in China have planted 66 billion trees since 1978, expanding their country's “Green Wall” dramatically. The late Wangari Maathai of Kenya started the Greenbelt Movement to plant a million trees in Kenya and spread her movement around the world. She won the Nobel Peace Prize for her work, which her daughter Wangira is carrying on through her GreenbeltMovement.org, proving that even one person can make a major difference.

Of course we can't afford to just wait to re-grow forests. In addition to the army of tree planters around the world, there is another army of pioneers in “bio-char”, using a process that goes back to the pre-Columbian Indians of Brazil, who burned their refuse with low

oxygen by covering it with dirt, creating a fine-grained charcoal product called “terra preta”, or dark earth, that enriched their soils while putting carbon back into long-term storage. There are also new technologies for capturing carbon dioxide from smokestacks and turning it into cement and aggregate for construction, through a mineralization process that mimics the way marine corals pull carbon dioxide from the sea to build their skeletons.

The good news about these strategies is that the economic potential for capturing carbon dioxide and turning it into commercial products is vast, but it's just getting started. Richard Branson and his Virgin group have offered a prize of \$25 million for the best technology to capture carbon dioxide and store it safely. Other inventors are working on artificial trees, creating carbon nanofibers from atmospheric carbon dioxide, and feeding carbon dioxide to algae to make biofuel.

All of this leaves me with a feeling of cautious optimism. There is so much genius in the world, in government, universities, technology companies, non-profits, and ordinary citizens. We just need to tap it, and tap it fast, to accelerate every possible solution to climate change and avoid the worst outcomes of a rapidly warming planet. Reversing the course of climate change will not be easy, but we can do it if we put our collective genius to work in the service of humanity before it's too late. ▲



**WORLD
ENVIRONMENT
DAY**



The illegal trade in wildlife is driving species to the brink of extinction while posing broader environmental, economic, development and security risks. But this is not inevitable. This year, World Environment Day challenges all of us to learn about our planet's precious biodiversity and commit to zero tolerance for wildlife crime.

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