

our planet

The magazine of the United Nations Environment Programme — May 2010



SERETSE KHAMA IAN KHAMA
OUR VERY ESSENCE

ELIZABETH MARUMA MREMA
CONSERVING KINGS

JAMES P. LEAPE
SPOTLIGHT ON SOLUTIONS

SIMON N. STUART
TIME TO THINK BIG



BIODIVERSITY

Our Life



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

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Shed scorpion skin. The exoskeleton of arthropods protects and supports the animal's internal organs and musculature. Periodically, arthropods must go through the process of ecdysis, molting their exoskeleton to accommodate growth of the body.

UNEP promotes
environmentally sound practices
globally and in its own activities.
This magazine is printed on 100% recycled
paper, using vegetable-based inks and other
eco-friendly practices. Our distribution policy
aims to reduce UNEP's carbon footprint.



IAN KHAMA : Our very essence PAGE 6

Biodiversity defines Botswana, and is fundamental to its economy, so the country takes care of it.



ELINOR OSTROM AND HARINI NAGENDRA : Be diverse PAGE 10

Institutional as well as biological diversity should be protected.



ELIZABETH MARUMA MREMA : Conserving kings PAGE 14

Shark populations are collapsing worldwide, but there is new hope for conserving them.



GEORGINA LANGDALE : Nature of value PAGE 18

Making natural capital economically visible is crucial in halting biodiversity loss.



JAMES P. LEAPE : Spotlight on Solutions PAGE 20

This year provides big opportunities for galvanising action on biodiversity.



SIMON N. STUART : Time to think big PAGE 22

What is needed to prevent the 2010 International Year of Biodiversity being just a publicity stunt.



JANET RANGANATHAN and POLLY GHAZI : Shattering glass walls PAGE 24

The environment and development communities should come together to protect ecosystems and combat poverty.



DENNIS GARRITY : Hope is evergreen PAGE 28

Farming with trees produces higher yields, better soils and greater biodiversity.



DARRYL D'MONTE : Where's the story? PAGE 32

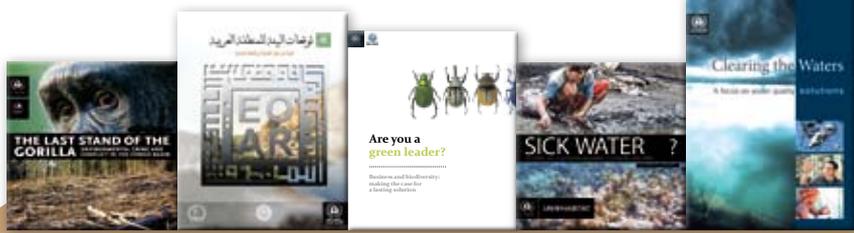
Journalists should write more, and better, about biodiversity.

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books

www.unep.org/publications



The Last Stand of the Gorilla – Environmental Crime and Conflict in the Congo Basin

A UNEP rapid response assessment report, this publication exposes the escalating threat to gorillas across the Greater Congo Basin from poaching for bushmeat, habitat loss and natural epidemics such as ebola. Alarming, the report indicates that militias are behind much of the illegal bushmeat trade, and estimates of the animal's range are significantly less than in earlier studies. It presents a series of recommendations for addressing threats to gorillas in the region.

The Environment Outlook for the Arab Region: Environment for Development and Human Well-being

The Environment Outlook for the Arab Region is the first official, comprehensive, and integrated assessment of the state of the environment in the Arab region. It is a credible, scientific assessment that provides a base for policy formulation in the region. The report was prepared in response to a decision by the Council of Arab Ministers Responsible for the Environment in its 17th session, held at the headquarters of the Secretariat-General of the League of Arab States, in Cairo, Egypt, in December 2005.

Policies for Sustainable Governance of Global Ecosystem Services

Edited by Janet Ranganathan, Mohan Munasinghe and Frances Irwin (Edward Elgar Publishing)

This book provides a compilation of policy, institutional and governance recommendations from 18 leading international experts, to respond to the Millennium Ecosystem Assessment (MEA) finding that over the last 50 years humans have degraded ecosystem services at a faster rate and on a larger scale than at any time in human history. The contributors review the MEA findings and define a global action agenda for governments, businesses, international organizations, civil society and research organizations.

Are you a Green Leader? Business and Biodiversity: Making the Case for a Lasting Solution

Aimed at businesses and organizations that work with the private sector, this publication explores the link between biodiversity and business, highlights best practices and encourages businesses to engage with biodiversity issues. It provides a global snapshot of major biodiversity impacts, efforts and future challenges in a number of key industry sectors – mining, energy, agrifoods and fisheries, construction and forestry, tourism, pharmaceuticals, cosmetics, fashion and finance – that depend or have an impact on biodiversity and ecosystem services.

Biodiversity and the Law Intellectual Property, Biotechnology and Traditional Knowledge

Edited By Charles R. McManis (Earthscan)

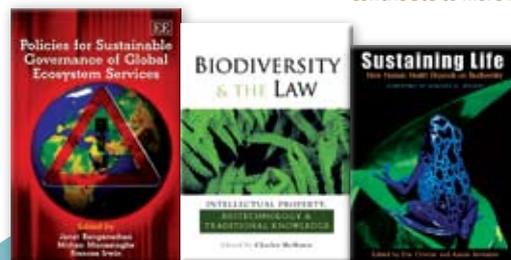
This book addresses the question: how do we promote global economic development while simultaneously preserving local biological and cultural diversity? Its 50 contributors examine biodiversity, its loss and what is to be done; whether biotechnology is part of the problem or part of the solution; traditional knowledge and how, if at all, it should be protected; and the practical lessons learned in relation to ethnobotany and bioprospecting.

Clearing the Waters: A Focus on Water Quality Solutions

This publication conveys the urgency of controlling pollution and preserving water quality around the world. Marking an international change of focus from water quantity to the importance of water quality for satisfying human and environmental needs, it presents an overview of water quality challenges and issues and uses case studies to illustrate both problems and solutions. The book emphasizes water quality solutions and strategies for water quality institutions, pollution prevention, water treatment and ecological restoration. Key findings and policy recommendations are provided.

Sick water? The central role of wastewater management in sustainable development

This publication addresses the challenges posed by illegal and unregulated wastewater, which present a global threat to human health and well-being. The report identifies the threats to human and ecological health and the consequences of inaction on this issue. It also outlines appropriate policy and management responses over the short term and longer term that can trigger employment opportunities, support livelihoods, boost public and ecosystem health and contribute to more intelligent water management.



Sustaining life: how human health depends on biodiversity

Edited by Eric Chivian and Aaron Bernstein (Oxford University Press USA)

Sustaining Life examines the full range of potential threats that biodiversity loss poses to human health. Written by Harvard Medical School physicians, it is a comprehensive view of how human medicines, biomedical research, the emergence and spread of infectious diseases, and the production of food, both on land and in the oceans, depend on biodiversity. Case studies illustrate the contributions that a wide range of organisms have already made to human medicine, and those they are expected to make if we do not drive them to extinction.



reflections

ACHIM STEINER

UN Under-Secretary-General and Executive Director, UNEP

Climate change has been described as the biggest market failure of all time, but loss of biodiversity and of nature's economically important services must surely be running it close, if not equalling it. Year in and year out, the world economy may be losing \$2.5 to \$4.5 trillion-worth of natural capital as a result of deforestation alone, quite apart from the cost of the losses of other key ecosystems.

Decisive action must be taken to reverse these declines or the bill will continue to climb. And, at the same time, the chance will disappear of fully achieving the poverty-related Millennium Development Goals and of ushering in a sustainable 21st century for six billion people, rising to nine billion by 2050.

Governments mobilized stimulus packages worth over \$3 trillion, seemingly overnight, in response to the recent financial and economic crisis. Where are the same stimulus and the same coordinated international political response to address the crisis facing our natural and nature-based assets?

The ground breaking Economics of Ecosystems and Biodiversity (TEEB), hosted by UNEP, attempts to crystallize and illuminate new answers and assist towards decisive choices. Its landmark report is to be published to inform governments' decisions in advance of the Convention on Biological Diversity's meeting in Nagoya, Japan, later this year. But many inspiring and potentially transformational facts and figures are already emerging, as are more creative management options.

Let me cite one example that underlines TEEB's framing of the debate. Subsidized commercial shrimp farms can generate returns of around \$1,220 per hectare by clearing mangrove forests. But TEEB shows that this does not take into account costs to local communities — linked with losses of wood and non-wood forest products, fisheries and coastal protection services — totalling over \$12,000 a hectare. And the profit to commercial operators similarly neglects the costs to society of rehabilitating the abandoned sites after five years of exploitation — which is estimated at over \$9,000 a hectare.

Some countries are rising to the challenge, at least in part.

- Planting and protecting nearly 12,000 hectares of mangroves in Vietnam costs just over \$1 million but saves annual expenditures on dyke maintenance of well over \$7 million.
- One in 40 jobs in Europe is now linked with environment and ecosystem services ranging from clean tech 'eco-industries' to organic agriculture, sustainable forestry and eco-tourism.
- Investment in protecting Guatemala's Maya Biosphere Reserve generates an annual income of close to \$50 million a year, and has created 7,000 jobs and boosted local family incomes.

World Environment Day, mainly hosted this year by the country and people of Rwanda, marks a moment in 2010 — the UN International Year of Biodiversity — to re-engage the biodiversity challenge. The public, politicians and business leaders must reconnect with the fundamentals that really drive the global economy, livelihoods and ultimately all our life support systems.

Next time you buy honey from the supermarket or corner shop, reflect on the fact that bees and other pollinators provide services worth perhaps \$90 billion a year. Bread and jam would not get to the table were it not for the worms, beetles and bugs that make soils fertile and the multi-trillion dollar agricultural industry possible. The list of similar services is long and legion.

Using smart market mechanisms and bringing visibility to the true value of nature are perhaps the 'missing links' in progressing towards sustainable management. Unless we give economic value to biodiversity — and to ecosystems and the services they provide — we are unlikely to turn the tide in a world fascinated by GDP, stock markets and other measures that define contemporary notions of progress.

Biodiversity is, of course, far more than dollars and cents, Yen, Euros, Yuan or Kenyan shillings — but the economic case for sustainable management of our natural capital needs to be made if we are to design a path away from degradation, destruction and extinction. As TEEB underlines, the economic case is overwhelming and compelling. It is a powerful ally and complement to the traditional case for conservation, centered on stewardship and on respecting the spiritual dimensions of the living world.



IAN KHAMA
.....
President of
the Republic of Botswana

OUR VERY ESSENCE





It's safe to say that when you say the word "Africa" to most people, the images that appear in their minds are something like Botswana.

They will picture waterways alive with blazing-pink flamingos, lazy hippos, ferocious crocodiles and millions of other birds, insects, plants and fish; baking savannah where herds of elephants rest under shady trees and lions, cheetah and wild dogs stalk nimble antelope and zebra; a place where the extraordinary is normal and where, for millennia, people have been learning the secrets of plants and animals that surround them.

Biodiversity is not something that we merely think about in Botswana — it is something that defines our nation and our people, something that gives us our traditions and our history, and a fundamental part of our economy.

The biological diversity of Botswana — which includes us, its people — is the beating heart of our nation, and our deep-rooted understanding of this is part of what makes Botswana an African success story. We respect and care for our resources, and our desire to sustain and maintain the environment that has nurtured us all helps to inform our wider set of sustainable policies. This means that we do not allow rapacious exploitation of our land and its resources and this has helped us to create a healthy economy, a peaceful and effective democracy, good standards of living and a stable society.

Protection of our biodiversity is not some vague cause that we pay lip service to — it is our patriotic duty and our duty to our children. In protecting our biodiversity, we protect the very essence of Botswana and its people. Indeed, the use of biological resources in Botswana is as ancient as human antiquity.

The health of a country's biodiversity is often an indicator of the health of its society. To maintain biological diversity one needs good governance and a holistic and long-term vision for the nation. In Botswana this is what we endeavour to do, and as a result of our pragmatic approach — and unlike many developing nations with an abundance of mineral wealth — we have not fallen prey to the so called "resource curse" where potential wealth generates unrest, inequality, poverty and suffering.

Instead, our diamonds and other minerals — which are, of course, a finite resource — have assisted us in setting in place policies that will help us to continue to thrive even if the revenue from mining diminishes. These policies, naturally, have the protection of our natural and renewable assets — our biological diversity — at their heart.

Tourism is an important and growing part of our national income — accounting directly or indirectly for 10 per cent of our GDP — and this depends on ensuring that Botswana remains beautiful and exciting, which means conserving our stunning wildlife. Agriculture

is still the primary source of income for 80 per cent of our people and, by working to ensure the well-being of our land and biodiversity, we help to reduce the impact of the biggest threat to Botswana people who depend on agriculture — climate change — causing drought and desertification.

In 2004, as signatories to the Convention on Biological Diversity (CBD) we made a commitment to work to ensure the protection of our nation's biodiversity. Our vision was that Botswana should be:

“A nation in balance with nature, with fair access to biological resources, where the benefits deriving from the use of these resources are shared equitably for the benefit and livelihoods of current and future generations, and where all citizens recognize and understand the importance of maintaining Botswana's biological heritage and related knowledge and their role in the conservation and sustainable use of Botswana's biodiversity.”

In the CBD meeting that will take place in Nagoya, Japan later this year we are preparing to show that we have followed a path that has helped ensure that we have realised

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represent income for the nation now, but there are untapped and unknown benefits in our endemic wildlife that stand to provide the world with new medicines and other new technologies in the future. It is vital that the parties at Nagoya recognize Botswana's right to benefit fairly from the exploitation of these resources — as well as the rights of other nations to benefit from their biological resources.

Botswana's plants and animals are as much of a part of this nation as its people, and it is vital that this

the opening decade of the 21st century has taught us anything it is that local problems often require global action.

The conservation of Botswana's natural splendour requires international action on climate change; it needs effective legislation to ensure that where freshwater ecosystems cross national boundaries, the rights of all nations served by these waterways are considered carefully; and it needs pragmatic regulations in place that allow nations to use their wild resources prudently when it can be shown that their stewardship of these resources is effective.

Because we need to address these issues internationally, for more than a decade I have been a member of the board of directors of Conservation International, a major international environmental organization: this helps me to keep my finger on the pulse of international issues that have a bearing on the biodiversity and future of Botswana.

The crux is this. Botswana's people's needs are indivisible from the needs of our land. Botswana is our home, our provider and our pride. In the words of our national anthem:

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