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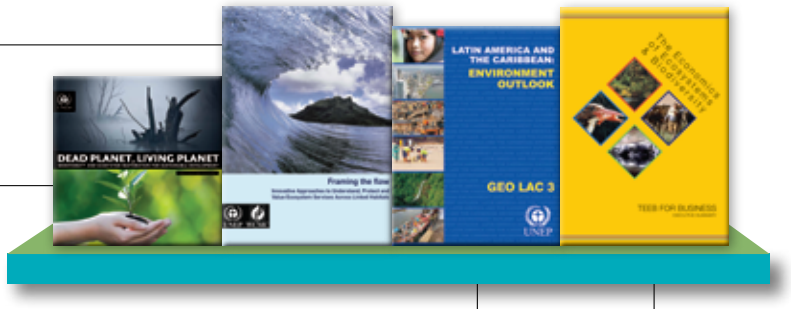
Framing the Flow: Innovative Approaches to Understand, Protect and Value Ecosystem Services Across Linked Habitats

Framing the Flow presents a framework for an understanding of the connectivity between tropical coastal ecosystems (including mangroves, seagrasses, estuaries and coral reefs) across environmental, economic, social and management contexts. It presents innovative approaches to better understand, protect and value ecosystem services across linked habitats, and to allow informed trade-offs between different land use management decisions and consequent changes in different ecosystem services.

Dead Planet, Living Planet: Biodiversity and Ecosystem Restoration for Sustainable Development

Ecosystems deliver essential services to human kind estimated to be worth $72 trillion a year, yet nearly two thirds of the planet's ecosystems are considered to be degraded. This book documents over 30 successful case studies referencing thousands of restoration projects ranging from forests and rainforests to rivers and coasts. It confirms that restoration is not only possible but can prove highly profitable in terms of public savings, returns and the broad objectives of overcoming poverty and achieving sustainability.



Environment Outlook for Latin America and the Caribbean No.3 (GEO LAC 3) 2009 Edition

GEO-LAC 3 provides an impartial, scientifically sound analysis of the state of the environment. It examines major environmental impacts and drivers and presents options for action for decision makers and other regional actors concerned with the state of the environment in Latin America and the Caribbean. It is part of UNEP's GEO framework — a series of globally integrated environmental assessment reports aimed at providing comprehensive, scientifically credible and policy-relevant assessments on the interaction between environment and society.

The Economics of Ecosystems and Biodiversity (TEEB) for Business

TEEB is a study focusing on the global economic benefits of biological diversity, the costs of the loss of biodiversity and the failure to take protective measures versus the costs of effective conservation. TEEB makes the case for integrating the economics of biodiversity and ecosystem services into decision making. The TEEB for Business report reviews key indicators and drivers of biodiversity loss and ecosystem decline, and shows how this presents both risks and opportunities for business.

Global Biodiversity Outlook 3 (GBO-3)

Convention on Biological Diversity

The launch of *GBO-3* is one of the UN principal milestones of the 2010 International Year of Biodiversity. It is a vital tool to inform decision makers and the wider public about the state of biodiversity in 2010, the implications of current trends and our options for the future. The report is based on scientific assessments, national reports submitted by governments and a study on future scenarios for biodiversity. Its conclusion will be central to negotiations by world governments at the Convention on Biological Diversity Conference in October 2010.

World Mangrove Atlas

Mark Spalding, Mami Kainuma and Lorna Collins (Earthscan)

Mangrove forests have critical importance economically and ecologically, however, the global loss of these ecosystems continues. This atlas provides the first truly global assessment of the state of the world's mangroves. Written by a leading expert on mangroves with support from top international researchers and conservation organizations, this atlas contains 60 full-page maps, hundreds of photographs and illustrations and a comprehensive country-by-country assessment of mangroves.

A Global Green New Deal – Rethinking the Economic Recovery

Edward B. Barbier (UNEP and Cambridge University Press)

A Global Green New Deal presents an economic policy strategy for ensuring a more economically and environmentally sustainable world economic recovery. It acknowledges that reviving growth, ensuring financial stability and creating jobs have to be essential objectives. But the book also makes the point that unless the new policy initiatives also address other global challenges such as reducing carbon dependency, protecting ecosystems and water resources and alleviating poverty, their impact on averting future crises will be short-lived.

The Blue Economy – 10 years, 100 innovations, 100 million jobs

Gunter Pauli (Paradigm Publications)

The Blue Economy is built on one hundred nature-inspired technologies that could affect the economies of the world, while sustainably providing basic human needs. The key to the business model presented in this book is they way in which nature-inspired innovations are integrated with real world economies as ways to provide sustainable benefits to the commons. Each of the fourteen chapters investigates an aspect of the world's economies and offers a series of innovations capable of making aspects of those economies sustainable.

reflections

ACHIM STEINER

UN Under-Secretary-General and Executive Director, UNEP

The year 2010 — the United Nations International Year of Biodiversity — has seen a remarkable re-focusing of global attention on the accelerating degradation of the planet's ecological infrastructure. It has also witnessed growing awareness of the enormous opportunities for lives and livelihoods — including for the poor — in managing it far more intelligently.

Until recently, biodiversity and ecosystems were seen as poor relations of climate change. Now the challenges and opportunities presented by the fate of the Earth's life support systems are recognized as being just as important. This has been driven by new science and by new policy and investment choices by Governments, including giving a green light to reduced emissions from deforestation and forest degradation (REDD) initiatives.

The Economics of Ecosystems and Biodiversity study (TEEB), established by the G8 and developing country environment ministers, has done much to bring about this sea change. Mandated to develop an independent, global study on the economics of biodiversity loss, it is hosted by the United Nations Environment Programme with financial support from several Governments and other partners.

As a result, Governments gathering in Nagoya, Japan, in October for the crucial meeting of the Convention on Biological Diversity (CBD) have before them the most comprehensive and compelling assessment of the vast economic losses being sustained from mismanagement of the planet's natural assets. They have the opportunity to start putting the economics of nature firmly in the centre of national accounting, thus maximizing and widening the benefits of development choices.

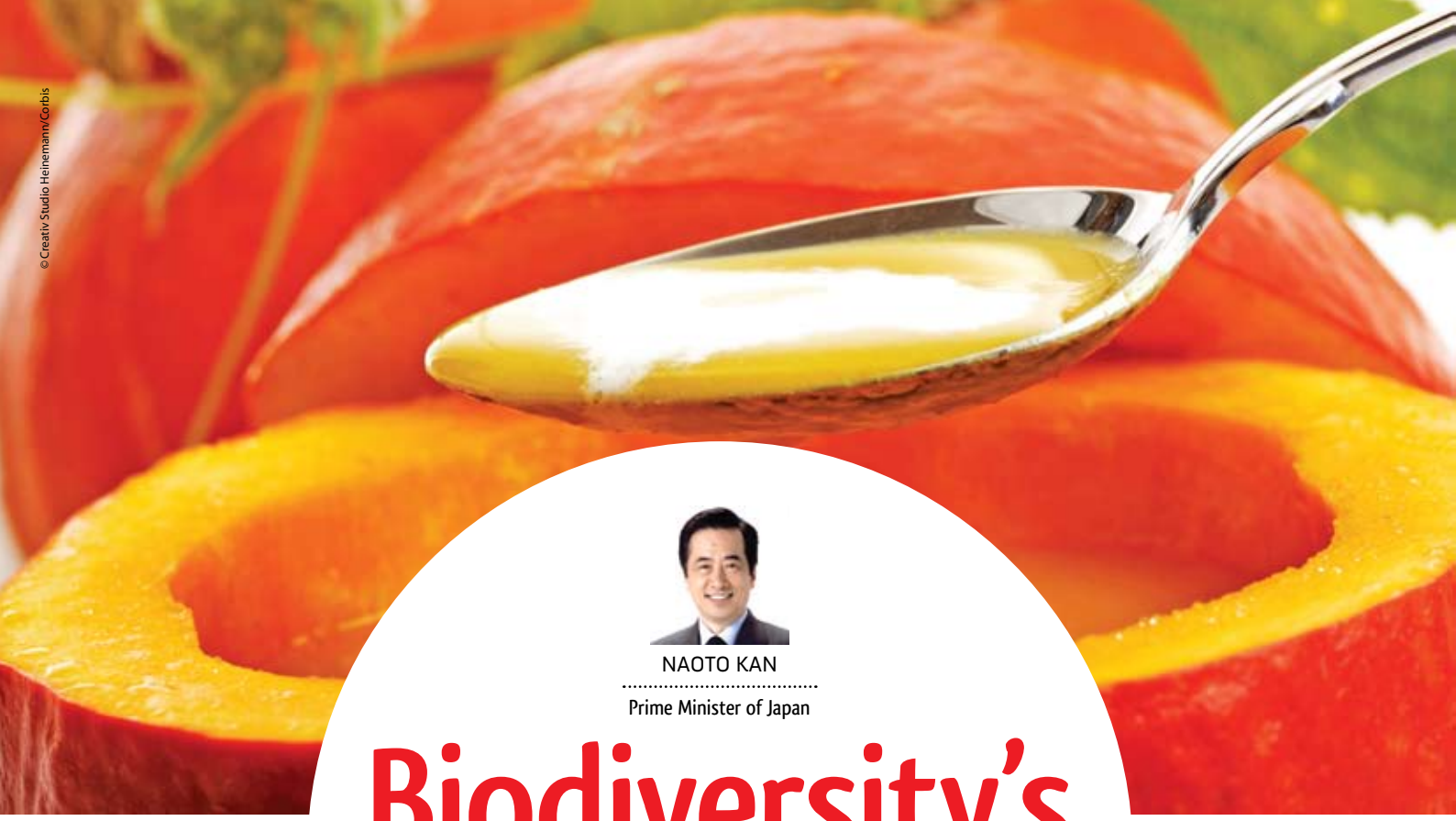
The TEEB report provides smart management options and intelligent policy regimes needed to turn growing losses into economic and livelihood opportunities for the world's people. TEEB has built authority by convening some of the brightest and most-forward-looking economic experts, and assembling community and country case studies of where transformation is already occurring. It has evolved from over two decades of scientific, social and economic research by academics, the United Nations and other partners via such reports as the *Global Environmental Outlooks* and the landmark 2005 *Millennium Ecosystem Assessment*.

Some countries have already begun accounting for the economics of nature — and are realizing returns in terms of jobs, livelihoods and economics that outstrip those achieved by remaining wedded to the economic models of the previous century:

- Investing in Venezuela's national protected area system is preventing sedimentation that could reduce farm earnings by around $3.5 million a year.
- Spending just over $1 million on planting and protecting nearly 12,000 hectares of mangroves in Viet Nam has saved expenditure on dyke maintenance far exceeding $7 million every year.
- Investing in protecting Guatemala's Maya Biosphere Reserve is generating close to $50 million a year, and has created 7,000 jobs and boosted local family incomes.
- One in 40 European jobs is now linked to environment and ecosystem services ranging from clean tech "eco-industries" to organic agriculture, sustainable forestry and ecotourism.
- New calculations indicate that ecosystem services provided by the Mau forest complex — such as providing drinking water, hydropower, carbon storage, tourism and moisture for tea plantations — may be worth around $1.5 billion a year to the Kenyan economy alone.

Such findings provide an imperative to act, especially in the aftermath of the global financial and economic crisis, which has also heightened Governments' focus on social and equity issues, making it timely that countries also reach agreement on sharing the resources ethically and equitably between providers and users of resources. This is the basis of the discussions on access to genetic resources and benefit sharing under the CBD. Adopting an international regime on this issue in Nagoya would also reflect the increased understanding of the role smart market mechanisms can play in sustainable development.

It remains to be seen how far Governments and society as a whole respond to the series of assessments of ecosystems and biodiversity, and their economics — but it is certain that this work has already permanently transformed international understanding and discourse.



NAOTO KAN
Prime Minister of Japan

Biodiversity's benefits

"It is now time for us to recognise the benefits derived from biodiversity, halt its further loss, and take concrete actions to recover it."

Among a variety of environmental issues, biodiversity loss is one of the most important challenges facing the international community. Throughout its long history, humankind has enjoyed benefits from nature's cycle. Food, clothing and shelter are only available by our use of nature and living things. Humankind has also acquired a wide range of knowledge from nature, and cultivated arts and technologies in the course of maintaining a sustainable way of life within it.

We bear a heavy burden of responsibility to pass down rich and diverse ecosystems to future generations, so that human beings can continue receiving the benefits provided by nature in future years.

This issue becomes easier to understand when we consider our socio-economic activities, for which raw materials such as grains, fruits, timber and water are provided by the benefits from biodiversity. In Japan, for example, there is a super express train network known as the Shinkansen bullet train that connects major cities throughout the country. The design of the shape of its nose cone was based on the beak of the kingfisher bird, in order to reduce air resistance for high-speed performance.

In order to promote the conservation and sustainable use of biodiversity, it is very important to recognize the interrelationship between biodiversity and our lives, and consider how we should view it. It is in this context that The Economics of Ecosystems and Biodiversity (TEEB) study, lead by Dr. Pavan Sukhdev, draws attention to highlighting the linkage between biodiversity and the economy, so as to enhance public awareness of biodiversity's importance and give greater significance to promoting its conservation and sustainable use.

Japan is moving ahead in an attempt to assess the economic value of biodiversity and to integrate it with conservation measures. For example, the Japanese Ministry of the Environment conducted an assessment from 2008 to 2009 on the benefits of the nation's coral reef ecosystems, revealing an annual economic value estimated at $27.6 billion from tourism and recreation, $1.2 billion in commercial marine products, and $0.9 billion to 9.6 billion in protection from tidal waves and erosion hazards. These results serve as a basis for the Action Plan for Conservation of Coral Reef Ecosystems in Japan released by the Ministry in April 2010, and are widely used to improve public awareness of the importance of coral reefs.

Meanwhile, the Millennium Ecosystem Assessment compiled by the United Nations in 2005 concludes that, among 24 ecosystem services evaluated globally, 15 ecosystem services (equivalent to about 60 per cent of world ecosystem benefits) have been damaged over the past 50 years, and that human behaviour is the underlying cause. The third edition of the *Global Biodiversity Outlook* (GBO-3), produced by the Secretariat of the Convention on Biological Diversity (CBD), also concludes that the state of biodiversity is continuing to decline on a global scale, and that the world has failed to meet its targets to achieve a significant reduction in the rate of biodiversity loss by 2010. It is now time for us to share the same recognition concerning the benefits derived from biodiversity, halt its further loss, and take concrete actions to recover it.

A number of major issues regarding the conservation and sustainable use of biodiversity will be discussed at the tenth meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD-COP10) in the city of Nagoya, Aichi Prefecture, Japan. One is to establish a new strategic plan including post-2010 targets. Another important theme is Access and Benefit Sharing (ABS) related to genetic resources. The Government of Japan also intends to take this opportunity to advocate the promotion of the Satoyama Initiative.

In Japanese, Satoyama refers to woodlands or grasslands (yama) adjacent to villages (sato), and represents one example of the natural environment that the initiative aims to create. Satoyama, being closely associated with local traditions and culture, are places where local communities fully receive the benefits derived from ecosystems through such human activities as agriculture and forestry. The Satoyama Initiative — jointly initiated by the Japanese Government and the United Nations University Institute of Advanced Studies in close cooperation with a wide range of partner organizations — is a global effort and approach to create a society in harmony with nature. Through it we want to promote the sustainable use of biological resources suitable for specific climates and natural features in each region, contribute to the improved well-being of humans in general, and achieve the objectives of the Convention on Biological Diversity.

All stakeholders — including international organizations, Governments, municipalities, NGOs, businesses and local communities — will cooperate in implementing a major effort to advance the conservation and sustainable use of biodiversity, while considering the discussions at CBD-COP10 and other accomplishments in this International Year of Biodiversity. Japan is now calling for a "United Nations Decade on Biodiversity", to be considered at the United Nations General Assembly this year, and would like to ask you all for approval and cooperation. Keeping COP10's slogan — "Life in harmony, into the future" — as a key phrase, Japan will exert its utmost efforts, hoping to pass down the benefits of biodiversity to future generations.

IT'S A CHALLENGE

EMANUEL MORI

"While the relatively small sizes of our islands and communities may seem to make setting aside large tracts of land and near-shore protected areas even more difficult, in fact these protected areas