Sustain

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Business, biodiversity and ecosystem services

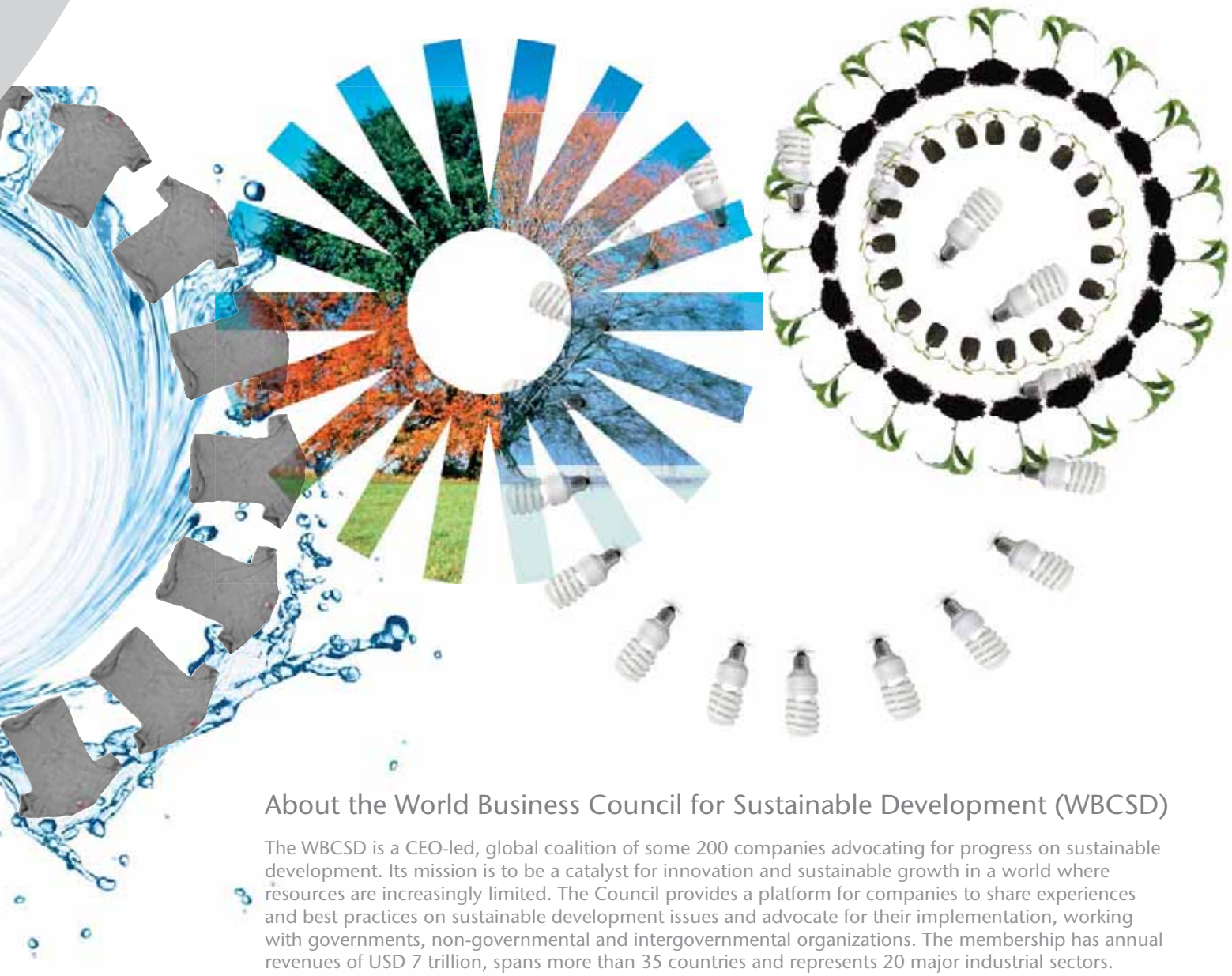
The interdependence story

World Business Council for
Sustainable Development

The WBCSD's presence in Nagoya

The WBCSD will be an active participant during the 10th Conference of the Parties (COP 10) to the Convention on Biological Diversity (CBD) in Nagoya, Japan, in October 2010.

The Council will host an International Business and Ecosystems Dialogue with the International Union for Conservation of Nature (IUCN) and Keidanren Committee on Nature Conservation (KCNC), supported by the CBD Secretariat.



About the World Business Council for Sustainable Development (WBCSD)

The WBCSD is a CEO-led, global coalition of some 200 companies advocating for progress on sustainable development. Its mission is to be a catalyst for innovation and sustainable growth in a world where resources are increasingly limited. The Council provides a platform for companies to share experiences and best practices on sustainable development issues and advocate for their implementation, working with governments, non-governmental and intergovernmental organizations. The membership has annual revenues of USD 7 trillion, spans more than 35 countries and represents 20 major industrial sectors. The Council also benefits from a network of 60 national and regional business councils and partner organizations, a majority of which are based in developing countries.

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Pricing natural capital is a start ...
Now we need to account for it and manage it responsibly

Back in 1997, when the WBCSD released its first guide on *Business and Biodiversity*, I would not have imagined there would be an International Year on Biodiversity one day. At that time, business was just awakening to the Convention on Biological Diversity (CBD) which had held its third Conference of the Parties (COP) a year earlier.

More than a decade and seven COPs later, we have come a long way and for the first time, business has been invited to provide input to the development of the new CBD strategic plan and the 2020 targets. This is an important milestone for business and biodiversity.

Another milestone is *The Economics of Ecosystems and Biodiversity (TEEB)* study which will be released in Nagoya. We now know for sure that natural capital has substantial economic value but the biggest challenge is to account for it. We also know that we need regulatory changes that leverage market forces and make the inclusion of decision making around biodiversity and ecosystems more accepted.

Moving forward, the next step for business is to include ecosystem values in corporate balance sheets. Our Ecosystems Valuation Initiative is trying to do exactly that and help companies assess the full value of ecosystems and their services. This is a pre-requisite to ensuring their sustainable use.

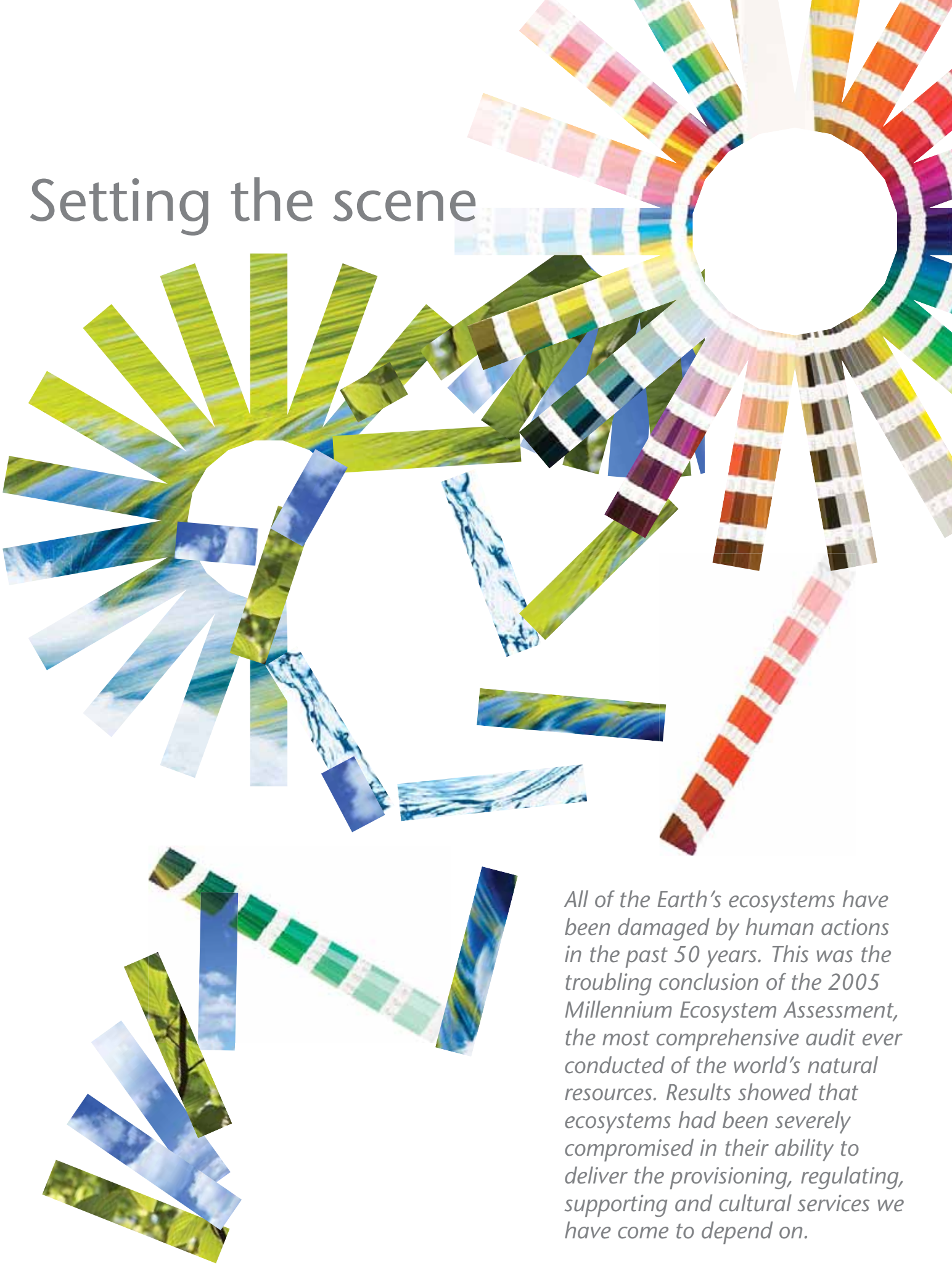
For the WBCSD, COP 10 in Nagoya will serve as a platform to launch various publications and host many events, including an International Business and Ecosystems Dialogue with the IUCN and the Keidanren Committee on Nature Conservation – where we will explore how business and governments can best collaborate to halt biodiversity loss and ecosystem degradation.

This year's focus on biodiversity has provided the WBCSD with a good opportunity to demonstrate that its members are in a leadership position in terms of understanding and managing ecosystem impacts and dependence. Across sectors and countries, we see many successful examples of how companies are supporting the CBD's core objectives.

There is now an understanding of the global nature of ecosystems and biodiversity, and the need for us all to take action. What is becoming increasingly clear also is the recognition that these actions must be based on a common but differentiated responsibility. This means that companies have to be active in conserving biodiversity, use ecosystem services sustainably and share the benefits. But it also means that governments have to set policies that leverage market forces and entice business to provide even better solutions. Being prime engines of innovation, companies have indeed much to contribute to the long-term sustainability of ecosystems.

Björn Stigson
President, WBCSD

Setting the scene



All of the Earth's ecosystems have been damaged by human actions in the past 50 years. This was the troubling conclusion of the 2005 Millennium Ecosystem Assessment, the most comprehensive audit ever conducted of the world's natural resources. Results showed that ecosystems had been severely compromised in their ability to deliver the provisioning, regulating, supporting and cultural services we have come to depend on.

Making the case for corporate action on ecosystems

Why should business care? The simple answer is that ecosystems services underpin all business operations in some way, and if they are compromised, this could seriously challenge companies. If a business cannot access the freshwater, timber or other natural resources it needs, or if supplies of those resources become unreliable, it faces a significant risk. Companies can only function if the ecosystems and the services they provide are healthy and balanced.

But companies not only depend on ecosystems and their services, they also impact them, and the implications of their degradation are becoming clear. The loss of ecosystem services poses business risks (i.e. higher input costs, new government regulations, reputational damage, changing consumer preferences, more rigorous lending policies), but also presents opportunities (i.e. demand for new products, services and technology, new revenue streams from managing and selling natural assets).

For every risk, there is an opportunity

Broadly speaking, ecosystem risks and opportunities can be broken down into five categories: operational, regulatory and legal, reputational, market and product, and financing.

Yet, for every risk, there is an opportunity. For example, while coastal companies may be affected by flood damage to coastal ecosystems, building infrastructure to protect coastal zones may provide a new business opening.

Similarly, ecosystems offer a chance to open up previously unexplored income streams through the use of market mechanisms such as payments for ecosystem services. Ecosystem-friendly financial products that are becoming more commonplace include wetland banking and biodiversity offsets and credits, similar to the current market for carbon trading.

Valuing ecosystems is key to their conservation…

As the understanding and recognition of ecosystem benefits grow – services that until recently had been taken for granted or simply discounted from the equation – we see growing interest in ecosystem valuation. While markets provide prices for some ecosystem services (e.g. cereals, fish and timber), there are many more where markets are absent. As a consequence, the

use of these services is often perceived to carry low to zero cost and they are excluded from measures commonly used to assess and report on company performance.

For example, pollination, a service provided by bees, is seemingly free. However, some estimates put its value at USD 4 billion for the US agricultural sector alone. Similarly, putting a value on trees cut down and marketed for timber is a relatively straightforward exercise, yet this may not be the only or greatest source of income from the forest, such as providing key services of watershed protection, erosion control and climate regulation through carbon sequestration. Watershed protection could, for instance, prevent silting up of the reservoirs held behind hydro-electric generator dams, thereby reducing risks for energy companies and saving them money. The challenge lies in capturing these potential values, and until now, there has been no system tailored to the private sector.

In order to fill the gap, the WBCSD launched the Ecosystem Valuation Initiative, an effort to recognize nature's services as an integral part of corporate planning and decision making. Being able to express ecosystem value in monetary terms provides figures that can be directly integrated with conventional financial measures and linked to the financial bottom line.

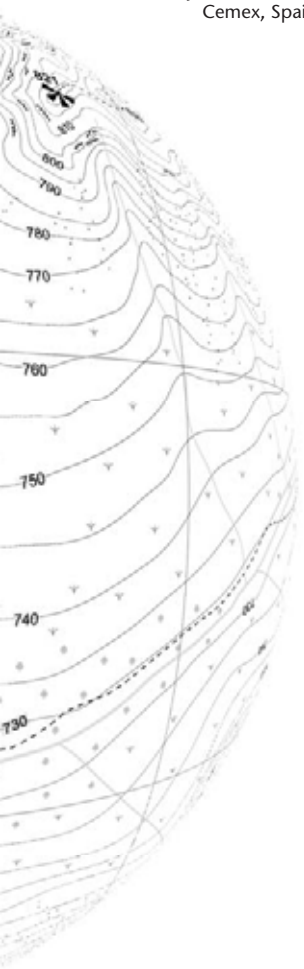
Importantly, the initiative links with *The Economics of Ecosystems and Biodiversity (TEEB)*, a study initiated in 2007 by the G8 Environment Ministers analyzing the global economic benefits of biodiversity and ecosystem services, the cost of the loss of biodiversity and ecosystems and the failure to take protective measures versus the cost of effective conservation. Interim results, based on deforestation only, had shown that the world loses between €1.35 trillion and €3.10 trillion-worth of natural capital every year. Because these losses have major financial consequences, ecosystem degradation is becoming a critical issue for business and society at large.

… So are smart policies

Defining smart public policies that can help to frame ecosystem use and management, and support business action is important. These policies should clearly define property and tenure rights as the basis for effective stewardship, provide appropriate incentives structures, and recognize business as a significant ecosystems steward in its own right.

Any new regulatory framework needs to level the playing field for all ecosystem users and leverage market forces and the capacity of business to provide solutions. Being prime engines of innovation, companies have much to contribute to the long-term sustainability of ecosystems. ❑

Quarry rehabilitation, Cemex, Spain



Business and biodiversity

Moving from niche to mainstream

By **Joshua Bishop**, IUCN

The Economics of Ecosystems and Biodiversity (TEEB) shows that environmentalists are increasingly interested in working with business to address biodiversity loss, including the development of markets for ecosystem services and pro-biodiversity business models. A number of visionary investors, companies and entrepreneurs are committed to this approach, but the question is how to scale up business action and investment in biodiversity conservation.

The lesson of carbon markets is that significant private investment will only be forthcoming where there is a serious business liability (in the form of stringent emission caps and/or punitive carbon taxes) as well as serious opportunity (in the form of tradable emission reduction credits and new technologies). In this regard, there is still a long way to go for biodiversity.

The value of biodiversity is still difficult to measure

TEEB shows that the direct use values of biodiversity – such as recreation, bio-prospecting and wild harvested resources – can be economically significant, but that such values alone are rarely sufficient to motivate significant private investment in conservation and sustainable use. For biodiversity to be commercially competitive, other indirect values – such as water regulation and purification, pollination and erosion control – need to be factored in. The so-called 'intrinsic' or non-use values of biodiversity can also be significant but are hard to measure and are generally not reflected in business decision making except through public policies that discourage rather than encourage business. Examples include protected areas – the cornerstone of most countries' conservation strategy – as well as phyto-

sanitary restrictions and other measures to control the spread of invasive alien species, or quotas on the harvest of fish and other wild species. Such policies can be effective but they are rarely intended or able to mobilize private investment in conservation.

A combination of liability and opportunity can unlock private investment in biodiversity. There are examples of more 'business-oriented' approaches, such as biodiversity banking (in the USA, Australia and a few other countries), or increased legal and financial liability for ecological damage (e.g. the Environmental Liability Directive in the EU). Most of these initiatives are recent however and have little track record.

In practice, this implies more widespread adoption of the principle of 'No Net Loss' (NNL) or 'Net Positive Impact' (NPI) on biodiversity as a basis for resource planning and economic development. Moreover, as shown by the few countries and companies that have put biodiversity offsets and habitat banking into practice, a policy of NNL or NPI can form the basis for significant private investment in biodiversity conservation and ecosystem restoration. In the USA, for example, the market for wetland mitigation (a form of ecosystem banking and trading underpinned by a legal requirement for NNL) has been valued at USD 1-2 billion per year and is dominated by commercial operators. Such an approach can be extended to other ecosystems and other countries and may provide the combination of liability and opportunity that unlocks significant private investment in biodiversity.

The Gulf of Mexico oil spill is a watershed, but to what extent remains unclear. On the one hand, the 40% decline in the value of BP's stock, in the weeks following the accident, were a loud wake-up call for many investors and a reminder that environmental liabilities can ruin a business. On the other hand, the rapid breakdown of oil in the warm waters of the Gulf may lead to complacency about the real scale of the biodiversity crisis.

Action is required on several fronts to halt biodiversity loss

The fact remains that the underlying global trend of species extinction and biodiversity loss continues unabated, due to pollution and climate change but also over-exploitation, habitat disturbance and the spread of invasive alien species through trade. We don't know how much biodiversity we need or, to put it another way, how much more biodiversity loss our economies can tolerate; however prudence suggests that action, including by business, is required to halt this trend by:

- Identifying their impacts and dependencies on biodiversity and ecosystem services (BES)
- Assessing the business risks and opportunities associated with these impacts and dependencies
- Developing BES information systems, setting SMART targets, measuring and valuing performance, and reporting results
- Taking action to avoid, minimize and mitigate BES risks, including in-kind compensation ('offsets') where appropriate
- Grasping emerging BES business opportunities, such as cost-efficiencies, new products and new markets
- Integrating business strategy and actions on BES with wider corporate social responsibility initiatives
- Engaging with business peers and stakeholders in government, NGOs and civil society to improve BES guidance and policy ❑

Download *TEEB for Business – Executive Summary*: www.teebweb.org

Joshua Bishop is Chief Economist at IUCN, International Union for Conservation of Nature: www.iucn.org

Insurance cost from flood damage

Business and the Convention

CBD's Third Biodiversity and Business 2010 Challenge Conference, Jakarta, Indonesia

By **Ravi Sharma**, Convention on Biological Diversity

Ever since the first CBD decision focused on business was adopted in 2006, momentum has been building around business engagement in the Convention.

COP 10 in Nagoya, Japan, will be no exception. Environment officials from 192 countries will be discussing the future strategy for implementing the three objectives of the CBD including the engagement of the business community. In addition a ten-year strategic plan for the convention and the post-2010 targets will be considered.

The working group of the CBD Conference of the Parties has already agreed on a major strategy to engage the business community which includes asking governments:

- To promote a public policy environment that enables private sector engagement and the mainstreaming of biodiversity into corporate strategies and decision making
- To facilitate private sector engagement by establishing national and regional business and biodiversity initiatives
- To develop principles for incorporating biodiversity into business practices

New biodiversity strategy includes realistic and measurable targets

Although ambitious, the targets included in the new strategy are realistic and measurable. They are based on the third *Global Biodiversity Outlook (GBO3)* released in May 2010. The strategy will be the foundation for governments to set rules and regulations on biodiversity for the business sector.

Concretely, the plan encourages governments to involve businesses in any future revision and implementation of national biodiversity strategies and action plans. Further, governments are asked to adopt sustainability criteria when purchasing products of biological resources.

on Biological Diversity

At the same time, companies are encouraged to use the CBD's Strategic Plan 2011-2020 and its post-2010 targets for defining concrete and measurable biodiversity targets for their own operations and for assessing their impacts on biodiversity and ecosystem services. Importantly, in order to track implementation in a transparent manner, companies should use clear and measurable criteria or indicators.

Business engagement is critical to meet CBD targets

Governments recognize that ambitious targets cannot be achieved without mobilizing the business community and are therefore discussing ways to attract private investment. This was also reiterated at CBD's Third Biodiversity and Business 2010 Challenge Conference held in Jakarta, Indonesia, in December 2009. The conference adopted the Jakarta Charter on Business and Biodiversity highlighting ways to advance the engagement of business in biodiversity. Another important initiative has been *The Economics of Ecosystems and Biodiversity (TEEB)* report which has helped place a dollar value on biodiversity and ecosystems.

Many tools, indicators and certification schemes for businesses are simultaneously being developed and improved. Meanwhile, we are witnessing an increased interest from companies seeking advice and asking what they can do for biodiversity as hundreds of events are being organized across the world to mark the International Year of Biodiversity. The developments are encouraging and CBD welcomes everyone with an interest in the business sector to a busy COP 10 where a high-level event will be held on 28 October 2010 at the Messe Nagoya venue to bring together CEOs of companies and Environment Ministers to discuss the realization of the new biodiversity targets.

At the upcoming COP 10, together with the International Union for Conservation of Nature and the Keidanren Committee on Nature Conservation, the WBCSD will host an International Business and Ecosystems Dialogue on 26 October, supported by the CBD Secretariat. ❑

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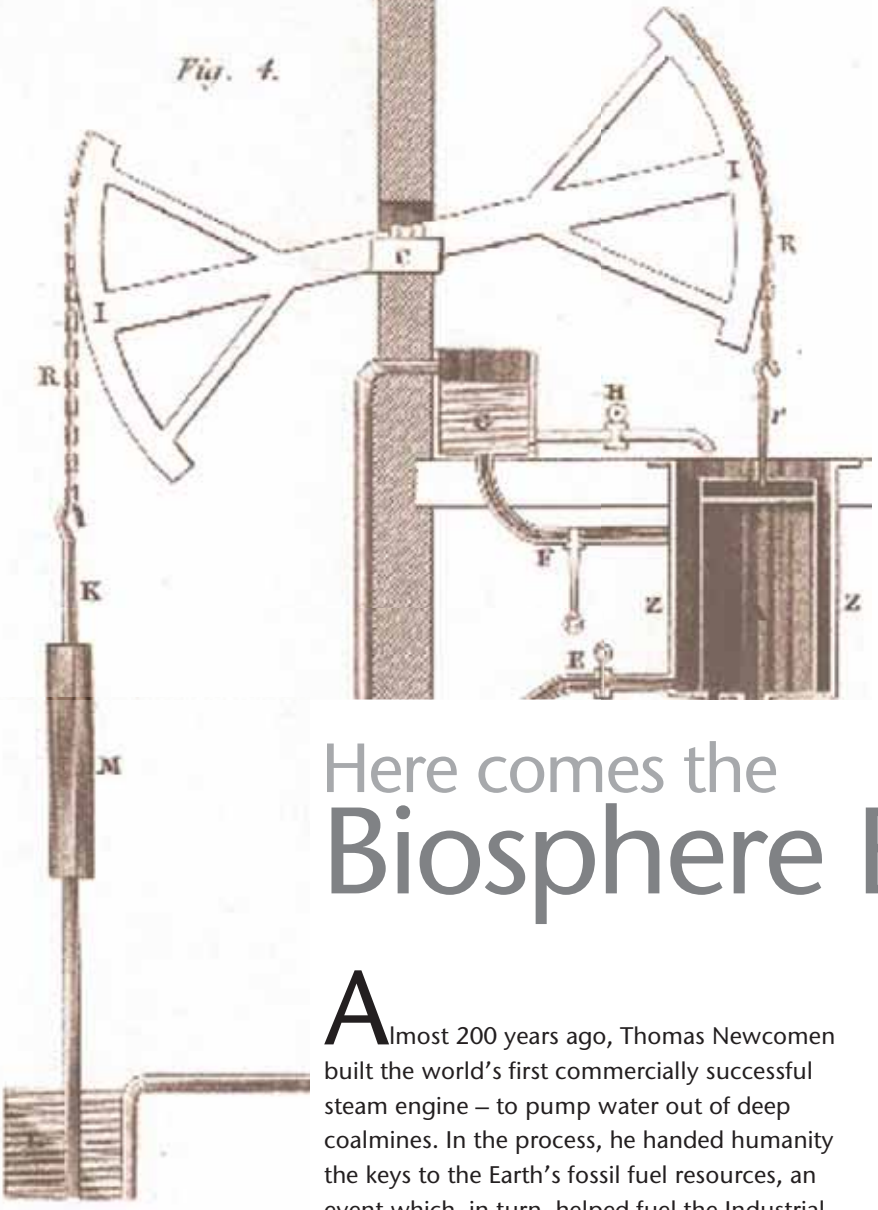


Diagram of Newcomen's steam engine developed in England to pump water out of coal mines

Here comes the Biosphere Economy

By **John Elkington** and **Alejandro Litovsky**, Volans

Almost 200 years ago, Thomas Newcomen built the world's first commercially successful steam engine – to pump water out of deep coalmines. In the process, he handed humanity the keys to the Earth's fossil fuel resources, an event which, in turn, helped fuel the Industrial Revolution. Ever since, the natural world has been in retreat, equally undervalued by economists, accountants, engineers and politicians. Now, a new revolution is under way, once again ignited by resource constraints – but this time with a small group of innovative economists and accountants leading the charge, alongside activists, engineers, scientists, business leaders and politicians.

Take Pavan Sukhdev, former managing director of the Markets Division of Deutsche Bank – will later in 2010 launch the findings of the *TEEB* study, the acronym for *The Economics of Ecosystems and Biodiversity*. The focus of his work – and of a growing number of economists – is the creation in the coming decades of what we call the 'Biosphere Economy.' The evidence suggests that this will be as profound in its impacts as the original Industrial Revolution, with the critical difference that this time the economy will be working with the grain of the biosphere, rather than against it.

The financial value at stake is mind-boggling. The *TEEB* analysis, for example, concludes that the degradation of the Earth's ecosystems and biodiversity due to deforestation alone costs us natural capital worth somewhere between USD 1.9 and USD 4.5 trillion every year. And, on the other side of the equation, the business opportunities likely to be created by the shift in the prevailing market paradigm are equally astonishing.

From natural capital to asset valuation

Spurred on by such findings, extraordinary new insights are now flowing from the leading edge of ecosystems science. Whether we like or not, whether we plan for it or not, we are entering the Biosphere Economy – a future where business and politics increasingly take account of natural capital, bridging the gap between man-made assets and nature's ecological infrastructures that underpin our economies and societies.

This Biosphere Economy is moving on from 'intangible' ecosystem services such as naturally produced water, soil and clean air, to identify a set of tangible issues for business – and, in the process, shifting its focus from business 'externalities' such as pollution, deforestation, and resource degradation, to a re-consideration of market and corporate valuation mechanisms.

"It is only a question of time," we were told by Chris Knight, Associate Director for Forestry and Ecosystems, Sustainability and Climate Change at PriceWaterhouseCoopers in the UK, "before

a financial analyst looking at the valuation of companies such as utilities or food and beverages, begins to consider (knowingly or not) ecological factors that threaten their business."

The business case for the Biosphere Economy

A new generation of entrepreneurial initiatives is spotlighting ecological footprints, with the ambition to influence investors and shareholders, as a means of getting to Boards and C-Suite decision makers. Whether it is the Natural Value Initiative – a partnership between NGOs and institutional investors, or the Carbon Disclosure Project and its offspring, the Forest Footprint Disclosure Project or the Water Disclosure Project, transparency requests are now being backed by institutional investors managing trillions of dollars in assets.

But a central challenge for business, at least to date, is that the Biosphere Economy agenda is emerging on an issue-by-issue basis, with a range of alternative, yet often complementary, initiatives per issue. "You can't expect business and the financial industry to run a series of different systems for water, carbon, forests, and others all separately," we were advised by Richard Burrett of Earth Capital Partners, who previously led ABN Amro's efforts on project finance and sustainability. "There is a resource constraint to doing this within companies, and eventually we will need to develop a lens that addresses all the issues holistically, also involving governments as regulators."

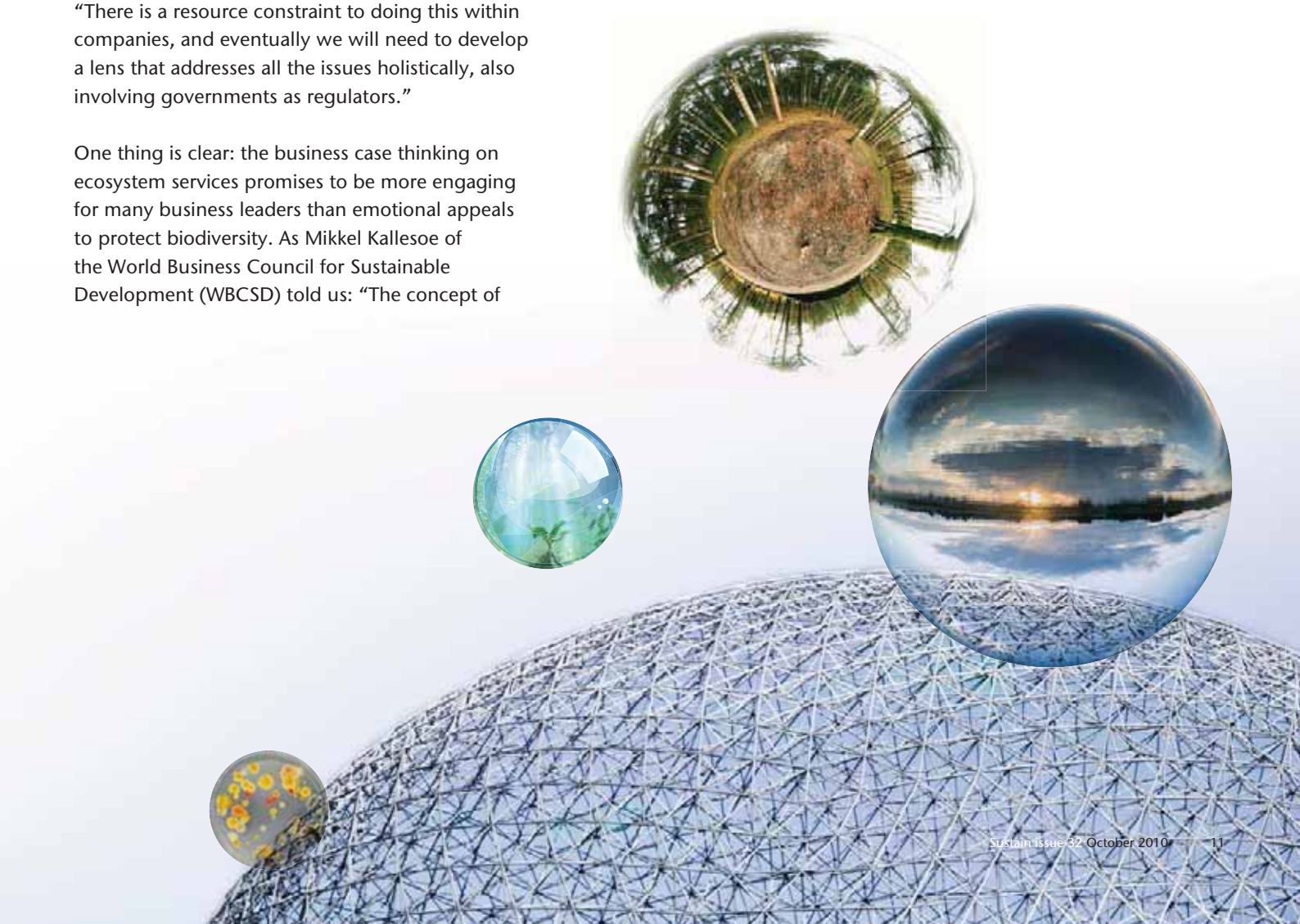
One thing is clear: the business case thinking on ecosystem services promises to be more engaging for many business leaders than emotional appeals to protect biodiversity. As Mikkel Kallesoe of the World Business Council for Sustainable Development (WBCSD) told us: "The concept of ecosystem services is more tangible for business than biodiversity. We are talking about freshwater, crops, pollination, fibre and erosion regulation. These units fit with other inputs in a business model and a production process."

Time is of essence

There will be winners and losers in the Biosphere Economy – whether you think of companies, sectors, cities or entire regional economies. But how to spot the difference early enough to act?

One possible way will be to look at how 'ecologically overdrawn' is an economy, industry or company. Later this year, Trucost, a firm that is introducing environmental valuations to the business mainstream, will publish a report concluding that the 3,000 biggest public companies in the world had 'ecosystem liabilities' of USD 2.2 trillion in 2008, representing on average over 30% of their combined profits. Once such information is properly absorbed and acted on by financial institutions and markets, everything will change. ❑

John Elkington is Executive Chairman and Co-Founder of Volans: www.volans.com and Co-Founder and Non-Executive Director at SustainAbility: www.sustainability.com
Alejandro Litovsky is Director of the Volans Innovation Lab.



Vision 2050 and ecosystems

Where we need to go

The WBCSD has a vision: in 2050, some 9 billion people live well, and within the limits of what this small, fragile planet can supply and renew, every day.

Syngenta CEO Michael Mack understands the urgency and recognizes that for his company the challenge lies in food grown on a fixed amount of land. For Syngenta, agriculture is a huge part of what has to happen differently in order to have a sustainable planet and they are addressing the link between technology and agriculture and how these two can better work together. “Humanity has largely had an exploitative relationship with our planet; we can, and should, aim to make this a symbiotic one,” Mack says.

In line with these words and this vision, the WBCSD’s *Vision 2050* project has outlined the means for achieving it, providing the ‘must haves’ that will put the planet on the path to a sustainable world in 2050. A clear look at the world’s ecosystems and the services they provide will be a key starting point to achieve the essential changes in economic frameworks and the assumptions of what is needed to secure growth.

To achieve the vision, we must take a series of actions, bold steps including integrating the true costs of creating a product or a service into its pricing, including accounting for the use of natural capital (i.e., ecosystem services and biodiversity), along with the removal of perverse subsidies that keep unsustainable practices in the mainstream. Leveling the playing field in this way will ensure that the necessary mechanisms are built into the marketplace for all competitors, allowing business to deliver solutions that are both sustainable and competitive and allowing consumers to choose sustainable products not just because they are sustainable but because they deliver better value.

In the march to 2050, political and business constituencies will shift from thinking of climate change and resource constraints as environmental problems to economic ones related to the sharing of opportunity and costs.

A model of growth and progress will be sought that is based on a balanced use of renewable resources and recycling those that are not. This will spur a green race, with countries and business working together as well as competing to get ahead.

This transformation will bring with it huge shifts in terms of regulation, markets, consumer preferences, the pricing of inputs, and the measurement of profit and loss; all of which will impact business. Because business is part of the solution and has a lot to offer, it cannot afford to just follow the coming changes, it must lead this transformation by doing what business does best: cost-effectively creating solutions that people need and want.

The difference is that the new solutions will be based on a global and local marketplace with 'true values and costs,' the 'truth' being established by the limits of the planet and what it takes to live well within them. Business, consumers and policy makers will experiment, and, through multi-stakeholder collaboration, systemic thinking and co-innovation, find solutions to make a sustainable world achievable and desirable. This is opportunistic business strategy at its best.

For example, *Vision 2050* sees a 21st century version of the Green Revolution, one that has helps the larger population meet its nutrition needs through improved agricultural practices, water efficiency, new crop varieties and new technologies, as well as allowing agriculture to contribute to energy supply without jeopardizing food supplies or biodiversity. Bigger yields will reduce the land area under agricultural production. Better management will increase the carbon sequestration potential of soils. And ensuring that forests recover and regenerate, through a halt to deforestation and greater yields from crop cultivation, will help protect against climate change and biodiversity loss and to meet the resource needs of society.

The transformation ahead represents vast opportunities in a broad range of business segments as the global challenges of growth, urbanization, scarcity and environmental change become the key strategic drivers for business in the coming decade. Business leaders will need to manage companies through unprecedented transformational change, in parallel with governments getting the right policies and incentives in place.

A real, global attempt at sustainable development means clear changes for business and markets in general and for the individual participating sectors. It also means greater cooperation between business, governments and society. The interconnectedness of issues such as water, food and energy will be a clear motivator for everyone to reach *Vision 2050*.

Making these changes – and more – will enable us to consume just over one planet's worth of ecological resources in 2050, as opposed to the 2.3 planets we will be using if we continue on the path we are on today. ❑

Download *Vision 2050: The new agenda for business*: www.wbcsd.org

Researcher in trial field, Syngenta

Research & Development greenhouse, Syngenta

Ecological balance – one of the three pillars of sustainable development – cannot be achieved in isolation and requires addressing social and economic aspects as well. Although many of the tools and guidelines developed by the WBCSD to foster sustainable business practices do not focus specifically on ecosystems, they are still very relevant and complement environmental efforts. For example, procurement, greenhouse gas emissions, production and consumption patterns as well as development activities all have an impact on ecosystems.

WBCSD tools and frameworks

WBCSD tools for corporate action on sustainable development

Sustainable procurement of wood and paper-based products

The WBCSD and the World Resources Institute have developed a dedicated website and two publications – *Sustainable Procurement of Wood and Paper-based Products* and its associated *Guide and Resource Kit* – to assist business executives and purchasing managers in identifying the central issues around the sustainable procurement of wood and paper-based products, provide an overview of some tools, programs and labels that have emerged, and guide them in developing sustainable procurement policies. Decisions regarding the purchasing and use of wood and paper-based products not only have significant and long-term impacts for the forests and ecosystems from which they are harvested. Sustainable procurement can also help a company maintain its social license to operate, reduce reputational risk, and align its values with those of stakeholders. These materials are updated online annually to keep track of fast-paced developments within the marketplace for sustainable wood and paper-based products.

Download *Sustainable Procurement of Wood and Paper-based Products:* www.sustainableforestprods.org

The sustainable management of the world's forests also has implications for the banking sector. In an effort to assist financial institutions in managing risks related to forestry investments or industrial projects that have forest impacts, the WBCSD and PricewaterhouseCoopers developed the *Sustainable Forest Finance Toolkit*. It is meant to help banking staff proactively address forest loss and illegal logging activities when considering loan applications. The toolkit is a web-based tool, also updated annually to keep pace with sustainable forest management developments. ❑

Download the *Sustainable Forest Finance Toolkit:* www.pwc.co.uk/forestfinancetoolkit

Combating climate change: The business case for greenhouse gas emission (GHG) measurement and management

For a decade, the World Resources Institute and the WBCSD have worked with businesses, governments and environmental groups around the globe to develop the *Greenhouse Gas Protocol* – a standardized and effective accounting and reporting standard for corporate GHG emissions. The *Protocol* is the most widely used corporate GHG accounting method and serves as the foundation for nearly every GHG standard and reporting program in the world. New standards are being developed though a global multi-stakeholder process to measure and report Scope 3 supply chain emissions and the greenhouse gas emissions from products and services.

The assertion 'what gets measured, gets managed' truly speaks to the business case for GHG measurement. Corporate emissions measurement makes good business sense because it allows companies to comply with existing carbon-related regulations and helps mitigate future physical, financial, and regulatory risks. Moreover, it can help identify cost savings through gains in operational or supply chain efficiency, and changes to production input and outputs. In return, actions that reduce or avoid these emissions can benefit ecosystems and biodiversity by slowing down the accumulation of GHGs in the atmosphere. ❑

Download the *Greenhouse Gas Protocol:* www.ghgprotocol.org

Reducing pressure on natural resources through sustainable production and consumption

Current global production and consumption patterns cause environmental degradation and threaten human health and livelihoods. High rates of species extinction, a great loss and degeneration of natural resources, increased pollution and climate change are but a few reasons for companies and consumers to reduce their ecological footprint. Along with other global priorities, the protection of ecosystems and biodiversity depends on achieving a new framework for sustainable production and consumption.

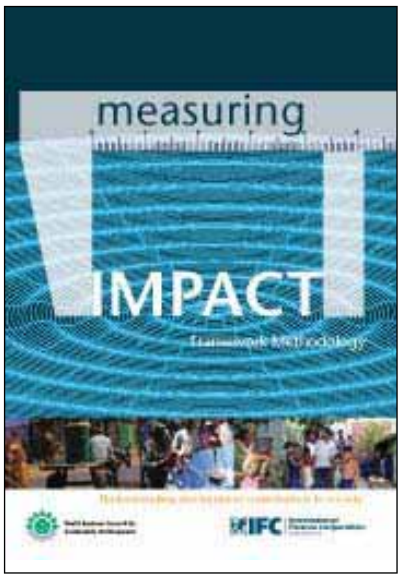
To respond to this challenge, the WBCSD has partnered with the UN Environment Programme (UNEP) and the Society of Environmental Toxicology and Chemistry (SETAC) in developing the Sustainable Value Chain Initiative (SVCI). The initiative strives to assist companies in integrating life-cycle thinking and eco-efficiency into their business strategies. Fostering consumer awareness and responsible consumer choice serves to minimize overall ecological impacts as well. Members of the WBCSD's Consumers and Sustainable Consumption workstream are thus exploring the drivers and barriers to sustainable consumption patterns and lifestyles. ❑

Measuring impacts from development

The WBCSD developed the *Measuring Impact Framework (MIF)* to help companies measure and assess their contribution to development and make better investment and operational decisions. The *MIF* presents a methodology that can systematically capture, illustrate and quantify the complex interactions between business activities and host societies, covering social, economic and environmental issues.

The *MIF* methodology complements and enhances traditional impact assessment tools and approaches by allowing for a holistic understanding of contributions to development and informed prioritization of management responses. ❑

Download the *Measuring Impact Framework:*
www.wbcsd.org



Global Water tool©

Check out
Latest version with new data and maps

Refreshed for risk assessment

The 2010 version of the *Global Water Tool (GWT)* is now out and available for public use. It includes new and updated data and improved functionalities – making it more meaningful and easier to use.

"The *Global Water Tool* is the first step for any company to make water-informed decisions. First launched in 2007, it is now being used by over 300 corporations worldwide. Non-business stakeholders, too, are increasingly recognizing its value," says Björn Stigson, President of the WBCSD. Transition to the new tool should be straightforward for companies already using the original tool.

Every situation is different

A company needs water for its operations, employees and supply chain, and ultimately its customers. In order to manage current and future risks related to water, companies should understand their water needs in relation to local conditions. These include water availability (current and projected), water quality, water 'stress' (relating to people, environment and agriculture), access to safe drinking water sources and sanitation, as well as population and industrial growth.

The *Global Water Tool* aims to help corporations and organizations map their water use and assess risks across their global operations and supply chains. It can be used in a variety of ways, to compare sites with key external water-related data, to create indicators, inventories, risk and performance metrics, and do geographic mapping. Ultimately, it can lead to effective risk management and improved communications with internal and external stakeholders.

Across sectors and regions, the *Global Water Tool* is gaining ground

Companies have used the tool in different ways. For example, The Dow Chemical Company used the tool to show that nearly 40% of its sites around the world will experience some degree of freshwater stress by 2025, and it also helped inform the development of sustainable water management strategies for these sites. Lafarge used the *GWT* at both corporate and site levels, and found it particularly powerful for raising awareness. Caterpillar customized the *GWT* to make its own set of water metrics combining external information and water use. Sites that are ranked as medium- and high-risk are then analyzed further. And PepsiCo inputted data for more than 600 of its sites into the *GWT*, which provided compelling visuals through maps and Google Earth. The company uses the *GWT* with local employees, communities, suppliers and technical experts to reduce their water impact. Importantly, the *GWT* fits well with other water tools, for example both Dow and Caterpillar combined the use of the *GWT* with the Global Environmental Management Initiative's 'Collecting the Drops: A Water Sustainability Planner,' while Lafarge and PepsiCo linked it to their testing of the Water Footprint Network's method. ❑

"Effective water risk management on a global scale requires a comprehensive understanding of water availability and other risks on the local scale."

Jan Dell, Vice-President
Energy Division, CH2MHILL

We welcome your feedback and suggestions: GlobalWaterTool@wbcsd.org
Download the *Global Water Tool* from: www.wbcsd.org/web/watertool.htm

Corporate Ecosystem Services Review: Two years on

By **John Finisdore**, WRI

Companies often fail to make the connection between the health of ecosystems and the business bottom line. One reason may be that they are not fully aware of the extent of their dependence and impact on ecosystems and the possible ramifications.

In an effort to reverse the trend, the WBCSD, the World Resources Institute (WRI) and the Meridian Institute developed the *Corporate Ecosystem Services Review (ESR)* – a method that helps managers improve both corporate performance and the environment.

Improving the bottom line on many fronts

Companies around the world have been using the *ESR*. There are at least four areas where firms are finding success.

First, at the highest levels of a corporation, executives are using the *ESR* to improve **corporate strategy**. For example, Mondi, the international paper and packaging company, used the *ESR* in 2008 to establish a platform for building a comprehensive freshwater strategy – stretching from plantation management to community engagement through to Mondi's government relations.

Second, managers are using the *ESR* to understand how the degradation of ecosystem services may affect their customers, thereby enabling managers to **identify opportunities for new products or services** that could help customers mitigate or adapt to these changes. Syngenta, a world-leading agribusiness, used the *ESR* to analyze the risks its customers in southern India face from the degradation of ecosystem services. This led to the establishment of a new water team at its corporate headquarters and was followed by investments in innovative products and services.

Third, companies have been using the *ESR* to **strengthen their existing decision making processes**. In particular, they find that the *ESR* draws attention to environmental aspects that existing processes often exclude and deepens their analysis of a business unit's dependence on ecosystem services. For example, Eskom, the South African energy company, is weaving the *ESR* into some of its corporate standards and policies, including its biodiversity policy and its ISO-based biodiversity standard. ERM Ltd, a global environmental consultancy, is using the *ESR* to embed ecosystem service considerations into its environmental impact assessments. BC Hydro, one of the largest electric power companies in Canada, used the *ESR* to enhance discussions about ecosystem services within its water-use planning process – the key tool used by the firm to improve decision making by working with regulators and community stakeholders. And AkzoNobel – the world's largest paints and coatings company and a major producer of specialty chemicals – used the *ESR* to improve its sustainability assessments by catching issues difficult to include in existing quantitative life cycle or eco-efficiency assessments.

And fourth, companies are using the *ESR* to **identify and reduce risks in their supply chains**. For example, Henkel, a leading consumer goods company, used the *ESR* to analyze key issues in one of its raw material supply chains. Their *ESR* highlighted several potential concerns and provided a basis for determining next steps and assessing alternatives.

While these examples cover only a portion of *ESR* use to date, they demonstrate the value that conducting an *ESR* can bring to a business. Specifically, it can help managers uncover new business risks and opportunities, help develop new products and services, and improve supply chain management. ❑

For more information on the *ESR*:
www.wbcsd.org/ecosystems.htm

John Finisdore is Associate at the Business & Ecosystem Services Project at the World Resources Institute: www.wri.org

Biodiversity and ecosystems at Nippon Keidanren

By **Jun Hangai**, KCNC

With some 1,300 member companies, Nippon Keidanren, the Japan Business Federation, is engaged in a range of environmental activities. Thanks to donations from its corporate members, Nippon Keidanren has set up a conservation fund to sponsor nature conservation activities in developing countries. By 2010, the fund provided USD 28 million in support of 917 projects, mainly in the Asia-Pacific region.

A range of nature conservation projects

To date, Nippon Keidanren has supported various projects including mangrove plantations at an abandoned shrimp pond in Thailand and the protection of orangutans and other rare animals on Borneo Island.

The mangrove plantations project improves fish harvests, increases the number of viable species, protects residents from tsunami damage, and is a recognized model for the country's forest restoration projects.

Through the Keidanren Committee on Nature Conservation, Nippon Keidanren also implements public awareness activities, provides information, and promotes cooperation between business and NGOs.

The committee has put nature conservation and biodiversity at the center of its work. It has developed various activities, such as symposiums and seminars inviting experts from Japan and other countries, and has participated in international conferences associated with the topic.

Launch of a Biodiversity Declaration

This has led Nippon Keidanren to launch in 2009 a Biodiversity Declaration outlining seven principles for biodiversity conservation and the sustainable use of ecosystem services. The declaration aims to expand corporate efforts toward biodiversity conservation in Japan. The declaration includes the following principles, underpinned by 15 action policies:

1 Appreciate nature's gifts and aim for corporate activities in harmony with nature
2 Provide a global response to biodiversity loss
3 Act voluntarily and steadily to contribute to biodiversity
4 Promote corporate management for sustainable resource use
5 Create an industry, lifestyle and culture that will learn from biodiversity
6 Collaborate with relevant international and national organizations
7 Spearhead activities to build a society that will nurture biodiversity

According to a recent internal survey, half of all Japanese companies currently reference biodiversity in their corporate policy. 20% of these companies have done so since the launch of the declaration.

Various regional economic or industrial associations are also planning to launch their own biodiversity declaration. In an effort to further raise awareness of biodiversity among business, Nippon Keidanren plans to launch a new business and biodiversity framework in October, during the Convention on Biological Diversity in Nagoya, Japan. ❑

Jun Hangai is Deputy Executive Director, Keidanren Committee on Nature Conservation

Bringing corporate ecosystem valuation to life

In the past year, fifteen companies have road tested the WBCSD's new *Corporate Ecosystem Valuation (CEV)* guide, meant to help companies put a value on natural capital. The pilots are still ongoing, but five companies agreed to lift the veil over their preliminary findings.

Quantifying the value of pollination

Currently, 90% of blueberries in Michigan, US, are pollinated by commercially-managed bees, which growers have to rent. An opportunity exists to improve pollination efficiency, fruit yield and quality and the grower's bottom line by establishing on-farm habitats for wild pollinators. This led the agri-business Syngenta to use *CEV* to examine the return on investment (ROI) for growers of transferring some cropland (blueberries) to pollinator habitats.

"The road test demonstrated that by providing the right habitats for wild bees, pollinator populations in the field could be increased. The growers' ROI could potentially increase by USD 40 per acre or more, thereby bringing some tangible benefits to blueberry production," says Jennifer Shaw, Syngenta's Head of Sustainability for North America.

Preparing for a change in legislation

Hitachi Chemical, a Hitachi Group company, wanted to assess the amount of carbon dioxide emitted during the manufacturing process of copper clad laminates, an ingredient used in electronics such as PCs, TVs, digital cameras and digital phones.

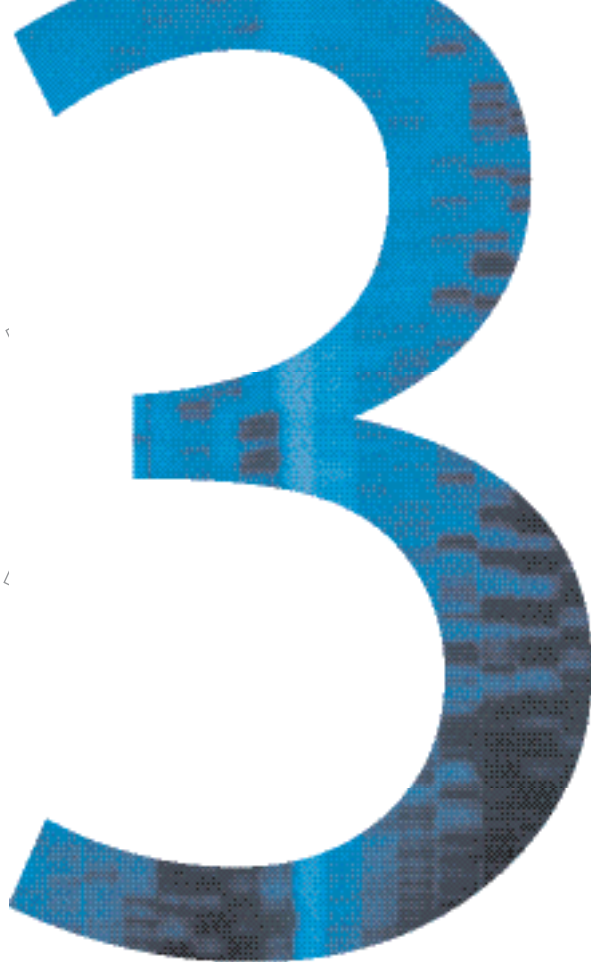
"Currently, Japan is not involved in any carbon-trading schemes and there is no carbon tax. Yet, this could change and we wanted to be prepared," says Ayako Kohno, from the Corporate Communication Center, who drove the *CEV* road test at Hitachi Chemical.

Using the European market rate for carbon in conjunction with *CEV*, the company was able to quantify the economic value of its carbon dioxide emissions and the potential cost to offset them.

Enhancing social and economic benefits

EDP, an electrical utility headquartered in Portugal, has used *CEV* to help ascertain an environmental baseline at one of its hydropower sites – as required under the EU Environmental Liability Directive – and to compare social versus corporate benefits of different watershed management scenarios.

"Companies are under pressure to reduce their operational costs," says Sara Fernandes, senior corporate staff member for sustainability at EDP. "We wanted to see how we could cost-effectively enhance social and corporate values simultaneously."



The WBCSD has identified 10 reasons why companies should awaken to the opportunities ecosystems offer to business:

1 **Improve business decision making**
2 **Capture & price new income streams**
3 **Save costs**
4 **Reduce taxes**
5 **Sustain revenues**
6 **Revalue assets**
7 **Investigate new goods & services**
8 **Assess liability & compensation**
9 **Measure company & share value**
10 **Report performance**

Source: *Corporate Ecosystem Valuation, Building the business case*, 2009

Creating local biodiversity and ecosystem service benefits

In support of a request to expand an existing quarry in the UK, Aggregate Industries UK, a member of the Holcim Group, proposed to create a mix of wetlands for wildlife habitat as well as a lake for recreational use, following mineral extraction.

The *CEV* road test concluded that the proposed wetlands – covering roughly 38 hectares – would deliver net benefits to the local biodiversity of about USD 2 million, in present value terms.

"The study further showed that the costs of ecosystem restoration and aftercare were low compared to both the economic benefits of wetland restoration and the financial returns from sand and gravel extraction," says Delia Shannon, Biodiversity Manager at the company.

Incorporating ecosystem valuation into business decisions

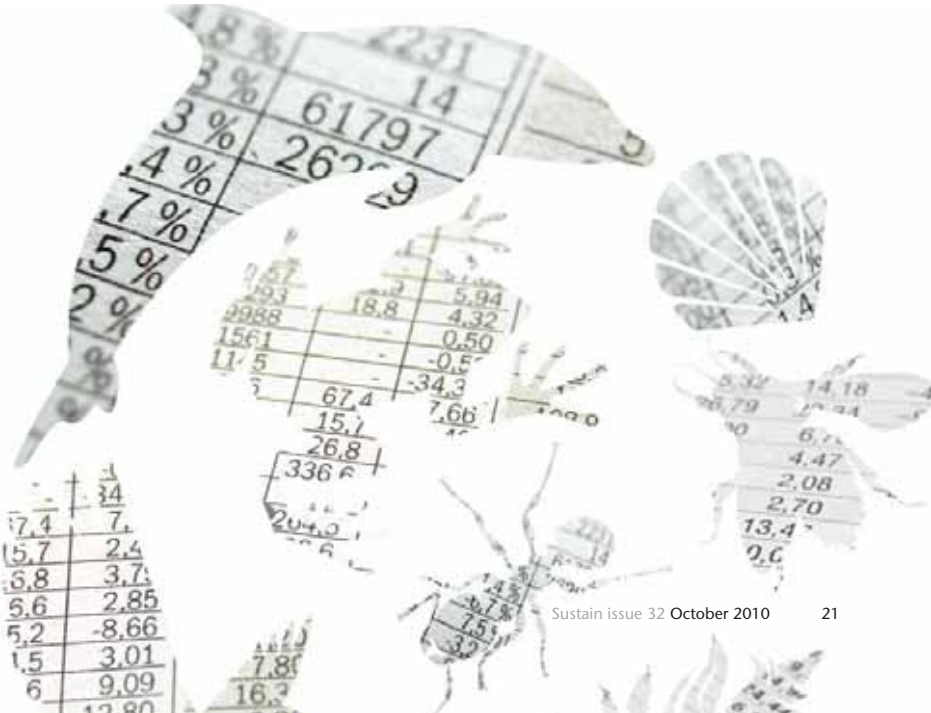
GHD, the global consulting company, working with two major water utilities in Australia, used the *CEV* to assess the benefits of protecting and reinstating ecosystem services in catchments to improve water quality rather than investing in conventional water treatment methods.

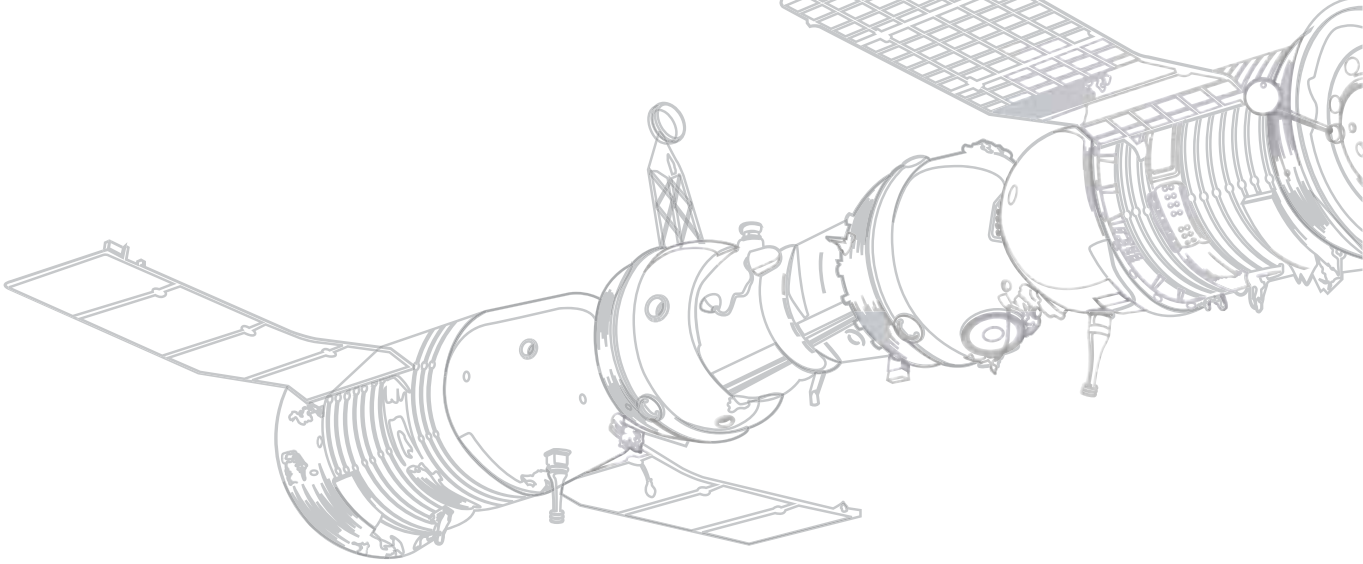
"The road test enabled our client to incorporate ecosystem valuation into business planning, accounting systems and decision making," says Peter Sutherland, Business Leader Water Resources at GHD.

The way forward

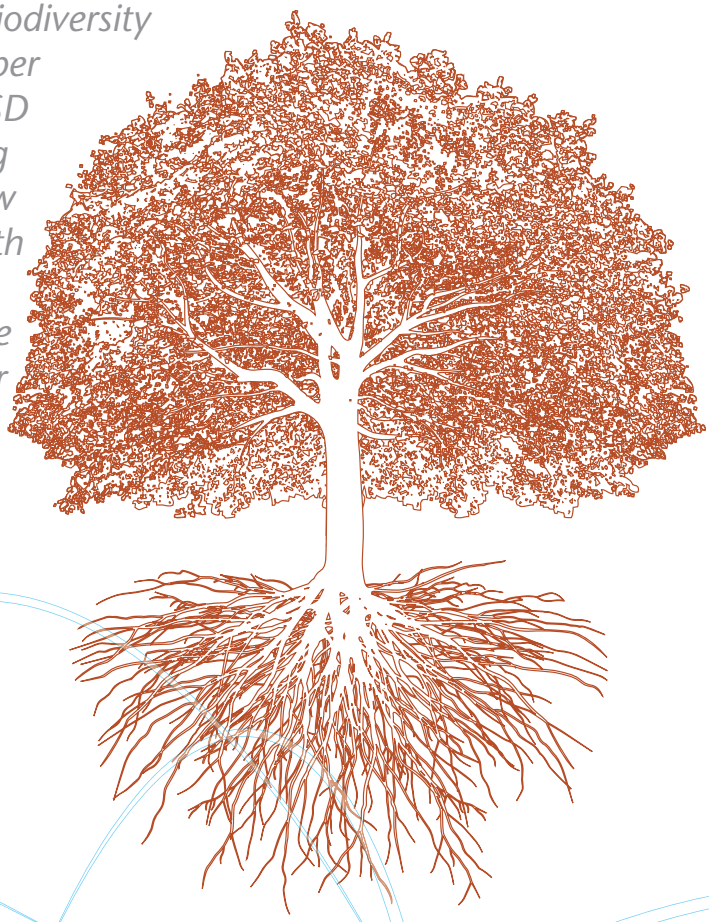
Corporate Ecosystem Valuation is a process, not the end point. Therefore, road-testing the *CEV* guide is a journey where each of the participating companies has taken its own route in bringing ecosystem values closer to their business.

The WBCSD's upcoming *Corporate Ecosystem Valuation* guide, to be released at the beginning of 2011, will feature more road test examples and business learnings. ❑





In our efforts to better understand, measure and manage biodiversity and ecosystems, a number of initiatives, with WBCSD involvement, are moving ahead. In particular, new technologies such as Earth Observation provide companies with accurate data to help them better manage ecosystems.



Other initiatives

Accounting from above

How space technology can support ecosystem management

By **Benjamin Koetz**, European Space Agency

The first view from space (figure 1) forever changed how humanity sees its home planet, pointing to its fragility while showing how human activities are affecting the environment (e.g., ozone depletion, deforestation, climate change).

Today, a fleet of satellites is continuously providing Earth Observation (EO) data on the state of the environment on a global scale. The main advantage of EO satellites is their capacity to measure and monitor the planet's ecosystems and many of their provisioning services in an objective and transparent manner, consistent over space and time.

The ability to access historic observations in EO archives allows the establishment of baselines (e.g., forest cover in 1990 relevant for the REDD initiative — Reducing Emissions from Deforestation and Forest Degradation) and thus the ability to assess changes in ecosystems over time from a regional to a global scale.

In 2010, the Forest Stewardship Council (FSC) launched a project, funded by the European Space Agency (ESA), to provide independent and accurate geospatial data for the certification of sustainable forest management. These best practices, once established, should be extended to other accreditation standards in order to advance the forestry sector (see figure 2).

Depending on the surface type, satellites are able to observe the Earth's land cover, amount and status of vegetation as well as ocean color and sea surface temperature. Ecosystems and their changes, such as deforestation, coral bleaching, land degradation and pollution, are already being surveyed by EO monitoring systems (see figure 3).

How can companies benefit from Earth Observation?

In the business context, EO is a cost-effective and objective approach to inform decisions around environmental resources such as for crop and water management, forest and biodiversity monitoring, renewable energy and extreme weather events.

Today, companies are using EO for a number of purposes including:

- Assessing their impacts on ecosystems
- Tracking ecosystem changes
- Monitoring ecosystem restoration and rehabilitation activities
- Outlining topographical boundaries
- Reporting environmental performance

A new generation of EO satellite missions called the 'sentinels' will be launched in 2012 as a joint European Commission-European Space Agency initiative. They will bring enhanced spectral, temporal and spatial capabilities and provide observations for operational services under an open and free data policy agreement for the next 20 years. ❑

Benjamin Koetz is Earth Observation Engineer, Applications and Future Technologies Department, European Space Agency: www.esa.int

Figure 1 Picture taken by Apollo 8 crewmember Bill Anders on December 24, 1968, showing the Earth rising above the lunar surface: "We came all this way to explore the moon, and the most important thing is that we discovered the Earth."

Source: www.hq.nasa.gov

Figure 2 Spatial landmap
Read more: www.fsc.org

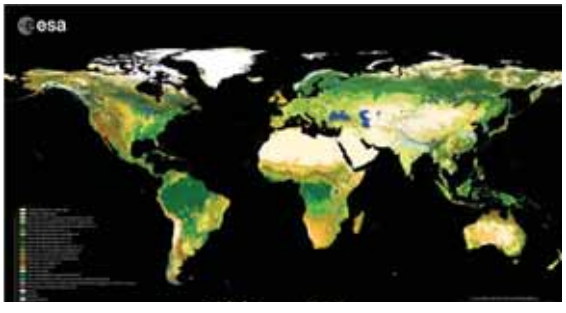


Figure 3 Globally consistent land cover map at 300 meter resolution for the year 2005. Updates of the GlobCover map in a frequency of 5 years are foreseen. (Map courtesy of GlobCover team)

Learn more about Earth Observation: www.eomd.esa.int

Agus Setyarso and Juan Carlos Rueda; two participants at The Forest Dialogue, 2009

REDD-plus finance

Reducing Emissions from Deforestation and Forest Degradation in Developing Countries

Generating consensus through dialogue

By **Stewart Maginnis**, IUCN and **James Griffiths**, WBCSD

According to *The Economics of Ecosystems and Biodiversity*, we lose between USD 1.9 to USD 4.5 trillion per year of natural capital due to deforestation. The creation of REDD-plus markets under the United Nations Framework Convention on Climate Change (UNFCCC) for the carbon sequestration and storage services of well managed forests in developing countries is the first substantive attempt to created a global market place for ecosystem services.

In 2009, The Forests Dialogue (TFD) organized a set of dialogues focusing on the financial architecture of REDD-plus. The meetings produced recommendations that directly informed policy makers and anchored the voices of forest stakeholders into the global REDD-plus debate. TFD is an informal but influential platform for forest stakeholders to address challenges in the forest sector.

The inclusion of the broad scope of forest mitigation options as listed in the Bali Action Plan is now widely recognized as essential for the international community to achieve atmospheric stability with a fast-track pathway toward 2020. REDD-plus should ensure reduced emissions from deforestation and forest degradation through forest conservation and restoration, and the sustainable management of forests. While the terms of reference of a REDD-plus agreement are still under negotiation at the UNFCCC, continuing debates indicate the persistence of considerable areas of disagreement.

Given the complexity of forest issues and interests, TFD's accomplishments in generating consensus language among disparate forest stakeholders are remarkable. The widely acclaimed *Beyond REDD-plus* report, which was the outcome of a stream of dialogues in which over 275 forest stakeholders took part during 2008 stands witness to this. In 2009 TFD organized a set of dialogues on REDD-plus finance. Discussions between stakeholders across business, environmental and scientific sectors, as well as indigenous peoples and forest-based communities, culminated in recommendations for policy makers that were published in October this year, at the UNFCCC meetings in Bangkok.

Participants stressed the need for REDD-plus to generate demonstrable emissions reductions in an efficient, effective and equitable way, while safeguarding atmospheric, social and environmental integrity. There was strong support for a phased approach, which allows countries to embark on early-day preparatory activities that focus on building country-specific frameworks to identify and tackle the drivers of deforestation. These REDD-readiness phases should focus on governance reforms and capacity-building. The clarification of land, carbon and tenure rights, capacity-building and the strengthening of forest law enforcement are essential components. The rights of indigenous peoples and local communities must be recognized and developed in all phases.

James Griffiths' working group in Gland

The REDD finance dialogue created an operational framework in the form of a matrix with requirements for key outcomes, safeguards and financial arrangements for each of the three stages of the phased approach: readiness, policies and measures, and performance-based payments. The phased approach allows financial arrangements that move beyond the 'funds-versus-markets' discussions when countries develop portfolios for funding. Early readiness phases could be supported through bilateral and multilateral funds, while later phases could gradually link to voluntary or compliance markets for performance-based payments. The idea of 'triggers' was developed in this context with performance-based proxies that can facilitate the progress of countries from one phase to the next.

The importance for policy makers of recommendations and consensus language from forest stakeholders on REDD-plus can't be underestimated. The TFD process to date is a reminder of the importance of good forest governance. Without this, we won't conserve let alone enhance the critical ecosystem benefits that forests deliver – climate regulation, food, fibre, energy and water. So the starting point in any REDD-plus process needs to be sustained upfront investment in governance capacity-building, based around good stakeholder engagement processes and shared decision making. ❑

This article first appeared in the 41st issue of IUCN's arbor*vitae* newsletter (spring 2010)

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James Griffiths is Managing Director, Ecosystems, Water and Sustainable Forest Products Industry, World Business Council for Sustainable Development, WBCSD: www.wbcsd.org

The UN REDD, program poster campaign

Business responding
to the Convention on Biological Diversity

Cook Composites and Polymers Co, wetland restoration, USA

East side of site parallel to Harris County drainage system

Center of site between AST and process areas

North side of site parallel to Holmes Road

Houston Site, NW

As part of its efforts to demonstrate best business practices around sustainable ecosystem management and use, the WBCSD has compiled over 30 case studies highlighting how companies are supporting one or more of the objectives of the Convention on Biological Diversity (CBD).

The three objectives of the CBD include:

1 The conservation of biological diversity
2 The sustainable use of its components
3 The fair and equitable sharing of the benefits arising out of the utilization of genetic resources

Companies have a strong interest in maintaining ecosystem integrity as they depend on many ecosystem services for their daily operations.

The examples below demonstrate that achieving business goals and the objectives of the CBD can go hand-in-hand.

Conserving biodiversity – Bayou ecosystem restoration to improve the performance of an industrial site

On its industrial site in Houston, US, Cook Composites and Polymers Co. (CCP) is faced with frequent storms and associated flooding. To reduce exposure to the flooding and its financial consequences, CCP supported by the US BCSD has weighed the options of either building a new storm water storage tank or restoring a small degraded adjacent wetland.

The wetland restoration option proved to be the most cost-effective solution and plant biodiversity is expected to increase by approximately 30 species. As part of the ongoing restoration activities, CCP is also engaging the local community thereby strengthening its social license to operate.

The sustainable use of biological diversity – Water supply in the automotive industry

Car manufacturer Volkswagen found that its operations in Mexico were highly exposed to water scarcity risks and responded by initiating a multi-stakeholder reforestation program in 2008, in the Puebla Tlaxcala region surrounding its factories.

As a result of this program, 300,000 Hartweg's Pines (a native Mexican tree) were planted over two years and extensive rain water infiltration projects were carried out. The forecasted result was an additional 1,300,000 additional cubic meters of water per annum fed into the region's aquifer. That is significantly more groundwater than Volkswagen in Mexico itself consumes every year. Over the long term, the planted trees will also help sequester carbon and improve the living conditions of the native fauna. The additional groundwater will help secure Volkswagen's operations in the region as well as benefit the local communities.

Fair and equitable sharing of benefits arising from the use of biodiversity – Use of traditional knowledge and natural ingredients in cosmetics

Natura is a cosmetics company strongly relying on the natural ingredients it sources in its country of origin, Brazil. It also depends on local communities' traditional knowledge as a source of innovation, to develop new products with differentiated qualities and position its brand.

To secure the supply of natural ingredients and future innovation, Natura has engaged in several partnerships with local communities, who in return for providing access to the natural ingredients and their traditional knowledge, receive direct payments and benefits from other investments made by Natura in local development.

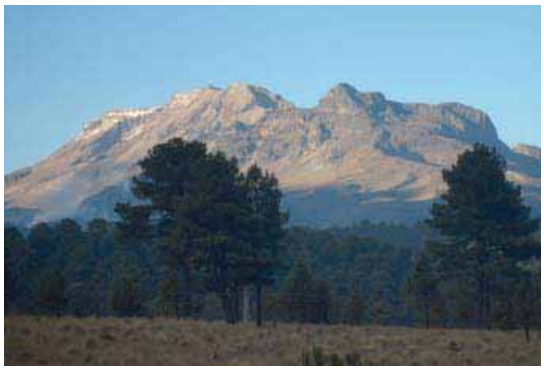
This in turn not only helps to improve local livelihoods, but also to enhance biodiversity conservation through sustainable resource management. For Natura, sourcing natural ingredients in a fair and equitable way is critical as it brings additional value to the brand's products, and consequently strengthens consumers' loyalty to the brand.

The examples above, drawn from a new WBCSD publication, demonstrate that business is already part of the biodiversity and ecosystem solution and can deliver tangible conservation outcomes through its own actions. ❑

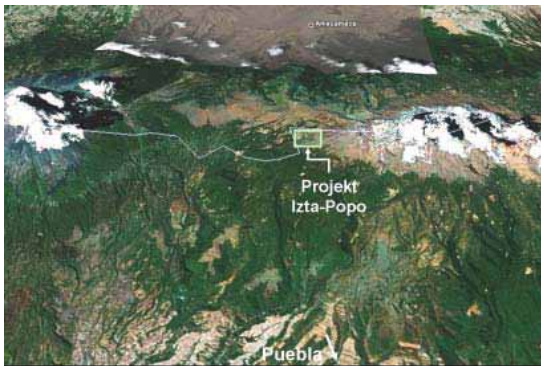
Download *Responding to the Biodiversity Challenge - Business contributions to the Convention on Biological Diversity*: www.wbcsd.org

Volkswagen, reforestation project, Mexico

View of reforestation area

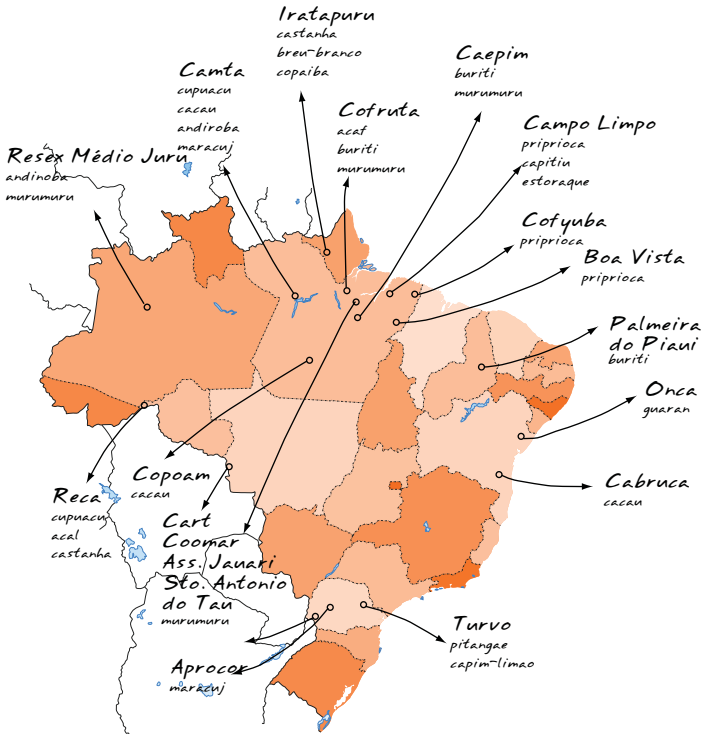


Reforestation project area



Pine seedling for reforestation

Natura, ingredient sourcing, Brazil



Building bridges
between biodiversity & business

The WBCSD-IUCN cooperation on business and biodiversity goes back nearly 15 years, starting with the release in 1997 of a private sector guide. This cooperation was strengthened by an MoU in 2005 based on annual joint work programs, renewed for four years in 2009.

By **Juan Marco Alvarez**, IUCN

Since the creation of the Business and Biodiversity Program in 2004, IUCN has been actively engaged in private sector-related issues with the objective to influence market transformation and change operational behavior.

IUCN has long held the position that because of the interaction between companies and biodiversity and considering that business operations have the potential to significantly affect biodiversity, business should be encouraged to avoid, minimize and mitigate such impacts. Yet, the role of business should not be limited to reducing its environmental 'footprint.' It also has the responsibility and potential to positively contribute to the CBD objectives.

A valuable partner for business

IUCN can be a valuable partner to business. Companies mostly appreciate IUCN's support in:

- Convening multi-stakeholder discussions around critical and contentious issues
- Providing state-of-the-art science on species, biodiversity, ecosystems and livelihoods
- Outreaching and networking with different constituencies
- Accessing the policy arena (advice to international conventions such as the Convention on Biological Diversity (CBD), governments and the United Nations)

The combination of these factors makes IUCN a valuable partner for creating sector-wide standards, managing independent expert panels, providing input to companies' biodiversity policies and strategies, and exploring new tools for the integration of biodiversity in business operations (such as biodiversity offsets).

Initially, we have focused on the large footprint sector, such as oil and gas, mining, port construction, and the cement and aggregates sector (i.e., Shell, International Council of Mining and Metals, Rio Tinto, Dhamra Port and Holcim) with goals that include enhancing biodiversity management and raising biodiversity performance standards. With the mining sector in particular, we have been involved in improving the industry's performance in biodiversity conservation, with a focus on reducing the negative impacts of its operations and enhancing the industry's contribution to the environment. A clear example of this is our current work with Rio Tinto in advising and monitoring their commitment for net positive impact on biodiversity.

IUCN member organizations, NGOs in particular, are also engaging business in innovative ways. Rainforest Alliance (RA) is a great example of a conservation organization whose work focuses on changing agriculture business and consumer behavior through third-party certification. Together with other IUCN organizations in Latin America, they have developed a standard with rigorous social and environmental criteria. Companies such as Mars, Chiquita Brands, Kraft and Unilever are strongly committed to sourcing RA certified products, creating social and biodiversity-related benefits on the ground.

An active contributor to intergovernmental processes

As well, IUCN has actively been promoting the business and biodiversity agenda in international fora, such as the Kobe Dialogue and the Third Business and Biodiversity Challenge Meeting, held in Jakarta in late 2009. IUCN not only played a key role in organizing both events, together with the CBD, but also participated with presentations on business and biodiversity partnerships.

Most recently, IUCN hosted a workshop with companies, including WBCSD members, to discuss the IUCN position paper on the new CBD Strategic Plan as well as provide input to the relevant post-2010 targets and agenda items in the upcoming 10th Conference of the Parties (COP 10). ❑

Juan Marco Alvarez is Director, Economy and Environmental Group and Head, Business and Biodiversity Program, IUCN, International Union for Conservation of Nature: www.iucn.org

Effective biodiversity and ecosystem, policy regulation

A business perspective

By **Chris Knight** and **William Evison**, PwC

In a new Policy Brief developed with the support of PricewaterhouseCoopers, the WBCSD calls on governments to set realistic targets for business to make further progress toward ecosystems and biodiversity protection.

Regulatory change is long overdue

In response to the emerging reality of natural resource limits, ecosystem degradation and biodiversity loss, business must anticipate new policies and regulatory frameworks. We are already seeing changing mindsets and expectations among customers, shareholders, investors, NGOs, media and regulators around acceptable levels of business impacts on, and use of, ecosystem services. Companies will increasingly be called upon to demonstrate sustainable operations and environmental practices.

Yet, in order for business to fully deliver on its role as ecosystem steward, at the scale needed, the right environmental policies and regulations must be in place. This will lead to a level-playing field.

Regulatory options recommended by TEEB

There are a number of proposals in the area of biodiversity and ecosystems policy currently receiving attention from policy makers.

The Economics of Ecosystems and Biodiversity (TEEB), for instance, makes the case for integrating the economics of biodiversity and ecosystem services in corporate and governmental decision-making. Analysis from the study identifies existing and emerging solutions to the global biodiversity crisis. *TEEB* advocates:

- **Rewarding benefits through payments and markets**. Payments for ecosystem services (PES schemes) can work on a local or global basis (from local water provisioning to REDD-plus proposals for Reduced Emissions from Deforestation and Degradation, as well as effective afforestation and reforestation conservation.
- **Reforming environmentally harmful subsidies.** The objective to reduce so called 'perverse' or 'harmful' subsidies is widely accepted by many governments around the world. Transparency on subsidies is a key precondition for well-informed public debate and can help to define a clear plan for reform, as well as provide the motivation to do so.
- **Addressing losses through regulation and pricing.** Many threats to biodiversity and ecosystem services can be tackled through robust regulatory frameworks that establish environmental standards and liability regimes. These perform best when linked to pricing and compensation mechanisms based on the 'polluter pays' and 'full cost recovery' principles, to alter the status quo which often leaves society to pay the price.
- **Adding value through protected areas.** The global protected area network covers around 13.9% of the Earth's land surface, 5.9% of territorial seas and only 0.5% of the high seas. Nearly a sixth of the world's population depends on protected areas for a significant percentage of its livelihoods. Increasing coverage and funding, including through PES schemes, would leverage their potential to maintain biodiversity and expand the flow of ecosystem services for local, national and global benefit.
- **Investing in ecological infrastructure.** Up-front investments in maintenance and conservation are almost always cheaper than trying to restore damaged ecosystems. Nevertheless, the social benefits that flow from restoration can be several times higher than the cost.

Creating the right environment for change

Simply put, it is crucial to establish a global policy framework that supports the conservation of biodiversity and ecosystem services alongside the realization of new business opportunities.

In a Policy Brief launched at COP 10 in Nagoya, the WBCSD and its member companies advocate that regulation should leverage market forces, thus making the inclusion of decision making around biodiversity and ecosystem strategy more intuitive. Business needs clear guidance in the form of realistic targets which are predictive, transparent and consistent, but also create appropriate incentives for sustainable use. Finally, policy makers should develop regulation which secures property and tenure rights, whether public, private, community or shared. ❑

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