

ALSO IN THIS ISSUE: BIODIVERSITY OFFSETS



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agribusiness, forestry, construction, financial services

construction, **financial** services, ocean industries, oil & gas,

financial services, **ocean** industries, oil & gas, biotrade, tourism

**COP-9: BUSINESS
and BIODIVERSITY
in BONN**

From the Secretariat

By AHMED DJOGLAF



Ahmed Djoglaf at the Business and Biodiversity High Level Conference (Lisbon, November 2007).

Photo courtesy of IUCN/Wiebke Herding

In March 2006, at their eighth meeting (COP-8), Parties adopted the first decision under the Convention focusing exclusively on business engagement. The message was as clear then as it is today. The Convention will not be implemented without an increased understanding and participation of the business community.

This message has been relayed in several critical policy fora, as witnessed, notably, by the inclusion of 'business and biodiversity' in the Potsdam Initiative, the Biodiversity Communication of the European Commission, and the Biodiversity Agenda of the EU Presidencies Germany, Portugal and Slovenia. I believe that the study on valuing the economic cost of biodiversity loss, which has just begun under the able leadership of Pavan Sukhdev, will go a long way to illustrate the business case for biodiversity.

Another sign has been the adoption, shortly after COP-8, of the Global Environmental Facility's *Strategy to Enhance Engagement with the Private Sector*.

Likewise, several major events have taken place, notably in Portugal (last November) and in Germany (in April of this year). Several contributors to this issue provide feedback on these events.

Germany, as host to the COP, has been particularly active in mobilizing the business community on biodiversity. This work will be profiled on 27 May and again during the High Level Segment, on 29 May. An itinerant exhibition throughout the COP will also be showcasing the work of the signatory companies to the German Business and Biodiversity Initiative.

Another clear signal of this booming agenda has been the number of requests the Secretariat has received for business related side events at COP-9. In this regard, I am also delighted that the Secretariat is organizing – with colleagues at UNEP and UNU-IAS, and others – a Business and Biodiversity Forum.

In this issue of the newsletter, we provide an overview of business and biodiversity in order to help guide the discussions on business engagement tabled for COP-9. This should be read in conjunction with the formal *Note* prepared on the subject [1].

The issue contains four sections: (1) a general update on business and biodiversity (e.g. what governments are doing at the national level; tools to assess a company's dependency on ecosystem services; updates from NGOs on business engagement); (2) a sector by sector overview of recent initiatives, with a particular emphasis on agribusiness, given this year's theme for the International Day for Biological Diversity (IBD); (3) biodiversity offsets – one of the instruments explicitly highlighted in decision VIII/17; and (4) Access and Benefit-sharing (ABS).

We launched this newsletter in October 2006 in order to accompany the implementation of decision VIII/17. Over the course of the last year and a half, we have received positive feedback from Parties, businesses and others. During the COP, we will be carrying out an informal survey on how to improve this product. I would like to invite you to take part in this exercise.

[1] UNEP/CBD/COP9/21/Add.1

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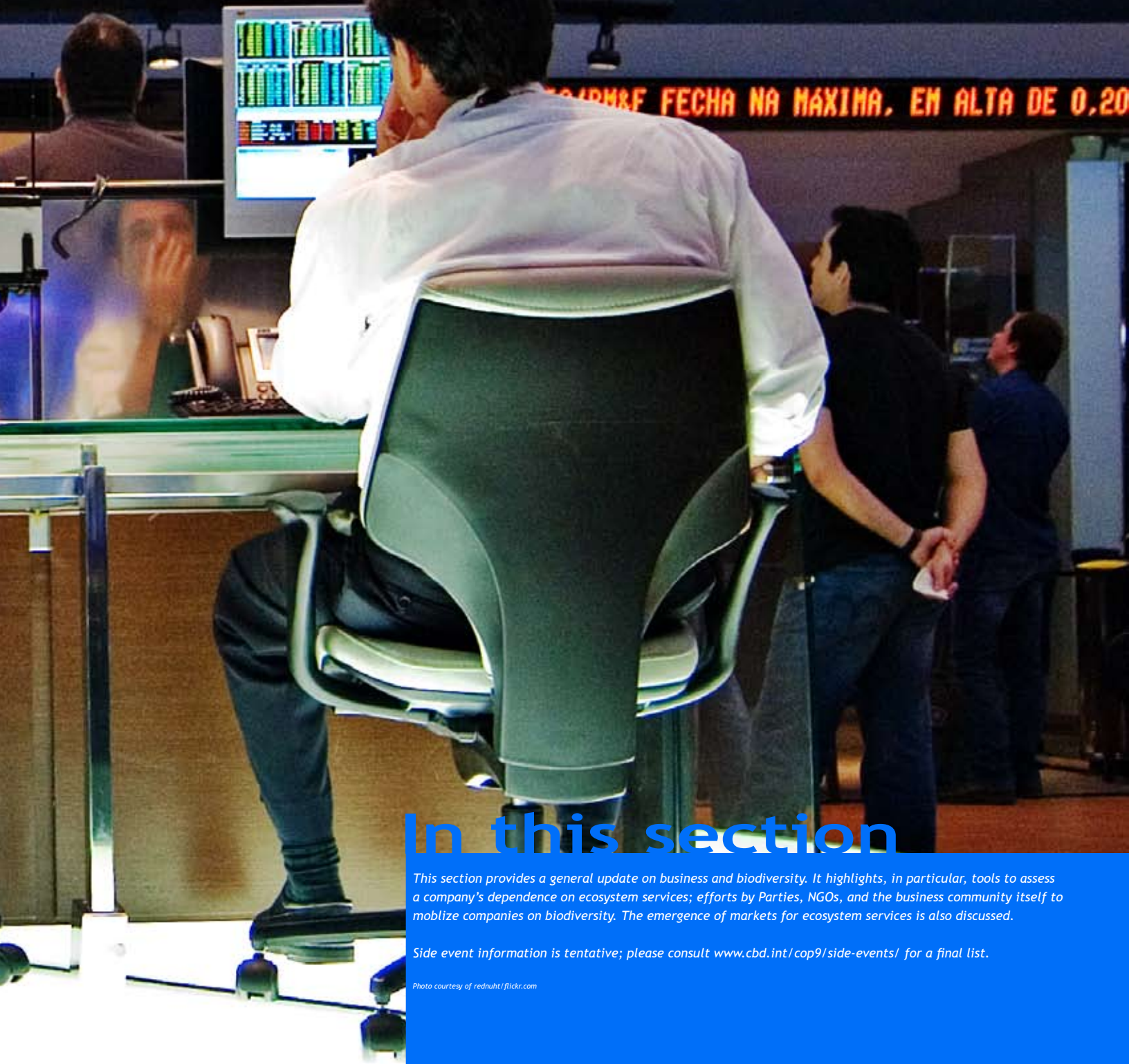
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7.12	1.1	168	KMP14	13.80	1.0	171	WCEB4	72.30	1.0	76	PTM14	88.00	1.4	40	EUI
45.20	0.2	202	#SDIA4	8.75	1.1	588	#RIBV4	1152.47	0.3	246	#PTIP4	25.54	0.5	128	STB
48.22	0.3	379	SUZ65	21.40	0.4	153	#CGRS5	420.00	0.9	103	#TCSL4	7.33	3.5	1228	TRN
7.05	1.4	11	#TRPL4	30.90	0.9	294	#CPLE6	25.11	0.4	454	TLPP3	52.60	3.1	28	#USD
40.89	0.1	608	UBER4	8.14	1.2	10	#CRUZ3	44.70	2.5	228	#THRS5	47.59	1.2	204	UAR
52.00	1.7	4	UGPA4	63.00	0.2	235	#CSNA3	88.10	0.4	927	#THCP4	4.37	0.2	179	
9.60	4.0	2	UNIP6	1.79	1.1	134	CTHM4	331.00	0.6	46	#THLP4	33.60	2.0	1204	RTIU
79.01	1.1	706	#VALE3	82.19	0.7	821	GETI4	69.20	0.2	38	TNLPE36	0.22	35.2	215	DUF6
11.18	1.6	870	#VALE5	69.85	0.2		LANE4	129.63	0.5	253	#USIN5	96.00	0.0	974	GPIU
6.32	1.1	232	#UCPA4	40.80	0.2		PETR3	51.58	0.8	868	UAGU4	2.65	2.2	141	TEFO
16.50	0.9	3	UGOR4	1.24			#TR4	45.60	1.0	3201	#VIU04	9.15	2.2	1545	MSCH



In this section

This section provides a general update on business and biodiversity. It highlights, in particular, tools to assess a company's dependence on ecosystem services; efforts by Parties, NGOs, and the business community itself to mobilize companies on biodiversity. The emergence of markets for ecosystem services is also discussed.

Side event information is tentative; please consult www.cbd.int/cop9/side-events/ for a final list.

Photo courtesy of reduht/flickr.com

Business: a key player in coping with the biodiversity challenge

By HUMBERTO D. ROSA



It is now widely recognized that human activities are the cause of a severe reduction of our planet's biological diversity. It is incumbent upon us to review the way we manage natural resources, and to do our utmost to preserve the genetic make-up of our planet and its diversity of species and ecosystems.

Despite the claim that biodiversity should be protected on ethical grounds, just on the basis of its inherent or intrinsic value, there are also strong instrumental reasons for humans to preserve nature. Our own species and our civilizations depend on the complex web of interactions that occur in natural ecosystems; biodiversity is a source of resources and services that are central to our economies; the destruction of species and habitats has an enormous economic impact, albeit difficult to quantify. Even if this is not immediately apparent, the truth is that the loss of biodiversity damages human interests at large and economic interests in particular.

The strong business case to move towards a path of sustainable use of natural resources and the sense of urgency in biodiversity conservation are becoming increasingly obvious. Similarly, it has become painfully evident that governments and policy makers alone cannot cope with the scale of the biodiversity crisis. This is why, on the second half of 2007, the Portuguese EU Presidency promoted the European Business and Biodiversity Initiative as one of its environmental priorities. This initiative, which is supported by the European Commission, aims at reinforcing the links between business and biodiversity through the promotion, benchmarking, recognition and consistency of the different partner-



ships developed at local level, and engaging business stakeholders in the conservation of biodiversity.

Competitive advantage

We noticed that an increasing number of business leaders are willing to take into account the importance of biodiversity in their decision processes, and are looking for guidance on how to act. We believe that in most cases this trend is driven by a genuine understanding of the competitive advantage gained from biodiversity conservation and the sustainable use of biological resources, rather than merely by corporate image strategies.

The High-Level Conference on Business and Biodiversity, held in Lisbon on 12-13 November 2007, joined together 400 representatives of over 150 companies and promoted in-depth discussions that brought further definition to the initiative [1]. The meeting's conclusions – the Message from Lisbon on Business and Biodiversity – recognized the need to promote the incorporation of biodiversity strategies in the business sector as well as awareness among consumers, and to offer information and expertise to business, to assist companies in shaping their commitments to biodiversity.

The impact of the business sector on biodiversity is huge, both as a user of ecosystem services and as a contributor to ecosystem change. The impact of biodiversity loss on the business sector has a comparable scale. It is therefore clear that business has an essential role to play in addressing the challenge of biodiversity loss.

[1] www.countdown2010.org/business

Humberto D. Rosa is Secretary of State for Environment, Portugal.

“It has become painfully evident that governments and policy makers alone cannot cope with the scale of the biodiversity crisis”

Humberto D. Rosa

“This global support, in the form of survey results, data and advice, is of utmost importance for the establishment and sustainable impact of the study results”

Mark Schauer

The Economics of Ecosystems & Biodiversity (TEEB) study aims at:

- Raising awareness amongst decision makers, notably politicians and the business community, by describing the cost of policy inaction and the continued non-sustainable use of ecosystem services and biodiversity.
- Undertaking a meta-analysis of valuations of ecosystems and biodiversity, to provide a comprehensive reference document which covers a matrix of all major biomes, material services (flows) and values (stocks).
- Engaging important end-user groups, including business.
- Producing timely reports which will present the meta-analysis in the form of a recommended framework, supported by a definitive methodology and examples to be presented from COP-9 onwards, in various interim reports. An extensive final report is due at the end of 2009.

the Environment. Discussions on the topic have been initiated through several meetings and the partners furthermore received help from numerous sources and expert.

The team has received more than a hundred studies for review and inclusion in the study, from various authorities and organisations around the world. This global support, in the form of survey results, data and advice, is of utmost importance for the establishment and sustainable impact of the study results.

The study is being coordinated by the renowned Indian economist Pavan Sukhdev. Pavan Sukhdev is Managing Director and Head of Deutsche Bank's Global Markets business in India. He is founder and now Chairman of Global Markets Centre (GMC), Mumbai, the global division's dedicated 'front-office off-shoring' hub, a market first of its kind. He is also Founder-Director of the 'Green Accounting for Indian States Project', an initiative of the Green Indian States Trust (GIST) to set up an economic valuation and national accounting framework to measure sustainability for India, including significant economic externalities [1].

He is assisted in his task by an advisory board, which consists of prominent expert members, including from business.

The report of the first phase of the study will be presented by Commissioner Dimas and Minister Gabriel at the High Level Segment at COP-9. This will be an important platform for presenting and discussing further steps of the study.

[1] www.gistindia.org

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Photo courtesy of Michael Menefee (www.flickr.com/photos/fortphoto/)

Assessing the economic cost of biodiversity loss

By MARK SCHAUER



The goals of conservation and sustainability will only be achieved if the main drivers of ecosystem and biodiversity loss are actually addressed through appropriate intervention and response based on credible valuations.

Defective compass

With this in mind the European Commission and the German Federal Ministry for the Environment have jointly initiated a global study on the economic costs of the loss of biodiversity, thereby following a decision of the G8+5 Ministers for the Environment in Potsdam, Germany, in spring 2007. The purpose of the study, which is named The Economics of Ecosystems & Biodiversity

(TEEB), is to prepare a valuation toolkit for ecosystem services and biodiversity tailored to ensure successful end-use by the main economic agents, including business, who are impacting biodiversity and ecosystem services (see box, above). Society must urgently replace its defective economic compass to ensure development and conservation of ecosystems and biodiversity on a global scale.

The purpose of TEEB will be not only to produce and publish credible valuations, but also to pro-actively identify and engage key user groups for the use of its valuations. Governments and companies will be encouraged to use the TEEB-methods and values as plug-in into an improved decision-making framework.

Evidence

With the help of a number of partners (e.g. European Environment Agency, IUCN, WCMC, Federal Ministry for the Environment of Germany and the European Commission), a framework and a working structure for the study have, so far, been established. The team has collected and sifted through evidence from existing studies, while initiating a number of independent studies financed by the European Commission and the German Ministry for

Quel système d'incitation pour les entreprises en vue de la conservation de la biodiversité en France ?

Par SARAH HERNANDEZ et HÉLÈNE SOUAN

Les années 70 et 80 ont marqué un tournant dans la prise en compte de l'environnement par l'ensemble des acteurs économiques. En France, la loi fondatrice de protection de la nature (loi du 10 juillet 1976) introduit le principe de l'intégration de la biodiversité et de l'environnement en amont des projets d'aménagements ou des travaux publics ou privés. C'est le premier volet d'une série d'outils juridiques qui ont eu pour résultat le renforcement de la protection de la biodiversité remarquable ou dite « exceptionnelle », soit celle des espèces et habitats naturels protégés au niveau national et européen. Sous l'impulsion des associations de protection de la nature, de la communauté scientifique et des pouvoirs publics, le monde des entreprises s'est inscrit dans cette mouvance, contraint par la réglementation mais poussé aussi, par la recherche d'une plus grande acceptation de ses projets. Mais au-delà de l'acceptabilité, le tournant observé dans le comportement des entreprises vis-à-vis de la diversité biologique s'explique également par des opportunités économiques et financières liées à sa gestion. Il ne s'agit plus de produire en tenant compte des contraintes environnementales mais de faire de l'objectif environnemental un des facteurs de la performance des entreprises. La performance environnementale peut être favorisée par un cadre institutionnel permettant la participation active des acteurs sociaux et économiques aux décisions publiques relatives à la conservation de la biodiversité.

Mobilisation

La Stratégie française pour la Biodiversité (SNB) adoptée en 2004 et plus récemment, le « Grenelle de l'Environnement », large consultation nationale de l'ensemble des acteurs économiques et de la société civile dans le domaine de l'environnement, a permis de renforcer la mobilisation de tous les acteurs, publics comme privés, et le développement de nouveaux partenariats pour définir les orientations de politique pour les prochaines années. Des actions en matière d'information et de communication ont été engagées pour aider, inciter et orienter les entreprises dans la prise en

compte des impacts sur la biodiversité.

Dans le domaine de l'information, des actions ont été menées à l'échelon national, permettant aux entreprises d'établir des partenariats de recherche visant la mise au point d'un système comptable d'évaluation des impacts sur la biodiversité et de valorisation de la contribution des services des écosystèmes à la production économique et industrielle. Dans le domaine de la connaissance, d'autres actions visent l'élaboration d'outils et des méthodes d'évaluation économique des biens et services liés à la biodiversité. Voici quelques-unes des activités menées jusqu'à maintenant :

- Le renforcement du lien entre les résultats de la recherche en biodiversité et leur appropriation par les secteurs économiques, est favorisé par la création d'une fondation scientifique pour la biodiversité dont les entreprises peuvent être partenaires et même co-fondatrices ;
- La création prochaine d'un observatoire de la biodiversité mettra à la disposition des acteurs privés des informations pertinentes sur l'état (de conservation) de la biodiversité ;
- Des documents d'information et de communication qui mettent en évidence l'importance de la biodiversité sur les sites d'activités industrielles [1] sont mis à la disposition des entreprises ;
- La production de guides méthodologiques sur la valorisation et l'évaluation économique de la biodiversité et de services écologiques associés ;
- Le renforcement du lien entre système d'information et d'évaluation de la biodiversité et la décision publique fait l'objet d'une analyse de la Commission nationale des Comptes et de l'Économie de l'Environnement (CCEE).
- Le portage d'un mécanisme international d'expertise scientifique sur la biodiversité (IMOSEB) permettant l'interface entre les décideurs et la connaissance scientifique en matière de biodiversité, est soutenu par la France ;
- La loi nationale relative aux « Nouvelles Régulations Économiques » (article 116) impose aux sociétés françaises cotées sur le marché réglementé, d'inclure dans leur rapport annuel « des informations sur la manière dont elles prennent en compte les conséquences sociales et environnementales de leurs activités ».

Les entreprises sont associées à ces différentes réflexions et participent de manière active en apportant leur savoir-faire pour alimenter de manière pragmatique les contributions émanant de la connaissance scientifique. Il faut noter le travail de l'Association Orée [voir pages 10-



Photo courtesy of omphe44/flickr.com

11 de ce numéro], du MEDEF (Mouvement des Entreprises de France), de l'AFEP (Association française des entreprises privées) et d'EPE (Entreprises pour l'Environnement) qui contribuent à la sensibilisation, la communication et l'expertise dans la relation 'entreprises biodiversité', de leurs membres. Le secteur du tourisme développe également des actions en vue de limiter la pression environnementale de ses activités (en intégrant notamment des critères environnementaux dans ses démarches de certification) et de participer à la préservation des sites naturels avoisinant les implantations touristiques.

Outils de marché

En dépit de toutes ces avancées, le recours aux mesures réglementaires reste prédominant, laissant entrevoir des progrès potentiels dans l'utilisation d'outils de marché pour la conservation de la biodiversité. Le ministère français de l'environnement a mis en place une commission économique de haut niveau, la Commission Landau [2], associant les secteurs économiques, les associations de conservation de la nature et les partenaires sociaux, pour apporter des recommandations sur l'opportunité d'utiliser des outils économiques et de marchés liés aux servitudes de conservation, aux marchés de compensation des dommages sur la diversité biologique, et à d'autres types de partenariats institutionnels ou de contrats sociaux permettant de capturer les bénéfices des services écologiques. En outre, des formes d'intéressement et d'incitation sont en cours d'analyse pour promouvoir l'investissement socialement responsable, destinées notamment aux gestionnaires des fonds d'épargne et des retraites. D'autres propositions vont dans le sens du développement d'un étiquetage environnemental et social des produits ou bien, de l'instauration d'un label d'entreprises

“Il ne s’agit plus de produire en tenant compte des contraintes environnementales mais de faire de l’objectif environnemental un des facteurs de la performance des entreprises” – Sarah Hernandez et H el ene Souan

responsables.

Le potentiel des outils financiers et de march e pour favoriser la conservation de la biodiversit e est une r ealit e d ej a examin ee par les entreprises, ainsi qu’en t emoigne la cr eation de la CDC Biodiversit e [voir pages 42-43 de ce numero]. Le m ec enat d’entreprise peut  egalement repr esenter une opportunit e financi ere pour les acteurs de la conservation de la nature.

Des actions et des orientations en mati ere de politique de conservation de la biodiversit e se mettent en place progressivement mais il reste encore un long chemin  a parcourir dont le succ es repose essentiellement dans la qualit e des partenariats entre tous les acteurs. La Convention sur la Diversit e Biologique, dans sa d ecision VIII/17 souligne la n ecessit e d’explorer de telles possibilit es. Des pistes d’am elioration sont toujours possibles. Elles pourraient aller dans le sens d’obligations de reporting plus pr ecises, de la d efinition d’indicateurs de performance environnementale ou de formes de certification.

[1] « La biodiversit e, un atout pour vos sites d’entreprises » - Association Or ee, Comit e fran ais de l’UICN, EpE (www.ecologie.gouv.fr/IMG/pdf/biodiversite_sit_ntreprise_web.pdf).

[2] Landau J.P. 2008. « Finance and Sustainable Development : opposition or partnership ? *Economica*.

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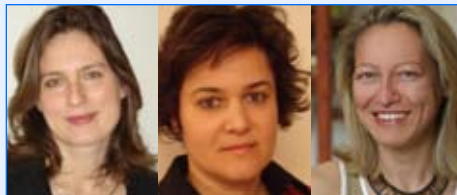
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Business and biodiversity: a perspective from three European NGOs

By BJELA VOSSEN, PAULA SILVA and ANAMARIJA SLABE



Our three organizations – Deutscher Naturschutzring (DNR, Germany), Quercus (Portugal) and Institute for Sustainable Development (Slovenia) – have started a project, funded by the Federal Agency for Nature Conservation and the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, to provide input into the development of the European Business and Biodiversity initiative. The latter is being implemented during the three Presidencies of Germany, Portugal and Slovenia.

Our project consists in organizing conferences and seminars to facilitate further discussion and collaboration between civil society, business and public authorities. The goal of the project is to develop NGO awareness on ‘business and biodiversity’, to prevent greenwashing and to build sustainable biodiversity partnerships.

In September 2007, we organized a seminar on ‘Civil Society, Business and Biodiversity’ in Lisbon to discuss the prospects and limits of the Business and Biodiversity Initiative. Different approaches, from regulatory to more market based approaches – such as biodiversity labels – were discussed. We drafted the ‘Lisbon Declaration of ENGOS on the Business and Biodiversity Initiative’ [1], which was distributed to participants of Business and Biodiversity High Level Confer-

ence, hosted by Portugal in mid November in Lisbon [2]. In the declaration, we state, in particular, the importance of developing guidelines as well as to set performance benchmarks for companies from relevant sectors.

In February 2008, in Ljubljana, the conference ‘Forest and Wood – Green Business Opportunities’ analysed biodiversity challenges in the forestry sector. Besides the goal to initiate concrete partnerships between NGOs and the forestry sector, the basis of those partnerships was discussed.

As part of the German contribution to the project, *Business and Biodiversity Between Greenwashing and Authenticity* was published in German in December [3].

The results of the whole project will be presented at the COP-9 on 28 May 2008, during a panel discussion at the Forum of Diversity.

[1] www.business-biodiversity.eu/uploads/Xq11E/Xq1E1xMeOF4_x4-xhP-7Q/LISBON_DECLARATION_OF_ENGOS_ON_BB.pdf

[2] www.countdown2010.org/business

[3] <http://www.eu-koordination.de/PDF/eur07-iii.pdf>

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The Corporate Ecosystem Services Review

By CHARLES ICELAND and MIKKEL KALLESOE



In the February issue of this newsletter, we introduced the Corporate Ecosystem Services Review (ESR), a tool designed to help managers proactively develop strategies to manage business risks and opportunities arising from their company's dependence and impact on ecosystems. We noted that rapid and extensive decline of ecosystem services throughout the world is highly relevant to business because company operations and ecosystems are inter-related.

Yet, many businesses currently fail to make the connection between the health of ecosystems and their bottom line, in part because many 'traditional' environmental management tools are not attuned to identifying ecosystem service-based risks and opportunities. Many of these tools are better suited to handle conventional issues of pollution and natural resource consumption. Most focus on environmental impacts, not dependence. Furthermore, they typically focus on risks, not business opportunities. As a result, companies may be caught unprepared or miss new sources of revenue associated with ecosystem change. The ESR is designed to fill this gap.

Features

The ESR has several features making it user-friendly:

- It offers a structured methodology (see summary of five steps in table, opposite page) to help companies understand their dependence and impact on ecosystems and the resulting business risks and opportunities in a coherent, structured manner.
- It leverages existing, relevant data that companies may have on hand, although ad-

ditional research and input are likely required.

- It has a simple design allowing managers to tailor it to meet their own needs and existing processes.
- It provides supporting tools and information to help managers throughout the review, including:
 - A complete list of ecosystem services, definitions, and examples;
 - A questionnaire and spreadsheet for assessing corporate dependence and impact on ecosystem services;
 - A framework and set of questions to guide the analysis of ecosystem service trends;
 - An extensive list and case examples of business risks and opportunities that might arise from trends in ecosystem services;
 - A framework to guide the development of strategies for addressing these risks and opportunities; and
 - Suggested data sources and case studies throughout.
- It directs managers to a number of issue-specific tools and resources if more detailed analysis is required.
- It has a website where managers can download supporting tools and data resources [1].

Business benefits

Road-test experience indicates that the ESR can provide a number of business benefits, such as:

- *Identifying new business risks and opportunities* arising from a company's dependence and impact on ecosystems and the services they provide. Because the ecosystem services framework is a new approach for assessing the inter-relationship between business and the environment, the ESR can uncover sources of risk and opportunity that traditional strategy development processes miss.
- *Framing and giving added urgency* to risks or opportunities previously identified by management. The ESR can yield new information that raises the profile of issues the company may have considered in the past and that are now worthy of greater attention.
- *Anticipating new markets and influencing government policies* that will emerge in response to ecosystem degradation. The ESR can help managers identify opportunities to participate in emerging ecosystem service-related markets such as payments for carbon sequestration, mitigation banking, and eco-labeling systems. It also can help managers prepare for new government regulations and participate in the

“Many ‘traditional’ environmental management tools are better suited to handle conventional issues of pollution and natural resource consumption. Most focus on environmental impacts, not dependence. Furthermore, they typically focus on risks, not business opportunities. As a result, companies may be caught unprepared or miss new sources of revenue associated with ecosystem change. The ESR is designed to fill this gap”

development of new public policies.

- *Strengthening existing approaches to environmental impact assessment.* The ESR can complement existing environmental management systems and due diligence tools in a number of ways. First, the ESR fills gaps these tools may not consider because the ESR evaluates a suite of environmental and business issues that traditional processes and tools do not address. Second, the ESR – or elements of it – can be directly integrated into a company's existing environmental due diligence tools. Third, managers can use the ESR to screen or prioritize which environmental issues to evaluate with existing tools.
- *Improving stakeholder relationships.* Many natural resource conflicts that companies face relate to the fact that stakeholders – communities, indigenous people, other industry sectors, nongovernmental organizations – value different services coming from the same ecosystem. The ESR can improve a company's understanding of these issues and identify options for better managing trade-offs.
- *Demonstrating leadership in corporate sustainability* by proactively addressing the degradation of ecosystem services. Several corporate and environment observers have identified this issue as the next big 'global environmental problem' that may garner political attention and impact business [2]. This issue is where climate change was 10 years ago and similarly is likely to grow to become a preeminent concern.

WBCSD/WRI side event at COP-9

26 May, lunchtime, BMVBS / room 0.121

Step		1. Select the scope	2. Identify priority ecosystem services	3. Analyze trends in priority services	4. Identify business risks and opportunities	5. Develop strategies
Activity		Choose boundary within which to conduct the ESR (a specific business unit, product, market, landholdings, major customer, supplier, etc.)	Systematically evaluate degree of company's dependence and impact on more than 20 ecosystem services. Determine highest "priority" ecosystem services – those most relevant to business performance	Research and evaluate conditions and trends in the priority ecosystem services, as well as the drivers of these trends	Identify and evaluate business risks and opportunities that might arise due to the trends in priority ecosystem services	Outline and prioritize strategies for minimizing the risks and maximizing the opportunities
Who is involved	<ul style="list-style-type: none"> Executive managers Manager(s) from selected scope Analysts Consultants (optional) 	● ●	●	● ●	● ● ●	● ● ●
Sources of input and information	<ul style="list-style-type: none"> In-house business managers and analysts Existing and new in-house analyses Local stakeholders Experts from universities and research institutions Millennium Ecosystem Assessment publications and experts Non-governmental organizations Industry associations Published research Other resources and tools 		● ● ●	● ● ● ● ●	● ●	● ●
End product		Boundary for ESR analysis	List of 5-7 "priority" ecosystem services	Short paper or set of data that summarizes trends for each priority ecosystem service	List and description of possible business risks and opportunities	Prioritized set of strategies
Estimated time*		1-2 weeks	2-3 weeks	4-6 weeks	1-2 weeks	2-3 weeks

* Estimates based on road tests and reflect one full-time equivalent. Time required to conduct an ESR will vary based on factors including the scope selected, availability of information, and number of staff allocated to gather information and conduct research and interviews.

Who should conduct a Review?

The Ecosystem Services Review generates most value when managers responsible for corporate strategy, business operations, and environmental performance collaborate. Managers can use or tailor the presentation available online [2] to make the case to colleagues about the value of conducting an ESR and educate them about the methodology. Companies can also opt to hire consultants to apply the ESR.

The ESR is a promising approach for companies to strengthen their ability to respond to a growing global environmental crisis. By accounting more fully for the dependencies and impacts of their business on ecosystem services, managers can better manage the associated risks and opportunities. In addition, by helping companies make the connection between healthy

ecosystems and their bottom line, the ESR can stimulate more sustainable business practices and support for public policies that protect and restore the ecosystems upon which we all depend.

[1] and [3] www.wri.org/ecosystems/esr

[2] See Millennium Ecosystem Assessment, 2005. *Ecosystems and Human Well-being: Opportunities and Challenges for Business and Industry*. Washington, DC: World Resources Institute; F&C Asset Management (formerly ISIS Asset Management), 2004. *Is Biodiversity a Material Risk for Companies?*

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Version 1.0 of the Corporate Ecosystem Services Review (published in March).

A composite indicator for analyzing a company's interdependencies with biodiversity

By JOËL HOUDET



Established in 2006 and coordinated by *Orée* – Entreprises, Territoires et Environnement, the Institut Français de la Biodiversité, and Veolia Environment, the working group on 'integrating biodiversity into corporate strategies' has been working on the development of a Business and Biodiversity Interdependency Indicator (B.B.I.C.) [1].

The aim of this composite indicator is to help companies better assess their direct and indirect relationship with biodiversity, as well as suggest potential pathways for integrating biodiversity into their strategies and daily activities.

Methodology

The Indicator is a self-assessment tool which can be used by companies in any sector and any size, operating nationally or internationally. The activities, products and services analyzed should be clearly identified *ex ante* and as comprehensively as possible. The company may then score the various criteria making up the evaluation grid (see table 1) according to an integer scale of 1 to 4, as follows: 1 – the firm is not concerned by the criterion; 2 – criterion of minor importance; 3 – important criterion; 4 – criterion critical to the firm. This self-evaluation requires the company to provide qualitative explanations of scores, so as to analyze the nature of its interdependency with biodiversity.

Testing the Indicator

The Indicator has been tested in 2007 through interviews with nineteen member companies of our working group [2]. For each company, we plotted the results on a radar chart (see figure 1 for a hypothetical firm belonging to the mining industry). Each axis represents the mean value for scores for each group of criteria. This allows for a visual representation of the

firm's perceptions of its interactions with biodiversity.

Ultimately, the working group aims to better understand the diversity of perceptions within and between firms and across industries. We recognize of course the inherent limitations of a tool based on individual perceptions. Views can be biased or reflect only a partial understanding of all the issues at stake. For instance, one may not be fully aware of all the direct and indirect impacts of his company from a product life-cycle perspective. Assessing the company's dependencies with respect to the constraints and advantages of living systems necessitates very precise understanding of the interactions between the company's production processes and the evolution of living systems that are influenced [3]. Such limitations, we believe, may be corrected at a later stage through further analysis and research.

A tool for identifying challenges

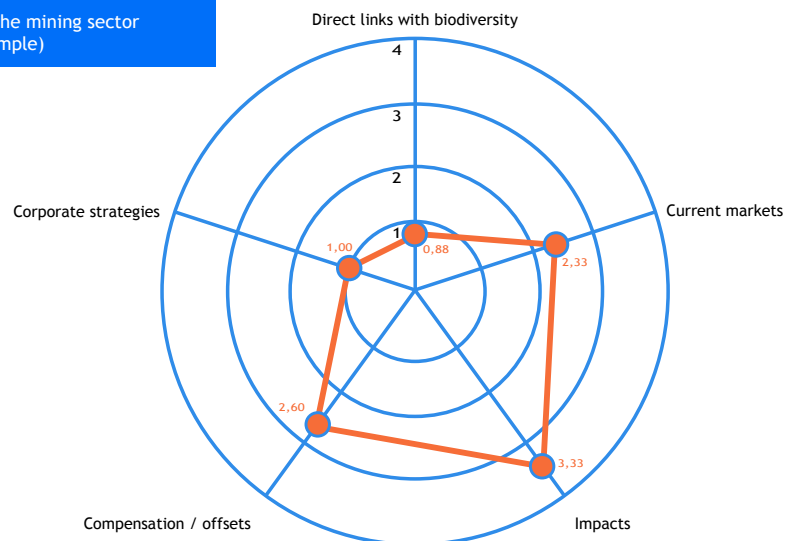
B.B.I.C. users rapidly realize that interactions between their company and biodiversity abound, explicitly or not, at multiple scales, from local industrial sites to internal commercial networks, from

all suitable scales, a key challenge would be to make the diversity of perceptions with respect to the interactions between companies and biodiversity converge.

Interactions between companies

The Indicator can help frame many strategic issues, including with respect to technological and organizational innovation. With respect, for instance, to criteria C1.1 to C1.6, a company can explore the implications in terms of supply chains management and purchasing policies [4]. In the case of interdependencies with respect to the constraints and advantages of living systems, how can companies rethink their production processes so as to promote and valorize economically the variability and complexity of living systems? Such queries confirm the importance of the study of interactions between companies with respect to biodiversity: *e.g.* agribusiness, financial and insurance industries among many others; and their interactions with other economic agents, including public institutions and international organisations. From a perspective of co-evolution between companies and ecosystems, we would then need to work on the appropriate tool sets essential for the integration

Figure 1
Company X from the mining sector
(hypothetical example)



societal pressures, purchasing strategies, product innovation and marketing to in-house training. Though the Indicator is only at its first development stage, its use allows companies evaluate global and systemic biodiversity challenges. Various criteria may prove particularly difficult to understand or be simply unknown (*e.g.* C.1.3 – Bio-mimetism, C.1.2 – Ecological services), hence the need for more education on these critical issues. Furthermore, the pilot testing has revealed divergent or contradictory perceptions with respect to certain criteria. In order to improve the collective management of living systems at

of biodiversity within the strategies of company networks [5].

Strategic positioning

Though the Indicator as such does not aim to be an audit tool, it is confronted to the concrete needs of firms with respect to their strategic positioning. Indeed, the need for a legitimate and recognized set of indicators for business and biodiversity relationships is largely expressed. Given certain adaptations and emphasizing the interdependencies between firms and living systems, the Indicator may be useful to that end. It could allow companies (1)

Category	Aims to assess the company's...	Criteria	
Direct links with biodiversity	... dependency on raw materials	C1.1	C1.1.a Percentage of raw materials from living systems C1.1.b Percentage of raw materials from past living systems (e.g. oil and gas)
		C1.2	Ecological services
	... dependency on services et technologies from living systems	C1.3	Bio- or Eco-mimicry
		C1.4	Dependency to the variability of ecosystems
		C1.5	Dependency to the health of ecosystems
		C1.6	Dependency to the complexity of ecosystems
Current markets	... dependency on biodiversity with respect to revenues generated	C2.1	Costs of raw materials from living systems compared to overall production costs
		C2.2	Part of profit margin linked to marketing biodiversity or its components
		C2.3	Revenues generated by goods and services from living systems compared to the total gross revenue of the firm
Impacts	... negative and positive impacts on living systems	C3.1	In terms of reversibility
		C3.2	In terms of changes in landscapes
		C3.3	In terms of pollutions, waste and production by-products
		C3.4	In terms of species survival, species spatial distribution and selective pressures
		C3.5	In terms of habitat fragmentation
Compensation / offsets	... compensatory actions on biodiversity	C4.1	Compensation linked to the impacts of the firm in response to regulatory standards / legislation
		C4.2	Compensation linked to the impacts of the firm outside the scope of relevant legislative frameworks
		C4.3	Monetary compensation not linked to the impacts of the firm
Corporate strategies	... strategies regarding biodiversity	C5.1	Importance of integrating biodiversity into corporate strategies for securing the firm's license to operate / sustaining its activities
		C5.2	Societal pressure
		C5.3	Competitiveness gains
		C5.4	Consequences of external communication
		C5.5	New market opportunities
		C5.6	Impacts on corporate culture

to position themselves by an initial comprehensive evaluation, (2) to identify innovative policies and practices for implementation within and between companies and (3) to develop the appropriate sets of performance indicators adapted to their specificities and their environmental management systems.

This composite indicator goes beyond a traditional approach which focuses on impact mitigation and compensation. Though recent works on the business case for biodiversity have highlighted companies' dependencies on the diversity, variability and complexity of living systems, we intend to emphasize, in the light of the forthcoming COP-9 at Bonn in May, that the reciprocity is also true. For instance, eco-mimicry should be actively promoted for the design of industrial sites and supply chains, while research and development should target new products and services that valorize ecosystem variability and complexity. As we work towards building a Biodiversity Accountability Framework for business, to be published by November 2008, testing the Business and Biodiversity Interdependency Indicator is clearly a major step forward.

[1] See Houdet J. & Weber J. (2007). "Rethinking business and biodiversity linkages", *Business2010*, Vol. 2, No 3, pp. 30-31.

[2] Companies and public organizations which tested the Business and Biodiversity Interdependency Indicator include in alphabetical order: Accalmi - Alban Muller International, Carrefour, CDC Société Forestière, Compagnie Nationale du Rhône, Crédit Coopératif, Conseil Régional d'Ile-de-France, EDF, FCBA, Gaz de France, GSM - Italcementi, LVMH, Phytoresource, SAF, Séché Eco-Industries, Solabia, Veolia Environment, Ville d'Angers, Yves Rocher, 3M. They belong to various industries: agribusiness, forestry, water services, energy, retailing, banking, mining, cosmetology, etc. I would like to thank Nadia Loury, Béatrice Bellini, Michel Trommetter and Jacques Weber for their help and valuable comments during this exercise.

[3] Living systems, from the level of genes to that of ecosystems, may present constraints and advantages for business. For instance, modern agriculture has decomposed complex ecosystem processes into simple sequences with optimized outputs through the use of production inputs from agro-business (e.g. out-of-ground crop production). Such practices have generated considerable ecological impacts.

[4] See Linton J.D., Klassen R. & Jayaraman V. (2007). "Sustainable supply chains: An introduction". *Journal of Operations Management*, Vol. 25, pp. 1075-1082.

[5] See Porter T.B. (2006). "Coevolution as a research framework for organizations and the natural environment". *Organization & Environment*, Vol. 19, pp. 479-504.

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Table 1
Evaluation grid

Business and biodiversity: Some insights from Germany

By ANGELIKA POHLENZ



Together with its member companies and associations, the International Chamber of Commerce (ICC) has monitored the CBD since it was signed at the Rio 'Earth Summit' in 1992. ICC takes part as a representative of the business community during CBD meetings. During COP-9, ICC will focus on sustainable agriculture, technology transfer and Access and Benefit-sharing (ABS).

I am convinced that biodiversity is important for business in many ways! I think that for many German companies, however, the tangible links between biodiversity and business operations are not always clear. It is, therefore, of great importance that COP-9 will take place in Bonn. This offers the opportunity to discuss biodiversity issues more intensively in Germany and will hopefully lead to a clearer understanding of the linkages between business and biodiversity. ICC will follow the discussions and contribute to the dialogue – there will also be an ICC-exhibit and side events.

From my point of view, the fundamental conflict concerning biodiversity is not primarily between business and nature, but between man and nature. By 2050, the world population is projected to rise from 6 to 9 billion. This means that the demand for land and areas to be used for settlement, traffic and agriculture will increase dramatically.

In the following, I would like to put forward three theses in order to explain where business is already contributing to biodiversity and also where I see further potential:

ICC side events at COP-9

19 May, lunchtime, BMU / room 1.130
22 May, lunchtime, Maritim / 'Haydn'

1356 & 1277

Already contributing to biodiversity

Thesis 1: Many German companies are already contributing to biodiversity – often as part of environmental and resource management – without explicitly referring to 'biodiversity'.

This is the case, often, when companies initiate corporate programmes for climate protection and energy reduction. As climate change is a major cause of biodiversity loss, they are thus usually contributing, indirectly, to biodiversity conservation.

Since the 1990s, most of the big companies have been implementing sustainability reporting systems. These measure, list and describe in detail the impact of their business activities on the environment. The Global Reporting Initiative (GRI) guidelines, for instance, cover aspects relating to biodiversity. The GRI has also published a Biodiversity Resource Document to help companies address biodiversity in the context of sustainability reporting.

The business case

Thesis 2: Conservation of biodiversity is already a business case for companies. Ideally, the conservation of biodiversity, including efficient resource management, should be linked with the company's core business. In this case, responsible companies can contribute in a credible manner to biodiversity. A classic win-win situation is in the tourism sector.

Tourism is directly dependent on healthy environments beautiful landscapes, etc. It is thus in the long-term interest of companies in that sector to conserve biodiversity. TUI, a German travel company, highlighted some of its efforts on biodiversity in an earlier edition of this newsletter [1].

Sustainable agriculture is of central interest for the nutrition of a rising world population. Here, good agricultural practices can be combined with the conservation of biodiversity. The maintenance of functioning ecosystems, such as water supply and soil protection, play a central role. Efforts by Bayer CropScience are highlighted in the present issue.

Opportunities

Thesis 3: Biodiversity is a business opportunity. The application of biological principles to the study and design of technology and products is known as bionics. One of the best-known bionics examples with regard to a water- and soil-repellent application is the lotus effect. But also new natural materials for cosmetics or genetic resources for medicine generate new products and business activity.

"I think that for many German companies, the tangible links between biodiversity and business operations are not always clear. Therefore COP-9 in Bonn will give a great push for developing a clearer understanding"

Angelika Pohlenz

"Convincing business people about the importance of nature conservation in their strategic decisions and everyday activities is a significant task"

Veronika Kiss



Environmental technologies can contribute to solving problems such as that caused by invasive alien species. Container vessels, for instance, take up water for stabilization – depending on their cargo. When arriving at the port of destination, they empty these water tanks with 5,000 to 50,000 tons. In doing so, non-native micro-organisms and also fish, shells or crabs are introduced into the existing ecosystem and might harm it. Evonik Industries, that holds a top position in Chemicals, has developed in cooperation with Hamann, mechanical engineering company, a sophisticated ballast water management system, named SEDNA® which disinfects water without chlorine. Thus, ballast water tanks can be emptied at the port of destination.

These are only a few examples that clearly indicate where German companies are already contributing to biodiversity and where further potential could be expected. Much more will be highlighted at COP-9.

[1] see Business.2010, 2007, 2(1).

Angelika Pohlenz is Secretary General, International Chamber of Commerce (ICC) Germany.

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News from Budapest

By VERONIKA KISS



Convincing business people about the importance of nature conservation in their strategic decisions and everyday activities is a significant task. Understanding this, CEEweb for Biodiversity – an international network of NGOs in the Central and Eastern European (CEE) region – organized a business and biodiversity conference on 29 February 2008.

We started thinking on organizing this conference in the second half of 2007. This was the time when we got involved in the preparations of the High Level Conference on Business and Biodiversity (hosted by Portugal on 11-12. November 2007). Our own conference, which took place in Budapest, convened fifty participants from the government, civil and financial sectors as well as SMEs.

We made it a special point to share national best practices to inspire the participants in their everyday lives: As entrepreneurs, they could get involved more deeply in nature conservation and, at the same time, could boost profits.

Several constructive suggestions came up during the meeting, among, which the following:

1. Solutions are needed to better distribute European funds, thus allowing more effective participation of SMEs in grant programmes;
2. Incentives (such as state guarantees or fiscal policies) could help the development of credit lines for biodiversity 'friendly' SMEs; and
3. Tools are needed to better assess the biodiversity impacts of biodiversity businesses.

CEEweb will be advocating for such proposals in Brussels. Overall, we were happy to see that stakeholders were enthusiastic and actively participated in the issue. If we want this process to be successful, it is ever so important to give people a chance to participate actively in common events and to form and maintain new relationships.

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"We have to learn from the climate debate and make the topic attractive to the public. Therefore, we need clear objectives, further cooperation and a recognized scientific institution such as the IPCC for climate protection"

Matthias Machnig, State Secretary of the Federal German Ministry for Environment, Nature Conservation and Nuclear Safety

Förderer / Supporters



Closing panel, from left to right: Dr. Konukiewicz (BMZ- German Federal Ministry for Economic Cooperation and Development); Christine von Weizäcker (Ecoropa); Martin Oldeland (B.A.U.M. e.V.); Judith Harl (Deutsche Welle); Uwe Brendle (German Federal Agency for Nature Conservation); and Dr. Naoki Adachi (Japanese Business Initiative for Conservation and Sustainable Use of Biodiversity).

Report back on the business and biodiversity conference (2-3 April, Bonn)

By SILJA DRESSEL



Stressing the economic importance of biodiversity, the State Secretary of the Federal German Ministry for Environment, Nature Conservation and Nuclear Safety, Matthias Machnig, opened the Business and Biodiversity Conference (2-3 April, Bonn, Germany) with these words: "We have to learn from the climate debate and make the topic attractive to the public. Therefore, we need clear objectives, further cooperation and a recognized scientific institution such as the IPCC for climate protection".

He furthermore pointed out to the impor-

tance of the German Business and Biodiversity Initiative, launched by the Ministry last year in order to help mobilize the business community in reaching the objectives of the Convention.

With this intention, more than 250 representatives of business, governmental and non governmental organizations (NGOs), the European Union and scientific institutions met to exchange best practise, methodologies and strategies on how to integrate biodiversity into corporate management systems [1].

Invited by the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH and Global Nature Fund (GNF), participants discussed the special implications for the financial services sector, ABS related issues, and the interrelation with climate change. Participants stressed the need for developing comprehensive indicator systems, setting frameworks, and combining efforts globally.

[1] Visit www.globalnature.org/bio-div for conference presentations and summaries.

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www.bmu.de/english/nature/downloads/doc/40635.php

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Equitable payments for watershed services: the business proposal

By JULIO C. TRESIERRA



Payments for ecosystem services (PES) are flexible, direct and promising compensation mechanisms by which service providers are paid by service users. Our project (jointly undertaken with CARE) focuses on restoring upstream ecosystem integrity through the change from subsistence agricultural practices in poor rural communities to sustainable land

providers or 'sellers') and downstream public and/or public corporations (service users or 'buyers'). Thus, our approach brings public and private sectors to the negotiating table as equal partners in a mutually beneficial business proposition. Farmer and indigenous upland communities negotiate Memoranda of Understanding with downstream water user such as beverage companies, hydroelectric companies, a private association of water users, government run water utilities, etc.

The result is the restoration of symmetry between capital assets: social capital (livelihoods of upland communities) is enhanced; natural capital (ecosystems) is restored and, long-term return on financial capital is enhanced (providing a business case to companies). The permanently balanced association between capital assets is the most efficient form of assuring sustainability.

A phased strategy

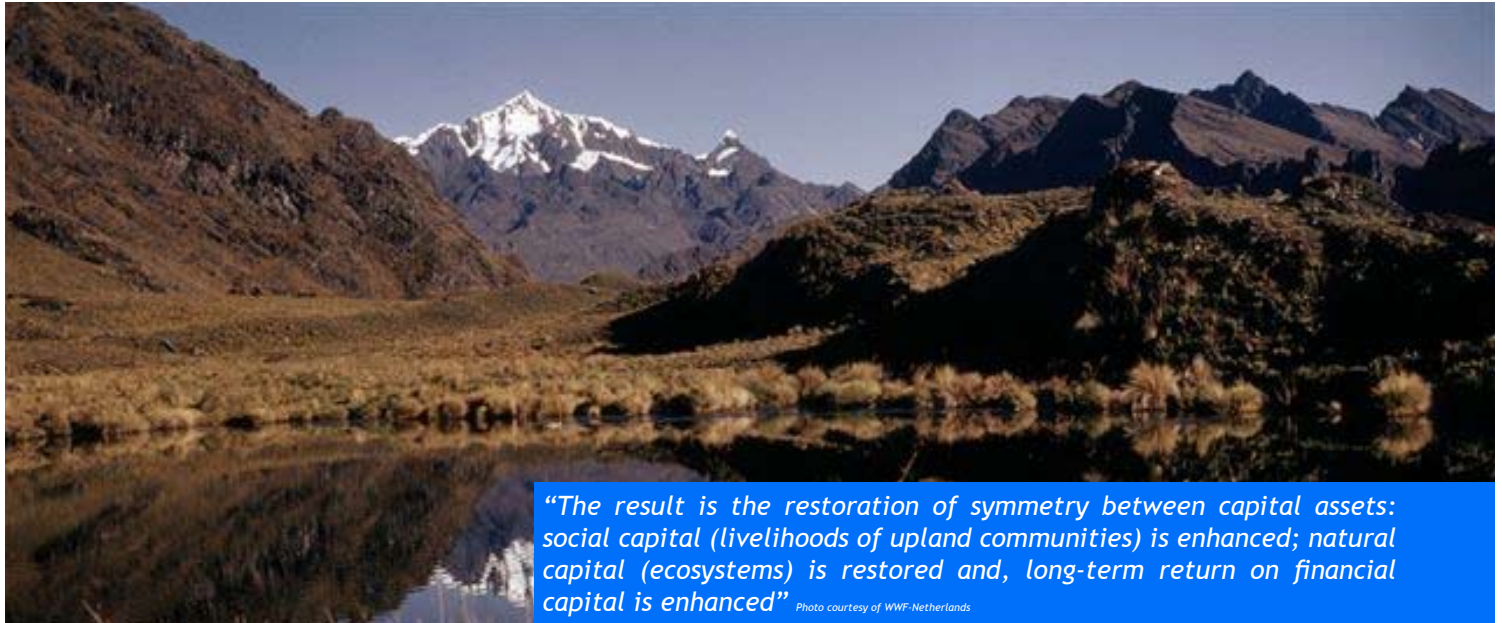
Our programme – currently under implementation in Tanzania, Indonesia, Peru and Guatemala – aims at strengthening the organizational, negotiating and sustainable-productive capacities of national organizations both public (local-regional governments) and private (community

industrial and domestic users) and sellers (upland communities) were identified. By the end of Phase One, buyers and sellers signed Memoranda of Understanding.

A four year Phase Two is currently underway. Land-use changes are being implemented in selected communities and a thorough process of monitoring and evaluation will measure the impact of such changes upon livelihoods and on water uses. We anticipate the mechanism of Equitable Payments for Watershed Services to be functioning by the end of December 2011.

Phase Three would tentatively start with buyers and sellers of watershed services establishing legally binding contractual agreements. At such time, local capacity will be in place to appropriate and manage the mechanism. Allowing external agents (donors and managers) to exit.

High on the COP-9 agenda is the issue of innovative finance mechanisms. Accordingly, our EPWS operationalizes in the field a unique blend of public-private partnership. Systematically drafted business accords articulate a mechanism for restoring biodiversity in degraded landscapes. Companies invest in land use change so as to assure the continuity of water services



"The result is the restoration of symmetry between capital assets: social capital (livelihoods of upland communities) is enhanced; natural capital (ecosystems) is restored and, long-term return on financial capital is enhanced" Photo courtesy of WWF-Netherlands

use. Landscapes are restored and/or protected, poor upland communities improve their livelihood and domestic, industrial and commercial water users downstream can enjoy a reliable and continuous supply of quality water.

Business proposition

Unlike other PES schemes, our project establishes business agreements between poor rural upland communities (service

based organizations; corporate business) in improving and guaranteeing the supply of quality fresh water downstream.

In dialogue with all stakeholders, the WWF-CARE consortium has designed a phased strategy. During the first 18 months, baseline studies in hydrology and community livelihoods were carried out as well as legal, institutional and economic analyses. Potential buyers (downstream commercial,

crucial for their operations. At the same time, enabling conditions are created to improve rural poor livelihoods reversing the decades-old controversy between conservation and development.

Dr. Julio C. Tresierra is Global Coordinator, WWF-NL.

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Sector by sector overview



In this section

This section provides an update on initiatives in different sectors, including agribusiness, forestry, construction, the financial services sector, ocean industries, oil & gas, biotrade, and tourism.

The theme of this year's International Day for Biological Diversity (IBD, 22 May) is 'biodiversity and agriculture' – hence, a special emphasis is given to agribusiness.

Side event information is tentative; please consult www.cbd.int/cop9/side-events/ for a final list.

Photo courtesy of Ben/flickr.com

Mainstreaming sustainable agriculture

By JACQUES DU PUY



Photo courtesy of IUCN / Wiebke Herding

As highlighted in my contribution to the last issue of this newsletter, the recent dramatic price increases for agricultural commodities reflect the increased demand for agricultural products. We have moved from surplus to deficit in the EU in just a few years and, since agricultural land is finite most of the demanded increase will have to result from boosting production on existing land [1].

We thus face a two-fold challenge with sustainable agricultural intensification: we need to achieve productivity increases on existing land, while maintaining or enhancing the diversity of agro-ecosystems to safeguard their long-term production base and resilience.

Sustainable agricultural intensification

In my view, sustainable agricultural intensification builds on two major sets of measures. Firstly, we need strategies and practices for sustainable agro-ecosystem management. Secondly, we require a set of science-based and flexible policies and mechanisms that involve farmers and which provide them with the necessary incentives to adopt good practices.

As a company, we promote Integrated Crop Management (ICM) because it provides a sensible, balanced and holistic approach to agro-ecosystem management. Classic elements of agricultural decision-making are applied, such as tillage and crop-choice, -rotation, -protection and -nutrition. Measures for biodiversity enhancement, water and energy management and landscape protection are also included, and speak for the recognition of agriculture as a complex and dynamic system which is in constant interaction with its environment.



Business, 2010 | April 2008

“The challenge, however, is to implement holistic approaches that address all pillars of sustainability and, with that, help mainstreaming good agricultural practices worldwide”

Photo courtesy of Bayer CropScience

Biodiversity conservation within ICM includes the conservation, or creation, of habitats within the farm environment, including hedgerows and field margins. These measures contribute not only to the conservation of flora and fauna in general, but also support pest management by providing habitat, cover and refuge for beneficial insects. In common with the concept of ‘ecoagriculture’, proposed as a way to integrate agriculture and wildlife protection [2], ICM builds on the concept of integrated ecosystem management in line with the principles of the ecosystem approach.

Sustainable practices and policies

Strategies for holistic sustainable agro-ecosystems management already exist today. However, to achieve the mainstreaming of good agricultural practices, the goal is to see them applied globally and to adjust the policy framework in the following areas:

1. Political discussion needs to shift from a bureaucratic approach that focuses on input reduction, to a more holistic and flexible framework that supports the enhancement of site-specific needs and reflects agriculture’s overall positive contributions to biodiversity conservation, such as habitat protection, water management

and erosion prevention. I was pleased that some of these aspects were considered at SBSTTA-13. However, we need a focused discussion on developing flexible policy frameworks. An approach based on voluntary schemes, for example, would be more attractive to farmers because it reduces their administrative burden.

2. Market mechanisms should provide incentives for farmers by stimulating improved market access possibilities, thus generating a price premium for sustainable agro-ecosystems management. In addition, outcome-focused compensation schemes would be a driver for farmers to develop, implement and disseminate site-specific good practices and respond to local needs and opportunities to enhance ecosystem services. The adoption of such schemes should comprise direct payments for specific activities and measures, based on their effectiveness in achieving environmental objectives.

Approaches to date

Although the growth of various food labels and certified standards as a market mechanism tool is rising, the total volume and value of such products is still a small percentage of the overall market – about

“Political discussion needs to shift from a bureaucratic approach that focuses on input reduction, to a more holistic and flexible framework”



5 percent. While these labeled products provide a premium price in niche markets, most of them focus only on specific aspects of production, such as labour rights, social standards, input reduction, biodiversity conservation, low distance to market, or reduction of greenhouse gas emissions. The challenge, however, is to implement holistic approaches that address all pillars of sustainability and, with that, help mainstreaming good practices into the remaining ‘95%’ of agricultural production.

A broad range of successful, holistic approaches already exists, but they need to be scaled-up, promoted and actively encouraged. A pioneering example is GLOBALGAP developed by food retailers through the setting of voluntary certification standards for agricultural products. These standards are adhered to by many farmers worldwide, because they are based on regionally-adjusted criteria that apply to local needs and they allow access to premium markets by generating improved quality produce [3].

Such market-driven certification systems could be made even more powerful through compensation schemes that provide farmers with direct payments for the

implementation of sustainable agro-environmental practices. In the UK, entry-level stewardship schemes encouraging farmers to adopt simple, yet effective, environmental management practices led to a dramatic increase in the area managed under agri-environmental schemes, now covering close to 60% of all agricultural land [4].

Outlook for COP-9 and beyond

The examples above, show that market mechanisms and outcome-oriented compensation schemes are already successful in many places; but their immense potential to support the mainstreaming of sustainable agro-ecosystem management is yet to be realized and further efforts are needed. An increased awareness among consumers about efforts being undertaken by farmers to protect the environment and provide high quality and affordable food products is required. To ensure this, policy makers should take a lead role in addressing the huge challenges faced by agriculture in a clear and balanced way. We should seize the opportunity at COP-9 to set the direction towards an integrated policy for sustainable agricultural intensification.

Mainstreaming sustainable agro-ecosystem practices is an objective shared by business, the conservation community and consumers. The current boom in commodity prices is both a signal for the urgency to act – including to ensure food security – and an opportunity to initiate crucial shifts in policy making. With such broad-based support for the objective, it demands action by the policy makers and regulators and the good collaboration of all. We in Bayer CropScience stand ready to share our expertise alongside others to accelerate the progress towards this important common goal.

[1] See FAO, 2003. *World agriculture: towards 2015/2030. An FAO perspective*, edited by J. Bruinsma. Rome, FAO and London, Earthscan.

[2] See UNDP, 2002. *Reconciling Agriculture and Biodiversity: Policy and Research Challenges of ‘Ecoagriculture’*.

[3] www.globalgap.org

[4] UK Biodiversity Partnership, 2007. *Biodiversity Indicators in your Pocket*. (www.jncc.gov.uk/page-3923)

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International Day for Biological Diversity

The United Nations proclaimed 22 May the International Day for Biological Diversity (IBD) to increase understanding and awareness of biodiversity issues.

This year’s theme for IBD, ‘Biodiversity and Agriculture’, seeks to highlight the importance of sustainable agriculture not only to preserve biodiversity, but also to ensure that we will be able to feed the world, maintain agricultural livelihoods, and enhance human well being into the 21st century and beyond.

Key messages

- Biodiversity is the basis of agriculture. Its maintenance is essential for the production of food and other agricultural goods and the benefits these provide humanity, including food security, nutrition and livelihoods.

- Biodiversity is the origin of all crops and domesticated livestock and the variety within them. Biodiversity in agricultural and associated landscapes provides and maintains ecosystem services essential to agriculture.

- Agriculture contributes to the conservation and sustainable use of biodiversity but is also a major driver of biodiversity loss. Farmers and agricultural producers are custodians of agricultural biodiversity and possess the knowledge needed to manage and sustain it.

- Sustainable agriculture both promotes and is enhanced by biodiversity. Sustainable agriculture uses water, land and nutrients efficiently, while producing lasting economic and social benefits. Barriers inhibiting its widespread adoption need to be reduced.

- Agricultural producers respond to consumer demands and government policies. To ensure food security, adequate nutrition and stable livelihoods for all, now and in the future, we must increase food production while adopting sustainable and efficient agriculture, sustainable consumption, and landscape-level planning that ensure the preservation of biodiversity.

www.cbd.int/ibd/2008

“Dramatically increased productivity is among the most impressive achievements of agriculture in the past 50 years. It is estimated that some thirty to sixty per cent of increases are due to improved crop varieties made possible by plant breeding” – Laura van der Meer and Annik Dollacker (page 18)

“Farming is first a business and a livelihood, but it also has a critical conservation role to play. For conservation efforts to work the farmers must see benefits” – Nora Ourabah Haddad and Jessica Goodfellow (page 19)

Sustainable agriculture: Replicate and expand winning solutions!

By LAURA VAN DER MEER and ANNIK DOLLACKER

There are only two ways to produce more crops: cultivate more land or achieve higher yields on the land currently cropped. In practice, there is no rational alternative to increasing yield per hectare. Agricultural productivity, whether measured in production per unit land or per unit water, has enormous remaining potential left. For example, for certain important crops, some regions achieve only 20% of the productivity enjoyed elsewhere. Making up just half of that yield gap would revolutionise the relationship between agriculture and biodiversity, as well as contributing to poverty alleviation. Increasing productivity only, however, is not enough. Care also must be taken to manage land and agricultural inputs sensibly to prevent erosion, maintain soil fertility, protect water, enhance biodiversity and improve degraded lands.

A global mosaic of solutions

There is no one-size-fits-all management tool or technology to achieve sustainable agriculture. However, many of the solutions for meeting escalating demands while protecting the environment already exist. In the end, a global mosaic of viable solutions and site-specific approaches will be required to manage agro-ecosystems in a sustainable manner.

Plant breeding – Dramatically increased productivity is among the most impressive achievements of agriculture in the past 50 years. It is estimated that some thirty to sixty per cent of increases are due to improved crop varieties made possible by plant breeding. Hybrid seeds enabled a significant step in terms of increased yield and also have been widely used to improve resistance to disease and pests. More recently, genetically engineered (GE) crops have further contributed to enhanced yield, quality, and pest resistance, resulting in farmer savings in water, soil, energy, time and costs.

In addition to contributing to increased yields, plant breeders also are contributing to the conservation of plant biodiver-

sity. First created by plant breeders in the 1930s, gene banks today hold more than 6 million plant samples. Further, every year, thousands of new varieties are released. Indeed, in some crops, plant biodiversity is being enhanced as the range of genetic material in crops is enriched by professional breeding, which includes genetic material from wild relatives. For instance, the wheat variety VEERY was developed through 3,170 crosses involving 51 crop parents from 21 countries.

Integrated farming practices – Integrated Crop Management (ICM), promoted since the 1980s, comprises a wide portfolio of management measures such as soil and nutrient management, crop choice and protection as well as measures of water and energy management and landscape protection. A large percentage of cultivated fields are for instance, situated on sloping land, which may lead to severe soil erosion. Effective crop management such as rearrangement of fields to follow contour lines, crop rotation, use of cover crops and reforestation measures can be used to counter erosion. Similarly, no- or minimum-till farming also has proven to be a very sensible land management approach, which often are made possible by the availability of herbicides and herbicide-tolerant varieties. Minimum-till decreases erosion, improves soil moisture and also increases the organic matter in the soil, which contributes to increased carbon sequestration. In many places, water may become the limiting factor to sustainable agriculture. The optimisation of irrigation techniques, creation of rainwater reservoirs, improvement of the water table through land management, and improved access to water sources can increase crop yield and labour effectiveness in agriculture.

Integrated Pest Management – Within ICM, pest control is referred to as Integrated Pest Management (IPM). This includes both indirect measures for weed, insect and disease prevention, such as crop rotation, and direct control measures through biological, biotechnological, mechanical and chemical means. In the context of chemical pesticide evaluation, research has ensured for many years that insecticides will not adversely affect pollinators or other beneficial insect populations when used properly, so that they can continue to perform their valuable services to agriculture. Many pesticides, such as systemic products that only control those insects or diseases that harm the plant through sucking or biting, can be fully incorporated within IPM approaches.

Recommendations to Parties

- Shift towards more outcome-focused and tailored biodiversity-enhancing measures that address local, site-specific needs, rather than relying on arbitrary, non-science-based measures;
- Encourage investment in the development of new improved varieties and technologies, including through the provision of intellectual property protection;
- Introduce market mechanisms to make the health and environmental benefits of Integrated Crop Management more transparent for consumers; and
- Enable farmers to implement sound agro-ecosystem management measures by means of targeted capacity-building programmes and by rewarding their commitment with performance incentives.

Meeting the challenge

We are convinced that many of the solutions needed to attain sustainability in agriculture are known and invite governments in ensuring that those winning technologies are identified, adapted and disseminated (see box, above).

More than twenty years ago, the world community agreed in the Rio Declaration that States must “cooperate to strengthen capacity-building for sustainable development through improving scientific understanding by improving exchanges of respective knowledge, and by enhancing the development, adaptation, diffusion and transfer of technologies, including new and innovative technologies”. If we want to ensure compatibility between agriculture and biodiversity, we must better implement this principle and ensure that known solutions are made available to all.

An all-out effort by the international community is needed to replicate successful solutions and experiences that harness and promote good practices and to facilitate the transfer, adaptation and scaling up of all the approaches and powerful technologies available today. Let us be optimistic, but practical. Let us share what we know, build on the best, and ensure farm-level choice to truly achieve sustainability.

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This paper represents the views of several agricultural businesses of the International Chamber of Commerce's CBD Task Force.

www.iccwbo.org/policy/environment/id5621/index.html

ICC side events at COP-9

19 May, lunchtime, BMU / room 1.130
22 May, lunchtime, BMU / room 1.130

Farmers are part of the solution

By NORA OURABAH HADDAD and JESSICA GOODFELLOW



We hear it on the news and read it in environmental reports: farmers are often targeted as the main actors causing the biodiversity crisis. Efforts of the farming community, however, are essential to integrate agriculture and biodiversity. We believe that farmers are key holders of the solution.

Farmers are constantly responding to new socio-economic and environmental demands and are, at the same time, trying to maintain and increase productivity to meet the food needs of a growing population. Farmers need to identify how their activities relate to and promote practices that improve biodiversity while maintaining the economic viability of their activities.

Farmers want to participate in environmental protection, but this generates additional costs that can become a burden to many farm families. While farmers have their responsibility in this integration process, this is a shared responsibility with the rest of society.

Implementing change

Let us, therefore, define the main issues and what measures need to be in place to implement change.

Public policies – Government support mechanisms and stewardship programmes are essential for providing the necessary incentive measures for farmers. Farming is

“In many countries, agriculture is frequently subject to a plethora of environmental legislation, which lacks coordination with other legislation affecting agricultural production. The trend often within government is to attend these issues in isolation”

first a business and a livelihood, but it also has a critical conservation role to play. For conservation efforts to work the farmers must see benefits. This is why it is so important to have strong political will from national governments, donors and development agencies to implement mechanisms that reward farmers for their efforts. As an illustration of effective stewardship mechanisms, governments in some developed countries have encouraged farmers to cultivate a varied range of crops and livestock that enhance local biodiversity. At the same time, governments and the business community have helped to create the marketing networks to be able to sell those local products. This enhances biodiversity, through the protection of local varieties and the promotion of sustainable agricultural practices, and generates income for farmers.

North-south cooperation – Unfortunately, most farmers from the developing countries do not have access to the same resources. As a result, protection of biodiversity becomes a luxury. Instead, short-term food security is the overriding concern. How can we solve this problem? Global innovative partnerships deserve to be developed. Since governments and farmers’ organizations in developing countries lack the capacity to reward farmers for environmental services rendered to nature through such practices as zero tillage, reforestation, fighting desertification and carbon storage, economic partnerships need to be established with developed countries. These would aim to transfer and adapt stewardship mechanisms which have proved to be successful in developed countries for the benefit of small-scale farmers in developing countries e.g. credit systems, extension services.

Information exchange and capacity building – The lack of regional information is proving to be a significant handicap for farmers in reducing the negative impacts of agriculture on the landscape. Data needs to be collected, including an inventory of the diversity of plant genetic resources for food and agriculture, and made available to farmers. Such information needs to be accessible so that farmers are aware of the urgency of this problem and understand how remedying it is in their interests. Through education, they will feel ownership for the cause of biodiversity enhancement in their farming activities and will be in a better position to lobby and work with governments to find ways of achieving this.

Research agendas and project implementation – The research community is one of the key stakeholders that must partner

with farmers and farmers’ organisations. Results will be maximized if farmers play a participatory role. It is therefore important that both communities work together and that researchers listen to farmers’ needs. Research on the positive synergies between biodiversity and economic activities must be strengthened, particularly on the roles of fauna and micro-organisms in soil fertility, insect pollination, and biological pest control.

Legislation – In many countries, agriculture is frequently subject to a plethora of environmental legislation, which lacks coordination with other legislation affecting agricultural production. The trend often within government is to attend these issues in isolation. There is also a lack of capacity to enforce legislation in a coordinated way. Capacity therefore needs to be built so legislation can be enforced in a coordinated way with farmers, local communities and other relevant stakeholders.

Rights and responsibilities – Overall, the rights and responsibilities of farmers in the fight to conserve biodiversity must be clarified. Agriculture is a prime example of how human activities affect ecosystems. Thus, it needs to become a priority on governments’ agendas, both nationally and internationally. There is enough information available on the cause and effect; now it is time to use this information to develop rural strategies to enhance biodiversity with the participation of farmers’ organisations.

International biodiversity day

This year, the International Day for Biological Diversity focuses on agriculture. IFAP, through its network of members, looks forward to taking part in this celebration. After having contributed to the discussion on the review of the Programme of Work on Agricultural Biodiversity during SBSTTA-13 in Rome, a delegation of IFAP farm leaders is preparing to take part in COP-9 to consolidate the positive steps that have been taken by Parties in Rome. Farmers are ready to contribute to the implementation of an ambitious programme with the CBD, FAO, Parties and other stakeholders. We therefore hope that the outcome document at COP-9 will continue to recognise the important role that farmers and their organisations can play in the implementation of the Programme of Work.

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Sector by sector overview > forestry

Forests at COP-9

The stakes are high at COP 9 to agree on actions for the conservation and sustainable use of forests.

Forests are home to an estimated two thirds of all terrestrial species and are, therefore, a key ecosystem to reach the 2010 target. Forest related topics to be addressed at COP-9 include new and emerging issues, such as the biodiversity benefits arising from the efforts to reduce emissions from deforestation and forest degradation in developing countries (REDD). This mechanism will open new opportunities for business to become involved in carbon offsetting through forest conservation. Another COP-9 forest debate will revolve around the potential impacts of genetically modified trees. And the impacts of bioenergy production on forest ecosystems will be addressed as well.

These and other pertinent issues will be discussed as part of the review of the CBD forest programme of work, which has been operational since 2002 and is due for in-depth review at COP-9. The programme of work contains 130 activities to improve the conservation and sustainable use of forest biodiversity, as well as the equitable sharing of its benefits. Despite many activities implemented by countries, and by business, the loss of forest biodiversity continues at an alarming rate. At a recent SBSTTA, countries listed priority issues to be addressed more urgently in future. These include the role of forest biodiversity in climate change mitigation and adaptation; the establishment of forest protected area networks; illegal logging and land conversion; habitat fragmentation; forest fires; and invasive alien species.

Recommendations on Forest Biodiversity are listed in COP-9 document UNEP/CBD/COP/9/3, available at www.cbd.int/doc/meetings/cop/cop-09/official/cop-09-03-en.pdf.

Contact Tim Christophersen, Environmental Affairs Officer for forest biodiversity (Tim.Christophersen@cbd.int) for more information.



Sector by sector overview > forestry

A biodiversity partnership in the Austrian forestry sector

By GÁBOR WICHMANN and GERALD PLATTNER



The cooperation between both our organizations – Austrian Federal Forests AG (ÖBf) and BirdLife Austria – is an attempt to find a common approach to nature conservation. 15 % of all forests are state owned via the ÖBf acting as a private business, thus being the biggest forest owner in Austria. Therefore this cooperation can be a benchmark for other forest owners in Austria.

Speaking a common language

An important aspect of our partnership is to raise mutual understanding, for instance on 'sustainability', a term used by both sides in completely different ways. We are working towards establishing a common basis for bird protection and models for support measures. While BirdLife defines the scientific criteria for conservation, ÖBf works on the economic and practi-

cal framework. The overall aim is to find practical ways for companies to take into account ecological aspects whilst being mindful of market imperatives.

We have so far defined concrete thresholds for indicators such as amount of dead wood or age of stands being crucial for endangered bird species. The threshold values were based on existing literature, BirdLife case studies and a workshop with Austrian and German nature conservation experts. In a second workshop, and in several discussions with ÖBf experts, the practicalities for integrating the suggested conservation measures into the daily routine of forest rangers were carefully evaluated.

Breakthrough

In the next phase of our project, instructions for ÖBf employees will be prepared to implement the selected conservation measures. Implementation will then start in selected forest districts run by forest rangers who are committed to biodiversity conservation. In a second step, these measures will be extended to the whole ÖBf property. Reaching a breakthrough with Austria's biggest forest owner might then set a trend for further cooperation initiatives.

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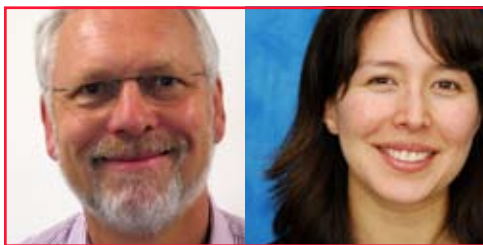


Solving the biodiversity challenge in the oil & gas sector. Photo courtesy of iStockphoto

Sector by sector overview > oil & gas

Solving the energy and biodiversity challenges

By RICHARD SYKES and ERICA DHOLOO



Sustainable development requires access to affordable energy, as well as the conservation of biodiversity and the ecosystem functions it provides. The need to meet energy demands while maintaining the health and functionality of ecosystems leads to some complex challenges for society.

Industry performance

Oil and gas operations may have a range of direct and indirect impacts on biodiversity at all stages of a project lifecycle, from exploration and production through to decommissioning. Although the industry's physical footprint is small relative to other sectors, companies face the challenge of managing operations in a way that conserves biodiversity. From a business perspective, it is important to minimise risks and thereby enhance the ability to access key business resources and company reputation.

IPIECA and OGP's Biodiversity Working

Group (BDWG) focuses on ways to improve industry performance and increase industry awareness of key biodiversity issues by: sharing good practice across the industry in international workshops; developing tools and guidance to assist with biodiversity-inclusive business planning; providing a forum to share information on strategic issues; and liaising with biodiversity conservation organisations and policy fora, including the CBD.

The oil and gas sector has been active in developing best practices and guidelines that integrate biodiversity into different management processes. Examples include Biodiversity Action Plans and the integration of biodiversity into Environmental and Social Impact Assessments and Environmental Management Systems. These practices, which are shared within IPIECA and OGP, are focused on identifying biodiversity risks at an early stage to ensure mitigation is built into project design. By reducing its operational footprint, the sector can contribute to achieving the objectives of the CBD.

Business value

There is business value in managing risks associated with biodiversity at all stages of industry activities, from upstream access to blending of fuels. In the exploration and production business, for example, business works to gain access to resources in sensitive environments by participating in the development of policy on protected areas, engaging stakeholders in planning of new oil and gas projects; and operating to recognised standards that minimise ecological impacts.

Recommendations

IPIECA and OGP's current recommendations for moving forward with business and biodiversity focus on:

Biofuels: Business needs to know that the biofuels it sources are sustainably produced. IPIECA stands ready to represent the industry in developing international standards for sustainable biofuels and has recently accepted an invitation to co-chair the Implementation Working Group of the Roundtable on Sustainable Biofuels (RSB). Such engagement and cooperation should continue through the development of the RSB [3].

Regulation and decision-making: Biodiversity is not at risk everywhere. Business seeks regulations that provide for a case-by-case assessment of the risks of projects rather than blanket restrictions. Business wants to be recognised as a responsible stakeholder and included in clear and transparent decision-making processes.

Ecosystem services should be seen as an 'emerging issue' for business. Business needs to understand how to identify and assess potential impacts on ecosystem services in order to manage operations in a way that safeguards these. Accordingly, the development of such tools would benefit from business input at an early stage.

However, there are other instances where business may benefit from collaborating with others. Governments, business and civil society all have their roles to play in generating opportunities to conserve biodiversity. Examples of business partnerships with conservation organisations include:

- The Energy and Biodiversity Initiative (EBI) was a partnership between energy companies and conservation organisations which developed industry best practice on topics such as metrics and site selection [1].
- Energy companies working with UNEP-WCMC to improve the availability of biodiversity data for all stakeholders.
- Oil and gas companies have worked with conservation organisations on a range of projects. Examples of these can be found on IPIECA's website [2].

[1] www.theebi.org

[2] www.ipieca.org/activities/biodiversity/bio_case_studies.php

[3] energycenter.epfl.ch/biofuels

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Creating the sustainable city

By MATTHIAS SCHULER



For us, it all started in 1992 with a conviction that the only responsible way of dealing with our environment was to abandon the use of nuclear energy, conserve fossil fuels, and increase utilization of solar energy and other renewable energy forms.

The annual report for 1989 on primary energy in the Federal Republic of Germany showed that building heating accounted for nearly one third of the nation's overall energy needs. This drew our attention to the field of building design; it was a call to action, a challenge.

The message

In 1998, WWF began its Living Planet Reports showing the state of the natural world and the impact of human activity upon it. The 2006 edition of the report confirms that we are using the planet's resources faster than they can be renewed – the latest data available (for 2003) indicate that humanity's Ecological Footprint has more than tripled since 1961. Our footprint now exceeds the world's ability to regenerate by about 25 percent.

The other index in the report, the Living Planet Index, shows a rapid and continuing loss of biodiversity – populations of vertebrate species have declined by about one third since 1970.

The message is clear: we have been exceeding the Earth's ability to support our lifestyles and we need to stop. If we do not, we risk irreversible damage. The biggest contributor to our footprint is the way in which we generate and use energy. The Living Planet Report indicates that our reliance on fossil fuels to meet our energy needs continues to grow and that greenhouse gas emissions now make up almost half of our global footprint.



Demanding buildings

About 40 percent of the final energy demand is for buildings. This means that more than 15 years after Transsolar was founded, the purpose of climate engineering for buildings has not changed, but acquired a global meaning: ensuring the highest possible comfort in buildings with the lowest possible energy use will lower the impact on our environment.

Transsolar accomplishes this by developing and validating innovative climate and energy concepts and strives to go beyond the limited idea of energy conservation based upon maximizing thermal properties of the building envelope or skin. Our approach also recognizes the interdependence of the built and natural environments, and

ensures that natural laws are respected, even with the building intervention. We employ sustainable strategies in our concepts as they apply to specific site, building type, and user needs.

Master plan

As member of the design team for the Masdar City Master Plan in Abu Dhabi, we were introduced to a new and most holistic approach of defining sustainable urban development: The six square kilometre city, designed by Foster and Partner for the Abu Dhabi Future Energy Company, is to house an eventual 50,000 people in accordance with WWF One Planet Living sustainability standards which include specific targets for the city's ecological footprint.



The Masdar City Master Plan in Abu Dhabi: The six square kilometre city, designed by Foster and Partner for the Abu Dhabi Future Energy Company, is to house an eventual 50,000 people. © Copyright Foster and Partners

Masdar City – which will be zero-carbon, zero-waste and car-free – plans to exceed the requirements of the 10 sustainability principles of the One Planet Living programme, a global initiative launched by WWF and environmental consultancy BioRegional. Independent and public verification of Masdar City's performance in meeting these standards is just one of the features distinguishing the project. Another is the commitment that the project will not just preserve existing regional biodiversity but enhance it.

One Planet Living is based on 10 principles of sustainability. The design team developed targets that are to be achieved by the time Masdar City is completed and fully functioning, in 2012 (see box).

Replication

The involvement in the Masdar project has given us the chance to view the possibilities of our work differently. Up to this point, we saw ourselves as experts in planning highly comfortable environments for the building user with a minimised energy demand. Through our work in the design team for Masdar City we were challenged to set the highest targets possible for energy savings, enabling the team to plan a self-sufficient sustainable city – by realizing high density living and working space, which will still allow a luxurious modern lifestyle. If this can be showcased this will have global impact. The high standard living society in the world is responsible for the tripling of our ecological footprint. To prevent irreversible damage, we not only

Masdar One Planet Living targets

ZERO CARBON – 100 per cent of energy supplied by renewable energy – Photovoltaics, concentrated solar power, wind, waste to energy and other technologies.

ZERO WASTE – 99 per cent diversion of waste from landfill (includes waste reduction measures, re-use of waste wherever possible, recycling, composting, waste to energy).

SUSTAINABLE TRANSPORT – Zero carbon emissions from transport within the city; implementation of measures to reduce the carbon cost of journeys to the city boundaries (through facilitating and encouraging the use of public transport, vehicle sharing, supporting low emissions vehicle initiatives).

SUSTAINABLE MATERIALS – Specifying high recycled materials content within building products; tracking and encouraging the reduction of embodied energy within material sand throughout the construction process; specifying the use of sustainable materials such as Forest Stewardship Council certified timber, bamboo and other products.

SUSTAINABLE FOOD – Retail outlets to meet targets for supplying organic food and sustainable and or fair trade products.

SUSTAINABLE WATER – Per capita water consumption to be at least 50 per cent less than the national average; all waste water to be re-used.

HABITATS AND WILDLIFE – All valuable species to be conserved or relocated with positive mitigation targets.

CULTURE AND HERITAGE – Architecture to integrate local values.

EQUITY AND FAIR TRADE – Fair wages and working conditions for all workers (including construction) as defined by international labour standards.

HEALTH AND HAPPINESS – Facilities and events for every demographic group.

need to see our personal life style and its impact in a global context but also the chances that lie in our work and in the way we work.

We see the vision of the Masdar Development for a carbon neutral city as a concept demanding replication in other location around the globe.

Matthias Schuler is a founder and managing director at TRANSOLAR Energietechnik GmbH and a visiting professor at the Harvard University Graduate School of Design.

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Financing sustainability in Canada: from concept to practice

By BRENT PARKER



Environment Canada conducted a project with 6 major banks, and other stakeholders, to analyze sustainability risks and opportunities in the boreal region. Brent Parker highlights the main conclusions of the recently finalized project report.

Financial institutions around the world are increasingly responding to the unique business opportunities and risks posed by sustainability issues. Many financial institutions have recognized the inherent benefits of integrating sustainability into business decision-making and have begun to incorporate sustainability criteria into their operations, risk assessment processes, and new product development. At the same time, institutions are facing increased scrutiny over their policies and practices related to environmental and social issues such as biodiversity, climate change, and human rights. In Canada, banks in particular are experiencing growing stakeholder pressure from investors and non-government organizations to examine and disclose their lending policies with respect to these issues. One emerging area of focus is the impact and potential role of the financial services sector in protecting and conserving Canada's boreal region.

Boreal risks and opportunities

Canada's boreal region supports one of the world's last frontier forests with over 70% considered ecologically intact. The boreal forest plays an integral role in Canada's history, culture, economy and environment. It is home to hundreds of rural, remote and resource-dependent communities and plays a vital role in the economy by providing petroleum products, peat, forest products, hydro-electricity and tourism dollars. At a global level, the boreal plays a vital role as the single-largest terrestrial carbon storehouse in the world.

The main issues threatening the sustainability of the boreal region are the: cumulative impacts from forestry, mining, oil and gas, power generation and agricultural activities; impacts of abnormal natural disturbances such as forest fires, insects and disease; effects of climate change; and poor land use planning.

Activities in the boreal region present a mix of opportunities and risks for Canadian banks. Banks not only procure products from the region to support their operations but also provide products and services that support the activities in the area. Although Canadian banks have risk management procedures in place and are already working in various ways to enhance their environmental and social policies, they share a common interest in developing a better understanding of the relevance of their activities to the sustainability of the boreal region.

Engaging stakeholders

Building on this shared interest, the federal Department of Environment, Environment Canada, in collaboration with six major Canadian banks (Bank of Montreal, Canadian Imperial Bank of Commerce, National Bank of Canada, Royal Bank of Canada, Scotiabank, Toronto-Dominion Bank) commissioned research to examine financial institutions' activities in light of the sustainability challenges facing the boreal region and identify priority issues and global best practices appropriate to the Canadian financial services sector. The ultimate objective of the research paper was to provide a range of options for consideration in developing strategies aimed at fostering greater alignment of the social, environmental and economic interests of the banks and their stakeholders with the sustainability of the boreal region.

The research assessed the relevance of financial institutions' lending, procurement and other policies, strategies and practices on Canada's boreal region. This broad perspective was supplemented by an inventory and review of the participating banks activities and an overview of recognized international best practices in the financial sector.

In total 81 Canadian and international organizations including NGOs, SRI funds, Aboriginal peoples, financial institutions, and financial service sector clients, were researched as part of this project. Thirty-five stakeholders actively participated in the consultation process identifying key issues and developing options for consideration.

"The boreal forest plays an integral role in Canada's history, culture, economy and environment. It is home to hundreds of rural, remote and resource-dependent communities and plays a vital role in the economy by providing petroleum products, peat, forest products, hydro-electricity and tourism dollars. At a global level, the boreal plays a vital role as the single-largest terrestrial carbon storehouse in the world"

Key findings and future considerations

The research culminated in the report *Financing Sustainability – Moving from Concept to Practice: Research Paper on the Relevance of Canadian Banks' Activities to the Sustainability of Canada's Boreal Region*, which outlines the key issues and considerations for financial institutions [1].

The research highlights the fact that although concerns about the boreal were the impetus for sustainability considerations, these issues could just as easily come into focus in other critical areas of Canada such as the arctic, the rainforests of British Columbia, the urbanization of southern Ontario or Atlantic Canada. The issues landscape will also likely further expand from today's primary focus on climate change and biodiversity to include water scarcity and endangered species. Both trends speak to the benefit of corporate-level sustainability policy.

Risks around the boreal forest region and sustainability need to be carefully considered in the context of all other types and forms of risks faced by a bank. In the overall scheme of a bank's operation, revenue and shareholder value, the significance of such risks will vary. Rather than respond to pressure-based, issue-specific solutions proposed by activists, there is a need to balance the competing needs of relevant stakeholders by getting ahead of potential issues to assess the impact they may have on their organizations.

In order to expand beyond the historically narrow definition and assessment of environmental risk (e.g. site contamination), banks need to identify and obtain a broader set of skills to assess questions and practices of sustainability. Canadian banks are beginning to develop this forward looking capability; however, this could be further supported by broader consultation processes that engage non-traditional stakeholders such as govern-

ment agencies, aboriginal organizations and academics. Canadian banks might also consider developing partnerships with science-based conservation organizations to further research issues related to specific sustainability issues.

The report also identified the opportunity for Canadian banks to develop environmentally-oriented consumer investment products as well as commercial products that provide incentives or preferential services which recognize the implementation of sustainability practices such as third party certified operations, research and development leading to improved operational practices, or the development of green products or technologies. In terms of their own operations and procurement Canadian banks could also generate a positive impact on the boreal region by enhancing internal corporate social responsibility practices.

The research noted the catalytic role banks could play in fostering a sustainability-based economy and identified key areas of opportunity for further development. The options outlined for consideration involve assessing transaction risks with respect to social and environmental criteria, fostering improved client performance, and sectoral collaboration on leadership activities such as Equator Principles-type guidelines for lending in Canada, standardized environmental risk assessment checklists and a statement on sustainable lending for protected or eco-sensitive areas.

Institutionalizing sustainability

Canadian banks are acknowledging their direct and indirect role in Canada's sustainability through the responsible management of the country's social, economic and natural resources. Over the intervening time period of this research, Canadian banks have broadened their corporate environmental policies and expanded their supporting activities. For example, some banks have committed to carbon-neutral operations while others have identified 'no-go' zones, such as World Heritage Sites, which are off limits for project financing. Many have also begun to capitalize on investor interest in responsible investments and have launched specialized SRI and environmental investment products.

It is expected that this research paper will be used to provide a common foundation upon which Canadian banks can, individually or collectively, continue their constructive dialogue with key stakeholders on boreal and sustainability issues. As financial institutions continue to acknowledge the risks and opportunities presented by sus-

tainability, those organizations that most effectively institutionalize these emerging issues stand to benefit their shareholders, stakeholders, and society at large.

[1] The full report can be downloaded at www.ec.gc.ca/cei-iee/DC145895-8C4D-45E3-8D43-912B8C57A2D5/Financing_Sustainability_in_the_Boreal-2007.pdf

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Sector by sector overview > financial services

Report back on the Biodiversity & Ecosystem Finance conference (New York, 27-28 March)

By **SOFIA SANTOS**



On 27-28 March in New York, bankers, economists, forestry experts and others discussed the linkages between biodiversity and the market economy [1]. This focused not only on global trends and theories that support the pricing of goods and services but, instead, was very much focused on concrete, tangible, business examples where biodiversity, ecosystem services and financial markets go hand to hand. This was really the key added value of the conference: exposing concrete cases in where ecosystem services have been valued economically and understood as long term investments. The conference highlighted that there is an increasing number of investors willing to invest in such portfolios.

Valuing nature

From these two days, it was clear that, gradually, economic agents are changing the way they value the services that come from nature. Quoting one of the speakers, Ricardo Bayon, "Labour used to be a scarce resource, and that's why we attributed

value. Today natural resources are scarce and therefore we have to pay for it". As Claudia Sobrevila, another speaker, from the World Bank stressed, "we face three major problems: Ecological, due to landscape fragmentation, climate change and invasion of alien species; Social, coming from inequality and exclusion, extinction of indigenous groups that live closer to biodiversity, population growth, conflicts, weak local, national and global governance; and Financial, due to growing competition for scarce resources, short planning horizons and market failures".

Attributing a value and a price to goods is the only way to not over consume. In order to develop a global market for ecosystem services, there is a need for creative and innovative economic and financial approaches. These approaches also need a legal framework – this can be at the national level, or can be between investors, or between them and governmental bodies. The need for some governmental intervention notwithstanding, it is the business community that has the power to develop innovative financial approaches.

New investment approaches

Business is already showing interest in looking for different investments. According with Radha Kuppalli, from New Forests, a forestry and eco products investment management company that manages USD 150m of sustainable forest assets in the Asia and Pacific region, "Investors seeking exposure to high-growth emerging markets and trends in sustainability should consider a new style of investment in forests, considering both timber and the new ecosystem-based assets". She also indicated that, increasingly, investors are looking for different investment approaches, with strong sustainability criteria.

This conference, which gathered around 100 participants, was an extremely valuable experience, with a rich selection of examples from US, Europe, Asia and Brazil. It was an excellent way to learn how different cultures, different legal and voluntary frameworks have been working in these regions, and how to strengthen the rationale for expanding ecosystem service markets.

[1] The conference was organized by Green Power Conferences. Presentations can be download at www.greenpowerconferences.com/carbonmarkets/biodiversity_ny2008_download.html

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Catalyzing global 'corporate ocean responsibility'

By PAUL HOLTHUS



The ocean is in trouble. Recent studies show that almost no part of the global ocean is unaffected by human impacts. Marine biodiversity is being degraded, destroyed and overexploited at an ever increasing rate and global scale. This is affecting the coastal inhabitants and communities worldwide that depend on marine areas for food and livelihood, many of whom are poor and marginalized. Degradation of the natural functions of the ocean may also affect its critical role in regulating the climate. As the primary user of ocean space and resources, business is key to the future of the ocean.

Global impacts

Oceans support a significant, unique component of the world's biological diversity in a dynamic, inter-connected, three-dimensional water world covering over 70% of the earth's surface. Due to the fluid, international nature of the ocean, its biological and ecological richness and resources often extend over vast geographic scales. The marine environment provides 59% of the world's ecosystem benefits, with the 5% comprising the nearshore marine environment, *i.e.* estuaries, coastal wetlands, mangroves, coral reefs, and continental shelves, alone providing 38% of the world's ecosystem goods and services.

Many businesses are entirely dependent upon ocean resources, services and space, *e.g.* marine transport, offshore oil and gas, ports, fisheries, aquaculture, marine tourism, and seabed mining. The worldwide economic value of ocean goods and services is estimated at USD 6-21 trillion.

Ocean industries such as shipping, oil, fisheries, aquaculture, and tourism are

big and are expanding rapidly, bringing ever increasing impacts to the marine environment and its biodiversity. Seaborne shipping accounts for about 90% of global trade. US container shipments quintupled from 1980 to 2006, and worldwide cargo will double or triple by 2020. Cruise ship passenger capacity doubled in the past 20 years and continues to expand. Shipping impacts to marine biodiversity include oil spills from tankers and fuel tanks, invasive species, and waste discharge at sea. Ship borne air pollution is projected to increase 150% over the next 30 years.

Ocean oil industry activity increased 9% in recent years, with Mexico's production alone expanding 70%. About 4,000 ocean wells exist around the world and exploration is expanding to ever deeper areas, particularly in many developing countries. Oil and gas industry operations in the marine environment result in a range of impacts from seismic testing, platform spills, drilling waste, etc. In the area of fisheries, human consumption of fish grew from 20 - 85 million ton during 1960 - 2002 and 70% of fish stocks are now considered to be fully exploited or overexploited. Fisheries impacts include over harvesting, excessive by-catch, trawling of ocean bottom habitat and direct and indirect impacts to marine mammals, seabird and other endangered wildlife. Other growing ocean industries include aquaculture, seabed mining, bio-prospecting and offshore wind energy – all creating their own sets of impacts and user conflicts.

The rules that rule the waves

Sustainable development of the dynamic, interconnected global ocean 'commons' – for which everyone, and no one, is completely responsible – presents unique challenges. The international 'playing field' and 'rules' for the sustainable development of the ocean are being established through numerous organizations, programmes, and agreements, most of which are UN related: *e.g.* Agenda 21's Chapter 17 on oceans and coasts and the World Summit on Sustainable Development targets; the UN Convention on the Law of the Sea (UNCLOS), which provides a global legal framework; and the CBD, which has promulgated the Jakarta Mandate on marine and coastal biodiversity conservation and sustainable use.

Numerous other international agreements cover more specific aspects of the sustainable development of oceans and coasts. These include: the International Maritime Organization (IMO) conventions on marine pollution from sea-based sources; the UN Environment Program (UNEP) Global Pro-

The World Ocean Council (WOC)

The World Ocean Council brings together ocean industries, *e.g.* shipping, oil and gas, fisheries, aquaculture, and tourism, to catalyze leadership and collaboration in addressing ocean sustainability and stewardship and is working with ocean industries to contribute to the sustainability of the seas in several ways:

- a. International research alliance on marine environmental problems. We are bringing together companies to develop a cooperative industry program of support for independent research into shared marine environmental problems, creating economies of scale in finding practical, cost-effective, operational solutions to collective issues such as ships collisions with marine mammals and waste discharge at sea.
- b. Ocean industry collaboration with other stakeholders. The WOC is organizing cross-sectoral industry working groups on priority marine conservation issues, such as marine protected areas and the Arctic, to increase industry understanding, willingness and ability to engage ocean conservation. We will facilitate constructive industry input to multi-stakeholder forums on these issues, for example, through industry participation in NGO workshops on designing high seas marine protected areas.
- c. Sustainability strategies to improve companies' marine environmental performance. We are working with companies to document their ocean ecological footprint, develop ocean sustainability strategies to reduce their marine environmental impacts, measure their performance, and publicly report their results.

gramme of Action for Protection of the Marine Environment from Land-Based Activities; the UN Food and Agriculture Organization (FAO) Code of Conduct for Responsible Fisheries; the Convention on the International Trade in Endangered Species (CITES); and several Regional Seas Conventions.

Although business is by far the main user of ocean space and resources, and responsible for the impacts that governments are seeking to manage, with a few exceptions, it is, by and large, not included, or only operates on the margins of these international ocean management processes. At the same time, governments and international bodies lack of capacity needed for surveillance and management of the global marine environment.

The tragedy of the ocean commons

The conservation of marine biodiversity is inherently multi-sectoral and international, requiring the participation of all stakeholders. As the primary user of the marine environment, and source of many ocean impacts, business is best placed to develop and drive solutions, but is often

WOC side event at COP-9

29 May, lunchtime, GSI/S26

“The health, productivity and biodiversity of the world’s ocean cannot be secured without proactive, collaborative business leadership”



Photo courtesy of willlewonker/flickr.com



Photo courtesy of danrandom/flickr.com



Photo courtesy of Phillip DiResta/flickr.com

not doing so in a way that addresses the global scale of the issues. Industry efforts to address its impacts are usually piecemeal and reactive, usually undertaken by one company in a limited area.

The problem is that there are few incentives for leadership in environmental responsibility and collaboration in a shared global ocean ecosystem. It is often not clear how, and with whom, to work on

the complex, intertwined, international marine issues. In this ‘tragedy of the commons’, actions taken by one company to be a good ocean steward generate costs that are not perceived to have benefits, resulting in a competitive disadvantage and few incentives to tackle shared environmental problems.

Although there are few incentives to take on shared environmental problems, some companies try to do business in a more environmentally sustainable way. Unfortunately, the efforts of one company or even a whole industry sector are not enough to address global, cumulative impacts of growing ocean use by a diverse range of industries. At the same time, some UN agencies, governments, and NGOs are working to address marine environmental problems, but are not engaging with ocean industries. A new approach is needed to overcome the limitations of government and international community capacity to manage the seas and the lack of a critical mass of business commitment.

Global Solutions

The health, productivity and biodiversity of the world’s ocean cannot be secured without proactive, collaborative business leadership. My work with ocean industries over the years has confirmed that responsible companies want to address environmental impacts, differentiate themselves from poor performers, collaborate within and across sectors, and engage other ocean stakeholders. The problem is that there has been no structure and process to make this happen.

The World Ocean Council has been formed to transform the way ocean sustainability is addressed by bringing together the responsible actors from a wide range of ocean industries to catalyze leadership and collaboration in ocean sustainability and stewardship – creating a culture of ‘Corporate Ocean Responsibility’ (see box, previous page).

The next meeting of the WOC (24 June 2008, New York) will be held in association with the annual UN oceans deliberations, and be followed by a side event inside the UN to increase the understanding of government/UN/NGO representatives to the UN oceans consultations of the proactive industry marine sustainability efforts. Interested companies and trade associations are invited to contact us for more information.

Paul Holthus is Executive Director, the World Ocean Council (WOC).

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Newly formed union promotes business engagement in CBD

GUS LE BRETON and **RODOLFO GUTTILLA**, respond to questions on establishment of the Union for Ethical BioTrade.



What is 'Ethical BioTrade'?

Gus Le Breton (GLB) – 'Ethical BioTrade' is the term used to describe a particular set of business practices that contribute, in a systematic way, towards sustainable development, including biodiversity conservation. It is a sincere attempt to harness the power of business as a partner towards achieving this goal. Ethical BioTrade is based on the BioTrade Principles and Criteria defined by the UN Conference on Trade and Development (UNCTAD), broadly centred on the CBD objectives. The work of the UNCTAD BioTrade initiative has been recognized by Parties in various COP decisions.

What is the Union for Ethical BioTrade?

GLB – The Union is a membership-based organization whose members, trading and non-trading, have all made a commitment to integrate Ethical BioTrade practices into their business model. It was publicly launched in October 2007.

Why create a Union?

Rodolfo Guttilla (RG) – Primarily because we are all venturing into new territory and we think the journey will be easier in the company of others. But we are also, of course, hoping to gain collective recognition for our efforts in trying to promote biodiversity conservation and sustainable development more generally.

How does it work?

GLB – On joining the Union, a company undergoes a detailed assessment that

compares its current business practices with Ethical BioTrade practices. From this, a work-plan is developed which should see the company reaching compliance with the Ethical BioTrade standard within less than five years. For companies at the end of the supply chain, this signifies establishing management systems that promote Ethical BioTrade. For actors at the beginning of the supply chain, this signifies good practices in the sourcing areas. The member then reports annually on its progress, and is required to submit to periodic third party assessments.

RG – Natura, for instance, has reviewed its sourcing and R&D policies in light of the requirements of the Union for Ethical BioTrade. It made the necessary changes and is now working with its providers and community suppliers to put these policies into practice further down the supply chain.

Who can join the union?

RG – Any corporate entity active in the BioTrade arena and which is seriously committed to the CBD, whether a trading company or a support organization, can apply for membership. At this stage, the primary focus is on companies in the cosmetics and personal care markets.

GLB – In our daily business activities, we witness that consumer awareness on fair trade and sustainability issues is growing rapidly in this sector. There is thus a strong incentive for businesses in this sector to start aligning corporate policies and practices with the objectives of the Convention.

What are the business benefits?

GLB – The Union is a grouping of like-minded companies. There is a great deal that members can learn and gain from each other, and a big part of the benefit simply comes from this collective association. This is one of the main drivers behind the new membership applications that we receive. However, it is more than that. Companies that are going that extra mile with respect to access and equitable benefit-sharing, fairer trade or biodiversity conservation practices, would like to get recognition for their efforts. Membership of the Union, and the third party verification that goes with it [see box], enables companies to do this.

RG – Natura, for instance, has submitted a large number of access and benefit sharing requests to the Brazilian Government, a process that is often complex and time consuming.

GLB – Members invest a lot in sourcing practices that assure sustainable use of

UEBT verification framework

The verification framework used by the Union is derived from the BioTrade principles and criteria as defined by UNCTAD. After a long consultation period, this verification framework was adopted in September 2007. The Ethical BioTrade framework contains 7 principles, which are broken down in criteria and indicators:

1. Conservation of biodiversity.
2. Sustainable use of biodiversity.
3. Fair and equitable benefit sharing derived from the use of biodiversity.
4. Socio-economic sustainability.
5. Compliance with national and international legislation.
6. Respect for the right of actors involved in BioTrade activities.
7. Clarity about land-tenure, right of use and access to natural resources.

biodiversity. PhytoTrade Africa now supports members with such practices, but in the future we look to the market to recognise these efforts and bear the additional costs.

How does the Union work with governments?

GLB – As the Union grows, it will work on engaging governments and companies into constructive dialogue. The Union is frequently approached by companies that are keen to know more about the CBD. After COP-9, UNCTAD and the Union are therefore planning discussions with companies from the cosmetics and personal care sector and CBD national focal points from developed and developing countries. These meetings intend to increase mutual understanding and make a contribution to national biodiversity strategies that effectively promote business engagement.

What activities are you planning at COP-9?

RG – This will be the first CBD COP since the Union for Ethical BioTrade was established, and we will of course actively participate. We intend to take the opportunity to present the Union to delegates and show the positive contribution members can make to the CBD objectives. We will organize a side event and have a stand at the 'Expo for Diversity'; we invite all readers to pay us a visit at stand 45. In addition, member companies will actively participate in the different events organized during the COP. Natura, for example, will join the German business and biodiversity initiative.

UEBT at COP-9

Side event: 26 May, lunchtime, Maritim / Planck Expo: stand #45

GLB – The COP will also give member companies an opportunity to see the inter-governmental machinery at work, provide insight in the issues at stake, and illustrate the different views and wide range of stakeholders involved in the debates.

What would you like to achieve by COP-10?

RG – By 2010 we plan to be a solidly established association with sufficient critical mass in terms of membership to make a real impact on the way business is done in our target sectors. For this we are reaching out to companies at both ends of the supply chain. In the running up to COP-10, we expect therefore significant level of activity by our members in trying to put the BioTrade Principles into practice. This will certainly pose challenges to the companies and their providers and will raise many practical questions.

GLB – Already members turn to us for guidance and advice, and we expect these requests to rise. At the COP-10 and its preparatory events, we expect to share these experiences with the parties and contribute with concrete inputs to the policy discussions.

Gus Le Breton is President of the Board of the Union for Ethical BioTrade, and CEO of PhytoTrade Africa (the Southern Africa Natural Products Trade Association). Rodolfo Guttilla is Vice-President of the Union's Board, and Director of Corporate Affairs, Natura Cosméticos SA, Brazil.

The Union for Ethical BioTrade is a non-profit, membership-based organization. The Board of the Union includes private sector, trade associations, NGOs, and National BioTrade Programmes.

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“The COP will also give member companies an opportunity to see the intergovernmental machinery at work, provide insight in the issues at stake, and illustrate the different views and wide range of stakeholders involved in the debates”

Above: rural harvesters in northern Namibia deliver Kalahari melon seed. Photo courtesy of PhytoTrade Africa

Sector by sector overview > biotrade

Bolivia's biotrade experience

By RUTH DELGADO



Biotrade, a relatively new concept, is defined like those activities of collection/production, transformation, and commercialisation of goods and serv-

ices derived from native biodiversity (genetic resources, species and ecosystems), under criteria of environmental, social and economic sustainability. Biotrade activities are framed within the global conservation and development objectives established by the CBD, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Millennium Development Goals (MDG) and the Commission on Sustainable Development (CSD).

The programme

The year 2003, the Government of Bolivia, the United Nations Conference on Trade and Development (UNCTAD) and the Government of the Netherlands and the Swiss Confederation signed a Memorandum of Understanding to support the execution of the Biotrade National Programme (Programa Nacional de Biocomercio Sostenible - PNBS) in Bolivia. In 2005, Friends of Nature Foundation (Fundación Amigos de la Natu-

raleza – FAN) was appointed as Technical Focal Point for the PNBS. The Programme is to facilitate the trade of products and services of native biodiversity, produced with ecologic, social and economic sustainability criteria and thereby to generate income for the country.

The PNBS - Bolivia was designed to alleviate four issues: First, a weak regulatory framework; Second, an underdeveloped market for biodiversity products and services with little added value; Third, difficult access to capital; and Fourth, lack of knowledge among the general public on biotrade and its potential.

The Programme was divided into four components: (1) Strengthening of regulatory framework and implementation capacity; (2) Development of value chains; (3) Financial systems; and (4) Information and training. Activities for each one of these

continued on page 30

continued from page 29

are undertaken using the value chain approach – this involves alliances among producers, processors, distributors, traders, regulatory and support institutions establishing a joint vision in order to develop intervention strategies and priority activities.

15 native biodiversity products

The PNBS has selected 15 native biodiversity products, namely spectacled caiman leather and meat, tegu lizard leather, collared peccary leather, vicuña fiber, woven jatata palm panels, palqui coffee, maca, butterfly chrysalis and pressed butterflies, babasu oil and cosmetics, copaiba balm, majo oil and milk, wild cacao, stingless bee honey, brazil nuts and aromatic herbs.

The biotrade initiatives related with these



Close up of maca bulb Photo courtesy of Ruth Delgado, FAN-PNBS

products, were evaluated in order to verify the fulfilment of the Principles and Criteria. Also, mapping and sector planning workshops were carried out. Both allowed for the identification of different needs and helped define the technical and financial assistance provided by the PNBS to the different actors. These included the development of nature resources management plans, strategic planning, development of business plans, establishment of productive units, field extension activities for ecologic production, recommendations for the implementation of Cleaner Production Measures, support in the application of protocols for Good Manufacturing Practices and market studies.

The Programme promoted the development and updating of different legal instruments that regulate and encourage biotrade at the national level.

La maca (*Lepidium meyenii*), which grows above 3000 m, is cultivated by communities from the Bolivian Andes. It is principally utilized like dietary supplement because of its high energetic and nutritious values. The maca's value chain involves mainly farmers, laboratories and companies.

The design of a strategic plan for maca's sector allowed for technical and financial assistance to be provided to the different actors. In this way, 21 communities were trained in organic and ecologic production. The beneficiaries are 250 maca producers connected to three companies. Three new associations of farmers were consolidated to promote more equitable commercial relations with the companies. The three companies are using the strategic and business plans designed by the Programme. Associations and companies have been promoted at international and national fairs.

The journey continues

The processes that have been started with the PNBS intervention are still fragile and the monitoring mechanisms are still being shaped. Nonetheless, it is very encouraging to note that 'biotrade' is now part of the Bolivian vocabulary. We need to ensure that biotrade does not get equated simply to the 'commerce of biodiversity' but that it maintains its links with ecologic, social and economic sustainability criteria.

Ruth Delgado is Natural Resources Manager of the Biotrade National Programme (PNBS) which is executed by Friends of Nature Foundation (FAN).

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Sector by sector overview > tourism

The biodiversity revelation

By DOUG FORSETH and ARTHUR DEJONG



At the heart of every corporate sustainability story, there seems to be a moment, an event or revelation that drastically changes the perspective of a key person or organization and leads them

on a path to more sustainable practices. For Whistler Blackcomb that moment came fairly early, in the spring of 1992. The ski area was a rising star in the resort industry, earning global recognition for its vast terrain, plentiful snow and its pedestrian village. On one sunny spring morning in 1992, it nearly became known for something else, poor environmental stewardship.

Wake up call

One of us (Arthur DeJong) received the call telling him that, through a combination of human error and a lack of containment systems, 800 litres of diesel fuel had leaked from a tank on Blackcomb Mountain and entered a fish-bearing stream. De Jong was responsible for day to day operations and felt a sharp spear of embarrassment and helplessness. "It was a nightmare turned reality when I realized that although we had first class due diligence with guest and

staff safety, we had no due diligence with environmental safety".

The environmental wake up call was a life changing event for the Operations Manager and the company. The only way out of this mess was to tell the blunt truth that we were entirely at fault and to commit to the public that we would never let it happen again. "Sixteen years later I still remember vividly the humbling experience of explaining the incident to the press and government authorities". Transparency and humility had become a trademark of Whistler Blackcomb programmes.

Relating to stakeholders

We leave it up to our stakeholders to determine if we are demonstrating leadership in sustainable practices. The ski company has been cited as writing the book on stakeholder relations with five out of sixteen of

“We feel that our credibility comes from the actions that we take, from the ability to admit our mistakes, and from our desire to include stakeholders in helping us find solutions”

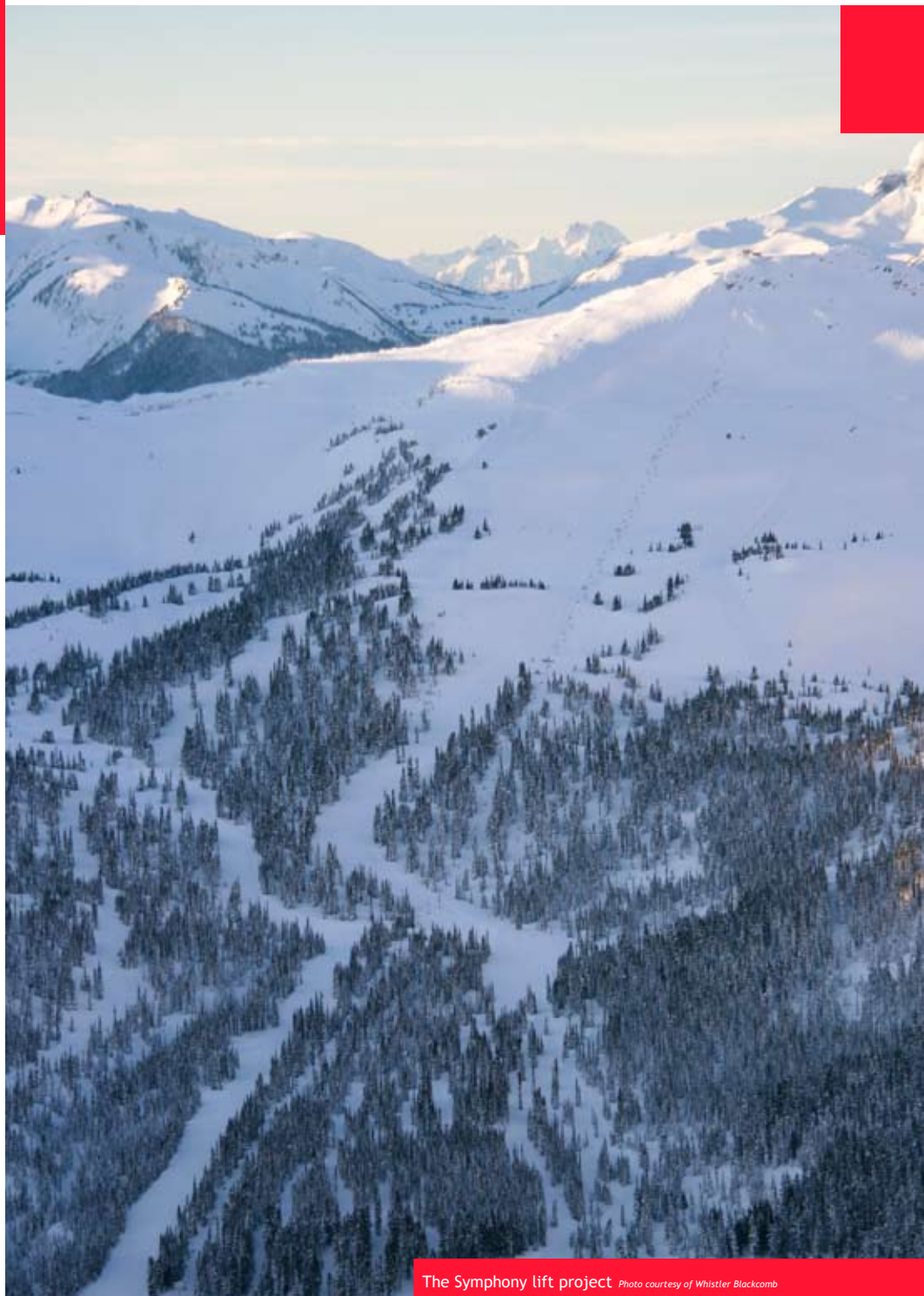
its national/international awards for environmental performance relating specifically to stakeholder relations.

Though we have been early adopters in sustainability planning, we have avoided marketing this in any traditional sense. Our approach is to actively engage our stakeholders on our issues and opportunities. We share our stories, both good and bad, about the efforts we are making to become more sustainable. We feel that our credibility comes from the actions that we take, from the ability to admit our mistakes, and from our desire to include stakeholders in helping us find solutions.

For example, we recognize that climate change threatens the health of our ecosystems and could have very negative impacts on our industry. We also recognize that tourism contributes to climate change. We conduct climate change tours on the mountains to demonstrate this threat and to showcase how we are mitigating, adapting, and diversifying to address this issue. Our three glaciers provide excellent opportunities to physically tell the story of climate change.

The ski area is one of the largest in the world with over 7,000 hectares divided into 3 biogeoclimatic zones and surrounded by Provincial Park. Recently, Whistler Blackcomb adopted an official Sustainability Policy that focuses on five key result areas, including the protection of mountain ecosystems through establishing conservation zones and improving design and mitigation. To date, several conservation zones have been established to protect wildlife and watersheds and more than USD 1.5m has been spent restoring areas negatively impacted by early development practices. Design principles focus on building experiences within existing ecosystems and minimizing any changes to those ecosystems. An example is the Symphony lift project (pictured right), completed in 2006. The footprint of this project was reduced from 40% of the area to 5% through the use of helicopters, working over snow and partially thinning forests for skiing as opposed to completely removing them.

Whistler Blackcomb recognizes that there is opportunity associated with conserving



The Symphony lift project Photo courtesy of Whistler Blackcomb

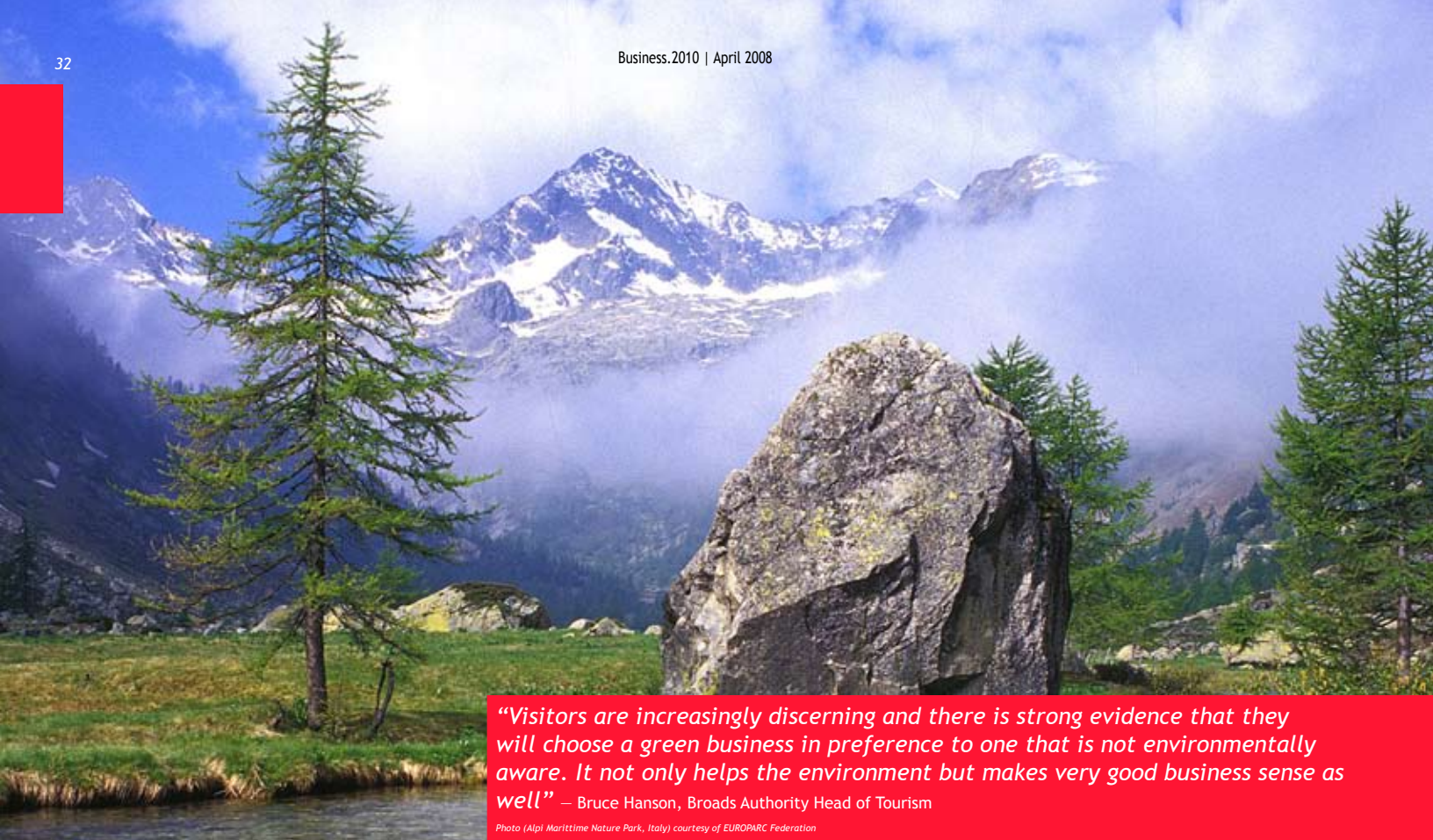
mountain biodiversity. The more we protect our natural assets, the more opportunities we have to share nature-based ecotourism experiences with our guests. We hope to inspire our guests to improve stewardship in their homes and communities. The goal of our programs is to protect, share and inspire. The ski area hopes to continue development of low impact, nature-based tourism to gain better utilization and profitability of its assets during non-winter months. In this regard, integrating environmental and economic strategy produce benefits for both.

Presented with these opportunities and daunting challenges, such as climate change, the ski operations sense of urgency to enact and inspire has never been greater.

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“Visitors are increasingly discerning and there is strong evidence that they will choose a green business in preference to one that is not environmentally aware. It not only helps the environment but makes very good business sense as well” – Bruce Hanson, Broads Authority Head of Tourism

Photo (Alpi Maritime Nature Park, Italy) courtesy of EUROPARC Federation

Sector by sector overview > tourism

European protected areas and local tourism businesses

By PETRA DIPPOLD



The European Charter for Sustainable Tourism in Protected Areas is a practical management tool that enables protected areas to develop and implement their tourism activities in terms of sustainable development. The core element of the Charter is working in partnership with all relevant stakeholders establishing a Sustainable Tourism Forum, including *inter alia* local communities, tourism businesses, local development groups and conservation NGOs. Based on the ten Charter Principles for Sustainable Tourism, the Forum develops a common sustainable tourism strategy and a 5-year action plan.

A positive influence on and new impulses to tourism development have been seen in and around the Charter protected areas resulting in new ideas and projects. The European Charter has been successfully implemented for more than ten years. 45 protected areas in seven European countries already belong to the Charter network, providing numerous model examples of how to develop and implement tourism activities that are ecologically, economically and socially balanced.

Partnerships

Many Charter protected areas have already started to build partnerships with local tourism businesses. The Volcanic Zone of Garrotxa Nature Park and the Tourism Association Garrotxa have been cooperating since 2001 in accrediting tourism businesses as Information Points of the nature park. As part of the Charter Action Plan, Harz National Park has started to certify national park friendly accommodation (Nationalparkfreundliche Unterkünfte) which fulfil special quality criteria, get involved with environmental protection activities and receive regular up-to-date information from the national park. The Charter protected areas Pilat regional nature park and Cevennes national park are two of seven protected areas located in the Massif Central, France, who came together and founded the IPAMAC association, elaborating an experimental methodology that commits all the partners and the volunteer

businesses to carry out a concrete action plan which must respect the principles of sustainable tourism recommended in the European Charter.

In 2005, the EUROPARC Federation started the process of drawing up a framework for protected areas across Europe to implement the European Charter Partnership Programme – Charter Part II. All the approaches and experiences from the Charter protected areas in working with tourism business were highly valuable and considered for its development. The European Charter Partnership Programme enables individual businesses in the tourism sector, working with protected area authority, to become recognised as European Charter Partners of their relating protected area under the umbrella of the EUROPARC Federation. The official text of the European Charter Part II was finalised and approved in May 2007.

European commonality – local flexibility

Finding an approach that works for all Charter protected areas located in different European countries with diverse national, regional and local background and realities was and is the major challenge. Tourism businesses wanting to become a European Charter Partner therefore need to fulfil requirements on two levels. The European level ensures the required

commonality in implementation across Europe, as well as compliance with the principles of the European Charter. Essential is the participation in the Sustainable Tourism Forum established by the protected area, where all partners have the opportunity to meet and exchange ideas. The activities of the tourism business should be compatible with the sustainable tourism strategy and the management plan of the protected area. With the support of the protected area the tourism business develops a three-year action plan listing specific activities to be implemented during the partnership, e.g. compiling visitor statistics, energy saving measures, development of interpretive guided nature tours in the protected area.

Signing the Partnership Agreement enables the Charter partner to use the European Charter for Sustainable Tourism in Protected Areas logo on their literature, website etc. As Charter partner the business will benefit from 'positive discrimination' *inter alia* in training and information campaigns, listing in promotional and information materials and activities of the protected area (web, brochures, visitor centres, fairs, etc.) and the EUROPARC Federation. The European Charter Network enables them to network with other national and European Charter businesses or participate at meetings of the Charter Network.

On the local level, each EUROPARC Section or national or regional Charter network are encouraged to work on a methodology for implementing the European Charter Part II to be validated by EUROPARC. At protected area level, the specific requirements for tourism business will be agreed by each protected area's Sustainable Tourism Forum. Thereby, EUROPARC will achieve a flexible partnership approach which reflects existing local quality marks and eco-labels (Green Tourism Business, Green Dragon, QIT, Marca Parque Natural, 'Q', Viabono for example), differing local needs and varying situations together with the commitment of the individual tourism sector business to sustainability.

Vital partners for the future

The European Charter Partnership Programme will give tourism businesses the opportunity to distinguish themselves as vital partners of the protected area on the basis of defined requirements and activities. Mike Pugh, Business Development Officer of Forest of Bowland AONB states that "being a Charter Partner shows that the businesses have made an effort and commitment to support Sustainable Tourism. As the Charter logo will be recognised by customers and visitors the benefit will ben-

Tourism events at COP-9

The *CBD Guidelines on Biodiversity and Tourism Development* will be put into practice in two side events and an exhibition during COP-9. On May 26, in the evening, the UNWTO Consulting Unit on Biodiversity and Tourism in Bonn will gather input, from invited participants, on its work applying the guidelines in countries affected by the 2004 tsunami in Southeast Asia. During the side event, the Consulting Unit on Biodiversity and Tourism for Tsunami Affected Countries will present its activities since October 2006, its guiding principles based on the CBD guidelines and first results of projects in Thailand and Indonesia. Furthermore, Ahmed Djoghla (CBD Executive Secretary), Jochen Flasbarth (Director General, German Federal Environment Ministry) and Geoffrey Lipman (Assistant Secretary General, World Tourism Organization) will discuss chances and opportunities for implementing integrated sustainable tourism forms including biodiversity, climate change and poverty eradication. A brochure has been prepared for the project [1].

Ecological Tourism in Europe will highlight its achievements in an open event on the UNEP/GEF project 'Conservation and Sustainable Use of Biodiversity through Sound Tourism Development in Biosphere Reserves in Central and Eastern Europe', on May 23 at lunchtime. The overall goal of the project, which is based in the Czech Republic, Hungary and Poland, is the protection of globally significant mountain ecosystems in selected Biosphere Reserves of Central and Eastern Europe (Babia Góra National Park and the Šumava and Aggtelek Biosphere Reserves) through the development of new and innovative management systems with a special focus on tourism-related uses of these sites.

Finally, the EUROPARC Federation will participate at the Expo of Diversity to be held during the High-Level ministerial segment (28-30 May) presenting the European Charter for Sustainable Tourism in Protected Areas as a valuable instrument for implementing the *CBD Guidelines for Biodiversity and Tourism Development* on the protected area level.

Contact Oliver Hillel, Programme Officer, Sustainable Use, Tourism and Island Biodiversity (oliver.hillel@cbd.int) for more information.

[1] www.unwto.de

efit from better marketing opportunities. Also the feeling of being part of something bigger – on a European wide level – and the 'esprit de corps', identifying with other like-minded businesses has been seen as a benefit". Other benefits are high-quality information about the protected area, reducing operating costs through audit and sustainable use of resources, opening new markets such as tourism based on discovery of the environment and targeting new customers attracted by the protected area, all leading to higher visitor satisfaction.

The implementation of the European Charter Partnership Programme will start in the course of 2008 and many protected areas are eager to strengthen the links and deepen understanding with their partners in the business community. The Partnership Programme is not a rigid certification scheme but relies very much on the mutual commitment, engagement and confidence of the protected areas and the tourism businesses. The challenge will be to motivate tourism business to voluntarily commit to a closer cooperation with the protected area and to develop sustainable tourism offers and to clearly elaborate the benefits for the Charter partners for example by circulating experiences from model examples. Bruce Hanson, the Broads Authority Head of Tourism said: "Visitors are increasingly discerning and there is strong evidence

that they will choose a green business in preference to one that is not environmentally aware. It not only helps the environment but makes very good business sense as well".

Integrating Tourism and Biodiversity

As stated in the *CBD Guidelines for Biodiversity and Tourism Management*, "authorities and managers of protected areas have a special role for the management of tourism and biodiversity". The European Charter provides a valuable instrument to apply the CBD Guidelines on protected area level. EUROPARC Federation is looking forward to promote the European Charter and the European Charter Partnership Programme at the COP-9 with information on various model examples from the Charter protected area: 'Tourism Garrotxa: An Association acting as the Charter Forum', 'The Charter Sustainable Tourism Strategy in the Forest of Bowland AONB', 'Sustainable mobility in the Mercantour National Park', 'Diversified environmental education in the Syöte National Park', etc.

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Biodiversity offsets



In this section

In the preamble to its decision VIII/17 on business engagement, the Conference of the Parties noted that contributions from business and industry towards the implementation of the Convention and its 2010 target could be facilitated by, inter alia, further work under the Convention to develop “guidance for potential biodiversity offsets in line with the objectives of the Convention”.

Articles in this section provide an overview of recent developments on biodiversity offsets. There is also a discussion on compensation (supply-chain offsets).

Side event information is tentative; please consult www.cbd.int/cop9/side-events/ for a final list.

Photo courtesy of lincolnblues/flickr.com

Biodiversity offsets: a step on the road to the 2010 target

By KERRY TEN KATE



Since before the CBD was born, when it was just a twinkle in the eye of the delegates to the UN Conference on Environment and Development, the need for innovative mechanisms to integrate conservation into economic decision-making has been obvious. I have been involved with the CBD since before Rio, wearing every badge of accreditation available (Secretariat, IGO, NGO, Government, Industry) except the one for indigenous peoples – sadly an unlikely prospect, as I am half Welsh and half Dutch. As time goes by, the need to engage business has become ever more pressing and, fortunately, the opportunities to do so have grown. Companies and civil society are looking for practical approaches to balance development activities and conservation. Biodiversity offsets offer one such approach, so it is a privilege to be working with the Business and Biodiversity Offsets Programme (BBOP). BBOP is a partnership of 40 companies, governments, conservation experts and financial institutions from around the world that are members of its Advisory Committee [1] with over 600 other individuals and organisations affiliated through its Learning Network.

Biodiversity offsets are measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development and persisting after appropriate prevention and mitigation measures have been implemented. Their goal is to achieve no net loss, or preferably a net gain, of biodiversity on the ground with respect to species composition, habitat structure and ecosystem services, including livelihood aspects.

BBOP side event at COP-9

26 May, lunchtime, BMU / room 1.150

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Properly designed and implemented, voluntary biodiversity offsets can promote more and better conservation and help companies manage their environmental liabilities, risks and business opportunities. In addition to these business motivations for voluntary biodiversity offsets, there is law and policy on the subject in over 30 countries, ranging from Belgium to Brazil.

BBOP is coordinating a portfolio of biodiversity offset pilot projects around the world. With the guidance of the Advisory Committee, we are developing a toolkit of methodologies and guidelines for biodiversity offset design and implementation and providing advice on the design of pilot projects.

The thinking on biodiversity offsets is still evolving around the world, as companies, conservation groups and other stakeholders develop projects and experiment with different approaches. The circumstances in which biodiversity offsets may be used will vary considerably, too. BBOP's response is to develop a set of voluntary principles for use where these will complement existing policy requirements, or where no such guidance exists. A consultation paper, including the draft principles (see box), is available for review and comment as an Information Document for COP-9 [UNEP/CBD/COP/9/INF/29]. The contents of the methodology toolkit will also be available for consultation on a schedule posted on the BBOP website [2].

Through its principles, toolkit and pilot projects, BBOP hopes to contribute to the 2010 target, demonstrating positive conservation outcomes and collaboration between business, policy-makers and conservation experts to address one of our planet's most pressing concerns: the loss of biodiversity.

[1] The BBOP Advisory Committee currently comprises representatives from: Anglo American; Birdlife International; the Cambridge Centre for Conservation Policy; the City of Bainbridge Island; Conservation International; the Department of Conservation, New Zealand; the Department of Sustainability & Environment, Victoria, Australia; Ecoagriculture Partners; Environment Australia; Fauna and Flora International; Forest Trends; the International Institute of Environment and Development; Insight Investment; the International Finance Corporation; IUCN (International Union for Conservation of Nature); KfW Bankengruppe; Newmont Mining Corporation; Shell; the Sierra Gorda Biosphere Reserve, Mexico; the Southern Rift Landowners Association, Kenya; Rio Tinto [see pp. 36-37]; the Biodiversity Neutral Initiative; the Centre for Research-Information-Action for Development in Africa; the London Zoological Society; the Ministry of Ecology and Sustainable Development, France; the Ministry of Housing, Spatial Planning & the Environment, Netherlands [see p. 44]; the National Ecology Institute, Mexico; the National Environmental Management Authority, Uganda; The Nature Conservancy; the Royal Botanic Gardens, Kew; Sherritt International Corporation [see pp. 38-39]; the South African National Biodiversity Institute; Solid Energy New Zealand; the Tulalip Tribes; the United Nations Development Program (Footprint

Draft Principles on biodiversity offsets

1. **No net loss:** A biodiversity offset should achieve measurable conservation outcomes that can reasonably be expected to result in no net loss of biodiversity.

2. **Adherence to the mitigation hierarchy:** Biodiversity offsets are a commitment to compensate for significant residual adverse impacts on biodiversity identified after appropriate avoidance, minimization and rehabilitation measures have been taken according to the mitigation hierarchy. Offsets cannot provide a justification for proceeding with projects for which the residual impacts on biodiversity are unacceptable.

3. **Landscape context:** Biodiversity offsets should be designed and implemented in a landscape context to achieve the best measurable conservation outcomes, taking into account available information on the full range of biological, social and cultural values of biodiversity and supporting an ecosystem approach.

4. **Stakeholder participation:** In areas affected by the project and by the offset, the full and effective participation of stakeholders should be ensured in all phases of decision-making about biodiversity offsets, including their evaluation, selection, design and implementation. Special consideration should be given to the existing, recognised rights of indigenous and local communities.

5. **Equity:** Biodiversity offsets should be designed and implemented in an equitable manner, which means the sharing of the rights and responsibilities, risks and rewards associated with a project in a fair and balanced way among the stakeholders.

6. **Long-term success:** The design and implementation of biodiversity offsets should have as their objective sustained outcomes in terms of: a) the viability of key biodiversity components, b) the reliability and accountability of governance and financing, and c) social equity.

7. **Transparency:** The design and implementation of biodiversity offsets, and communication of their results to the public, should be undertaken in a transparent manner.

Neutral Initiative); the US Agency for International Development; the US Fish and Wildlife Service; Wageningen University, Netherlands; the Wildlife Conservation Society; and WWF.

[2] www.forest-trends.org/biodiversityoffsetprogram/consultation.php

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A mining company perspective

By STUART ANSTEE



To help arrest biodiversity depletion, new concepts such as biodiversity offsetting are gaining popularity. For the past three years, we have been experimenting with biodiversity offsetting, initially by developing a methodology for offset planning, followed by implementing several pilot programmes at our mining operations in Madagascar, Brazil, and Peru [1]. Through the course of this work, we have realised that programme governance is a key issue.

Net positive impact

Along with climate change and water management, loss of biodiversity was identified, in the mid 1990s, as a critical environmental risk for the group's operations. The response was to establish a biodiversity strategy with the long-term goal for Rio Tinto to have a Net Positive Impact (NPI) on biodiversity. We believe that this goal can be achieved as we conduct our mineral extraction business. We also believe it will deliver value to the company's shareholders by helping us to maintain access to new resources.

Biodiversity offsets are a critical factor in our thinking around NPI. We recognise however, that offsetting in this way is only valid as a compensatory measure when linked with the actions we take to reduce the on-site impact of our operations. These on-site actions include avoidance, mitigation and rehabilitation and we refer to them collectively as the mitigation hierarchy [see Figure 1].

The Madagascar project

Rio Tinto's QIT Madagascar Minerals (QMM) offset programme provides a sophisticated case study in offset planning and implementation. The complex ecological and social issues in the Fort Dauphin region of south east Madagascar have dictated that Rio Tinto QMM's ilmenite operation takes a true multi-sector partnership approach to its biodiversity management and offset programme.

The approach started with the establishment of an advisory panel of eminent scientists, all specialising in different aspects of Madagascan biodiversity. The panel guided Rio Tinto QMM's strategic approach to biodiversity research and management, including the decision to set aside significant parts of the mining lease for the in-situ conservation of littoral forest.

Baseline ecological inventory work has been carried out by teams of scientists from Rio Tinto QMM, global and local NGOs, and research institutions such as Royal Botanic Gardens Kew, Fauna and Flora International, Earthwatch International, Birdlife International, Conservation International, Missouri Botanical Gardens, Asity Madagascar. Hamburg and Oxford Brookes Universities, both well known for their work on Malagasy biodiversity, also contributed.

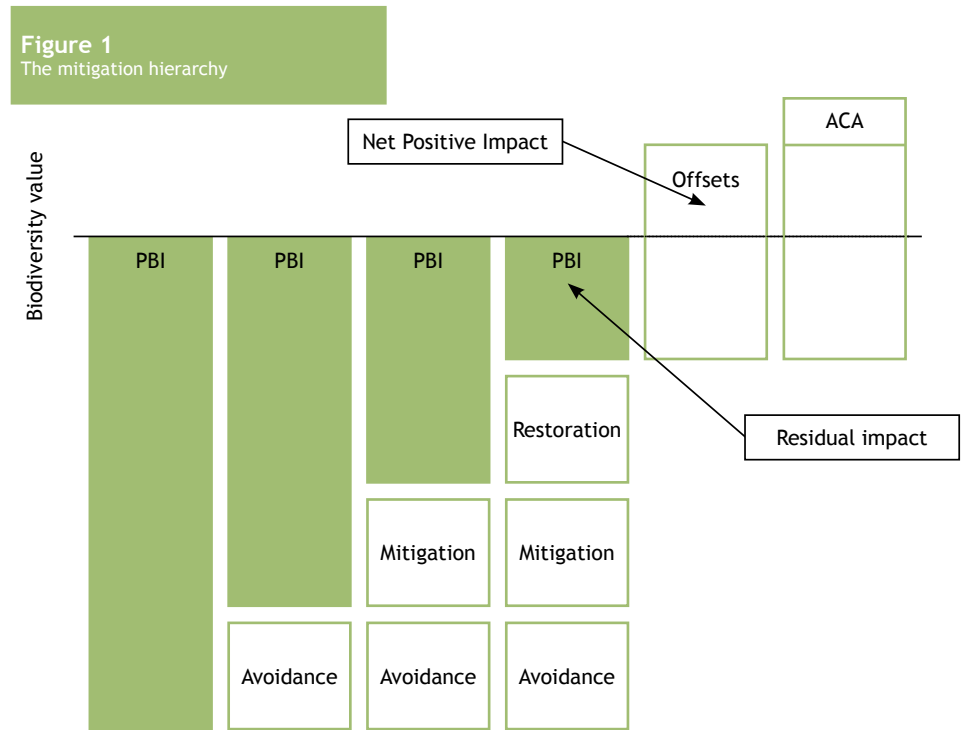
The focus of this work has been to characterise the impact that Rio Tinto QMM will have on the environment, and assess the biodiversity offsets that will compensate for this impact. The conclusion of this research is that a composite offset (more than one offset initiative) will be needed to mitigate the impact of the Rio Tinto QMM operations. To this end management recently proposed to take conservation management actions at four separate sites in and around the Fort Dauphin region: Ambatostigorongo, Ste Luce, Tsitongambarika, and Mahabo.

Research at these four sites gives us a valuable insight into the ecology of remnant forests in southeast Madagascar. For example, the forest at Tsitongambarika (TGK) is now recognised as one of the most important areas of lowland rainforest left in southern Madagascar. This whole area is under immense degradation pressure from a growing population trying to eek out a subsistence living through slash and burn agriculture or Tavy, and the production of charcoal for fuel. Once the importance of TGK was recognised, a programme was developed to designate it as a protected area.

Governance

The TGK offset programme has made considerable progress in the last couple of years. Pilot community based conservation projects are beginning to show success in reducing impacts on the remnant forest. The next step will be to consolidate this early success into long-term sustainable conservation gains. Much of this future success will be dictated by the long-term planning and governance structures that are implemented to manage TGK.

Effective governance structures have the authority to make decisions and act in the best interests of all parties. The form these structures take and their mandate needs to be commensurate with the size and complexity of the programme they are managing. When the initiatives are far reaching, a governance structure with



$$NPI = PBI + (Av + Mt + Rs) + Ofs + ACA$$

where NPI = Net Positive Impact; PBI = Predicted Biodiversity Impact; Av = Avoidance; Mt = Mitigation; Rs = Restoration; Ofs = Offsets; ACA = Additional Conservation Actions

greater powers may be needed to take control for the long term.

Rio Tinto QMM is using the TGK offset programme to compensate for its residual impact on biodiversity. For this strategy to be successful it is important that any conservation gains generated by the programme last in perpetuity. Long-term governance of an offset site programme is therefore considered to be a critical risk factor.

Rio Tinto QMM's view is that long-term governance of the TGK offset/protected area should eventually sit solely with the highest possible authority. This is in accord with global conservation management models which rely on government or proxies for government, often conservation NGOs, to undertake the planning, management, and governance of protected areas.

In the case of the TGK project, it can be argued that current local government capacity in southeast Madagascar is not sufficient to effectively manage TGK as a protected area. Our focus therefore is to set in place a governance structure that will enable the programme to easily adapt to changing requirements. Specifically this 'interim' governance structure should allow for an eventual transfer of control to the national government of Madagascar.

In the meantime, the Rio Tinto QMM approach is to develop a multi-stakeholder governance structure that provides:

- Effective management
- Clear accountability and responsibilities
- Equity of decision making
- Diversity of funding

The development of this structure commenced in November 2007 with the convening of a workshop in Fort Dauphin. The meeting succeeded in bringing together a diverse set of stakeholders, and resulted in the formation of a working group that is responsible for the continued development of the TGK protected area programme. Its function has been improved through the recent appointment of a co-ordinator. The working group's primary role is the delivery of specific TGK projects. But it is clearly understood that this is a temporary arrangement. The working group is far too big, and does not have the necessary authority to make the overall programme a lasting success.

Rio Tinto QMM proposes to improve this situation by forming a high-level project steering committee. This committee will effectively act as the CEO of the project, sharing accountability for the success of the programme with representatives from



Photo courtesy of Rio Tinto

the four key stakeholders groups; government, local community, QMM/Rio Tinto and conservation NGOs. Once established, the committee will be charged with the continued planning and implementation of initiatives within the offset/protected area. Our long-term strategy is to work with the Madagascan government to build their capacity in the southeast of Madagascar, so that they can eventually take control of the TGK protected area.

Our hope is that this model will succeed

in demonstrating how government, public, and private sector agencies can collaborate to deliver positive biodiversity gains as part of private sector development projects.

[1] In the future we are planning to establish more programmes, including initiatives in Australia and the USA.

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Offsets in the Ambatovy Nickel Project

By PIERRE O. BERNER

The Ambatovy Nickel Project is located in Madagascar [1] and comprises an open pit mine system located in a near primary forest mosaic. Other Project components include a pipeline transferring ore slurry to a plant near the port town of Toamasina on the east coast, a tailings facility, a port expansion allowing the import of raw materials and export of finished products and a limestone quarry project located in south-western Madagascar. The Project is currently under construction and operation is scheduled for 2010, with an expected duration of 30 years.

Biodiversity management

The Ambatovy Project's mine footprint is located in an area recognized for its high regional biodiversity. Hence, the Project's

diversity strategy is to compensate its residual impacts on biodiversity through the implementation of an offset programme. This programme will achieve measurable conservation outcomes that can reasonably be expected to result in no net loss of biodiversity and strive to attain a net gain. Upstream of this compensation effort, the Ambatovy Project is implementing appropriate avoidance and minimization measures according to the mitigation hierarchy.

Social aspects

The Ambatovy Project offset is designed and implemented with stakeholder participation to ensure its long term sustainability and regional integration. In Madagascar, natural resource management and biodi-



Above: Pierre O. Berner (centre) at the Ambatovy Nickel Project and right: the Diademed Sifaka (*Propithecus diadema*), a priority species for the project.

Photos courtesy of Ambatovy Nickel Project

setting implied the necessity for very stringent biodiversity management, as reflected by the Ambatovy Project's Biodiversity policy that states: "... to cause no net harm to biological diversity where we operate, to mitigate unavoidable impacts, and to practice responsible closure procedures; ... assure the conservation of habitats, flora and fauna, using all reasonable actions and technologies; ... ensure responsible attention to the maintenance and, where possible, enhancement of biodiversity in the best interest of our business, the communities in which we operate, and the world at large".

The heart of the Ambatovy Project's bio-

diversity conservation cannot be addressed without taking social aspects into consideration as natural systems constitute the direct life support system of many human populations.

The Project's offset program will deliver conservation outcomes that will ensure a no net loss of biodiversity, while favoring sustainable social development of local communities at both impact and offset sites.

[1] www.sherritt.com/Operations/Metals/Ambatovy.html

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How much offsetting is enough?

By ECE OZDEMIROGLU and IAN DICKIE



The Environmental Liability Directive (ELD) reflects some of the core principles of biodiversity protection. It is designed to encourage prevention of environmental damage, and put the ‘polluter pays principle’ into action by making the party responsible for environmental damage pay for its compensation – not only the compensation of the environment (by returning its quality and quantity back to the no-damage baseline), but also compensation of the human population. This latter aspect requires an understanding of how people may be affected by environmental damage and, in return, how they value the current environmental quality and quantity they enjoy.

The ELD has prompted new thinking about environmental compensation in relation to unplanned damage (e.g. accidents or imminent threat of damage). Similar thinking is also developed for the implementation of the Habitats and Wild Birds Directive in the context of planned environmental damage (from development). This thinking interacts with, and has implications for, current approaches to offsetting biodiversity loss.

Unplanned damage

The liability of those responsible for unplanned environmental damage has until now been limited to what is known as ‘traditional damage’ – damage to commercial assets (e.g. fish in a fish farm, tourism revenue) or human health. The ELD, which came into force on 30th April 2007, changes this by widening the definition of environmental damage to include damage to protected species and natural habitats, water and land (when a significant risk to human health).

As with other complex European Directives, there are several issues that still need to be ironed out for transposition and implementation. One of the issues that will require scrutiny is the institutional

setting. Almost a year on, the majority of Member States have still not transposed the Directive. The main reason for this delay is what we may call ‘a culture change’ that the Directive requires of both the Competent Authorities and the operators. Indeed, the ELD is a framework directive that cuts across all environmental media and most economic sectors. As such, some Member States are finding it difficult to appoint Competent Authorities that have sufficiently wide remit and institutional capacities.

For the operators, on the other hand, the difficulty with ELD is understanding the potential cost of the Directive which, in turn, requires understanding the risk of environmental damage from their operations, the magnitude of this damage, the cost of the damage and the cost of its compensation (or remediation in the language of the ELD). These issues are also of great interest for the insurance industry which has been very active in the transposition discussions surrounding the ELD.

Developments

In the cases of planned environmental damage (e.g. construction of infrastructure), Habitats and Wild Birds and EIA Directives have been used to assess the potential future damage and the amount of sufficient mitigation and compensation for residual damages. None of these Directives mentions biodiversity offsets explicitly. However, several factors related to their implementation make such offsets an interesting implementation tool.

The procedures for compensating for damage allowed due to ‘overriding public interest’ under the Bird and Habitats Directives are now established in European Law. Therefore, the compensation needed due to major new developments, and large-scale environmental changes (such as those happening and predicted due to climate change), can be anticipated and thought about in a strategic manner. In this context, offsetting can be regarded as a strategic approach to delivering compensation.

Resource equivalency methods

The ELD recommends the use of ‘resource equivalency methods’; a collection of methods and approaches that are used to determine the type and amount of resources and services that are lost over time as a result of an environmental damage, and the type and amount of remediation or compensation actions that are needed to offset this loss. They assist experts in answering some crucial questions which are also relevant in assessing the ap-

propriateness of biodiversity offsets such as: How much compensation is needed to ‘offset’ accurately?; How do you account for differing ecological quality or site-specific characteristics?; Should you replace habitats, ecosystem functions, or species?; How do you allow for impacts occurring at different points in time, like delays in starting offset projects, or losses while they achieve their full biodiversity value?; and How do you account for natural or existing environmental trends over time?

eftec is leading an international research project called REMEDE – Resource Equivalency Methods for Assessing Environmental Damage in the EU – that address these questions [1]. The project is preparing a resource equivalency Toolkit to assist the implementation of Environmental Liability, Habitats, Wild Birds and EIA Directives, and includes a detailed legal analysis of the relationships between these Directives.

The project brings together economic and ecological approaches to assess environmental damage. Once the damage is deemed significant and primary remediation (e.g. clean up and remediation on site) takes place, the REMEDE Toolkit can also be used to select the appropriate level of remediation to help resource reach no-damage baseline (if primary remediation is not sufficient) and compensatory remediation for the interim losses. The latter is defined as the damage that persists between the initial damage and when the resource recovers back to no-damage baseline (or into perpetuity if baseline is never reached).

The project draws from both US experience with Natural Resource Damage Assessment, in terms of methodological developments and implementation issues encountered, and experience of the EU Member States with the Habitats Directive. It describes case studies from across the EU, covering a variety of habitats; including wetland, forest and coastal ecosystems.

The REMEDE Toolkit is designed to be used by all parties interested in damage assessment and remediation selection, including businesses. In fact, it advocates collaboration between the operators and Competent Authorities from the start of an ELD or Habitats Directive case. In addition, the resource equivalency methods can be used in scenario analysis to help businesses estimate their potential liability under different risk and type of incident assumptions.

Beyond ELD

REMEDe has implications beyond the implementation of the ELD. It defines current



“Even with careful analysis, there are always risks and uncertainties in remediation. Governments, still need to consider the precautionary approach, but the presence of offsets and trading possibilities removes the risk to business of over-compensating for a damage incident, as any surplus should have a value through trade. This should encourage commitments to more ambitious remediation and compensation obligations” Photo courtesy of Ron.McCauley/flickr.com

best practice on remediation, helps formulate responses that are proportionate to environmental damage and establishes criteria that can guide the scale of environmental offsets. Therefore, the current lack of such rules should not prevent offsets discussions moving forward at COP-9. The rules need to work, not as substitutes for, but in addition to legal minima, which define the property rights and responsibilities in any damage case.

Even with careful analysis, there are always risks and uncertainties in remediation. However, offsetting systems and trading schemes can help business manage

these risks. For example, the presence of trading possibilities removes the risk of over-compensating for a damage incident, as any surplus should have a value through trade. This should encourage commitments to more ambitious remediation and compensation obligations. For governments, risks and uncertainties mean that there is still a need to consider the precautionary approach to the environment. Offset schemes should have careful monitoring and benefit from certification, preferably by an independent body. Finally, there is room for a period of ‘learning by doing’ on remediation methods in many regions and under different legislative regimes.

[1] REMEDE is sponsored by DG Research in the European Commission. Partners in the research bring together expertise from ecology, economics and law (www.envliability.eu)

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La Caisse des Dépôts a annoncé la création, le 19 février dernier, de la CDC Biodiversité. Quelle est le rôle de cette nouvelle entité ?

La Caisse des Dépôts a créé CDC Biodiversité avec trois missions en tête. D'abord, accompagner l'Etat, les entreprises, les collectivités, les maîtres d'ouvrage, les pouvoirs publics, dans leurs actions, volontaires ou réglementaires, en faveur de la biodiversité. Ensuite, concevoir et piloter la réalisation et la gestion à long terme d'actions positives pour la biodiversité, en mobilisant les financements nécessaires. Enfin, conjuguer durablement ingénierie écologique et financière pour contribuer à aménager les infrastructures écologiques du pays.

Qu'est-ce qui a motivé sa création ?

La création de CDC Biodiversité est un des aboutissements de la Mission Biodiversité de la CDC, une mission d'étude de trois ans conduite en concertation avec l'Etat, les associations, les entreprises et les collectivités. Cette étude a souligné le manque, dans le paysage français de la biodiversité, d'un opérateur pouvant jouer, sur le long terme, un rôle financier et d'ensemblier, indispensable à la mise en œuvre d'actions de conservation efficaces et pérennes. Le besoin d'un opérateur s'est notamment ressenti sur le sujet de la compensation. Je pense qu'il est important de rappeler que le droit français impose depuis 1976 aux maîtres d'ouvrage de projet d'aménagement de, dans un ordre hiérarchique, (1) éviter leurs impacts, (2) réduire leurs impacts non évités puis (3) compenser leurs impacts résiduels. Les mesures d'évitement et de réduction s'intègrent dans la conception même de l'ouvrage et peuvent avoir des implications techniques que le maître d'ouvrage maîtrise parfaitement. En revanche, la compensation, qui consiste à mettre en œuvre une action positive et additionnelle pour la biodiversité, repose

sur des logiques écologiques, opérationnelles et temporelles mal ou inconnues des aménageurs qui, en conséquence, ne savent pas comment procéder. Avec CDC Biodiversité, les maîtres d'ouvrage, entreprises et collectivités ont dorénavant un acteur spécialisé pour les accompagner dans leurs actions en faveur de la biodiversité, non seulement au titre de leurs obligations de compensation, mais aussi dans le cadre d'une démarche volontaire.

Comment CDC Biodiversité intervient-il concrètement ? Après de quels acteurs ?

Nous inscrivons notre action dans une double logique contractuelle de résultats écologiques et économiques, en apportant, notamment, l'assurance d'un suivi de longue durée et la stabilité d'un tiers de confiance. Nous intervenons à la demande d'un maître d'ouvrage, d'une collectivité, d'une entreprise, des pouvoirs publics, etc., dans le cadre d'une démarche contractuelle, et nous faisons intervenir des acteurs de terrain et des spécialistes qualifiés dont nous soutenons les actions par des partenariats de long terme.

Ainsi, CDC Biodiversité s'engage de plusieurs manières. En terme de sécurisation foncière, tout d'abord, lorsque nous identifions le foncier potentiel répondant aux exigences de la compensation, puis nous le sécurisons, en se portant, le cas échéant, acquéreur en nom propre du foncier. Ensuite, en terme de mise en œuvre de l'action de compensation sur toute la durée d'engagement, depuis la conception jusqu'à la gestion et le suivi scientifique de l'opération. Enfin, en terme de reporting, par un moyen approprié, au maître d'ouvrage ainsi qu'aux autorités administratives et scientifiques.

Pour viser la meilleure efficacité, nous plaçons notre intervention et évolution sous trois regards extérieurs sollicités. Celui d'associations de la nature avec lesquelles nous avons noué un dialogue structuré. Celui des autorités publiques en nous inscrivant dans un partenariat, Celui d'un comité scientifique réunissant des spécialistes reconnus de différentes disciplines scientifiques de l'écologie et de l'économie, qui nous éclaire et est garant de la conformité écologique de nos actions.

Est-ce comparable avec les « conservation banks » aux USA ?

Le cœur de métier de CDC Biodiversité est d'intervenir « à la demande ». Cette démarche est donc différente de l'approche « banking » fondée sur le financement d'actions positives pour la biodiversité avec l'objectif de les valoriser à posteriori au titre de la compensation, après leur

validation par l'administration.

Une intervention de type banking, que l'on peut aussi appeler « approche par l'offre » par opposition à l'approche par la demande décrite ci-dessus, n'en reste pas moins intéressante car elle permet de répondre à des enjeux écologiques réclamant une intervention rapide, mais ne trouvant pas, localement, de réponse adaptée; de garantir qu'au moment de l'impact, la mesure compensatoire soit déjà effective et ainsi rassurer les instances scientifiques et associatives d'une mise en œuvre effective et efficace au moment où le dossier est en cours d'instruction ; enfin de mutualiser le financement de plusieurs mesures compensatoires visant le même habitat, et ainsi conduire des actions de grande envergure, plus efficaces et plus cohérentes pour la conservation de la biodiversité.

L'expérience américaine et australienne du banking nous a convaincu, avec le Ministère de l'écologie, de l'intérêt d'une expérimentation en France. Nous sommes en train d'étudier le lancement d'actions pilotes expérimentant l'approche par l'offre, en liaison avec le Ministère français de l'Ecologie et les autorités scientifiques.

Comment les différents acteurs perçoivent-ils les mesures compensatoires ?

La compensation est prévue dans le droit français depuis 1976. D'un point de vue réglementaire, la question de sa perception ne se pose pas, la compensation est une obligation réglementaire et doit donc être mise en œuvre lorsque les autorités administratives et scientifiques l'exigent. D'un point de vue sociétal, la prise de conscience environnementale actuelle fait qu'il sera de moins en moins acceptable de proposer un aménagement sans prévoir la réparation complète des impacts de cet aménagement sur la biodiversité, et cela si et seulement si ils sont réparables. A ce titre, nous proposons de développer le partage du principe dit de « pas de perte nette » de biodiversité dans la réalisation d'un ouvrage, dans la conception d'un site ou d'une zone d'activités, etc. de manière à aménager en ménageant la biodiversité. La compensation est la troisième composante du triptyque éviter/réduire/compenser et c'est l'application dans sa totalité du triptyque qui est indispensable pour atteindre l'objectif « pas de perte nette ».

Quelle est la relation avec la Société Forestière, autre filiale de CDC ?

CDC Biodiversité constitue l'une des « solutions-nature » conçue par la Société Forestière, filiale du groupe Caisse des Dépôts, qui inscrit depuis plusieurs années déjà ses actions sous une bannière : « faire



“La Mission Biodiversité a souligné le manque, dans le paysage français de la biodiversité, d’un opérateur pouvant jouer, sur le long terme, un rôle financier et d’ensemblier, indispensable à la mise en œuvre d’actions de conservation efficaces et pérennes” Photo courtesy of dermoidhome/flickr.com

de la nature une valeur sûre». Elle assure la présidence, la gestion et l’animation de CDC Biodiversité et lui apporte d’ores et déjà l’infrastructure d’une société solide, un réseau régional de terrain, sa connaissance d’acteurs locaux et l’expérience acquise durant quarante années d’activités proches de la nature et de valorisation des investissements liés à la nature.

La Société Forestière a beaucoup œuvré dans le secteur de la « finance carbone ». Pouvez-vous nous rappeler les grands traits de cette démarche?

De par son activité, la Société Forestière, première société de gestion forestière privée en France, s’est naturellement intéressée au climat, et ce dès 1998. La SF est à l’origine de la Mission Climat de la CDC, qu’elle a pilotée entre 2000 et 2004, et qui a eu deux aboutissements majeurs. Premièrement, la création de Seringas, un logiciel informatique dédié à la tenue de registres nationaux de quotas d’émissions de gaz à effet de serre. Adopté par l’Etat français dès 2005, Seringas est aujourd’hui utilisé par d’autres pays membres de l’UE comme l’Allemagne, la Belgique, le Lux-

embourg ou le Portugal. Deuxièmement, la création du Fonds Carbone Européen (FCE), ayant vocation à acquérir, gérer et revendre des quotas d’émission de CO2 afin de contribuer à la liquidité du marché. Doté aujourd’hui de EUR 142 M, le FCE a depuis deux ans, participé à de nombreuses opérations de réduction d’émission de gaz à effet de serre, dépassant les 29 millions de tonnes.

De plus en plus d’entreprises perçoivent les enjeux stratégiques liés aux changements climatiques. A contrario, encore relativement peu d’entreprises font le lien entre performance commerciale et biodiversité. Comment peut-on rendre la biodiversité plus « tangible » pour les entreprises ?

Je pense que la création de CDC Biodiversité est un message fort en lui-même. Il indique aux entreprises que s’intéresser à la conservation de la biodiversité a un fondement économique réel. Je vous rappelle que les services rendus par la biodiversité au sens large sont évalués, au niveau mondial à 30 000 milliards de dollars. La transcription prochaine dans le droit

français de la directive européenne dite de « responsabilité environnementale », est un outil réglementaire supplémentaire dans le dispositif encadrant les atteintes à l’environnement. Plus les contraintes seront grandes, plus les entreprises feront attention. Mais il est important que la relation Entreprise / Biodiversité ne soit pas seulement appréhendée par l’angle des impacts. Les liens et les interactions entre les entreprises et la biodiversité sont multiples et variés. Même une banque, dont le cœur d’activité est à première vue bien éloigné des habitats naturels, garde un lien étroit avec la biodiversité, au niveau des consommables qu’elle utilise, des repas pris par ses employés, du type de projets et des acteurs qu’elle choisit de financer. C’est en appréhendant la relation dans son ensemble et en fournissant de nombreux exemples sur les services rendus par la biodiversité, que les entreprises deviendront convaincues qu’il faut agir pour celle-ci .

Laurent Piermont est Président-Directeur général, CDC Biodiversité.

www.cdc-biodiversite.fr

Pour toute information supplémentaire, contacter Brice Quenouille, Chargé de mission (b.quenouille.cdc-biodiv@forestiere-cdc.fr).

Balancing Biodiversity: Towards an international incentive instrument

By STEFAN VAN DER ESCH



As the Convention's 2010 target rapidly draws near there is an urgent need to focus our attention on developing international instruments that can help achieve a significant reduction of the rate of biodiversity loss. One of the mechanisms gaining increased attention is compensation. In response, The Netherlands, in cooperation with UNEP, intend to provide a proposal for such an instrument and engage the discussion on this issue with its 'Balancing Biodiversity' concept.

Development unchecked

If left unchecked, the coming decades will see a vast increase in the clearance of natural areas and a corresponding decline in biodiversity and important ecosystem services in a growing number of areas. The Netherlands Environmental Assessment Agency (MNP) has estimated that while at present 45% of economically attractive area in the world is in use for development (excluding agriculture, construction, etc. and already protected area), this figure is set to rise to 55% by 2050. Balancing Biodiversity proposes a concept of conservation through international compensation based on land use and sets a baseline for biodiversity by assuming a set amount of global area to be reserved for nature.

Several arguments warrant the creation of an international mechanism that is able to address biodiversity loss as well as safeguard important ecosystem services. There is, of course, the moral responsibility to preserve biodiversity for the future. There is also the benefit the whole world is able to enjoy from having such a diverse natural environment. More tangible is the importance of conserving certain ecosystem services in order to secure livelihoods of people in both urban and rural environments. At the international level, the internalization of environmental costs into

the costs of production is something that is in its infancy. Since impacts also occur outside the country where consumption takes place, internalization is needed to balance environmental costs and economic benefits. Compensation mechanisms are a step further.

Global compensation

'Balancing Biodiversity' is a method of global compensation based on an equal division of all economically usable area between development and nature [1]. Accordingly, any impact caused by the use or development of land is to be compensated for by the conservation of an equal area. In addition, land use is calculated taking into consideration the entire supply chain: for example, by assessing the total area necessary for meat consumption in The Netherlands (including, for instance, the land needed to produce the fodder) [2]. The method therefore balances land use be-



Photo courtesy of trekkandy/flickr.com

tween economic development and nature and brings natural areas in closer competition with land clearing and development. In doing so, Balancing Biodiversity:

1. Enables companies, consumers and governments to assess and compensate their impact on biodiversity based on their land use nationally as well as internationally;
2. Vastly increases available funds for conservation and sustainable development of areas, and;
3. Increases competition between economic development of land and conservation of biodiversity and important ecosystem services.

Concrete proposals and guidance

Several companies are also devising pilot projects that should advance insights in the concept and the practicalities associated with indirect compensation. These companies process or trade raw materials and goods produced elsewhere which results in indirect impacts and a shared responsibility in the supply chain to prevent, mitigate or compensate these impacts. This project will deal with the opportunities and dilemmas a company faces when compensating for an indirect impact. In addition to VROM, MNP and UNEP, the project con-

venes two consultancies (CREM and Sustainability consulting), Shell International and a number of NGOs. The experiences of the Business and Biodiversity Offsets Programme (BBOP) network on direct offsets will function as preliminary guidance.

The project will deliver concrete compensation plans for the participating companies (including preconditions and incentives), as well as guidance for other pro-active companies in order to familiarize them with the compensation mechanism.

Conservation of areas can, or even should include services that can be provided and harvested without compromising biodiversity and ecosystem services (e.g. sustainable harvesting of resources, watershed functions); the method is therefore additional to and not a substitute for instruments such as Payments for Ecosystem Services (PES).

A large number of issues still remains. Both conceptual – how far can 'like for like' be extended, should compensation be effectuated in the production region, how to translate land use, biodiversity quality and degradation into a suitable compensation measure, how to provide for additionality, etc. – as well as practical: issues of property rights and production chain traceability for example. In addition to working on conceptual issues and investigating the effects on biodiversity, the choice has been made to address these hurdles through a 'learning by doing approach' in the pilot projects.

The first results of the pilots as well as a more complete account of the methodology, background and contribution to the 2010 goal will be presented during a side-event at COP-9.

[1] Thereby leaving out economically unusable areas like the poles, deserts, mountains, etc.

[2] This is referred to as indirect compensation, as opposed to compensation of direct impacts locally.

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VROM side event at COP-9

20 May, lunchtime, Maritim / Hauptmann

Access and benefit-sharing



In this section

Background photo: Man with cocos de mer (Lodoicea maldivica) on his head.

In preparation for the High-level Segment of COP-9, the ABS Capacity Development Initiative for Africa, in partnership with the Government of the Seychelles, organized a meeting of African Leaders on Access and Benefit-sharing on 10-12 April 2008, in Victoria, Mahé with the participation of the Secretariat. A case study on the coco de mer was presented during the meeting.

Side event information is tentative; please consult www.cbd.int/cop9/side-events/ for a final list.

Photo courtesy of bob the lomond/flickr.com

A practical tool for ABS implementation

By CLAUDIA DENSS



In the January issue of this newsletter, it can be read, that the current situation on ABS is characterized by a growing feeling of mistrust between users and providers of genetic resources. In the same issue, on the other hand, it was stated, that about 80 percent of the world's people still use plant derived medicines for basic healthcare needs. Access to biodiversity is still important not only for pharmaceutical companies, but also for cosmetics, horticulture as well as agriculture. At the same time, the commercial use of genetic resources can negatively affect the interests of the providers of genetic resources, in case they are not able to make well-informed decisions about the genetic resources they own.

The ABS Management Tool (ABS-MT) has been prepared to respond to these challenges. It aims at building confidence, seeking mutually beneficial relationships between providers and users of genetic resources and supplying practical guidance over the full range of ABS activities. The ABS-MT has been developed by the State Secretariat for Economic Affairs (SECO) of Switzerland in collaboration with the International Institute for Sustainable Development (IISD), Stratos Inc. and Jorge Cabrera, a consultant. The ABS-MT is the result of a substantive research, consultations with ABS practitioners and governmental officials, outreach and field testing [1].

Added value

The providers and users of genetic resources are often facing a lack of practical guidance, certainty and confidence that prevents the actors of being able to manage the complexities of ABS negotiations. The Management Tool addresses some of these problems by providing practical guidance, capacity building and giving a common base for the negotiations.

Practical guidance – Even though the Bonn Guidelines are directed to all actors involved in ABS-related activities, they were

not designed to give practical guidance to users and providers of genetic resources. In particular, non-governmental users and providers, including research organizations, private companies, communities and indigenous peoples, have a need for clear guidance and tools to help them understand and implement the CBD's provisions on ABS. The ABS-MT supplies for the users and providers of genetic resources best practice standards and clear steps for participating in negotiations for accessing genetic resources and sharing benefits.

Building capacity – ABS negotiations are complex. For many governmental authorities, communities and indigenous peoples and other stakeholders, ABS is an unknown area. There is often a lack of capacity and a lack of trust in one's own capacities, that prevent potential providers from being engaged in ABS negotiations. The ABS-MT can be used as a capacity building instrument by addressing relevant ABS issues to national governments, companies, indigenous peoples and communities and providing a roadmap for ABS negotiations and discussing best practice.

Building confidence – A key aspect of successful ABS activities is the building of confidence and trust between the genetic resource provider and the genetic resource user. Without confidence and trust, the access and use of genetic resources can result in negative impacts for both sides. The ABS-MT gives a common basis for the negotiations and an equal understanding of the ABS standards, what can be very helpful to build up a confidential relationship.

Key Elements

Best Practice Standard – The Best Practice Standards contain the three following core standards on ABS: Prior Informed Consent (PIC), Mutually Agreed Terms (MAT) and benefit-sharing. These standards are described in a manner that the actors know, what core elements have to be respected to fulfil the requirements of the Bonn Guidelines and the CBD regarding these standards. Besides these three core standards, the ABS-MT contains two additional standards for specific situations: traditional knowledge and the conservation and sustainable use. These standards should only be applied, if these subjects concern the access to genetic resources.

Good Practice Guidance – For supplying practical guidance to users and providers of genetic resources, the ABS-MT contains a checklist of concrete elements for each ABS standard like PIC, MAT, benefit sharing, traditional knowledge as well as conservation and sustainable use. The checklist is



Photo courtesy of timsprool/flickr.com

intended to be applied flexibly according to the needs and circumstances of each case. Beside this checklist the ABS-MT assists the actors by providing different tools like for example: Material Transfer Agreements (MTA), Model Contract Outline, Guidance on Negotiating Strategies/ Methods, List of Potential Benefits and Links to Sector-Specific Guidelines. Specific case studies provide additional guidance on applying the ABS-MT and highlight lessons learned from field tests with the ABS-MT and other ABS negotiations.

A challenge for all actors involved

The ABS-MT helps the different actors involved in the ABS negotiation to achieve an agreement, which is acceptable for all parties. The way to the agreement takes time, understanding, patience and is a challenge for all actors involved. We hope, that the ABS-MT aids to face this challenge and leads the parties to a satisfactory agreement.

[1] The tool is available in three languages (English, Spanish and French) and can be downloaded at www.iisd.org/pdf/2007/abs_mt.pdf.

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Views on the International Regime

By SUSAN FINSTON



Just as CBD Parties intensified efforts on elaboration of an international regime for Access and Benefit-sharing (ABS) following COP-7, biotechnology companies sought greater engagement on biodiversity and benefit sharing issues. American companies launched the American BioIndustry Alliance (ABIA) in September 2005 to provide focused advocacy relating to access and benefit-sharing and international patent standards.

ABIA members – which include some of the largest companies active in the life sciences, and some of the smallest – share a heightened awareness of and commitment to biodiversity initiatives [1]. ABIA is company-driven, with member companies determining ABIA positions and activities.

Positive alternatives

ABIA works closely with CBD Parties and other stakeholders to provide positive alternatives to the patent-centric enforcement of ABS of genetic resource inventions. The ABIA organizes side-events at major multilateral meetings to present positive alternatives to mandatory patent disclosure obligations, and plays a collaborative and coordinating role with other leading industry groups and research institutions. Most ABIA positions have developed through interactions and collaborations with delegations from developing countries, other NGOs and international research organizations, including Codes of Conduct, Model Material Transfer Agreements, Trade Marks/Regional Certifications, and Traditional Knowledge Digital Libraries.

“Non-discriminatory treatment is needed to provide positive incentives for foreign direct investment and to ensure a fair rate of return, with transparent, predictable and durable procedures at the national level”

The positive role of Codes of Conduct was explored at the ABIA/BIO Side Event held at the fifth meeting of the Ad Hoc Open-ended Working Group on Access and Benefit-sharing (October 2007). ABIA members have a proven record of compliance with the ABS obligations laid out in the *Bonn Guidelines*, including meaningful Prior Informed Consent (PIC) and Mutually Agreed Terms (MAT) for commercialization.

Based on extensive experience in the Food and Agriculture Organization (FAO) International Treaty on Plant Genetic Resources (ITPGR), ABIA members believe that Material Transfer Agreements (MTAs) may provide legally-binding instruments to define the access and benefit sharing terms and conditions up-front and establish milestone events triggering either compensation or additional negotiations and could also provide the context for critical capacity building. The former Secretary General of the International Seed Federation provided an overview of the practical benefits for MTAs at the ABIA/BIO/CLI side-event held on the margins of ABSWG-6.

In 2006 at COP-8 in Curitiba, the Public Interest Intellectual Property Advocates (PIIPA) Survey provided identified trademarks, regional certifications and other doing-business IPP issues as leading areas of need for developing country entrepreneurs. Ethiopia has since adopted a trademarks/regional certification systems to promote a return from genetic resources to local communities. Through appropriate capacity building programs for local communities and indigenous groups, trademarks and regional certification could be implemented at the national level to provide immediate benefits for ABS stakeholders.

ABIA members have also learned a great deal from the pioneering work of India on the development of the Traditional Knowledge Digital Library (TKDL) for efficient prior art searches to prevent the issuance of patents for inventions based on prior art, *i.e.* lacking novelty or an inventive step. TKDLs provide positive incentives for research and investment in the commercialization of genetic resources. India, Malaysia, Venezuela, China and others, have already implemented TKDL variants. These databases add transparency about the origin of genetic resources, the related traditional knowledge and any indigenous groups from whom prior consent should be obtained. The role of TK data bases and digital libraries in generating meaningful benefits to stakeholders from genetic resources and related traditional knowledge was the subject of a side event that the ABIA sponsored at ABSWG-4 in Granada, Spain (1 February 2006).

ABIA / BIO / CLI side event at COP-9

28 May, lunchtime, BMU / room 1.130

1423

Red lines

Throughout the last three years, the ABIA has raised consistent concerns about primarily defensive and negative approaches to ABS, including mandatory patent disclosure.

- Clean title through patent protection for all life sciences inventions without additional disclosure obligations remains critical to industry's ability to make long-term investments.
- Complex and burdensome bureaucratic systems have led to stagnation of innovation and product development in the natural products area, discouraged international investment and collaboration with developing countries.
- Non-discriminatory treatment is needed to provide positive incentives for foreign direct investment and to ensure a fair rate of return, with transparent, predictable and durable procedures at the national level.
- Inclusion of indirect products or derivatives of any genetic resource would create enormous uncertainties for industry as technically even apples and oranges could be swept into the net of ABS-related activities as by-products of biodiversity.
- There has been a marked inability to reach international agreement on an accepted definition of TK. TK should be addressed in the elaboration of an ABS International Regime consistent with the scope of CBD ABS obligations and the Bonn Guidelines, and should go no farther.

ABIA members have learned a great deal from heightened engagement since 2005 and recognize that more hard work lies ahead. We appreciate the opportunity to work with CBD Parties and other stakeholders in the continuing work of the CBD's mandate to the ABS Working Group, as it completes its work in 2010 for the consideration of COP-10.

[1] Members include Avanti Therapeutics, Bristol Myers-Squibb, Eli Lilly and Company, Excel Life Sciences, General Electric, Hana Biosciences, Millennium Pharmaceuticals, Pfizer, Procter & Gamble, Tethys Research and ToxEM LLC. Membership is open to any company with U.S. operations active in the life-sciences, agriculture (inputs, related products and foods), forest, pulp/paper, plant, other industrial enzymes and/or environmental biotechnology applications.

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ABS in the context of bioprospecting and Traditional Knowledge

By ANATOLE KRATTIGER [1]



Equity is a moral issue that has repercussions with respect to the distribution of benefits and environmental conservation. However, equity is in the eye of the beholder; different individuals come to different conclusions about what is equitable and about how to achieve equity.

Unfortunately, market systems created to place a price on equity do not work because market systems are constrained in what they measure. With regard to TK, because its products are intangible, once the knowledge or information is disseminated, control over the knowledge is lost. From an objective standpoint, that knowledge has no direct monetary value unless the knowledge can be translated into a market-based commodity (or service), whereby the value of different contributions (knowledge, technology, labor, capital, and so forth) can be quantified and traded.

Modern IP system

In addition to these problems, the modern system of IP rights, particularly patenting, is based on the premise that anything that is already known cannot be protected. Indigenous knowledge is often communal, has been disclosed, and has been passed on from previous generations. The very nature of indigenous knowledge, therefore, does not meet the criteria for intellectual property in today's IP system. Not surprisingly, some people view the use of TK in modern science as a form of biopiracy, which is the unfair acquisition of biological resources and/or associated know-how. Some even argue that the modern IP rights system has harmful effects on indigenous peoples.

These arguments can be broken down into two distinct issues:

1. *Biopiracy*: to what extent do patent systems exploit traditional indigenous knowledge?
2. *Patenting of living organisms*: how can we justify patenting gene-sequence and gene-product information taken from living organisms (especially humans) when these are naturally occurring substances? And if patented, how do we answer the ethical questions surrounding such patents?

Successful partnerships

Any serious company chooses for bioprospecting countries that have unique and protected ecosystems, a solid legal framework, sufficient political will, fair and equal treatment for all access seekers, and strong science experts or institutions to partner with. Countries will seek partnerships with foreign companies and universities that adhere to international conventions and best practice, and that have an established track record. Guiding principles for a successful partnership between collaborators in the host country and a company include a commitment between parties to maintain a fair, trusting, long-term relationship, with an efficient and reasonable authorization process, and equitable sharing of benefits between partners.

In order to be successful, biodiversity access agreements (BAAs) must have a clear definition and assignment of legal rights to all genetic resources involved. Informed consent from all domestic parties affected by the bioprospecting, including landowners and managers, must be attained prior to partnership. There must exist a clear delineation of rights to patent and commercialization of the products derived from these endeavours. Each BAA is a confidential document, which supports a lack of competition among the partners to the agreement, and does not allow the transfer of proprietary technologies or technical capacity to third parties or exclusivity.

To understand the fundamental principles of ABS, one needs to know the relevant rules, regulations, laws, customs, and conditions for benefit sharing in the country where one intends to conduct research and/or collect samples. Basic questions to ask before collecting include:

- Under which conditions may I, as a scientist, enter another sovereign state's territory in my scientific capacity?
- Under which conditions may I, as a scientist, collect biological material and related information?
- Under which conditions may I, as a scientist, carry out or export biological ma-

Advice for COP-9

- Policymakers ought to formulate methods for equitable access to TK held by indigenous societies and for compensating the TK's owners. However, this issue involves a delicate balance: access should be granted only via authorized permission, yet the price that is assessed for permission to bioprospect should not be so high that it dissuades companies and individuals from seeking access.
- Countries should consider implementing an access and benefit sharing (ABS) regime that balances equitable access to biological resources, as well as related TK, with opportunities arising from R&D expertise of potential foreign partners in development. Such policies should be grounded in, and consistent with, the CBD.
- ABS regimes, including the process for obtaining permits, should be transparent and easily available to any scientist or institution that wishes to enter into biodiversity prospecting or collection activities. A complex system discourages foreign bioprospectors and may inhibit national researchers in their activities.

terial and related information from that sovereign state's territory?

- Under which conditions may I, as a scientist, make further use of collected biological material and related information?
- A practical overview of the principles and procedures underlying ABS regimes that will be useful to various types of research and access situations has been presented in detail elsewhere [2].

Foresight, focus and leadership

Irrespective of the specific legislation and international regime, any approach aimed at preserving and protecting biological resources and traditional knowledge require clear and transparent procedures. The ultimate goal for policymakers must be to develop practical solutions within workable (*i.e.* established) legal frameworks that encourage indigenous communities both to sustain their traditions and to equitably share their knowledge with the wider world so that all may benefit.

Successful international regimes are marked by foresight, focus and leadership.

They must be followed with a political will at the national level to establish programs to identify, organize, and optimize talent and resources, making the most of community support and entrepreneurial networks, be they national, regional or global. Thus, the regimes need to consider business practices if a bridge is to be built that benefits many.

[1] This text is based on Krattiger A, RT Mahoney, L Nelsen, JA Thomson, AB Bennett, K Satyanarayana, GD Graff, C Fernandez, and SP Kowalski. 2007. *Executive Guide to Intellectual Property Management in Health and Agricultural Innovation: A Handbook of Best Practices*. MIHR: Oxford, PIPRA: Davis, bioDevelopments-International Institute: Ithaca, and FIOCRUZ: Rio de

Facilitated access is an integral part of agricultural biodiversity

By AARON SMETHURST and KEITH JONES

The agricultural biotech sector is committed to increasing yields and to the technological development of essential crops – such as soybean, cotton, corn, and canola – that feed us, clothe us, provide energy, and help improve our lives. In order, however, to commit resources to expensive innovation efforts, we need practical, science-based, and transparent rules to be able to assess risk and make the correct business decisions that can benefit all.

Our members believe any discussion of certificates or the disclosure of the source or origin of a genetic resource must address the significant practical complexities of how genetic resources are actually accessed and used. Utilising genetic resources in the field of agricultural biotech is a complex process. At COP-9, we will be premiering our new Plant Breeders Guide that will encourage an understanding of how our industry uses genetic resources. Unfortunately, during these important practical discussions on access, there are often calls to link disclosure of source or origin of a genetic resource to patentability. We maintain that any discussion of patents is the mandate of World Intellectual Property Organization, not the CBD.

Definitions

The 2010 Biodiversity Target is rapidly approaching and we have reached the point in discussions where defining the terms of an Access Benefit-sharing agreement are critical. Unfortunately, many essential

Janeiro. Available online at www.ipHandbook.org.

[2] See Thornström CG., 2007. *Access and Benefit Sharing: Understanding the Rules for Collection and Use of Biological Materials*, p. 1461. In Krattiger et al (see Chapter 16.2 in www.ipHandbook.org) and Thornström CG and L Björk, 2007. *Access and Benefit Sharing: Illustrated Procedures for the Collection and Importation of Biological Materials*, p. 1469. In Krattiger et al (see Chapter 16.3 in www.ipHandbook.org).

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terms remain undefined; among them are international regime and derivatives. We call for substantive discussions regarding the definitions of these terms, and we are ready to provide our expertise and practical knowledge to these discussions. We are co-sponsoring two side-events at COP-9 that will provide insight into overcoming some of these challenges. The first, on 22 May, will focus on sustainable agriculture in conjunction with the IBD. The second, on 28 May, will focus on defining terms of the CBD.

Our members firmly believe that the Convention's efforts must work in tandem with existing international agreements. Most significantly for us is the Food and Agricultural Organization (FAO) International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). Specifically, its Standard Material Transfer Agreement can be a valuable source to satisfy concerns being raised in CBD discussions and most significantly in the certificates debate.

As the Convention begins to address the more practical challenges of its issues, we all need to focus more on cost-benefit analysis, gap analysis, and the burden of documentation and administrative bureaucracy.

Agricultural biodiversity

We are also concerned with discussions on the agenda about agricultural biodiversity, including the in-depth review of the Programme of Work. We intend to work with the Food and Agriculture Organization and other bodies in clarifying our position as regards agricultural biodiversity.

The plant science industry is committed to playing an important part in the conservation on biodiverse resources. In recognition of the essential links between biodiversity and sustainable food and non-food crop production, we can contribute expertise and experience to these efforts. We aim to

“Equity is in the eye of the beholder; different individuals come to different conclusions about what is equitable and about how to achieve equity” – Anatole Krattiger

“As the Convention begins to address the more practical challenges of its issues, we all need to focus more on cost-benefit analysis, gap analysis, and the burden of documentation and administrative bureaucracy”

Aaron Smethurst and Keith Jones

improve agricultural productivity, promote a life-cycle approach to our products, integrate biodiversity objectives within research and development programmes and support the further creation of seed bank collections that will ensure biodiversity in the future. With plant biotechnology, losses to destructive insects are reduced by targeting specific pests without harming non-target animals or plants. Farmers growing biotech crops report increased numbers of beneficial insects and associated biodiversity, such as songbird and hawks. What's more, plant biotechnology and herbicides have supported the widespread adoption of no-till weed control, which helps to conserve soil quality, moisture content and biodiversity.

The current emphasis on approaches that limit access undermine key discussions on important issues in benefit sharing, such as the development of effective national ABS regimes, material transfer agreements, capacity building; and the management of commensurate required resources.

The *Bonn Guidelines* offered a good roadmap to help develop and maintain national ABS regimes, but we believe the current proposals have strayed from the spirit of these guidelines. The relationship with the national regimes, a founding principle of ABS, should be formalised at the Bonn meeting and in the agreement set to be signed in 2010.

We believe that the involvement of industry at all levels of the negotiations is a crucial component to the creation of a successful international agreement on ABS that safeguards the planet's biodiversity.

Aaron Smethurst is Intellectual Property Policy Officer and Keith Jones is Stewardship and Sustainable Agriculture Officer, CropLife International (CLI).

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COP-9 side events co-sponsored by CLI

22 May, lunchtime, BMU / room 1.130 (with ICC)
28 May, lunch, BMU / room 1.130 (with ABIA and BIO)

News in brief

The Prince's Rainforests Project

The Prince's Rainforests Project (PRP), launched last November by The Prince of Wales, has brought together 13 major companies and a group of international analysts and experts to develop a range of solutions to halt the destruction of the rainforests.

Ending deforestation is essential primarily because carbon emissions from the destruction of the world's rainforests contributes between 12 per cent and 20 per cent of all global emissions, second only to the energy industry. Saving the rainforests is crucial for other reasons: they store carbon which is lost to the atmosphere when they burn, and they help clean the atmosphere of pollutants and feed it with moisture. In essence, the rainforests are giant global utilities, providing essential public services to humanity on a vast scale.

However, to stop deforestation, a way has to be found to make the forests worth more alive than dead. That means, first, placing a value on rainforests for the services they provide, and second, finding a means to transfer that value to the custodians of the rainforests.

This is where the PRP comes in. Led by The Prince of Wales, the project is assembling a coalition of representatives from the rainforest nations, governments, Non-Governmental Organisations (NGOs), and the business world, to find and agree on the practical solutions to deforestation.

As The Prince himself has said: "I am determined that this will be the largest ever public/private/N.G.O. sector partnership. The scale of the problem demands nothing less... The best way to preserve the rainforests is by helping to improve the well-being of the people who live there, which is why we have to find an equitable means of paying for the planetary life support system on which we depend – and fast!.. For the lives of billions of people depend on our response and none of us will be forgiven by our children and grandchildren if we falter and fail."

Contact Briony Mathieson, Communications Manager, The Prince's Rainforests Project, The Prince of Wales' Office (briony.mathieson@royal.gsx.gov.uk) for additional information.

COMINGS AND GOINGS

ANNIK DOLLACKER (Bayer CropScience) and **MICHAEL HAUSER** (Monsanto) have been appointed as the new co-chairs of the International Chamber of Commerce (ICC) Task Force on the CBD, a task force which lies under the ICC Environment and Energy Commission.

www.iccwbo.org/policy/environment/id5621/index.html

RICARDO BAYON (previously Director, Ecosystem Marketplace) has created a new for-profit venture, EKO Asset Management Partners. EKO aims at becoming a 'merchant bank' for people, projects and companies that seek to profit from emerging environmental markets; the markets for carbon, water, and biodiversity that have been closely tracked by the Ecosystem Marketplace.

www.ekoamp.com

the library

Publications

Please send information on new titles and upcoming events to the editor.

AGRIBUSINESS

FAO, 2007. "The State of Food and Agriculture 2007 – Paying farmers for environmental services", http://biodiversityeconomics.org/applications/library_documents/lib_document.rm?document_id=1130

S. Gura, March 2008. "Livestock breeding in the hand of corporations", *Seedling*, http://www.grain.org/seedling_files/seed-08-01-1.pdf

G. Tansey and T. Rajotte (eds.), January 2008. *The Future Control of Food: A Guide to International Negotiations and Rules on Intellectual Property, Biodiversity and Food Security*. Quaker International Affairs Programme (QIAP), <http://www.qiap.ca/pages/news.html>

BIOFUELS

OECD, March 2008. *ITF Round Tables No.138 Biofuels: Linking Support to Performance. Environment & Sustainable Development*, vol. 2008, no. 2, www.sourceoecd.org/environment/9789282101797

BIODIVERSITY BANKING

R. Bayon, J. Fox and N. Carroll, January 2008. *Conservation and Biodiversity Banking: A Guide to Setting Up and Running*

A new role for **ANNELISA GRIGG** at Fauna and Flora International (FFI): The focus in her new role will be to coordinate FFI's work with the finance sector and activities on climate change. The former will focus on the development of a tool for the finance sector to evaluate biodiversity and ecosystem services risk and opportunity (undertaken in collaboration with UNEP FI and Brazilian business school FGV); the latter will take forward a key part of FFI's conservation strategy.

Annelisa.Grigg@fauna-flora.org

IUCN has appointed **CHRISTOPH IMBODEN** as chairman for an independent panel to advise Holcim, a building materials supplier. The panel will review existing conservation tools used by Holcim and advise on how these might be improved, recommend or design additional tools as necessary, and provide independent input on biodiversity conservation policy.

www.iucn.org/business

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The Phu My Lepironia Wetland Conservation Project in Vietnam (Equator Prize Finalist 2006). The leprotonia grasses that grow near Phu My Village are customarily woven into a variety of traditional handicrafts. These grasses comprise the last extensive remnant of the leprotonia grassland ecosystem of the Mekong river delta. To save the species as well as the community's most valuable resource, the Phu My Lepironia Wetland Conservation Project was born. Villagers have been enforcing a new model of leprotonia harvesting, such that harvesting only the desirable grasses has replaced mass and indiscriminate cutting. Invasive weeds have also been targeted and eradicated. As a result of these new practices, the leprotonia crop has grown significantly and the average income amongst the villagers has tripled. Photo courtesy of UNDP Equator Initiative

Call for nominations, Equator Prize 2008

The UNDP Equator Initiative is a partnership that brings together the United Nations, civil society, business, governments and communities to help build the capacity and raise the profile of grassroots efforts to improve local livelihoods through the protection of natural resources and ecosystems. Nominations for the Equator Prize 2008 should be submitted by 31 May 2008.

In its previous award cycles the Equator Initiative honoured diverse communities for their innovative business ventures. Examples of these outstanding enterprises are Shompole Community Trust, a luxury ecolodge that benefits the Maasai in Kenya, Comunidad Indígena de N.S.J.P., an indigenous community in Mexico managing several forestry and ecotourism enterprises, and Aharam Traditional Crops Producers' Company, an agro-biodiversity business in India working with marginal farmers and landless labourers.

This year's call for nominations marks the fourth round. Prize winners receive worldwide recognition for their work as well as an opportunity to help shape national and global policy and practice in the field. Twenty-five community organizations will be honored in 2008 and awarded USD 5,000 each. Five of these communities will receive special recognition and an additional USD 15,000. Special recognition will be given for one initiative in each eligible region (Africa, Asia and the Pacific, and Latin America and the Caribbean) that best exemplifies community approaches to adapt to climate change, and one initiative that best exemplifies the conservation of agricultural biodiversity. The Prize will be presented in October 2008 at the fourth IUCN World Conservation Congress in Barcelona. All winners will have the opportunity to showcase their work in the 'Poble' Dialogue Space at the Congress.

You are invited to submit nominations of qualified grassroots community initiatives that meet the criteria for the Equator Prize by 31 May 2008.

Visit www.equatorinitiative.org for more information.

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Next issue

The next issue of the newsletter will analyse the outcomes of COP-9 for business. Please send contributions to the editor before 1 July 2008.

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Comments and suggestions for future columns are welcome and should be addressed to the editor.

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