

BUSINESS AND BIODIVERSITY IN BRAZIL: EXPERIENCE, ISSUES AND TOOLS FOR CORPORATE ENGAGEMENT IN THE CBD ¹

Introduction and summary

International environmental agreements establish responsibilities of Parties of importance to economic growth and social development. The Rio accords address such issues as energy exploration and consumption patterns, land use, access to biotic resources and associated intellectual property rights. These matters are critical to strategic business planning, and for this reason corporations have increasingly voiced their concerns in global environmental decision-making.

In the Convention on Biological Diversity (CBD), private sector roles are not as clearly laid out as in other agreements such as the Convention on Climate Change, in which specific incentives mechanisms have become associated with cleaner production practices. To comply with the CBD, productive sectors should respond to national regulation associated with protocols to the convention, contributing to conservation, avoiding damages and seeking means to promote the sustainable use of biodiversity components. Yet there is limited guidance to the CBD or its related implementing instruments that clarifies the role or responsibility of business.

In Brazil, as in most developing countries, issues of biodiversity conservation and sustainable use are still under discussion with society. Consensus among stakeholders remains to be achieved over issues such as compensation of undertakings with significant impacts on protected areas, use of genetically modified organisms, regulation of access to genetic resources and to traditional knowledge and the equitable distribution of benefits generated thereby, commerce in environmental goods and services, and so on. The complexity of these themes, allied with the lack of clarity of society's expectations with regard to the CBD, has made the role of business one of a number of concerns that demand greater understanding.

Despite uncertainties, a number of Brazilian companies have proactively adopted approaches that constitute opportunities to support CBD objectives and contribute to the target to achieve, by 2010, a significant reduction in the rate of biodiversity loss. These experiences deserve to be more widely divulged, serving as a basis for partnerships and broader replication. The following summary of issues explored in this study provides a roadmap to progress on business engagement in biodiversity, with an emphasis on experience of leading companies in Brazil.

¹ This study was prepared by Peter H. May (CPDA/UFRRJ) and Valéria da Vinha (IE/UFRJ) on behalf of the Brazilian Business Council for Sustainable Development – CEBDS, as a contribution to the “Business and the 2010 Biodiversity Challenge” seminar in São Paulo on November 3-5, 2005. The authors acknowledge support and encouragement from Beatriz Bulhões Mossri, Flavio Almeida and CEBDS staff, and of its Biodiversity Technical Commission (CT-BIO), chaired by Joaquim Machado (Syngenta). Bráulio Dias (SBF/MMA) provided important guidance. We also express appreciation for interviews conceded by André Freitas (Rabobank), Antonio Paes de Carvalho (Extracta), Christopher Wells and Cristiane Ronza (ABN/AMRO Real), Eduardo Bandeira de Melo and Marcio Macedo Costa (BNDES), Luis Stano and Maria Claudia Grillo (Petrobras), Maurício Reis (CVRD), Pedro Leitão (FUNBIO), Philippe Pommez (Natura), and Wagner Sequeira (Banco do Brasil).

A “megadiverse” country which harbors a staggering proportion of global biodiversity, Brazil has been at the forefront in setting a national framework for implementation of the CBD. The regulatory context of the Brazilian response on ratification of the convention established a series of domestic measures related to incentives, impact assessment and financing and subsidiary bodies responsible for review of access, sustainable use and biosafety matters. These instruments offer directions for constructive business practice and for representation in decision making toward the 2010 biodiversity target.

Experience in business engagement in biodiversity conservation and sustainable use in Brazil embraces a number of industries with direct and indirect physical impacts, with particular involvement by the energy, mining, agribusiness and forestry sectors. Many businesses in these sectors have developed reporting instruments related to socio-environmental parameters, but the use of biodiversity variables is still only incipient. Impacts along supply and value chains indicate the need to develop tools to adequately monitor and differentiate products from origin to final consumption. The financial and insurance sectors’ scrutiny and conditioning of undertakings with a biodiversity “footprint” can underwrite additional efforts to protect threatened species and ecosystems. Although a number of Brazilian and international firms active in Brazil have adhered to the Equator Principles, most still have some distance before them to incorporate biodiversity as a prominent feature in such scrutiny. Finally, several innovative enterprises have sought to explore emerging opportunities for sustainable use of biodiversity components for cosmetics, natural medicines and wide spectrum bioprospecting. The sensitivity of access and benefits sharing has impeded innovation to some extent, but has assured that safeguards are adopted through licensing processes.

This study makes no pretense of having exhausted the range of business experiences or opportunities in this area, which is recognized as rich and growing. Rather, an attempt is made to offer a glimpse into the complexity and the possibilities for proactive engagement by business in this realm.

Regulatory context of the CBD with regard to the role of business

The CBD is a legally binding multilateral environmental agreement on the conservation and sustainable use of all components of biodiversity, including genetic resources, species, and ecosystems. The CBD defines biodiversity conservation and sustainable use in their specific socio-environmental context. Its provisions apply to signatory Parties (States and regional economic entities), rather than to individual economic actors, which are themselves subordinate to national laws and international codes. The Conference of the Parties (COP) has met biannually since COP4 in 1998 and is now engaged in efforts toward implementation of the convention through strategic planning and thematic working groups. Nevertheless, it is primarily at a national level that CBD objectives will be met. National biodiversity strategies define the approach to implementation of the CBD at a country level, providing a forum for engagement of the private sector.

Article 10 (e) of the CBD encourages cooperation between government and the private sector in developing methods for sustainable use. Other articles are related to societal involvement, impact assessment, incentive measures and financial mechanisms all have pertinent implications for the private sector. Decisions of the successive COPs regarding

mechanisms of the CBD (e.g., Clearing-House Mechanism, Financial Mechanism, Biosafety Protocol and work programs on technology transfer, sustainable use, agricultural and forest biodiversity and incentive measures) refer to the need for private sector engagement. The importance of the CBD for business is recognized by representative corporate bodies such as the World Business Council for Sustainable Development.² Only recently however has the call for reciprocal engagement with the business sector on the part of the signatories to the convention become more urgent.³

At the Johannesburg Summit in 2002, Parties to the Rio accords had awoken to the insufficient commitment of public resources toward sustainable development. Agenda 21 had reaffirmed as a parameter that 0.7% of the GDP of the advanced nations be dedicated to Overseas Development Assistance (ODA) (Agenda 21, Chapter 33). The importance of private sector contributions to sustainable development was recognized in 1992 in rather perfunctory fashion. Yet by 2002, public ODA reached only about 0.25% of GDP among OECD nations, having been superseded by direct private investment, primarily channeled to emerging economies, in volume exceeding the Rio target. It became evident that harnessing flows of overseas investment as well as national business undertakings would be essential if goals of sustainability, including biodiversity conservation, were to be met in the new millennium.

The Millennium Ecosystem Assessment (MEA), divulged in May 2005, indicates that progress toward the goal of reducing the rate of biodiversity loss by 2010 at all levels would be difficult if not impossible if society continues along a path of “business as usual”. The goal for biodiversity is expected to require tradeoffs and synergies with other millennium goals (MEA, 2005). This implies the need for contributions from all actors in society. Business remains one of the major sources of both pressures against and potential solutions toward this goal.

National policy channels to engage the private sector in the CBD

Brazil is one of a small number of “megadiverse” nations. Its territory of 8.5 million km² hosts a staggering 15-20% of recognized global species diversity (WRI, 2005).⁴ With a variety of biomes ranging from semi-arid thorn forests (*caatinga*) to humid tropical rainforests, Brazil has taken significant strides to conserve remaining biodiversity at an ecosystem or corridor level and to ensure sustainable use of the components of biodiversity for equitable national development. It faces enormous challenges to control deforestation, fires, pollution, invasive alien species, and

² The manual *Business and Biodiversity* (jointly published by Earthwatch, IUCN and WBCSD in 1998, available in Portuguese from CEBDS), provides practical examples of opportunities for a beneficial engagement of businesses in both preventive and proactive approaches to biodiversity conservation and sustainable use.

³ Representative segments met at an initial *Business and the 2010 Biodiversity Challenge* meeting in London on January 20-21, 2005, organized by the Secretariat of the Convention on Biological Diversity, the Department for Environment, Food and Rural Affairs of the United Kingdom, the Brazilian Ministry of Environment, the World Conservation Union (IUCN), the Brazilian Business Council, and Insight Investment, and hosted by the latter. The CBD Intersessional meeting in Montreal in September 2005 ratified the call to promote the dissemination of best practices and to engage businesses toward the achievement of the 2010 goal of no additional net biodiversity loss.

⁴ Brazil is the country with the greatest floral diversity, with 50,000 vascular plant species (approximately 20% of the total known in the world), 524 mammals, 1,677 birds, 517 amphibians and 2,657 fish (MMA, 2005).

unsustainable production and consumption patterns. Yet it also possesses a notable portfolio of pilot experiences with which to face the challenges of biodiversity conservation, sustainable use and benefit sharing. Many of these experiences spring from efforts on the part of the national and international business community to respond to these challenges as part of their strategic insertion in Brazilian economy and society.

Government policy in Brazil has established a framework for response to the CBD, through the creation of a National Program for Biodiversity (PRONABIO) coordinated by the Ministry of the Environment, and guided by the National Council on Biodiversity (CONABIO), composed of representatives of ten ministries and ten civil society organizations (including two business associations). PRONABIO was conceived as an intergovernmental and multi-institutional program. With GEF support, the Brazilian government initiated a national biodiversity project (PROBIO) which identified priority actions, stimulating the development of demonstration subprojects, and disseminating biodiversity information. One result of PROBIO was to establish Brazil's National Biodiversity Policy (Decree 4339/2002), defining principles and directives for biodiversity consistent with the CBD. The Brazilian Biodiversity Fund (FUNBIO) established in 1995 as a private fund, acts as a long-term sustainable financing mechanism to promote conservation and sustainable use of biodiversity in Brazil. FUNBIO created partnership funds and innovative pilot projects with a number of business groups.

Brazil has accelerated its designation of areas for *in situ* biodiversity conservation since the passage of legislation for a National System of Protected Areas (SNUC) in 2000. Protected areas now comprise a total of 8.13% of national territory, an area of approximately 690,000 km², of which over one-quarter are in restricted parks and reserves. State governments protect another 22 million ha. The remaining 75% lies in sustainable use areas, including extractive reserves, national forests and Private Natural Patrimony Reserves – RPPN (MMA, 2005). Although many protected areas are so only in name, specialized personnel have been contracted and parks and reserves equipped. Partnerships with business and NGOs, and financing secured from bilateral and multilateral agencies have permitted the development of integrated corridor plans in fragile areas of the Atlantic Forest and Amazon regions.

The SNUC establishes criteria for financial compensation associated with facility licensing and impact assessment. Beyond ameliorating and minimizing significant impacts within or proximate to protected areas, undertakings are required to dedicate a minimum of 0.5% of facility investment costs to compensatory actions designed to fortify the protected areas system (Law 9985/2000, Article 36). This clause, tantamount to a compensatory offset, represents the single most substantial source of finance for protection of biodiversity in Brazil. Although the compensation criteria remain somewhat contentious,⁵ the Brazilian business community supports the premise that public compensation of the impacts on biodiversity can be complementary to proactive engagement of industry in socio-environmental improvement (CEBDS, 2004a).

Brazil has also established institutional frameworks for responding to issues of biosafety and of access and equitable benefits sharing of sustainable use of biodiversity components. In keeping with the Cartagena Protocol on Biosafety, the government

⁵ Issues remain regarding the absence of a maximum compensation amount, and of failure to incorporate environmental protection measures assumed by investment undertakings in the calculus.

created a technical panel (CTNBio) to review the impacts of using genetically modified organisms (GMOs), and proposed legislation to create a national Commission on Biosafety that would rule on commercialization of GMO-based products. A separate inter-ministerial commission (CGEN) was created to screen requests for access and use of biodiversity for research and development purposes. Regulations have been promulgated that establish procedures for legal access to collection and information, as well as criteria for equitable benefits sharing with holders of traditional knowledge concerning genetic resources.⁶

These concerns are complex and engender difficulties in achievement of consensus among stakeholders. Continuing uncertainties have led to adoption of a precautionary approach toward sustainable use, in particular. Some actors contend that in consequence of such caution unnecessary bureaucracy and scrutiny act as impediments to innovation and capture of biodiversity value. Others argue that caution is necessary with strategic biodiversity resources as a part of the license to operate (interviews, October 2005). The presence of mixed signals and perverse incentives at a policy level may indeed have stimulated continued abuses (e.g., widespread planting of GMO seed prior to policy definition; unabated biopiracy). Clearly these issues have no simple solution.

The Brazilian government has increasingly sought to encourage the mainstreaming of biodiversity in both public sector and private sector planning and policy. “Transversal” policy making approaches that integrate socio-environmental concerns across sectors, have engaged the Executive with economic sectors and stakeholder groups in building responses to critical resource conflicts. This approach was adopted in several high profile problem areas, such as deforestation and highway paving in the Amazon and interstate river basin management. Such stakeholder consultation led to budgetary integration and consolidation of recommendations for legislation and policy. The effectiveness of this problem-based approach to biodiversity mainstreaming was due to the following essential factors:

- i) high-level government commitment;
- ii) flexibility to reallocate existing resources where necessary to meet incremental demands; and
- iii) capacity to quickly leverage partnerships to stimulate the flow of private sector and international resources, as well as technical support.

The success of these measures motivated the formulation of a major World Bank project for mainstreaming biodiversity in public policies and private sector investment decisions, currently on the GEF work program.⁷

Businesses in different economic segments of Brazil demonstrate growing awareness of intractable social and environmental problems and corporate commitment to social responsibility. Nevertheless, production practices in key economic sectors are often not protective of remaining biodiversity and experience with sustainable use is rare. While some firms have developed product lines based on sustainable use of biotic resources,

⁶ Provisional Measure n° 2.186-16, 2001 and Decree n° 3.945, 2001.

⁷ The “National Biodiversity Mainstreaming and Institutional Consolidation Project”, budgeted at a total of \$100 million was presented for GEF support jointly by the Ministry of the Environment and FUNBIO. Of this amount, \$28 million is allocated for private sector partnerships for biodiversity mainstreaming in productive sectors. See <http://www.gefonline.org/projectDetails.cfm?projID=2764>.

these innovations remain limited to niche markets, and are far from transforming overall markets or business practices in the mainstream. In the remainder of this paper, we explore how biodiversity conservation has begun to be adopted as an integral part of business strategy and practice in Brazil, as a basis for recommendations toward greater engagement of business in the CBD.

Managing and reporting impacts of industries whose productive activities affect biodiversity

Brazil's private sector enterprises in a range of economic areas are increasingly integrating biodiversity conservation and sustainable use in their investment decisions. Although awareness of responsibility for biodiversity loss associated with direct or indirect impacts of business activity is a recent phenomenon, such recognition has become a central part of strategies for corporate socio-environmental responsibility among leading enterprises.

Given its simultaneously tangible and intangible nature, biodiversity interacts with knowledge management, whose function is to manage aspects related with intangible corporate assets. These include, for example: the learning process, reputation and longevity of a product label, corporate culture and public perception. From this perspective, the management of biodiversity presupposes the existence of a body of specific procedures, instruments and tools referenced to targets and that are submitted to performance evaluations. Corporate objectives and targets may take into account opportunities to benefit biodiversity conservation beyond simple prevention and mitigation of negative impacts.

Standards and reporting

In response to market drivers and stakeholder demands, Brazilian corporations in productive sectors with a large environmental "footprint" (such as energy, pulp and paper, mining and logistics) have adopted a profile of social and environmental responsibility. Such efforts include reporting of sustainability indicators according to international industry standards such as the Global Reporting Initiative-GRI (CEBDS, 2004b). Several major corporations have qualified for the Dow Jones Sustainability Index (DJSI).⁸ The São Paulo Stock Exchange Index Ibovespa is now in the process of adopting its own sustainability index, through an association with the Getúlio Vargas Foundation, the IFC, Brazilian business and NGO representatives (GVces, 2005). Industry officials contend that the advantages of reporting and disclosure go beyond transparency and market positioning to affect the enterprise's perception of its progress toward internal and external targets, serving as a tool for strategic planning and environmental management (interviews, October 2005).

⁸ To date, the DJSI includes among its Brazilian members Aracruz Cellulose, Banco Itaú and CEMIG. DJSI disclosure specifically addresses biodiversity impacts in the mining, construction and energy sectors. "Biodiversity is increasingly moving onto the radar screens of different industries. SAM [DJSI auditor] assesses whether companies have defined appropriate policies in this area, whether they evaluate their biodiversity impact in the context of existing and new projects, what monitoring procedures they have in place and what they do to rehabilitate sites." The recent inclusion of Aracruz in the DJSI is the fruit of efforts on the company's part to favorably represent its biodiversity impacts to stakeholders (www.sustainability-indexes.com/djsi_pdf/publications/Presentations/DJSI_PRT_050907_Review.pdf).

A recent study conducted by the Dom Cabral Foundation (CEBDS, 2004b) revealed that 84% of 59 Brazilian major companies possess ISO 9000 quality certification; 70.6% have adopted ISO 14000 environmental management criteria, and 45% are in the process of obtaining OHSAS 18001 health and labor safety management certifications. Governance structure reorganization has not always followed the pace of environmental and occupational health related standards observance, however.

For natural resource intensive companies to invest in conservation and ecosystem restoration goes beyond the usual legal requirements and standards. However, it is consensus among business managers and consultants that the voluntary or mandatory standards of reporting available are not appropriate to deal with the new set of challenges that emerge from biodiversity and other global environmental concerns. At a new stage of the market economy, where sustainability is rewarded and price and technology are not the only drivers for decision-making, standards and guidelines must to be subject to review (Porter, 1996).

An environmental management system is a precondition for companies wishing to conquer a sustainability attribute, but it is not a valid indicator of biodiversity commitment. According to the indicators adopted worldwide (DJSI, GRI and FTSE4Good) and the upcoming Ibovespa sustainability index, corporate environmental performance is still concentrated on end-of-pipe technologies rather than product stewardship. This implies that industry is far from adopting a “no residuals” goal, to reduce the level of natural resources exploitation so as to reduce net biodiversity losses.

Confusion persists about both how to define sustainability in business practice and regarding the best indicators to be used by companies to show advance in these terms. The biodiversity reporting strategy chosen by most companies consists in support for natural area preservation programs (Furnas, Alcoa, Aracruz); directly managing a private reserve and working with government to protect biodiversity in the area of influence of all its operations (CVRD); or investing in projects dedicated to monitor and protect endangered species (Petrobras).⁹ None of those options have to do directly with the impacts of productive processes. Furthermore, many companies still perceive biodiversity as a social responsibility issue, delegated to their communication or marketing departments.

The secretariat document prepared for the CBD Ad Hoc Working Group on Review of Implementation notes that “the existing standards and guidelines rarely reflect the full range of biodiversity-related issues, if they reflect them at all” (CBD, 2005). To some extent, this is also the opinion of Brazilian executives, who defend uniform standards defined by each sector. Some leading Brazilian industries, particularly those that heavily impact biodiversity, have already perceived that specific biodiversity standards and indicators are essential to better inform investors and financial institutions. They thus apply sectoral guidelines, when available, which are usually more rigorous but are also more appropriate to their conditions (for instance: Forest Stewardship Council – FSC, Marine Stewardship Council). Other companies are involved in discussion processes, such as internal working groups, in order to find better ways and tools to communicate and internalize biodiversity issues in their business.

⁹ Petrobras, emblematically, provides continuing support to a number of such species protection projects focused on marine wildlife: Humpback and Wright whales, Rotator Dolphins, manatees and marine turtles (Tamar Project).

The company has a Working Group more and more dedicated to the CBD principles, though conservation is still perceived in general as something more clearly related with institutional activities and corporate social responsibility, and biodiversity as an “environmental component”. The perception of impacts is more at the level of “ecosystems” where efforts are made to monitor, prevent and remedy effects of corporate activities on the environment, such as on soil and water, riparian forests, treatment of effluents, recommendations for technical and safe use of its products, as well as practices of conservation agriculture, principally No Till.

Joaquim Machado, Syngenta, October 2005

There is an internal corporate Working Group (entitled “Standards for management of potential impacts on biodiversity in protected and vulnerable areas”) seeking to define areas of direct influence that should be subject to criteria of vulnerability and sensitivity established with relation to biodiversity.

Luis Stano and Maria Claudia Grillo, Petrobras, October 2005

Despite these relevant initiatives, the lack of standards regarding biodiversity will probably be one of the biggest challenges for Brazilian industries to internalize CBD principles.

Oil and gas industry biodiversity strategies

The principal challenges of the Oil and Gas industry today are first: climate change, and second: future access to reserves. In the second case, it is clear that the sector is more and more vulnerable to societal concerns regarding the overlap between ‘the last great places’ of significant biodiversity and those with dwindling hydrocarbon reserves. To maintain an image as ‘clean operator’, it is necessary to respond to this vulnerability, which implies investments greater than the costs associated with socio-environmental requirements alone”

Luis Stano – Petrobras, October 2005

Within the current sustainability scenario for the Oil & Gas industry, three strategies are in play:

- 1) **“No-go”** (Shell) – Among the major oil companies Shell is a pioneer and still remains at the foremost position in addressing sustainable development. The so called “no-go” strategy adopted by Shell is based on the commitment announced in August 2003 not to explore for, or develop, oil and gas resources within any natural World Heritage sites.
- 2) **“Zero harm”** (Statoil) – the company has a Health, Safety and Environment (HSE) Poster where it is stated that the company’s goal is zero harm to people and the environment. In its new environmental policy adopted in May 2003, this general goal is specified through a definition of zero harm to the environment, which specifically refers to biodiversity and biodiversity related issues. Statoil’s definition of zero harm to the environment: preserve biological diversity by ensuring that no habitats are destroyed, no alien species are introduced and no impacts occur at the population level; keep discharges/emissions below the carrying capacity of the

relevant ecosystem; limit the use of land, clean up and restore areas after activity there has ceased, and preserve cultural monuments and landscapes of special value.

- 3) “Responsible Operations” (BP): seeks, at first, to understand direct and indirect impacts on biodiversity and support conservation projects in order to create collaborative partnerships, fund and contribute to conservation activities aligned with local, national, regional and global priorities before taking final investment decisions. From a company viewpoint, it is a way to contribute constructively to the public policy debate on biodiversity.

The Petrobras position closely follows that of BP. According to company representatives, the adoption of criteria related to biodiversity should precede the decision to locate or be locked into a specific project design. At the moment, criteria are being elaborated regarding areas affected by the activities of the company based on criteria of vulnerability and sensitivity as defined by the SNUC. There is as yet no attempt to characterize biodiversity impacts in the area of influence of energy related undertakings, nor is there a clear definition of the areas of influence that would be appropriate for this type of characterization (Interview, Petrobras, October 2005).

One factor that enables Petrobras to become more closely engaged in the CBD is the convergence of its environmental philanthropy with the characteristics of its core business. The company has invested for over 20 years in the monitoring of native or threatened species such as marine turtles and manatees. The Petrobras Environment Program initiated this effort toward greater convergence by opening a public competition for projects specifically dedicated to the theme of “water”, considered a critical resource for the future of the company itself.

With the partial privatization of Petrobras’ exploration monopoly in 2000, the field was rapidly invaded by foreign enterprises, most entering the Brazilian market for the first time, without a defined regulatory framework having been put in place. The relaxation of environmental requirements on the part of regulatory agencies was adopted so as not to scare away potential investors.

After five years of indefiniteness, Ibama this year launched its “Guide to Environmental Licensing of Activities of Petroleum and Gas Exploration – Seismic and Drilling”. Its objective is to serve as a useful tool in the preparation of environmental studies as well in support to planning of petroleum industry activity in coastal areas and offshore exploration blocks. The document is built on three pillars, one regarding “Biodiversity”, in which those areas which are nominally restricted from exploration for environmental reasons are identified, with reference to a Resolution of the Ministry of Mines and Energy – MME.¹⁰

The National Petroleum Agency (ANP) restricts approval for oil and gas exploration to areas outside those defined as a priority for biodiversity conservation in critical coastal areas such as mangroves, dunes and estuaries as determined by PROBIO. The costs of this policy imply an effective reduction in petroleum reserves authorized for exploration, with implications for national economic development and energy independence. In an important test case, Conservation International (2003) studied the impacts on marine wildlife of expanded petroleum exploration in the threatened

¹⁰ MME. Resolution nº 8, 21 July 2003.

Abrolhos bank in southern Bahia, and estimated that tourism revenues from whale sighting expeditions and regional fisheries would provide more employment in areas neighboring the Abrolhos bank than would the energy sector. As a result, ANP removed 162 exploration blocks in sensitive areas from its auction of potential sites in the region.

Energy companies engaged in response to the CBD should also be concerned with the impacts on local production systems of introduced exotic and invasive species transported in ballast waters of petroleum tankers,¹¹ and the demands of fishermen who seek to reduce the 500 meter exclusive access zone around petroleum drilling platforms.

Internalizing forest and mining industry impacts

A growing number of forest related enterprises including plantations and native forest management have adopted the rigors of certification (whether according to Forest Stewardship Council – FSC criteria or to the Brazilian CERFLOR standard). Most of the major Brazilian pulp and paper manufacturers have opted for forest certification. As a result some firms have adopted proactive approaches toward biodiversity within areas affected by their plantations. For example, Votorantim Celulose e Papel-VCP, through its ISO 14.001 process determined to set aside several properties with high conservation value as shelters for endangered species in perpetuity as RPPN. VCP also is preparing all of its forest plantations and adjacent native reserves for FSC certification by 2006 (VCP 2003 Annual Report). Aracruz Cellulose, the largest global short fiber pulp manufacturer based on eucalyptus, protects native forest reserves on its estates in excess of the legally required area and invests in restoration of degraded stream bank forests with native tree species of the threatened Atlantic Forest.

Despite the growing relative importance of planted forests for Brazilian wood products enterprise, native forests – particularly in the Amazon – still represent the principal source of timber in Brazil, simultaneously the largest global producer and consumer of tropical timber (Smeraldi and Verissimo, 1999). Brazil now has the largest area under certified native forest management in Latin America (WWF, 2004). The costs of adopting low impact production techniques are significant but in the long-term such conversion has been found comparably more lucrative (Barreto et al., 1998). A principal problem with certification is that of achieving coverage of a larger number of enterprises. Barriers that impede broader adoption include capital rationing and technical capacity (May, 2005). Yet the benefits from the perspective of biodiversity conservation and community relations are undeniable (Imaflora, 2005).

Certification represents a powerful tool, extremely rigorous and of high quality, but only 60 companies in Brazil have been certified according to FSC criteria. ... The dilemma arises: should we demand a lot of only a few or a little of many?

André Freitas, Rabobank, Oct. 2005

One idea advanced by leading businesses involved in efforts to promote improved forest management in the Amazon is to seek means to build capacity among smaller

¹¹ PROBIO recently organized a diagnostic symposium involving members of the concerned Brazilian academic community of the potential effects of invasive species, as the basis for a national program for monitoring and control over their introduction. A preliminary National Report on Invasive Exotic Species in Brazil found 53 species introduced unintentionally through ballast water or incrustation of vessels.

enterprises that practice or that are moving toward “good forest management practice”. Such enterprises may not be able to afford the incremental costs of adopting full certification standards at the outset, but may over time be able to absorb these additional costs as they gain access to more discriminating markets.¹² An NGO consortium led by Imazon and Friends of the Earth in association with certified forest producing companies in the eastern Amazon has assumed the role of coordinating this capacity-building effort. This will be accomplished through adoption of a gradual mechanism of management with independent verification to expand the managed area among the less capitalized companies (Roberto Smeraldi, personal communication).

In the mining field, Companhia Vale do Rio Doce – CVRD, one of the world’s largest mining and transport conglomerates, holds subsurface mineral rights throughout Brazil and other countries. Its operations in Brazil lie primarily in the Amazon and Atlantic Forest biomes where it preserves globally significant biodiversity in a total of 1.2 million ha of native forests, whose direct impacts only affect less than 3% of the area protected.¹³ CVRD’s operations are managed so as to assure restoration of degraded mining sites; its environmental restoration research and development facility at its Linhares Forest Reserve in Espírito Santo is considered a center of excellence in this field, dominating the reproductive biology of over 800 native tropical tree species.

We carefully manage the mining operation, so as not to have as much effort to restore nature afterward. Better knowledge of biodiversity and ecosystem dynamics allows us to better achieve its restoration.

Maurício Reis, CVRD, Oct. 2005

An equally significant effort has been launched by three major pulp and paper companies whose properties in southern Bahia and northern Espírito Santo total over 2,000 km². There, in collaboration with conservation organizations, a project for experimental restoration of biodiversity in degraded corridors linking existing Atlantic Forest remnants is underway. Over 10% of the total property area will be restored or placed under permanent conservation through this strategy, and four RPPNs demarcated (IBio, 2005).

“Biodiversity offsets” may be valuable to aid businesses that seek to address their biodiversity “footprint”, going beyond the principle of impact minimization and minimization, to compensate for the unavoidable effects on biodiversity that would otherwise impede meeting the 2010 biodiversity target. Like other mining companies in Brazil CVRD has also assumed responsibility for *in situ* biodiversity conservation in areas surrounding its mine sites, an approach that may be likened to the concept of “biodiversity offsets” (Ken Tate et al, 2004).

¹² It is axiomatic in the timber industry that buyers do not pay premium prices for certified wood. Rather, certification affords access to specialized markets for lesser known timbers and wood products. The internalization of biodiversity value in managed forest products represents one of the most serious challenges to sustainable enterprise in this field.

¹³ Among CVRD’s seven protected forest reserves, six are co-managed with the Brazilian government environmental agency Ibama.

Managing and reporting on biodiversity impacts along supply chains

Few Brazilian industries are well prepared to extend biodiversity criteria to their supply chains and to third party contractors. Initial steps have been taken with regard to the labor market (observance of human rights such as no slave or child labor practices; diversity in hiring policy) and demands for supplier certification (ISO 9000 and 14001), beyond conventional legal requirements. Some companies such as Shell have led advances in safety standards, carrying out regular audits of suppliers' safety standards. The Tubarão Steel Company – CST has invested in environmental control of partners and suppliers. Even within the GRI, considered by the private sector to represent the most complete and consistent set of industry reporting guidelines, aspects associated with the supply chain are few and relatively superficial. And the GRI has only one section on land use and biodiversity.

This is an emergent concern due to the large number of third party suppliers to Petrobras, and the less rigorous standards they could have. There is little information gathered in a systematic way along the supply chain.

Luis Stano and Maria Claudia Grillo, Petrobras, October 2005

Natura is an exception. “Strategic suppliers – chosen on the basis of quality, logistics, innovation and costs – were called to participate in the development of products, from the outset of their conception. There are diverse partners for each of the types of projects in progress. Suppliers share as well in social and environmental commitments of the company. In the same way, Natura has gotten closer to the local communities that supply natural ingredients used in the Ekos line. This is an effort that involves NGOs, scientists, researchers and governments and represents an evolution of a program of asset certification adopted by the company beginning in 2000 – a way to guarantee environmentally correct and sustainable management of Brazilian biodiversity. In this new phase, the company hopes to also assure the economically viable and socially equitable exploitation of these assets by the communities.” (Natura, 2004)¹⁴

Several initiatives to promote stakeholder dialog on the establishment of sustainable commodity chains have also arisen over the past few years, focusing on coffee and soybeans production and marketing systems.¹⁵ In Brazil, initiatives to reduce the biodiversity impacts of soybean expansion in the Amazon basin and to motivate adoption of conservation tillage and other appropriate agricultural practices have involved soybean traders and customers in consultations. Scrutiny of investment behavior has built pressure on credit offerings and value chains to promote biodiversity friendly practices. Soybean expansion should thereby become contingent on adoption of adequate socio-environmental safeguards such as avoidance of new clearing in forested areas. Dutch investors concerned with social responsibility specifically addressed this issue with reference to the Brazilian case, with support from Unilever, itself responsible for purchases of 110,000 tons per year of non-GMO soybeans in Brazil (VBDO, 2005). Stakeholders suggest the need for certification of origin of soybeans traded so as to avoid that their production originates from areas recently converted from tropical forests

¹⁴ Further details on the Natura case are provided below, in the section on Sustainable Use.

¹⁵ See, for example, the Sustainable Commodities Initiative, managed by the International Institute for Sustainable Development and UNCTAD (www.iisd.org/trade/commodities).

(FBOMS, 2004). This would be accomplished by preferential purchasing from cooperatives and traders who adopt such criteria in acquisitions, and whose geographic area of activity lies outside originally forested areas.

Along with interest in sustainable value chains for agricultural commodities has come a proliferation of criteria, norms and standards to identify products of sustainable origin. This proliferation confuses the consumer and may become yet another onus for producers charged with attending diverse criteria in the face of declining prices. To address these problems, discussion has taken place amongst stakeholders focusing on the creation of unified sustainability criteria. One example of this approach is the forum on Common Codes for the Coffee Community, made up of 70 industry representatives, producer groups, traders and NGOs, currently engaged in field testing of a common set of criteria for green coffee production and trade.¹⁶

Certification is a vital necessity, but the consumer today is lost in a proliferation of labels.

Philippe Pommez – Natura, October 2005

Financial sector disciplines

The Green Protocol is a letter of banking principles for sustainable development signed in 1995 by the major Brazilian official banks (Banco do Brasil, Banco do Nordeste, Banco da Amazônia, Banco Nacional de Desenvolvimento Econômico e Social – BNDES, Caixa Econômica Federal and Banco Central do Brasil). These institutions made a commitment to implement policies and practices aligned to the goals defined by the Brundtland Report, that is, to promote a development model which could satisfy the needs of future generations as well as the present.¹⁷

Among measures resulting from the Green Protocol, the Banco do Brasil adopted the following operating principles: to suspend financing to operations which generate environmental impacts, unless the creditor shows formal authorization of the responsible state or federal environmental agency, and to present documents from the responsible agency regarding approval for any of the following activities as mandatory condition for financing approval:

- Deforestation or agricultural activities leading to the incorporation of new areas into the production process;
- Marketing of unprocessed extractive vegetal or fisheries products;
- Investment operations in activities that utilize environmental resources or undertakings that may cause environmental degradation;

¹⁶ The "Common Code for the Coffee Community" comprises basic social, environmental and economic standards for achieving greater sustainability in the production, post-harvest processing and trading of green coffee. Details available at: <http://www.sustainable-coffee.net/>.

¹⁷ An inter-ministerial working group created in June 2004, entitled "Credit for Sustainable Development" was charged with formulating normative instruments for the inclusion of sustainable development criteria in federal government funds and credit systems. Among its attributes, the group is to revise the Green Protocol, proposing strategies for its restructuring and effective operation, through commitments between official agencies; proposing criteria for environmental sustainability in the use of government funds, as well as in the private banking system, proposing mechanisms to incorporate environmental criteria in credit instruments.

- Investment operations in activities that require Environmental Impact Assessment (EIA/RIMA);
- Investment operations in activities that utilize water resources, including irrigated agriculture, requiring water use licensing.

In 2003, the Banco do Brasil adhered to the Global Compact,¹⁸ having participated in preparation of the report “*Who Cares Wins – Connecting Financial Markets to a Changing World*”, addressed to recommend mechanisms for integrated environmental, social and corporate governance issues (Global Compact, 2004).

BNDES, Brazil’s national development bank, the largest investment bank in Latin America, also a Green Protocol signatory and an early adopter of environmental due diligence based on IFC criteria, recently had its Environment Department reinstated after a temporary hiatus. Although traditionally the BNDES concentrated its environmental financing in sanitation works (solid waste management, water and sewerage), its actions currently have expanded to include restoration of degraded sites, water resource cleanup, reforestation of riparian forests, as well as preventive projects such as the “Cleaner Production” program. The bank’s objective is to incorporate environmental variables in all its operations and productive sectors financed. Initially, this is being accomplished through the inclusion of a questionnaire regarding the environmental profile and performance of potential creditors, a tool that forms part of an eliminatory review of initial creditworthiness. Although not mentioned explicitly in the questionnaire, several items express preoccupation with possible biodiversity related risks of investment undertakings (see Annex 1).

At a global level, 31 financial institutions that account for an estimated 80% of all global project finance, including among them four private Brazilian banks and the Banco do Brasil, had by June 2005 signed the Equator Principles. This set of guidelines for the financial sector, particularly in emerging markets, commits banks to follow the rigors of International Finance Corporation (IFC) socio-environmental review procedures and safeguard policies (Equator Principles, 2003). The IFC procedures call for specific attention to biodiversity in environmental assessment of project finance, applied to loans in excess of \$50 million. Compliance with these principles extends to procedures for credit risk screening and loan covenants incorporating socio-environmental concerns, using criteria that go beyond adherence to host country legal requirements.¹⁹

Private banks active in Brazil have also begun to adopt environmental criteria in due diligence procedures, and governance issues in their financing procedures, assets management and securities. The most representative banks are proactive in promoting biodiversity friendly production practices in investment strategies. ABN/AMRO Real, Bradesco, Itaú and Rabobank are among those that, having signed the Equator

¹⁸ The Global Compact, launched during the World Economic Forum at Davos in January 1999 by UN Secretary General Kofi Annan, aims to mobilize the international corporate community to promote basic values in sensitive fields such as human rights and environment protection.

¹⁹ The language of the Principles provides that in the environmental assessment of projects, lenders address among other matters, “protection of human health, cultural properties, and biodiversity, including endangered species and sensitive ecosystems” (Equator Principles, 2003). For example, IFC procedures call for appraisal of impacts on endangered species from the IUCN threatened species list that is broader in coverage than the national lists prepared by Ibama in Brazil.

Principles, now seek means to incorporate environmental concerns as an integral part of credit risk management. Procedures for credit review now begin with a socio-environmental risk appraisal. At ABN/AMRO, loans that are questioned on these grounds may be vetoed. However, rather than deny credit for investors on these grounds, banks prefer to find ways to use credit as a lever to enhance socio-environmental performance among their clientele. At Rabobank, agribusiness enterprises – which make up the majority of the bank’s clientele in Brazil – seeking continued access to a line of credit, must show they are making progress toward recuperation of degraded permanent protection areas, as required by the Forestry Code.

We want more sustainable clients.

Christopher Wells, ABN/AMRO Socio-Environmental Risk Adviser

Risk appraisal begins with loan screening, applying a credit review questionnaire with the client. In addition to issues associated with waste management and emissions, the questionnaire addresses biodiversity through concerns such as observance of legal criteria for protected areas and reserves, and existence of liabilities associated with deforestation or degraded sites. The credit analyst then verifies information regarding licensing, fines and other environmental liabilities with the responsible state agency. Although some states offer access to regularly updated information on the status of licenses and infractions in their jurisdictions, these data are often inconsistent, out of date or nonexistent. For the banking industry to effectively incorporate socio-environmental safeguards, perhaps the most important role of the public sector would be to provide standardized and up to date information on business liabilities.

The financial sector also signals its commitment to biodiversity conservation through specific corporate risk policies regarding forests and other natural resources. ABN/AMRO published a global Forestry and Tree Plantation policy that excludes finance to activities that would provoke alteration of native forests (ABN/AMRO, 2001). Rabobank addressed its exposure in the agribusiness field by publishing a policy that would restrict credit to enterprises that adopt transgenic seed in areas where such use has been prohibited by law.²⁰

Financing the conversion

The adoption of biodiversity friendly technology and business practices depends in many cases on the availability of capital to finance the conversion. Businesses that wish to remain competitive in increasingly global markets find they must invest to bring their products into conformity with social and environmental criteria. If they do not do so, both their competitiveness and creditworthiness may be jeopardized. But there are few credit lines available that specifically finance the costs of conversion, and these are often limited to large creditors.²¹

²⁰ See corporate website for details on Rabobank’s Approach to Gene Technology: http://www.rabobank.com/Images/gm_statement_engels_tcm25-621.pdf.

²¹ In Brazil, the National Development Bank (BNDES) offers cut-rate loans for investments in environmental control technology. The IFC finances these loans at lower interest, permitting concessionary rates, and these loans may also be obtained through private sector financial institutions that manage IFC credit lines.

Private credit for biodiversity friendly production practices is a recent phenomenon. With \$51 million in IFC financing, ABN/AMRO Real recently created a Socio-Environmental Finance unit, offering credit lines that range from renewable energy to tree plantations for agrarian reform beneficiaries (ABN/AMRO, 2005). Rabobank is offering “Green Finance” at concessional terms to organic farming and other environmentally differentiated production systems. These loans are financed out of proceeds from “Green Bonds” marketed by Rabobank.

The public banking system and regionally earmarked constitutional funds offer subsidized credit lines for investment in productive activities, yet examination of these portfolios in the Amazon indicates that such credit has typically gone to conventional enterprises rather than to those that promote sustainable resource use. This is due to absence of material rewards to banking sector functionaries for efforts to innovate in lending, and to inadequate technical capacity to advise producers on the part of extension agents and technical consultants (Costa, 2005).

Transparency is important. Both the public and private banking sectors have been targeted as key leverage points to condition capital availability to new enterprises and infrastructure facilities on socio-environmental performance. NGO watchdog organizations are recognized as important actors in oversight of bank performance.²² A recent review of public disclosure of environmental management procedures adopted by Equator Principle signatories revealed some discrepancies in adoption of these disciplines (Chan-Fishel, 2005).

Business roles in access and benefits sharing in opportunities for sustainable use of biodiversity components

The potential to develop new products and industries based on biodiversity resources has frequently been cited as a primary motivation for ecosystem conservation, although the CBD is primarily grounded in appreciation of intangible, unpriced biodiversity. Between option value for the resource base and the actual capture of market value lies an enormous gap and a promise that has often gone unfulfilled. Capturing tangible values through bioprospecting or sustainable use of traditional products is fraught with controversy. Adequate safeguards to compensate holders of traditional knowledge and to avoid unsustainable harvesting of natural raw materials are an essential counterpart to the opening of new market opportunities. At the same time, corporate efforts to protect natural resources may be stimulated by the potential to devise business opportunities from research or visitation in protected areas to which they hold title.

Despite regulatory complexities, several Brazilian corporations have become involved in partnerships aimed at leveraging sustainable use of biodiversity. For example, a manual and training program to promote best practices in ecotourism has been promoted in cooperation with FUNBIO. Leading companies in the cosmetics and paper industries have developed product lines or associated enterprises derived from biotic resources. Proactive business undertakings include a medicinal plants production enterprise within

²² The “BankTrack” program, managed in Brazil by the Friends of the Earth Amazonia “Eco-Finanças” program, is at the forefront of this movement (ABN/AMRO interview). BankTrack is made up of 14 NGOs worldwide whose mission is specifically to report on the human and environmental impacts of the private financial sector and to promote good practice (www.banktrack.org).

a major pulp and paper operation, promotion of certified community natural products enterprises for use in a specialized natural cosmetics line, and capacity building in bioprospecting and high throughput screening for pharmaceutical and agrochemicals potential.

Klabin Paper and Cellulose Industries S.A. is the largest integrated producer of pulp and paper products in Latin America. Its holdings include a total of 400 thousand hectares in five states in Brazil's Atlantic Forest biome, of which 40% is dedicated to native forest conservation and the remainder to highly productive eucalyptus and pine plantations. The company's certified forest operation had as a spin-off, certification of the company's herbal plants nursery and natural medicinal products facility. Through a partnership with FUNBIO, this facility provides phytotherapeutic remedies applied in 70% of medical consultations by company employees, reducing treatment costs by an estimated 56%. Medicinal and aromatic herbs supply a range of natural products sold both on the national and international market, including herbal teas, creams, pomades, colorings, shampoos, and syrups.

Natura, now Latin America's largest cosmetics company, began in 1999 to develop the Ekos line of products, based on the use of sustainably harvested native species including guaraná, Brazil nut, andiroba, cupuaçu and buriti, originating from local communities. The principal difficulties faced by Natura were related to the logistics of assuring a steady and reliable supply, and guaranteeing sustainable origin. Through a joint program with Imaflores, an FSC and Sustainable Agriculture Network (SAN) certifier active in Brazil, supplier groups / communities obtained certification and technical assistance in supply management. Ekos grew rapidly to account for a significant share of Natura's sales.

Natura adopted internal policies for its relationship with communities based on recognition of local knowledge and distribution of part of its revenue for needs defined by the communities. The approach is to pay an amount associated with the sale value of products using the ingredient originating from a given community. The principle is not only to pay a fair price but to develop a relationship and associate the communities as partners in the enterprise.

Philippe Pommez – Natura, October 2005

As part of its learning process with raw material supply logistics, Natura is now working with communities to identify product line extensions from the same raw materials (WBCSD, 2005). The company is now in the process of a broader integration of natural products as raw materials, and a replication of this business model throughout the enterprise (interview, October 2005).

Although some 20% of all plant biodiversity in the world is found in Brazil, a recent compendium classifies only 1,300 species of medicinal plants known to man (Mors et al., 2000). Indigenous knowledge in combination with folk remedies thus represents only a small proportion of species potentially useful for pharmaceutical purposes. The Atlantic Forest has a number of unique species due to its isolation from other tropical forests. The argument of EXTRACTA Moléculas Naturais is to investigate through random collection, extraction and testing against industrial targets this storehouse of potential values for humanity.

EXTRACTA is a private bioprospecting startup that was incubated in the BIO-RIO complex based at the Federal University of Rio de Janeiro. The company amassed a substantial collection of plant extracts, fractions and pure compounds from collections it sponsored with contract partner Glaxo Wellcome, primarily in the Atlantic Forest and the eastern Amazon. Its agreements with landowners and researchers that contributed to its Bank of 40,000 plant extracts specify in detail a benefits sharing approach associated with eventual patents originating from high throughput screening of its collection against innovative biological targets. Screening is undertaken on a contract basis with industries in pharmaceuticals, cosmetics, fragrances, crop and livestock defense and new biomaterials areas. EXTRACTA became the first Brazilian corporation to receive a Special License from CGEN to access national biodiversity throughout Brazil and to form a commercial library of extracts and its derivatives, down to pure compounds.

EXTRACTA received official approval for its form of interaction with biodiversity, whose tonic is minimum impact, refusal to work with threatened species, and total adherence to the CBD and Brazilian legislation.

Antonio Paes de Carvalho – EXTRACTA, October 2005

Partnership with society: sharing biodiversity resources

It is consensual in the private sector that the necessity to prevent traumatic environmental events – along with pressures from ever more organized and active stakeholders – is one of the principal factors compelling change in corporations. At the same time, experience indicates that collaborative management of biodiversity with local organizations produces more rapid and reliable results, since it incorporates the contribution of groups and individuals who hold knowledge of species and ecosystem dynamics within the territory in which an undertaking is located. For this reason, a company interested in creating biodiversity value should seek opportunities for sustainable enterprise, principally involving those local communities most seriously affected by their operations. The interface with local populations is particularly delicate in extractive industries, such as mining activities carried out in or near indigenous territories in the Amazon.

Assuring adequate stakeholder engagement depends mainly on how business relations are conducted and nurtured. Communication must be clear and transparent, offering the maximum of information to those involved, even should the content be perceived as negative. A company is more likely to conquer the confidence of stakeholders when it openly assumes its errors and failures, as shown in communication strategies by Shell and BP in Brazil.

The CBD recognizes the narrow dependence on biological resources of traditional populations and local communities, providing that Parties assure that traditional knowledge and conservation practices be protected and applied more widely, conditioned on informed consent and equitable sharing of benefits (Article 8.j.).

Companies should perceive traditional knowledge of biological resources and sustainable management practices adopted by local communities as a vital source for sustainability of its business. Additionally, “These partnerships can assist companies by providing them with access to biodiversity expertise, and information; strengthening

and legitimizing biodiversity activities; allowing companies to efficiently outsource unfamiliar biodiversity activities; building company capacities which may be valuable in other areas of the business; and enabling cultural change.”. (Earthwatch/IUCN/WBCSD, 2002:43).

Conclusions

For management of biodiversity to produce positive results for the private sector, it is necessary to combat an excessive emphasis on short term financial returns. Rather than invest in quick fixes and superficial measures, companies should look to creation of long-term value, particularly derived from intangible assets and sectoral alliances. The main challenge of the CBD, more than that of the Climate Change Convention, will be to answer the dilemma of intertemporal equity inherent to biodiversity. For this reason, it will require the adoption of various instruments, at an initial stage through broadening Environmental Management Systems in productive chains, but this will in itself be insufficient to guide companies so as to use biodiversity in their favor.

Rather than respond to dozens of indicators and accumulating certifications, businesses should work toward sectoral standardization of directives and indicators, accompanied by partnership initiatives among companies of the same sector, such as the Energy and Biodiversity Initiative – EBI. Thanks to massive and uninterrupted investment in scientific research, the pulp and paper industry is today harvesting the results of a successful strategy of intra-sectoral partnerships with academic institutions that reduced criticism toward eucalyptus cultivation, directed in large measure at its low biodiversity.

“Viewing biodiversity conservation in terms of sustainability means recognizing the actual value of biodiversity to all people, everywhere” (Earthwatch/IUCN/WBCSD, 2002:26-27). In 2004, WBCSD and CEBDS with sponsorship by BP and support from Amanco, launched a business-oriented proposal for social inclusion. Centered on the principle of Sustainable Survival, the proposal defends support by companies toward sustainable enterprise initiatives of poor populations. Some companies already perceive the commercial and reputational potential of biodiversity management. As described above, Klabin used to advantage the existing genetic patrimony in its “own backyard” to create an award-winning program of “living pharmacies”, producing natural remedies that benefit poor people in the state of the Paraná.

Not by chance, the DJSI, the most influential market indicator of sustainable investment, introduced a new clause in 2004 specifically related to biodiversity, with a focus on energy, construction and mining industries. The clause includes measures associated with implementation of corporate biodiversity policy; systematization of monitoring and evaluation processes with regard to eventual impacts on biodiversity in operations and future areas of exploration; and consideration of the adoption of international guidelines such as those of IUCN and UNESCO in the decision-making process concerning new extraction areas.

The opportunities are many. The challenges reside in the still very inadequate perception of the importance of biodiversity among diverse segments of the private sector, in the promotion of a “radically developmental” posture toward Brazilian agriculture, and due to the absence of a high level debate between Government and society regarding the opportunity and fundamental importance

for the country of establishing leadership in processes and programs of sustainable accommodation between modern agriculture and biodiversity conservation and sustainable use. Assimilation of biodiversity concepts is still impeded by the traditional action of some lobbies in defense of private sector interests, confounding in large measure the concepts and actions related to biodiversity with those related with biosafety of transgenic organisms. This model requires urgent reform and updating.

Joaquim Machado – Syngenta, October 2005

Recommendations

It should be recognized that the private sector possesses biodiversity-relevant knowledge and technological resources, as well as more general management, research and communication skills, which, if mobilized, could facilitate the implementation of the Convention. The following recommendations are suggested as a preliminary set of guidelines to promote more ample engagement of businesses toward the 2010 biodiversity target, with emphasis on the Brazilian experience. They should be discussed and refined during the November 2005 seminar on Business and the 2010 Biodiversity Challenge.

- 1) *Reporting:* The GRI has been adopted with success by a number of corporations, as a step toward building uniform reporting standards and comparability. Efforts should be made to define and operationalize more detailed and sector-specific biodiversity indices within the GRI as a tool for management and monitoring.
- 2) *Incentives mechanisms:* Incentives and lines of credit are generally lacking to engage in biodiversity friendly activities. Credit lines should be developed on concessional terms to finance conversion to biodiversity friendly practices and technology, particularly among SMEs.
- 3) *Information for due diligence:* Access to regularly updated and consistent information from governmental licensing agencies regarding corporate socio-environmental liabilities is critical to facilitate credit risk appraisal on biodiversity criteria. Capacity building to for this purpose should be a central instrument for biodiversity mainstreaming.
- 4) *Sustainable use:* Licensing procedures for biodiversity access should find ways to limit obstacles toward capture and sustainable use of biodiversity values while observing CBD safeguards on informed consent and benefits sharing rather than serving as an impediment to such opportunities.
- 5) *Valuation of biodiversity to business:* There is a great need to quantify the economic benefits of biodiversity conservation to society and to business, though this need not necessarily be in monetary terms.
- 6) *Guidelines for biodiversity impact assessment:* A Guide should be developed regarding the biodiversity impacts of enterprises in different sectors, identifying approaches for their avoidance or amelioration, and containing details of experience in the form of one or more Business Cases.

- 7) *Engagement of SMEs*: Develop guidelines for “good management practice” incorporating biodiversity that will ensure, for example, that a larger share of the thousands of small and medium forest enterprises in the Amazon become engaged in low impact logging practices.
- 8) *Incorporating biodiversity in the value chain*: Supply chain management should begin at the buyer end, with specification of criteria for preferential purchase of goods and services that make biodiversity protection explicit (e.g. geographical origin). To be effective, major buyer groups and traders must be engaged in the process, building capacity to promote sustainable production practices along the value chain.

Steps toward more fruitful engagement of business in the CDB:

- *Mobilizing business capacity*: The biodiversity-relevant knowledge and technological resources as well as lessons learned and skills acquired in the process of integrating biodiversity concerns into private sector practices, should be mobilized to facilitate the implementation of the CDB (in combination with more general management, research and communication skills available to business).
- *Dissemination of CBD objectives and tools*: Workshops should be promoted to present and discuss the objectives and tools of the CBD, suggesting directions and opportunities for the private sector to become active in its implementation. In this context, the principal results of the Millennium Ecosystem Assessment and good industry biodiversity practice should be divulged.
- *Business representation at the COPs*: Business representatives should be encouraged to participate as delegates to the Conferences of the Parties to the CBD.

References

- ABN/AMRO Real. 2005. *Valores humanos e ecológicos, juntos*. São Paulo.
- ABN/AMRO. 2001. Forestry and tree plantations. ABN/AMRO Risk Policies. www.forestandtradeasia.org/files/ABN%20Amro%20Risk%20Policies.doc
- Chan-Fishel, Michelle. 2005. *Unproven principles; the Equator Principles at year 2 – an anniversary assessment*. BankTrack. Available for download at: http://www.banktrack.org/fileadmin/user_upload/documents/E_Publications_and_Reports/BankTrack_publications/050606_Unproven_Principles_anniversary_assessment.pdf.
- Barreto, Paulo, Paulo Amaral, Edson Vidal and Christopher Uhl. 1998. Costs and benefits of forest management for timber production in eastern Amazonia. *Forest Ecology and Management* 108: 9-26.
- CBD. 2005. Private-sector engagement in the implementation of the convention. Ad Hoc Open-Ended Working Group on Review of Implementation of the Convention. First Meeting. Montreal, 5-9 September. UNEP/CBD/WG-RI/1/8. <http://www.biodiv.org/doc/meetings/wgri/wgri-01/official/wgri-01-08-en.pdf>
- CEBDS. 2004a. CEBDS expõe na Câmara dos Deputados posição dos empresários sobre licenciamento ambiental. Available on the Web at: <http://www.cebds.org.br/cebds/noticias.asp?ID=74&area=1>
- CEBDS. 2004b. *Relatório de Sustentabilidade Empresarial*. Rio de Janeiro: Brazilian Business Council on Sustainable Development. Available for download at www.cebds.org.
- Conservation International. 2003. Avaliação de impactos da exploração e produção de hidrocarbonetos no Banco dos Abrolhos e adjacências. Caravelas, Bahia.
- Costa, Francisco de Assis. 2005. O FNO e o desenvolvimento sustentável na Amazônia. In: May, Peter H. et al. (ed.) *Instrumentos econômicos para o desenvolvimento sustentável da Amazônia: experiências e visões*. Brasília: MMA/AMA, pp. 49-60.
- Earthwatch Institute / IUCN / WBCSD. 2002. *Business and Biodiversity: A Handbook for Corporate Action*. Switzerland. Available for download at <http://biodiversityeconomics.org/document.rm?id=716>.
- Equator Principles. 2003. Available for download from www.equator-principles.com.
- FBOMS. 2004. GT-Florestas – “Soja e florestas”. Mimeo.
- Global Compact. 2004. Available for download from: <http://www.unglobalcompact.org/content/NewsDocs/WhoCaresWins.pdf>.

- GVces. 2005. Índice de sustentabilidade empresarial – ISE Bovespa 2005. São Paulo: Getúlio Vargas Foundation Center for Sustainability Studies. Available for download from: http://www.institutopharos.org/home/questionario_ise.pdf.
- Imaflora. 2005. *Brasil certificado. A história da certificação florestal no Brasil*. Piracicaba, São Paulo. For further information visit www.imaflora.org.br.
- ten Kate, Kerry, Josh Bishop and Ricardo Bayon. 2004. *Biodiversity offsets: Views, experience, and the business case*. Gland, Switzerland: IUCN and Insight Investments, UK. Available for download from: http://www.conservationfinance.org/Documents/CF_related_papers/Biodiversity_offsets.pdf
- May, Peter H. 2005. Forest certification in Brazil. In: Cashore, Ben and Dianna Newsome (eds.) *Forest certification in developing and transitional societies*. New Haven, Connecticut: Yale University School of Forestry and Environmental Studies. Available from the author (peter@rebraf.org.br).
- Mesquita, Carlos Alberto, et al. (IBio). 2005. Envolvendo o setor florestal na conservação da biodiversidade da Mata Atlântica. Instituto BioAtlântica. Mimeo. Prepared for publication in a book by The Nature Conservancy.
- Millennium Ecosystem Assessment – MEA. 2005. *Ecosystems and human well being: A framework for assessment*. Island Press. Available for download at: <http://www.millenniumassessment.org/en/Products.EHWB.aspx>
- MMA. 2000. Avaliação e Ações Prioritárias para Conservação da Biodiversidade no Bioma Zona Costeira e Marinha. Brasília. Available for download at: http://www.mma.gov.br/index.cfm?id_estrutura=14&id_conteudo=561
- MMA. 2005. 3rd Brazilian National Report to the CBD. Ministry of the Environment. Available for download from www.mma.gov.br.
- Mors, Walter B., Carlos. T. Rizzini and N.A. Pereira. 2000. *Medicinal Plants of Brazil*. Algonac, Michigan: Reference Publications, Inc.
- Natura. 2004. Relatório de sustentabilidade. In: CEBDS (2004b) op. cit.
- Porter, Michael. 1996. “What is strategy?” *Harvard Business Review*, Nov.-Dec. 1996, pp. 61-78.
- Smeraldi, Roberto and Adalberto Veríssimo. 1999. *Acertando o alvo: consumo de madeira no mercado interno brasileiro e promoção da certificação florestal*. Belém: Friends of the Earth-Brazilian Amazon/Imazon/Imaflora. Available for download at: <http://www.imazon.org.br/downloads/index.asp?categ=2>
- VBDO. 2005. Unilever and soy in Brazil. Annex to *Business and Biodiversity* report. Available for download from: <http://www.vbdo.nl/index.php?en/publicaties/30>.
- VCP. 2003. *Annual report*. São Paulo: Votorantim Cellulose e Papel. Available for download from: <http://www.vcp.com.br>.

WBCSD. 2005. Natura: Placing sustainable development at the center of business thinking. Available for download from: http://www.wbcsd.org/web/publications/case/natura_full_case_final_web.pdf.

World Resources Institute. 2005. Earthtrends Data Tables. Biodiversity. Available for download from http://earthtrends.wri.org/pdf_library/data_tables/bio1_2005.pdf.

WWF. 2004. Brasil assume o primeiro lugar em área de florestas certificadas na América Latina. Available at the website: <http://www.fsc.org.br>.

ANNEX 1. BNDES LOAN CREDITWORTHINESS QUESTIONNAIRE

In executing its credit policies, BNDES considers it to be of fundamental importance to observe socio-environmental principles. In this sense, BNDES conditions credit on observance of environmental regulation by its beneficiaries, promoting and supporting the investments needed for this purpose and verifying the environmental performance of projects financed. For the **environmental classification** of a project, the following questionnaire should be correctly filled-in with **yes (y)** or **no (n)** in all items. **CLARIFY IN CASE OF AFFIRMATIVE RESPONSE.**

1. Location of the undertaking

- Urban area
- Industrial District
- Rural area
- Situated within or in the buffer zone of an Integral Protected Area (Park, Biological Reserve or Ecological Station)
- Situated within a Sustainable Use Protected Area
- Contains an area recognized as an Historic, Cultural, Archeological or Speleological (cave) site
- Construction is planned within Permanent Protection Areas
- Communities surrounding the project express opposition

2. The activities of the undertaking are associated with:

- human population dislocation
- modification in water courses
- captation of subsurface or surface water
- deforestation of native forest or drainage of areas over 100 hectares
- production of radioactive substances
- utilization, production, or emission of substances listed in the Montreal Protocol or in the Stockholm Convention
- research on Genetically Modified Organisms - GMOs
- discharge of effluents into the sea, lakes or water courses
- generation, treatment, incineration, or final disposal of solid wastes
- emission of atmospheric pollutants
- generation of noises, odors, vibrations or electromagnetic radiation
- others (specify)