Assessing Exposure of Financial Institutions to Biodiversity Business Risks and Identifying Options for Business Opportunities[a]

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Abstract

Following the spur of climate change up the international business agenda, biodiversity possesses characteristics of becoming the next challenge for the financial sector. This study aimed at assessing 1) what types of biodiversity business risks (BBRs) financial institutions (FIs) can be exposed to; 2) what evidence there is on the business case for biodiversity for FIs from a risk perspective; 3) what possibilities FIs have to mitigate BBRs; and 4) what type of biodiversity business opportunities (BBOs) can be captured. Results from an interview survey among financial institutions (FIs) and other stakeholders revealed that 19 out of 26 respondents (> 70%) believed FIs are exposed to reputational risk. Additional types of risks that were identified, although to a lesser extent, include liability risk, social license to operate, credit risk and reduced shareholder value. Though it is difficult, at present, to link biodiversity business risks (BBR) to tangible financial metrics, such as default risk or shareholder value, a wide range of cases provide evidence of the business case. However, apart from a few banks, such as Rabobank, HSBC, ABN AMRO and Goldman Sachs, FIs have hardly integrated the issue in their daily operations. Also, as the interview survey revealed that a number of FIs are definitely interested in identifying how they can mitigate risks at an early stage, a general procedure is provides a systematic overview of tools that FIs can use to integrate biodiversity into their risk management procedures. Although BBRs are likely to be more financially significant, there are a number of BBOs already in use, such as growing markets for certified sustainably produced commodities, providing due diligence and advisory services to clients, and fully utilizing government-induced opportunities. Expected market sizes range widely, from US$35 million – 60 billion annually by 2010.

Key words: Biodiversity business risks, biodiversity business opportunities, financial institution, banking sector, asset management, insurance

I. Introduction

Climate change is nowadays recognized as an important business challenge for a wide range of private sectors, including the financial services sector. Financial institutions (FIs) that do not acknowledge the business rationale may be at risk for investments in, or loans, advisory services or insurance products to companies with significant carbon footprints. One way to deal with these risks is by downgrading or upgrading companies based on their carbon footprint. In this respect, JPMorgan Chase and Innovest teamed up to launch the JENI-Carbon Beta Index.[1] On the other hand, FIs that acknowledge the materiality of climate change can capture business opportunities, for example by increasing investments in clean energy technologies or by brokering deals through the European Emissions Trading Scheme (ETS) or the voluntary Chicago Climate Exchange (CCX). Bank of America[2] and Goldman Sachs[3] for example recently announced significant investments of US$ 20 billion and US$ 1.5 billion to support the growth of environmentally sustainable business activities, such as alternative energy and clean technologies.

On the contrary, the business case for biodiversity has only to a very limited extent been developed. However, biodiversity or the ecosystem services that support it bear characteristics of becoming the next challenge for financial institutions (FIs), including retail and commercial banks, institutional investors, asset managers and insurers. Global

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[a] This article is based on an IUCN study, titled: "Biodiversity, the Next Challenge for Financial Institutions?", which was carried out last year with financial support of the Alcoa Foundation and Alterra (a Dutch research institute).

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biological resources have decreased by about 30% since 1970[4]. This has set in motion a number of powerful drivers, such as increased pressure and activism by NGOs, increased regulatory and liability regimes by governments willing to protect their ecosystems, increase in scrutiny of supply chains for ecosystem-dependent sectors such as forestry and agriculture, and shifting consumer preferences, that are all leading to a growing relevance of biodiversity to businesses.[5, 6, 7, 8, 9] This is schematically highlighted in Figure 1.

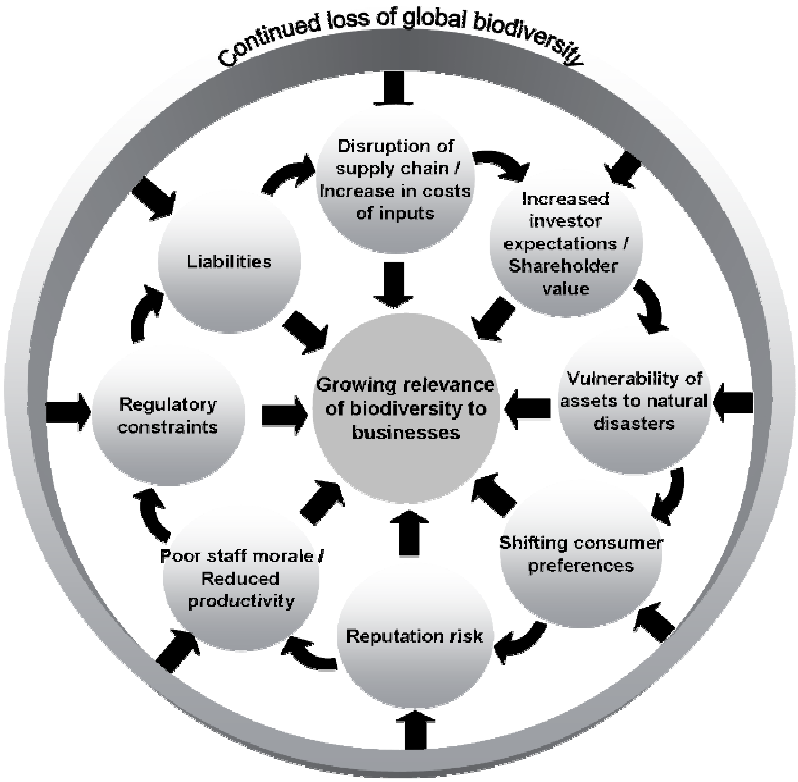

Figure 1: Linking biodiversity loss to business relevance

FIs that are not able to identify which companies are most at risk (having a biodiversity origin) can be exposed to biodiversity business risks (BBRs) themselves. Two types of companies bear especially characteristics that increase their susceptibility to BBRs for FIs:

1. **Companies having *(high) impacts/footprints* on ecosystems**. These can be subdivided into companies with *direct footprints* on ecosystems, such as the oil & gas, mining, forestry and construction sector, as well as sectors that have *significant impacts through their supply chains*, such as the food retail sector;
2. **Companies *depending* on ecosystem services**. These include for example the tourism, fisheries, forestry and the agricultural sector. As an example, cod landings off the coast of Newfoundland came to a stop in the early 90s due to complete depletion of the species.[5]

BBRs can both emerge *directly* and in the *short term*, as well as *indirectly* and over the *medium to long term*. FIs are exposed to direct and short-term BBRs when they face reputational damage or liability claims for involvement in a company with a bad environmental record or biodiversity reputation. In contrast, FIs are exposed to more systematic and long-term BBRs by providing insurance services to or having significant loan and investment portfolios in the above mentioned types of companies.

As the Millennium Ecosystem Assessment concludes that ecosystems will likely continue to degrade in the (near) future[5], biodiversity will increasingly become more material for companies having high biodiversity-footprints or strong dependency on ecosystems. De facto this means that biodiversity will likely become more material as well for investors, commercial banks and other FIs holding a significant number of shares, bonds or loans in companies with high biodiversity footprints/dependency. Goldman Sachs outlined for example that oil & gas companies will increasingly explore offshore oil and gas fields, which are more complex for exploration and production.[10] This phenomenon will likely be leading to increased BBRs for these types of companies.

The aim of this study is to assess 1) what types of BBRs financial institutions (FIs) can be exposed to; 2) what evidence there is on the business case for biodiversity for FIs from a risk perspective; 3) what possibilities FIs have to mitigate BBRs; and 4) what type of biodiversity business opportunities (BBOs) can be captured by FIs. The full report, on which this paper is based, has been published by the IUCN[11] in June 2007.

II. The Biodiversity Business Case from a Risk Perspective

An interview survey[11] among financial institutions, other private sector companies, and NGOs, posted the question: *Do you believe there is a business case for biodiversity from a financial sector's perspective?*[c] Results revealed that 19 out of 26 respondents[d] (> 70%) believed FIs are exposed to reputational risk (Figure 2). Liability risk, social license to operate, credit risk, and reduced shareholder value, were mentioned by the respondents as well, although these were regarded to be less important at present. The percentages in Figure 2 indicate *how many of the respondents mentioned a certain motivation to be a convincing biodiversity business case for FIs* (*i.e.,* respondents were not show a list of possible BBRs).

[c] While FI respondents naturally answered the question from their company's perspective, the non-FI respondents were asked to *imagine* what types of risks they believed the financial sector can be exposed to.

[d] Though HSBC did not take part in the interview survey, the company clearly states in their Environmental Risk standard (published in June 2003) what types of environmental business risks the company can be exposed to. For this reason they were included in the graph in Figure 2.

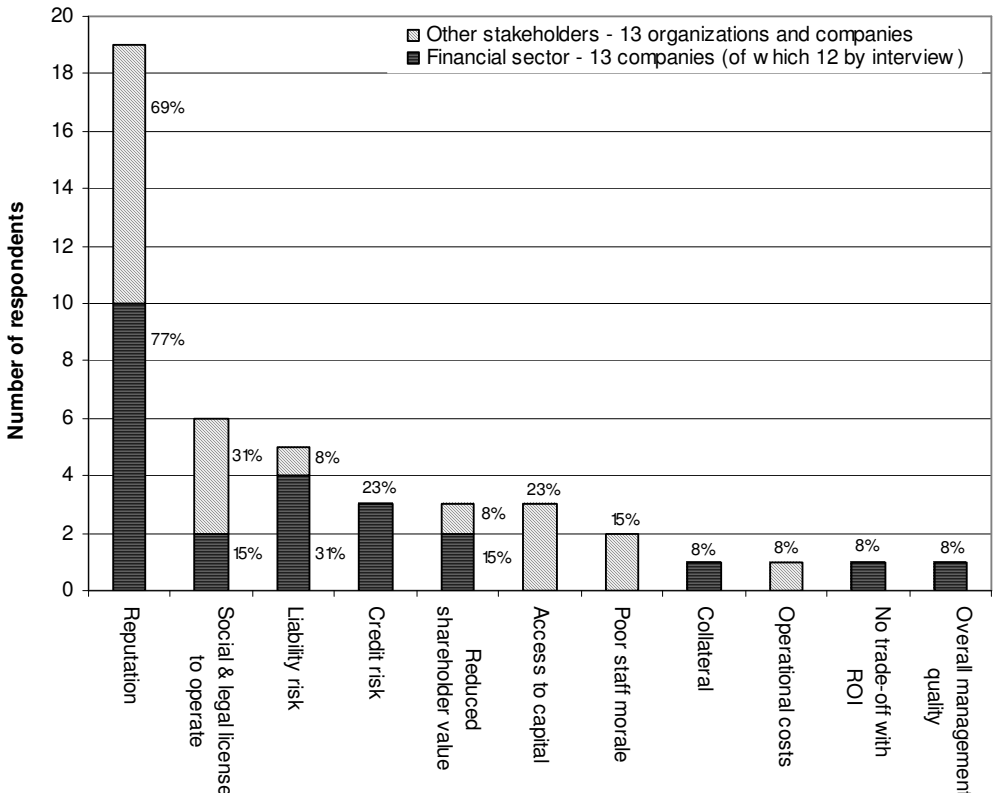

Figure 2: The business case for biodiversity from a financial institution's perspective – information gathered from interview surveys[e]

The interview survey, in combination with a literature study, revealed a wide range of case studies, expressing evidence of the business case. The most representative cases, highlighted below, are categorized according to the type of BBR they represent. Because of their variety and stand-alone nature, it is difficult at present to link BBRs to tangible financial metrics, such as market capitalization, asset value, or credit risk.

Liability risk

- EU Directive 2004/35/EC[12]: The directive aims at preventing environmental damage to water resources, soil, fauna, flora, and natural habitats, and at making the polluters pay whenever damage cannot be avoided in the European Union (EU). The directive introduces a liability scheme which will not only compensate for damage to the environment, in accordance with the 'polluter pays' principle, but also prevent such damage. The directive came into force on 30 April 2007. The European insurance industry is identifying how to respond to it.

Legal and social license to operate

- With respect to increased regulatory regimes, the environment ministers of the G8 countries and the five major new industrialising countries launched the "Potsdam Initiative – Biological Diversity 2010" on 17 March 2007. [13] The ministers specifically state that they will *"approach the financial sector to effectively integrate biodiversity into its decision making".* Besides, Portugal, which will hold the next EU presidency (second half of 2007), indicated its appetite for management systems to mainstream biodiversity in the private sector.[14]
- With respect to a social license to operate, Credit Suisse has recently been urged by indigenous groups from Guyana, Cambodia, Malaysia, and Papua New Guinea to pay them US$ 10 million in compensation, because of their link to the Malaysian timber company Samling. This company held Credit Suisse as an adviser during its stock market

[e] "No trade-off with ROI" was mentioned by one (alternative) bank, which believes that incorporating sustainability and biodiversity considerations into equity investment and lending activities does not affect profits.

flotation in February 2007, along with HSBC and the Australian bank Macquarie. The indigenous peoples claim that Samling's operations have damaged their communities by cutting down forests and, in some cases, polluting sources of drinking water.[15]

Shareholder value

- In April 2004, Associated British Ports saw GBP 155 million wiped off its market value (about 10% of its share price) after the UK government blocked the company's plans for a new container terminal at a site in the south of England. The government admitted that one major factor for its decision was the potential environmental impact.[16] Although the share price of the company has recovered since, it provides a clear case to investors that extra-financial issues (e.g. biodiversity) make business sense.

Reputational risk

- A survey by the Economist Intelligence Unit[17] among 269 senior executives (chief executive officers, chief financial officers, and chief risk officers) revealed that reputational risk was regarded as the most important type of risk for a company (even more important than regulatory risk, human capital risk, market risk, or credit risk). "Poor crises management" (*e.g.,* as a result of NGO campaigning), "exposure to unethical practices", "failure to address matters of public concern" (*e.g.,* climate change or biodiversity conservation), and "environmental breaches" (*i.e.*, liability), which can all be attributed to environmental and/or biodiversity concerns, were regarded to be important by between 20 – 50% of the respondents. 37% of the companies in the survey were financial institutions.
- ING Group has withdrawn support from a US$ 1.2 billion investment project by the Finnish company Botnia to build pulp mills across the banks of the Uruguay River. The project has been under scrutiny, from local communities among others, because of strong feelings that environmental pollution from the factories will damage agriculture and local (nature-based) tourism in Argentina. The Argentinean government strongly opposes this project saying the "*...mills posed a serious threat to the ecosystem of the River Uruguay*.[18] Although it remains speculation, potential reputational scrutiny and a lack of social license to operate could have contributed to ING's decision to withdraw from this project. Its role that has been taken over by the French investment bank Calyon.[19, 20]
- Barclays, one of the banks that participated in the initial development of the Equator Principles, came under scrutiny in the end of 2003, just after signing the Equator Principles[f] for providing a US$ 400 million loan to the US$ 1 billion project to build a series of dams in the east of Iceland.[21, 22, 23]

III. Biodiversity in the Business Operations of Financial Institutions at Present

To get a feeling if and how biodiversity is recognized at present, this section provides a very condensed overview how the issue has emerged in the banking sector, asset management, and insurance. It should be recognized that these types of institutions by no means represent the whole financial sector.

Banking sector. About fifteen years ago the first European and US banks started to integrate environmental considerations into their credit-lending activities.[24] While a lot of banks are struggling to integrate overall environmental risks into their lending activities,[25] recent analysis indicates that more and more banks integrate these considerations into their credit risk management procedures.[26, 27] These days, most large banks apply due diligence to loans, when there is reason to believe that impacts on the environmental may be significant. However, studies by Oxera[28] in 2000 and F&C Asset Management in 2004[29] revealed that on a sector level, biodiversity is hardly recognized at present.

[f] The Equator Principles is a tool that has been developed by the IFC, in collaboration with ABN AMRO, Barclays, Mitsui, and WestLB. It is intended to serve as a common baseline for the implementation by each endorsing FI (currently 41) of its own internal social and environmental policies, procedures and standards related to *project financing* activities specifically. See www.equator-principles.com.

Notwithstanding, an assessment of eleven commercial and investment banks that were chosen for their global reach and involvement in the development and/or adoption of the Equator Principles, reveals that a considerable number of these banks have already started to go beyond the Equator Principles for project finance and developed sector-specific guidelines (Table 1). The banks apply these new guidelines to an increasing number of credit products and some investment products. Although these sector-guidelines often do not make direct reference to biodiversity, phrases are used such as *tropical moist forest*, *critical natural habitat,* or *depletion of natural resources* that capture the value of biodiversity to a certain extent.

Table 1: Integration of biodiversity into the business operations of a number of major banks at present

Bank	General indicators			Sector guidelines										Applicable for…..
	CSR report	Env. risk standard	Equator Principles	Agriculture	Chemicals	Climate	Energy	Fisheries	Forestry / Plantation	(Freshwater) infrastructure	Leisure	Metals & Mining	Oil & Gas	
1. ABN AMRO*	√	√	√						√	√		√	√	All clients in respective sectors
2. Barclays**	√	√	√											
3. Citigroup	√	√	√						√					Project finance
4. Deutsche Bank	√	√												
5. Goldman Sachs***		√							√					Debt/equity underwriting, loans, investment banking, advisory
6. HSBC****	√	√	√		√		0		√	√		0		All clients in respective sectors
7. JPMorgan Chase		√				√			√					
8. Rabobank	√	√	√	√	√	0		√	√	√	√			Palm oil: applicable since 2001. Other sector guidelines: Applied to all clients. Some policies are still in an approval process.
9. Royal Bank of Canada	√	√	√											
10. WestLB*****	√	√	√											
11. Westpac	√	√	√											

Fields marked "√" are guidelines present within these institutions. Fields marked "0" are guidelines in the process of development.

Note:

* The sector guideline "(freshwater) infrastructure", is only applicable for the following clients and projects: 1) Project finance & advisory; 2) Cross-border structured finance; 3) Corporate lending and financial support.[30]

** While Barclays does not have external sector guidelines, it does use 32 internal sector-specific guidelines for their clients that operate in sensitive industries and sectors, and additionally topic-specific screening for certain projects. This information is consequently made available to the account manager.[31]

*** In addition to the forestry guideline, Goldman Sachs has endorsed the Biodiversity Benchmark (developed by Insight Investment).

**** The sector guideline "(freshwater) infrastructure", is only applicable for the following clients and projects: Project finance (direct lending, corporate lending).[32]

***** Several policies are under review.[33]

As explained above, the eleven banks that are covered in Table 1 can be considered leaders in their sector. It should not be expected that these banks are representative for the entire sector. However, even amongst these eleven banks, some are further ahead than others (with respect to having policies in place to account for biodiversity):

- Rabobank appears to be the leader on biodiversity. Not only have they developed a wide range of sector-specific guidelines, they are applying a CSR tool as of the 1st of February 2007 to all their lending activities. Three of the ten guiding principles of their CSR tool refer to some extent to biodiversity: 1) environmental pollution; 2) depletion of natural resources; and 3) cruelty against animals. Besides the six sector guidelines three more are in the approval process. The bank's client relation managers and risk analysts, who will be the day-to-day users, are *obliged* to use this tool for all credit activities.[34]
- It is interesting to recognize that six out of these eleven banks have developed a sector guideline for their forestry clients. However, HSBC, ABN AMRO, and JPMorgan Chase have also developed sector guidelines for their clients in other sectors (*e.g.,* freshwater infrastructure).
- Although Goldman Sachs has not produced a CSR report (yet) and although they have not endorsed the Equator Principles, they have recently adopted the Biodiversity Benchmark[35] (developed by Fauna & Flora International and Insight Investment). This means that this company has made a significant step to integrate biodiversity into their investment decision-making.

When identifying the types of credit products that are most exposed to BBRs, there are a number of characteristics such as 1) timeline of the loan; 2) non-recourse[g]; and 3) loans to companies with high impacts on ecosystems and/or from ecosystem dependent sectors, which can all contribute to a greater exposure of credit products to BBRs.[11] Judged by these criteria, this appears especially to be the case for project finance or other types of structure finance products, as well as for long term corporate loans. Commercial banks have the ability to respond to BBRs by several means, such as thorough due diligence and environmental impact assessments (which include biodiversity components) prior to commencing projects or transactions. Also, constructive dialogues with clients, *engagement*, are an important means to reduce exposure to BBRs, for example by pointing clients to sector-specific best management practices (BMPs).[36]

Asset management. Many fundamental or conventional investors have long considered environmental issues to be a topic simply for the Socially Responsible Investment (SRI) market. The reason for this, is that SRI markets are associated with investors who are putting environmental and social issues at the forefront of investment decision making (in stead of financial ones) and that they are therefore presumed to be satisfied with lower investment returns (ROI). Though prior investment results in the SRI area have been mixed, there is some evidence that incorporating environmental issues can lead to superior portfolio performances compared to similar fundamental funds. Derwall *et al* (2005)[37] show evidence that large-cap companies labelled "most eco-efficient" sizably outperformed a less eco-efficient portfolio over the 1995–2003 period by six percentage points, under different transaction cost scenarios. The difference could not be explained by differences in market sensitivity, investment style or industry bias. Even more recently GLG, which is a US$17 billion London hedge fund manager, announced to investors on 16 February 2007 that it planned to start an Environmental Fund filtering companies that have a 30% "lighter" impact on the environment compared to average companies from its US$1.5 billion European Equity Strategy. GLG announced that backtesting, using a long-only strategy that would not sell shares short to profit from price falls, produced annual returns of 27.6% after fees (compared to a 26.4% using a main strategy from the European Equity fund).[38]

Just as for other environmental issues, asset managers and their client investors can be exposed to BBRs when companies, in which they hold shares or private ownership, deliver poor financial results which are (partly) caused by biodiversity-related scrutiny (see Figure 1 for a list of possible causes). The characteristics that determine exposure of equity to BBRs, are comparable to the most vulnerable credit products, such as the 1) timeline of the fund; 2)

[g] Non-recourse is when the pay-back of a certain loan is fully determined by the revenue generated by a specific activity/project and the bank or lender is not entitled to access the borrower's principal assets in the event of default.

investments in companies with high impacts on ecosystems and/or ecosystem service dependent companies; 3) the link between climate change and changing ecosystems. Judging different types of equity on these criteria, mutual funds, which typically turn-over within a year, are perhaps most exposed to BBRs, although these risks are likely far less direct, and therefore less important, compared to most types of credit products. The reason for this is that equity funds often comprise large amounts of companies, making the underperformance of one or a few companies not critical. Private equity is less likely to be at risk, despite the longer time horizons (>3 years) of these types of investment, as they operate without the oversights and reporting requirements of public markets.[39] Similarly, unless backtesting concludes that a hedge fund performs better when considering extra-financial issues, this type of equity is not likely exposed to BBRs either, as hedge fund managers have the tendency to pull in and out of companies within days or months, making them extremely flexible and volatile. Asset managers that are recognizing the potential materiality of BBRs, have the ability to respond to these types of risks by means of 1) positive and negative screening during fund initiation; 2) voting power during shareholder meetings; and 3) engagement with the management of the company[40].

(Re)insurance. Traditional types of environmental liability claims included 1) property or liability loss on the basis of sudden or accidental pollution; 2) product liability loss; or 3) property loss during an operational breakdown.[41] However, the (re)insurance sector is facing new types of environmental liability, specifically related to an increase in extreme weather events caused by climate change. Economic losses from crop failure and forest fires in 2003 in the hottest summer on record in Europe, for example, accounted for US$ 14 billion.[42] During 2002, major floods across Europe caused total damage of almost US$ 16 billion and insured losses of just over US$ 3 billion.[42] Hurricane *Katrina* caused prices of insurances to triple or even quadruple for oil companies in the Gulf of Mexico seeking insurance and insurers seeking reinsurance to protect themselves against offshore losses.[43]

The most noteworthy development for biodiversity in the insurance sector is the new legislation in the EU as of 30 April 2007 to hold operators liable for damage to water resources, soil, fauna, flora and natural habitats and to make the polluters pay whenever damage cannot be avoided.[12] Although biodiversity has characteristics that make it difficult to meet conditions for insurability, such as difficulty in risk pooling across many insured entities, difficulty in defining clear biodiversity loss, and lack of availability of prior information about probabilities and size of biodiversity loss[44], insurance and reinsurance firms will need to respond to stricter liability regimes for biodiversity in Europe.

IV. Integrating Biodiversity in Business Operations of Financial Institutions

Though biodiversity is just starting to be recognized by FIs, the IUCN interview survey[11] among FIs and other stakeholders not only focused on identifying the business case for biodiversity, but also attempted to understand the willingness by FIs for them to be better equipped to identify, address and mitigate BBRs through their risk management procedures (RMP) or other business operations.[11] Though a few FIs appeared neutral, most of them clearly expressed their interest in having a tool developed that would enable them to take better account of biodiversity considerations within their business operations. A general procedure is outlined in Figure 3. It should not be seen as a new tool. Rather, it provides a systematic overview of tools that are available for FIs to use in their RMP, as well as what procedures banks, asset managers and insurers have in place to mitigate BBRs.

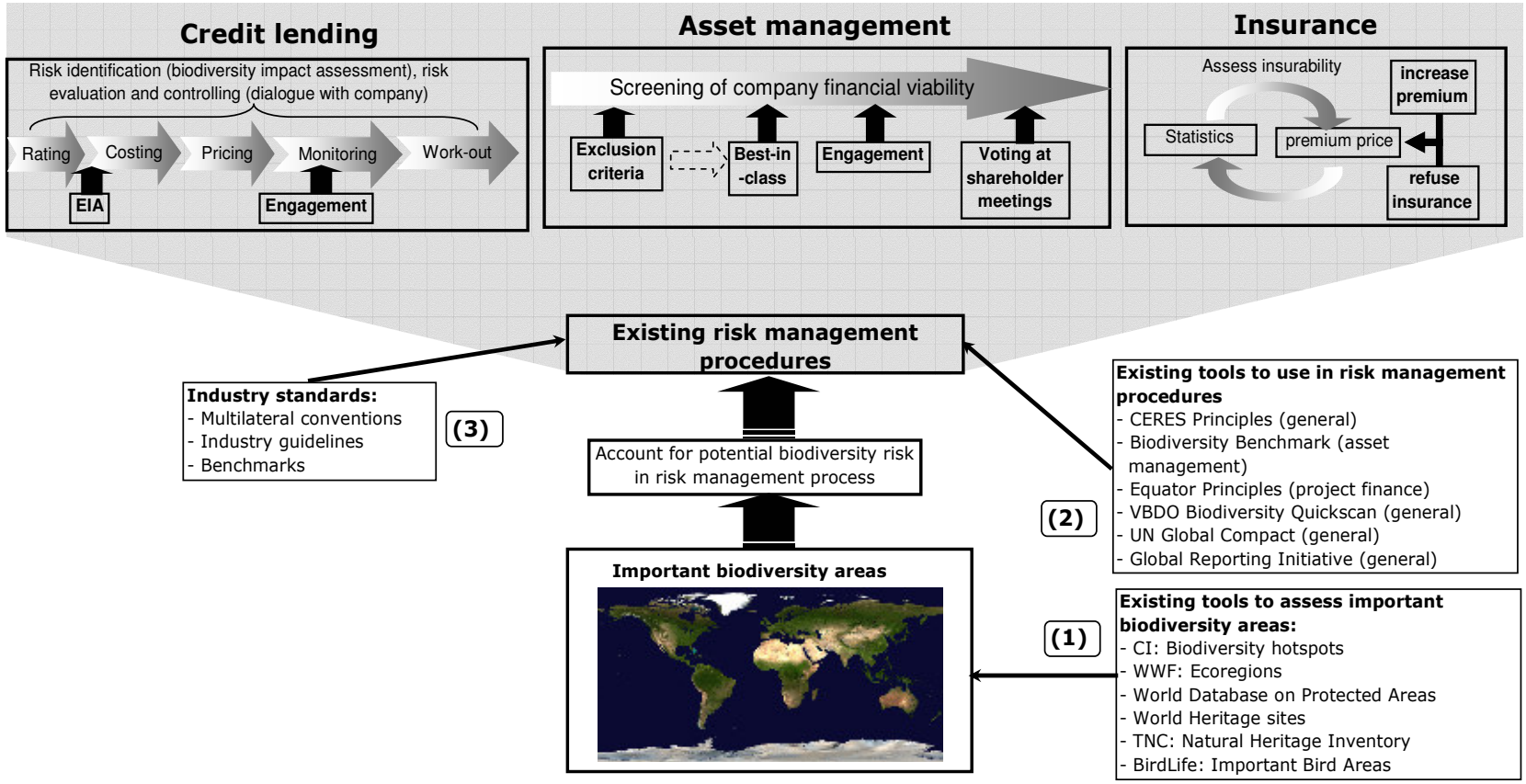

Figure 3: A general procedure to account for biodiversity risks for some segments in the financial sector

The different steps of the procedure are outlined below:

(1) **Identify biodiversity important areas**. A number of NGOs have developed (spatial) tools that identify important biodiversity areas, although most areas are quite broad. These include, but are not limited to, 1) Conservation International's *Biodiversity Hotspots*[45]; 2) WWF's *Ecoregions*[46]; 3) BirdLife's *Important Bird Areas* (IBAs)[47]; 4) UNEP-WCMC's *World Database of Protected Areas*[48]; and 5) *Centres of Plant Diversity*[49]. Though these tools and systems are highly valuable, it is virtually impossible to rule out private sector appearance in important biodiversity areas. A study by the World Resources Institute (WRI), for example, concluded that *"…three quarters of active mines and exploratory sites overlap with areas of high conservation value and areas of high watershed stress"*.[50] In order to be fully useful for the private sector, including the financial sector, a focus on important biodiversity areas on the smallest geographical scale would be needed.

(2) **Identify what tools have been developed for the private sector that (can) factor-in biodiversity**. These can be used by FIs, both in their own RMP or as indicators for their clients to assess their ability to address biodiversity. An overview of possible tools is given in Table 2, although it should be noted that this list is by no means complete.

Table 2: Tools developed for the private sector that (can) focus on or factor-in biodiversity

Name	Reference to biodiversity	Applicable for	Focus on corporate segment			
			Governance	Policy & Strategy	Management & Implementation	Monitoring, reporting & assurance
CERES principles[h]	Two of the ten principles capture biodiversity: 1. Sustainable use of natural resources 2. Protection of the biosphere	General		√		
UN Global Compact[i]	One of the environmental challenges mentions "loss of biodiversity and long-term damage to ecosystems"	General		√		
Equator Principles[51]	The Equator Principles follow the IFC Performance Standards, including No 6 on "biodiversity conservation and natural resource management"	Project finance			√	√
Biodiversity Benchmark[11]	This instrument has been developed for asset managers to enable them to assess the biodiversity performance of extractive industries and utilities	Asset management	√	√	√	√
Eco-Management and Audit Scheme (EMAS)[j]	Two biosphere indicators are identified: • Flora • Fauna (*e.g.* number of endangered species)	General			√	
ISO 14001/14031[k]	These tools provide companies with a guide to develop an Environmental Management System (EMS), ISO 14001, for which the company can receive certification, and a process for measuring the environmental performance – ISO 14031.	General			√	√
Global Reporting	• *EN 11*: Location and size of land owned, leased, managed in, or adjacent	General				√

[h] http://www.ceres.org/coalitionandcompanies/principles.php

[i] http://www.globalcompact.org/

[j] http://ec.europa.eu/environment/emas/index_en.htm

[k] www.iso.org

Initiative[l]	to, protected areas and areas of high biodiversity value outside protected areas. (Core) • *EN 12*: Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas. (Core) • *EN 13*: Habitats protected or restored. (Additional) • *EN 14*: Strategies, current actions, and future plans for managing impacts on biodiversity. (Additional) • *EN 15*: Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk. (Additional)					
VBDO Biodiversity Quick Scan[52]	A framework to quickly measure the biodiversity impact of a company, using a number of steps	Credit lending			√	

(3) **Identify sector-specific industry guidelines and international conventions**. Several FIs indicated during the interview survey that they would greatly benefit by knowing what the best management practices are sector-by-sector. By knowing this, they can inform their clients, use it as part of their conditions in issuing contracts, or use it when developing sector guidelines. Table 3 provides an overview of some guidelines for those sectors that can be considered relevant for biodiversity. Please note that this list is by no means comprehensive. Rather, it can be used as a simple overview for risk analysts, client relation managers, fund managers, etc to see what tools are available to base their policies and contract conditions on. The list has been structured according to the following criteria: 1) The sectors that are included in this table have been recognized by the European Bank of Reconstruction and Development (EBRD)[53] and by F&C Asset Management[29] as having a high impact on the environment (EBRD) or biodiversity specifically (F&C Asset Management); 2) a distinction is made between tools that fully focus on biodiversity and those that factor-in biodiversity considerations as one element; 3) industry bodies are included to enable financial institutions to contact the respective industry representative body for further information.

Table 3: Sector-specific sustainability guidelines, benchmarks and industry bodies that focus fully or partly on biodiversity

	Fully biodiversity focused		Biodiversity included as one factor		Industry bodies
Sector	**Sustainability guidelines**	**Benchmarks**	**Sustainability guidelines**	**Benchmarks - Certification**	
Forestry & Paper			▪ Sustainable Forestry Initiative (SFI)[m] ▪ The Forest Dialogue Review[54] ▪ HSBC Forestry Guideline[55]		▪ The Forest Dialogue (TFD) ▪ International Tropical Timber Organization (ITTO)[n] ▪ Global Forest Industry CEO Forum ▪ Forest Stewardship Council

[l] http://www.globalreporting.org/ReportingFramework/G3Online/

[m] www.aboutsfi.org

[n] http://www.itto.or.jp

	Fully biodiversity focused		Biodiversity included as one factor		Industry bodies
Sector	**Sustainability guidelines**	**Benchmarks**	**Sustainability guidelines**	**Benchmarks - Certification**	
					(FSC)[o]
Oil & Gas	▪ Energy & Biodiversity Initiative (EBI)[56]	▪ Biodiversity Benchmark (Fauna & Flora International/Insight Investment[7] ▪ A survey by F&C Asset Management[57]		▪ Goldman Sachs Energy Environmental and Social Index (GSEES)[10]	▪ International Petroleum Industry Environmental Conservation Association (IPIECA)[p] ▪ International Association of Oil and Gas Producers (OGP)
Mining & Metals		▪ Biodiversity Benchmark (Fauna & Flora International/Insight Investment[7] ▪ A survey by F&C asset management[57]	▪ The Extractive Industries Review (EIR by the World Bank)[q] ▪ Mining, Minerals and Sustainable Development Working Group (MMSD)[58] ▪ Guidance for the Mining Industry in Raising Awareness and Preparedness for Emergencies at the Local Level (ICMM & UNEP)		▪ International Council on Mining and Metals (ICMM)[r] ▪ Global Mining Initiative (GMI)
Building & Construction & Utilities		▪ Biodiversity Benchmark (Fauna & Flora International/Insight Investment[7]	▪ GRI sector supplement (Energy Utilities)[s] ▪ UNEP Dams and Development Project[59] ▪ Cement Sustainability Initiative Charter[t] ▪ HSBC Freshwater Infrastructure Guideline[60]		▪ World Commission on Dams (WCD)[u] ▪ Cement Sustainability Initiative (CSI by the WBCSD)[v]

[o] www.fscus.org

[p] www.ipieca.org

[q] http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTOGMC/0,,contentMDK:20605112~menuPK:336936~pagePK:148956~piPK:216618~theSitePK:336930,00.html

[r] www.icmm.com

[s] www.globalreporting.org

[t] http://www.wbcsdcement.org/land.asp

[u] www.dams.org

[v] www.wbcsdcement.org

	Fully biodiversity focused		Biodiversity included as one factor		Industry bodies
Sector	**Sustainability guidelines**	**Benchmarks**	**Sustainability guidelines**	**Benchmarks - Certification**	
Tourism	CBD guidelines		▪ Prince of Wales International Business Leaders Forum/Conservation International: Sustainable Hotel – Siting, Design and Construction[61] ▪ WTO/UNEPF Sustainable Tourism Guide for Policy Makers[62]	▪ The Green Globe[w]	▪ International Business Leaders Forum[x] ▪ The International Tourism Partnership[y]
Agriculture; Food processors & producers; Food & Drug retailers	▪ IFC-WWF Better Management Practices Programme[z] ▪ The Sustainable Food Lab[aa] ▪ Biodiversity and Agricultural Commodities Programme (BACP)[bb]	▪ Rainforest Alliance Certified Label[cc]		▪ Marine Stewardship Council	▪ Roundtable on Sustainable Palm Oil (RSPO)[dd] ▪ Roundtable on Sustainable Soy ▪ Marine Stewardship Council (MSC) ▪ The Sustainable Agriculture Initiative (SAI)[ee]

V. Biodiversity Business Opportunities

Although BBRs are likely to be more financially significant, there are a number of biodiversity business opportunities (BBOs) that FIs can capture. These include, but may not be limited to:

1) **Providing debt or equity to businesses that have a positive (direct or indirect) influence on biodiversity**. A forthcoming report by IUCN and Shell[63] provides an overview of various BBOs that either directly or indirectly contribute to conservation, such as markets for certified sustainable produced commodities (*e.g.*, for wild fish, aquaculture, or agricultural products). Estimates suggest a potential market size of about US$ 60 billion annually by 2010. There are also market opportunities for biodiversity offsets (biocarbon, NTFPs, PES, and biofuels among others). Estimates for potential market sizes range widely from US$ 35 million – 10 billion annually by 2010.

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[w] www.greenglobe21.com

[x] www.ibfl.org

[y] www.internationaltourismpartnership.org

[z] http://www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/art_CCF-BMPIntro/$FILE/BMP-Intro.pdf

[aa] www.glifood.org

[bb] http://www.ifc.org/ifcext/enviro.nsf/Content/Biodiversity_BACP

[cc] http://www.rainforestalliance.org/programs/agriculture/certification/index.html

[dd] www.rspo.org

[ee] www.saiplatform.org

2) **Due diligence or advisory services to clients that need assistance in biodiversity sensitive projects and transactions**. Niall Cameron, global head of traded products at ABN AMRO, for example, outlined in the January 2007 issue of *The Banker*[64] that the bank's clients may be affected by environmental change or water shortages and that the bank can provide help to hedge these risks.
3) **Biodiversity-related insurance cover**. For example, around 65% of the insurance premium of the shipping companies using the Panama Canal is environment-related, such as covering for too little water or delays because of regular dredging. Reforestation along the slopes of the canal will drastically cut insurers' exposure to BBRs. [64]
4) **Government-induced opportunities**. The Dutch government has triggered demand by private investors to invest in green funds by offering fiscal advantages. Total capital invested in 2005 amounted to € 1.5 billion, of which € 282 million has been allocated to the project category "nature, forests and landscapes".[65]
5) **Conservation land as a result of default or debt work-out**. Should a bank acquire a significant amount of biodiversity-sensitive land as a result of default or debt work-out situations, collaborations with NGOs, local conservation organizations, or the government might be helpful in finding suitable (conservation) purposes for the land, while the bank remains owner of the land. At the same time, this could be used to bolster a financial institution's reputation or be used for marketing purposes.

VI. Moving Ahead

Despite the fact that there is undoubtedly an increased interest in biodiversity issues in the financial sector, the issue is just at the very start of being recognized. Therefore, there is clearly a huge effort needed to increase the awareness of biodiversity as a significant business factor. The following recommendations have been highlighted in the IUCN report:[11]

Continue to build the business case

1) A *Stern-like* review[ff] of the economic costs of biodiversity loss and benefits of biodiversity conservation. The need for such a study was also highlighted during the G8 meeting of environment ministers in Potsdam (17 March 2007).
2) Greater focus on quantifying the business case. Though this project provided evidence of the business case, it is important to start linking the business case as much as possible to tangible financial metrics, such as default risk and shareholder value.

Increase communication & raise awareness

3) Better communicating the business case to FIs. Governments and policy makers, multilateral institutions, and NGOs, as well as those FIs that have already started to address biodiversity need to use their communication channels to increase awareness of the materiality of the issue.

[ff] The Stern-review assessed a wide range of evidence on the impacts of climate change and on the economic costs. From all of these perspectives, the evidence gathered by the Review leads to a simple conclusion: the benefits of strong and early action far outweigh the economic costs of not acting, as future loss of GDP is projected to be in the range of 5% to even 20% each year, whereas the costs of action now is estimated to cost about 1% GDP per year.

4) Building capacity within FIs to mitigate BBRs and identify BBOs. As this issue is rather new for the sector there is a need for FIs to build capacity to deal with this emerging issue. This can for example be achieved through training of staff, engaging in partnerships with NGOs and multilateral organizations, or by hiring consultancies that possess the technical capacity. UNEP FI[66] has already initiated a working stream on the issue.

Focus on the entire financial sector

5) Though this project focused on commercial banking, asset managers, investors, and insurance, there is an equal need to focus on other segments of the financial sector as well. Institutional investors, such as pension funds, have a clear business rationale to incorporate biodiversity because of the long term horizon of their investments. Similarly, efforts should be made to engage with credit rating agencies to identify possibilities to incorporate biodiversity into the "credit-worthiness" assessments for projects, companies, and countries. Since biodiversity is often still regarded as a public good, governments, which control huge amounts of public bonds and public pensions, have a special obligation to assess possibilities to integrate biodiversity into their RMP and investment decision-making.

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