

Biodiversity offsets and the mitigation hierarchy: a review of current application in the banking sector

A study completed on behalf of
the Business and Biodiversity Offsets Programme and
the UNEP Finance Initiative
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The views expressed herein do not necessarily represent the views of all financial services companies, BBOP, UNEP Finance Initiative or their members. PwC takes responsibility for any errors in representing these views and these should not be attributed to any interviewees.

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Executive Summary

Despite society's indisputable reliance on biodiversity and the ecosystem services it underpins, biodiversity is undervalued by modern economies and diminishing at a rapid rate. Over the past 50 years, humans have changed and impacted biodiversity and ecosystems more rapidly and extensively than in any comparable period of time in history.

All businesses, irrespective of their size, sector and location, depend, and consequently have an impact, on biodiversity and ecosystems. This is especially apparent for those who need access to, or convert, areas of biodiversity value: agriculture, food and drink, extractives, forestry and infrastructure are all examples of such sectors. Some industries have a direct impact on biodiversity, whilst others are reliant on ecosystem services to support their supply chains. Through its investments and loans to these businesses, the financial industry has an indirect but influential link to biodiversity issues in these and other sectors.

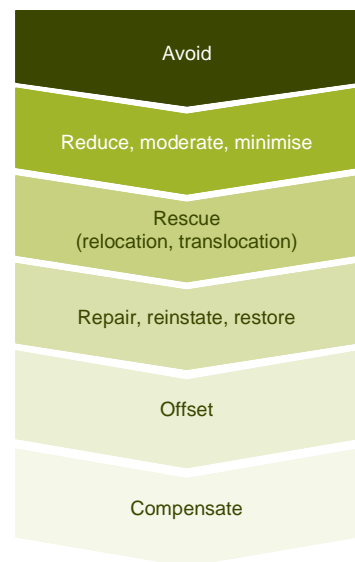
The 'mitigation hierarchy' is a tool which aims to help manage biodiversity risk, and is commonly applied in Environmental Impact Assessments (EIAs). Mitigation measures are referred to in the International Finance Corporation (IFC) Performance Standards – the most common reference point for banks providing project finance who wish to manage environmental and social risks.

This study was jointly commissioned by the United Nations Environment Programme Finance Initiative (UNEP FI) and the Business and Biodiversity Offsets Programme (BBOP), to explore the following themes:

- Familiarity and awareness among the financial sector of the biodiversity mitigation hierarchy and biodiversity offsets;
- Corporate policy approaches of banks in understanding and addressing biodiversity issues;
- Roles and responsibilities within banks on the management of biodiversity risks and opportunities; and
- The extent to which tools, resources and training are used in the management of biodiversity risks and opportunities.

The PwC Sustainability & Climate Change team was selected to conduct analysis based on 28 discussions with banks, environmental consultants, NGOs and bank clients.

Figure 1: The mitigation hierarchy



Research findings

The findings of the study demonstrate that banks have a relatively limited understanding of the mitigation hierarchy and biodiversity offsets. Banks do not currently apply these tools to their maximum potential to reduce the underlying biodiversity risk in transactions being financed. Their approach to biodiversity risk management is neither consistent nor systematic and demonstrates that banks have yet to fully recognise biodiversity as a material business issue. This implies that bank risk management frameworks have gaps that expose the sector to material biodiversity risks with potentially significant financial implications.

This summary is reached through the study findings, which draw out the following four main conclusions.

The finance sector is at a relatively early stage in understanding, assessing and managing biodiversity risks

Few banks have biodiversity specialists working within the organisation, but those that do are some of the leaders in this area. Biodiversity expertise is not a core competency of bank staff. This study has identified that frontline bankers are not equipped to identify biodiversity risks. Staff from banks that have adopted the Equator Principles and who are involved in project finance do have limited experience with biodiversity risks, but most frontline bankers and credit risk officers have little exposure to, and therefore a limited understanding of, these issues. Most bank respondents felt that client-facing employees and credit risk officers do not need deep expertise in biodiversity or other environmental and social risks. Rather, they need to be able to identify a potentially higher risk transaction or client in order to seek specialist advice from their internal social and environmental risk specialists.

Banks' decision-making procedures require the escalation of issues to teams with responsibility for social and environmental risk, which should be able to offer specialist advice. Such specialist teams have some awareness of direct biodiversity risks, but these are considered as just one of many complex and interrelated environmental and social issues. Banks rarely address biodiversity issues in isolation or under a specific biodiversity policy. However, a few banks employ experts in biodiversity and appear to be those doing the most to assess and manage biodiversity risk.

A common vehicle for considering biodiversity risk is the application to project finance by banks espousing the Equator Principles of IFC Performance Standard 6 (PS6). The application of PS6 is often referred to consultants or biodiversity specialists, rather than project finance transactors or environmental risk managers within banks. This is especially true in banks with less internal capacity which do not have specialist environmental teams, and in such cases consultants are often used to review EIAs or provide expert opinions on specific issues. Under the Equator Principles, banks are obliged to seek an independent review of compliance with the principles for high impact projects. With consultants playing such a key role, the selection of consultants and ensuring they have appropriate expertise is critical. Despite this essential role, it is not common practice for banks to screen consultants to ensure they possess the appropriate skills.

Beyond project finance, other financial and investment products rarely include a consideration of biodiversity issues in decision-making, with the result being that frontline staff do not typically engage their clients on biodiversity. The financial sector is still discussing how to extend the attention it pays to environmental and social issues on project finance into other areas such as bond and equity underwriting and corporate lending. In some sectors, such as forestry, where a limited amount of project finance is provided, it is these other types of finance where banks are more exposed to biodiversity risks.

Most interviewees were familiar with the concept of the mitigation hierarchy, although few respondents could demonstrate detailed knowledge relating to its practical application. Few banks have either a deep appreciation for the

mitigation hierarchy or direct experience with biodiversity offsets, and for the majority of banks, these would be new assessment and management approaches.

Key business drivers are risk-based and primarily reputational

In terms of the business case for managing biodiversity risk, reputation was the most common driver for banks. Projects with potential impacts on critical habitat or endangered species tend to have the highest profile and are most often the reason biodiversity is raised as an issue by external stakeholders. The other driver identified by a number of respondents was regulatory requirements for elements of the mitigation hierarchy, such as compensation or offsets. This obviously depends on the policy regime in place in the country of operation. Different regulations direct operators to particular places on the mitigation hierarchy, with some focusing on compensation, whilst others indicate offsets are required.

There was very limited discussion of the potential business opportunities relating to biodiversity, or to seeing biodiversity as a risk beyond specific project or asset financing. There is ongoing work to demonstrate the economic value of ecosystems, and only a few specialised financial products and services are trying to tap into these emerging markets. Some of these opportunities may relate to a broader sector and value chain approach rather than a specific project finance activity. From a risk perspective, banks appear to be more conversant with climate and water-related risks and the impacts these may have on their loan portfolios than with biodiversity issues.

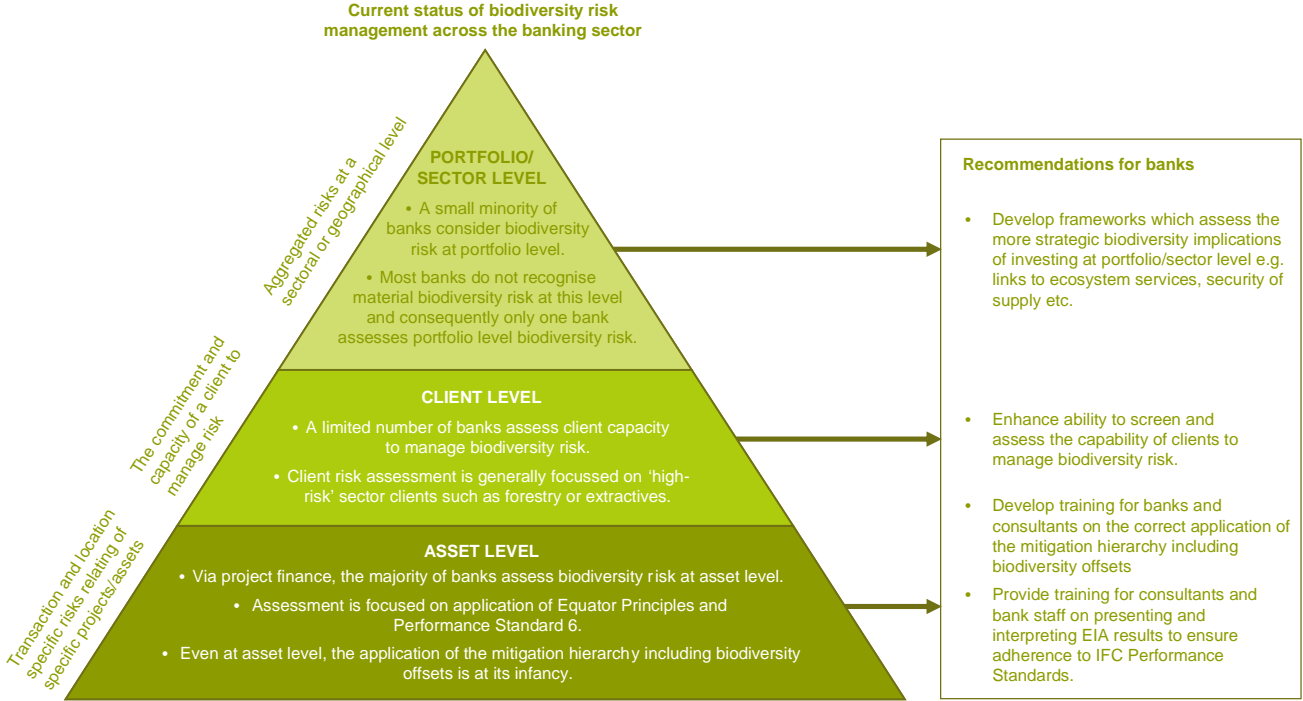
Bank policy frameworks and procedures seem to lack a broader, strategic consideration of biodiversity risks

A number of banks have developed sector specific policies to address and manage environmental and social issues. Examples include 'Forestry' and 'Oil and Gas' sector specific policies. These policies assist the bank in assessing project risk or reviewing the capacity and experience of a client in dealing with biodiversity issues pertinent to that specific sector. One benefit of this approach is that it enables sector teams to become highly familiar with how a specific industry sector interacts with biodiversity, and consequently enables banks to look at the wider, more strategic issues associated with biodiversity and ecosystem services which may arise throughout the entire value chain of a product. When assessing the biodiversity implications of investments, banks appear to rely primarily on the designations of protected areas and other recognised spatial zones as indicators of risk. Whilst this will identify some important areas, many important biodiversity resources are not protected or mapped. As a result there is a risk that the limited scope of data available will result in risks and opportunities being missed.

Beyond these sector specific policies, there appears to be limited "joining up" of specific issues into a broader, more cross-cutting appreciation for how biodiversity impacts can transcend sectors and be brought to bear across numerous geographies, clients and assets. Only one bank reported consideration of biodiversity at a portfolio level i.e. looking across all its activities to understand the risks and opportunities. Most banks are still struggling with how to integrate environmental concerns at a more strategic level.

Whilst the implementation of a biodiversity management framework is largely focused at the asset level, the application of the mitigation hierarchy and offsets is in its infancy

Figure 2: How biodiversity intersects with risk management within the banking sector



As noted above, many of the banks we interviewed demonstrated familiarity with considering biodiversity at an asset or project level (as opposed to a client or portfolio level), and stated that biodiversity issues can, and do, have a bearing on financing decisions. Most banks do not explicitly apply the mitigation hierarchy, but do consider some elements of it. Very few banks could give examples of where they had required an offset or been involved in its development.

Banks still perceive there to be a number of barriers to applying offsets. Banks feel the timing of their involvement in the project may not be optimal, as the client has often attempted to apply the mitigation hierarchy as far as possible by the time it approaches the bank for finance, and the project may already be well advanced. There was also concern about the time and effort involved with developing, implementing and monitoring offsets. There is still debate about the credibility and value of offsets in the absence of an agreed standard. Banks are aware that there are situations where an offset may not be the appropriate solution but need assistance in determining when this is the case.

Both bank staff and many external consultants would benefit from specific training on how to identify material biodiversity issues and their implications for financing organisations. Although some anecdotal examples of checklists and methods to identify biodiversity issues for banks were provided, there is clearly a gap in the availability of a specific tool to help banks assess and address biodiversity risk in project finance, and also in wider types of financing activity such as corporate lending to clients or an entire portfolio base. Often compounding this lack of a risk assessment tool, is the poorly presented or inaccurate results of an EIA, which make it difficult for bank staff to interpret what specific biodiversity-related risks may be associated with particular projects. Both bank staff and consultants may therefore benefit from additional training on how biodiversity can influence investment decisions, and how to synthesise and present results in a format which is appropriate for investment staff.

Recommendations

- Build capacity to assess and manage biodiversity within banks by creating and providing training which:
 - extends the consideration of biodiversity beyond project finance to the full range of financial services and products such as bond and equity underwriting and corporate lending. This may involve training seminars which convey how biodiversity and ecosystem services can influence the long-term viability of client and portfolio lending.
 - provides advice on the benefits and the practical application of the mitigation hierarchy, including biodiversity offsets. This should highlight the business case for using this approach and refer to best practice case studies from industry. This training should also extend to banks' consultants who may be employed to provide advice on the mitigation hierarchy, including biodiversity offsets.
 - enhances banks' understanding of the EIA process including how to select an appropriate EIA consultant (based on level of relevant expertise), how to critique an EIA to ensure comprehensiveness and adherence to PS6 and how to interpret EIA results and determine whether reported biodiversity-risks present reputational risks to a bank.
- Develop appropriate tools which can be integrated into banks' current approach to manage overall risk, and help screen for, identify and assess biodiversity-related risk to investment.
- Provide training for EIA consultants on the correct application of PS6, articulating how biodiversity can influence investment decisions, and how to synthesis and present results in a format which is appropriate for investment staff.
- Using a regular knowledge sharing forum, improve the communication of best practice examples which demonstrate the business case for assessing biodiversity risk, and leverage good practice procedures from leading development and commercial banks.

1 Survey methodology



1. Survey methodology

Aim

This study aims to provide a snapshot of current practice in the financial sector with respect to the understanding and application of the mitigation hierarchy and biodiversity offsets. The outcome from this research will contribute to the evidence base (both in terms of success to date and effort undertaken) of how the financial sector views this approach to managing biodiversity risk, in addition to identifying key barriers to progress, highlighting areas of best practice and providing recommendations.

This study was jointly commissioned by the United Nations Environment Programme Finance Initiative (UNEP FI) and the Business and Biodiversity Offsets Programme (BBOP). In August 2009, PricewaterhouseCoopers' (PwC) Sustainability & Climate Change team was selected by UNEP FI and BBOP to conduct this research.

Approach

Following the collaborative development of the study questionnaire and interviewee list with UNEP FI and BBOP, PwC conducted 28 telephone interviews during October and November 2009 and February 2010. The responses were analysed and are summarised in this report. In order to retain anonymity, statements or information provided by respondents has not been attributed to individuals, unless prior permission has been sought.

The areas explored in the interviews were as follows:

- Familiarity with and awareness of the mitigation hierarchy and biodiversity offsets amongst banks;
- Policy approaches of banks to understanding and addressing biodiversity issues;
- Roles and responsibilities within the banks; and
- Tools, resources and training used by banks.

The banks interviewed represent the commercial and development banking sectors, and cover a range of geographies and biodiversity issues. In order to obtain a broad perspective, several of the interviews were carried out with banks that have not adopted the Equator Principles, nor are members of UNEP FI. In addition to interviewing 21 banks, three other groups of stakeholders were also selected for interview. These stakeholder groups, together with the rationale for their inclusion, are:

Bank clients: Companies receiving finance from banks are typically required to comply with lending terms and conditions, including compliance with biodiversity management commitments. Discussion with key bank clients helped the study team to understand the clients' interaction with banks with respect to biodiversity risk management.

Environmental consultancies: For project finance lending in particular, environmental technical specialists are engaged by either the developer (the bank client) or the lending institution to conduct an Environmental Impact Assessment (EIA), part of which ascertains the project's impact on biodiversity. Increasingly (and as required by the Equator Principles 7 and 9), environmental consultants are engaged by banks to independently review EIAs and also determine adherence to International Finance Corporation (IFC) Performance Standard 6 (see page 10).

Non Governmental Organisations (NGOs): Campaigning NGOs often draw attention to the biodiversity consequences of a bank's financing activities, especially related to project finance. Conservation NGOs are closely linked to the scientific conservation community and have the potential to generate significant negative publicity for banks and developers who are seen to be contributing to biodiversity degradation. In addition, conservation NGOs can play a significant role in determining project impacts and often have the technical competencies to help the private sector with mitigation and biodiversity offset efforts. It was beyond the scope of this survey to talk to the full range of NGOs representing a wider range of stakeholders, as the focus was on current banking sector practice.

2 Policy context



2. Policy context

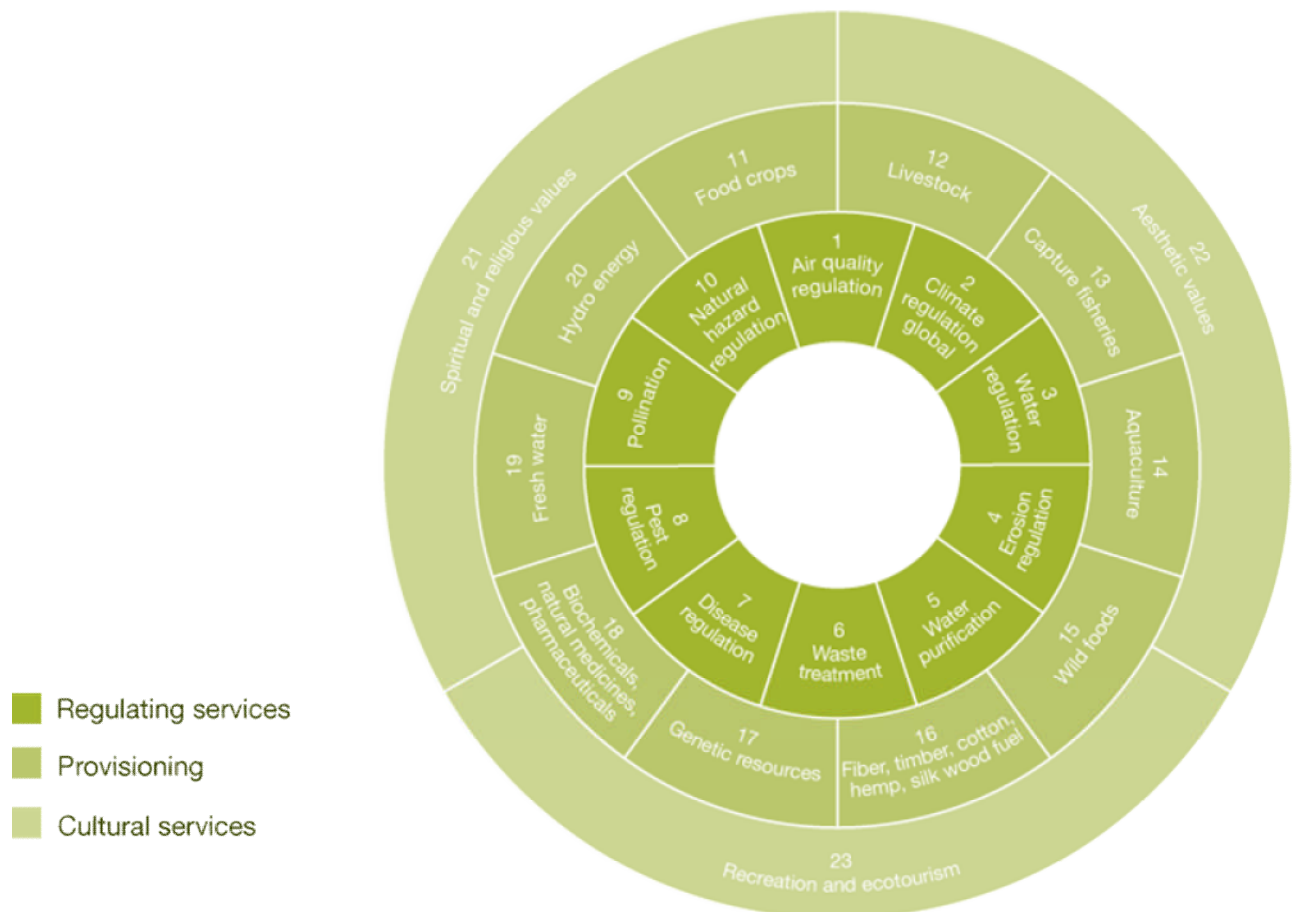
What is biodiversity?

Biodiversity, in its simplest form, is the diversity of life on earth. It is more formally defined by the United Nations Convention on Biological Diversity¹ as:

“the variability among living organisms from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems”

Biodiversity sustains life on Earth and provides human society with a myriad of resources. Raw materials, foods, medicines, cultural and recreational goods are all underpinned by healthy biodiversity. These ‘benefits’ are often referred to as ‘ecosystem services’, as shown in Figure 3.

Figure 3 Ecosystem Services²



¹ The Convention on Biological Diversity is an international treaty to sustain the diversity of life on Earth.

² PwC analysis, adapted from Millennium Ecosystem Assessment (MEA, 2005).

Biodiversity is declining

Despite our indisputable reliance on ecosystem services, biodiversity is often under-valued by modern economies and is diminishing at a rapid rate. Over the past 50 years, humans have changed ecosystems more rapidly and extensively than in any comparable period of time in human history³. Much of this loss is attributed to developments in the agriculture, forestry, extractives, and transport and construction sectors, among others. Whilst our use of ecosystems has contributed to substantial gains in human well-being and economic development, these gains have been achieved at growing costs in the form of the degradation of many ecosystem services, and have exacerbated poverty for some groups of people. As highlighted by The Millennium Ecosystem Assessment (the most recent comprehensive review of the status of biodiversity), examples of biodiversity decline include:

- Conversion of more land to cropland in the 30 years after 1950 than in the 150 years between 1700 and 1850;
- The loss of approximately 20% of the world's coral reefs and an additional 20% degraded in the last decades of the twentieth century; and
- Over the past several hundred years, humans have increased the species extinction rate by as much as 1,000 times over background rates typical over the planet's history.

Despite the socio-economic importance of biodiversity, and the ecosystem services it underpins, these values are not well reflected in economic and development policies, investment decisions or consumption patterns. Indications are that they could be very significant, as the following varied illustrations show:

- In 2007 the collapse of bee colonies was calculated to have cost US producers US\$15bn⁴
- By mid 2008 the 1989 ExxonMobil oil spill in Alaska had cost the company US\$5bn in fines and clean up costs^{5,6}
- In the 1990s, Vittel (Nestlé Waters) chose to address groundwater contamination from local agricultural nitrates by compensating farmers and helping them to convert to more sustainable practices. In the first seven years Vittel spent US\$32m⁷ on this programme. This is a substantial sum, but small relative to the cost of plant closure, relocation, or brand damage which befell some competing brands
- The annual economic cost of loss of biodiversity and ecosystem degradation was estimated at US\$2 – 4.5tn (3.3 – 7.5% of global GDP) in 2008⁸.

In essence, the continuing loss of biodiversity at global to local scales places great stress on the ability of ecosystems to provide the benefits that people and businesses need. Climate change will only exacerbate the decline of biodiversity: the Intergovernmental Panel on Climate Change (IPCC) forecasts that if the average global temperature increases by more than 2.5°C, 20-30% (varying among regional biotas from 1% to 80%) of animal and plant species will face extinction.⁹

Biodiversity and business: risk or opportunity?

Business and the link to biodiversity

All businesses, irrespective of their size, sector and location, depend, and consequently have an impact, on biodiversity and ecosystems. For instance, freshwater is a critical input for every conceivable major industrial process. Industry sectors such as pharmaceuticals, biotechnology, chemicals, agriculture and personal care industries regularly use

³ Millennium Ecosystem Assessment, Ecosystems and Human Well-being: General Synthesis, 2005

⁴ United States Department of Agriculture, 2007

⁵ Available online: <http://www.greenpacks.org/2009/06/16/exxon-mobil-ordered-to-pay-507-5-million-in-damages-for-the-1989-oil-spill-in-alaska/>

⁶ Available online: <http://news.bbc.co.uk/1/hi/business/7473968.stm>

⁷ The Vittel payments for ecosystem services: a "perfect" PES case? Daniele Perrot-Maitre (2006)

⁸ TEEB Cost of Policy Inaction Study, 2008

⁹ Available online: <http://www.ipcc.ch>

genetic resources in research and development. Agribusiness depends on pollination, healthy soils and erosion regulation services; and the insurance industry benefits from the natural hazard protections that some ecosystems provide.

Biodiversity as a business risk

For most businesses familiar with their biodiversity impacts, biodiversity is generally considered a risk to be managed or avoided within the context of normal business activity. This is especially apparent for those who need access to, or convert areas of biodiversity value; agriculture, extractives, forestry and infrastructure are all examples of such sectors. Increasingly, this means companies' value chains may also be associated with biodiversity risk. Expenses related to assessing and managing biodiversity risks – monitoring studies, impact assessments, compensation payments, the cost of offsets, achieving certification – are generally absorbed within the economics of business as part of a business' operating requirements. The most material way in which biodiversity risk expresses itself is by preventing or delaying business activity, which may lead to loss of access to market and generate long lasting reputational damage. Publicly available examples include:

Impact on Social Licence to Operate¹⁰

One of the most high profile examples is Sakhalin 2 in Russia, where potential impacts to the critically endangered Western Gray Whale population resulted in Shell rerouting its offshore pipeline at a cost of USD 300 million. Further problems and delays involving significantly greater costs related to concerns over the ability of sub-contractors to apply the environmental management requirements whilst constructing over 1000 river crossings, including those across vital salmon habitats.

Delays to projects¹¹

The Transneft project in Russia incurred severe delays due to its proximity to the pristine Baikal Lake and potential impacts on the critically endangered Amur leopard. It cost a reported USD 1 billion to shift the pipeline's route on the Russian president's insistence.

Access to land

Refusal of planning permission caused by environmental concerns can be operationally and financially damaging to organisations. The share price of Associated British Ports dropped by 12 percent following planning refusal for its port at Dibden Bay, due to its proximity to protected areas. The company was forced to write off GBP 44.9 million¹² for the project.

Reputational damage¹³

The forestry company Samling was criticised for alleged illegal logging and losing Forest Stewardship Council (FSC) certification at some operations. As this came to light around the time of its Initial Public Offering (IPO), the banks involved attracted negative publicity for not applying their standards to their IPO support services.

Inability to provide a product

Following the dramatic price increases associated with the collapse of cod stocks in the 1990s, Unilever (heavily reliant on cod for its premium frozen food products) saw a 30 percent reduction on margins for cod-related products¹⁴.

Biodiversity as a business opportunity

While the biodiversity risk debate is understood and documented within some groups, the discussion around business opportunity has historically been largely anecdotal and based on effects on reputation rather than driven by hard economics. Biodiversity generated revenue does not appear in corporate financial reporting and good biodiversity management is rarely cited as a strategic advantage. However, the increased recognition of the value of ecosystem services (underpinned by biodiversity) has started to balance the risk versus opportunity debate for business. Pro-biodiversity business opportunities include:

¹⁰ World Wildlife Foundation, *Sakhalin II oil and gas development project*, <http://www.panda.org/wwf_news/news/special_coverage/sakhalin/>, [Accessed 22 Feb 2010]

¹¹ Greenpeace Russia, *The Transneft Pacific pipeline project*, <<http://www.greenpeace.org/russia/en/campaigns/lake-baikal/the-transneft-pacific-pipeline/>>, [Accessed 22 Feb 2010]

¹² UNEP FI, *Bloom or Bust*, 2008

¹³ AFX News Limited, *Morley asks HSBC for explanation over advice to Malaysian logging firm IPO*, *Forbes*, 20 April 2007, <<http://www.forbes.com/feeds/afx/2007/04/20/afx3634814.html>>, [Accessed 22 Feb 2010]

¹⁴ World Resources Institute, *The Corporate Ecosystem Services Review: Guidelines for Identifying Business Risks and Opportunities Arising from Ecosystem Change*, 2008

- Revenue from sound stewardship or protection of biodiversity and ecosystem services (e.g. conservation banking, wetland banking and opportunities associated with Reducing Emissions from Deforestation and Degradation (REDD))
- Brand enhancement (and the resultant impact on sales) through implementing and communicating sustainable purchasing, operating or investment practices in order to differentiate corporate brands (e.g. Marks & Spencers)
- New products and markets e.g.:
 - participating in emerging markets for carbon sequestration, watershed protection and biodiversity credits (e.g. in 2009, US\$4.6bn was committed to Reducing Emissions from Deforestation and Degradation projects across six international funds. Yearly sales volume of mitigation banking in the US is about USD \$1.2-2.4 billion¹⁵, representing the sale of ecosystem service credits from environmental restoration and preservation of habitat);
 - launching new products and services that reduce customer impacts on ecosystems;
 - capturing new revenue streams from company-owned natural assets included with ecosystem services markets (e.g. under the Australian 'Bushbroker System', average prices for 'credits' used to offset unavoidable impacts to biodiversity range from AUD \$42,000 to \$127,000 per hectare¹⁶; and
 - offering eco-labelled wood, seafood, produce, and other products (e.g. Marine Stewardship Council-labelled products worldwide grew by 67% from April 2008 to March 2009)¹⁷.

Policy measures as a driver of the business case

Biodiversity conservation has risen rapidly up the environmental and political agenda and now represents a key challenge for the 21st century. At the global level, the main policy instrument for conservation is the United Nations Convention on Biological Diversity (CBD), now ratified by 193 state Parties. In an attempt to stem the tide of biodiversity loss, in 2002, the CBD Conference of the Parties (COP) 6 saw its Parties commit to the "2010 Biodiversity Target" to achieve "a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth". The need for increased private sector engagement on biodiversity has featured in several subsequent intergovernmental decisions, declarations and programmes¹⁸. A decision of CBD COP-9 in 2008 on business engagement defined priority actions, including that the Secretariat of the Convention should collaborate with BBOP and other relevant organisations on biodiversity offsets¹⁹. This report is a contribution to that commitment.

Increased collaboration between business and conservation

The last five years have also seen a gradual increase in the number of organisations and initiatives working to integrate biodiversity considerations into business and commercial activities. Of particular significance to this study are:

- **UNEP FI:** a unique public-private partnership between UNEP and the global financial sector, with over 180 member organisations. UNEP FI's Biodiversity & Ecosystem Services Work Stream (BESW) assists financial institutions to address the challenges arising from the loss of biodiversity and the degradation of ecosystem services. The activities of the BESW are carried out with the support of a number of UNEP FI signatory members, as well as recognised NGOs and advisory partners. See <http://www.unepfi.org/> for further details.
- **BBOP:** a partnership between over 40 companies, governments, financial institutions and conservation experts to explore biodiversity offsets. Key objectives include:

¹⁵ Forest Trends, 2010 State of the Biodiversity Markets: Offset and Compensation Programs Worldwide

¹⁶ Victoria Department of Sustainability and Environment, 2006

¹⁷ Marine Stewardship Council, Annual Report 2008/2009 (Online available from <http://www.msc.org/>).

¹⁸ For instance, the Potsdam initiative (March 2007), the Biodiversity Communication of the European Commission (May 2006) and the Biodiversity Agenda of the EU Presidencies of Germany, Portugal and Slovenia (November 2007).

¹⁹ Decision IX/26: Framework of Priority Actions in the period 2008-2010: 5. In collaboration with relevant organizations and initiatives, such as the Business and Biodiversity Offsets Programme (BBOP), compile and/or make available: (a) case studies; (b) methodologies; tools and guidelines on biodiversity offsets; and (c) relevant national and regional policy frameworks.

- Demonstrating no net loss of biodiversity and livelihood outcomes in a portfolio of biodiversity offset pilot projects;
- Developing, testing, and disseminating best practice on biodiversity offsets, ultimately resulting in standards for best practice in biodiversity offsets; and
- Contributing to policy and corporate developments on biodiversity offsets so they meet conservation and business objectives.
- See <http://forest-trends.org/> for further details.

Among numerous initiatives, other notable collaborations include:

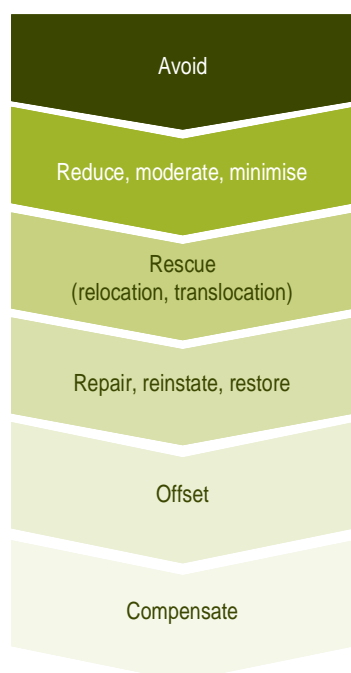
The Economics of Ecosystems and Biodiversity (TEEB): a major international initiative to bring attention to the global economic benefits of biodiversity and draw together expertise from the fields of science, economics and policy to enable practical actions moving forward.

WBCSD Ecosystems Champions Group: comprising over 60 companies aiming to address ecosystem services-related business risks and promote market-based approaches that support the sustainable use of ecosystem services.

Business and Biodiversity Initiative (introduced by the German Federal Ministry for the Environment): It aims to intensify the engagement of the private sector in achieving the CBD objectives by encouraging companies to: incorporate the conservation and sustainable use of biodiversity into their management systems by signing and implementing the Leadership Declaration; publish their best practices and actively take part in COP 10 in Japan in 2010 to broaden the international profile of the initiative.

The heavier ecological footprint industries such as mineral extraction have specific environmental and social industry groups to assist sector companies with management of biodiversity issues. Examples include **IPIECA** (International Petroleum Industry Environmental Conservation Association), with a specific Biodiversity Working Group, and **ICMM** (International Council on Mining and Metals), with an Environment Stewardship Program. Both groups have worked on biodiversity offsets.

Figure 3: The Mitigation Hierarchy



The application of the mitigation hierarchy

The mitigation hierarchy (see Figure 3) is widely regarded as a best practice approach to managing biodiversity risk. According to the mitigation hierarchy, efforts should be made to prevent or avoid impacts to biodiversity, then minimise and reduce, and then repair or restore adverse effects. After these steps, any significant residual effects should then be addressed via a 'biodiversity offset' in order to achieve 'no net loss' of biodiversity. If an offset is not possible, some other form of compensation may be needed.

A formal application of the mitigation hierarchy is required by law in some jurisdictions, where an effective environmental protection regime is enforced by the government. Developers are usually required to produce an Environmental Impact Assessment (EIA), or increasingly an Environmental and Social Impact Assessment (ESIA), where social and environmental aspects are considered together. EIAs assess the size and significance of the impacts, and recommend mitigation measures. A well recognised tool for developers, the EIA is an obvious vehicle for integrating biodiversity offsets into existing corporate procedures. In addition to regulatory requirements, investors may also require their clients to apply the mitigation hierarchy with care. Following approval of a development, an Environmental Management Plan (EMP), is often produced to set out how the mitigation measures will be implemented and monitored. These naturally cover a wider 'environmental' remit and hence are not exclusively focused on biodiversity or ecological

outcomes, but may indeed capture actions taken to implement the mitigation hierarchy. In addition, a Biodiversity Action Plan (BAP) can be used to detail more specifically a set of future actions that will lead to the conservation or biodiversity enhancement. Some companies (in particular those in the extractives sector), are now requiring BAPs for all major projects which impact biodiversity. For project finance by Equator Principles banks, adherence to the BAP will be a covenant in the loan documents, a breach of which is an event of default.

Throughout this process, developers should be considering both the positive and negative impacts that may result from a project. Biodiversity offsets offer a way for companies to manage their direct and indirect risks and for projects to demonstrate positive impacts.

What are biodiversity offsets?

There is a significant opportunity to secure biodiversity conservation and business benefits through the appropriate use of biodiversity offsets. Whilst it is clear that offsets are intended as an option of last resort to address residual impact, biodiversity offsets are a potentially powerful tool for balancing conservation and development. They are defined by BBOP as:

“measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development and persisting after appropriate prevention and mitigation measures have been implemented. The goal of biodiversity offsets is to achieve no net loss, or preferably a net gain, of biodiversity on the ground with respect to species composition, habitat structure and ecosystem services, including livelihood aspects.”²⁰

Biodiversity offsets seek to compensate for residual environmental impacts of planned developments, after appropriate steps have been taken to avoid, minimise or restore impacts on site. Their application should not be seen as a means for short-circuiting requirements for mitigation, and developers must have a strong comprehension of what can and cannot be offset. Given the complex nature of biodiversity and its intrinsic socioeconomic and cultural values, it is important to understand the limitations of offsets and to use them only where appropriate and with care. BBOP has developed a set of principles which underpin its approach to offsets.²¹

Offsets are increasingly used to achieve net environmental benefits, with offset policies being advanced in over 30 countries e.g. United States (US wetlands mitigation, US conservation banking), Brazil (Brazilian Industrial and Forest Offsets), and also Australia and the European Union.

Biodiversity offsets and relevance to business

In addition to being mandated by law in over 30 countries, an increasing number of organisations are beginning to recognise the business benefits of understanding biodiversity offsets and integrating them into business practice. Potential advantages for companies who are able to apply biodiversity offsets include:

- Improved access to land and resources;
- Enhanced regulatory and social licence to operate;
- Supply chain risk management;
- Reputational benefits associated with strong environmental stewardship;
- ‘First mover advantage’ for companies who understand their application; and
- Broader and easier access to finance.

²⁰ BBOP, 2009

²¹ <http://bbop.forest-trends.org/guidelines/principles.pdf>

Sustainability and the banking sector

In 2003, partly as a response to increasing awareness of environmental and social issues triggered by the rise of NGOs, a consortium of financial institutions developed the Equator Principles (EP).²² The Equator Principles provide a voluntary framework for addressing environmental and social issues in project financing and advisory services:

“The Equator Principles Financial Institutions (EPFIs) have consequently adopted these Principles in order to ensure that the projects we finance are developed in a manner that is socially responsible and reflect sound environmental management practices. By doing so, negative impacts on project-affected ecosystems and communities should be avoided where possible, and if these impacts are unavoidable, they should be reduced, mitigated and / or compensated for appropriately.”

Source: Equator Principles

Since 2003, 67 financial institutions have adopted the Equator Principles and they have now become the global de facto standard for managing environmental and social risks in project finance. In 2009, over USD 31 billion of projects²³ were financed under Equator Principles.

To put the Equator Principles into perspective, project finance accounts for 1-2% of most banks' activities. A growing number of banks are putting in place sustainability risk policies that cover sensitive sectors, including forestry, and are increasingly looking at biodiversity risks in other sectors. The Equator Principles banks are also considering whether the Principles could be extended to other lending activities. Both of these initiatives will widen the scope of where banks can assess and manage biodiversity risks, and could create an opportunity for the use of the mitigation hierarchy and offsets.

Project categorisation

Equator Principles adopters undertake to apply the IFC's Performance Standards to projects with capital costs of at least USD 10 million. Under the Equator Principles, projects are categorised A, B or C, to indicate the level of environmental and social impact. The categories are defined as follows:

- **Category A:** Projects with potential significant adverse social or environmental impacts that are diverse, irreversible or unprecedented;
- **Category B:** Projects with potential limited adverse social or environmental impacts that are few in number, generally site-specific, largely reversible and readily addressed through mitigation measures; and
- **Category C:** Projects with minimal or no social or environmental impacts.

²² www.equator-principles.com

²³ Project Finance International League Tables, January 2010. NB. This figure only includes the top 20 banks under the Global Initial Mandated Lead Arrangers category.

Equator Principle 2 on Social and Environmental Assessment requires that Category A and B projects must have an appropriate ESIA and Action Plan. For projects with a significant impact on biodiversity (likely to be Category A), a Biodiversity Action Plan is required as part of the Action Plan. The plans are subject to independent audit on an annual basis to ensure compliance through the life of a loan. Compliance with the Action Plan is a covenant in the loan documents, a breach of which could lead to an event of default. This is a powerful lever for banks to ensure the projects they finance comply with the required Action Plans.

IFC Performance Standard 6

The IFC’s Performance Standard 6 (PS6) includes specific expectations and requirements relating to biodiversity, mitigation and biodiversity offsets. The IFC is currently reviewing all of its Performance Standards, and specifically relating to PS6 will clarify what constitutes a ‘critical habitat’. In the context of biodiversity offsets under PS6, it is important to note that Equator Principles banks would view this as an obligation of the client rather than their own responsibility.

Figure 5 IFC PS6²⁴

How does IFC PS6 reference different habitats and biodiversity offsets?

Clients have different obligations for different categories of habitats. These include:

Natural habitat

In areas of natural habitat, the client will not significantly convert or degrade such habitat, unless the following conditions are met:

- There are no technically and financially feasible alternatives
- The overall benefits of the project outweigh the costs, including those to the environment and biodiversity
- Any conversion or degradation is appropriately mitigated (see mitigation requirements listed below).

Critical habitat

In areas of critical habitat, the client will not implement any project activities unless the following requirements are met:

- There are no measurable adverse impacts on the ability of the critical habitat to support the established population of species or the functions of the critical habitat
- There is no reduction in the population of any recognized critically endangered or endangered species
- Any lesser impacts are mitigated in accordance with the mitigation requirements listed below.

Mitigation measures

Mitigation measures will be designed to achieve no net loss of biodiversity where feasible, and may include a combination of actions, such as:

- Post-operation restoration of habitats
- Offset of losses through the creation of ecologically comparable area(s) that is managed for biodiversity
- Compensation to direct users of biodiversity.

²⁴ Direct extract from IFC PS6 Biodiversity Conservation and Sustainable Natural Resource Management, p 25.

3 Survey findings



3. Survey findings

The survey results demonstrate that most banks have relatively limited understanding of the mitigation hierarchy and biodiversity offsets, and do not apply these approaches to their maximum potential to reduce the underlying biodiversity risk in transactions being financed. In general, the approach to biodiversity risk management is driven primarily by reputational risk concerns, with few institutions looking at biodiversity issues at a more strategic risk level.

The analysis of interviews with banks and their stakeholders (clients, NGOs and consultants) drew out four main findings that led to the development of the above conclusion. These four main findings and supporting evidence from the study interviews are detailed below.



Key finding 1: Banks are in the embryonic stages of addressing biodiversity risks

Awareness of biodiversity risk across the financial sector is growing but not established, and biodiversity risks are not considered to pose distinct financial risks

Bank interviewees acknowledge that biodiversity issues are an important consideration in lending and investment decisions, highlighting corporate values and reputation as primary drivers for its importance. However, interviews demonstrate that the degree to which biodiversity issues are actually reflected in decisions is still relatively low. This was also reflected in the opinions of bank stakeholders such as NGOs, clients and external consultants, who responded that biodiversity and ecosystems services are growing in importance and value among banks but that policies and processes to manage these risks appear to be in the early stages of implementation. Despite recognition in banks that biodiversity risks are important, procedures for assessing and managing these risks are not yet established internally. Widespread practice among interviewees is to evaluate biodiversity risks as part of the bank's overall environmental and social risk assessments or where they are raised by stakeholders, notably NGOs and the conservation communities. Interviewees did not consider biodiversity to be of greater significance than other environmental risk exposures. One bank remarked that, biodiversity "needs to be looked at within the whole composite picture", is representative of the approach of the majority of respondents towards biodiversity risks.

Generally, banks do not apply in-depth analyses of biodiversity issues and concepts

The understanding of the mitigation hierarchy varied across the banks, with most respondents understanding or recognising the concept but not applying the approach with any degree of rigour. Interviews also revealed a lack of clarity around some steps within the hierarchy. There were some respondents who were not familiar with the mitigation hierarchy but did identify with the process, indicating that elements of the hierarchy may be applied by some banks without explicit attribution to the approach.

Some stakeholder respondents commented that certain individuals within some banks have a comprehensive understanding of the concept but, in general, knowledge of biodiversity issues is not widespread or deep. Despite this, several stakeholders cited the IFC as demonstrating strong awareness and management of biodiversity-related risks within its lending decisions.

Frontline bankers are not equipped to identify biodiversity risks; instead, the decision-making procedures call for escalation to teams with responsibility for environmental and social risks

Bank responses highlighted that while staff involved in project finance had experience with biodiversity risks due to the application of Equator Principles, most frontline bankers and credit risk officers have limited exposure to, and therefore understanding of, these issues. The majority view among bank respondents is that client-facing employees and credit risk officers do not need deep expertise in biodiversity or other environmental and social risks, but need only to be able to identify a potentially higher risk transaction or client in order to seek specialist advice.

Bank respondents commented that clients and transactions are filtered through 'escalation criteria' based on the materiality of potential environmental and social risks. Interviews demonstrate that these criteria cover a range of environmental and social risks based on the bank's risk framework. Banks do not have screening and escalation criteria specifically focused on biodiversity issues, relying instead on material biodiversity risks being triggered through the overall environmental and social risk screening and escalation procedures. Some banks utilise checklists and screening tools to support frontline bankers in identifying potentially higher risk transactions or clients due to the presence of significant sustainability issues. However, these tools are not generally specific to identifying biodiversity issues and cover a broader scope of environmental and social issues facing projects and clients. The tools in use relate to the policy framework in place (e.g. IFC performance standards, sector policies, client screening) and will usually link in with the existing approval systems in the bank. The use of a checklist approach is the subject of debate amongst stakeholders due to the need for both a relatively simple process and the need to reflect the complexity of biodiversity issues.

Where internal procedures reveal potentially high biodiversity or other environmental or social risks, the transaction or client is referred to the bank's in-house environmental and social risk specialists. These teams work with the frontline bankers to explore the issues and provide specialist advice on the deal or client. For certain transactions and clients, banks may also retain external consultants to provide technical input which contributes to the advice provided by in-house environmental and social risk specialists. Depending on the level of materiality, size of transaction and client/transaction importance, the issue may be further escalated to a central credit committee or senior credit risk executive, where final decisions are made.

The challenge is to equip frontline staff with sufficient knowledge to be able to escalate deals or clients with potentially high biodiversity risks to internal specialists for expert assessment, while not overburdening frontline staff with the need for high levels of knowledge on various environmental and social risks. To do this, banks require practical and pragmatic tools and resources to better understand and identify biodiversity risks linked to their portfolios and help build internal buy-in and awareness of the importance of these issues.

Leading banks carry out regular training for their staff on environmental and social risk issues to levels they believe are appropriate to the type of function and business unit, with biodiversity often covered within this. One bank, for example, has carried out a global programme under which 40 regional staff were trained on the bank's environmental and social policies and procedures, and these staff in turn support and train local staff reviewing transactions for environmental and social risks. Beyond the implementation of sector policies which consider biodiversity, no respondent mentioned specific training on biodiversity risk or awareness raising for frontline bankers suggesting this may be a key gap within banks.

Responses related to escalation indicate that credit committees in many leading banks take the advice of in-house environmental and social risk specialists (which may have been supplemented by advice from external consultants) very seriously and generally do not override their recommendations. As bank awareness and knowledge of biodiversity risks deepen, the level of appreciation for internal specialists' advice will likely serve as an opportunity in these banks for deeper implementation of biodiversity considerations by reducing internal hurdles to recommendations that utilise the mitigation hierarchy and biodiversity offsets.

Biodiversity management and understanding varies among banks, with a clear distinction apparent between commercial and development banks and between Equator Principles adopters and banks that have not adopted the Equator Principles

Banks appear to be at different stages in their management of biodiversity, with development banks and EP adopters demonstrating a more robust understanding of biodiversity risks than commercial banks and those that have not adopted the EP.

The difference in approach taken by commercial banks in comparison to development banks is marked. Development banks generally appear to have stronger management of biodiversity issues. A number of them also have larger teams dedicated to evaluating the social and environmental aspects of the financing provided. The high levels of accountability in place for government funded entities also enhance focus on biodiversity, amongst other issues. This result is not surprising given their explicit role to promote sustainable development.

Bank representatives commented that the Equator Principles have raised the profile of biodiversity issues among banks and advanced a practical approach to managing biodiversity-related risks. All respondents were of the view that EP adopters were likely to be more aware of biodiversity issues and take them more seriously than other banks. EP adopter respondents pointed out that they have an obligation to consider biodiversity risks in order to comply with the Equator Principles. A number of banks mentioned that IFC Performance Standards, in particular Performance Standard 6, have informed their policies and have acted as a reference point for conducting client and transaction assessments.

For EP adopters, respondents stated that biodiversity risk assessments are always incorporated into transactions that fall within the Principles' compliance scope. For transactions where Equator Principles are not applicable, bank procedures for identifying and addressing biodiversity risks rely on existing internal environmental and social risk procedures. However, as mentioned previously in this study, banks have limited knowledge and expertise to identify and assess the diverse range of biodiversity risks present in their deals, clients and portfolios accurately. Existing internal procedures may not raise attention to material biodiversity risks to which a bank is exposed.



Key finding 2: The main business drivers for addressing biodiversity are reputational risk and regulatory compliance

Banks recognise that there are fundamental reputational reasons to take biodiversity issues into consideration in lending and investing decisions. The primary business driver for banks to consider biodiversity risks appears to be reputational risk concerns. Banks are concerned about associations with serious negative ecological impacts. One bank commented that it takes biodiversity risks seriously, as “there are growing examples of lenders who’ve had financial and reputational loss due to neglect of these issues”.

The focus on reputational risk as the key business driver has implications for the development of policy frameworks as well as implementation and practices for biodiversity risk management. Where biodiversity risks are not recognised as having broader risk implications such as long-term financial risk, it may lead to gaps in bank risk management frameworks and is likely to lead to biodiversity risks being underweighted in overall risk assessment. This is especially relevant for banks as the business and operational risks posed by biodiversity challenges to many industries, such as agriculture, forestry or fisheries, grow in importance and relevance.

Regulatory compliance is an important business driver in assessing biodiversity risks

While reputational risk appears to be the main business driver, compliance also featured among bank responses, in particular with respect to compliance with national legislation for EIAs and the requirement to mitigate residual impacts of projects. Where respondents referred to the application of biodiversity offsets, they were reported to be conducted under legislative requirements, although it was unclear whether this was due to the application of the mitigation hierarchy within EIAs that can lead in some cases to biodiversity offsets being included in the agreed measures, or due to specific regulatory requirements for biodiversity offsets.



Key finding 3: Bank policy frameworks and procedures lack strategic consideration of biodiversity risks and are primarily focused on negative screening

Bank policy frameworks seem to lack strategic consideration of biodiversity impacts. Banks rather rely on broad environmental and sector policies to assess and manage biodiversity risks.

Interviews reveal that internal bank policies and procedures fall short of applying a strategic consideration of biodiversity risks and are primarily focused on screening for specific biodiversity issues rather than understanding the broader interrelated biodiversity and ecosystem implications of financing. There is an overwhelming view that addressing biodiversity within existing sectoral or broad environmental policies and procedures is sufficient to identify and manage any material risks related to biodiversity.

The majority of banks reported that they do not have in place policies related to biodiversity risks. Two notable exceptions among interviewees were JP Morgan and Citigroup. JP Morgan’s Environmental Policy has a forestry and biodiversity policy and commitments section. Citigroup has updated its Environmental & Social policies to include areas of special value, High Conservation Value Forests (HCVF) and Critical Natural Habitats (CNH). Citigroup prohibits any financing activity associated with the significant conversion or degradation of CNH. A number of interviewed banks have incorporated biodiversity issues into high risk sector or thematic policies, such as Forestry, Oil & Gas and Water.

The absence of specific biodiversity policies reflects the structures of banks, with most teams organised around their client's sectors in order to develop industry expertise, rather than being aligned with particular issues. Most leading commercial banks have developed a number of sector policies to augment the Equator Principles. These sector policies may also introduce sector specific standards to address some biodiversity related concerns in supply chains. For example, some banks' forestry policies refer to multi-stakeholder initiatives that develop certification standards for the supply chain, e.g. Forest Stewardship Council and the Roundtable on Sustainable Palm Oil.

“Our environmental and social policy does not mention biodiversity as a specific issue but it falls under wider themes such as deforestation, sustainable land use and waste management”

The triggers for enhanced due diligence on biodiversity risks are focused on traditional indicators such as protected areas or endangered species.

As previously described, banks assess and manage biodiversity risks when they are raised either through Equator Principles application, internal bank policies and procedures, or stakeholder concerns.

When applying internal policies and procedures, the triggers for conducting enhanced assessments and due diligence on biodiversity risks generally focused on traditional definitions and delineated areas, such as protected areas or endangered species. Assessing the biodiversity significance of species, assemblages and ecosystems for their functions, intrinsic value or socioeconomic and cultural value did not appear to be considered as important when compared to the designation of a protected area. As the finance sector is broadly in the early stages of addressing biodiversity, this is likely because identifying the conservation and socioeconomic significance of components of biodiversity is a more complex exercise than simply identifying whether an area has protected status, and an approach which does not provide banks with a rapid indication of biodiversity risk. By comparison, defined areas are easier for banks to identify. However, given that the large majority of biodiversity lies outside protected areas, this is an important gap and constraint facing banks and is worthy of further consideration. Biodiversity risks in value chains or wider indirect impacts are also not always captured by more simplistic screening systems.

Bank clients also expressed the view that the financial sector often addresses biodiversity using a 'tick-box' approach and that these risks are evaluated in order for the banks to demonstrate good governance rather than address biodiversity concerns. Consequently, there is a focus on traditional 'checklist' issues such as protected areas and 'Critical Natural Habitats', which may overlook other significant biodiversity impacts and material business risks to the bank. One bank client also observed that Equator Principles adoption could potentially increase risk exposure by raising financiers' comfort levels due to the application of a process or standard without actually delivering underlying ecological benefits. This is the danger if the exercise becomes a tick-box process, rather than a substantive engagement with the issues.

Several NGO, client and consultant commentators also noted that the country context influences the level of attention banks and their clients offered to biodiversity-related risks. For example, despite the requirements of the EIA process, respondents commented that biodiversity risks can often go undetected if local conservation stakeholders are not present or do not have sufficient awareness to challenge a developer's approach to conserving local biodiversity. This is revealing, implying that banks rely on external organisations to draw risks to their attention, rather than ensuring their own staff or their clients and their consultants are taking responsibility for identifying the issues themselves. This finding also supports bank responses that reputational risk is a key driver.

Another trigger of enhanced biodiversity due diligence is its interrelationship with other environmental and social risks. Bank interviewees observed that biodiversity risks rarely appear in isolation from other environmental or social issues and one respondent commented that biodiversity gains more traction as an issue for consideration by banks when linked to other environmental or social risks. One respondent provided the example of negative impacts on biodiversity having knock-on negative effects on local communities or indigenous people. This was reported to raise the materiality of the risk, in which case banks are more likely to pay it closer attention. As biodiversity has many environmental and social interrelationships, these linkages are likely to be common. However, this finding may also indicate that biodiversity risks on their own are not perceived as having sufficiently material implications for banks to investigate them further in their own right.

“When considering the triggers for application of the mitigation hierarchy, it can be difficult to assess the indirect impacts a project will have. For example if you are financing a processing plant, the biodiversity risk analysis should also include supplier impacts, so that the mitigation hierarchy can be applied at the correct scale.”

As described in preceding paragraphs, biodiversity issues and concerns which were cited by banks as triggering enhanced due diligence are:

- Protected areas
- Critical habitats
- Stakeholder campaigns or focus
- High Conservation Value forests
- Endangered, sensitive or charismatic species
- Primary and tropical moist forest
- Potential breach of the Convention on International Trade in Endangered Species (CITES)
- Sensitive locations of local, national or regional importance
- Sensitive sectors (e.g. Oil & Gas, Fisheries, Forestry)



Key finding 4: Implementation of a biodiversity management framework focuses at the asset level and there is need for greater rigour at all levels of assessment and management, including at the client and portfolio levels.

Biodiversity risk is a complex issue to assess. Biodiversity challenges and solutions are often very site-specific but biodiversity risk can also extend to generate indirect impacts through the value chain. In order to ensure risks to an investment are adequately assessed and understood, a strong understanding of local biodiversity is required, in addition to how it interrelates with ecosystem services such as the provision of fresh water, timber, fisheries or protection from natural hazards and erosion control. .

Banks have limited experience and face numerous challenges in applying the mitigation hierarchy

As indicated earlier, the banking sector reports to have some familiarity with the concept of the mitigation hierarchy but it is not their primary reference point for assessing environmental or biodiversity risk. Respondents felt that at times, the mitigation hierarchy is not available to them in its entirety, as impacts have already occurred by the time the project seeks finance or a particular bank becomes involved. As the Equator Principles also apply to project finance advisory activities, this perhaps suggests that Equator Principles advisors are not considering biodiversity-related risks early enough in the project finance cycle. If the full process is not followed because impacts cannot be avoided, this could damage the credibility of the assessment or even delay the project. The timing of a bank's involvement therefore appears critical in determining its level of influence over the application of the mitigation hierarchy. As projects progress, there is increasing resistance to revising plans, as it may involve reapplying for government approval or components of the project may already have been contracted or procured.

Case study: Citigroup applies the mitigation hierarchy

In one project finance example, Citigroup applied the mitigation hierarchy after the Environmental Impact Assessment identified potential impacts to coral reefs. Mitigation was as follows:

Avoidance: Baseline coral survey results were incorporated into the alternatives analysis during the design phase, which resulted in redesign of several project components

Minimisation: Mitigation measures to minimise impacts were implemented, including silt screens to reduce turbidity, etc. In addition, a Biodiversity Action Plan was developed that included an innovative coral transplantation program with oversight by an IUCN independent scientific review panel.

Restoration / offset: The Biodiversity Action Plan provided support for the management of a protected area as part of the national Coastal Zone Management Plan.

Most banks and bank clients interviewed did not have experience applying biodiversity offsets. Even banks leading in the area of sustainability and responsible lending have limited or no experience with biodiversity offsets. Some respondents stated that anticipated NGO opposition was a barrier to the application of offsets. NGOs typically look for project sponsors to take action further up the mitigation hierarchy in order to avoid impacts, rather than requesting an offset.

Banks perceive a number of limitations to applying biodiversity offsets

Most banks noted there are significant limitations to the application of biodiversity offsets. There was a clear view among respondents, particularly those more informed, that biodiversity offsets:

- Should have a net positive outcome for biodiversity;
- Should not be used as a lever to be obtain permission to degrade or pollute the project site; and
- May not always be appropriate due to the sensitivity of the species or area, as some impacts on biodiversity cannot be offset.

BBOP has agreed principles for biodiversity offsets that reflect these points and is developing assurance mechanisms for their application. The group is also developing a standard for biodiversity offsets. However, in the meantime, there is no accepted standard, and advisory panels of experts and stakeholders can help banks and their clients establish whether the mitigation hierarchy and biodiversity offsets have been designed in line with best practice, so as to manage risk adequately.

Key challenges identified by banks in their application of biodiversity offsets include:

- A disconnect between financing timeline and banks' ability to encourage clients to develop and agree an offset;
- The need to demonstrate biodiversity offsets' effectiveness and net conservation gain;

- A concern over potential liability exposure (perceived liability of their money being used for something which could go wrong);
- The time and expense involved in implementing a successful biodiversity offset;
- A lack of initiative among clients to act beyond regulatory requirements;
- Limited awareness on the part of clients and their consultants on biodiversity issues and limited understanding of their value
- Inapplicability of offsets where biodiversity is particularly vulnerable and irreplaceable, and thus not capable of being offset;
- The importance of the biodiversity lost to local communities: significant socioeconomic uses may not be capable of being offset;
- Insufficient land involving equivalent or higher conservation value biodiversity available to offset the project's impacts;
- A lack of local capacity to implement and manage the design and implementation of biodiversity offsets; and
- Clients may source alternative funding if banks insist on strict application of mitigation hierarchy and biodiversity offsets.

“To help us apply biodiversity offsets we are looking for an internationally accepted standard that can help us to quantify the offset needed against the impact of the project. In projects where clients have made offsets it would help to assess these offsets using an international standard.”

Biodiversity risks are primarily assessed at an asset level

The mechanisms for addressing biodiversity risks differ based on the level at which biodiversity issues are assessed and managed: asset, client or portfolio. Asset level management refers to biodiversity management of projects and is likely to be more location-specific. Client level management evaluates the risks posed by the activities of individual bank clients and their performance in managing biodiversity risks. At the portfolio level, risk exposure is evaluated and managed at broader levels cross-cutting financial product types, business units and sectors.

Banks were asked whether they considered biodiversity at the asset, client or portfolio level. Almost all the banks interviewed indicated that they primarily considered biodiversity issues at the asset level. Two banks reported they overlay this with consideration of client capacity to manage biodiversity, with only one bank stating it looked across its portfolio.

Asset

Discussions of policy application at an asset level were focused on the Equator Principles and Performance Standard 6. A number of banks apply the spirit of Equator Principles and IFC Performance Standards to transactions that fall outside the scope of the Equator Principles, particularly where biodiversity issues are identified as potentially significant. In the absence of biodiversity policies in most banks, responses indicate that banks consider biodiversity risks primarily through project finance assessment procedures.

For non-project finance transactions, industry practice varies but banks tend to be reactive rather than proactive in seeking to identify potentially adverse biodiversity impacts as with Equator Principles. Most banks will address biodiversity risks where they are triggered as potentially material in the course of applying bank environmental and social policies, which may include sector policies that address industry-specific biodiversity considerations.

Client

Client level risk assessments are primarily focused on high risk sectors. Outside the bank's high risk sector policies, biodiversity assessments take place where material issues are identified or where stakeholders raise risks that could potentially have an impact on the project's success or pose a reputational or financial liability to the bank. For new clients approaching the bank with a project, interviewees reported that client and project screens may be conducted together. Clients may then be reviewed periodically or when they make further requests for finance.

For large multinational clients, the scope of activities and geographical locations makes it difficult to assess location specific risks. Therefore it is necessary to try and identify priority locations based on the level of potential biodiversity-related risk and assess the client's systems, capacity and performance. For major clients, banks want to develop long-term relationships and be a preferred provider of finance. In these situations, discussions about managing biodiversity risk may take the form of an ongoing dialogue, seeking continuous improvement, rather than applying strict criteria on day one of the relationship.

Portfolio

Only one respondent addressed biodiversity issues at a portfolio level. This respondent stated that portfolio level issues are addressed within an internal working group to which external input is sought where appropriate.

In general, responses are consistent with the overall approach of banks to biodiversity risks: namely that biodiversity risks are reactively incorporated into decision making where material issues are raised and where the type of financing allows the bank to influence the client's management of these risks. The focus on the asset level is likely because impacts are more tangible and banks have greater influence and more involvement with these specific projects. Information supply is also a factor, as banks typically receive a great deal more information on specific projects than they do at a corporate level. At present, only a very small proportion of a bank's activities are covered by the standards applied to project finance. There are ongoing discussions in the sector about how to apply risk assessments more widely, across a range of products and services, such as corporate lending, initial public offerings, bonds and export credits.

The type of financing has a direct impact on the level of consideration and due diligence applied to biodiversity risk

As different bank products have varying levels of risk and leverage, the type of financing and client heavily influence application of bank policy. The most notable difference reported by banks is between asset management and commercial lending. A number of respondents remarked that asset management functions need to be treated separately from commercial lending in the application of bank policies as they are following the mandate of the asset owners (e.g. pension funds). There is ongoing debate over the scope of fiduciary duty to consider environmental and social factors and responsible investors already provide some asset managers with explicit requirements to assess environmental risks. Within commercial lending itself, a policy is difficult to apply where the use of funds is unknown or where banks have little or no influence over the intended use, such as with corporate loans or revolving credit facilities. Environmental or biodiversity-related policies appear to be most rigorously applied at transaction levels where there is a direct link to the asset being financed, in which loan documents and covenants can include conditions related to biodiversity risks.

Citigroup, for example, appears to have a notably rigorous environmental risk assessment framework and yet the bank also noted that the accurate assessment of environmental risks associated with transactions involving corporate loans, in which banks generally do not know how the funds will be used, is more challenging, as, unlike project finance, they have limited knowledge of and control over where the funds are used.

Where banks act in a syndicate, it was suggested by respondents that the range of approaches and levels of understanding among them can make it difficult to reach a common position on the requirements of a lender consortium. Some project finance syndicates are now appointing a lead environment bank from the group to focus on equator principles compliance and to manage consultants. The outsourcing of assessment and engagement with clients on biodiversity issues may lead to bank staff maintaining a very high level view of issues and relying on the recommendations of consultants. This could be considered a missed opportunity to build a relationship with the client to manage biodiversity-related risks and opportunities.

There is a lack of consistency in how the IFC performance standards and the mitigation hierarchy are applied among banks

There is little uniformity in how biodiversity and environmental policies are implemented, even among those organisations that apply IFC PS6. For example, one stakeholder felt that if banks are adequately applying PS6, there would be many more examples of biodiversity offsets as part of credit conditions (outside of regulatory requirements). As with any changes, it has taken time for banks to start to understand how to apply the Performance Standards, and work continues by the IFC to provide more guidance and refine the system.

The key challenge for banks is to identify material biodiversity impacts, understand how to apply the mitigation hierarchy and determine when an offset is most appropriate and applicable. Banks identified inconsistent and vague definitions of biodiversity terminology as a challenge to managing biodiversity risks both within the Equator Principles and beyond. Banks do not yet have a common approach to implementing the IFC Performance Standards, the mitigation hierarchy or biodiversity offsets.

Several respondents commented on the difficulty in applying Performance Standards on the ground due to the gap between reality and the high aspirational quality of the Performance Standards. It is important to note that ultimately it is the client who must comply with the performance standards, rather than the bank which is providing finance.

Banks rely heavily on the expertise of consultants to assess biodiversity impacts, apply the mitigation hierarchy and provide management recommendations that are then incorporated into loan conditions

As banks often do not have in-depth technical expertise on the mitigation hierarchy or offsets, they may rely on external consultants, particularly at the asset level, where much of the biodiversity due diligence occurs. Interviews show that banks typically rely on environmental consultants to apply the mitigation hierarchy accurately and provide clients and the banks with informed recommendations and outputs.

As environmental consultants are involved in various processes related to projects, it is useful to distinguish between their different functions and services:

1. Technical consultants are engaged by the project operators to produce EIAs and advise on technical aspects of engineering design to reduce environmental impact. The primary purpose of these processes is to gain regulatory approval; however these same documents will then also be assessed by potential lenders.
2. Local consultants may be used to contribute their knowledge of local ecology, cultures and regulatory frameworks. It may also be necessary to utilise local representatives in order to deliver effective consultation and avoid language barriers.
3. Independent technical consultants may be engaged by the lenders for high risk transactions to review the EIA and proposed approach of the project. These extra reviews may be requested or directly commissioned by potential lenders (at the expense of the client) in order to make an informed decision. Banks may require a very specific expert review of a specialist topic for example, especially where the approach of the project operator has been questioned by NGOs.
4. Specialist consultants (familiar with Equator Principles and the approach of banks) are engaged to review a project's compliance with the Equator Principles. For Category A projects (and category B where appropriate), an independent social or environmental expert not directly associated with the borrower is required to review compliance with the Equator Principles.

According to bank respondents, the outputs from consultants are used by banks to inform the covenants attached to loans. An example of such a covenant could be to create and implement a Biodiversity Action Plan. Banks require their clients to implement the measures outlined in the environmental management action plan as a condition of lending.

Monitoring of compliance with these conditions has historically been a weakness in implementation of the Equator Principles. Although any material breach of these conditions which is not rectified in a timely manner is a breach of the loan conditions, a loan would only be recalled as a last resort, if the client failed to respond to the issue. Interviewees were not aware of any loan covenants relating to biodiversity offsets.

The quality of consultants and their outputs is variable, which can impact the quality of application of the mitigation hierarchy

Banks have had mixed experiences with external consultants, finding that the services provided are of varying quality. Some banks have selection criteria or screen consultants to assess their technical suitability. Other than this, selection appears unsystematic, with many depending on prior experiences working with the consultant. However in some cases there are a limited number of consultants available who have both the relevant technical expertise and local knowledge required. Banks may also use leading academics or reputable NGOs to provide input or expert review of proposed measures. One respondent commented that some NGOs can be considered independent. In some instances, banks have turned to independent scientific panels or organisations to try and improve the rigour of assessment and create viable solutions. The level of client expertise is also a factor, with variability in understanding and experience of biodiversity issues. External panels and organisations could be useful resources to help in the design and application of biodiversity offsets.

Often, shortcomings of the work by the initial consultant that conducted the EIA necessitate further reviews by other consultants, because the potential lenders do not have confidence in the EIA. In some cases, the EIA consultant's failure to apply the mitigation hierarchy correctly contributes to unnecessary impacts and risks, and poor relations with stakeholders. Some banks have had bad experiences with consultants who have down-played environmental risks or overstated the potential for mitigation measures in EIA documentation. Overconfidence on the part of consultants that biodiversity risks can be adequately addressed and managed poses a risk for banks, since unforeseen impacts and liabilities for which they are responsible may arise. With consultants playing a key role in assessing projects, greater focus is warranted on ensuring the quality of consultants.

There is significant variation in the level of capacity and expertise in different banking institutions on biodiversity

Banks with greater internal capacity or specialist teams responsible for reviewing projects will rely less on consultants. The leading development banks typically have an internal team who will conduct initial assessments and can make recommendations. There are a few specialists in some commercial banks who are trained ecologists. This reduces the need for external input on biodiversity issues.

Responses imply that for many banks, in-house specialists would benefit from greater depth of knowledge on biodiversity concepts and tools in order to translate information on biodiversity, gained through EIAs or other sources, into risks and materiality levels pertinent to the bank. This will support banks to build stronger risk management capabilities and processes in-house. One bank commented that it would like to offer more training to its staff on biodiversity risks and another noted that "with the pace at which things are changing in this space it is always helpful to have further awareness-raising".

Banks will benefit from biodiversity related capacity and awareness building

All respondents expressed the need for further resources and training on biodiversity related topics. This may include building awareness of how biodiversity issues materialise into risks and opportunities as well as building knowledge on the mitigation hierarchy, including biodiversity offsets. Unsurprisingly, all NGOs and bank consultants also agreed with this view, adding that further guidance on applying PS 6 would also be beneficial. It was noted that this would likely comprise of bespoke training tailored for the requirements of each individual bank.

Types of training recommended by respondents include:

- Training on the 'basics of biodiversity' and the links to ecosystem services; the various priorities attributed to biodiversity (regional vs. site level) and explanation of case studies where biodiversity has caused project delays or influenced investment.
- Training and research into the opportunities created and value added by taking a more structured approach to biodiversity and application of the mitigation hierarchy, including offsets.
- Guidance on how to convert biodiversity issues (especially EIA results) into financial decisions and equip bank staff with the appropriate powers of inquiry so they can challenge EIA results and understand the potential reputational and other risk exposure.
- Project specific training from environmental/ ecological specialists which alerts a bank (or consortium of banks) to the types of biodiversity risks which may be faced during an investment on a specific asset or project. This would be particularly helpful in large scale linear infrastructure developments which are likely to encounter numerous biodiversity issues.

One bank respondent commented that he found the UNEP-FI environmental and social risk training very helpful and has recommended it to colleagues. One stakeholder was of the opinion that bank staff would benefit from spending more time with the client on the ground to better understand the issues. However, one bank respondent noted that there is limited time and resources for site visits by bank staff.

Banks lack awareness of the tools and processes available to help manage biodiversity risks effectively

Interviews imply that there are few tools and processes in use within banks to manage biodiversity risks and most banks do not utilise specific tools to assess biodiversity risks. A small number of respondents identified the use of the Integrated Biodiversity Assessment Tool²⁵ (IBAT) and the Sustainable Finance Limited Toolkit²⁶ in addition to internally developed checklists. There were several ad-hoc examples of internal tools and systems including:

- Assessment of biodiversity risk as part of a wider risk assessment framework using an internal tool that produces a sustainability risk rating.
- Use of Geographic Information Systems (GIS) information from a national biodiversity institute website to map the project site against ecologically sensitive areas. This helps to identify some of the less obvious biodiversity risks at sites located outside protected areas or world heritage sites.

Respondents also highlighted that these tools provide initial risk screening for issues related to biodiversity and not comprehensive risk assessment, which usually lies within the EIA process and specialist risk assessments. One commentator felt that the EIA should still be considered as the most appropriate tool to consider biodiversity-related risks for banks, but reiterated the output of the EIA is highly dependant on the quality of the consultant.

Most respondents did not identify specific tools that could support biodiversity risk management in banks suggesting there is a significant information gap in relation to screening for biodiversity-related risks. They expressed interest in tools that could provide geographical information, such as the location of high conservation value forests and other designations. One respondent felt that decisions related to biodiversity are too location-specific for tools to be widely applicable. Another noted that bank clients may be interested in support to address biodiversity risks of projects, as client capability is not always strong and robust biodiversity risk management is increasingly required for financing.

²⁵ See <http://www.ibatforbusiness.org/> for further details

²⁶ See <https://toolkit.sflinet.com/> for further details

Biodiversity issues do influence financing decisions

Nearly all banks responded that biodiversity risks can affect financing decisions. Mismanagement of biodiversity issues by a client can be, and has been, a reason to decline financing, either as a stand-alone issue or as part of multiple risks associated with a transaction or client. However, deal-breakers are often the result of multiple triggers, of which biodiversity is just one of several issues. In some cases, biodiversity concerns have been among the more significant risks. Where projects are declined by some banks due to non-compliance with their required standards, there may be others that would interpret the situation differently or have a different policy framework and approach to environmental risk.

4 Conclusions and recommendations



4. Conclusions and recommendations

Conclusions	Analysis and recommendations
Addressing biodiversity risk	
<p>Although many banks understand the mitigation hierarchy concept, there was limited evidence to demonstrate practical application and some confusion relating to the concept.</p>	<p>The mitigation hierarchy is not widely used by banks, although elements are applied informally, and consultants may apply it on behalf of banks or their clients. There is value in increasing awareness and application of the mitigation hierarchy as a practical and pragmatic tool to help banks assess and reduce biodiversity risk associated with asset specific funding such as project finance. Whilst the theory of the mitigation hierarchy may be applied to manage the risks associated with client and asset lending, using the mitigation hierarchy as a 'tool' may not be appropriate for considering biodiversity at the portfolio level.</p> <p>Recommendation:</p> <ul style="list-style-type: none">● Provide guidance on the benefits of and provide practical training on how banks should apply the logical steps of the mitigation hierarchy as part of their asset level risk management processes.
<p>Most banks do not consider biodiversity-related risks in isolation from other environmental and social issues.</p> <p>Within banks, project finance staff demonstrate a basic understanding of biodiversity risks, however most banks do not ensure client-facing employees/ credit risk officers are aware of biodiversity risks.</p>	<p>Banks need to ensure that biodiversity issues are adequately covered and integrated within their existing internal assessment frameworks and not treated as a standalone issue or system.</p> <p>Recommendation:</p> <ul style="list-style-type: none">● Develop appropriate tools which can be integrated into banks' existing systems and processes and are made available to both front office teams and risk officers.
<p>Across the financial sector, there is a wide range of capacity and expertise within banks, with some development banks and EP signatories leading the way in terms of the depth of their understanding and approach to biodiversity issues.</p>	<p>There are examples of good practice among the banking sector, where banks have addressed major biodiversity issues and/or have demonstrated strong internal expertise.</p> <p>Recommendation:</p> <ul style="list-style-type: none">● Using a regular knowledge sharing forum, improve the communication of leading examples which demonstrate the business case for assessing biodiversity risk, and leverage good practice procedures from leading development and commercial banks.
Business drivers	
<p>Banks focus on protecting reputation associated with project finance as opposed to considering the wider biodiversity and ecosystem services risks associated with project finance or other forms of lending.</p> <p>No examples were cited of voluntary offsets suggesting that regulatory compliance is also a key driver.</p>	<p>A better understanding of the broader investment implications related to biodiversity and ecosystem services would benefit banks. This would extend their assessment of risks, currently largely based on reputational issues and their 'negative screening' focus and allow for a more sophisticated understanding of how biodiversity loss can, in the long-term, influence wider lending scenarios associated with the client and portfolio level. This consideration is integral to the sector given that asset level finance is only a fraction of banks' total lending capacity.</p> <p>Recommendation:</p> <ul style="list-style-type: none">● Develop training seminars to convey how biodiversity and ecosystems services can influence the long-term viability of (particularly client and portfolio) lending, including indirect and supply chain risks.● Cooperate with industry leaders and others (including the NGO community) who are already considering biodiversity risks to stimulate further consideration of this topic within the finance sector.● Once the business case to assess biodiversity risks beyond project finance is fully recognised, future steps could include improved capital allocation which fully considers the associated biodiversity risk of particular regions, sectors and clients. For example, where relevant this should become part of the client engagement process, which will require front office staff to become more knowledgeable about these issues.

Frameworks and procedures

The triggers for further due diligence on biodiversity risks are focused on traditional risk based indicators such as protected areas and may miss some key risks.

Banks mainly assess direct biodiversity risks where there is a formal delineated designation of high biodiversity value, typically in geographically protected areas. However, the majority of high biodiversity values lie outside protected areas, so this is an inadequate basis for assessing biodiversity risk. Banks' focus on projects' impacts on specific high biodiversity areas also means that biodiversity risks that emerge through the supply chain or indirectly are not being systematically observed or addressed.

Banks primarily consider biodiversity implications when applying IFC PS 6 for project finance.

Recommendation:

- Provide training on how to assess biodiversity risks, especially those outside protected areas and how these biodiversity risks interrelate with ecosystem services and value chains.
- Provide further guidance on operationalisation of PS 6.

Banks have more influence over direct project finance than they do over general corporate lending which has no specified single project goal.

Banks' limited biodiversity risk assessments are, in the vast majority of cases, only applied to project finance, which constitutes a small proportion of banks' activities.

Recommendation:

- Banks should collaborate to develop tools for understanding wider biodiversity risks and to develop ways of applying them to types of lending and investment other than project finance.

Banks have different governance frameworks to deal with biodiversity risks, ranging from dedicated central expertise having approval powers to decentralised decisions by regional risk officers.

Recommendation:

- Banks need to review the effectiveness of their risk management for environmental and social issues and consider whether there are appropriate elevation channels to consider biodiversity-related risks.

Implementation and capacity

Banks have limited experience of applying the mitigation hierarchy and biodiversity offsets, and the study revealed there are a number of perceived practical barriers to applying biodiversity offsets.

While biodiversity offsets can be an effective risk management tool, designing, implementing and monitoring effective offsets can have considerable long-term resource implications for both banks and their clients, and also pose certain risks. Careful thought is needed to determine when biodiversity offsets are needed and how they should be designed to offer effective risk management.

The potential involvement by banks in aggregated offsets and conservation banking could enable them not only to improve risk management (by working at the landscape level and better handling indirect and cumulative impacts, by attaining superior conservation outcomes and keeping the transaction costs of offsets low), but also to explore the business opportunities presented by the mitigation hierarchy and biodiversity offsets.

Recommendation:

- Conduct further research to establish the willingness of banks to take part in landscape level aggregated offsets and 'conservation banks', especially where they are part of a consortium of banks or operators.
 - For all parties involved (banks, clients, consultants etc), provide practical guidance on biodiversity offsets and conservation banks, covering lessons learnt and examples of good practice offsets associated with designing, implementing and monitoring biodiversity offsets.
 - Further to this, unless an offset is implemented by a third party which takes on the liability, banks specifically need to understand how to evaluate consultants' recommendations related to biodiversity offsets and determine what their role should be in monitoring them.
-

Current biodiversity risk management focuses on the asset level, and few banks are assessing biodiversity risk and opportunity at the client or portfolio level.

It is understandable that biodiversity impacts are most obvious in relation to a specific project in a precise location. Banks feel they can have most influence over this type of project and receive the most pressure externally as it is clear where their money is going.

While asset level biodiversity risks are generally considered more tangible (associated with direct project footprint etc.), extending the focus to consider client or portfolio level implications of biodiversity risk would benefit banks and would encompass the greater proportion of their total lending. Some banks are currently doing this through applying sector policies to high impact sectors, and looking at the client's capacity to manage issues. Banks are exploring developing tools for the portfolio level, but it is a challenge to address any topic at this scale in a meaningful way.

Recommendation:

- Extend the current risk frameworks beyond project finance.

There is a strong reliance on external expertise to assess and manage biodiversity risks.

External expertise is of variable quality which can often impede a bank's assessment of biodiversity-related risk.

While reliance on credible external ecological expertise to identify biodiversity risks is a practical model, there is merit in bridging the current major 'disconnect' in communication and understanding between external consultants (and the findings of the EIA) and bank staff. This 'disconnect' is often due to a lack of dialogue between the two parties, and the limited understanding of how EIA findings interrelate with financial decision making. There is also a lack of discrimination in the calibre of consultants selected to assess biodiversity risks and apply the mitigation hierarchy appropriately.

Recommendation:

- Provide training for EIA practitioners including: a particular focus on the correct application of PS6; how biodiversity can influence investment decisions; and how to synthesise and present results in a format which is appropriate for investment staff.
- Provide training for bank staff on the EIA process including: how to select appropriate consultants based on their level of ecological expertise; how to critique an EIA to ensure comprehensiveness and adherence to PS6; how to advise whether the mitigation hierarchy has been applied appropriately, including the use of biodiversity offsets; how to interpret results of an EIA; and, how to determine whether EIA results present reputational risks that could be better managed by a more rigorous application of the mitigation hierarchy and biodiversity offsets.

It is not common practice for banks to apply selection criteria when engaging external consultants.

Excluding the EIA, the use of tools to assess biodiversity risk is not common practice.

There is a clear demand for a tool or system to help banks manage biodiversity risks at all lending levels. However, whilst incorporating a 'tick box' approach to prompt consideration of certain triggers is important, this tool also needs a 'process' which requires certain questions to be answered to allow for increased analysis and rigour.

Recommendation:

- Create a tool which aids rigorous biodiversity-related decision making and operationalises current guidance used within banks.
-

Appendices



Appendix I

List of interviewees

Provided below is a list of the organisations interviewed for this study.

Banks

1	Banco Santander
2	HSBC
3	Citigroup
4	RBS (ABN AMRO)
5	Fortis
6	DEG
7	Rabobank
8	Mizuho Financial Group
9	Standard Chartered
10	Access Bank
11	Nedbank
12	Japan Bank for International Cooperation
13	Yes Bank India
14	FIRA
15	JP Morgan
16	Banco Itaú
17	European Bank for Reconstruction and Development
18	International Finance Corporation

NGOs

19	WWF
20	Banktrack
21	The Nature Conservancy
22	Conservation International
23	PACT

Consultancies

24	ERM
25	The Biodiversity Consultancy

Bank Clients

26	Rio Tinto
27	Tullow Oil
28	Repsol

Appendix II

Glossary of terms

Term	Meaning
Asset	An economic resource owned by a business or company.
BAP (Biodiversity Action Plan)	A formal plan to set out actions that will lead to the conservation or enhancement of biodiversity.
BBOP (Business and Biodiversity Offsets Programme)	BBOP is a partnership between companies, governments, conservation experts and financial institutions that aim to explore whether, in the right circumstances, biodiversity offsets can help achieve better and more cost effective conservation outcomes than normally occur in infrastructure development, while at the same time helping companies manage their risks, liabilities and costs. BBOP has been researching and developing best practice on biodiversity offsets and beginning to test it through a portfolio of pilot projects in a range of contexts and industry sectors, aiming to demonstrate improved and additional conservation and business outcomes. BBOP's expectation is that biodiversity offsets will become a standard part of the development process when projects have a significant residual impact on biodiversity, resulting in long term and globally significant conservation outcomes. Further information on BBOP's vision, results to date and priorities for future work can be found at: http://www.forest-trends.org/biodiversityoffsetprogram . *
Biodiversity	The variability among living organisms from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems. ²⁷
Biodiversity offset	Biodiversity offsets are measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development after appropriate prevention and mitigation measures have been taken. The goal of biodiversity offsets is to achieve no net loss and preferably a net gain of biodiversity on the ground with respect to species composition, habitat structure and ecosystem function and people's use and cultural values associated with biodiversity.*
Biotas	The plant and animal life of a region
CBD (Convention on Biological Diversity)	An international treaty to sustain the diversity of life on earth.
CITES (Convention on International Trade in Endangered Species)	An international agreement between governments aiming to ensure that the international trade in specimens of wild animals and plants does not threaten their survival.
Client	Private or public entity receiving financial services from a financial institution.
Client acceptance	The process of accepting a client by a financial institution based on the application of the financial institution's acceptance policy framework.
Credit risk officers	Bank staff with specific responsibility to analyse credit proposals to evaluate risks, returns and feasibility of projects.

²⁷ Convention on Biological Diversity

Term	Meaning
Critical habitats	<p>A range of lending institutions have recently defined 'critical habitat', accompanied by conditions for clients whose projects may impact upon it. Common themes mentioned by these definitions include threatened species; endemic or geographically restricted species; congregations of migratory and other species; assemblages that support key processes or services; and biodiversity of social, economic or cultural value.</p> <p>Examples of definitions include the following:</p> <ol style="list-style-type: none"> 1. Irrespective of whether it is natural or modified, some habitat may be considered to be critical by virtue of (i) its high biodiversity value, (ii) its importance to the survival of endangered or critically endangered species, (iii) its importance to endemic or geographically restricted species and sub-species, (iv) its importance to migratory or congregatory species, (v) its role in supporting assemblages of species associated with key evolutionary processes, (vi) its role in supporting biodiversity of significant social, economical or cultural importance to local communities, or (vii) its importance to species that are vital to the ecosystem as a whole (keystone species) (see EBRD Environmental and Social Policy, 12 May2008). 2. Critical habitat is a subset of both natural and modified habitat that deserves particular attention. Critical habitat includes areas with high biodiversity value (such as areas that meet the criteria of the IUCN classification), including habitat required for the survival of critically endangered or endangered species (as defined by the IUCN Red List of Threatened Species or as defined in any national legislation); areas having special significance for endemic or restricted-range species; sites that are critical for the survival of migratory species; areas supporting globally significant concentrations or numbers of individuals of congregatory species; areas with unique assemblages of species or which are associated with key evolutionary processes or provide key ecosystem services; and areas having biodiversity of significant social, economic or cultural importance to local communities.
Conservation bank	<p>A parcel of land managed for its conservation values. In exchange for permanently protecting the land, the bank owner is allowed to sell credits to parties who need them to satisfy legal requirements for compensating environmental impacts of development projects.</p>
Ecosystem services	<p>The benefits people obtain from ecosystems. These include provisioning services such as food, water, timber, and fibre; regulating services that affect climate, floods, disease, wastes, and water quality; cultural services that provide recreational, aesthetic, and spiritual benefits; and supporting services such as soil formation, photosynthesis, and nutrient cycling.²⁸</p>

²⁸ BBOP

Term	Meaning
EIA (Environmental Impact Assessment)	A formalised process, including public consultation, in which all relevant environmental consequences of a project are identified and assessed before authorisation is given. The process of identifying, predicting, evaluating and mitigating the biophysical, social, and other relevant effects of development proposals prior to major decisions being taken and commitments made.*
EMP (Environmental Management Programme)	Describes the processes that an organisation will follow to maximise its compliance and minimize harm to the environment. This plan also helps an organisation map its progress toward achieving continual improvements.
EP (Equator Principles)	A financial industry benchmark for determining, assessing and managing social and environmental risk in project financing.
EPFI (Equator Principles Finance Institution)	A financial institution which is a signatory to the Equator Principles.
ESIA (Environmental and Social Impact Assessment)	A process for predicting and assessing the potential environmental and social impacts of a proposed project, evaluating alternatives and designing appropriate mitigation, management and monitoring measures.*
Event of default	The occurrence of an event which allows a lender to demand repayment of the loan in advance of its normal due date.
Frontline banker	Bank staff directly involved in lending decisions and client relationship management.
Forest Stewardship Council	An independent not-for-profit organisation established to promote the responsible management of the world's forests.
HCVF (High Conservation Value Forest)	Forests of outstanding and critical importance due to their high environmental, socio-economic, biodiversity or landscape values. ²⁹
IFC (International Finance Corporation)	A member of the World Bank Group responsible for financing and providing advice for private sector ventures and projects in developing countries.
IPO (Initial Public Offering)	The process of a company issuing common stock or shares to the public for the first time
Mitigation hierarchy	The mitigation hierarchy is defined as: <ol style="list-style-type: none"> 1. Avoidance: measures taken to avoid creating impacts from the outset, such as careful spatial or temporal placement of elements of infrastructure, in order to completely avoid impacts on certain components of biodiversity. This results in a change to a 'business as usual' approach. 2. Minimisation: measures taken to reduce the duration, intensity and / or extent of impacts that cannot be completely avoided, as far as is practically feasible. 3. Rehabilitation / restoration: measures taken to rehabilitate degraded ecosystems or restore cleared ecosystems following exposure to impacts that cannot be completely avoided and / or minimised. 4. Offset: measures taken to compensate for any residual significant, adverse impacts that cannot be avoided, minimised and / or rehabilitated or restored, in order to achieve no net loss or a net gain of biodiversity. Offsets can take the form of positive management interventions such as restoration of degraded habitat, arrested degradation.*
Natural Habitats	Land and water areas where the biological communities are formed largely by native plant and animal species, and where human activity has not essentially modified the area's primary ecological functions.*

²⁹ Forest Stewardship Council (2008). Small, low intensity and community forests: briefing note 4.#

* Denotes where the explanation has been derived from the BBOP Glossary <http://bbop.forest-trends.org/guidelines/glossary.pdf>

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