

# Biodiversity Risk - Integrating Business and Biodiversity in the Tertiary Sector

November 2018



## Introduction

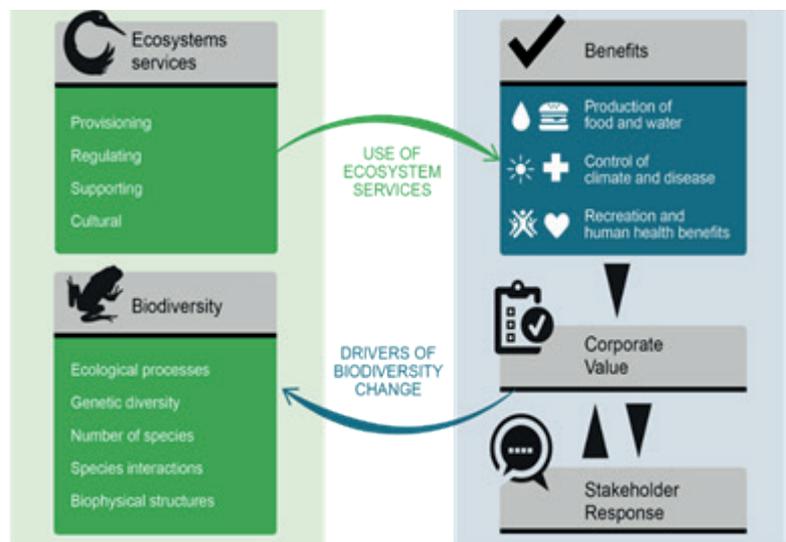
This practice note aims to encourage greater integration of biodiversity into business decisions by clarifying the biodiversity-associated opportunities and risks faced by the private sector. Although predominantly aimed at tertiary sector businesses, the recommendations are applicable to other business sectors. The note sets out why the private sector needs to account for their biodiversity dependencies and impacts and identify vulnerabilities to different biodiversity risks. Methods for approaching biodiversity risk and opportunity profiling are given as well as suggestions of how to bring in new knowledge bases to help improve long-termism.

The full report accompanying this note contains a compendium of case studies, as well as examples of biodiversity integration measures adopted by companies.

## Why should businesses care about biodiversity?

Biodiversity, the variability between living organisms, underpins ecosystem services which create flows of benefits for human wellbeing and supports sustainable economic development (see Figure 1).

Biodiversity directly and indirectly supports multiple global and local industries. However, the world is experiencing unprecedented rates of biodiversity loss with predictions stating that this trend will continue. This will create not only declines in societal well-being but also economic stability. For example, The Economics of Ecosystem Biology (TEEB) put the value of the total annual economic cost of biodiversity loss and ecosystem degradation at between US\$2 and US\$4.5 trillion (3.3 – 7.5% of global GDP), which includes losses attributed to several other risks (e.g. inland flooding and infectious diseases) to which biodiversity is connected.<sup>(i)</sup>



**Figure 1. Relationship between biodiversity, its benefits and corporate value. Adapted from Maes et al., (2013)<sup>(vi)</sup>**

Biodiversity loss can lead to resource scarcity and/or supply chain disruption, increased operational costs or even lead to permanent loss of a resource or service putting future business operations at risk. However, despite a number of reports and articles stressing the vulnerability of businesses exposed to biodiversity risk<sup>(ii. iii. iv. v)</sup> it is not yet fully recognised as a material issue for many businesses.

## What are biodiversity risks?

The World Economic Forum defines 'biodiversity risk' as business risks related to biodiversity in the broadest sense. Biodiversity risks manifest themselves through biodiversity impacts and biodiversity dependencies. See Table 1 for categories of biodiversity risk.

A study by Vigeo Eiris<sup>(v)</sup>, an ethical investment research company, found 47% of FTSE companies that have a medium to high impact on biodiversity had no policies in place to manage exposure to biodiversity risk. In addition, only 6% of these companies had 'good' policies (i.e. evidence of a site level biodiversity action plan or certified sourcing scheme).

Table 1. shows that biodiversity risks underpin and bind many business risks. Furthermore, biodiversity risk is constantly evolving as new public policies and regulations are being developed in response to biodiversity loss and ecosystem degradation. This puts pressure on business managers to improve their understanding and management of biodiversity and ecosystem impacts and dependencies, whilst also developing new business solutions to meet these challenges.

**Table 1: Biodiversity related risk categories. Adapted from ACCA (2012)<sup>(vii)</sup>, TEEB (2012)<sup>(i)</sup>**

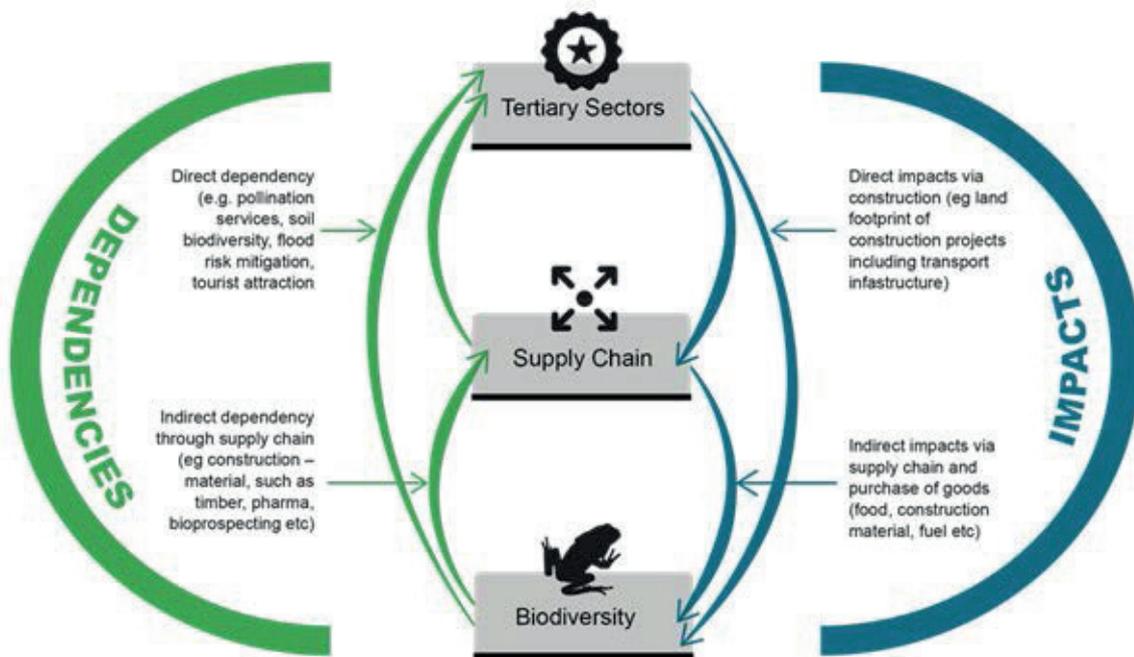
Risk Category	Type of Risk
<b>Operational</b>	<ul style="list-style-type: none"> <li>▪ Scarcity, or quality of raw materials (e.g. limited natural resources such as timber, fish stocks, fresh water).</li> <li>▪ Disruptions to business operations (e.g. heightened natural hazard frequency, such as flooding due to degraded ecosystems).</li> <li>▪ Supply chain risks (e.g. disruption to supply or increased cost of essential materials procured from biodiversity sensitive areas).</li> </ul>
<b>Regulatory and legal</b>	<ul style="list-style-type: none"> <li>▪ Restrictions on access to land and resources (e.g. restricted operations in ecologically sensitive areas and restrictions on threatened biodiversity resources).</li> <li>▪ Litigation (e.g. for environmental damage).</li> <li>▪ Compensation i.e. where mitigation isn't possible, also termed offsetting (e.g. Section 106 compensation mechanisms under planning regulations).</li> <li>▪ Procurement standards (e.g. restrictions on businesses not complying).</li> <li>▪ Delay in obtaining permits (e.g. for construction projects).</li> </ul>
<b>Reputational</b>	<ul style="list-style-type: none"> <li>▪ Damage to brand or license to operate (e.g. if products or operations negatively impact biodiversity).</li> </ul>
<b>Market and product</b>	<ul style="list-style-type: none"> <li>▪ Consumer preferences (e.g. trends and preferences for products with fewer biodiversity impacts).</li> <li>▪ Purchaser requirements (e.g. supply chain requirements that include biodiversity safeguards).</li> </ul>
<b>Financial</b>	<ul style="list-style-type: none"> <li>▪ Cost of capital or lending requirements (e.g. financial blocks to companies negatively affecting biodiversity).</li> <li>▪ Insurance risks (e.g. insurance premiums affected by how companies manage biodiversity issues).</li> </ul>

## The Tertiary Sector

This study examines tertiary sector industries providing the following services:

Communication	Business
Education	Social
Construction	Tourism
Engineering	Travel
Retail	Recreation
Waste management	Cultural
Financial	Sporting
Health	Transport
	Distribution

All tertiary sector industries depend on biodiversity to some extent either directly or indirectly. Figure 2 shows the relationship between tertiary sector industries and biodiversity impacts and dependencies.



**Figure 2. The relationship between biodiversity dependencies and impacts within tertiary sector industries**

Whereas primary sectors, such as mining and agriculture, have high direct impact on biodiversity, tertiary sectors often have smaller direct impacts but larger indirect impacts. Companies from a range of primary sectors are voluntarily integrating biodiversity into their operations and channelling funds into environmental protection and biodiversity conservation. Conversely, many tertiary sector companies are doing this only via regulatory compliance and remain unaware of the role biodiversity plays in maintaining their corporate operations. However, any loss of biodiversity that affects the primary sector is likely to have implications for tertiary sector companies, through their supply chain. Yet tertiary sector businesses are often choosing to mitigate their risk without addressing the core issues (e.g. changing suppliers, adopting resource or product substitution, changing investment or loan portfolio). This short-term approach to risk management is unlikely to address the material issue.

The challenge is to turn a globalised, systemic, diffuse risk of biodiversity loss into an individuated risk that can be measured, managed and mitigated by individual businesses and enable them to act, invest, and operate differently.

As many of the risk categories shown in Table 1 overlap, addressing one may simultaneously reduce others. Some risks, such as financial and operational risk, may unfold over a longer time horizon when biodiversity loss becomes more visible and starts affecting corporate operations. By contrast, reputational risk is more short-term in nature.

## Survey respondent's perception of risk

Biodiversity represented an important issue for survey respondents yet only 10% indicated that their business had been affected by biodiversity loss. This supports the perception that, due to diffuse supply chains, biodiversity loss seems remote from an individual business so is not treated as a material issue.

Examples of biodiversity risk identified included:

- Access to land;
- Delays in planning and project delivery with consequential costs and reputational risk following lack of early consideration of biodiversity risks;
- A rise in costs due to scarcity of raw material;
- Affected retail grocery supplies because of loss of soil biodiversity.

## Barriers to recognising biodiversity

Businesses often face the following barriers preventing incorporation of biodiversity risks into decision making:

- Many companies do not know how to measure and report effectively on biodiversity due to lack of consistent 'currency' or metrics.
- Investors and other stakeholders rarely demand data on biodiversity impacts and dependencies.
- The absence of a compelling business cases, lack of prices and linking biodiversity risk to tangible financial metrics, results in a perceived lack of importance of the issue amongst many company managers and investors.
- There is limited understanding of the links between biodiversity losses and ecosystem functioning making it more difficult to infer how biodiversity loss leads to an increase in corporate risks.
- Biodiversity issues frequently go beyond the boundaries of direct ownership and control and so outside the scope of corporate influence.
- Biodiversity risks are partly based on external factors not under the company's control for example: reputational risk is created by the perception of trust and confidence of external stakeholders on how business operates; and regulatory and legal frameworks often result from societal pressures.
- Planning and managing investments favours an option that minimises early costs but costs of biodiversity loss accumulate gradually and so are less visible to decision-makers.

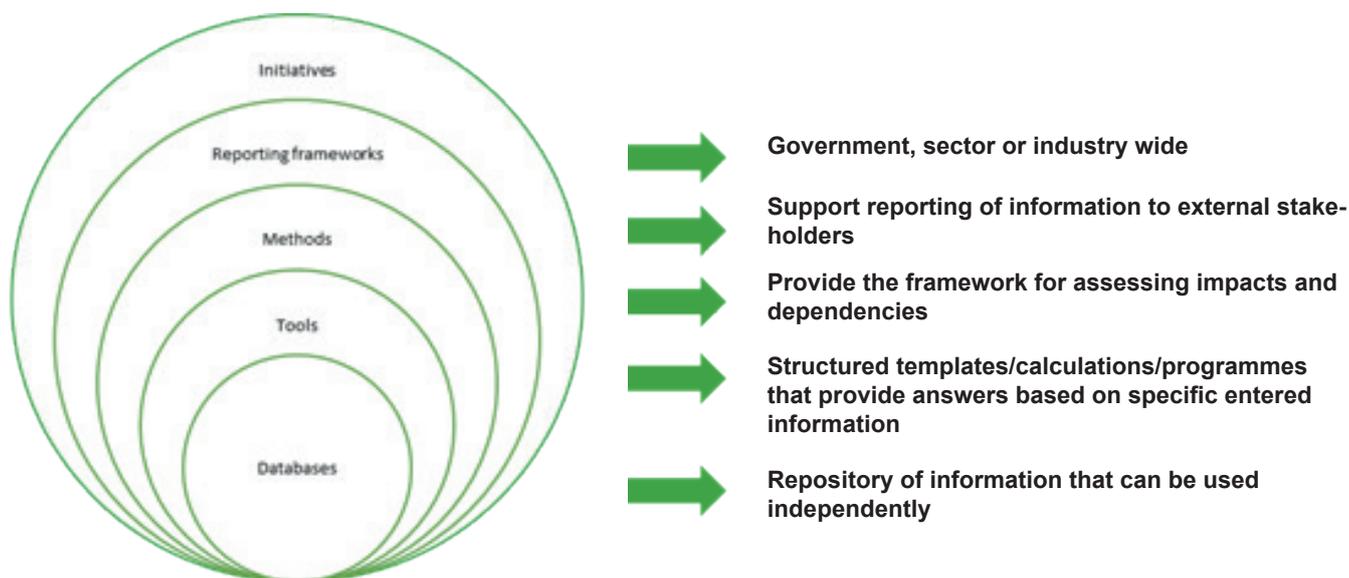


Figure 3. Hierarchy of biodiversity relevant approaches to scoping risk and opportunity.

### Biodiversity risk and opportunity profiling

Risk profiling can highlight which business operations could be exposed to biodiversity risk and how. Some of the strategies that can help companies identify potential biodiversity related risks and opportunities are:

- Consolidating sectoral information (e.g. through fact sheets) about the main impacts and dependencies and associated risks and opportunities.
- Identify critical points in the supply chain and operations where key biodiversity risks arise, and where opportunities could be maximised.
- Include quantitative information to enable assessment and visualisation of the magnitude of potential exposure across operations and the supply chain using scoping tools such as ECO-LCA<sup>(viii)</sup> or BioScope<sup>(ix)</sup>.

Brand accreditations have been very successful in encouraging the uptake and implementation of biodiversity integration in retail supply chains. Examples of accreditations include the Marine Stewardship Council (MSC), the Forest Stewardship Council (FSC) certification, and the Roundtable on Sustainable Palm Oil (RSPO).

Awards are opportunities for showcasing best practices. For example, the CIRIA (Construction Industry Research and Information Association) BIG (Biodiversity Interest Group) Biodiversity Challenge commitments and awards recognises those businesses which go above compliance to enhance biodiversity.

An overview of the landscape that supports biodiversity decision making is presented in Figure 3.

### Opportunities for integrating biodiversity

While many of the dependencies and impacts with regards to biodiversity loss may not be recognised as a material risk, opportunities presented by biodiversity can often encourage companies to take a more proactive and engaged response. Table 2 outlines some of the biodiversity opportunities that that may benefit tertiary sector businesses.

**Table 2. Biodiversity related business opportunities. Adapted from TEEB(2012)<sup>(i)</sup>**

<b>Operational</b>	<ul style="list-style-type: none"> <li>Monitoring biodiversity impacts across operations can reduce cost and increase security of supply.</li> <li>Benefits from increasing biodiversity driven design such as water-use efficiency or building an on-site wetland to eliminate the need for new water treatment infrastructure.</li> </ul>
<b>Regulatory and legal</b>	<ul style="list-style-type: none"> <li>Engaging governments to develop legislation, policies and incentives to protect or restore ecosystems that provide services a company needs.</li> <li>Improve compliance by adapting policies and practices near protected areas.</li> </ul>
<b>Reputational</b>	<ul style="list-style-type: none"> <li>Benefits from implementing and communicating sustainable purchasing, operating, or investment practices that help product differentiation and improve corporate image as consumers become more aware of sustainability issues.</li> <li>Investment in nature conservation as a means to preserve sustainable supplies and also engage with local suppliers.</li> </ul>
<b>Market and product</b>	<ul style="list-style-type: none"> <li>Developing new products and services that reduce consumer impacts on ecosystems, including selling certified sustainable products.</li> <li>Capturing new revenue streams from unrealised company-owned, natural assets, such as wetlands and forests, from which new markets, such as wetlands and forests, but for which new markets or payments for ecosystem services could emerge.</li> </ul>
<b>Financing</b>	<ul style="list-style-type: none"> <li>Access to more favourable financing terms or improved access to capital for companies supplying products and services that improve resource efficiency or restore degraded ecosystems or have no negative impacts.</li> <li>Better financing terms for companies that report biodiversity related information and have developed actions or mitigation plans.</li> </ul>

### Collaboration with biodiversity experts to maximise opportunities

A number of successful collaborative partnerships between biodiversity experts and businesses have emerged to navigate the complexities of identifying biodiversity risks and maximising associated opportunities. Such collaborations can yield many benefits including:

- Enhancing corporate reputation;
- Increasing access to land and license to operate;
- Mitigating risk; and
- Obtaining access to specialist expertise.

### Collaboration between sectors

In addition, there is potential for inter and intra sector collaboration to address issues that impact multiple businesses. One obvious inter-sector collaboration is through accreditation of suppliers. This could regulate supply and promote sustainable management throughout the supply chain.

### Survey respondents' perceived collaboration barriers

Despite some successful examples, survey responses reveal some key barriers preventing collaboration. These included:

- Businesses finding biodiversity experts expensive, This may be a lack of perception of value rather than direct cost (i.e. environmental consultants are less expensive than many);
- Lack of clarity concerning links between biodiversity and dependencies; and
- The perception that biodiversity professionals lack the required understanding of critical business objectives to tailor professional services appropriately.

### Survey respondents collaboration recommendations

According to survey respondents, collaboration could be better facilitated by:

- Involving experts at early stages of planning major projects to recognise the financial implications of not doing so and ensuring biodiversity is not considered solely as an "after-thought";
- Integrating biodiversity at all levels from strategic to operational across all service areas; and
- More prominence and approachability of experts.

## Summary

Communicating how biodiversity affects day-to-day operations in tertiary sector industries is complex. Yet, the opportunities presented by correctly considering biodiversity in a corporate context, such as developing new products and entering new markets, has been a major factor in driving front-runner companies to take an informed strategic approach to biodiversity issues. To account for biodiversity dependencies and impacts, a top down approach (e.g. risk and materiality assessment, risk profiling and identification of focus areas) can be used in conjunction with a bottom up technical approach whilst also facilitating engagement between experts and business. Overall, businesses can sustain long-term value creation opportunities by extending considerations of biodiversity throughout the supply chain and implementing actions beyond regulatory compliance.

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