The spectrum of corporate biodiversity indicator applications for business

Background

Many businesses seek to develop biodiversity indicators to inform business decision-making. However, nature is complex, and serious challenges exist to develop indicators that can cut through this complexity and display clear and simple measures of biodiversity through space and time that are relevant to business needs.

Furthermore, from a business perspective, indicators are needed for many different reasons, and at very different levels, from site all the way to corporate, and for very diverse audiences. These differences clearly influence the development of the indicators.

The IUCN and the University of Oxford have a shared interest in bringing the latest thinking from the conservation community and science to business. We have come together to clarify the variety of applications where biodiversity indicators are currently used by businesses, and may be adopted in the future. Biodiversity indicators will not be developed in this project. Rather, this project seeks to define the spectrum of applications where businesses use or require biodiversity indicators.

This spectrum will be used as the foundation for discussion at the upcoming workshop at the University of Oxford with conservation and environmental scientists. In this workshop, we aim to begin to develop a set of science-based recommendations for the development and use of indicators for a variety of business applications. See workshop agenda for more details on the day's focus.

The Spectrum of corporate biodiversity indicator applications for business

To facilitate the reflection on which already existing frameworks and systems can be "adopted" by business to address their "needs for indicators", IUCN and the University of Oxford have developed the spectrum of business applications for biodiversity indicators through consultation with practitioners who work with business, and the IUCN business network[1]. This spectrum demonstrates the breadth of contexts where biodiversity indicators are relevant to businesses: from site-level to corporate-level assessment of risk, dependencies, impacts and gains; to internal decision-making (e.g., relating to risk management and accounting), and to meet a variety of external reporting requirements (e.g., certification, non-financial disclosure, and regulation). Biodiversity may be assessed as a one-off, or assessments may need to be repeated through time. Biodiversity may be assessed by companies for their current operations (e.g., environmental management of assets), but also often is assessed for future operations (e.g., forecasting to screen

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for risk and differentiate between alternative investments or operations). Finally, companies have a variety of spatial contexts in which they require biodiversity indicators – from their site-level operations, through their supply chains, and at aggregated levels such as business unit, product, or corporate-level.

The 8 identified business applications of biodiversity indicators have been organized into 4 different levels at which typically business decisions are made using biodiversity indicators:

A. Biodiversity management and performance at individual site and landscape level
B. Biodiversity management and performance at cluster, business unit, corporate or product levels
C. Corporate level communication and external disclosure of biodiversity management and performance
D. Third-party biodiversity performance assessment / rating of biodiversity management and performance

While there may seem to be overlaps between each application, they are then further differentiated depending on the:

• context where the business question is relevant
• current and planned operations
• typical owners of the assessment
• primary audience (internal and external stakeholders)
• assessment scope (the spatial scale and temporal frequency of the decision)

How to use the Spectrum of corporate biodiversity indicator applications for business during the Workshop

During the workshop, the Spectrum will become handy when we discuss the various systems and frameworks used in conservation, as we will be able to check which specific applications the various frameworks could support specific business applications for biodiversity indicators. Furthermore, the break-down in the specific applications can also support the discussion on principles for the development and use of indicators.

Annex: What is a biodiversity indicator and other key terms

While we will not be developing indicators in this project, it is important to define what indicators are. Indicators should be a measure that conveys information about more than itself. Indicators should be relevant to a 'key question' or objective of an organisation, and be used to inform decision-making, and/or trigger action. There are a number of key terms that we use in this table to reduce misunderstanding (based on feedback that we've received already from conservation practitioners). See box below.

Biodiversity indicators are used to represent components of the environment that are relevant to decision-making - the **state** of biodiversity (e.g., a species or ecosystem), or the **pressures** (e.g., a threat) on biodiversity. Related indicators that are indirect measures of biodiversity, can also include business actions (e.g., the business **response** to mitigate biodiversity impacts), and the **benefits** that people derive from biodiversity (e.g., ecosystem services). Indicators can be a **single measure** (e.g., the abundance of a species of bird), or a **composite/constructed measure** (e.g., an aggregation the abundance of a threatened species of bird, forest condition and extent).

Indicators can draw on **raw data** (e.g., from biodiversity monitoring programmes), **modelled data** (e.g., from global models like the PREDICTS model) or **expert judgement** (e.g., experts estimates

of the likelihood and consequence of potential impacts in risk assessment). Indicators typically require information to be synthesized (e.g., through statistical analysis or assessment against a reference condition) to translate scientific evidence into a format that is relevant for decision-making. This process on analysis or synthesis is critical to ensure indicators are fit-for-purpose and are addressing the key question(s) or objective(s) of an organisation.

Box: Key definitions

Scale of business applications:

Site – a discrete area where there is a direct business footprint (and therefore potential impact on biodiversity) which can include upstream production sites and downstream offices, warehouses, stores, etc.
Landscape – an area surrounding a site, which is defined as an ecological unit (e.g., a catchment) or important area by stakeholders, where there is a potential for a business to contribute to indirect or cumulative impacts with other key operators in a landscape.
Business-unit – sub-group of overall corporate, typically grouping at regional or brand or subsidiary level
Corporate – accounts for the entire business operations (multiple sites, landscapes, supply chains, commodities, and products) and investment portfolio.
Supply Chain – a system of organisations from resource extraction/production through to product development and delivery to customers and eventual waste/recycling of materials.
Commodity - a raw material or primary agricultural product.
Product – a finished product made up of multiple commodities

Audiences of business applications:

Internal (teams/managers):
Operations – responsible for managing business operations
Finance– responsible for financial accounts and reporting
Procurement – responsible for sourcing products and raw materials
Sustainability/corporate social responsibility – responsible for directing and reporting on sustainability initiatives
Environment – responsible for managing environmental impacts of company operations, sometimes addressed under HSE (Health, Safety, and Environment)
Risk - responsible for risk management relating to environmental impacts and due diligence
Asset – responsible for management of investment portfolios
External:
Shareholders – shareholders of publicly listed companies
Stakeholders – the general public with an interest in the company (e.g., through Sustainability Reports) or interaction with company operations (e.g., within the landscape where a company operates)
Certification bodies – organisations like the Marine Stewardship Council and Forest Stewardship Council who provide independent certification of sustainably sourced natural resources
Regulators – government agencies that require reports from companies (e.g., through compliance & regulation)
Lenders – Financial institutions that invest in specific projects (i.e., banks)
Investors – Banks or firms that invest (e.g., purchase shares) in companies
Civil society groups – NGOs and charities that act as watchdogs to assess the environmental performance of companies
Tertiary sector – Businesses that provide services (e.g., transport, distribution, wholesale, and retail), which rely on the secondary sector (e.g., manufacturing), and the primary sector (e.g., mining).