Developing, measuring and communicating the outcomes of corporate biodiversity strategies

Joseph W. Bull, Christine Bryant, Julia Baker and E.J. Milner-Gulland

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Wild Business is a specialist UK-based consultancy, primarily working on projects concerning the relationship between businesses and biodiversity, ecosystem services and natural capital. The work Wild Business undertakes is founded upon robust ecological science, and members of the team continue to pursue ecological and environmental policy research activities, with the aim of remaining at the forefront of thinking in the field. Since being founded in 2012, Wild Business has undertaken a series of projects on behalf of both private and public sector organisations, in the UK and in various other countries throughout the world. All projects undertaken emphasize that nature can be of value to business, and that businesses can play a key role in biodiversity conservation and restoration.

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Imperial College London's Grand Challenges in Ecosystems and the Environment (GCEE) Initiative is a global hub for addressing key environmental challenges for humanity, carrying out internationally excellent science with a focus on finding solutions to these challenges in a collaborative manner, and acting as an interface between science, practitioners and policy makers. Based at Silwood Park, but with members from across Imperial College London, the UK, and the globe, this initiative brings together a multi-disciplinary group of researchers to tackle some of the greatest environmental challenges facing the world. Professor E.J. Miner-Gulland is the Director of GCEE.

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DEVELOPING, MEASURING AND COMMUNICATING THE OUTCOMES OF CORPORATE BIODIVERSITY STRATEGIES

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Contents

Executive Summary

Nature is a crucial emerging topic on the corporate sustainability agenda. Businesses and other organisations, throughout the world, have begun to make substantial progress in the development of corporate biodiversity strategies. However, there remain significant challenges in effectively implementing such strategies. One challenge, in particular, is how to appropriately measure progress in terms of real outcomes for nature, and communicate a company's biodiversity performance.

This document reports on the outcomes of discussions held at a workshop hosted by the Grand Challenges in Ecosystems and the Environment (GCEE) initiative at Imperial College London. The GCEE workshop was on the topic of developing, measuring and communicating the performance of corporate biodiversity strategies. It is our belief that the array of currently available resources is not yet fulfilling the requirements of companies implementing corporate biodiversity strategies. The workshop was intended to confirm whether this is true, why this is the case, and to explore what can be done better to support companies to implement biodiversity strategies.

Workshop delegates generally agreed that key challenges facing those corporates looking to measure and communicate their performance, in relation to biodiversity strategy, could be grouped into three categories: (i) data set quality and availability; (ii) scalability i.e. scaling from project or site level up to corporate level; and, (iii) understanding the wider benefits of biodiversity. For each category in turn, the report details the challenge, and outlines key recommendations from workshop delegates for beginning to address these challenges. The recommendations generally require a combination of novel research and mechanisms for bringing existing research findings into practice.

Recommendations around research requirements going forward were combined into a proposed research and communication agenda. Again, proposed activities could be grouped into three categories: (a) cross-sector engagement and learning/communication of best practice; (b) development of an expert system and decision tool; and, (c) further academic engagement.

It was concluded that, despite the wealth of guidance available on developing corporate biodiversity strategies, real challenges do exist in measuring and communicating the outcomes of those strategies for nature. There are a variety of groups working to resolve these challenges, and we do not pretend to be alone in drawing this conclusion. Having here captured some of the most pertinent challenges, it is clearer where new and existing research can support progress on this topic.

In the appendices to this report, we include for reference a list of resources available to companies to help develop their biodiversity strategy, as well as the outcomes of a light review of existing biodiversity measures used by large corporations.

1. Introduction

Businesses and other organisations, throughout the world, have begun to make substantial progress in developing corporate biodiversity strategies. There are a number of toolkits and guidance documents available to help these organisations go beyond legal compliance, and proactively integrate biodiversity into business models. However, there remain significant challenges in effectively implementing biodiversity strategies – one in particular is how to measure a company's biodiversity performance. Based upon conversations had with leading businesses at a 2014 workshop devoted to the topic, this report highlights some challenges businesses face in developing, measuring and communicating the outcomes of corporate biodiversity strategies. The report could be used to inform the research agenda in going forward and overcoming these difficulties.

In November 2014, the Grand Challenges in Ecosystems and the Environment (GCEE) Initiative at Imperial College London hosted a workshop on "Developing, measuring and communicating the outcomes of corporate biodiversity strategies". This workshop was attended by 18 individuals from the biodiversity and environmental management teams of 11 separate companies belonging to a range of commercial sectors, from consumer goods to oil and gas. Attendees were invited to share their organisations' experiences, specifically in relation to the following four areas:

- how corporate biodiversity objectives have been set and why;
- which toolkits have been used to achieve objectives;
- the challenges in implementing these toolkits; and,
- the measures used to monitor performance and progression towards targets.

The fourth of these areas was a key focus, i.e. performance of corporate biodiversity strategies in terms of *outcomes for nature*. This is in addition to merely tracking the *actions* undertaken by companies (e.g. developing biodiversity action plans). The overall objectives of the workshop were categorised as:

- Exploring the **challenges** faced by businesses in measuring and reporting progress of their corporate biodiversity strategies;
- Discussing **what is needed** in order to meet these challenges; and
- Considering how collaborative research and engagement between industry and academia could help **meet these needs**.

In this report, we first provide background information in relation to corporate biodiversity strategies, including an overview of currently available supporting resources. The following chapters set out some of the key outcomes of and recommendations from the aforementioned GCEE workshop. These recommendations provide a foundation for a suggested research agenda going forwards, and this is outlined in the final chapter.

2. Corporate Biodiversity Strategies

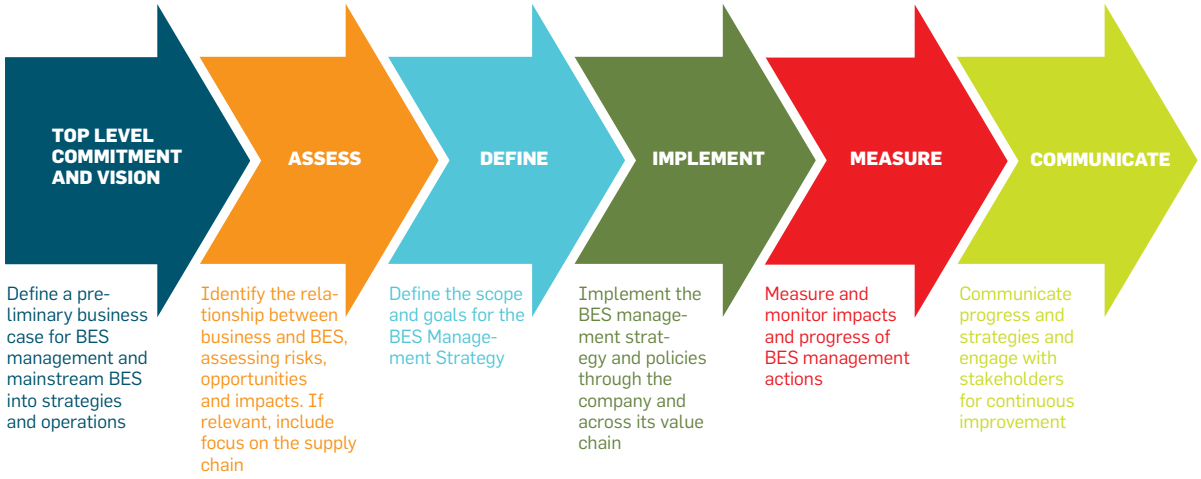
There is a plethora of frameworks, guidelines and tools available for corporations concerned with integrating biodiversity considerations into business strategy and practice. As a means of categorizing these approaches we utilized the United Nations Global Compact's Biodiversity and Ecosystem Services Management Model (UNGC BES Management Model; Fig. 1).

The best starting point for any organisation aiming to create and deliver a biodiversity strategy is to develop a high-level commitment and vision. Various companies have made some form of public commitment to conserve biodiversity (or nature, natural capital, ecosystem services, and other related commitments). Not least, there are the 32 multinational companies recently identified by Rainey et al.[1] that, since 2001, have committed to achieving goals of 'no net loss' or a 'net positive impact' upon the environment alongside all operations. Of these, 18 specifically mention biodiversity as a primary objective.

We do not describe all stages of the UNGC BES Management Model further in the main text of the report, as our focus here is primarily upon the challenges businesses face in *measuring* and *communicating* the outcomes of biodiversity strategies. Instead, we include information on the different stages of the Model in the Appendices:

- Appendix I of this report details the six stages of the UNGC BES Management Model, alongside complementary frameworks, guidelines and tools.
- Appendix II contains a summary of currently available frameworks, guidelines and tools themselves.

***Figure 1**: Overview of the UNGC Biodiversity and Ecosystem Services Management Model*[2]



So how do companies currently measure biodiversity performance? Table 1 contains a sample of 21 companies, taken from a broader database of companies known to be showing a degree of leadership on biodiversity strategy. Based upon a simple review of information available online, the Table points to their current biodiversity reporting measures. Reporting efforts reflect the final stage – 'communicate' – of the UNGC BES Management Model.

[1] Rainey, H.J., et al. (2014) "A review of corporate goals of No Net Loss and Net Positive Impact on biodiversity" *Oryx*
[2] UN Global Compact and IUCN, 2012; ISBN: 978-2-8317-1501-8

***Table 1**: Indicators of actions and biodiversity outcomes being reported by a sample of companies (in alphabetical order), relevant to the final stage ('communicate') of the UNGC BES Model*

Company	Area of biodiversity rich land controlled	Description of biodiversity impacts	Habitats protected / restored	Biodiversity impact strategy developed	Number of IUCN Red List species impacted	**Other indicators, incl. bespoke**
Alcoa	•	•	•			•
Balfour Beatty	•	•	•	•		
BG Group	•	•	•	•		
BP	•	•	•	•	•	•
BAT		•		•		
Carillion		•	•	•		•
Cemex	•	•	•	•	•	•
Dow Chemical	•	•	•		•	
Glencore	•	•				•
Holcim	•					•
Kering (Puma)	•	•	•	•	•	
Kingfisher	•	•	•			
Lafarge Group	•		•		•	•
Nestle	•	•	•	•		
Network Rail						•
Rio Tinto Group	•	•				•
Shell	•	•	•	•		•
Total	•	•	•	•	•	•
Syngenta		•	•	•		
Unilever	•	•	•	•		
Walt Disney	•	•	•	•	•	

The first five columns of Table 1 are commensurate with the Global Reporting Initiative's indicators on biodiversity[3], and the final column refers to sector-specific reporting, including that within the oil and gas and cement sectors. A description of each indicator referred to here is contained within Appendix III.

Biodiversity Actions vs. Performance

Though indicators of biodiversity change are available and used at a global policy level (e.g. for measuring contributions to the CBD Aichi targets), these do not currently translate through into company-level indicators of biodiversity change. As can be seen in Table 1, various indicators are in use for monitoring and measuring the implementation of corporate biodiversity strategies. These relate principally to actions undertaken to manage biodiversity (e.g. "habitats protected"), or to predicted impacts upon biodiversity measured through proxies (e.g. "area of biodiversity-rich land

[3] EN11 to EN15. "Biodiversity – a GRI Reporting Resource". (2007) https://www.globalreporting.org/resourcelibrary/Biodiversity-A-GRI-Resource-Document.pdf . For more information, see Appendix I.

controlled"). What current indicators do not tend to do well is measure *performance*, in terms of the actual outcomes of corporate biodiversity strategy from nature's perspective. There is a difference between measures that relate to *actions* taken by corporations with respect to biodiversity, potential *impacts* upon nature, and measures that relate to actual outcomes or *performance*.

Three categories of biodiversity indicators could be said to currently exist:

1. *Potential impact/risk:* measures biodiversity sensitivity (e.g. the GRI and IPIECA indicators, on number of protected areas and protected species). These 'snapshot' indicators do not necessarily link to measuring biodiversity impacts on the ground.
2. *Activities*: input (size of budget, number of staff, etc.) and process (number of biodiversity action plans). A measure of actions taken, where there are no clear links to output in terms of biodiversity *performance*.
3. *Action*: number and type of site-specific biodiversity initiatives, e.g. the planting of wildflower meadows on factory sites. These do not necessarily link either to *impacts* or to *performance*.

So, we consider a gap to exist in terms of indicators for measuring and communicating the outcomes of corporate biodiversity strategy, which relates to biodiversity outcomes or *performance*. The challenge of developing indicators that capture performance arises through difficulties in: quantifying biodiversity sensitivity; determining how actions achieve biodiversity targets; understanding the feedbacks between potential impact/risk and performance; and, developing indicators that are robust proxies for biodiversity change.

Biodiversity Measures and Trends

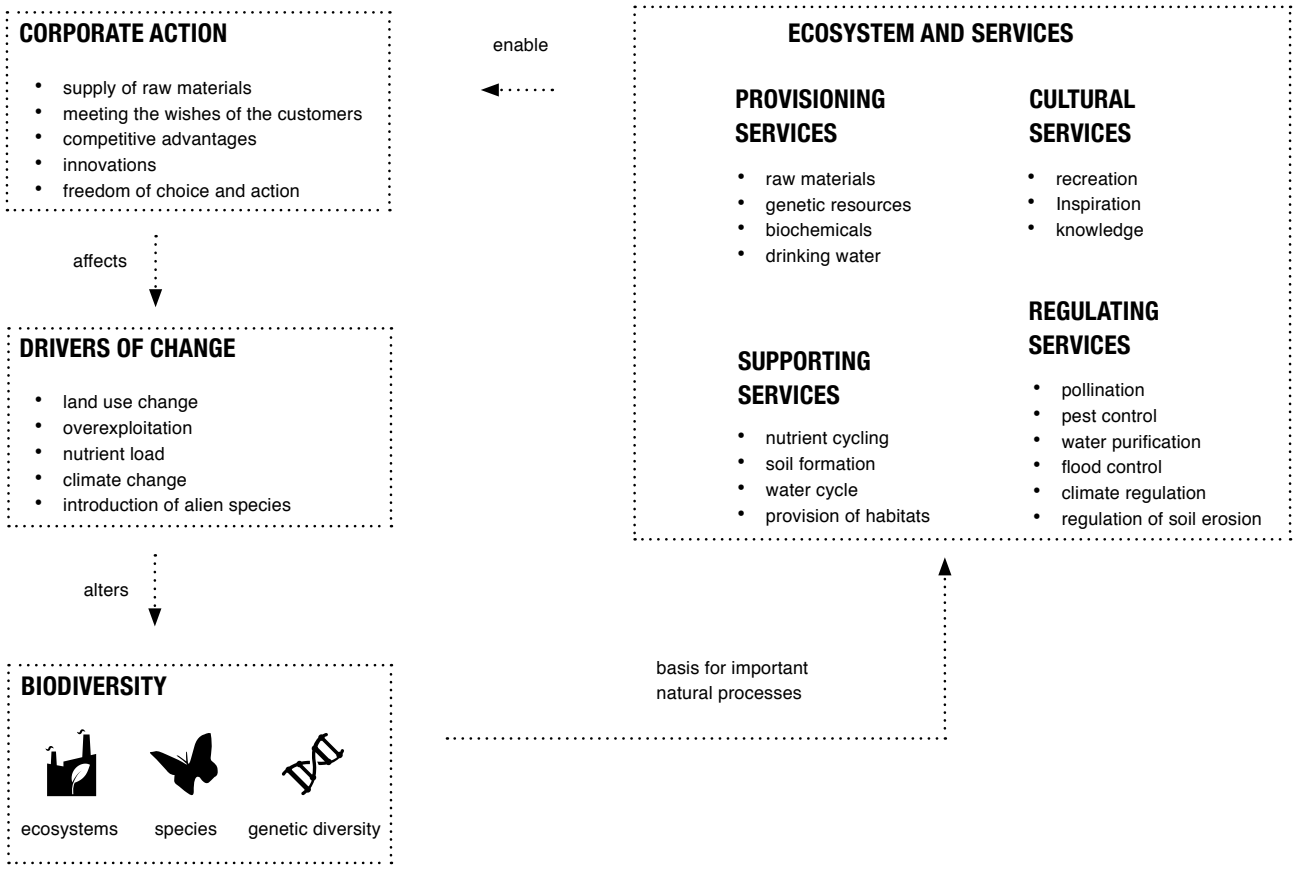
An increasing number of companies make outcome-based biodiversity commitments (e.g. No Net Loss, or Net Positive Impact), but there seems to be a gap in terms of how to measure this. Potential measures do exist in theory and associated with related areas of academic research (e.g. through biodiversity offset research).

There is increased interest in understanding the outcomes of corporate biodiversity initiatives upon nature. This requires performance measures that, amongst other things:

- can be aggregated across different regions/countries;
- can be used to benchmark against other companies; and
- can be used to communicate performance to company decision-makers and the public.

Note: as implied above, whilst some companies focus on biodiversity, others are interested in building strategies around related topics such as natural capital, or ecosystem services. Given the interrelatedness of biodiversity and ecosystem services (Figure 2), this report includes within scope leading frameworks for the inclusion of ecosystem services and natural capital in corporate management strategies.

***Figure 2**: Relationship between biodiversity, ecosystem services and corporate action, from*[4]



In support of the areas for improvement we perceive in corporate biodiversity strategy development, the Natural Capital Committee's guidance for corporate natural capital accounts[5] also notes the challenges in providing a complete picture of biodiversity. The Committee suggests that the implementation of biodiversity strategies should be seen as an iterative process of improvement.

The goal of this report, and of the workshop that led to it, was to capture the opinions and comments of those working within companies to design and implement corporate biodiversity strategies. Therefore, we do not include further information here in the main text on the state-of-the-art for corporate biodiversity strategies – further information in this regard can be found in the Appendices I – II, and the various documents cited in Appendix II.

[4] Global Nature Fund (2014) "How business values natural capital". www.globalnature.org

[5] Natural Capital Committee (2015) "Developing corporate natural capital accounts". https://www.naturalcapitalcommittee.org/

3. Key Workshop Outcomes

The GCEE workshop in November 2014 was attended by 18 individuals across a range of sectors (Table 2). After introductory presentations, the workshop branched off into two successive breakout sessions: the first focussed on challenges of measuring and reporting biodiversity performance, and the second proposed recommendations for addressing the identified challenges. The workshop concluded with a plenary discussion to set the research agenda going forward.

***Table 2**: broad sectors represented by participants in the November 2014 GCEE workshop*

Sector	Number of attendees
Consumer Goods	4
Ecological Advisory	3
Extractive and Energy	3
Food and Beverage	3
Transportation	1
Academic	3
Other	1
Total	**18**

The three principal challenges identified by participants in the first breakout session – relating to data sets, scalability, and wider benefits – can be further outlined as follows:

1. **data sets:**
    a. How do we obtain data that are useful, of good quality, and reliable - without being too costly?
    b. Are these data already available, and if so where?
    c. What are we even trying to measure (e.g. outcomes for nature vs. company actions; or, biodiversity vs. ecosystem services)?
    d. How do we work with and motivate regional and local employees and suppliers to ensure that data are collected and reported?
2. **scalability:**
    a. How do we go between local biodiversity performance and benefits, and national or global reporting? Is it even possible to do so?
    b. Are the necessary biodiversity performance measures consistent to any extent between different scales?
    c. How do we capture broad scale impacts from a site-level perspective?
3. **wider benefits of biodiversity:**
    a. What does a sustainable landscape look like?
    b. How do we incorporate the wide social outcomes of biodiversity initiatives into performance measurement?
    c. How do we make the case for biodiversity?

These challenges, and those actions recommended to address them, are detailed below. A more comprehensive table of challenges and recommendations derived from the breakout sessions is presented in Appendix III.

1. *Data set challenges*

The data challenges reported by participants fall within a few key categories. One is *relevance* - knowing which data to collect at an appropriate scale. Another is *rapidity*, which is tied to *cost-effectiveness* – biodiversity data collection is often a time-intensive and costly process, and a key challenge is ensuring data are highly targeted and efficiently gathered. Finally, there is a challenge around ensuring *reliability*, without having to divert too many resources towards data verification.

Recommendations

- Establish the business case for biodiversity data collection. Tie elements to cost, schedule or reputation to encourage corporate managers to get on board.
- Define the end-goal and methodology, specifying what is needed. For example, is No Net Loss a goal? A detailed method is required, including an understanding (and communication) of the philosophy behind the method.
- Enhance awareness – understand what data are already available (e.g. open access databases, public sector data, etc.). It is imperative that data used are up-to-date and robust.
- Manage and share data – establish an internal data management strategy. Share data within the company as well as externally (e.g. via academic data journals, or local biological record centres).
- Incorporate background trends when monitoring and when generating baselines.

2. *Scalability challenges*

A scientific challenge exists in scaling biodiversity measures from the local level to the global level. The equivalent business issue is taking measures collected at the site level, and scaling up to the broader (e.g. global or corporate) scales. Issues of connectivity and taking a landscape-scale perspective beyond the immediate purview of the company exacerbate these scalability challenges. One workshop breakout session pondered whether it is 'possible to think at a landscape scale, as just one actor within that landscape?' – highlighting the need for companies to work alongside local experts and form partnerships with other land users.

These challenges are further driven by a lack of data on the impact of interventions (i.e. additionality, above the baseline of 'no intervention'), as well as the relative impact of different sectors on landscapes. Another issue is that biodiversity management initiatives, such as Net Positive Impact, are typically at the site scale only and are not easily reportable across portfolios.

Recommendations

- Plan strategically to understand the impact of interventions at the site level. Consider a portfolio of different evaluation types (e.g. mix of in-depth gold standard and rapid appraisal). Engage with local expertise and use partnerships to identify local-scale priorities for biodiversity actions.
- Develop a global 'sense check' of the company's biodiversity measurement strategies. This includes biodiversity mapping, developed in coordination with local partners, scaled to appropriate units for prioritisation.
- Take a bottom-up incremental approach, but with a broader vision. Consider a planetary boundaries approach on a commodity-specific scale. Use simpler global frameworks to frame the local detail.

3. *Addressing the wider benefits of biodiversity*

Communicating the wider benefits of biodiversity in a manner that resonates well internally and with the public is a prime challenge. The working group stressed that articulating the benefits of biodiversity is not the same as measuring it. Participants affirmed that they can describe the social benefits of their biodiversity initiatives (both to employees, and more widely to external stakeholders) but are unsure of how to demonstrate them.

The diversity of landscapes and range of biological diversity itself are also challenges, particularly for organisations that work across different geographical regions. Another topic discussed in detail was that of ethics. The group acknowledged that, just because a biodiversity initiative is sustainable, does not necessarily mean it is ethical.

Recommendations

- Define what a sustainable landscape looks like (e.g. look at Wildlife Trust's Living Landscape strategy). Always consider ethics, not just sustainability.
- Develop the business case for measuring the wider benefits of biodiversity, consider using a modified cost-benefit analysis approach to communicate the results to the decision-makers.
- Examine the trade-offs between biodiversity and other environmental, social, economic variables.
- Articulate and communicate the wider benefits of biodiversity, examining:
    - the positive and negative social aspects of biodiversity
    - when is measurement critical?
    - when is intrinsic value critical?
    - why value biodiversity at all?
    - what is the meaning behind the numbers?
    - what does the organisation and its customers value?

4. Setting the Research Agenda

The following themes were discussed in the final plenary session of the workshop:

- The degree to which metrics could conceivably be common across different sectors, and different scales. It may be that a common metric for biodiversity (e.g. analogous to greenhouse gas emissions in $tCO_2(e)$, for monitoring performance in relation to climate policies) is not possible, but a common framework for defining measures might be.
- The extent to which – even within one company operating in different habitats or regions – biodiversity metrics have to be highly localized rather than common across the company's portfolio.
- The idea that overarching guiding principles behind biodiversity commitments may be common (e.g. to aim for No Net Loss), but that the details of biodiversity strategies developed based upon these principles can vary widely.
- The challenge of communicating biodiversity strategy, and engaging employees, managers, suppliers and the public.
- A need to better learn from best practice, and from case studies.
- Synthesizing information in digestible form, and making use of existing datasets.
- Creation of a landscape-scale vision for biodiversity, e.g. biodiversity opportunity areas.
- A critique in terms of *outcome for nature*. Particularly, are existing initiatives having the "best" possible outcomes?
- Which approaches to conservation are most relevant, including those interventions that are designed to recognize and manage the social value attributable to biodiversity, e.g. ecosystem service assessments?
- The potential for an expert system approach, for instance based around a well-developed decision-tree.

Based upon the plenary discussion, an outline of a possible overall research agenda was developed. It is proposed that this be explored by academic researchers working in the field, in collaboration with appropriate thought leaders in business.

a) **Cross-sector engagement and learning/communication, best practice**:

- Whilst some cross-sectoral platforms do exist (e.g. the Cross Sectoral Biodiversity Initiative, comprised of extractive and finance sector organisations), attendees noted that the workshop brought together a truly diverse array of corporations to discuss biodiversity, and that large areas of common ground were found between attendees;
- One element of the research agenda could be to identify those common challenges that appear across *radically different* sectors, and explore solutions for them;
- Further, researchers could offer useful peer engagement and communication, as well as a mechanism for learning from best practice, across sectors;
- Best practices, tools and performance indicators could be grouped for different sectors. The extent to which practices, tools and performance indicators can be transferred between sectors would be useful to understand;
- Conversely, researchers could explore when and why sector-specific (as opposed to generalised) frameworks and methodologies are most appropriate, and also where different goals and procedures require different metrics and performance indicators.

b) **Development of an expert system and decision tool**:

- It was suggested that common approaches and measures may not be possible – but that a framework for choosing between measures in particular instances would be possible, and useful. Guiding principles may be common across very different sectors and scales of organisation;

- The creation of a form of generalised decision tool (for instance, in the form of a decision tree) seemed popular amongst attendees. Such a tool would be used in establishing how to approach biodiversity management and performance measurement, and link to the array of existing methodologies and data sets in existence[6], as well as identifying a range of new performance measures;
- The application of the tool could be guided via consultation, and expert academic input. This would represent an *expert systems* approach to basic questions when developing biodiversity strategy and performance measures (e.g. whether to take a local or a landscape scale approach to intervention);
- Part of this approach would be to develop a large set of metrics pertinent to the measurement of performance against biodiversity objectives – in terms of outcomes for nature. Consequently, to establish with individual companies which measures would work best for their business and activities. This does not currently exist;
- The framework would have to address the key challenge of how to scale strategy and performance measurement from site level up to corporate (e.g. national or international) level.

c) **Further academic engagement**:

- Researchers could be useful in terms of synthesising information, such as those data sets that are available and the quality of the data. In addition, there may be a role in terms of more clearly defining terminology in objective, scientific terms;
- Researchers could offer extensive scientific critique of existing processes for developing biodiversity strategies, where this might be useful for corporations keen to develop a biodiversity component to operations or corporate responsibility. The same would apply to existing measures of impact, or even performance where the latter exists;
- Finally, there was some interest amongst attendees in terms of how to take a big data approach as a company managing biodiversity challenges. This is an area that should be explored in more detail.

5. Conclusions

Despite the wealth of guidance available on developing corporate biodiversity strategies, real challenges do exist in measuring and communicating the outcomes of those strategies for nature. We do not pretend to be alone in drawing this conclusion; there are other groups now working to highlight and resolve such challenges.

However, the utility and novelty of this report is that we have brought together thought leaders on biodiversity from a very wide range of companies (i.e. across radically different sectors), and asked them directly to contrast and compare their perspectives. In doing so, we have captured a snapshot of the key general challenges facing companies seeking to measure and communicate biodiversity strategy. Further, we have laid out the basics of a research agenda for tackling these challenges.

The way forward requires a combination of novel research and research communication; and, as always, productive collaboration. Our hope is that this report clarifies where new and existing research can support progress on this crucial topic of business and biodiversity.

[6] As set out in Appendix II.

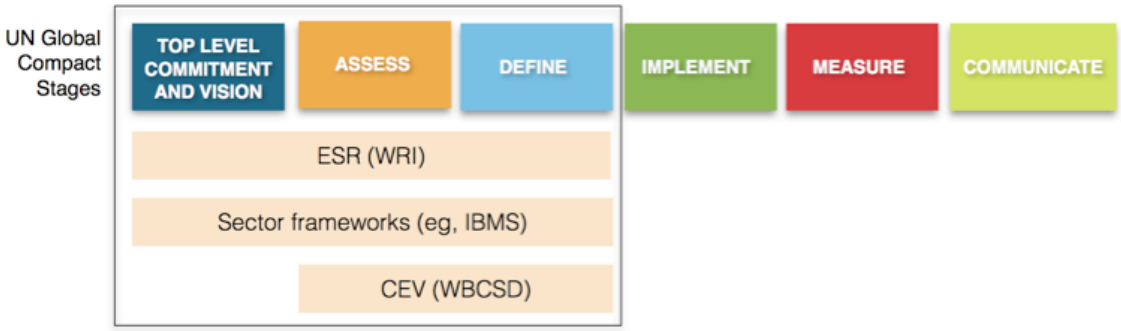
Appendices

Appendix I: Frameworks available

Available frameworks generally focus on: (1) Assessing and defining company-wide biodiversity strategies aimed at minimising impacts on, and delivering positive outcomes for, biodiversity; (2) Implementing company-wide biodiversity strategies into existing environmental management systems and/or newly developed biodiversity management systems; (3) Measuring the outcomes of corporate biodiversity strategies through the use of indicators; and, (4) Communicating the outcomes of corporate biodiversity strategies in sustainability reporting.

These are shown below. The UNGC BES Management Model is shown first, and complementary frameworks (e.g. ESR, CEV) are listed below.

1. Assessing and defining corporate biodiversity strategies



Top level commitment
Top level commitment generally requires a company to first recognize that it may have material impacts or dependencies upon biodiversity, and to establish a company-wide policy as a result.

Best practice companies adopt a policy such as achieving No Net Loss or even a Net Positive Impact on biodiversity alongside operations (see Rainey et al., 2014)[7].

Assessing the need
The next step, having made such a commitment, is to understand to what extent components of biodiversity underpin or restrain business activities. The frameworks in the text box, particularly the World Resources Institute's Ecosystem Services Review (ESR), attempt to provide guidance in this regard.

Beyond understanding how the company's operations rely directly or indirectly upon biodiversity, and establishing potential risks associated with impacts upon biodiversity, it may be useful to understand how competitor and peer companies manage their relationship with nature.

Good practice is to go further, and explore advantages (including monetary values) that would be conferred upon the company by improved biodiversity and ecosystem services (BES) management.

Defining scope and goals
This exploration will lead to the chance to establish a concrete corporate goal and associated objectives, along with a defined timeline for rolling out BES management. This may include establishing working benchmarks to "do no harm" and "do some good" with respect to avoiding, minimizing or negating the company's impact on those BES components most affected by company operations.

[7] Rainey, H.J., et al. (2014) "A review of corporate goals of No Net Loss and Net Positive Impact on biodiversity" *Oryx*

Text box: relevant frameworks, guides, case studies and tools

Frameworks
UN Global Compact (UN)
Corporate Ecosystem Valuation (WBCSD)
ESR (WRI)
Corporate Natural Capital Accounting guidance (Natural Capital Committee)

Sector-specific frameworks
Mining & Metals (ICMM)
Cement & Aggregates (IUCN)
Oil & Gas (IPIECA)

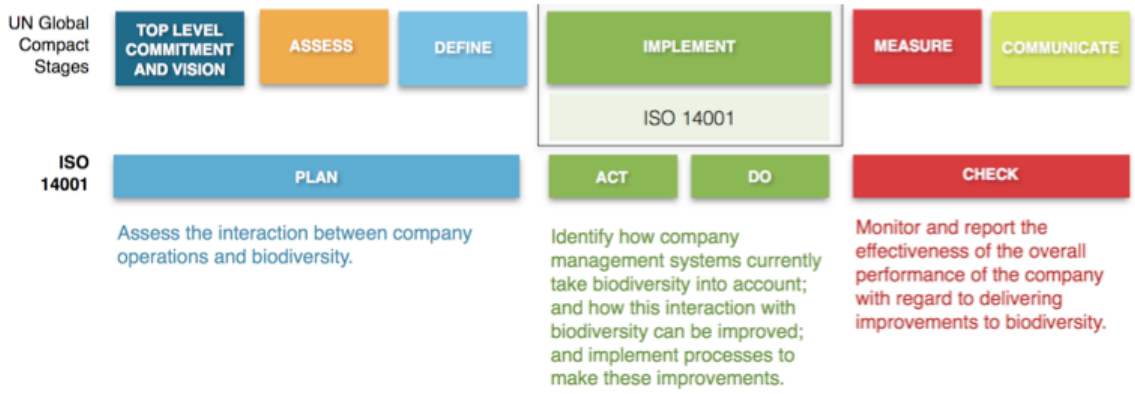
Guides
Are you a green leader? (UNEP)
Biodiversity Management (B&B)
Biodiversity in Good Company
Nature in performance (WRI)

Case studies and examples
BSR - reports on emerging trends

Tools
ARIES
Biodiversity check – EBBC
ESB
IBAT
Natural Capital Asset Check

For more tools, see Eco4Biz by the WBCSD (http://www.wbcsd.org/eco4biz2013.aspx)

2. Implementing corporate biodiversity strategies



Some key topics in the implementation of biodiversity strategies are as follows:

Integrating biodiversity into management systems

Many companies have some form of environmental management system. One widespread framework for building management systems is the International Organization for Standardization's 14001 Guidance Standard, or ISO14001, which is based around the common "Plan-Do-Check-Act" cycle.

The Energy & Biodiversity Initiative (EBI) guide provides a good example of how to integrate biodiversity into ISO14001. For drafting a new policy on biodiversity (monitoring system, written policy, product tracing mechanism, supplier requirements), see the *Biodiversity in Good Company's Corporate Biodiversity Management Handbook*, which includes practical guidance and case studies on implementing corporate biodiversity strategies.

Implementing the mitigation hierarchy

The mitigation hierarchy, as applied to biodiversity impacts, provides a framework for achieving No Net Loss (NNL) or a Net Positive Impact (NPI) upon biodiversity associated with a company's operations. It can take various forms, but a common one is 'avoid-minimize-restore-offset'.

Many companies implement the mitigation hierarchy on a project basis, or first use pilot sites to demonstrate proof of concept. NNL/NPI can be achieved by a series of actions combining impact avoidance, mitigation and ecosystem restoration, followed by biodiversity offsets to address remaining residual impacts.

Collaborating with stakeholders

Communication and collaboration with stakeholders – which might include governments, NGOs, investors, and other companies – is often a crucial component of an effective corporate biodiversity strategy. Not only are some aspects of biodiversity strategy only achievable in partnership, but collaboration can also ensure a best practice approach is taken (for example, see the Biodiversity Partnership, involving British American Tobacco)[8].

[8] http://www.batbiodiversity.org/

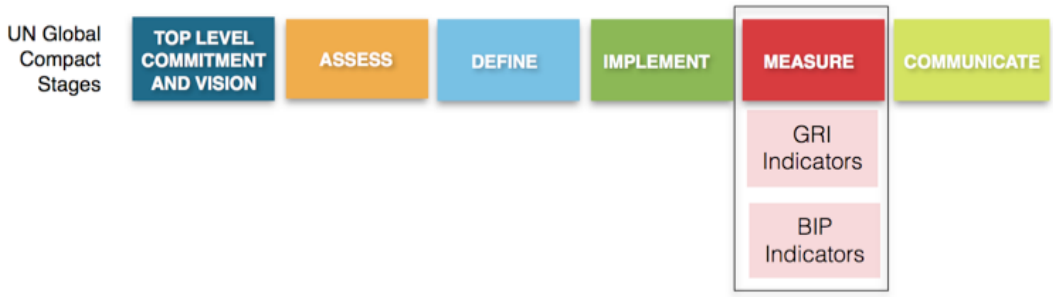
Text box: relevant frameworks and advice

Frameworks & Guidelines
Biodiversity Management
Biodiversity in Good Co.
Biodiversity in Environmental Management Systems (EBI)
Business and Biodiversity Offsets Programme (BBOP)
Corporate Natural Capital Accounting guidance (Natural Capital Committee)

Sector-specific advice
Mining & metals (ICMM)
Cement & Aggregates (IUCN)
Oil & Gas (IPIECA)

ISO 14001
Advice on implementation: http://www.bsigroup.com/en-GB/iso-14001-environmental-management/Implementing-ISO-14001/

3. Measuring the outcome of corporate biodiversity strategies



In order to evaluate progress towards corporate biodiversity goals, measurable indicators of changes in biodiversity status are needed. Indicators help to answer the question, 'did we do what we said we would, when we said we would?' One of the key rationales for the GCEE workshop was that useful, robust and widely accepted indicators have yet to be developed for measuring, managing and communicating the *performance* of corporate biodiversity strategies.

Measures do exist to some extent for biodiversity impacts, but even these vary from industry to industry. It has yet to be established whether there are common indicators which could be widely applicable, and which types of impact are likely to require bespoke indicators which vary by industry or company.

Example indicators relating primarily to impacts, that provide useful context, include those developed by the Biodiversity Indicator Partnership (BIP), and those suggested by the Global Reporting Initiative (GRI). The GRI indicators are intended for use by companies, whilst the BIP indicators are designed for governments. In any case, indicators such as these do not yet seem to have been widely taken up in terms of measuring the outcomes of company biodiversity strategies.

Text box: relevant indicators

BIP Indicators
A suite of indicators of biodiversity status and change. They are the primary mechanism for monitoring progress towards the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets.

Framework and proposed indictors: http://www.bipindicators.net/globalindicators

GRI Indicators
Biodiversity indicators include impacts related to the location and size of land occupied, and products and services utilized for operational purposes. Biodiversity-specific indicators include EN11-15.

G3.1 & G4 Indicator guidelines: www.globalreporting.org

4. Reporting and communicating the outcome of corporate biodiversity strategies

The final stage of the UNGC entails reporting the company's biodiversity actions to the wider global community through:

- Communicating to stakeholders, including governments, NGOs, investors, and other companies;
- Engaging industry associations and sectoral platforms, with a view to advancing BES best practice management across the sector;
- Establishing networks and partnerships, with local, national and international NGOs and environmental specialists in the field of BES with the objective of ensuring knowledge-sharing;
- Performing comprehensive and transparent disclosure of company progress towards meeting its BES commitments/corporate targets.

The Global Reporting Initiative (GRI) Reporting Framework is the most widely used standard for corporate sustainability reports. The reporting framework contains at least four guidance components into which biodiversity considerations could be readily inserted: (1) materiality, (2) sustainability context, (3) organizational profile and strategy, and (4) performance indicators.

Text box: relevant guidelines, advice and initiatives

GRI Guidelines
GRI biodiversity guide
GRI G4 guidelines

Using GRI G4 Guidance to communicate progress on UNGC Principles:
https://www.globalreporting.org/resourcelibrary/UNGC-G4-linkage-publication.pdf

Reporting advice
UN Global Compact
Nature in Performance (WRI)
See sector guidance

Other reporting initiatives

International Integrated Reporting <IR> Framework
<IR> brief for UNGC participants:
https://www.unglobalcompact.org/docs/communication_on_progress/Tools_and_Publications/GCIR_brief.pdf

Sustainability Accounting Standards Board (SASB)

Appendix II: Overview of key resources

Reviews and case studies of corporate biodiversity approaches and tools	
Are you a Green Leader? - UNEP http://apps.unep.org/publications/pmtdocuments/Are_you_a_green_leader.pdf	An overview of the impacts and dependencies that business has on biodiversity and ecosystem services and the associated business risks and opportunities. It highlights existing initiatives to address biodiversity and ecosystem services and harness the opportunities this can present.
Eco4Biz - Ecosystem services and biodiversity tools to support business decision-making - WBCSD http://www.wbcsd.org/eco4biz2013.aspx	A structured overview of existing tools and approaches that are publicly available. The tools and approaches are clustered by scale (i.e., global, landscape, or product) and output (i.e., map, quantitative value, or score).
How Business Values Natural Capital - Global Nature Fund http://www.business-biodiversity.eu/global/download/%7BSYYFGQIDSY-6242014124559-MRIRELADKC%7D.pdf	A report on the status quo of the discussions, existing approaches, methods, and case studies on natural capital valuation. The study can also serve as an initial guide to those companies who want to implement their own valuation projects.
Making the Invisible Visible - BSR http://www.bsr.org/en/our-insights/report-view/making-the-invisible-visible-analytical-tools-for-assessing-business-impact	Helps corporate employees understand the full range of analytical tools to identify, measure, assess, and, in some cases, value multiple ecosystem services concurrently within decision-making processes.
Natural Capital Business Hub - Corporate Eco Forum & The Nature Conservancy http://naturalcapitalhub.org/	A collaborative, open and dynamic online platform that aims to help diverse companies at varying stages of maturity on natural capital issues. More than 40 leading companies are featured, along with more than 15 opportunities for collaboration.
Private Sector Engagement with Ecosystem Services - BSR *http://www.bsr.org/en/our-insights/report-view/private-sector-engagement-with-ecosystem-services*	Explores how business refers to and addresses ecosystem services work, to better understand ways to engage with and factor ecosystem services impacts and dependencies into decision-making.
Initiatives and working groups	
B-TEAM www.bteam.org	A not-for-profit initiative formed by a global group of leaders to create a future where the purpose of business is to be a driving force for social, environmental and economic benefit.
Biodiversity and Ecosystem Service Work Stream (UNEP FI) www.unepfi.org	Involves experts from financial institutions and other institutions in the development of tools to guide managers from the banking and investment community. The initiative is collaborating with Fauna & Flora International under The Natural Value Initiative.

Biodiversity in Good Company - The Business and Biodiversity Initiative http://www.business-and-biodiversity.de	Advocate for the protection and sustainable use of biodiversity in partnership with other political and societal stakeholders. The Initiative members are small-, medium-, and large-scale companies from Germany and other countries and a variety of sectors.
Business & Biodiversity Campaign led by Global Nature Fund. http://www.business-biodiversity.eu/	A consortium led by the Global Nature Fund including competent partners from Belgium, Germany, the Netherlands and Spain demonstrates how businesses can include biodiversity concerns in their business model.
Business and Biodiversity Offsets Programme – BBOP http://bbop.forest-trends.org/	Assessment on whether offsetting is appropriate and provides guidance on how to design offsets. Shows business how to use the mitigation hierarchy (avoid/minimize/restore/offset) to achieve no net loss or a net gain of biodiversity.
Business for social responsibility's (BSR) ecosystem services working group http://www.bsr.org/en/our-work/working-groups/ecosystem-services-tools-markets	Focuses on emerging risks and opportunities associated with corporate reliance on, impact on, and revenue opportunities from ecosystem services and environmental markets. The group tracks the emergence of new environmental performance expectations associated with ecosystem services
Cambridge Natural Capital Leaders Platform http://www.cisl.cam.ac.uk/business-action/natural-resource-security/natural-capital-leaders-platform	Development of a framework for the assessment of externalities. Centres on support for the practical implementation. Recently published guidelines for the agriculture.
Corporate EcoForum http://www.corporateecoforum.com/	Building an open-source enterprise platform to exchange experience and best practices.
Dow Chemical Company and The Nature Conservancy http://www.nature.org/about-us/working-with-companies/companies-we-work-with/dow/	Development of tools, methods and models that aim at helping companies to integrate the economic value of nature in their strategies, goals and decision making. Very site-specific and decision-oriented approach.
EU Business @ Biodiversity (B@B) Platform http://ec.europa.eu/environment/biodiversity/business/index_en.html	Builds on existing initiatives to develop methodologies establishing good practice principles in natural capital accounting, with a particular focus on biodiversity and ecosystems.
Natural Capital Coalition (formerly TEEB for Business Coalition) http://www.naturalcapitalcoalition.org/	Platform of initiatives. Development of methods for the evaluation of natural and social capital. Development of open- source database.

Natural Capital Committee https://www.naturalcapitalcommittee.org/	Includes a methodology for corporate natural capital accounting, working with a range of organisations to pilot its methodology. Working to develop ways of measuring natural capital, and identifying which assets are at risk.
True Price Foundation www.thetrueprice.org	Development and testing of a methodology for the detection of social and environmental costs and supporting companies in calculating these costs.
IUCN Business and Biodiversity Programme http://www.iucn.org/about/work/programmes/ business/	The purpose is to engage the corporate world in the pursuit of biodiversity nature conservation by increasing businesses' understanding of the conservation imperative and of the business opportunities in nature conservation.
UK National Ecosystem Assessment Follow-on http://uknea.unep-wcmc.org/Resources/tabid/82/Default.aspx	Provide greater understanding and improved quantification of the value of the natural environment. Developed accounting and decision support tools that can be used by government, business and the voluntary sector to understand the value of the natural environment and the impacts of their decisions.
UN Global Compact http://www.unglobalcompact.org/	Strategic policy initiative for businesses that are committed to aligning their operations and strategies with ten universally accepted principles in the areas of human rights, labour, environment (including biodiversity) and anti-corruption.
UNEP World Conservation Monitoring Centre www.unep-wcmc.org	Produces and updates common ecosystem services evaluation methods, which are especially useful to corporate managers in setting baselines and monitoring trends that have implications for performance.
World Business Council for Sustainable Development http://www.wbcsd.org/	Provides capacity-building material, and generates case studies for businesses to consider ecosystem services and ecosystem change, while also providing business input into policy debate.
Biodiversity in sustainability reporting	
Global Reporting Initiative (GRI) G4 https://www.globalreporting.org/reporting/g4/Pages/default.aspx	Information on how to report and on what should be reported in terms of disclosure on management and performance indicators.
International Integrated Reporting <IR> Framework www.theiirc.org/the-iirc	Development of guidelines for the integrated reporting. Integrated report to include parts of financial and sustainability report.
Sustainability Accounting Standards Board (SASB) www.sasb.org	Development of industry-specific standards for the disclosure and accounting of key sustainability topics.
Biodiversity indicators	

G4 Sustainability Reporting Guidelines - GRI https://www.globalreporting.org/resourcelibrary/GRIG4-Part2-Implementation-Manual.pdf	Guidance and references for reporting on biodiversity-specific indicators, EN11-14, are detailed on pages 100-103.
The 2010 Biodiversity Indicators Partnership http://www.bipindicators.net/globalindicators	The global biodiversity indicators are the primary mechanism for monitoring progress towards the Strategic Plan and the Aichi Biodiversity Targets. There are 12 headline biodiversity indicators currently under development.
Biodiversity indicators for monitoring impacts and conservation actions - EBI http://www.theebi.org/pdfs/indicators.pdf	Methodology for developing site-level indicators to monitor BES impacts.
Tools	
ARIES: ARtificial Intelligence for Ecosystem Assessment http://ariesonline.org/about/approach.html	Online modelling platform to map the potential provision of ecosystem services, their users and biophysical features that can deplete service flows. Designed to operate with scarce or uncertain data.
Biodiversity Check, EBBC http://www.business-biodiversity.eu/Default.asp?Menue=128	Provides a first overview on the companies' relation to biodiversity regarding opportunities, impacts and risks. It is based on the philosophy and objectives of the Convention on Biological Diversity (CBD).
Business Ecosystems Training (BET) - WBCSD http://www.wbcsd.org/bet.aspx	A freely available capacity building program to equip companies to measure, manage and mitigate their impact and dependence on ecosystems and the services they provide.
Ecosystem Services Benchmark (ESB), The Natural Value Initiative http://www.naturalvalueinitiative.org/content/003/303.php	A tool to evaluate investment risk and opportunity associated with biodiversity and ecosystem services impacts and dependence in the food, beverage and tobacco sector.
Integrated biodiversity assessment toolkit – IBAT https://www.ibatforbusiness.org	Provides an overview for businesses on available tools and partnerships that can help them manage BES resources.
InVEST: Integrated Valuation of Environmental Services and Trade-offs http://www.naturalcapitalproject.org/InVEST.html	A family of tools to map and value ecosystem services, enabling decision makers to assess the trade-offs associated with alternative choices.
Natural Capital Asset Check, UK NEA http://uknea.unep-wcmc.org/Resources/tabid/82/Default.aspx	An assessment of the current and future performance of natural capital assets, with performance measured in terms of their ability to support human well-being.

Sector-specific guidance	
Cement and aggregates sector IUCN https://portals.iucn.org/library/sites/library/files/documents/2014-008.pdf	Biodiversity management in the cement and aggregates sector. Integrated Biodiversity Management System (IBMS) - IUCN
Oil and gas sector - IPIECA http://www.ipieca.org/library	A Guide to Developing Biodiversity Action Plans for the Oil and Gas Sector (IPIECA, OGP); The Oil and Gas Industry: Operating In Sensitive Environments (IPIECA, OGP)
Mining sector - ICMM http://www.icmm.com	Sustainable development framework, Good practice Guidance on Mining and Biodiversity and ICMM-IUCN dialogues.

Appendix III: Prominent existing indicators

Global Reporting Initiative (GRI) biodiversity indicators		T
	G4	**G3.1 and G3**
EN11	Operational sites owned, leased, managed in, or adjacent, to protected areas and areas of high biodiversity value outside protected areas.	Location and size of land owned, leased, managed in, or adjacent to, projected areas and areas of high biodiversity value outside protected areas
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.
EN13	Habitats protected or restored	Habitats protected or restored
EN14	Total number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	Strategies, current actions, and future plans for managing impacts on biodiversity
EN15		Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk
GRI mining & metals sector biodiversity indicators		
MM1	Amount of land (owned or leased, and managed for productive activities or extractive use) disturbed or rehabilitated.	
MM2	The number and percentage of total sites identified as requiring biodiversity management plans according to stated criteria, and the number (percentage) of those sites with plans in place.	
GRI oil & gas sector biodiversity indicator		
OG4	Number and percentage of significant operating sites in which biodiversity risk has been assessed and monitored.	
IPIECA/API/OGP oil & gas sector biodiversity indicator		
EN5	Qualitatively describe how the company addresses management of risks and opportunities related to biodiversity and/or ecosystem services	
WBCSD Cement Sustainability Initiative biodiversity indicators		
KP1	Number of active quarries within, containing or adjacent to areas designated for their high biodiversity value (number and coverage), with biodiversity value as defined by GRI EN11	
KP2	Percentage of quarries with high biodiversity value (according to KPI 1) where biodiversity management plans are actively implemented.	

Appendix IV: Detailed notes from breakout sessions of the workshop

Topic	Challenges WG1 Group 1	Challenges WG1 Group 2	Challenges WG1 Group 3	Working Group #1 (WG1) General Suggestions
Business case for measurement	• What is the value to business? • What does the end-goal look like?	• Biodiversity seen as a constraint/cost until a metric is produced • Scaling to board-level	• How to develop a KPI to illustrate how well a company is doing/progressing? • Lack of clarity regarding the outcome – what do we want to achieve in terms of biodiversity?	• Important to make a business case for biodiversity, once the CEO buys in it cascades down the company • Consider public relations, not just £ • Link value to employees and community
What to measure?	• Which species, predators, et cetera? • Consider values that conservation science has placed on species? • Measure habitat protection?	• Using appropriate units, that support targeted approaches (e.g. managing restoration)	• What is the best metric to measure?	• Measurement necessarily simplistic • Focus on allocating resources for wildlife rather than measurement • Prioritisation – cannot measure everything • Look at the values that conservation science puts on species
Opinion of the natural capital accounting approach	• Useful, can cross sectors • Monetising any measurement can help to influence decisions at board level.	• Challenge to implement until there is a more standard methodology.	• Financial reporting has a lot of weight, but how do you put a number and value on biodiversity?	• Focus on societal value rather than cost-based approaches • Useful for global, complicated supply chains and diverse sectors
Indirect and wider impacts	• Important to measure indirect impacts in different supply chains at ground level. • Discrete vs. diffuse	• Scaling up local site level impacts to company-level impact	• How to articulate social benefits (e.g., health & well-being), financial benefits, measuring resilience (future proofing)?	• Increase level of awareness around biodiversity • Using an ecosystem services approach can provide insight into the wider benefits of biodiversity
Data	• Needs to be relevant, rapid and reliable • How to justify measurement approach and the value attributed?	• What to collect, verification, cost and use. • Challenge to collect same data globally and targeted data	• How to reconcile local and corporate data • Onerous and cumbersome data collection and reporting	• If process is simple, more likely to gather data • Use students to measure • Not focusing on over measuring for NPI, but for practical approaches to best practice • Reporting should be visual as possible to reach more people
Driving corporate policies forward	Employee motivation to measure biodiversity			• Embed biodiversity within corporate systems • Take lessons from success of integrating health & safety policies in

				companies • Develop biodiversity working groups comprising trained employees to increase awareness and implement systems • Report environmental incidents and raise awareness of issues around the company
Engagement with community and NGOs	What is the perception of impacts?	Difficulties collaborating with NGOs	Raising awareness of the need to measure	• Focus on local engagement (after understanding best practice) to deliver qualitative gains. • Be inspiring: use people who are passionate to engage and drive strategies forward • Raise awareness among stakeholders to consider biodiversity aspects and the need to monitor on ground
Commoditisation		Considered to be a dangerous track		• Take lessons from carbon trading and avoid pitfalls for biodiversity
Supply chain	• Can companies have expectations of their supply chain? • Measuring direct and indirect impacts in diffuse supply chains at ground level			• Engagement with suppliers to increase awareness
Sustainable production process	• What does it look like? • Raw materials are a major footprint for FMCG			

Appendix V: Challenges to measuring biodiversity losses and gains[9]

Problem	Description	Design recommendations
(a) Currency	Choosing metrics for measuring biodiversity	Use multiple or compound metrics Incorporate measure of ecological function as well as biodiversity
(b) No net loss	Defining requirements for demonstrating no net loss of biodiversity	Measure no net loss against dynamic baseline, incorporating trends State whether no net loss is at project or landscape level. Consider discounting rate
(c) Equivalence	Demonstrating equivalence between biodiversity losses and gains	Do not allow 'out of kind' gains *unless* 'trading up' from losses that have little or no conservation value
(d) Longevity	Defining how long biodiversity schemes should endure	Gains should last at least as long as the impacts of development Biodiversity interventions should be adaptively managed for change
(e) Time lag	Deciding whether to allow a temporal gap between development and biodiversity gains	Require initiatives to be delivered through biodiversity banking mechanisms
(f) Uncertainty	Managing for uncertainties throughout the biodiversity strategy process	Development of a framework for understanding and managing uncertainty is a requirement in advance of implementation
(h) Reversibility	Defining how reversible development impacts must be	Define reversibility Require all biodiversity losses to be reversible
(i) Thresholds	Defining threshold biodiversity values beyond which development is not acceptable	Define explicit thresholds for non-compensable impacts on biodiversity in advance of operations commencing

[9] Adapted from Bull, J.W. et al. (2013) 'Biodiversity offsets in the theory and practice". *Oryx*