

# Technical Paper | Corporate Biodiversity Accounting

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## Introduction

This paper shows how corporate biodiversity performance can be presented in a transparent and concise set of accounts for corporate social responsibility reports and business reviews. The suggested framework follows the same structure as financial reporting, although it doesn't require the conversion of biodiversity data to monetary values.

The information reported on is produced using the normative biodiversity metric (NBM), an assessment methodology designed to quantify changes in habitats caused by companies' activities. Information on this methodology is available in 'Assessing Organisational Biodiversity Performance' (Jarrett 2011). It is not necessary to use this methodology; the accounts developed here could be used with other, similar habitat assessment methods<sup>2</sup>. It could also be used in co-ordination with recently developed biodiversity certification approaches (Earthmind 2012; LIFE Institute 2012).

The proposed biodiversity accounts are designed to be presented in sustainability reports of businesses which have a large impact on biodiversity. The framework is designed to provide a few key performance indicators: a) 'annual biodiversity impact' (showing changes caused by the organisation over the year); and b) 'NBM position at year end' (showing status of all land holdings). These indicators can be extracted from the biodiversity accounts and used as headline measures of environmental performance. Statements such as 'no net biodiversity loss' and 'net positive impact' can be justified within this accounting framework.

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<sup>2</sup> For example, the Habitat Hectares (Parkes et al. 2003) or Biodiversity Benefits Index (Oliver and Parkes 2003) approach provides similar information

## **Biodiversity Accounts**

The biodiversity accounts are broken down into two main components: the “Biodiversity Impacts Account” (Box A - below) and the “Biodiversity Position Statement” (Box B - below). These effectively mirror the profit and loss account and balance sheet of regular financial statements. The impacts account shows performance over the accounting period, and the position statement summarises the total land holdings of the organisation at the end of the accounting period.

These accounts would be accompanied by a narrative description of what has influenced biodiversity performance during the period assessed (e.g. new constructions, acquisitions of land, conservation projects).

### **Biodiversity Impacts Account (Box A):**

The biodiversity impacts account shows the impact that an organisation has on biodiversity during the accounting period, broken down into direct and indirect impacts. This account is equivalent to the profit and loss account of financial statements, showing only the *flow* of biodiversity impacts during the accounting period.

Direct impacts are those impacts which occur on the land under direct control (including land under direct ownership, leased land, and land where concessions for raw material extraction have been granted) of the organisation being assessed; habitat degradations and restorations, or changes in the presence of endemic endangered species.

Indirect impacts are currently beyond the scope of the NBM methodology, but ultimately should be reported on within a biodiversity accounting framework. As such, they are included in this paper to demonstrate how biodiversity accounting will work. Indirect impacts would occur on land owned by suppliers to the organisation being assessed (supply chain impact would be included in the assessment), where biodiversity offsets or biodiversity credits are funded, or where the organisation is responsible for diffuse pollution over an area of land they do not own. Accounting for indirect biodiversity impacts will be discussed in a forthcoming paper.

If the overall impact on biodiversity is positive during the period, the total biodiversity impact figure will be positive, and if overall impact on biodiversity is negative, the figure will be negative (negative figures are shown in brackets in boxes A and B).

### **Biodiversity Position Statement (Box B):**

The biodiversity position statement shows the biodiversity value of all the land owned by the organisation at the end of the accounting period. This statement is equivalent to the balance sheet in regular financial statements. The land owned by the company is assessed at the balance sheet date using the NBM, or a similar habitat assessment methodology. The biodiversity position statement at the start of the period, adjusted for the biodiversity impacts during the period, equals

the biodiversity position at the end of the accounting period, after adjusting for any acquisitions or divestments of land.

### **BOX A: Biodiversity Impacts Account**

	<b>31<sup>st</sup> March 2011</b>	<b>31<sup>st</sup> March 2010</b>
<hr/>		
<b>DIRECT IMPACT</b>		
Habitat improvements <sup>1</sup>	0.20	0.12
Habitat degradations <sup>1</sup>	(0.45)	(0.30)
<hr/>		
<b>Direct biodiversity impact</b>	<b>(0.25)</b>	<b>(0.18)</b>
<hr/>		
<b>INDIRECT IMPACT</b>		
Indirect habitat improvements <sup>2</sup> (offsets etc)	0.15	0.10
Indirect habitat degradations <sup>3</sup> (supply chain impacts etc)	(0.25)	(0.30)
<hr/>		
<b>Indirect biodiversity impact</b>	<b>(0.10)</b>	<b>(0.20)</b>
<hr/>		
<b>Overall biodiversity impact</b>	<b>(0.35)</b>	<b>(0.38)</b>
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<sup>1</sup>Habitat improvements and degradations are measured by the Normative Biodiversity Metric [NBM] (Jarrett 2011) which measures the change in the biodiversity value of patches of owned land, aggregated over all the land owned by an organisation. In this example the habitat degradations are greater than the habitat improvements, giving a negative net biodiversity impact (with negative figures shown in brackets).

<sup>2</sup>Indirect habitat improvements would arise when the assessed organisation causes an indirect improvement, measured by the NBM, in habitat quality of land not owned. This could be through contributing to the costs of restoring a particular area, funding a biodiversity offset project, or improving biodiversity performance down the supply chain.

<sup>3</sup>Indirect habitat degradations would arise when the assessed organisation's activities cause a negative impact on land which the organisation does not own. This could be the results of an oil spill for example, or the impacts of sourcing supplies from different locations.

## **BOX B: Biodiversity Position Statement**

	<b>31<sup>st</sup> March 2011</b>	<b>31<sup>st</sup> March 2010</b>
<b><u>DIRECT POSITION</u></b>		
<b>NBM assessment at start of period<sup>4</sup></b>	<b>1.82</b>	<b>0</b>
Current period biodiversity impacts <sup>5</sup>	(0.25)	(0.18)
Purchase/Sale of land <sup>6</sup>	0.40	2.00
<b>NBM assessment at period end<sup>4</sup></b>	<b>1.97</b>	<b>1.82</b>
<b><u>INDIRECT POSITION</u></b>		
<b>NBM assessment at start of period<sup>7</sup></b>	<b>(0.10)</b>	<b>0</b>
Current period indirect biodiversity impact <sup>8</sup>	(0.10)	(0.20)
Acquired/divested land responsibility <sup>9</sup>	0.25	0.30
<b>NBM assessment of indirect land at period</b>	<b>0.05</b>	<b>(0.10)</b>
<b>Overall NBM Position</b>	<b>2.02</b>	<b>1.72</b>

<sup>4</sup>The NBM score is calculated by assessing all of the land owned by the organisation with the NBM assessment methodology.

<sup>5</sup>This figure is taken from the biodiversity impacts account (Box A).

<sup>6</sup>When organisations purchase or sell land during the period, the change in NBM for the organisation will be adjusted in the biodiversity position statement, rather than the biodiversity impacts account – companies therefore cannot manipulate their biodiversity impact score by buying and selling land.

<sup>7</sup>This figure would be the NBM assessment score of land over which the organisation has an indirect impact (e.g. funded conservation areas, areas affected by pollution, supply chain areas).

<sup>8</sup>This figure is taken from the biodiversity impacts account (Box A).

<sup>9</sup>When an organisation starts or stops having an indirect influence over a piece of land during the period, the change in indirect NBM for the organisation will be shown in the biodiversity position statement, rather than the biodiversity impacts account.

## Conclusion

Setting up the biodiversity accounts in the same manner as financial accounts removes the possibility for companies to manipulate their results by selling degraded land and buying pristine land with the aim of hiding their negative impact on habitats. Any negative impacts would be reported in the biodiversity impacts account, while the buying of pristine land would not: purchases of land would be shown in the biodiversity position statement.

Standard accounting practices would be applied to situations where land was part-owned or bought/sold during a financial year – impacts would be attributed to companies in proportion with ownership.

This framework, while not the only way biodiversity impact can be presented, provides a transparent and concise method for reporting biodiversity impact at an organisational level, and also has the advantage that it is presented in a structure familiar to accountants and finance professionals.

## References

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