



National Biodiversity and
Business Network (NBBN)

The Biological Diversity Protocol - Adapting double-entry bookkeeping to net biodiversity impact accounting and disclosure

**Scoping workshop on SEEA and business accounting
October 17th, 2019**



Introducing the Biological Diversity Protocol (BD Protocol)

- Designed as a comprehensive biological diversity accounting and reporting framework that can help you produce the credible and unbiased information needed for various biodiversity-related applications, especially **disclosure**
- Benchmark for aim and structure: GHG Protocol Corporate Accounting and Reporting Standard
- The BD Protocol is an output of the Biodiversity Disclosure Project (BDP), managed by the National Biodiversity and Business Network (NBBN) of South Africa and hosted by the EWT.
- Aligned to the Natural Capital Protocol of the Natural Capital Coalition



Target audiences and uses

Which companies can use it?

- Any sector or industry
- Any step of value chain, including suppliers and clients

Helps you generate 2 main types of biodiversity information:

- 1- biodiversity footprint (surface area adjusted for condition);
- 2- Species level impact data.

Target audiences:

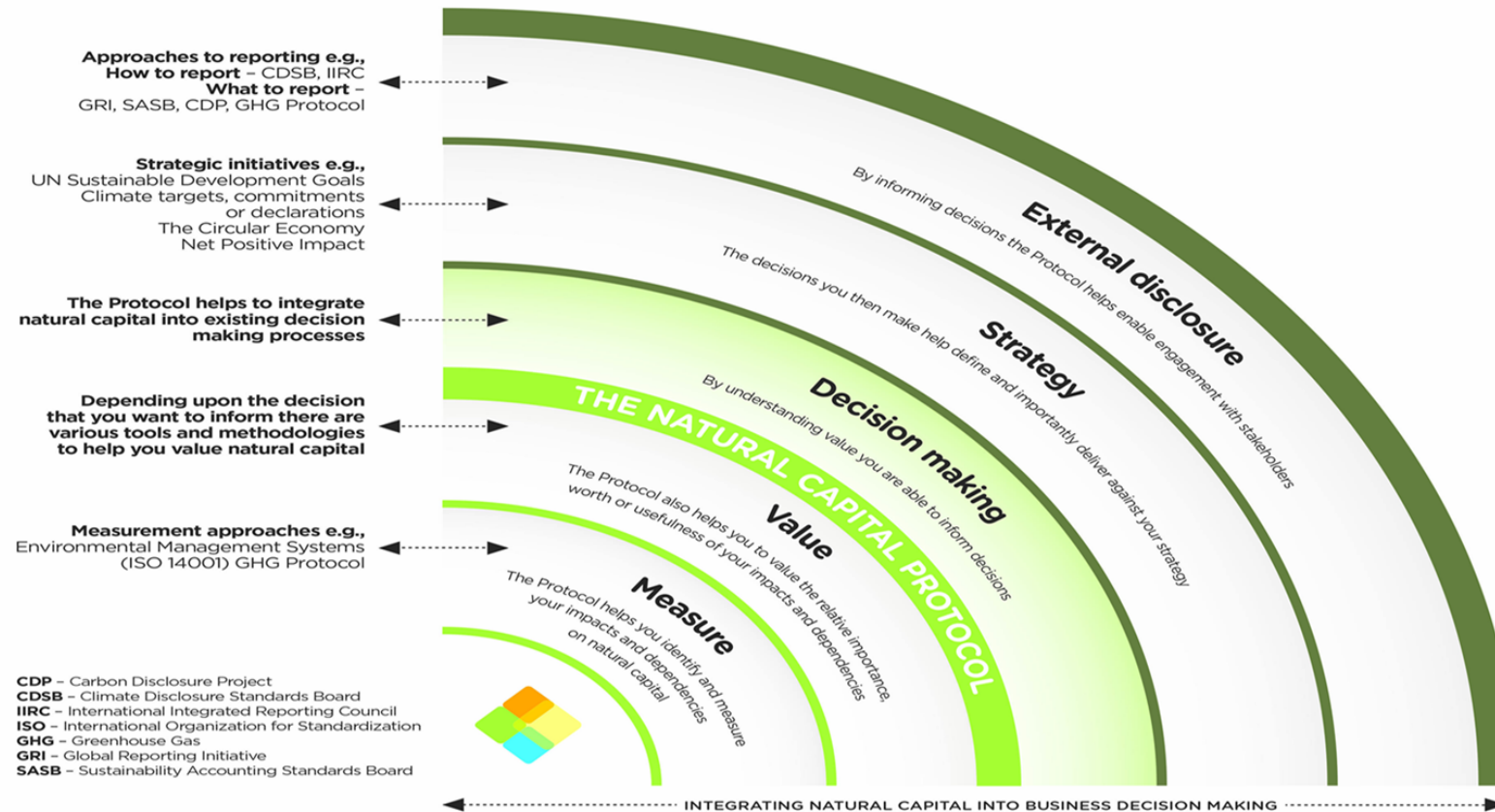
- Environment / sustainability specialists within companies
- Environmental consultants
- Biodiversity specialists
- Reporting / disclosure specialists

Pilot studies:

- 2 Eskom energy generation sites, including transmission
- 2 other in discussions (property development, mining)



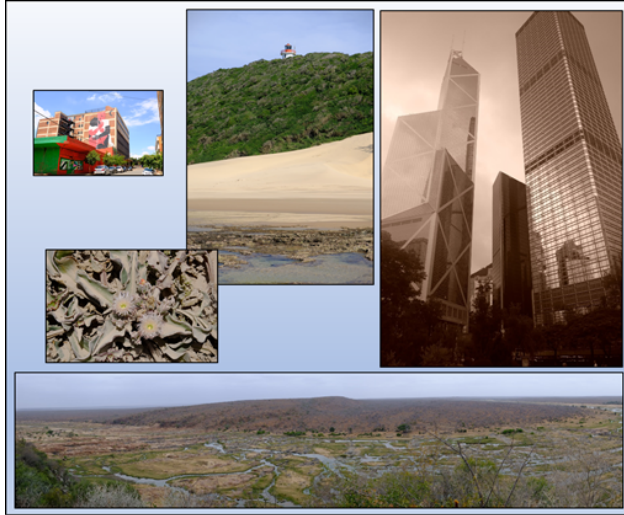
The BD Protocol helps with biodiversity impact measurement and disclosure



This landscape is not exhaustive. The Natural Capital Coalition will continue to explore the landscape as it evolves.



Consultation process



BIOLOGICAL DIVERSITY PROTOCOL
Draft 1.1 - For consultation only



Biological Diversity Protocol

- 1st comprehensive draft completed (V1.1)
- Consultation online:
<https://collaborase.com/bdprotocol>
- Hosted by the **Natural Capital Coalition**
- Consultation closed on August 15
- Stakeholder feedback report in late 2019
- Updated BD Protocol late 2019
- Preparing for CBD CoP China 2020



The BD Protocol includes guidance on how to:

- Develop and manage a biodiversity impact inventory according to the appropriate organisational and value chain boundaries
- Identify and determine material biodiversity impacts
- Assess impacts on biodiversity, considering the nature of the biodiversity components impacted
- Account for net changes in biodiversity, in accordance with the impact mitigation hierarchy and the associated equivalency principle
- Apply the biodiversity accounting framework to build Statements of Biodiversity Position and Performance and account for biodiversity gains and losses over time
- Validate and verify a biodiversity impact assessment
- Disclose or report on an organisation's consolidated impacts on biodiversity in a coherent and meaningful manner

Scoping assessment boundaries

Value chain boundaries:

- **Scope 1: Direct operations** (gate-to-gate), which covers activities over which your business holds ownership or control.
- **Scope 2: Upstream** (cradle-to-gate), which covers the activities of suppliers;
- **Scope 3: Downstream** (gate-to-grave), which covers activities linked to the purchase, use, re-use, recovery, recycling, and final disposal of your business' products and services.

For all scopes, need to distinguish:

- A: Direct biodiversity impacts;
- B: Indirect biodiversity impacts;



Building your biodiversity impact inventory

The BD Protocol recommends that your business accounts for:

- **All its impacts on land cover** => critical to produce the biodiversity footprint of your business, the headline key performance indicator for reporting or disclosure purposes
- Only its **impacts on taxa** (species and sub-species) that are **important** to its internal and/or external stakeholders.

NB1: You should use the land cover concept applicable to the jurisdiction(s) the business interest or operation is operating in.

NB2: There are several criteria worth considering in order to determine whether a taxon should be included in your biodiversity impact inventory, including whether:

- The taxon is legally protected;
- The taxon is recognised as a threatened species (e.g. IUCN red list);
- Your business impacts on the taxon are likely to result in a change in its overall population or viability;
- The effective management (or lack thereof) of the taxon generates significant financial revenues (or receivables) and/or expenses (or liabilities);
- The taxon plays a critical role in the ecosystem, and can thus be defined as a keystone, umbrella or engineer species;
- The taxon plays a significant cultural or economic role (e.g. hunting, harvesting) for your stakeholders.



Biodiversity accounting framework based on adaptations to Double-Entry BookKeeping (DEBK)

Statement of Biodiversity Position (or Biodiversity Balance Sheet):

Biodiversity assets (ecosystem extent accounts in hectares) (A) =

accumulated positive impacts (condition-adjusted ecosystem extent accounts in hectares equivalent) (B) +

accumulated negative impacts (condition-adjusted ecosystem extent accounts in hectares equivalent) (C)

or

$$A = B + C$$

Statement of Biodiversity Performance (or Biodiversity Net Impact statement):

Net biodiversity impacts (hectares equivalent) (X) =

periodic Positive Impacts / Gains (condition-adjusted ecosystem extent accounts in hectares equivalent) (Y) –

periodic Negative Impacts / Losses (condition-adjusted ecosystem extent accounts in hectares equivalent)

or

$$X = Y - Z$$



Case studies (from Houdet *et al.*, to be published soon)

Nimes-Manduel-Redessan train station

Land artificialized:

- Fallow land: 4.04 Ha;
- *Brachypodium phoenicoides* grasslands: 2.15 Ha;
- Agricultural lands: 4.76 Ha;
- Diverse land uses with no or very low ecological value (e.g., built areas): 7.11 Ha.

Offset areas (27.00 Ha) purchased (habitats used as proxy for species occurrence)

Cossure 'habitat banking' project

Basic restoration activities (e.g., exotic tree species and infrastructure removal) for 357.00 ha

3 additional measures tested to further accelerate the return of the Coussoul steppe:

- The seeding of various species (60.00 Ha);
- The spreading of hay obtained from other Coussoul properties (24.00 Ha);
- The addition of mycorrhizae and vegetative parts to seed mixes (3.00 Ha).

Nimes-Manduel-Redessan train station

Statement of Biodiversity Position

Assets (A)			Accumulated negative impacts (C)		
Ecosystem accounts	Hectares (Ha)	Percentage (%)	Ecosystem accounts	Hectares equivalents (Ha eq.)	Percentage (%)
			Garrigue-type condition 0	26,11	49%
			Garrigue-type condition 1	21,60	41%
			Accumulated positive impacts (B)		
Garrigue-type condition 0	26,11	49%	Ecosystem accounts	Hectares equivalents (Ha eq.)	Percentage (%)
			Garrigue-type condition 1	5,40	10%
Garrigue-type condition 1	27,00	51%	Garrigue-type condition 1	5,40	10%
Total	53,11	100%	Total	53,11	100%

Statement of Biodiversity Performance

Journal entries	Periodic gains (Y)		Hectares equivalents (Ha eq.)
1	Accounting for reference state of ecosystem assets to be developed, which underpins their subsequent condition scoring	Garrigue-type condition 5	26,11
3	Before development, recording gains associated to existing ecosystem asset condition scores	Garrigue-type condition 1	2,19
6	Accounting for reference state of new ecosystem assets purchased as part of offset measures, which underpins their subsequent condition scoring	Garrigue-type condition 5	27,00
8	After offset measures, recording condition-adjusted gains associated to new ecosystem asset condition scores	Garrigue-type condition 1	5,40
Sub-total periodic gains (Y)			60,70
Journal entries	Periodic losses (Z)		Hectares equivalents (Ha eq.)
3	Before development, recording losses associated to existing ecosystem asset condition scores	Garrigue-type condition 5	26,11
5	After development, recording condition-adjusted losses associated to changes in ecosystem asset condition scores	Garrigue-type condition 1	2,19
8	After offset measures, recording condition-adjusted losses associated to new ecosystem asset condition scores	Garrigue-type condition 5	27,00
Sub-total periodic losses (Z)			55,30
Net ecosystem impacts (X = Y - Z)			5,40

Cossure offset project

Statement of Biodiversity Position

Assets (A)			Accumulated negative impacts (C)		
Ecosystem accounts	Hectares (Ha)	Percentage (%)	Ecosystem accounts	Hectares equivalents (Ha eq.)	Percentage (%)
			Coussoul condition 2	163,80	46%
			Coussoul condition 3	33,60	9%
			Accumulated positive impacts (B)		
			Ecosystem accounts	Hectares equivalents (Ha eq.)	Percentage (%)
Coussoul condition 2	273,00	76%	Coussoul condition 2	109,20	31%
Coussoul condition 3	84,00	24%	Coussoul condition 3	50,40	14%
Total	357,00	100%	Total	357,00	100%

Statement of Biodiversity Performance

Journal entries	Periodic gains (Y)		Hectares equivalents (Ha (eq.))
1	Accounting for reference state of ecosystem assets on purchase, which underpins their subsequent condition scoring	Coussoul condition 5	357,00
5	After restoration measures, recording condition-adjusted gains associated to new ecosystem asset condition scores	Coussoul condition 2	109,20
5	After restoration measures, recording condition-adjusted gains associated to new ecosystem asset condition scores	Coussoul condition 3	50,40
Sub-total periodic gains (Y)			516,60
Journal entries	Periodic losses (Z)		Hectares equivalents (Ha (eq.))
3	On purchase of ecosystem assets, recording condition-adjusted losses associated to existing ecosystem asset condition scores	Coussoul condition 5	357,00
Sub-total periodic losses (Z)			357,00
Net ecosystem impacts (X = Y - Z)			159,60

Consolidated accounts for both case studies

Key points

Consolidation of impact data at group level possible through:

- Impact inventory for each biodiversity asset;
- Adherence to the equivalency principle (like-for-like);
- New conventions applied to DEBK.

NB: Adaptation of DEBK enables true net impact assessment, as other methods focus on annual net changes with no balance sheet contra-accounts.

Statement of Biodiversity Position

Assets (A)			Accumulated negative impacts (C)		
Ecosystem accounts	Hectares (Ha)	Percentage (%)	Ecosystem accounts	Hectares equivalents (Ha eq.)	Percentage (%)
			Garrigue-type condition 0	26,11	6%
Garrigue-type condition 0	26,11	6%	Garrigue-type condition 1	21,60	5%
			Coussoul condition 2	163,80	40%
Garrigue-type condition 1	27,00	7%	Coussoul condition 3	33,60	8%
			Accumulated positive impacts (B)		
Coussoul condition 2	273	67%	Ecosystem accounts	Hectares equivalents (Ha eq.)	Percentage (%)
			Garrigue-type condition 1	5,40	1%
Coussoul condition 3	84,00	20%	Coussoul condition 2	109,20	27%
			Coussoul condition 3	50,40	12%
Total	410,11	100%	Total	410,11	100%

Future work & issues to consider

Expansion of adapted DEBK

- To other Natural Capital Impacts & Dependencies, from stock extent & condition to benefits (CICES, FEGS-CS, NESCS, and NESCS Plus) so as to build comprehensive NC statements of position and performance in non-monetary values
- Externality-based statements of position and performance, separate from financial statements, also based on adapted DEBK (building contra-accounts for existing work/ e.g. Kering);
- Accounting frameworks and methods that would **link** would **non-monetary quantitative, financial and externalities values** for different accounts, from an integrated accounting and reporting perspective

Key risks with jumping to the monetary values for total / net impact

Importance of stocks and condition

Confusion between monetary and financial values

Importance of net impact through adapted DEBK

Aligned financial and NC reporting does not necessarily mean using monetary values for everything (IPBES 2017)

Using only monetary values: weak sustainability which

(a) Fails to disclose the changes in the status and condition of NC,

(b) Will lead to the over-valuation of NC assets without any understanding of whether they are sustainably managed /restored,

(c) Would wrongly convey the impression that only some NC I&D externalities matter (e.g., GHG emissions versus biodiversity loss)

⇒ **Our proposed approach: integrated set of accounts (non-monetary quantitative, financial values, externality accounts) that are integrated using adaptations of DEBK**

Any question?

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