

Measuring Biodiversity Impacts of an Enterprise

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Ending the economic invisibility of nature is a key to stopping its degradation and destruction



- □ Biodiversity is the living fabric of this planet
- Natural capital is the economic reflection of biodiversity
- ☐ Biodiversity includes **quality** <u>and</u> **quantity** dimensions across <u>three</u> strata
- Each strata delivers valuable contributions ecosystem services...

Table 2.2 Relationship between biodiversity, ecosystems and ecosystem services			
Biodiversity	Quality	Quantity	Services (examples)
Ecosystems	Variety	Extent	RecreationWater regulationCarbon storage
Species	Diversity	Abundance	Food, fibre, fuelDesign inspirationPollination
Genes	Variability	Population	Medicinal discoveryDisease resistanceAdaptive capacity

Source: TEEB in Business and Enterprise (Earthscan, 2012), Ch.2



What are the biodiversity impacts of a business?

A framework for aggregating estimated company-level impacts for investment portfolios....

Ecosystem service Flows (+/-)

Changes in ecosystem Stocks (+/-)

Ecosystem Level

Estimate annual value(in USD) from ecosystem level services from business-owned areas

Direct impacts: PV of future ESS lost due to businesscaused Land Use Change per annum

Species Level

Annual value (in USD using TCM¹ etc) of species-level services from business-owned areas

Species richness: Loss of species richness (in PDF² % and USD) due to direct and indirect impacts of a portfolio of businesses

Species abundance: Loss of species abundance (in MSA³% and USD) due to direct Land Use change and indirect impacts of a portfolio of businesses

Note: at this stage, there is insufficient globally available data at the genetic level, hence we have omitted this tier from the proposed framework. However, research is under way in many teams to fill this data gap.

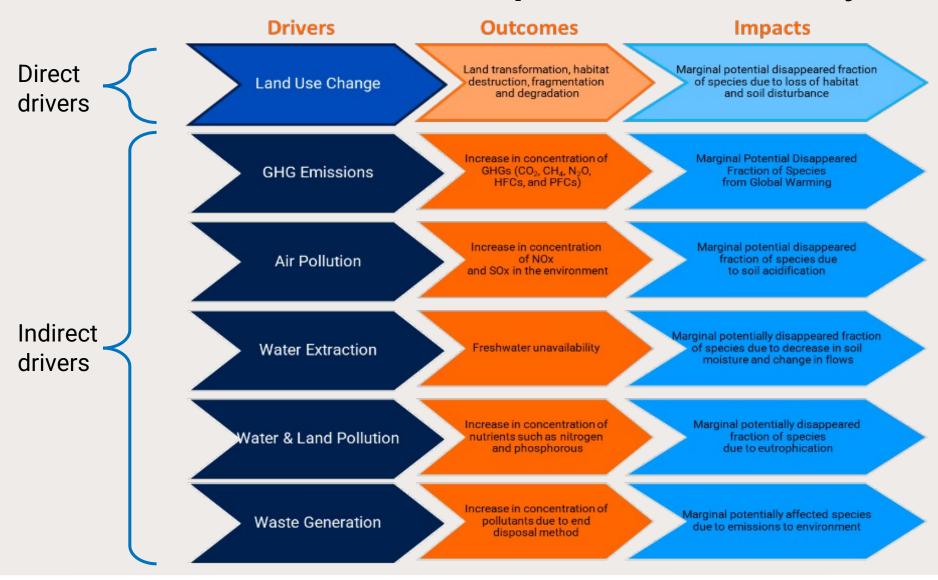
¹TCM =Travel Cost Method

²PDF = Potentially Disappeared Fraction, LCIA methodology

³MSA = Mean Species Abundance, GLOBIO methodology

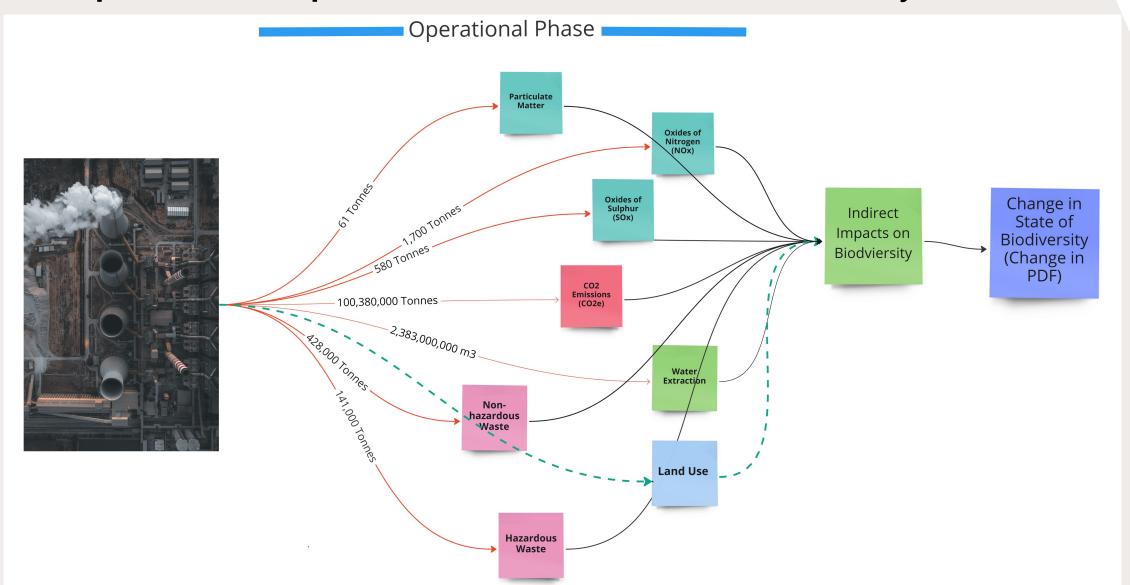


Direct and indirect drivers and their outcomes and impacts on biodiversity



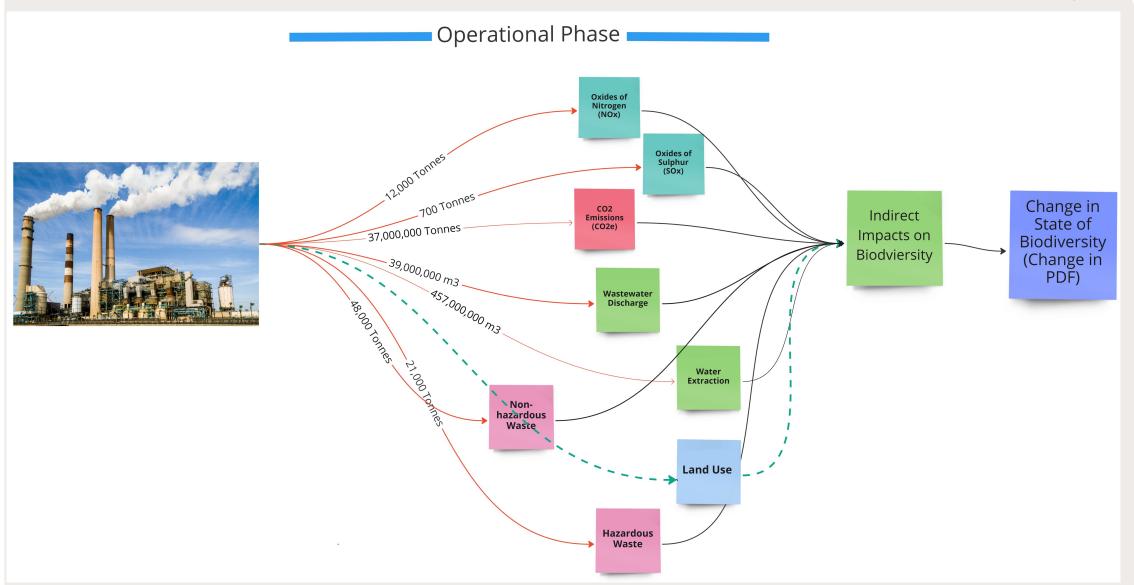


Example: Indirect impact of Thermal Power Co. on biodiversity



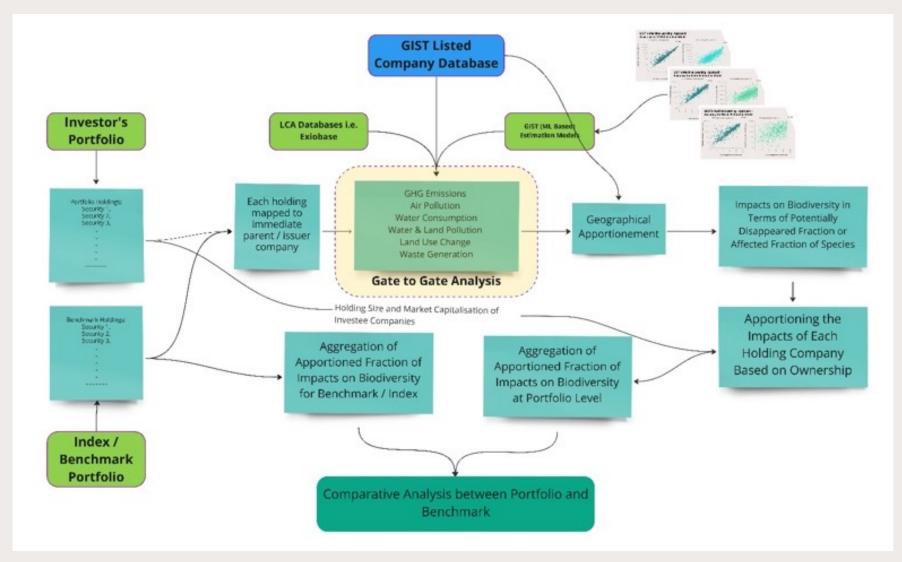


Example: Indirect impact of a Chemical Manufacturing Co. on biodiversity





Scaling up from an investee to a fund or a portfolio





Thank you