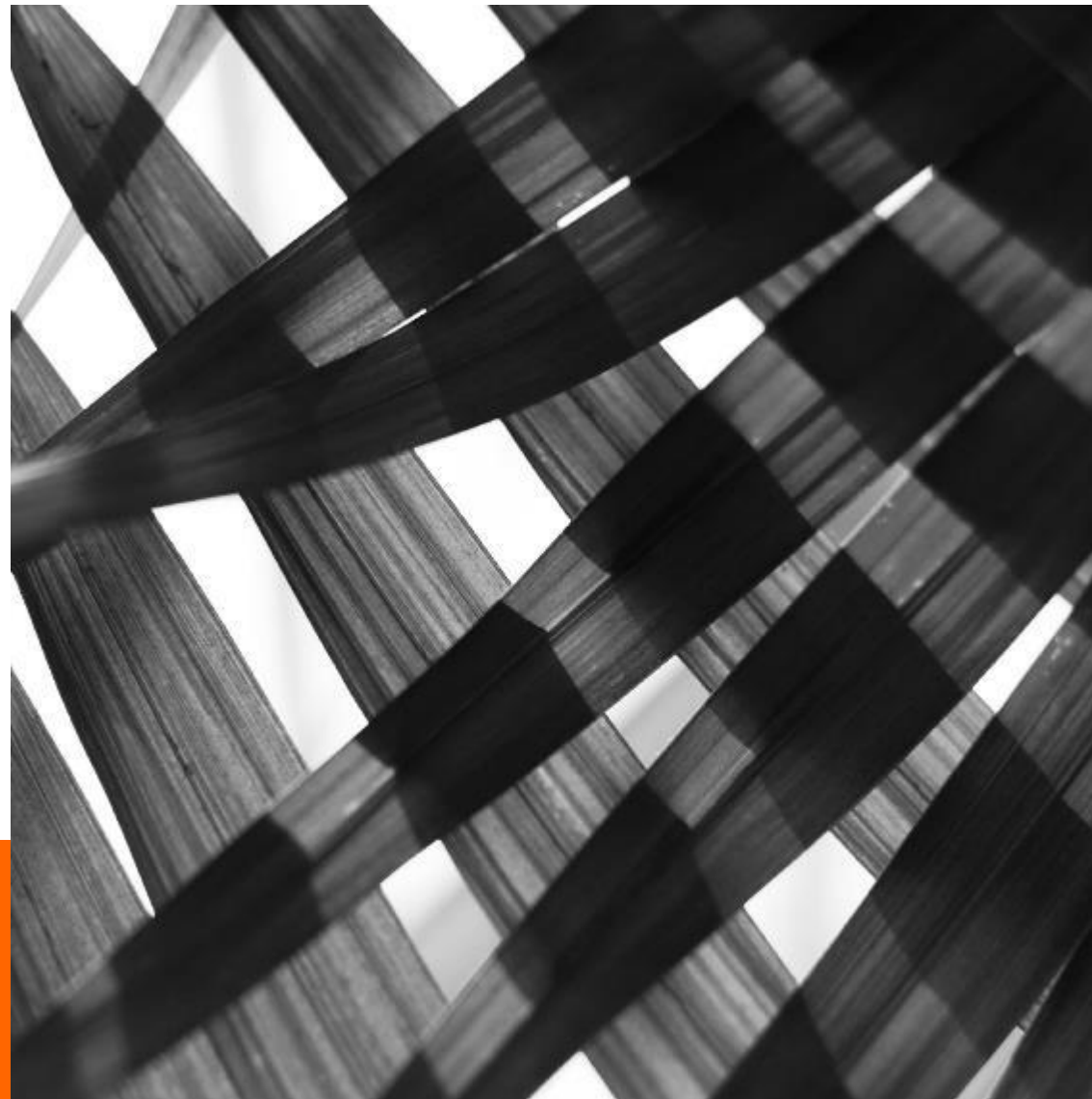




GIST Impact

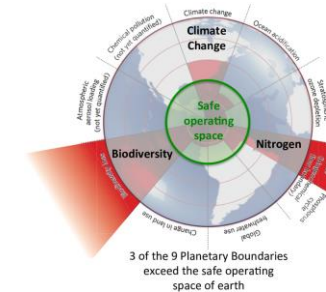
Introduction to Biodiversity

Q1 2023



Why nature & biodiversity?

- ✓ **TIPPING POINTS:** Rapidly approaching
- ✓ **REGULATION:** Increasing regulatory pressures
- ✓ **HIDDEN RISK:** Looking beyond Net Zero to nature more broadly
- ✓ **STAKEHOLDER ALIGNMENT:** Growing demands to protect nature and potential rewards (new clients, staff loyalty)



Climate tipping points¹



“\$44 trillion of economic value generation moderately or highly dependent on nature” WEF



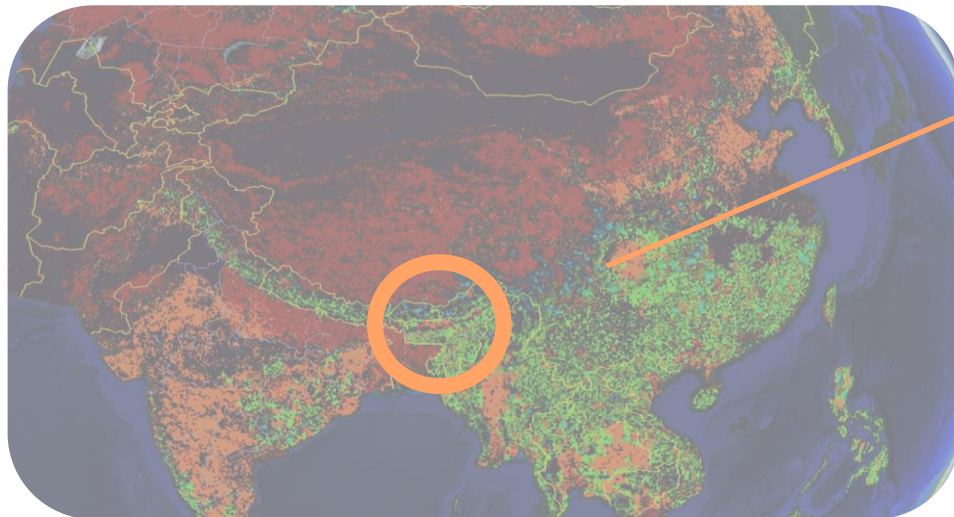
Nature Action 100



ICGN

Data analysis required

1. Screen risks



2. Measure impacts



Why GIST Impact?

Ease & Speed

Question 3 of 22

Greenhouse Gas Emissions

What are the total CO2 equivalent emissions occurring by sources owned or controlled by your company? (scope 1 emissions)

Emissions Tonne CO2e

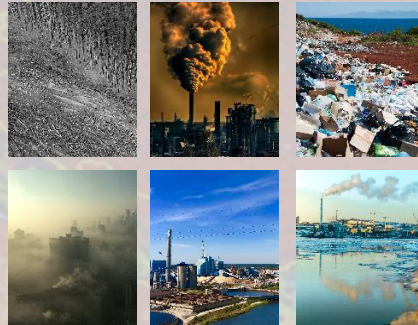
☐ I don't collect this data yet

☒ Each question will include some information regarding specifics of why collecting this information is important and/or where to go within your organisation to find this information.

[< Back](#) [Save & exit](#) [Next >](#)

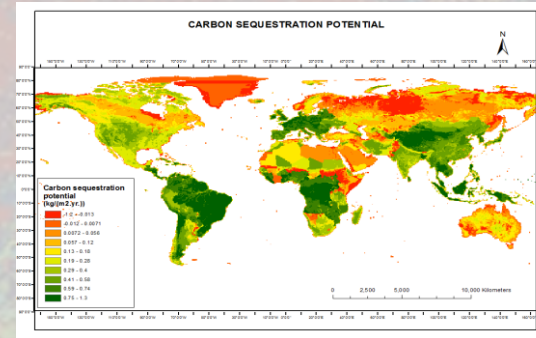
Simple data inputs and complete analysis straight away

Holistic Data Sets



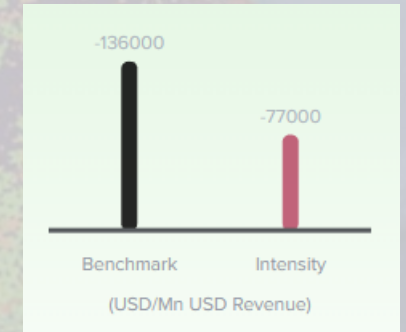
Include both direct *and* indirect impacts

Unparalleled Granularity



Going beyond country or regional averages, down to 300m²

Global Benchmarking



Sector benchmark across 12,800 companies

How we do it

1. Data

DIRECT Drivers

- Land use change
- Sea use change
- Endangered Species Trade

INDIRECT Drivers

- GHG Emissions
- Waste Generation
- Air Pollution
- Water Consumption
- Water & Land Pollution

2. Screening

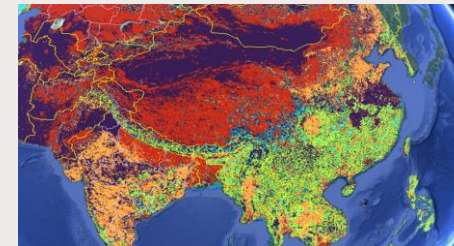
Proximity & Risk Analysis Screening



- Proximity to protected areas, key biodiversity areas and IUCN red list species in the area

3. Impact Analysis

Impact Analysis

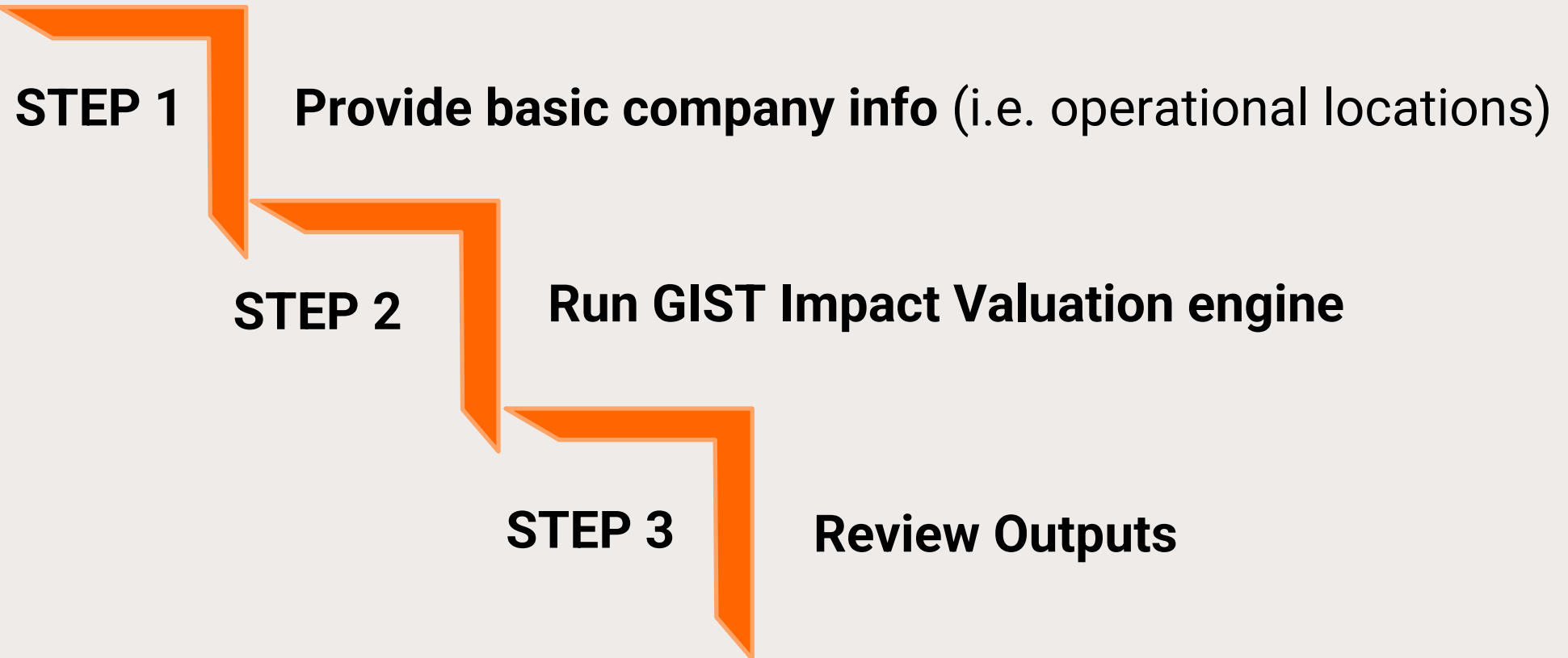


- TNFD indicators and CSRD disclosures
- Potentially Disappeared Fraction (PDF)
- Mean Species Abundance (MSA)
- Ecosystem Services impact (\$)

Powered by
GIST Impact:



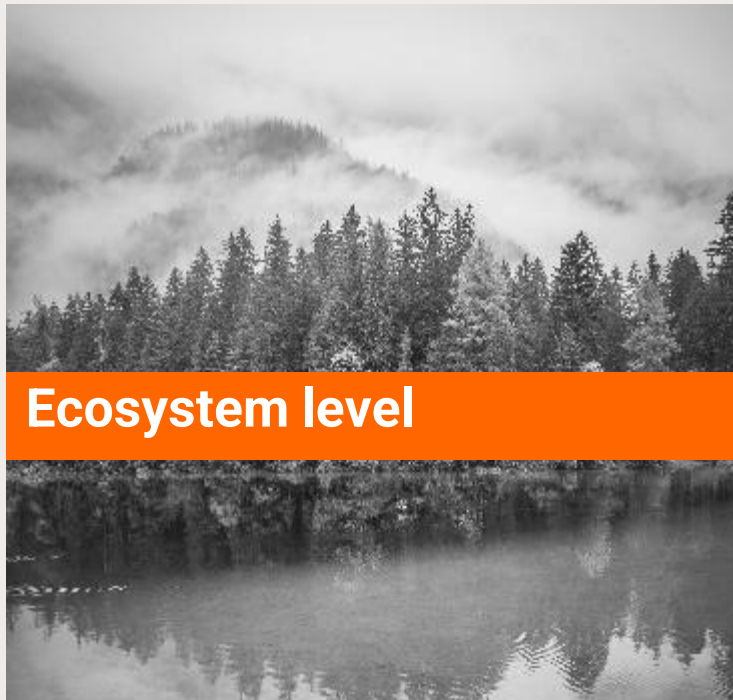
Start now



Appendix: Biodiversity Deep-Dive

How to measure biodiversity?

Valuing nature based on contributions to people



Ecosystem level

For Example: Recreation, Water Regulation, Carbon Storage



Species level

For Example: Food, Fiber, Fuelwood, Design Inspiration, Pollination



Genetic level

For Example: Medicine Recover, Disease Resistance, Adaptive Capacity

The missing link: Companies focus on their direct impacts, but *indirect* impacts are often forgotten

DIRECT impact



Land & sea use change



Endangered Species Trade

INDIRECT impact



GHG Emissions



Waste Generation



Air Pollution



Water Consumption



Water & Land Pollution

Direct impacts example: Company operations can have significant direct impacts on biodiversity

DIRECT Impact

Not exhaustive of all impacts



Paper and Pulp Manufacturing in operations

Land use change
(plantation activity)



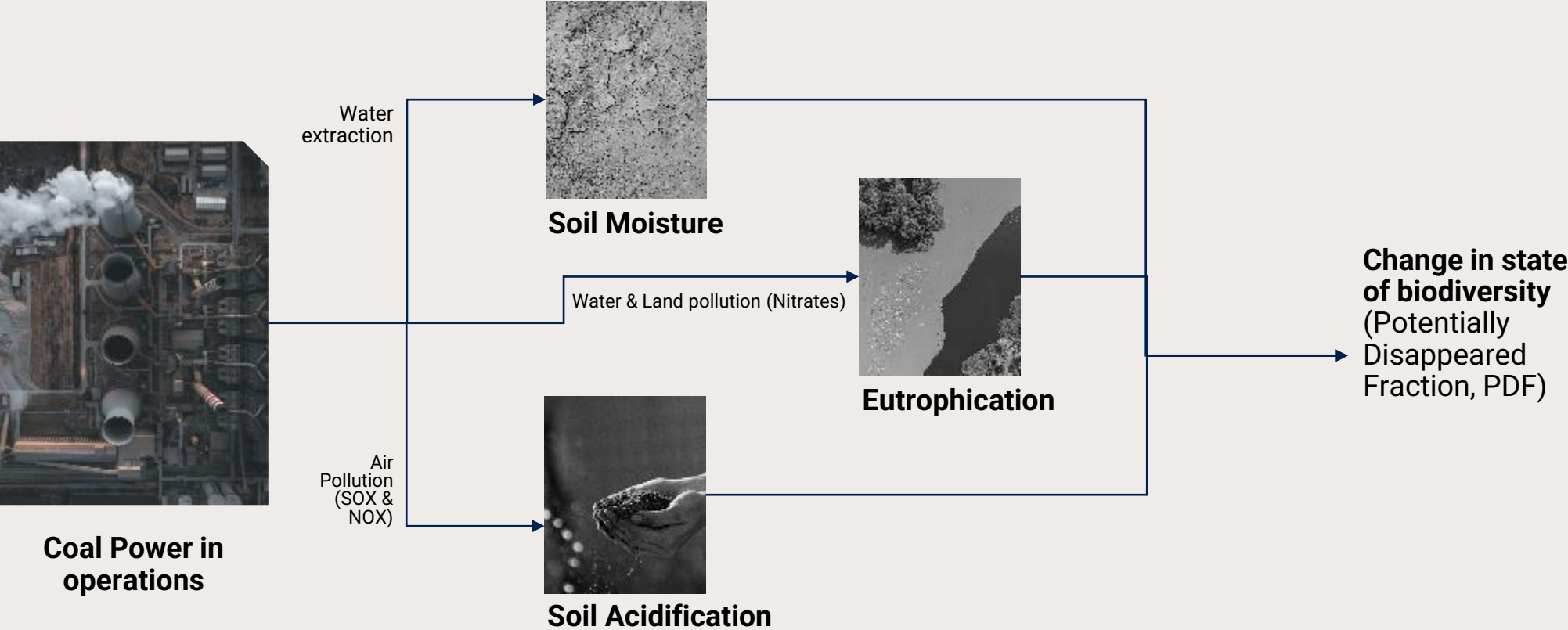
Land Stress

Change in state of biodiversity (Habitat Loss, Habitat Fragmentation, Potentially Disappeared Fraction, PDF)

Indirect impacts example: Company operations can have significant indirect impacts on biodiversity

INDIRECT
Impact

Not exhaustive of all impacts



About GIST Impact: Accelerate your biodiversity measurement

Broadest & deepest data

Impact Valuation Engine



Company-specific impacts



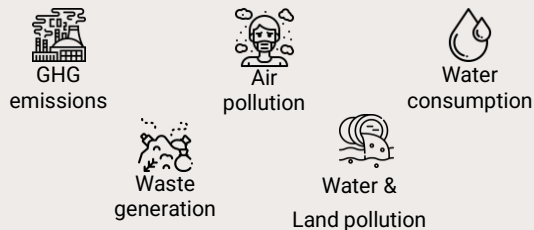
12,500+ companies globally

Geographically precise



Assessment up to 300m²

All key impact drivers



Comprehensive biodiversity and ecosystem services framework & methodology

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 business-caused Land Use Change per annum

Species Level

Annual value (in USD for e.g. 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

Biodiversity maturity stages

3 broad stages of organisational maturity when assessing biodiversity

1 STARTING OUT

Initial Risk Screening

e.g.



e.g.



Company proximity
and impact on species
richness

2 MATURE

Quantitative Impact

Species Richness – direct
and indirect

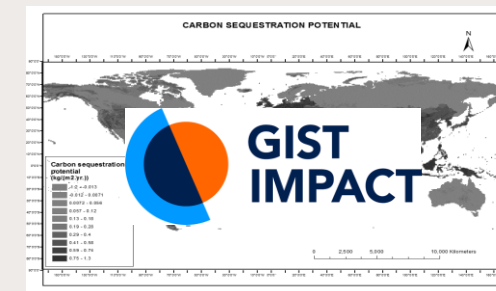


Company and sector
benchmark for impact on
species richness (PDF)
considering direct *and*
indirect drivers

3 ADVANCED

Deep Dive Quantitative

Ecosystem *and* Species in
depth



Detailed analysis across
Ecosystem Service Flows
and Change in Stocks for all
company operations

Defining metrics: MSA and PDF

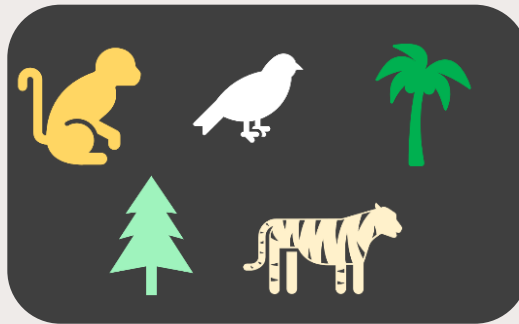
UNDISTURBED HABITAT

DISTURBED HABITAT

Species Richness

Metric: Potentially
Disappeared
Fraction (PDF)

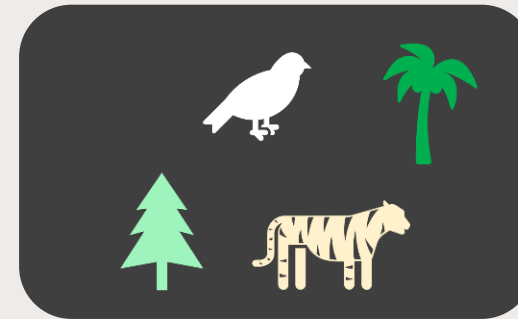
PDF: Range 0-1



Number of
species in an
area A



PDF: 0.2*



PDF Lower the value
= **Better** [i.e.
represents lower risk
of loss of
biodiversity]

MSA: Range 0-1

Species Abundance

Metric: Mean
Species Abundance
(MSA)



(Number of
species)*
(Number of
individuals per
species) in an
area A



MSA: 0.73*

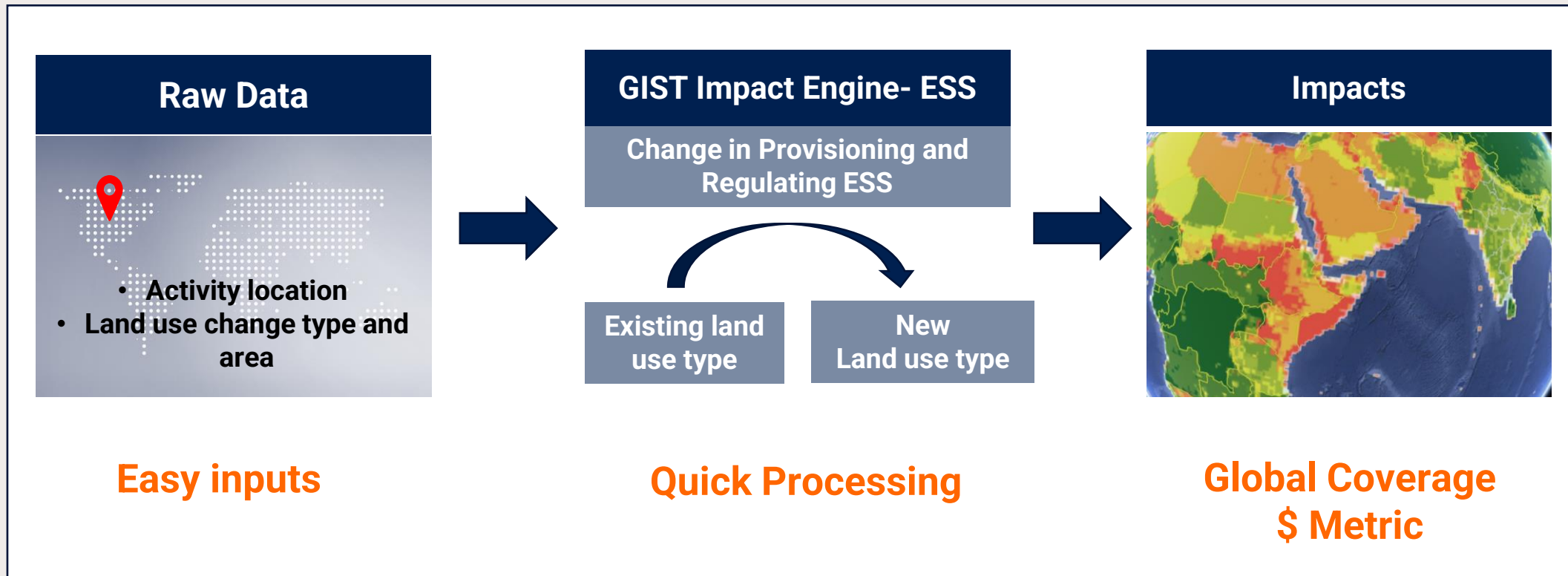


MSA Higher the value =
Better [i.e. represents
higher species
availability]

MSA loss=1-MSA

Defining metrics: Ecosystem Services

Translating Land use change into impacts on ESS



We are GIST Impact

We are a leading data and analytics provider harnessing the power of impact economics to understand the value contribution a business makes to the world.



Thank you

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