



Icare

+ Measuring impact:
tools and solutions

Because our impact matters

2023

+ IMPACT QUANTIFICATION: INTEGRATING THE "FOOTPRINT" CONCEPT

T N L E A P
F D

Dual materiality analysis: companies should assess their **IMPACTS** and **DEPENDENCIES** in relation to nature

Biodiversity footprinting

Economic activities company A

- Power Generation
- Earthworks
- Road construction
- ...

Activity data

Calculated and/or reported pressures on specific habitats

- LCA/ecological data
- Soil transformation
- Pollutant emissions
- Fragmentation
- ...

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Impact factors of footprint tools (geolocated whenever possible)

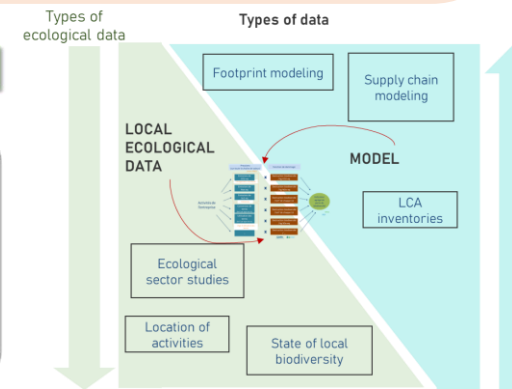
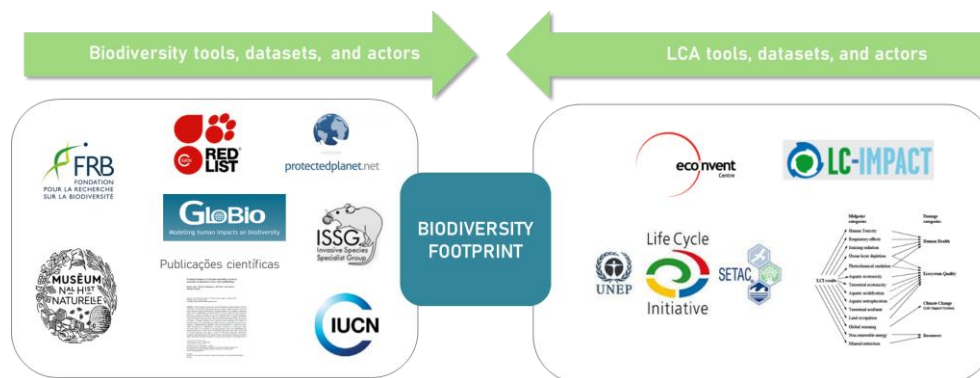
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Calculated potential impact on biodiversity

- Evolution (negative or positive) of
 - Abundance
 - Diversity

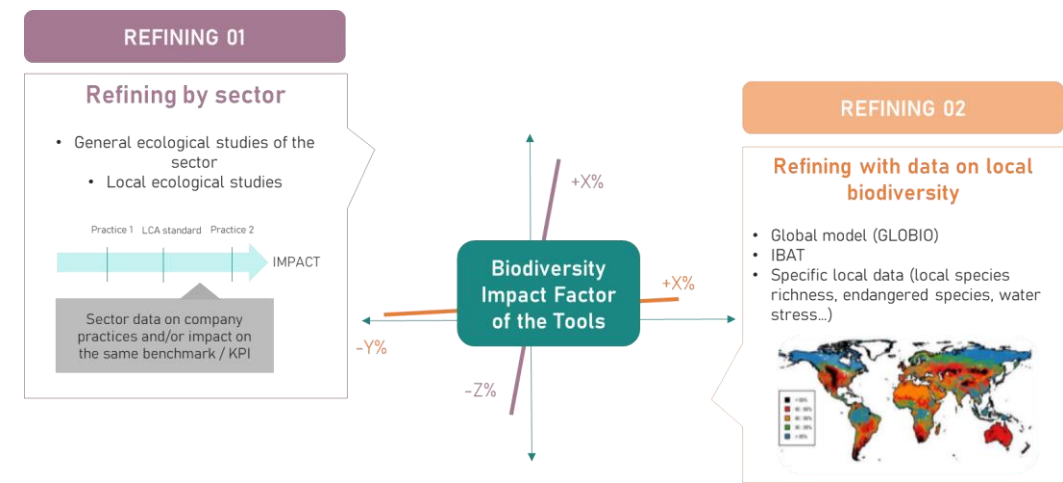
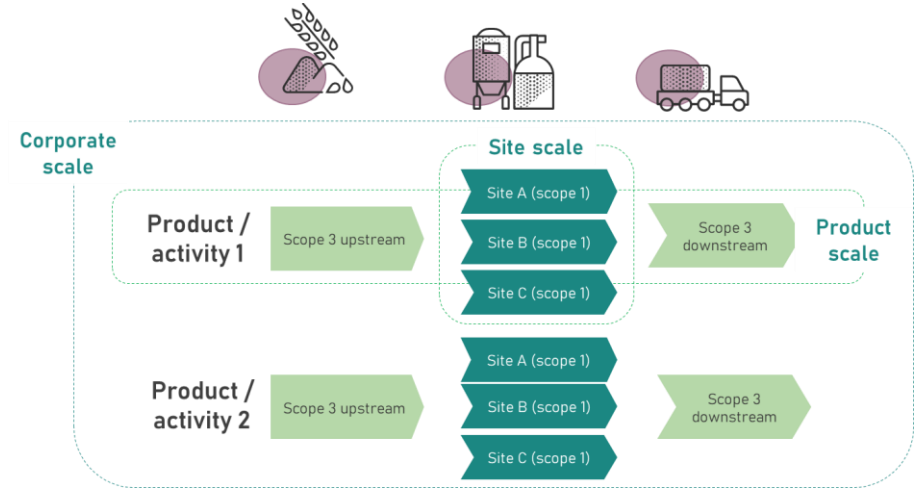
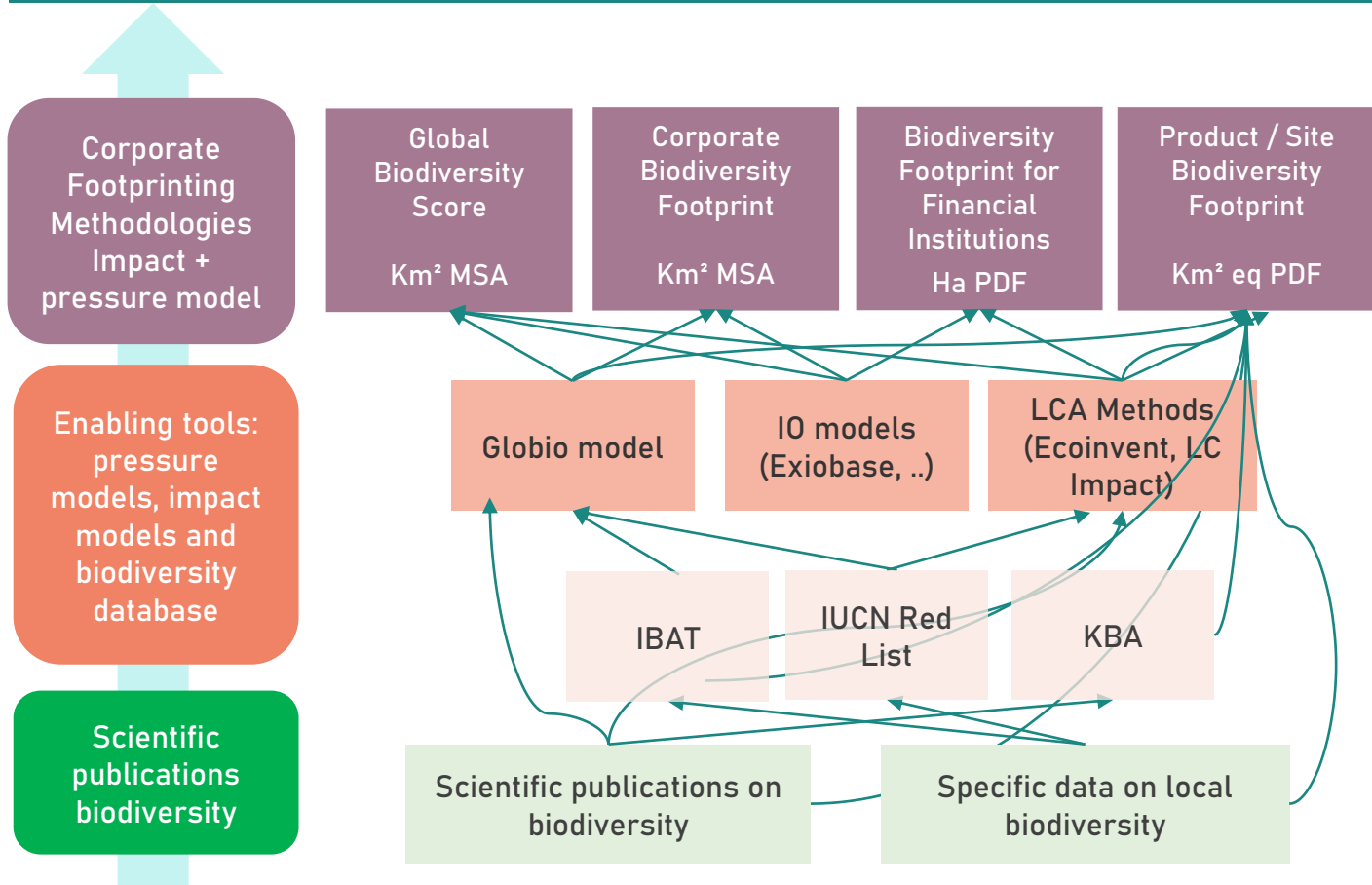
State of biodiversity N-1 year

State of biodiversity N year



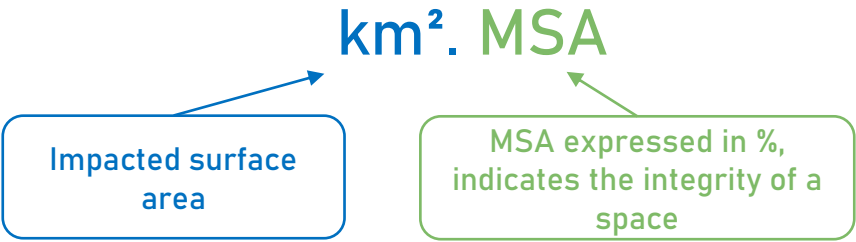
+ DIFFERENT METHODS TEND TO CONVERGE

Different methodologies based on the same sources



+ THE MEAN SPECIES ABUNDANCE (MSA) METRIC

Mean Species Abundance (MSA)
Abundance of individuals for key species



A loss of 1Km² .MSA is equivalent to the destruction of 1Km² of a pristine medium

The Mean Species Abundance (MSA) metric

Reference

Disturbed

$$MSA = \frac{1/2 + 0/1 + 1/3 + 2/2}{4} = 0.46$$

● Included in MSA
● Not-included in MSA

Forest ecosystem

MSA = 100%

MSA = 70%

MSA = 50%

MSA = 30%

MSA = 10%





+ MAIN RECOMMENDATIONS FOR A MATERIAL BIODIVERSITY FOOTPRINT

1

Even when calculating the overall footprint of the project, keep the detail per pressure and the positive and negative impacts separated, since as they do not counterbalance directly (it is still a matter of debate)

2

Capture the entire value chain and use time integration (cumulative impact)

3

Be flexible to integrate ecological literature on different pressures and granular enough to capture local specificities and integrate ecological data



+ THANKS!

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