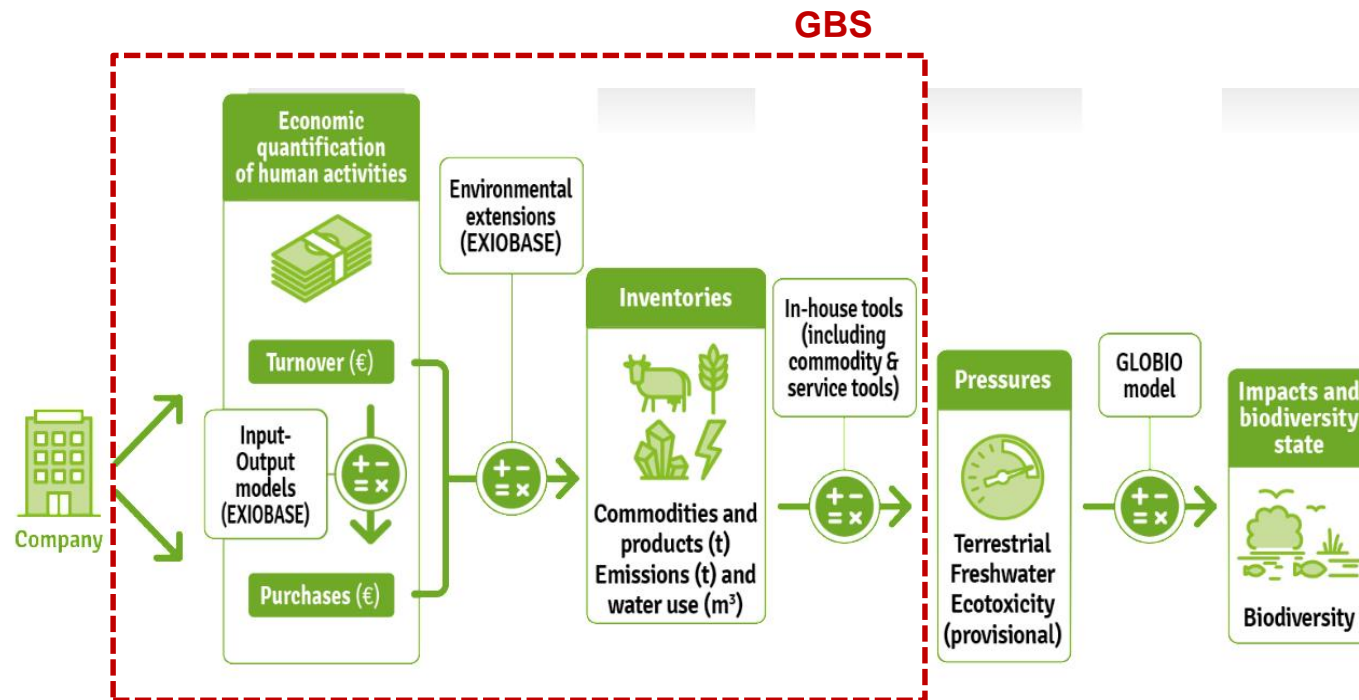
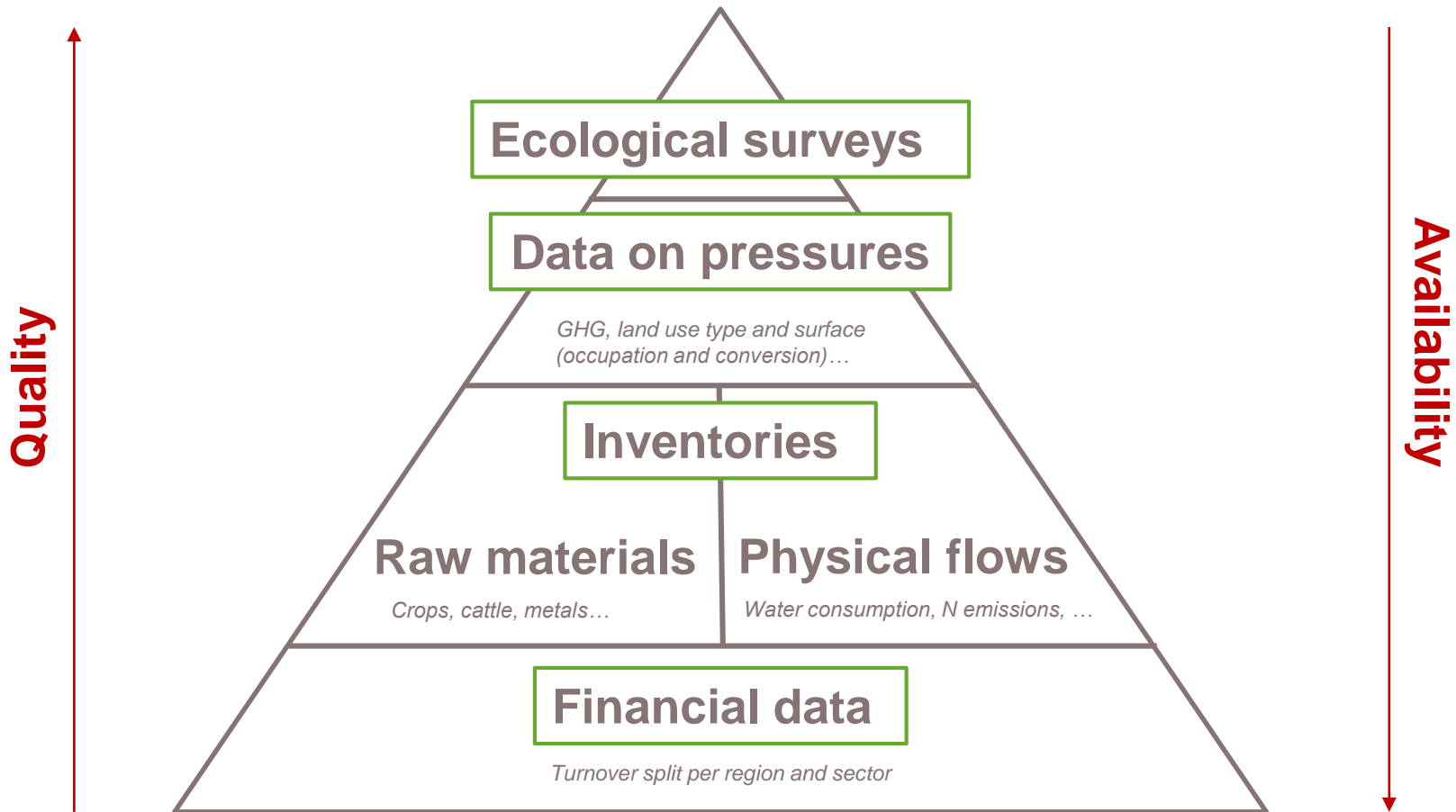



# GBS Key concepts

- ❑ GBS quantifies the contribution of economical activities to **pressures on biodiversity**
- ❑ GBS account for potential impacts **on terrestrial** and **aquatic (freshwater)** biodiversity







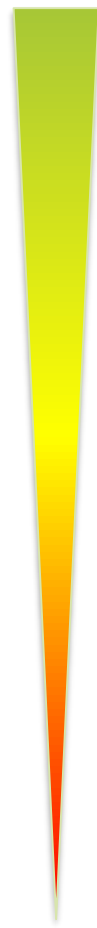
Static impacts  
➤ Biodiversity state



Dynamic impacts  
➤ Biodiversity changes



Forest ecosystem



MSA = 100%

MSA = 70%

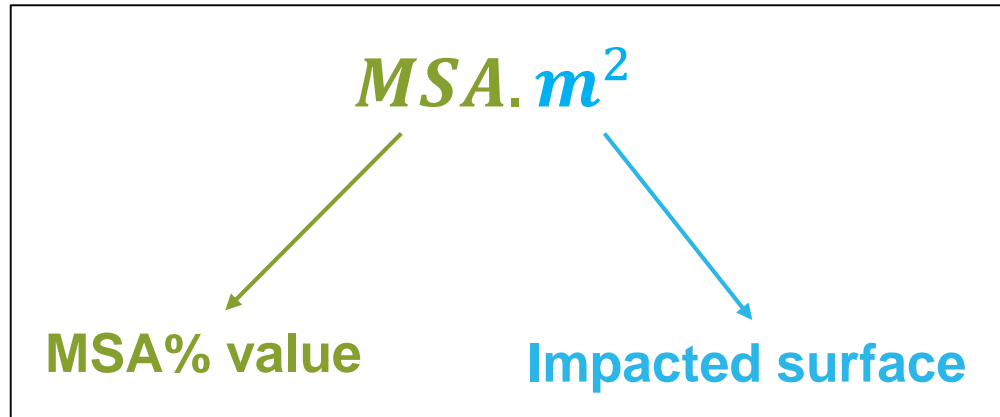
MSA = 50%

MSA = 30%

MSA = 10%



Global biodiversity model for policy support



**1 MSA.m<sup>2</sup> loss**  
*is equivalent to*  
**the artificialization of 1 m<sup>2</sup> of  
pristine natural ecosystem**

## MSAppb

aggregates **terrestrial and aquatic** impacts by expressing both as a fraction of their respective surface area and multiplying by  $10^9$  (parts per billion)

*It can be used for intensities also, e.g. to express  $MSA.m^2/kEUR$  in  $MSAppb/bEUR$*

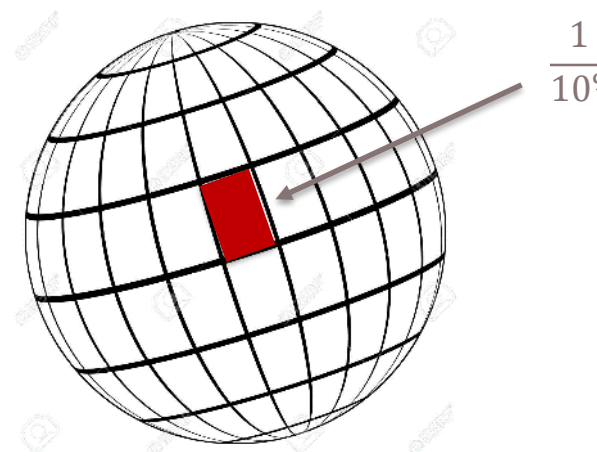
### Respective areas of terrestrial and aquatic ecosystems



130 million km<sup>2</sup>

11 million km<sup>2</sup>

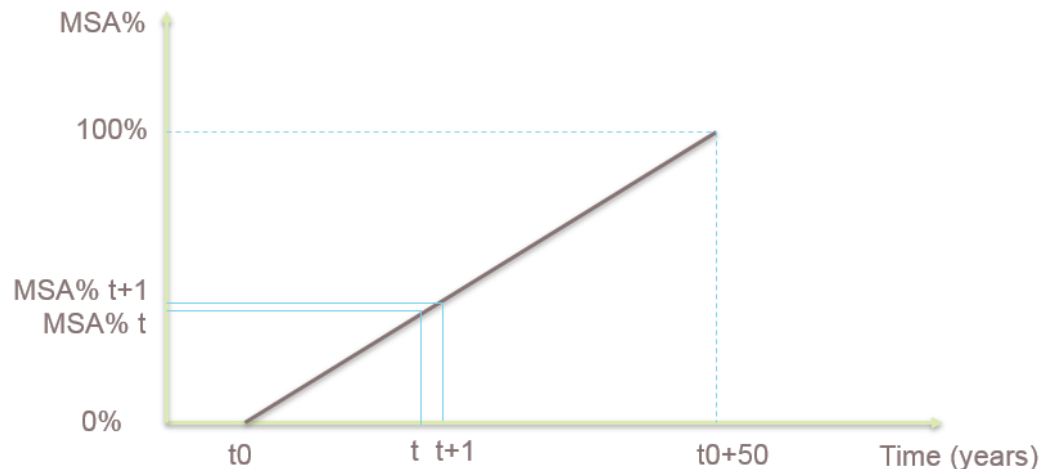
Part per billion (ppb): used for proportions, corresponds to a ratio of  $10^{-9}$



- Recovery time assumption: **50 years + linear curve**
- Inline with time integrated metrics such as PDF.m2.yr

## MSA score

- Static impacts can be seen as a missed opportunity for biodiversity recovery
- This opportunity can be estimated to 1/50 over 1 year
- To compare static and dynamic impacts, **we divide static impacts by 50** (assuming dynamic impacts are computed over a 1-year period)





# Towards quantitative results aggregation: example



## Impacts of the company



Static

Dynamic

Static

Dynamic

Impacts in MSA.km<sup>2</sup>

100 MSA.km<sup>2</sup> 1 MSA.km<sup>2</sup>

10 MSA.km<sup>2</sup> 0.5 MSA.km<sup>2</sup>

Impacts in MSAppb

800 MSAppb 8 MSAppb

920 MSAppb 46 MSAppb

Static

Dynamic

1720 MSAppb

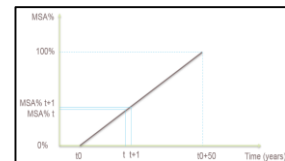
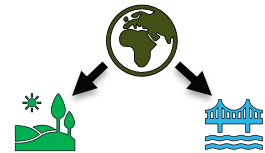
54 MSAppb

Impacts in MSA score

34 MSA score

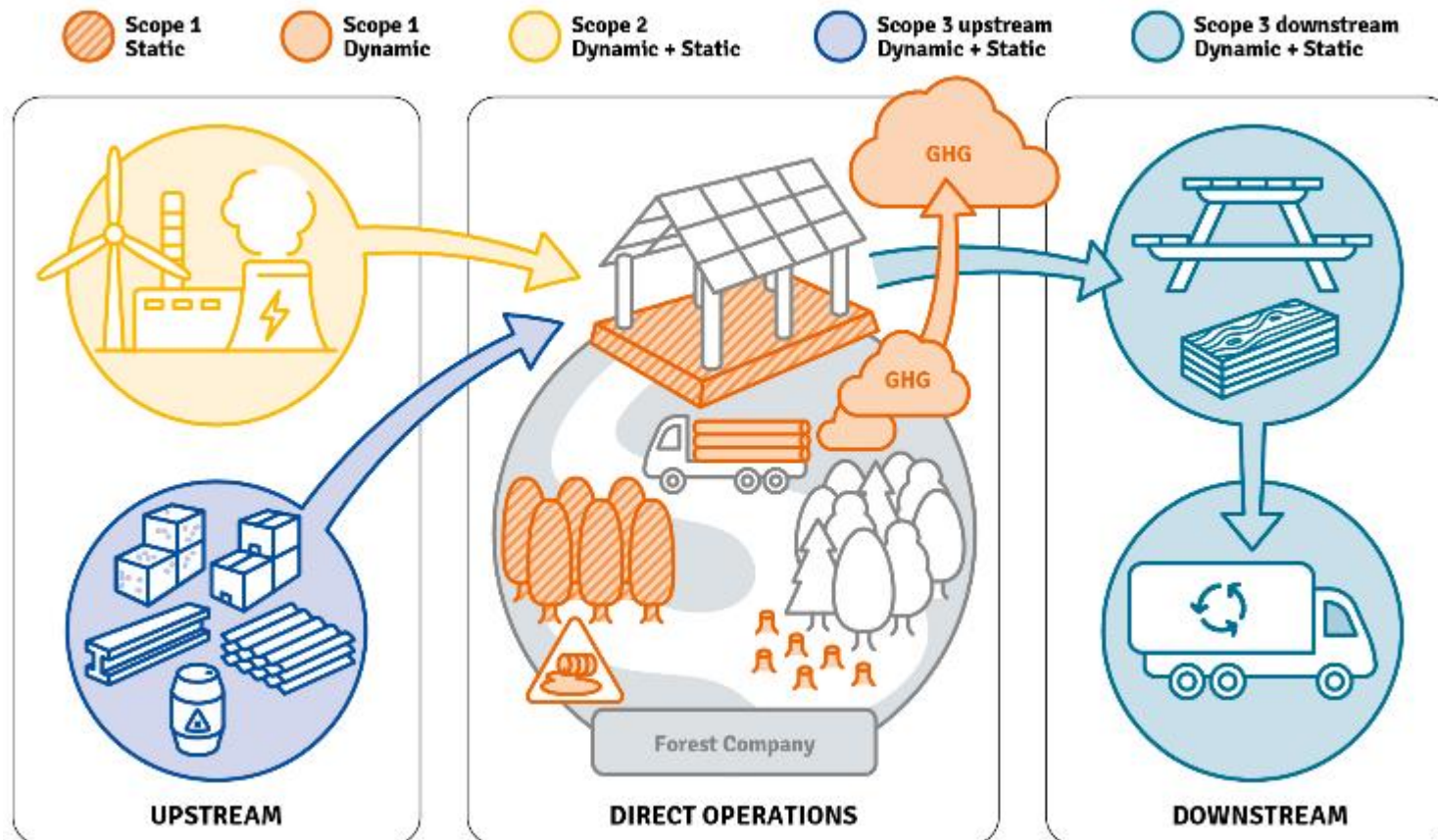
54 MSA score

**88 MSA score**



... that enables to take into account all sectors and all scopes

**Value chain boundaries compatible with the GHG Protocol:**



**Value chain boundaries compatible with the Natural Capital Protocol**

