

Indicators and frameworks for biodiversity  
assessments:  
what, when and how to use them

**Serina Ahlgren**

# Quantify biodiversity?

- Global/national/regional indicators
- Corporate frameworks
- Land owner (farm/forestry) frameworks
- Product level (LCA)

# Global indicators

For example

- IUCN Red List Index of Threatened Species
- SEBI indicators (EU)
- SDG indicators



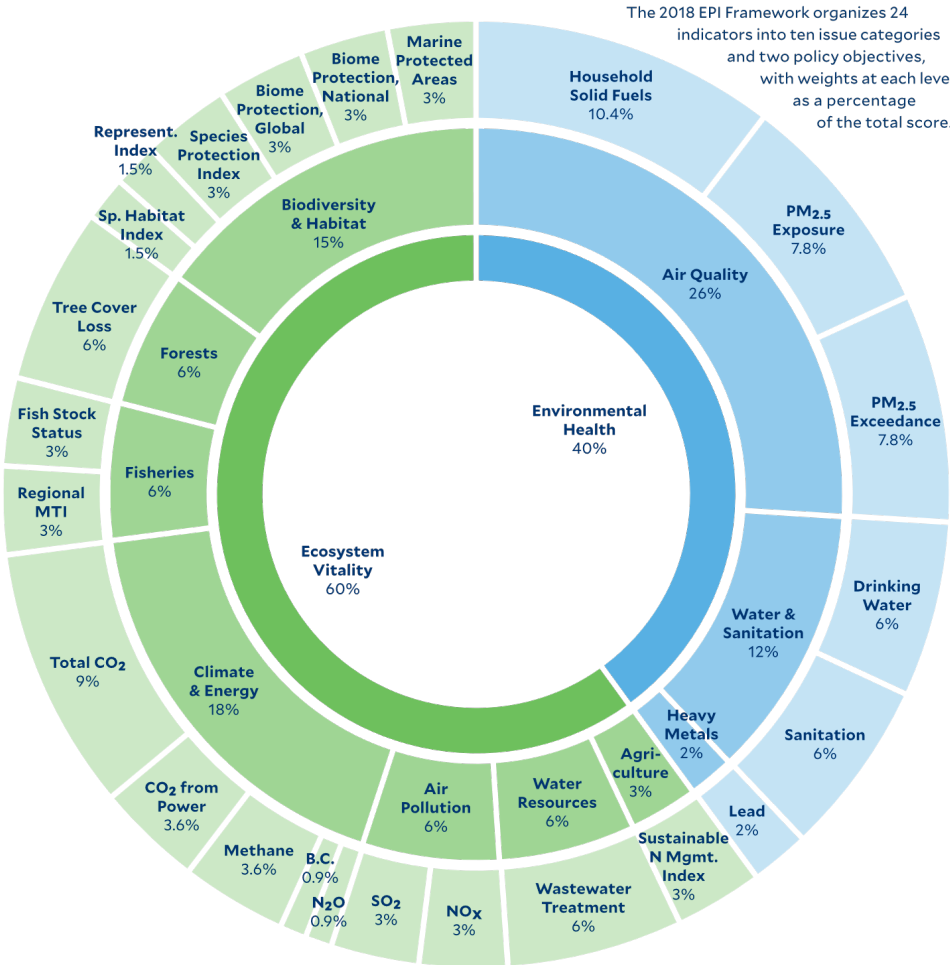
The IUCN Red  
List of Threatened  
Species™



# Global indicators

## Environmental Performance Index (EPI)

Ranks 180 countries on 24 performance indicators across ten issue categories covering environmental health and ecosystem vitality.



# Swedish environmental objectives

## **Varied Agricultural Landscape**

Indicators:

- Pasture
- Organic production
- Birds and butterflies
- Agricultural development
- Yields barley and wheat

## **Rich Diversity of Plant and Animal Life**

Indicators:

- Preservation status
- Red listed species
- Protected forests

# Corporate frameworks

Of the **top 100** companies, **86** have publicly available sustainability reports:



Addison et al 2018

# Ecogain biodiversity index

- Rank Swedish and Nordic companies' biodiversity efforts

RANK 2020	FÖRETAG	BRANSCH	OMS 2018, MKR	POÄNG
1	LKAB	Material	23 978	17
1	SCA	Material	18 725	17
3	Arla Foods	Dagligvaror	16 358	14
3	IKEA	Sällanköpsvaror- och tjänster	27 627	14
3	Preem	Energi	79 046	14
6	AAK	Industrivaror- och tjänster	26 565	13
6	Holmen	Material	17 556	13
8	BillerudKorsnäs Aktiebolag	Material	22 565	12
8	Hennes & Mauritz	Sällanköpsvaror- och tjänster	200 004	12
10	Vattenfall	Energi	135 295	10



2020  
BIODIVERSITETSINDEX

SVERIGES ENDA RANKING AV BIOLOGISK  
MÅNGFOLD INOM NÄRINGSLIVET



# Science based targets



## How can companies set a science-based target?

The private sector must play a fundamental role in reducing GHG emissions. Embedding science-based targets in sustainability management is crucial.

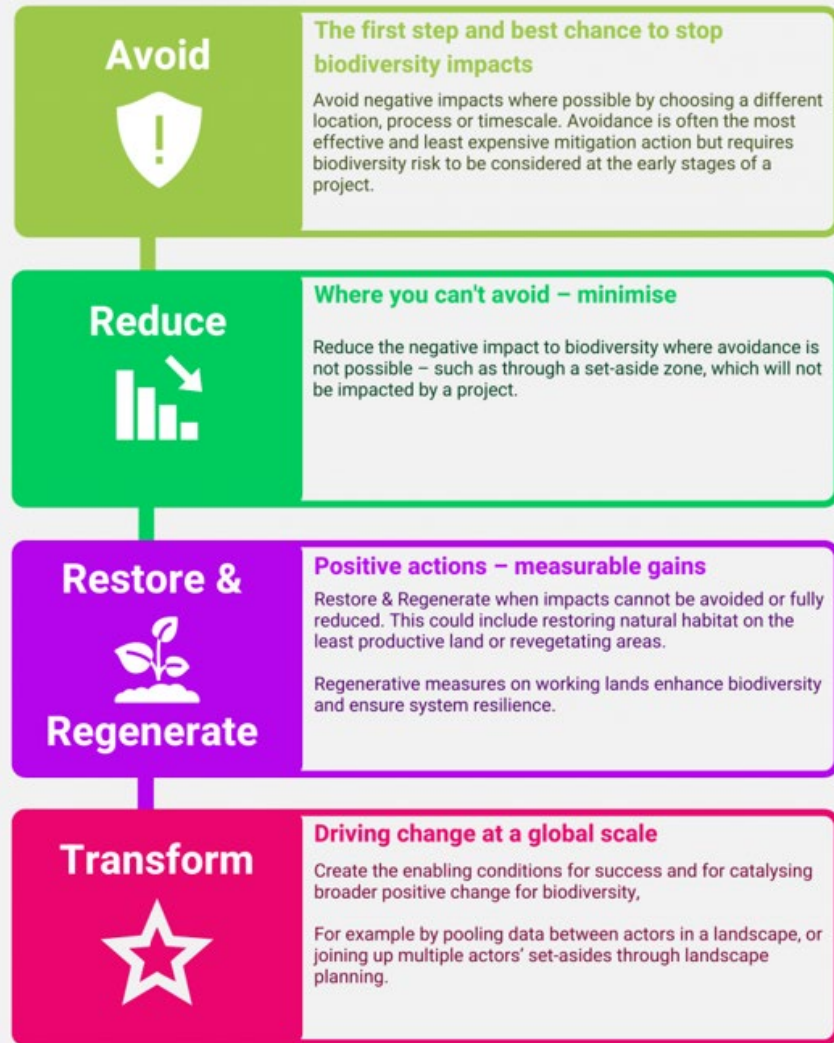
Setting a science-based target is a five-step process:

- ✓ **Commit:** submit a letter establishing your intent to set a science-based target
- ✓ **Develop:** work on an emissions reduction target in line with the SBTi's criteria
- ✓ **Submit:** present your target to the SBTi for official validation
- ✓ **Communicate:** announce your target and inform your stakeholders
- ✓ **Disclose:** report company-wide emissions and track target progress annually



# Science based targets for nature

<https://www.thebiodiversityconsultancy.com/approaches/science-based-targets-for-nature/>



# Farm level

For example

- Cool Farm Tool
- Sustainable Agriculture Initiative (FSA-tool)
- Response Inducing Sustainability Evaluation (RISE)



Indikatorer för hållbart jordbruk:  
Växtnäring, klimat och biologisk mångfald  
på naturbruksskolorna Sötåsen och  
Uddetorp

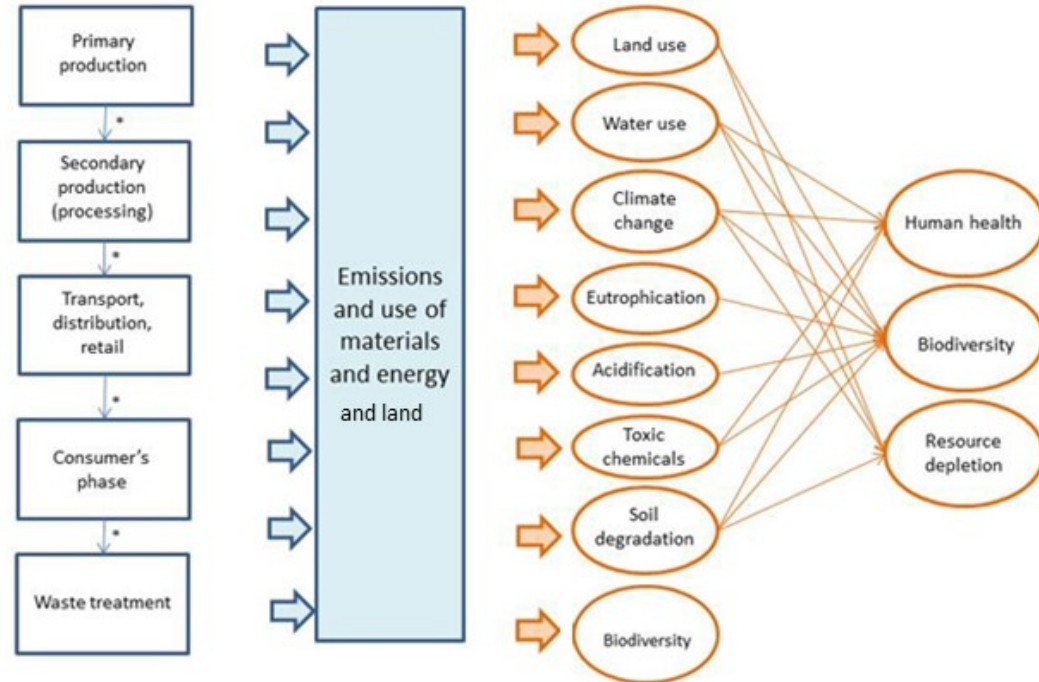
Pernilla Tidåker\*, Birgit Landquist\*\* och Maria  
Berglund\*\*\*

\*SLU Sveriges lantbruksuniversitet, \*\*RISE, \*\*\*Hushållnings sällskapet Halland  
RISE Rapport 2020:04

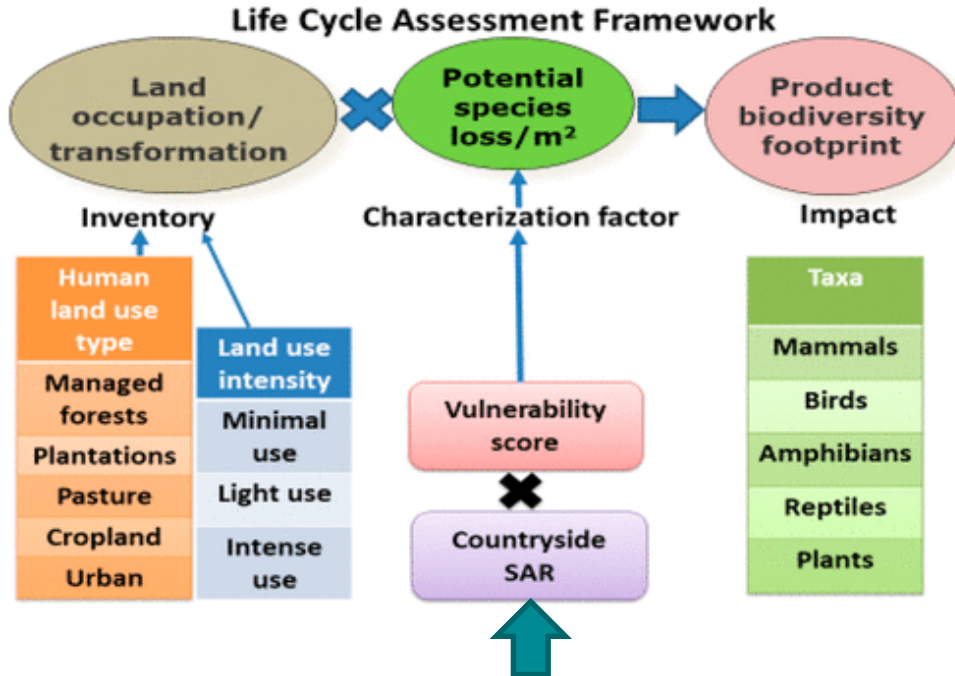
<http://urn.kb.se/resolve?urn=urn:nbn:se:ri:diva-43541>

# On product level

- For LCA framework
- Hectares  $\times$  characterization factor

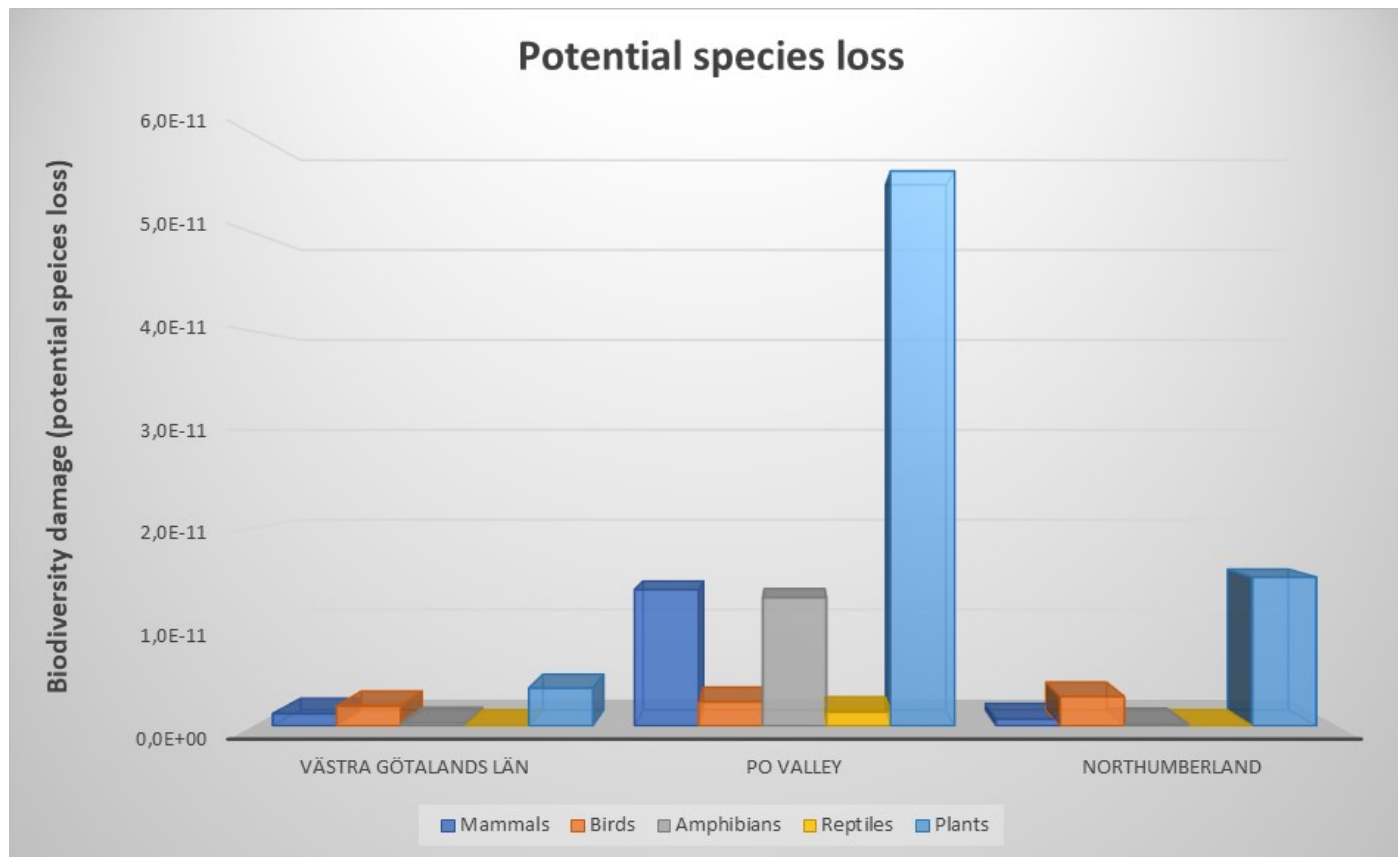


# Chaudhary et al 2018



Biodiversity data collected mainly from:  
WWF Wildfinder database  
IUCN Red list habitat classification scheme

# Results of hypothetical study, per kg beef



# Lot's to consider

- System boundaries extra important
- Global value chains - Local effects
- Birds, insects, reptiles, plants, etc. How weigh together?
- When a species is gone, it's gone
- Lack of data
- What is the reference situation?

**Serina Ahlgren**

serina.ahlgren@ri.se

070-630 70 13