



the value of biodiversity and ecosystem services

# Ecosystem services as arguments for biodiversity protection

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**Millennium Ecosystem Assessment, 2005:**  
“Ecosystem services are the benefits people obtain from ecosystems.....”

TEEB, 2010

The direct and indirect contributions of ecosystems to human wellbeing





# Millennium Ecosystem Assessment

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“Everyone in the world depends completely on Earth’s ecosystems and the services they provide”

Well-being:

- basic material for a good life;
- health and a healthy environment;
- good social relations;
- security;
- freedom of choice.



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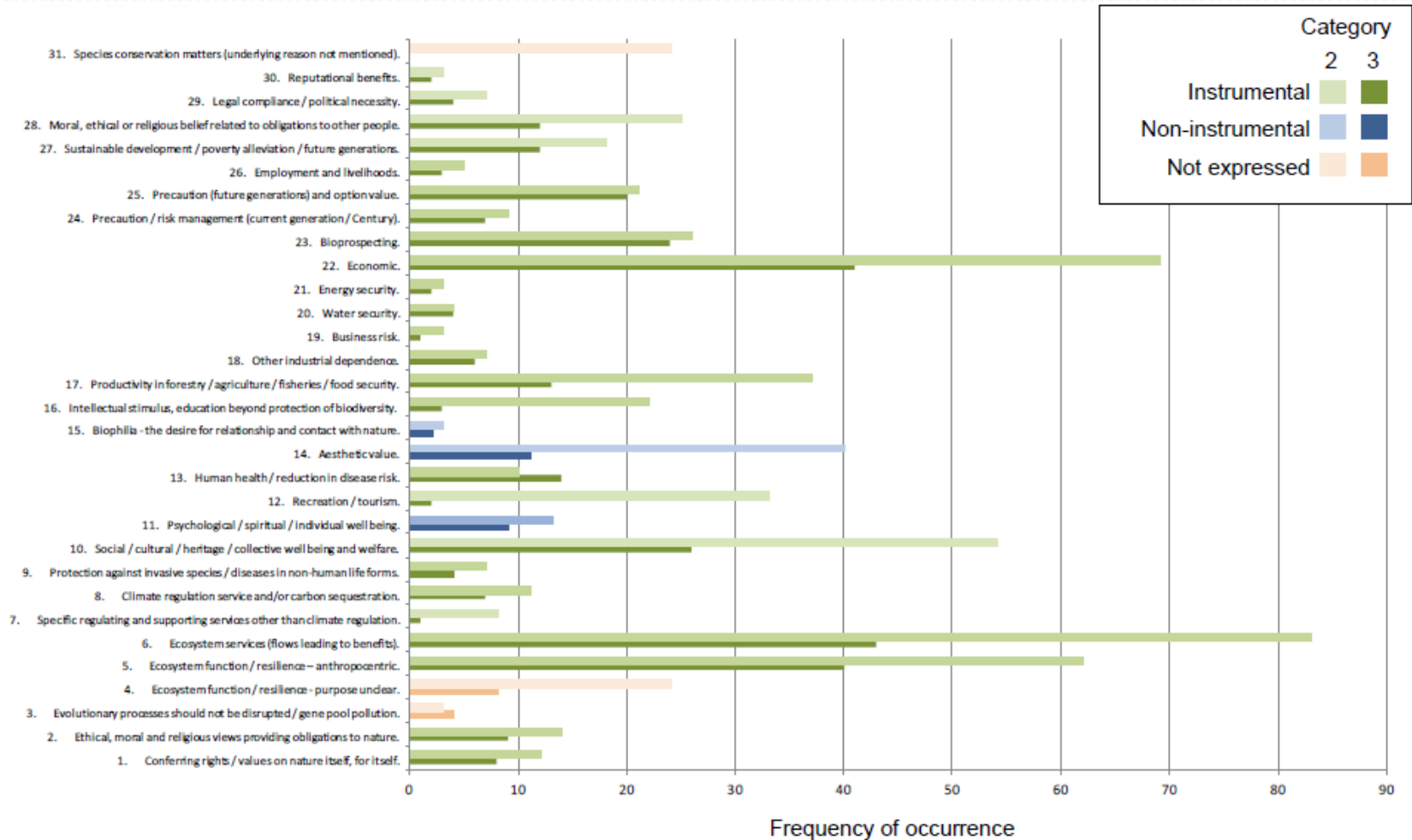
# Types of premise statements for biodiversity relating to ES

- Ecosystem function / resilience
- Contribution to specific services  
e.g. Social / cultural / heritage / psychological well being and welfare.
- Risk reduction / security

# Frequency of reference to premises



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## EU Biodiversity Strategy to 2020

"Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss"

Our life insurance, our natural capital: an EU biodiversity strategy to 2020



# 2050 vision



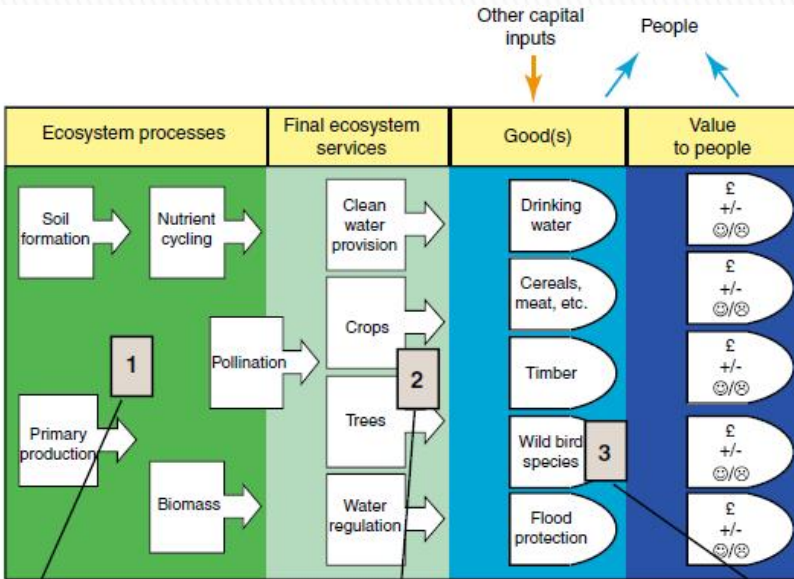
By 2050, European Union biodiversity and the ecosystem services it provides — its natural capital — are

- protected, valued and appropriately restored
- for biodiversity's intrinsic value and
- for their essential contribution to human wellbeing and economic prosperity,
- so that catastrophic changes caused by the loss of biodiversity are avoided.

# What is the role of biodiversity in the delivery of ES?



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From Mace et al., (2012) Trend in Ecol. & Evol.

TRENDS in Ecology & Evolution



www.besafe-project.net





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## How ES might support arguments for biodiversity

- Need (selected) components of biodiversity to support and deliver an ES
- Biodiversity may be a service itself
- MA recognises people influence ecosystems because of concern for their own well-being, but also the intrinsic value of ecosystems and species.



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## Some challenges to using ES as an argument

- relationship between ES and biodiversity
- the different roles of biodiversity in the delivery of ES
- valuing biodiversity within ES



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# Relationship between ES and biodiversity

## Questions affecting arguments

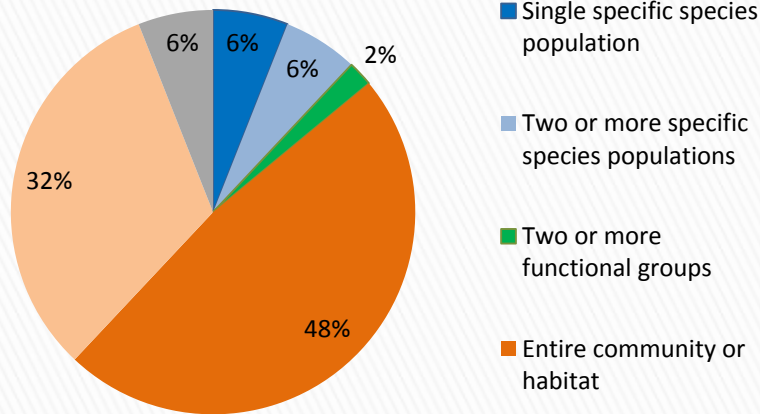
- Are they synonymous?
- Does all biodiversity have a role in the delivery of ES?
- Will the maintenance of ES protect biodiversity?

# What is the role of biodiversity in the delivery of ES?

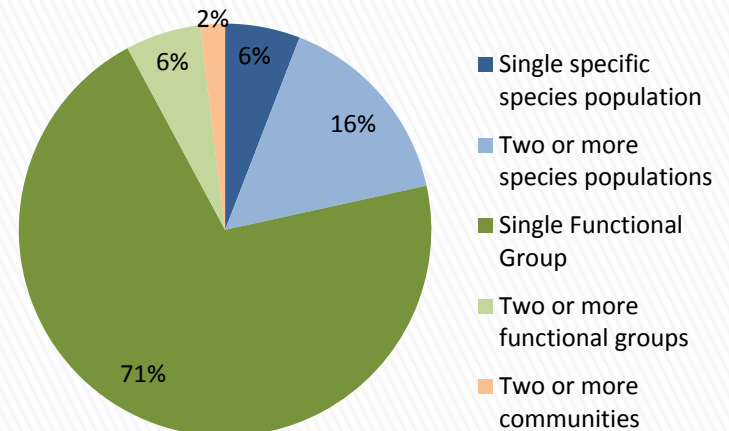


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## Water quality

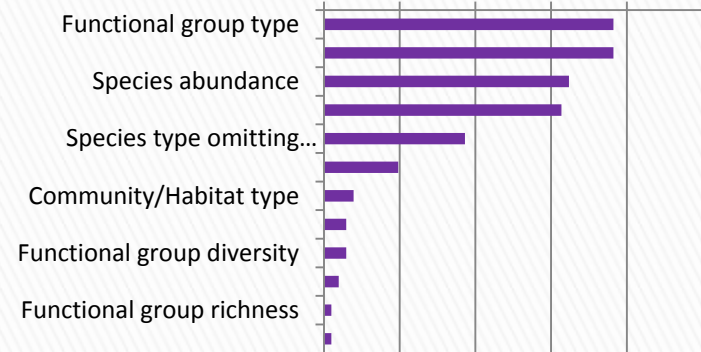
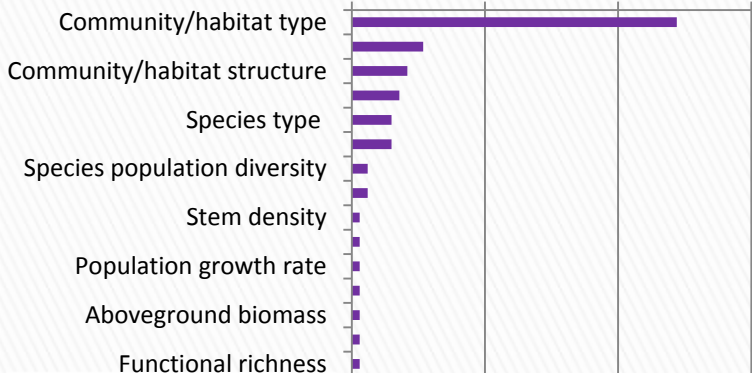


## Pollination



0 20 40 60

0 20 40 60 80 100



# Valuing biodiversity within ES



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- Valuing of those components of biodiversity that can be explicitly linked to ES
- Neglect of some of the premises e.g. biophilia, intrinsic value, species conservation for own sake
- Is ES a value-added argument?



# Summary

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- There are arguments within ES which can be used to enhance biodiversity protection
- Need to identify which are/could be most effective given different components of biodiversity involved and potentially different priorities
- Need to think how they can best be used

