

# Global status of terrestrial biodiversity and our response

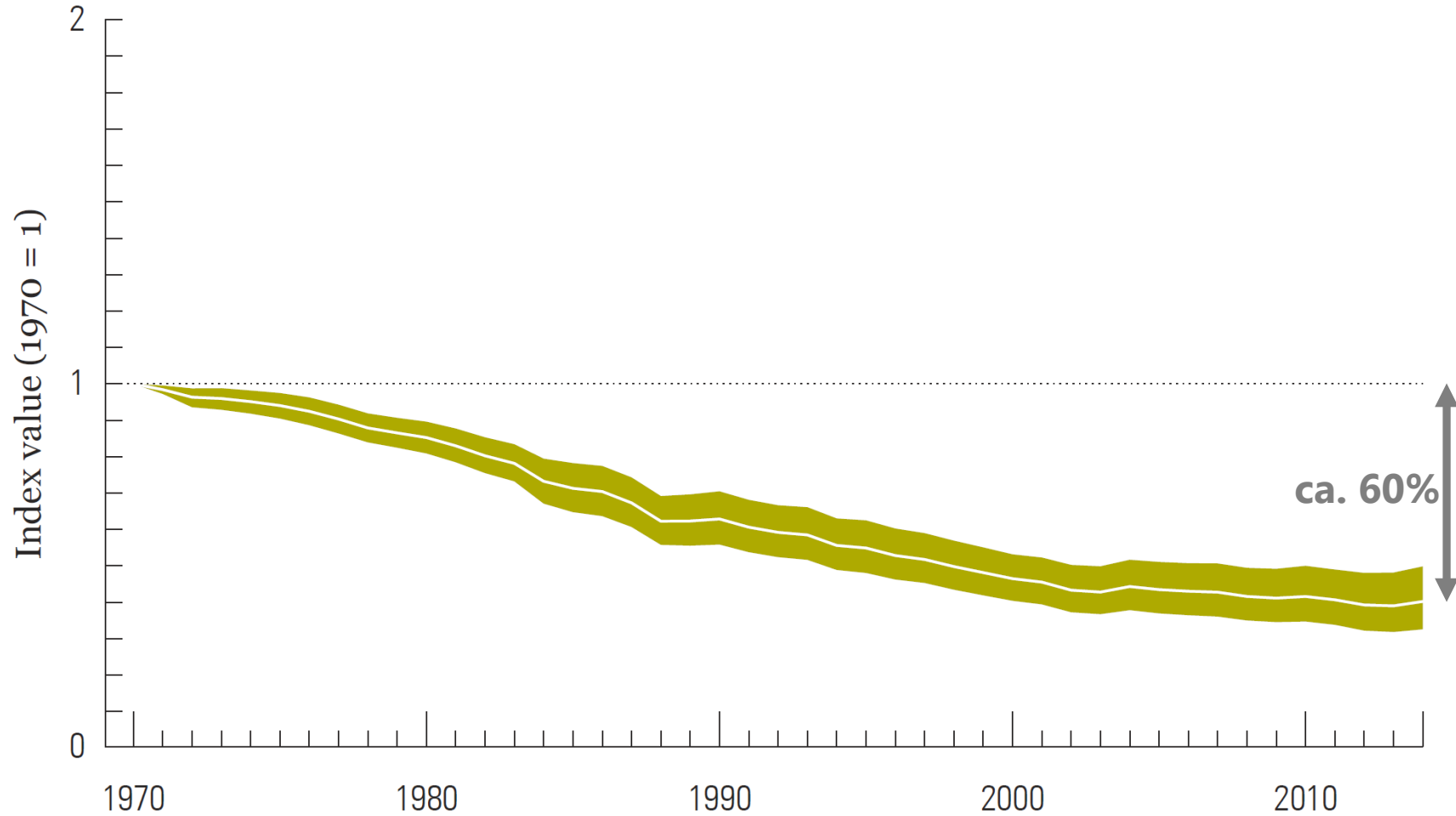
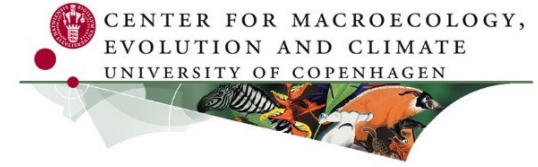
Jonas Geldmann,  
Climate Thursdays, SDU,  
22 September 2022

UNIVERSITY OF  
COPENHAGEN



**The 6<sup>th</sup> mass extinction?**

# Populations are seeing dramatic declines

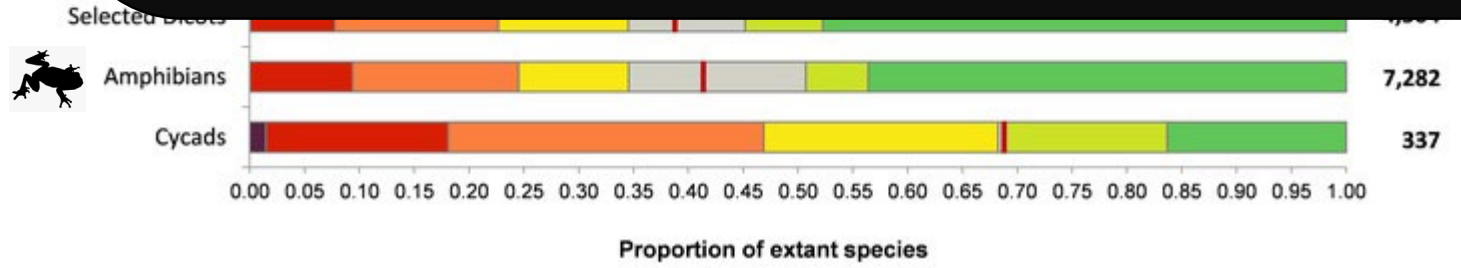


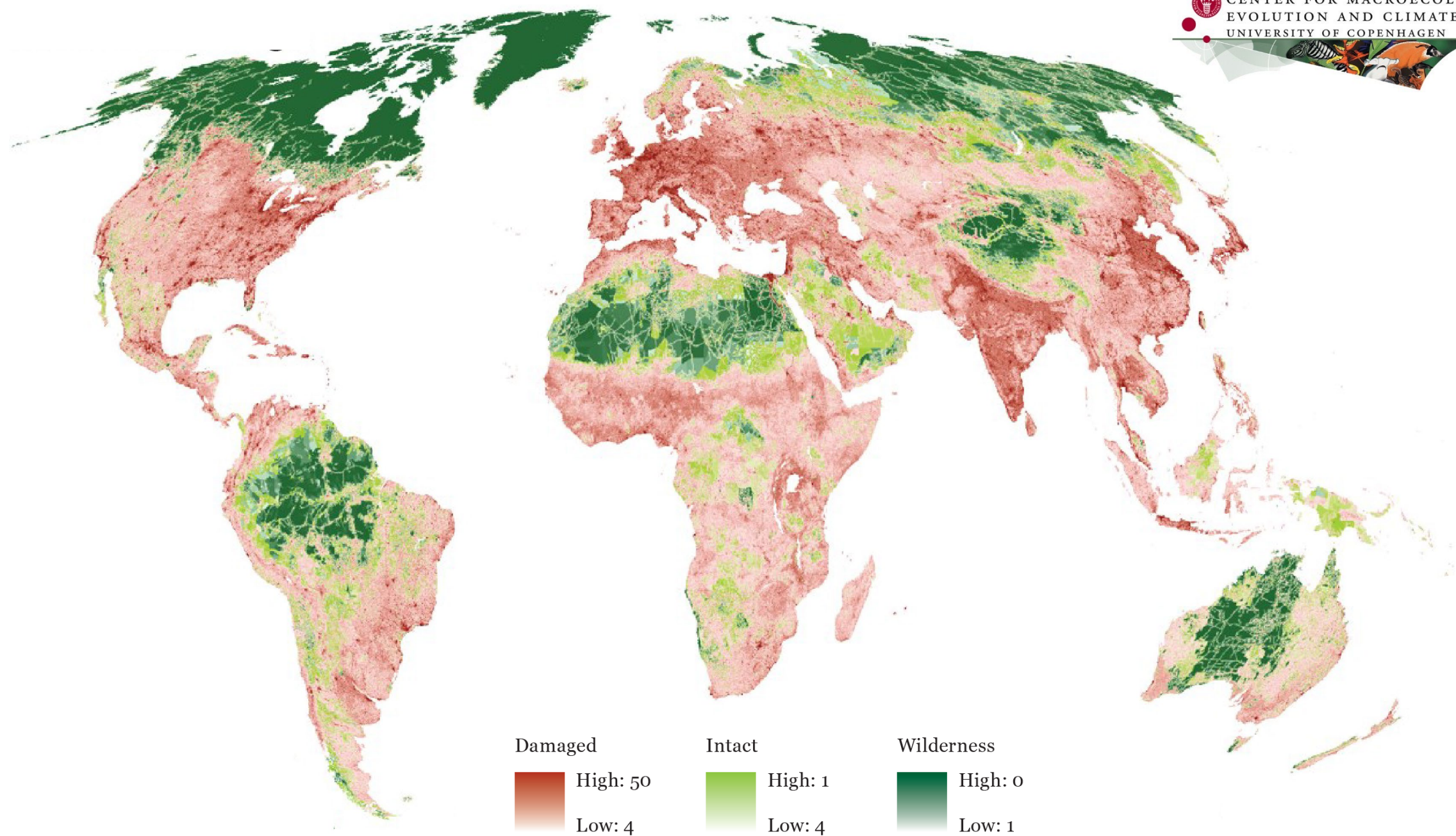
# Threatened with extinction

**Ca. 25% of all assessed species threatened with extinction**

**Extinctions rates are 100-1,000 times higher than expected**

EW CR EN VU DD NT LC  
TOTAL EXTANT species assessed (excluding EX)





**25% of all assessed species are threatened with extinction**

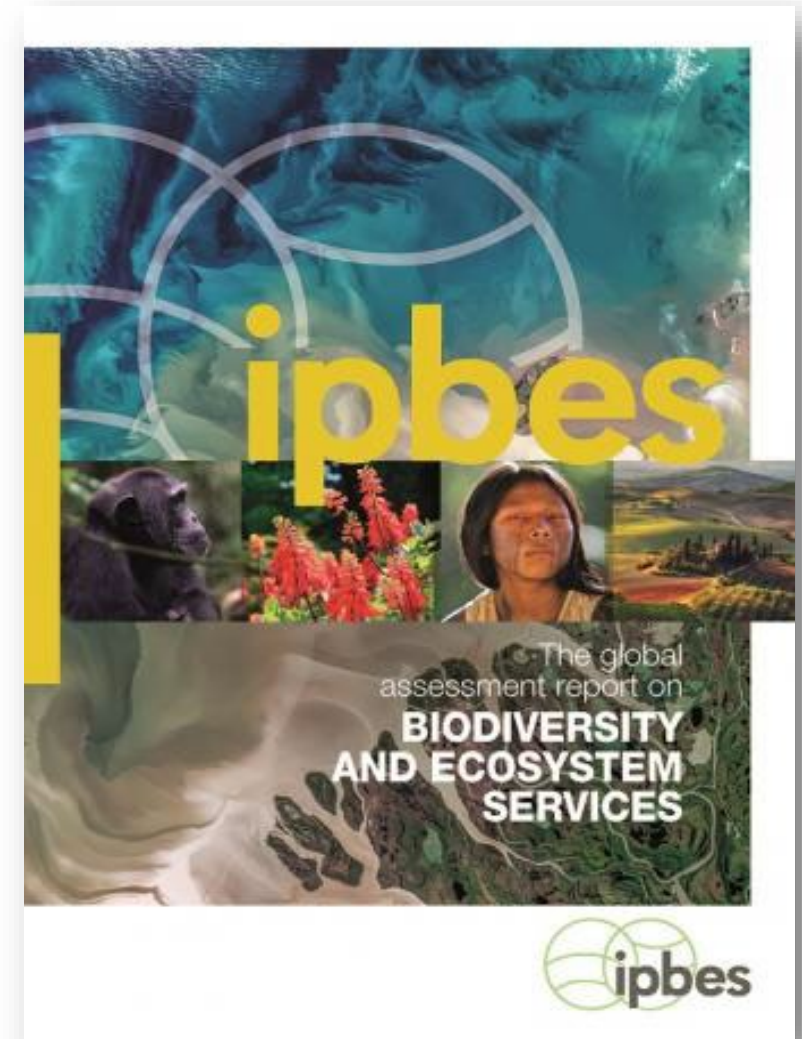
**Monitored vertebrate populations have lost on average 60% of the population sizes**

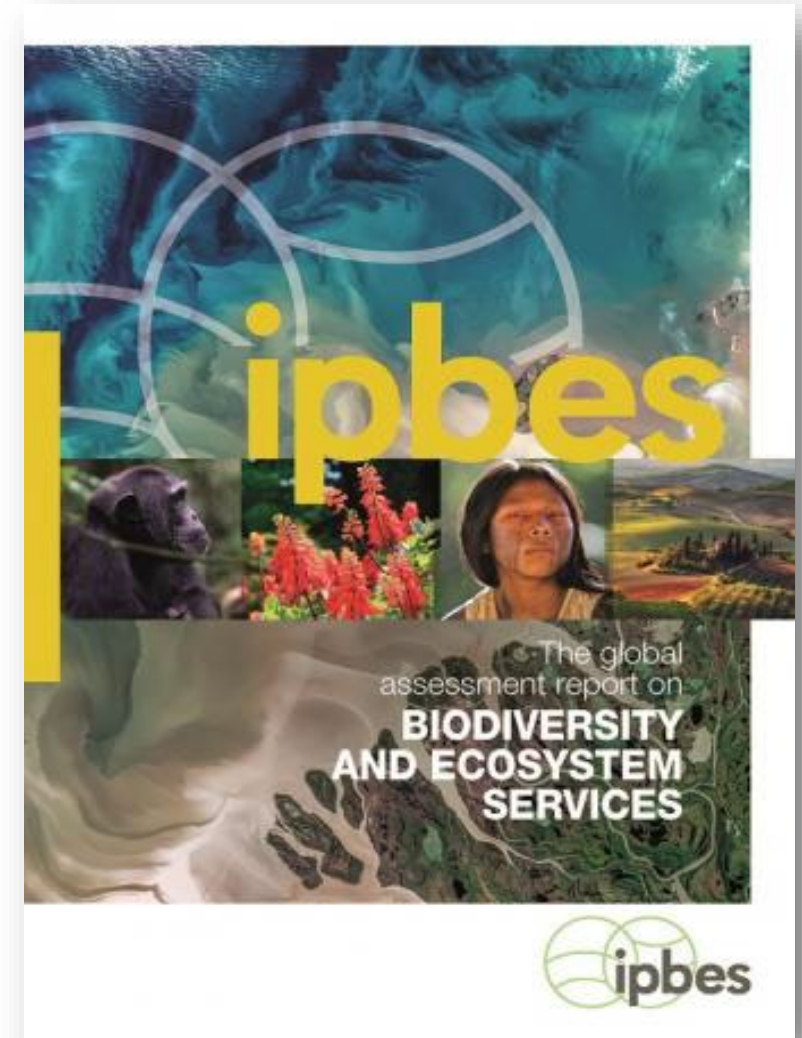
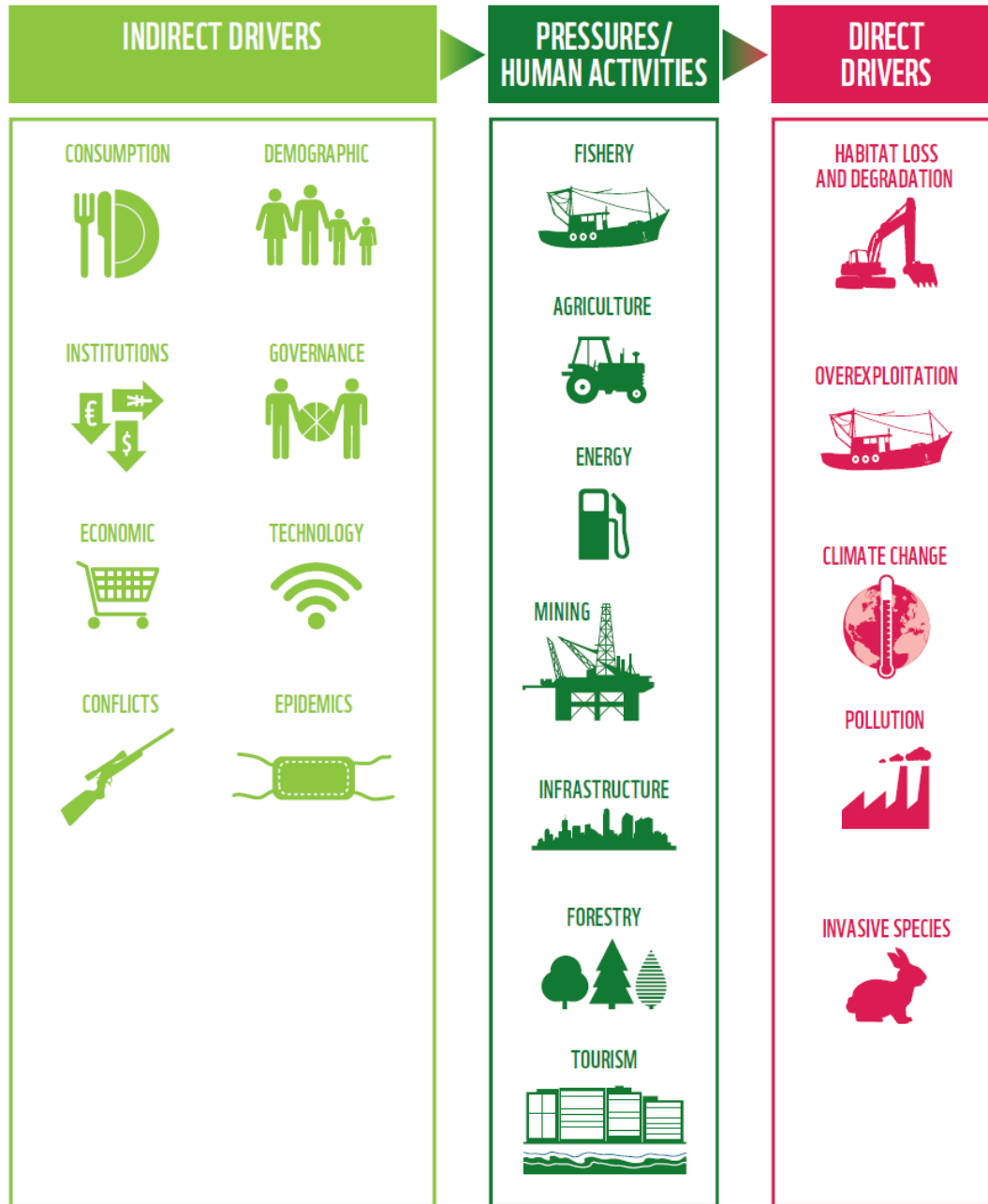
**Over 75% of the worlds terrestrial surface shows significant impacts of people**

## Consensus report from 2019

> 500 experts

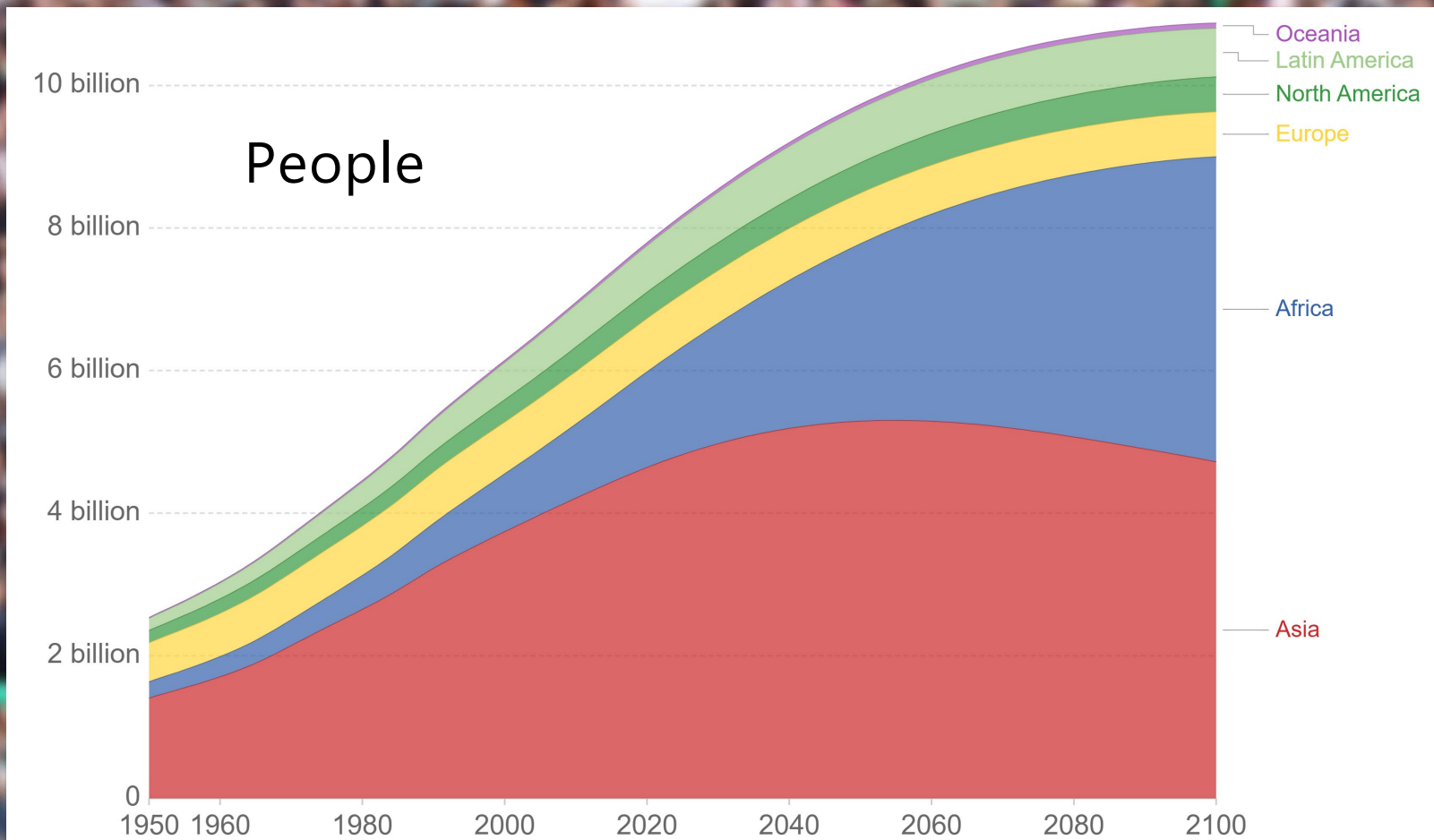
> 15,000 articles and reports

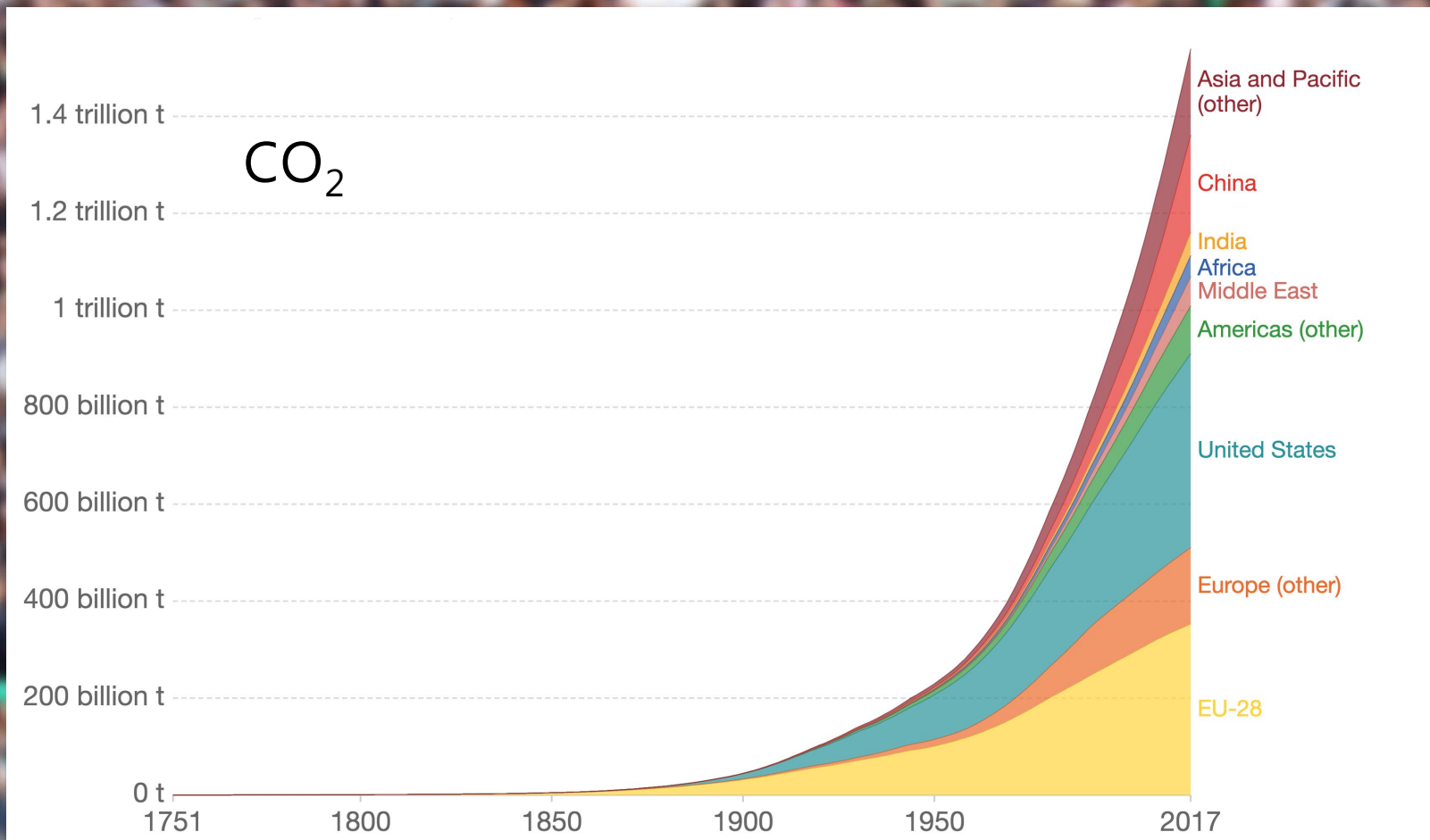












# The Convention on Biological Diversity

***“by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people”***

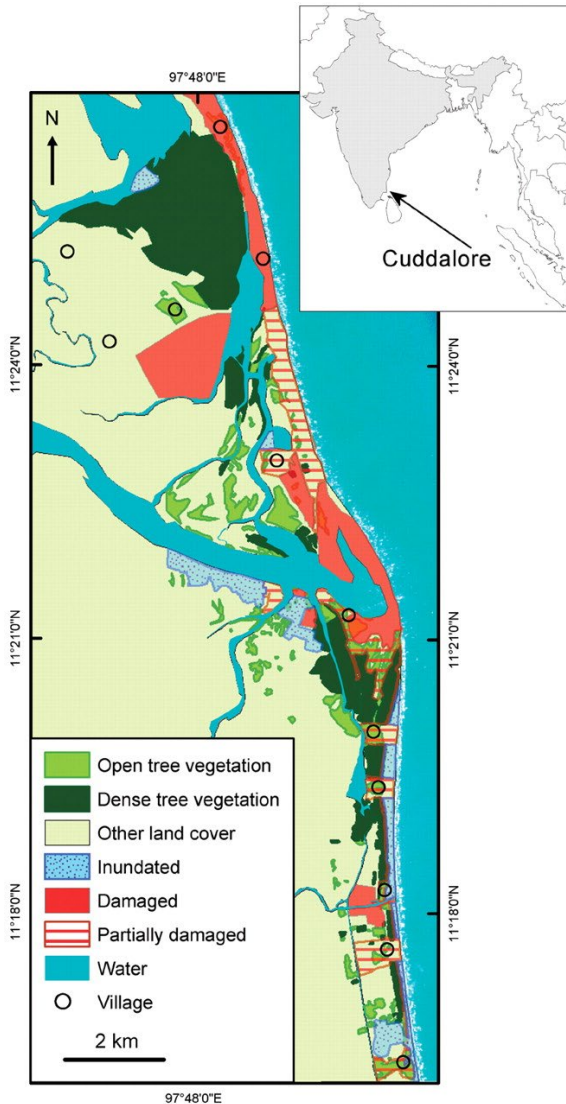
***“... we have halted the loss of biodiversity”***



Convention on  
Biological Diversity

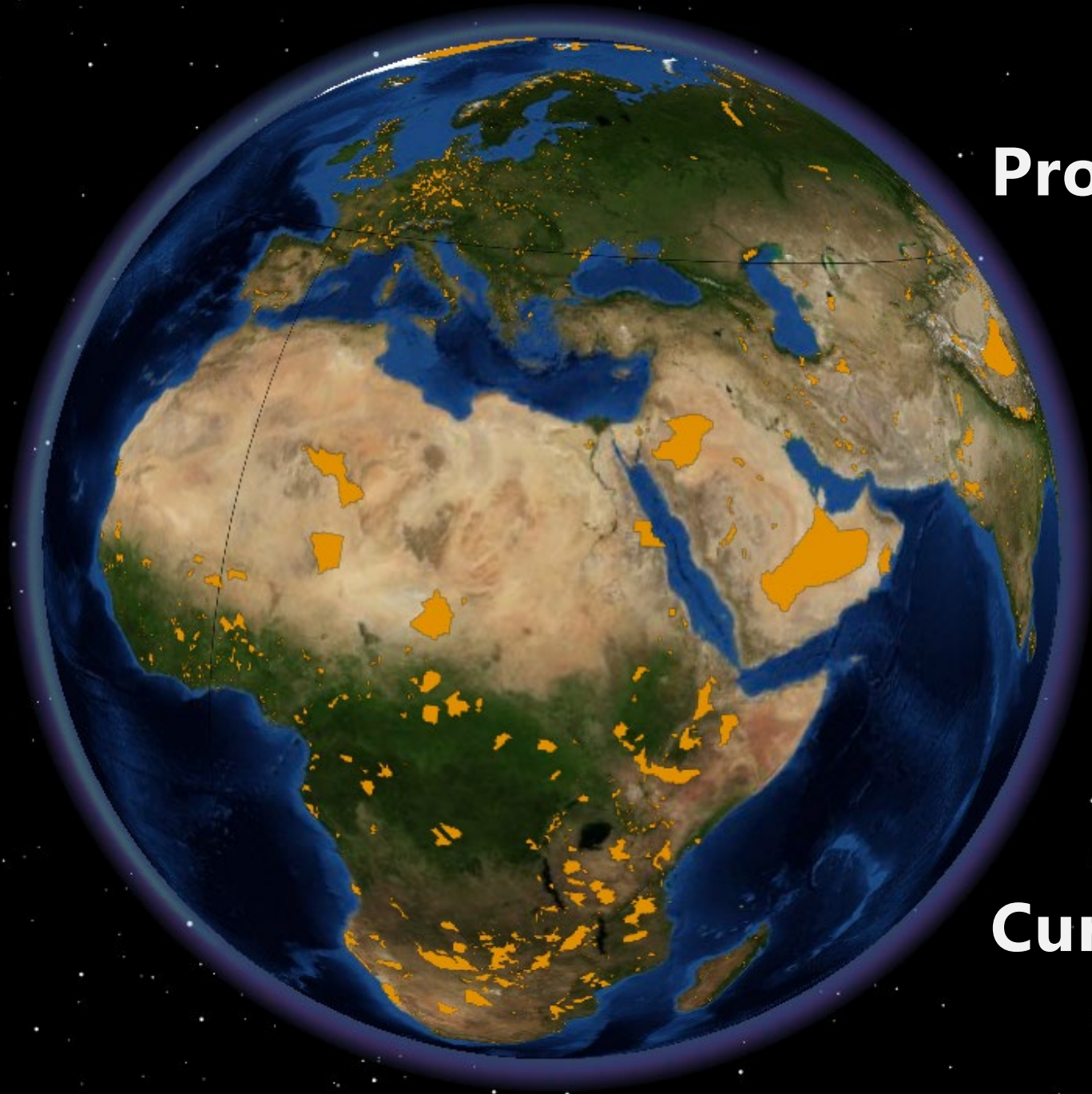
- **Intrinsic values** – the value that is independent of potential usefulness of biodiversity for human beings ("*A healthy planet*")
- **Extrinsic value** – the value that is not intrinsic. Often marketable and can be put in terms of \$\$ ("*delivering benefits essential for all people*")

# Nature for hazard prevention



**“Damage to villages also varied markedly. In the north, stands of mangroves had five associated villages, two on the coast and three behind the mangrove. The villages on the coast were completely destroyed, whereas those behind the mangrove suffered no destruction even though the waves damaged areas unshielded by vegetation north and south of these villages.”**

# **We are in a biodiversity crisis ...So what are we doing?**



**Protected areas**

**Global target: 30%**

**Currently at 17%**



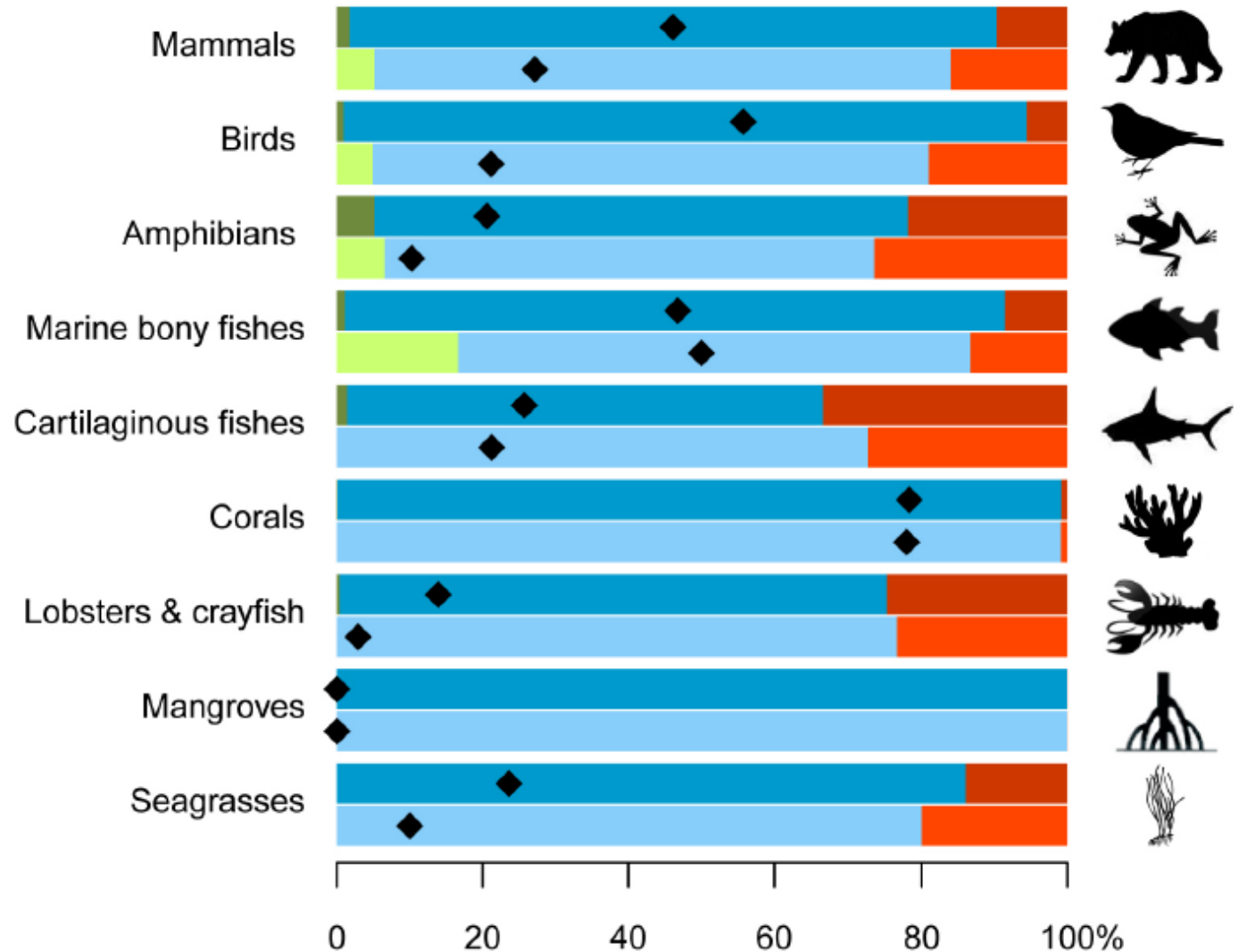
**Are protected areas in the right places?**

**Are protected areas effective?**

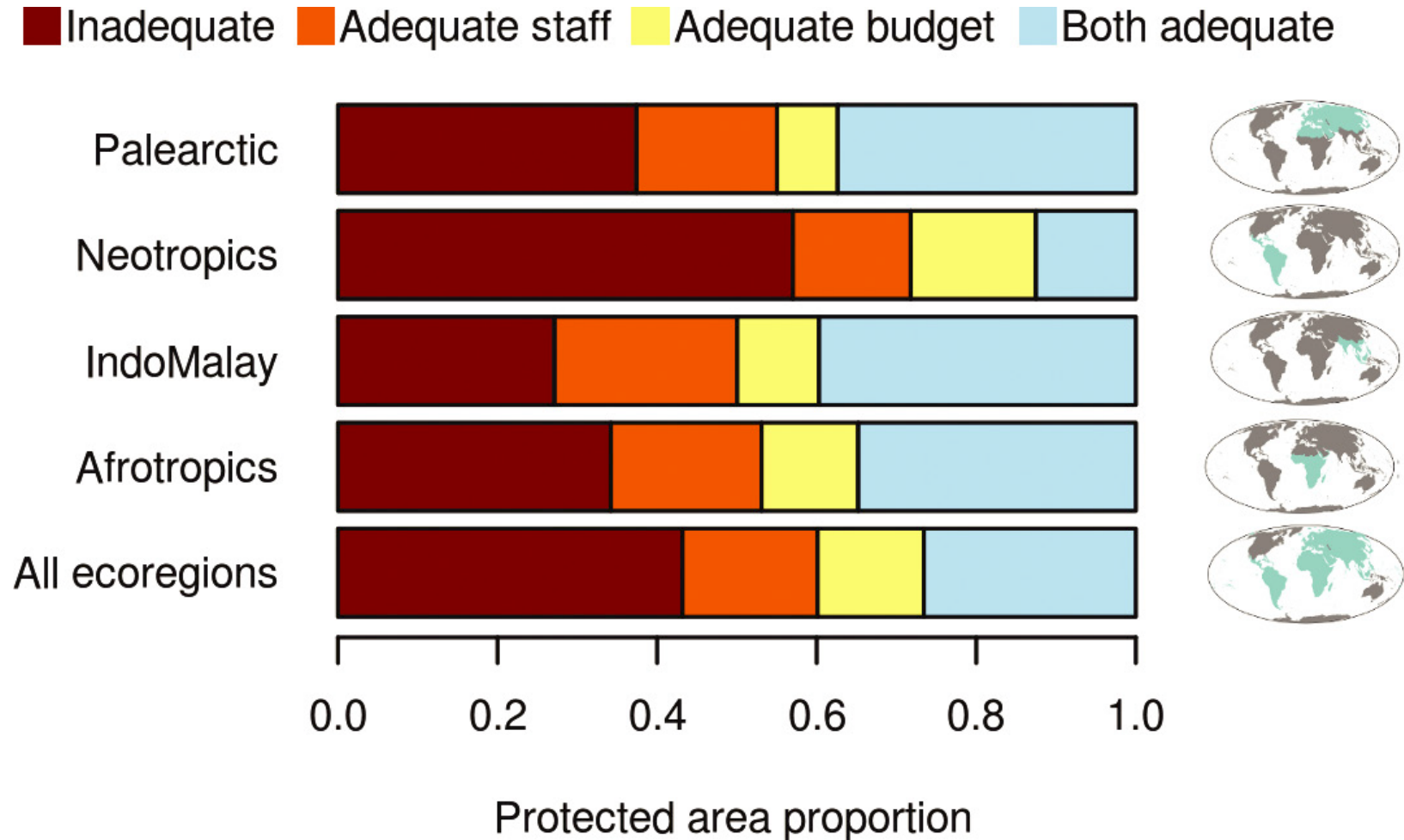
# Are we protecting the right places?

Very few species are adequately protected

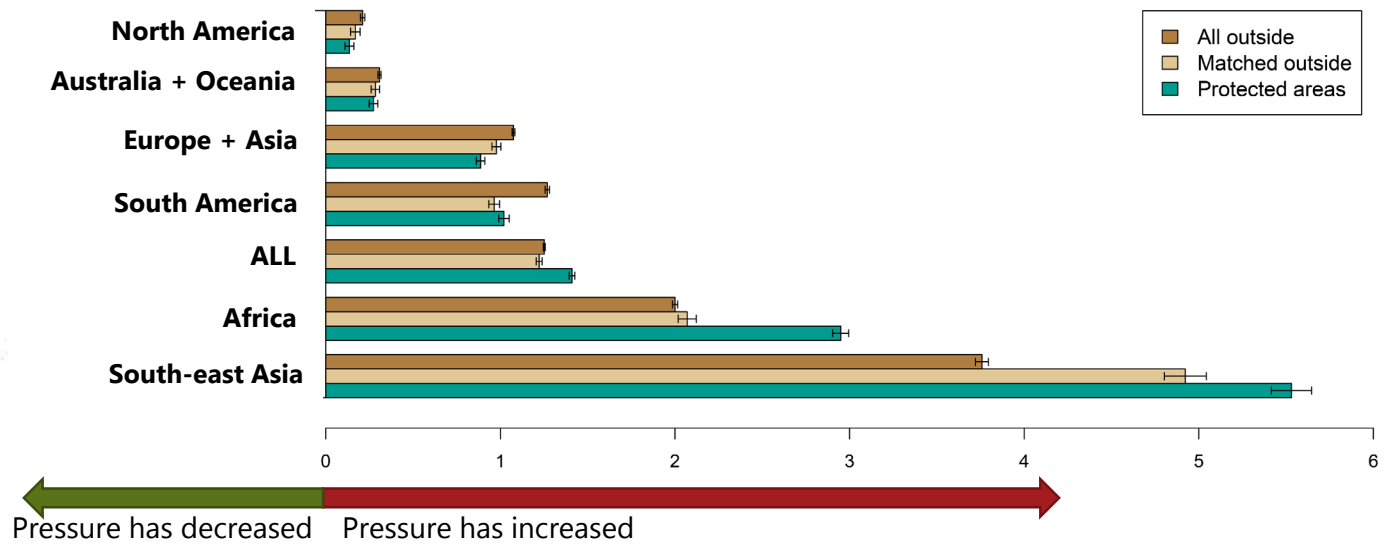
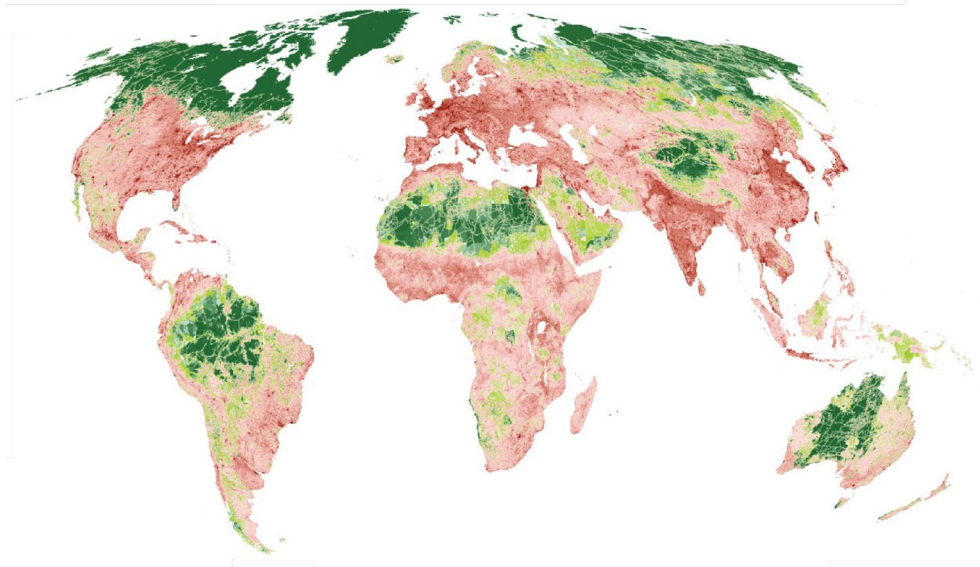
17% of 4,118 threatened vertebrates are not found in a single protected area



# Protected areas – are underfunded

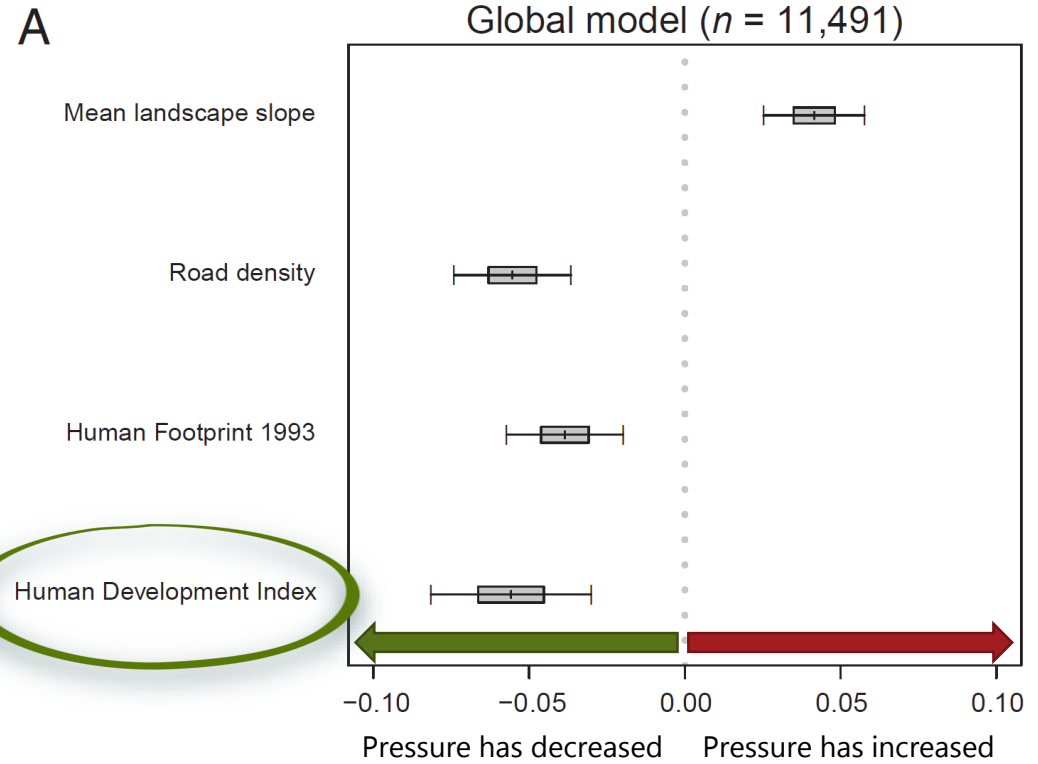
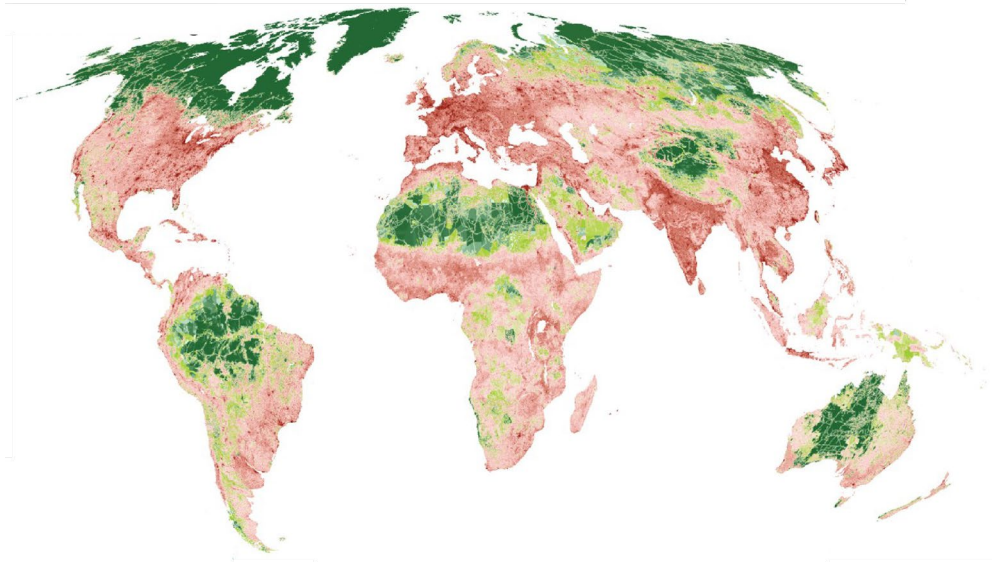


# Protected areas – are not performing



Both inside and outside protected areas the human footprint has increased over the last 20 years

# Protected areas – are not performing



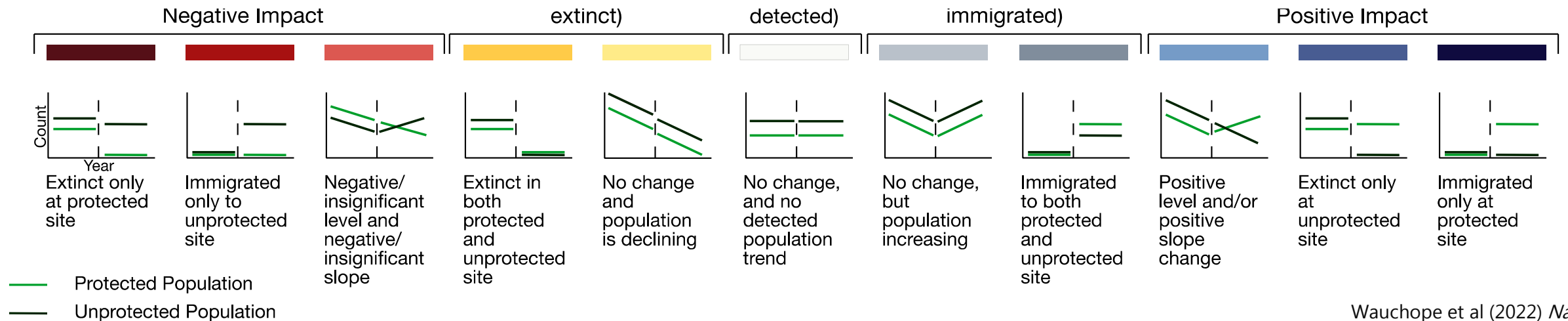
But less so in areas with better governance

# Protected areas – are not performing

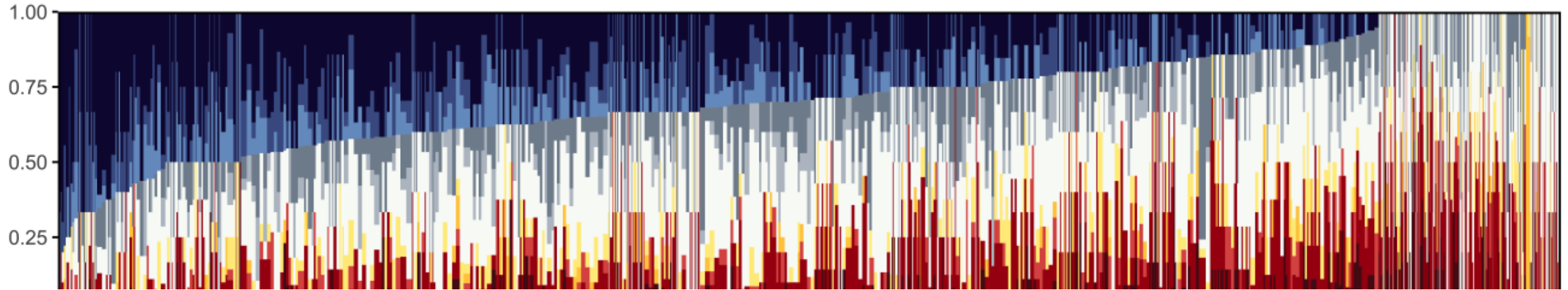
- Based on 27,000 populations of water birds from over 1,500 protected areas and across 144 countries
- To assess the impact of protection compared to a counterfactual control scenario



# Are protected areas effective?



# Are protected areas effective?

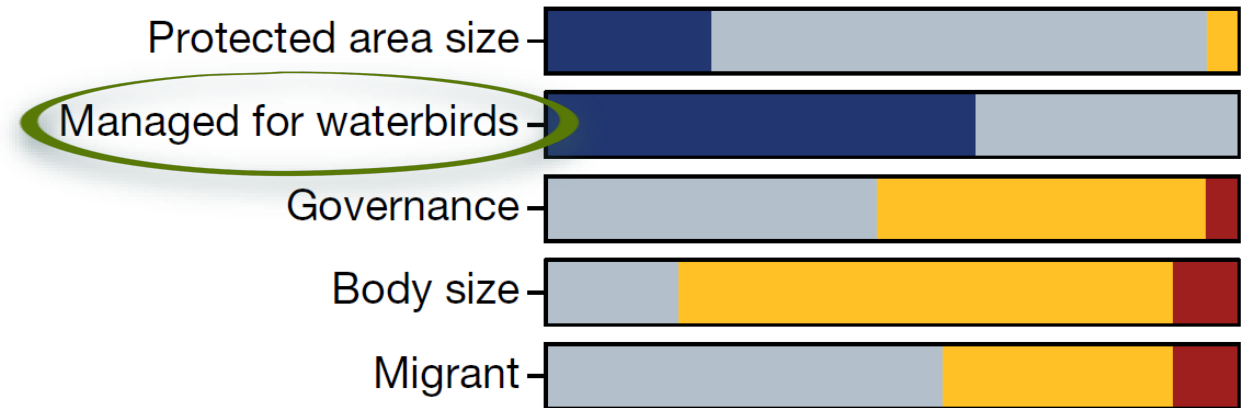




# What factors predicts effectiveness?

**Effective management  
essential for success**

**Governance is potentially also  
a underlying prerequisite for  
success**







***“Conservation will either contribute to solving the problems of the rural poor who live day to day with wild animals, or those animals will disappear ”***

Adams and McShane (1992) The myth of wild Africa

# Questions