




**Science-based  
approaches for  
conservation  
prioritisation and  
target setting**

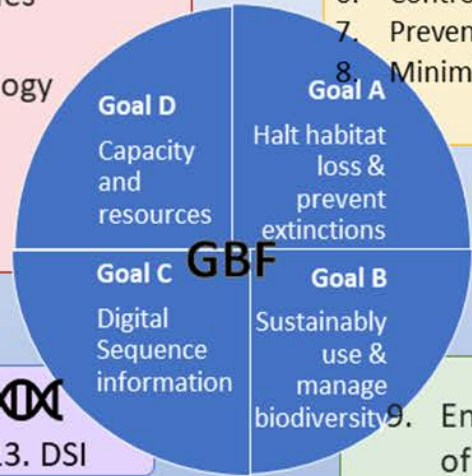
Alice. C. Hughes


*University of Hong Kong*

# Success will depend on data

- D**
14. Mainstreaming of biodiversity
  15. A. Monitoring environmental impacts
  - B. Facilitating sustainable consumption
  - C. Reporting compliance
  16. Sustainable consumption
  17. Biosafety
  18. Elimination of harmful subsidies
  19. Finance
  20. Capacity building and technology transfer
  21. Communication
  22. Gender representation
  23. Equality
- 

- A**
1. Protection of all high diversity areas
  2. 30x30 Terrestrial, Freshwater, Coastal & High-seas
  3. Reconnect & representative protect
  4. Prevent extinction of threatened species
  5. Ensure use of species is sustainable
  6. Control Alien invasive species
  7. Prevent damaging pollution
  8. Minimise impacts of climate change
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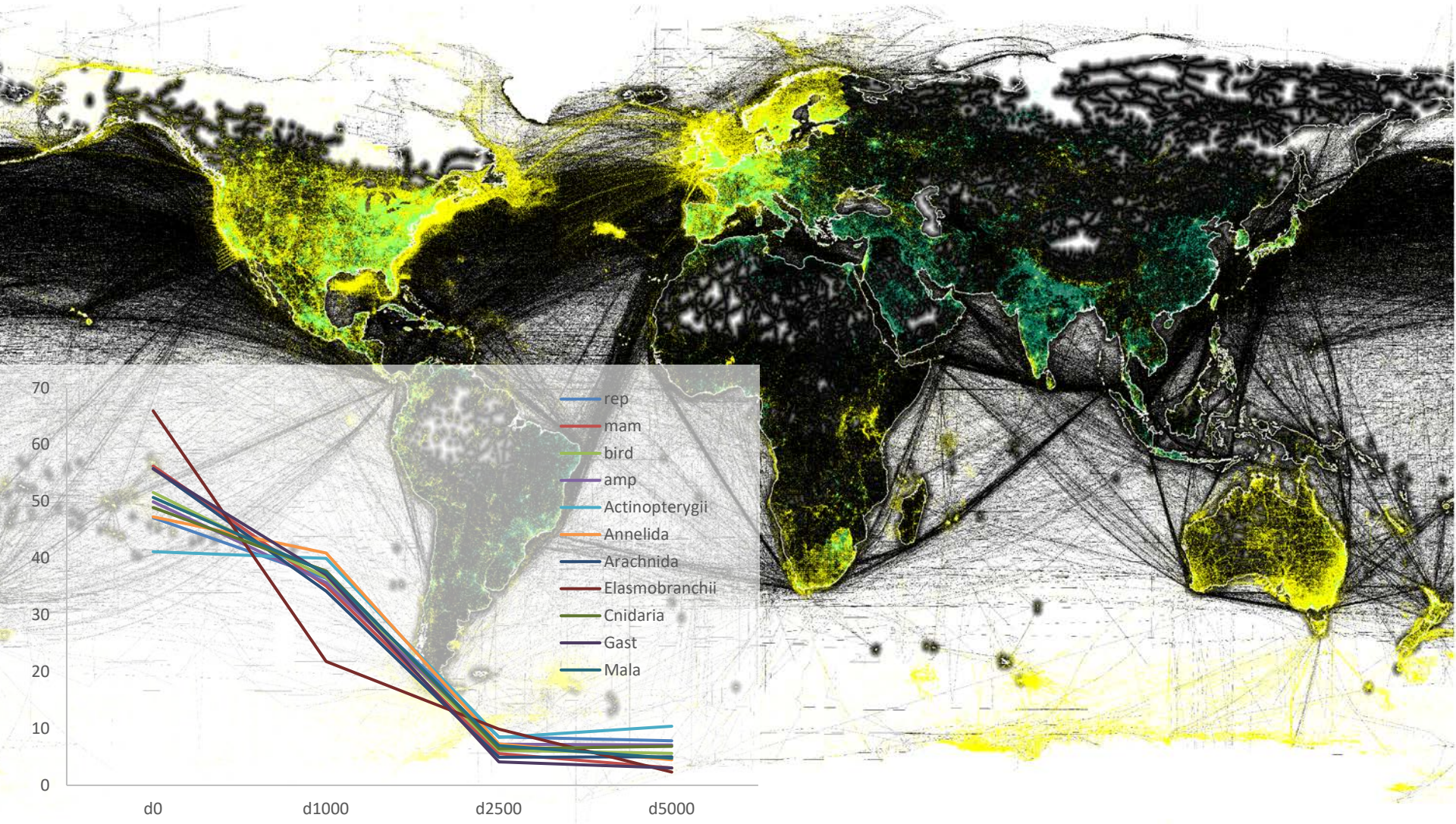


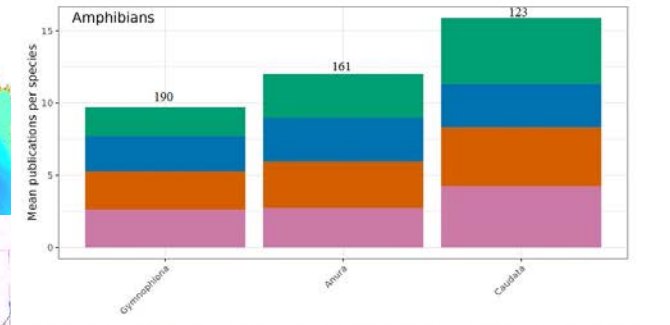
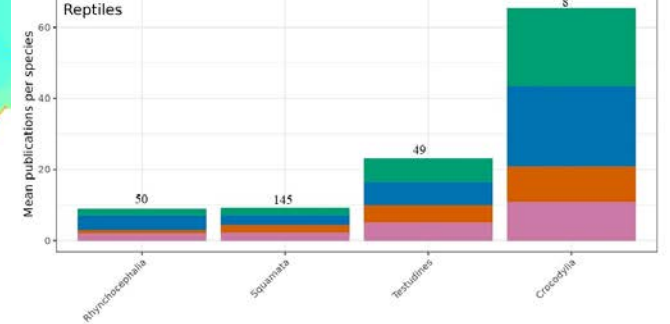
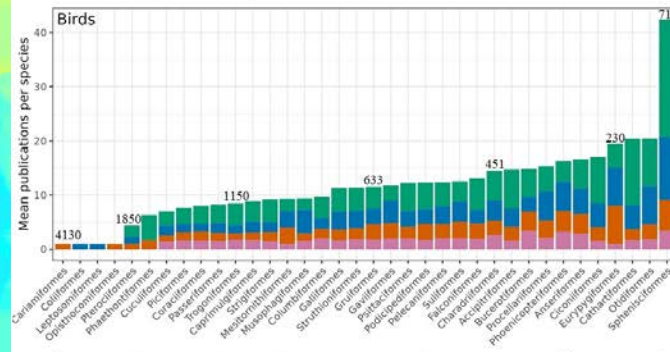
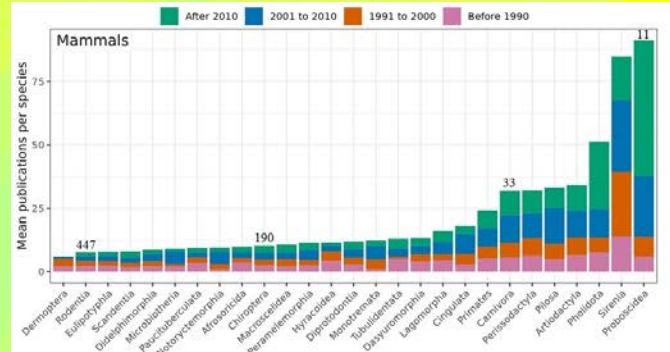
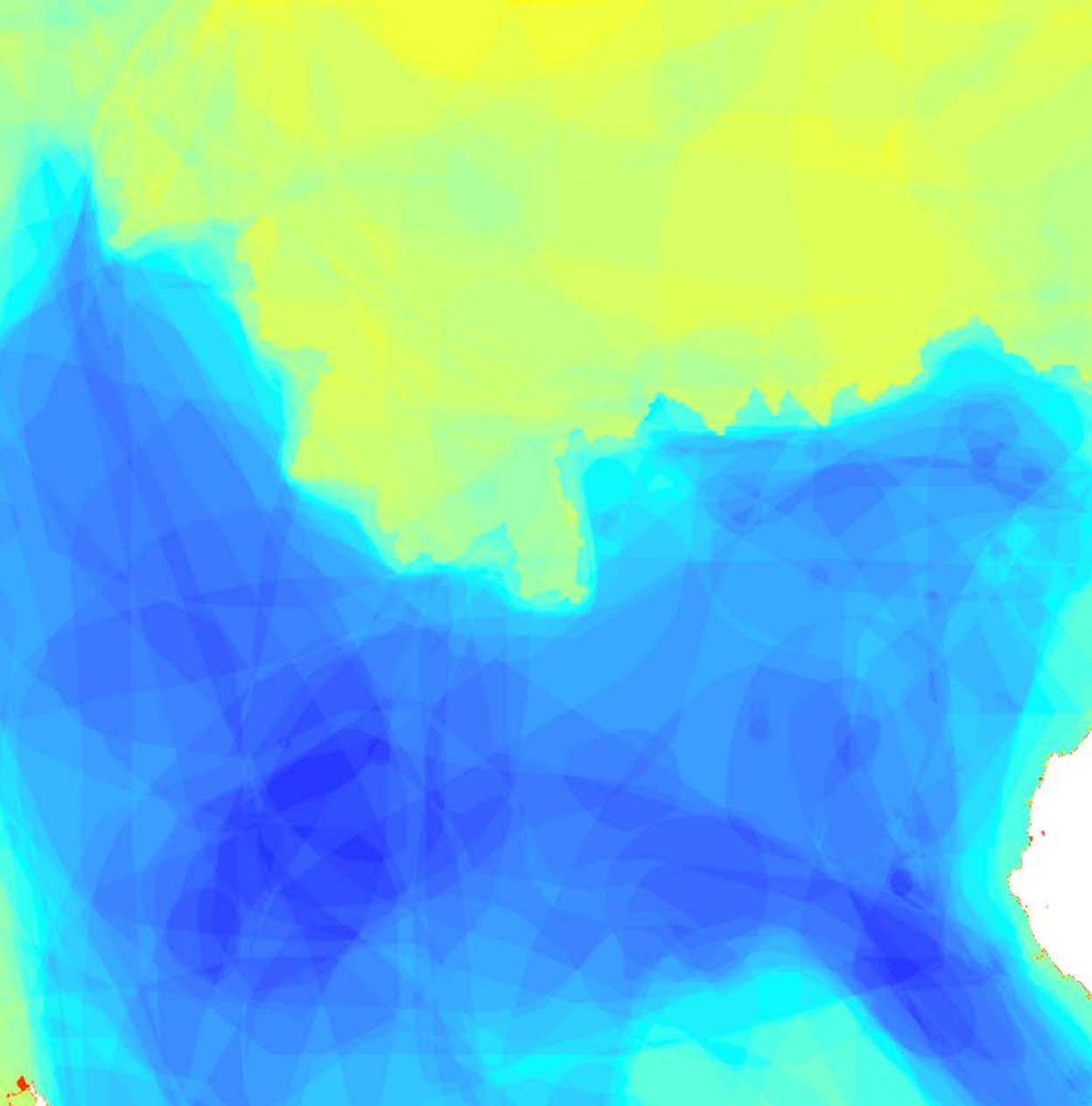
- 19**
- A. Increase biodiversity related financial flows
  - B. Increase domestic resource mobilisation
  - C. Leverage private finance
  - D. Payment for ecosystem service mechanisms
  - E. Optimise climate-biodiversity finance target synergies
  - F. Enhance community approaches
  - G. Enhance efficiency of resource provision
- 

**C**  13. DSI

9. Ensure sustainable management of wild species
  10. Sustainable agriculture
  11. Maximise ecosystem service provision
  12. Increase urban green space
- B**
- 

# Setting targets-do we have the data?





Mean number of publications per species per time period for each order, with the mean number of assessments each cited publication appears in per group shown for select orders

Hughes, A.C., Orr, M.C., Qinmin, Y., Qiao, biodiversity patterns for different regions and c

- Understanding the

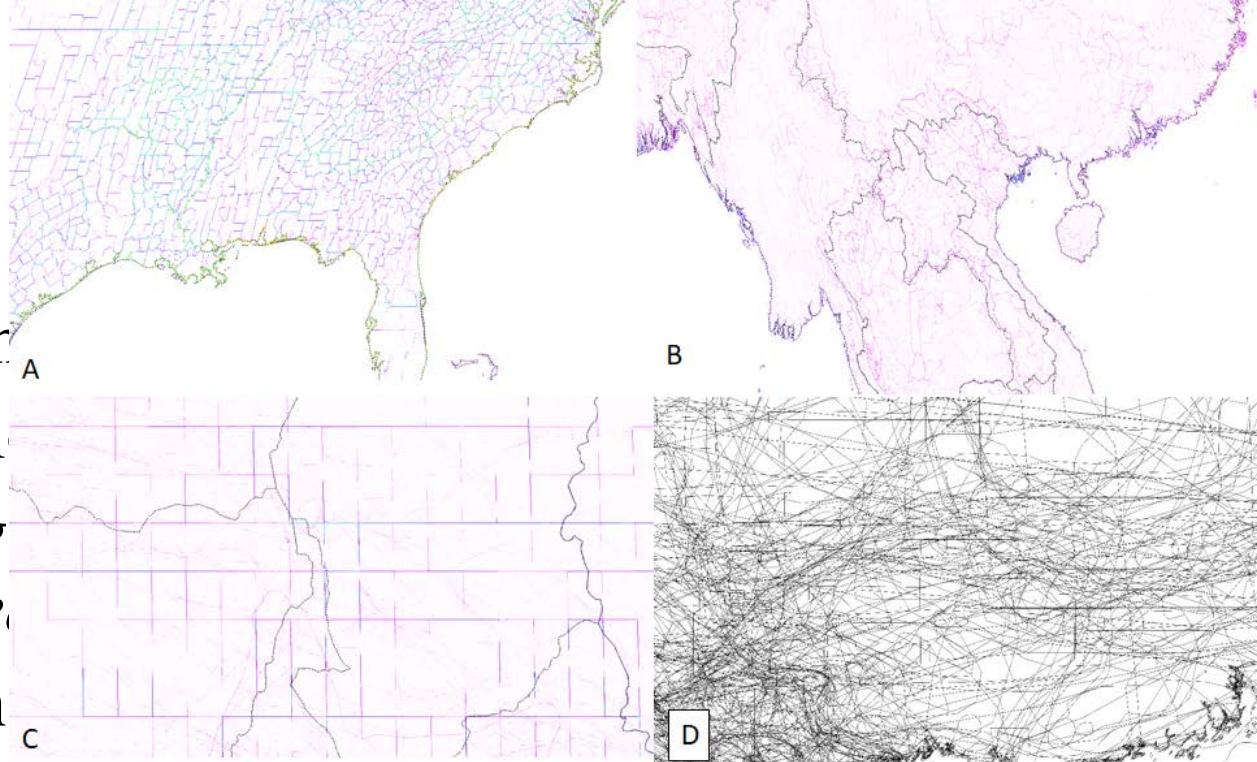
- Does the data all

*No, data is full of gaps  
does exist it's biased*

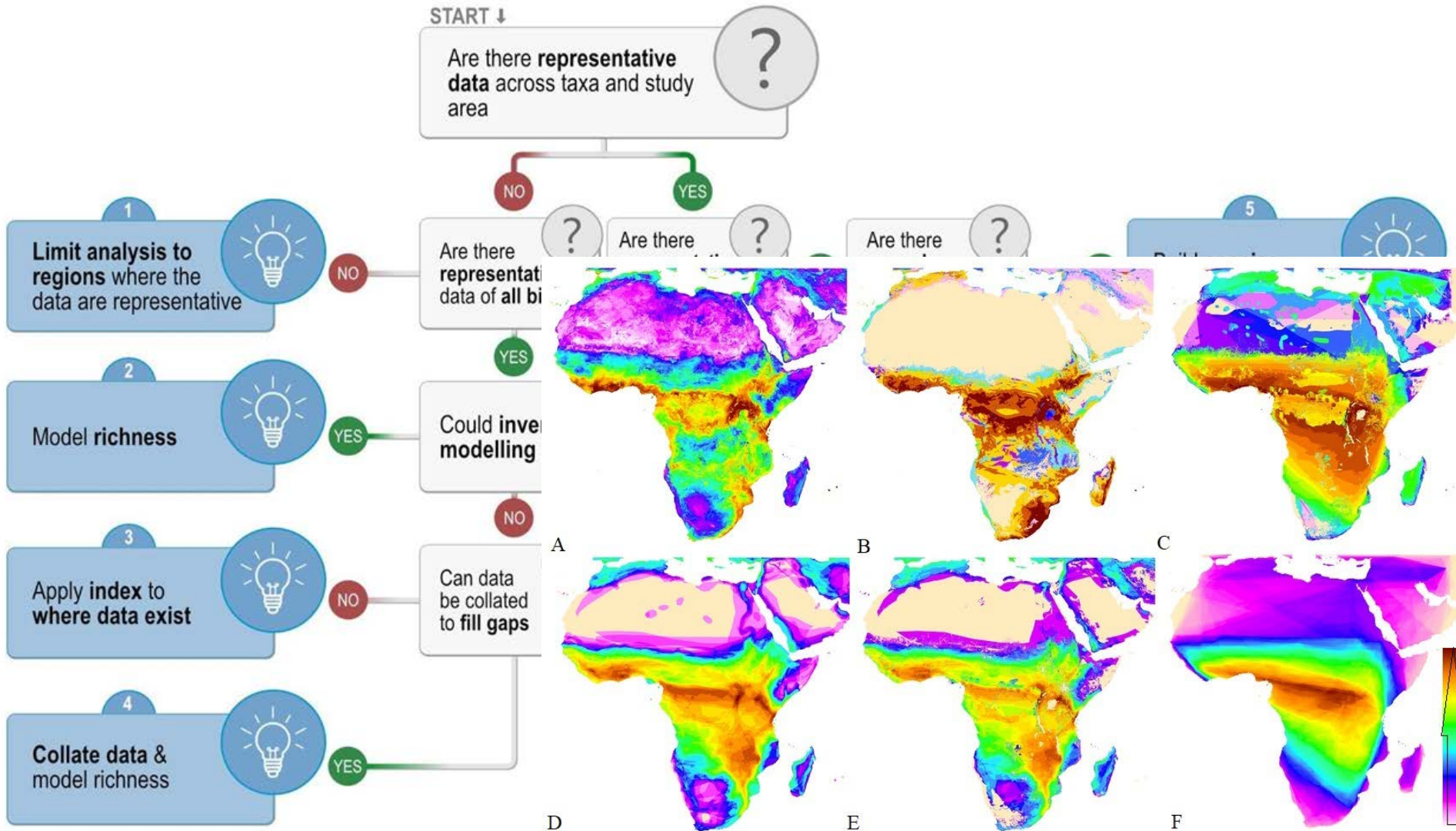
- Is there an alternative

*Not really, range maps are not always representative, and  
have demonstrable biases*

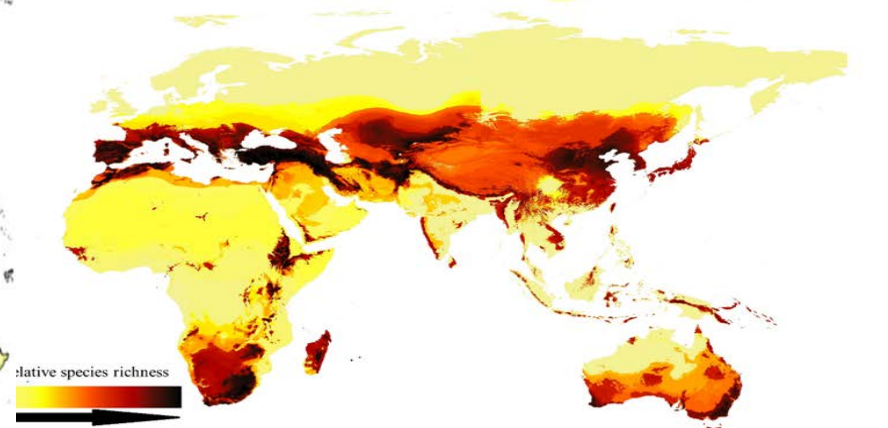
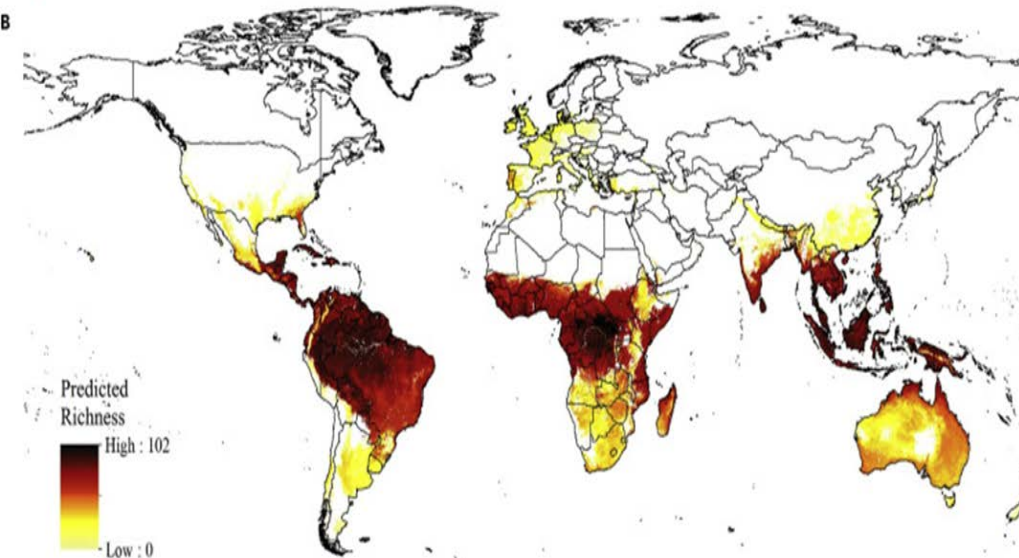
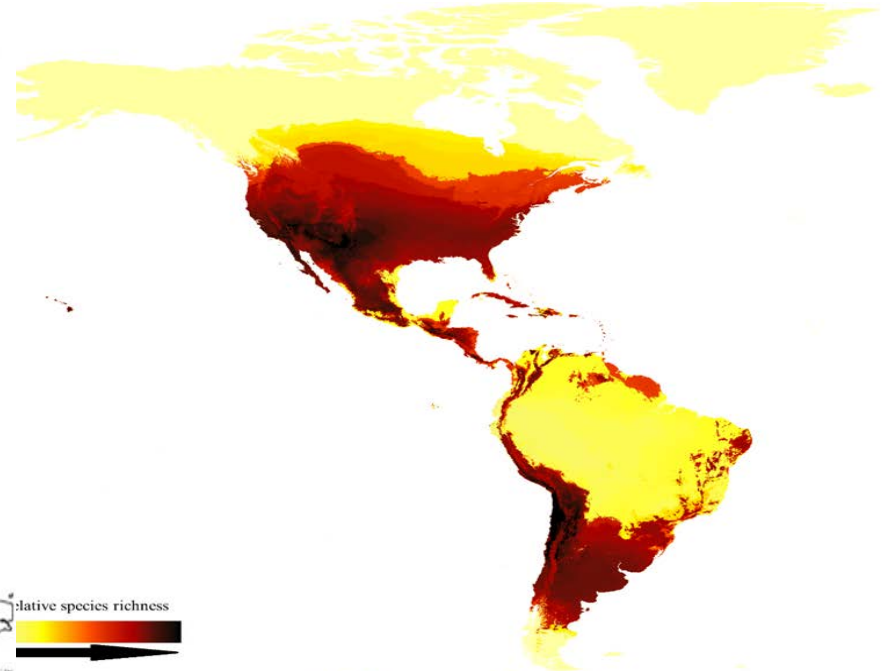
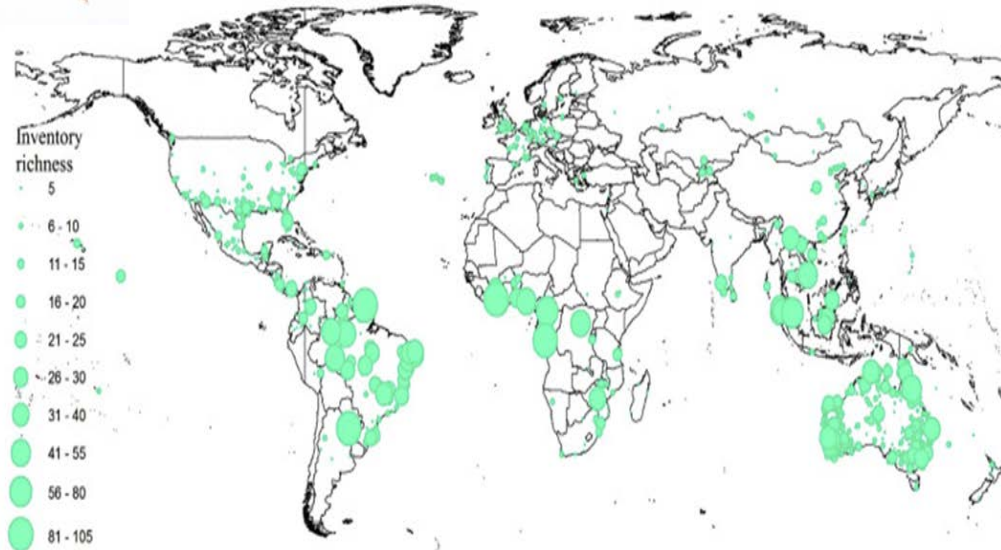
- How about those impressive numbers in global reports
- *Unfortunately these are based on non-standardized  
inconsistent data due to a lack of monitoring*
- We need to collate better and more representative data to  
understand where species are



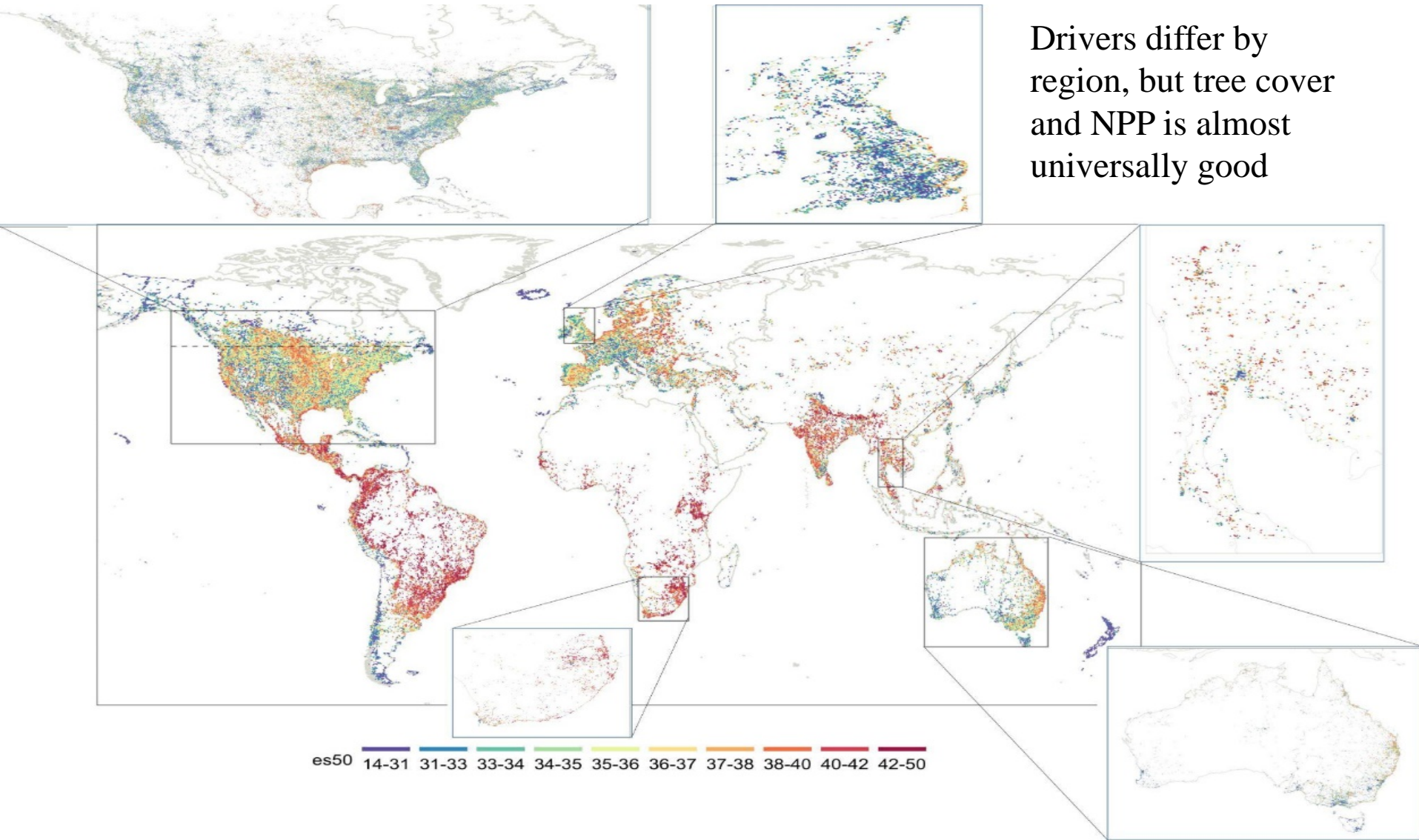
# Measuring diversity across scales



# Using data to enable change

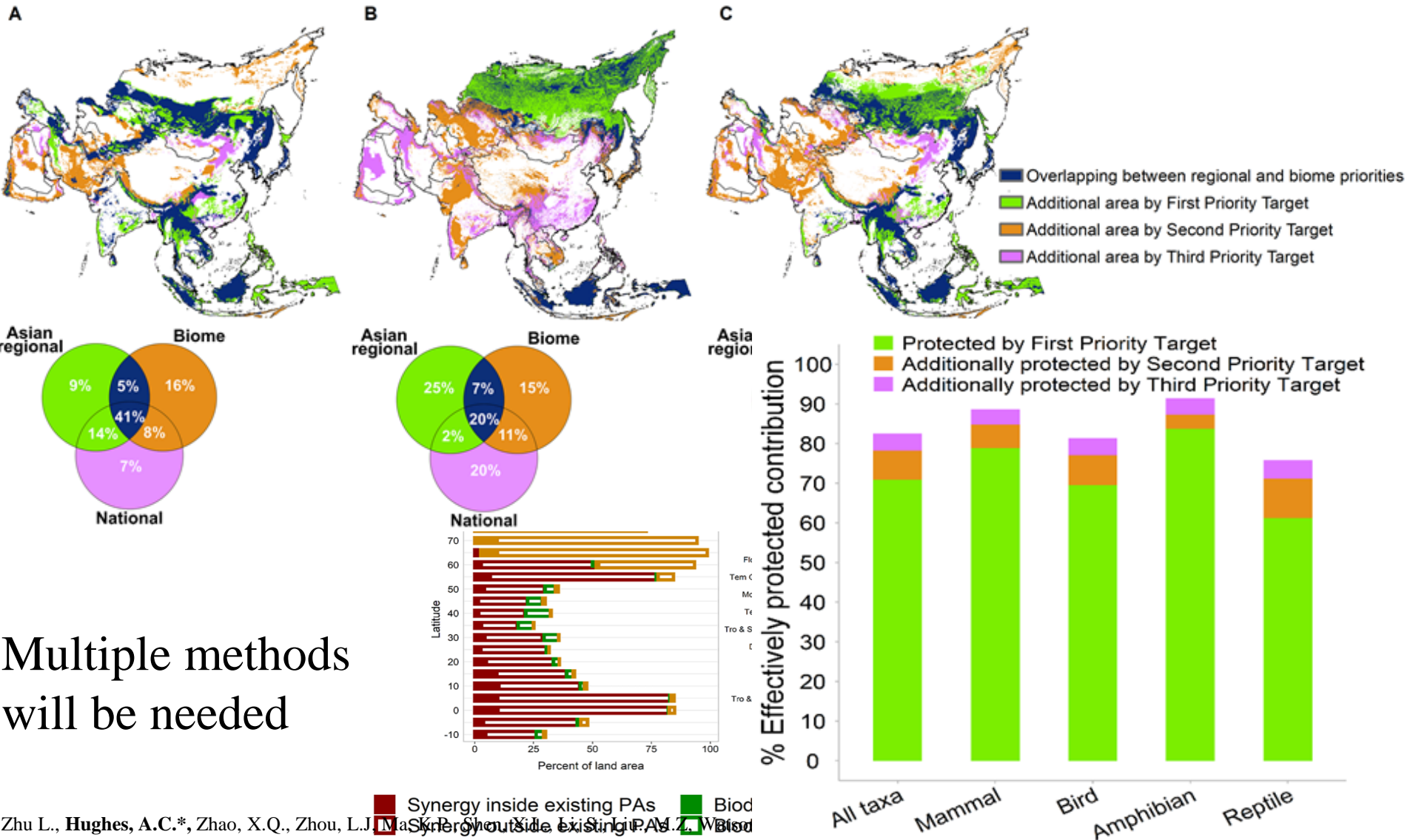


# Converting data into policy





# Target setting



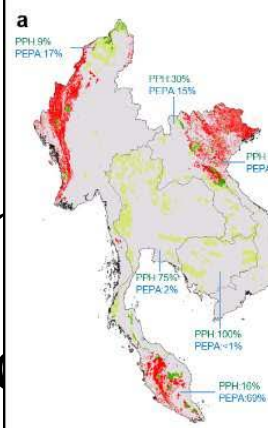
Multiple methods  
will be needed

# Ecological

- Redlines and

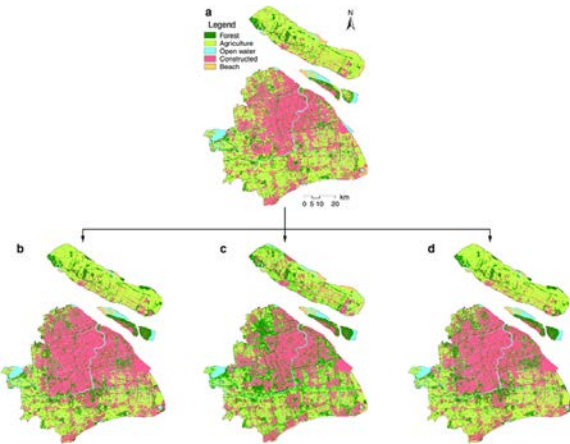
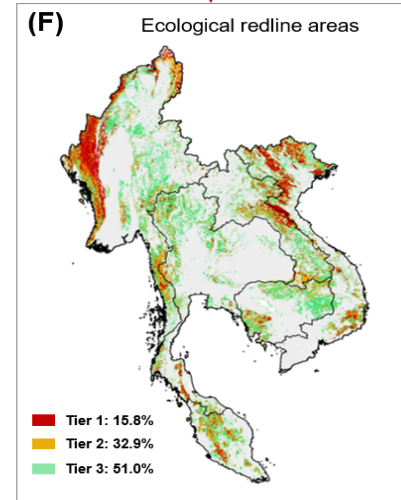
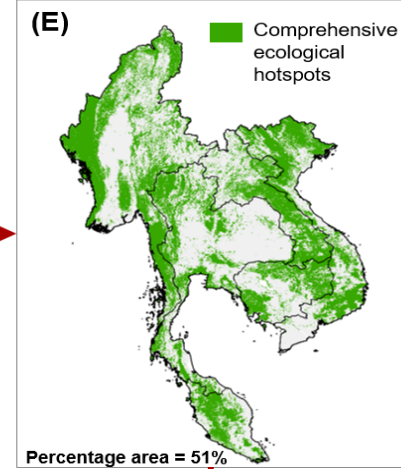
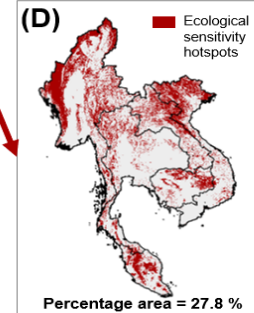
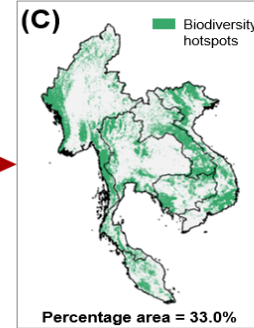
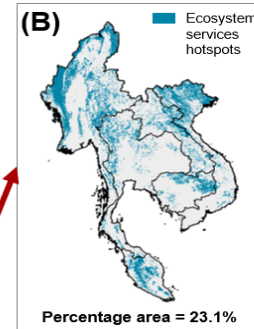
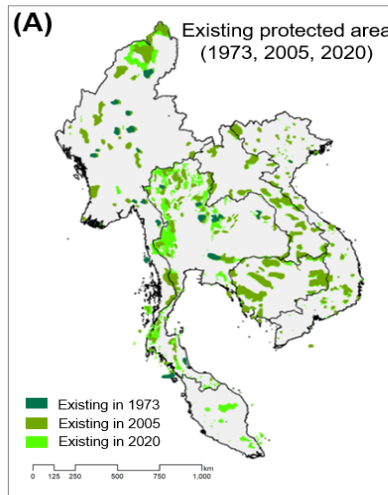
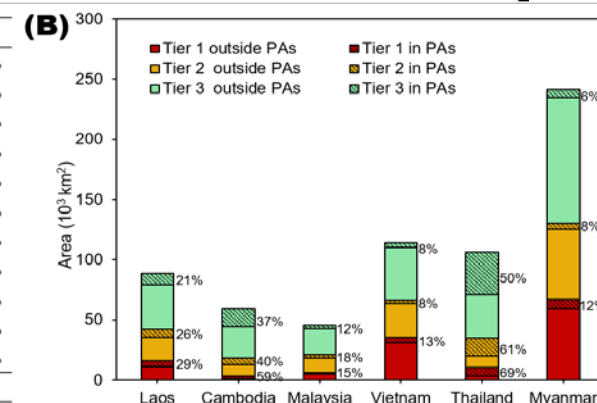
*Based on high development, provision with*

- Greening d
- Identifying

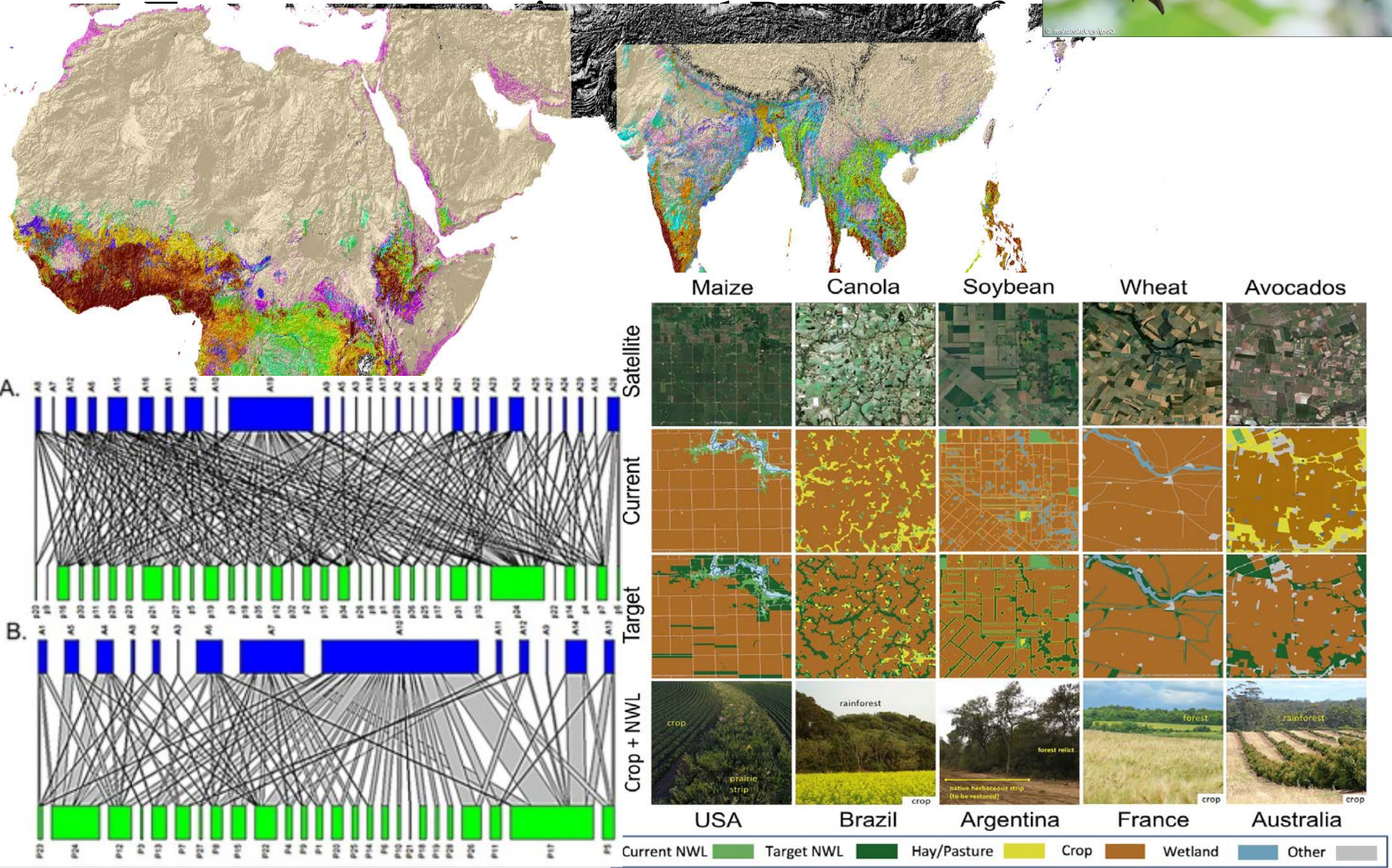


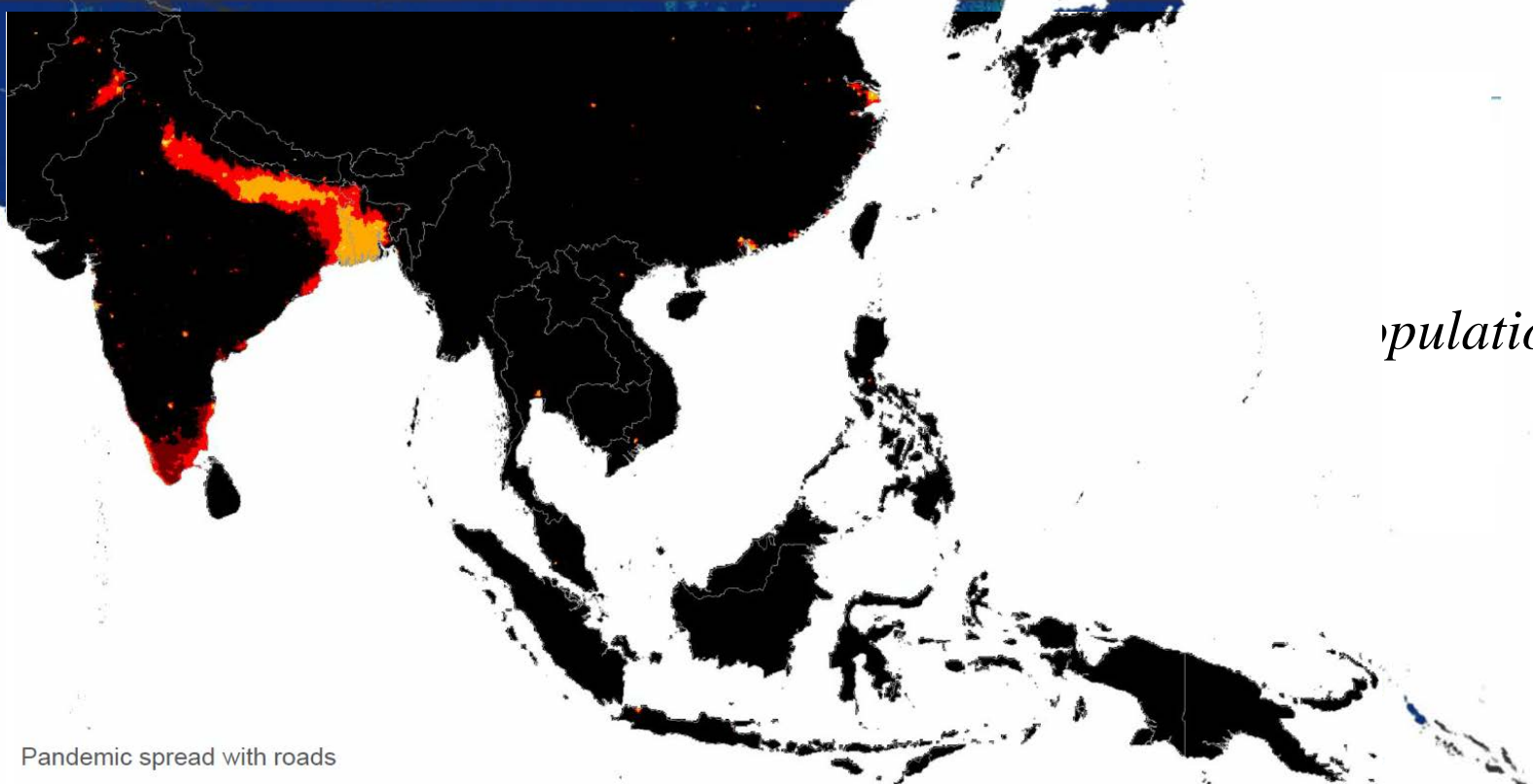
**(A)**

	Tier 1	Tier 2	Tier 3
Water retention	17.53%	27.76%	39.19%
Carbon storage	20.54%	31.00%	40.49%
Soil retention	21.97%	41.16%	63.80%
Acid rain sensitivity	18.64%	29.27%	42.96%
Habitat sensitivity	23.99%	36.09%	47.53%
Soil erosion sensitivity	23.32%	42.67%	56.15%
Mammals richness	21.46%	35.11%	45.05%
Birds richness	19.24%	29.77%	38.97%
Amphibians richness	21.31%	35.32%	47.52%
Reptiles richness	21.23%	36.17%	48.46%
Plants richness	21.14%	33.18%	43.89%
Timeline	2025	2030	2050



# Services and value



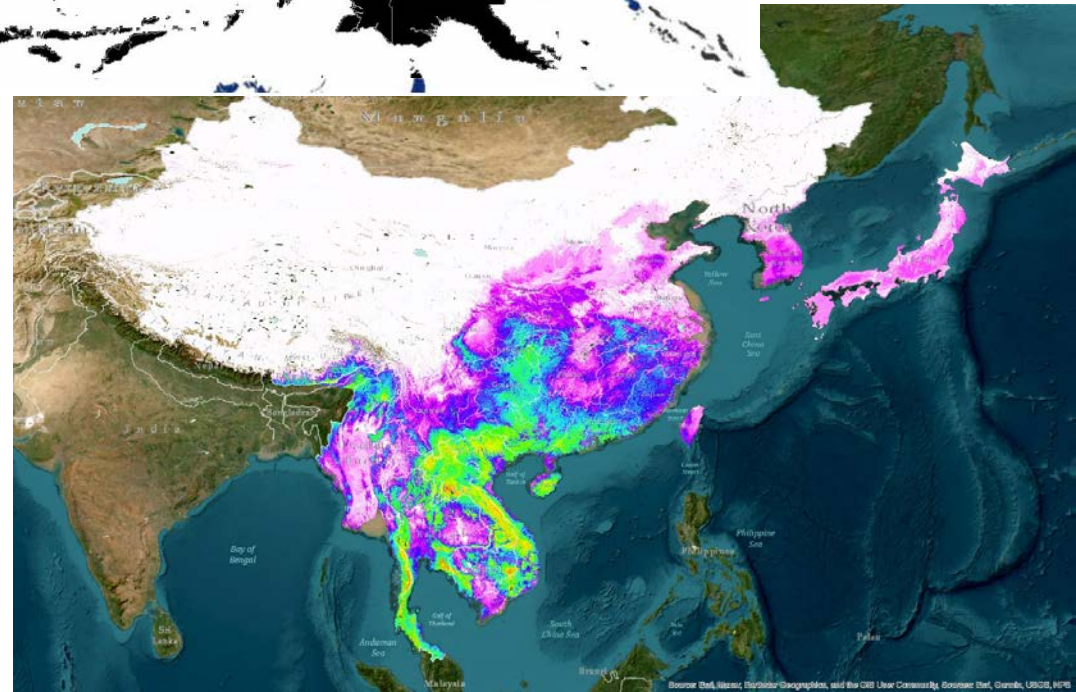


Pandemic spread with roads

*populations at risk*

Rhinolophids (and some other genera) carry Beta-CoVs and likely do across the old-world

So far South China-GMS has seen the most SARS-Like CoVs



# Implementing change

- Conservation policy can only be implemented if it is translated into an appropriate context
- Social cultural components are needed in any suggested solution to conservation and management
- Providing solutions within appropriate for a and accessible language is also needed
- Priorities need a firm foundation of data, and include risk assessment
- We also need caution to not use data beyond its limits

# Building on Synergies

- Biodiversity must be part of the solution, and rather than Billion-tree tsunamis, and great-green walls we must prioritize protecting, then restoring native systems
- Conventions must work in synergy to maximise benefits
- Better data is needed for targets, but targets must also reflect human needs and pathways to implementation
- Impact assessment, and monitoring also need to be more rigorous and use data better

# Moving forwards

- We have seven years until the end of the time period to achieve the 2030 targets, and to prepare ourselves for the 2050 vision
- To be ready for this point we need a clearer understanding of the impact of threats as a baseline for management
- Furthermore we need better data to clearly understand patterns of diversity as a basis for targets
- Additionally we need better integration between targets and conventions to reduce tradeoffs and increase synergies

*Thank you*

