



# Understanding the limits of biodiversity data

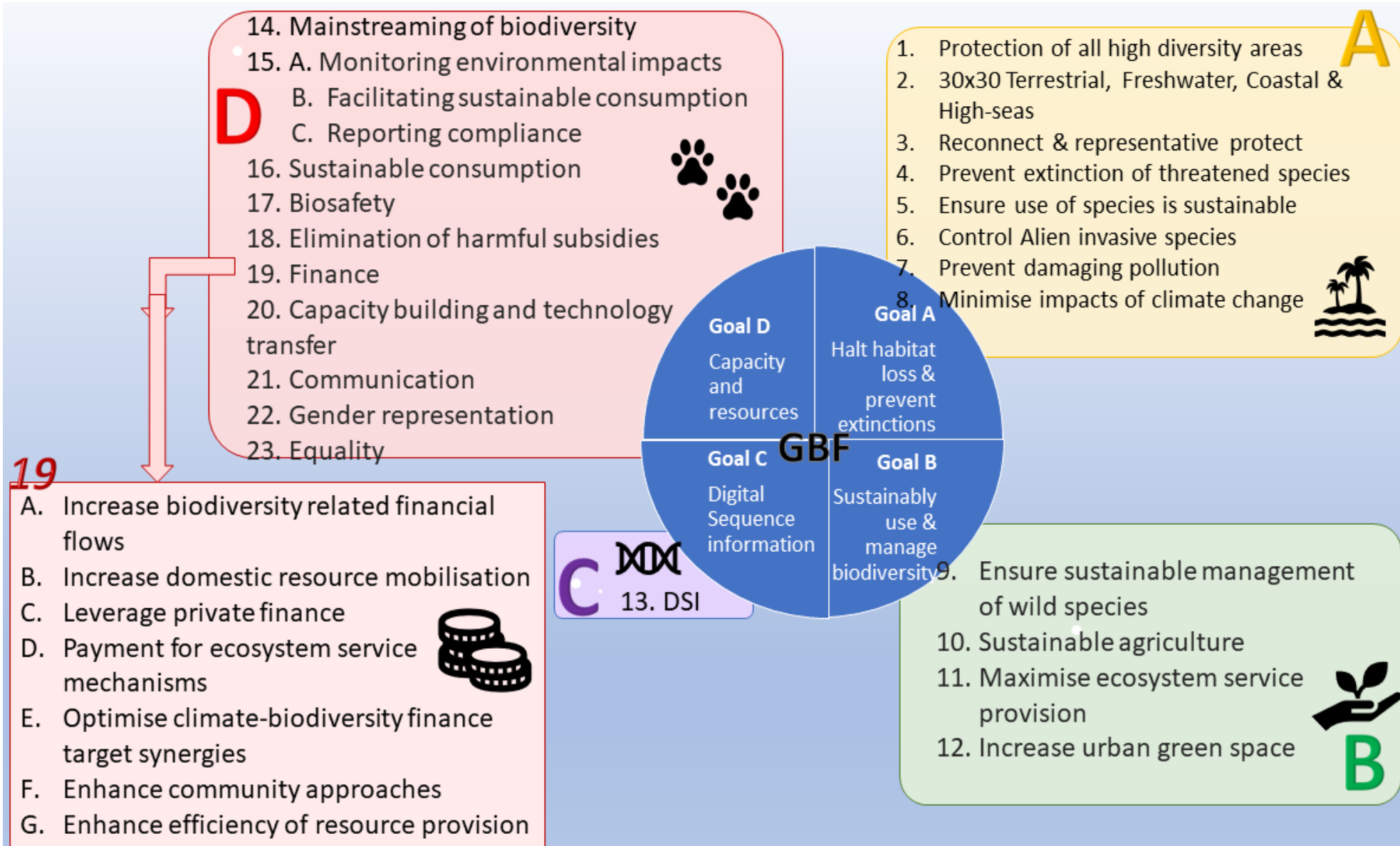
Alice. C. Hughes

*University of Hong Kong*

# Where are we on global biodiversity data?

- In the last two decades we have undergone a big data revolution!
- We have unprecedented availability of data at increasingly high temporal and spatial resolutions
- Yet how can we effectively use that data to inform change, and where do we need to be cautious to ensure our analysis is accurate
- -And how does this fit in the context with global goals, such as in the context of the GBF?

# Using the framework as a mandate



# Using the framework-SMART?

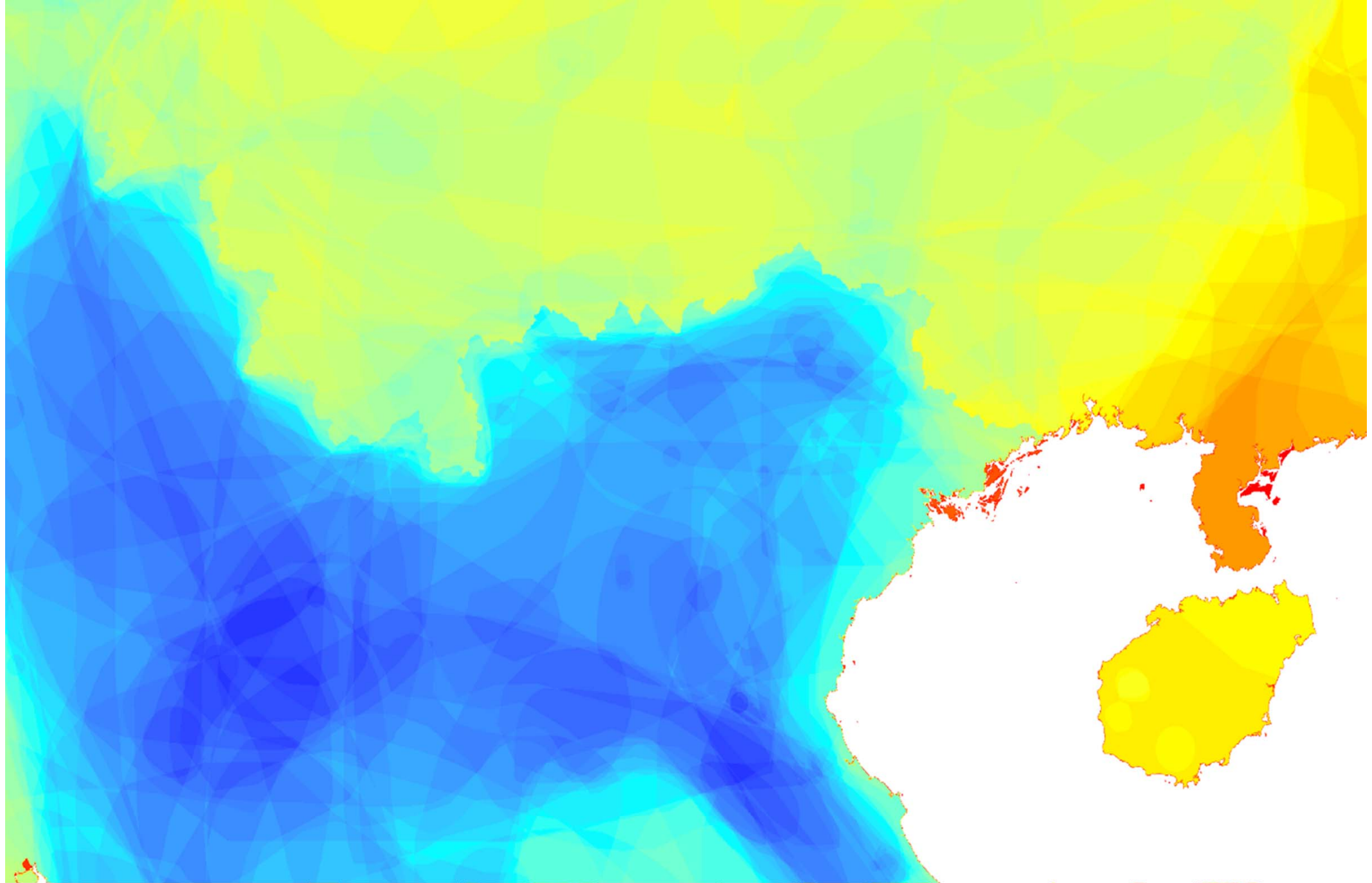
A. Draft Goal/Target <sup>1</sup>	Proposed headline indicators <sup>2</sup>
A	A.1 Red List of Ecosystems A.2 Extent of natural ecosystems A.3 Red List Index A.5 The proportion of populations within species with an effective population size > 500
B <sup>b</sup>	B.1 Services provided by ecosystems*
1 <sup>b</sup>	A.1 Red List of Ecosystems A.2 Extent of natural ecosystems 1.1 Percent of land and seas covered by biodiversity-inclusive spatial plans*
2	2.2 Area under restoration*
3	3.1 Coverage of protected areas and OECMs
4	A.3 Red list Index A.5 The proportion of populations within species with an effective population size > 500
5	5.1 Proportion of fish stocks within biologically sustainable levels
6 <sup>b</sup>	6.1 Rate of invasive alien species establishment
7	7.1 Index of coastal eutrophication potential 7.2 Pesticide environment concentration*
8 <sup>b</sup>	-
9 <sup>b</sup>	9.1 Benefits from the sustainable use of wild species* 9.2 Percentage of the population in traditional occupations*
10	10.1 Proportion of agricultural area under productive and sustainable agriculture 10.2 Progress towards sustainable forest management
11	B.1 Services provided by ecosystems*
12 <sup>b</sup>	12.1 Average share of the built-up area of cities that is green/blue space for public use for all

- Specific
- Measurable
- Achievable
- Relevant
- Timebound?

So...If indicators are mismatched,  
what do we have, what do we need?

- Many targets rely on temporal data for monitoring-which we lack
- Others need to target 30x30 to cover key areas-but how are these areas identified?
- No agreed on glossary means many targets may be misinterpreted or misused
- Mismatches (or lack of) indicators for certain targets
- So what is the issue with certain key data?





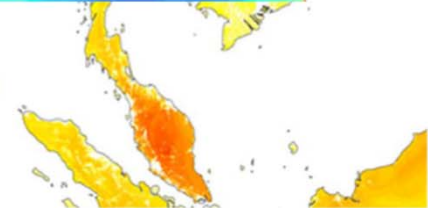
Hughes, A.C., Orr, M.C.  
biodiversity patterns for



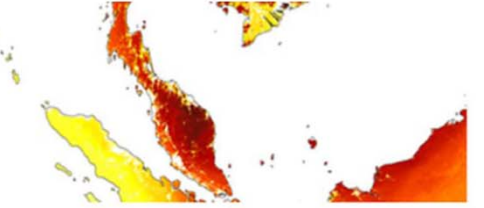
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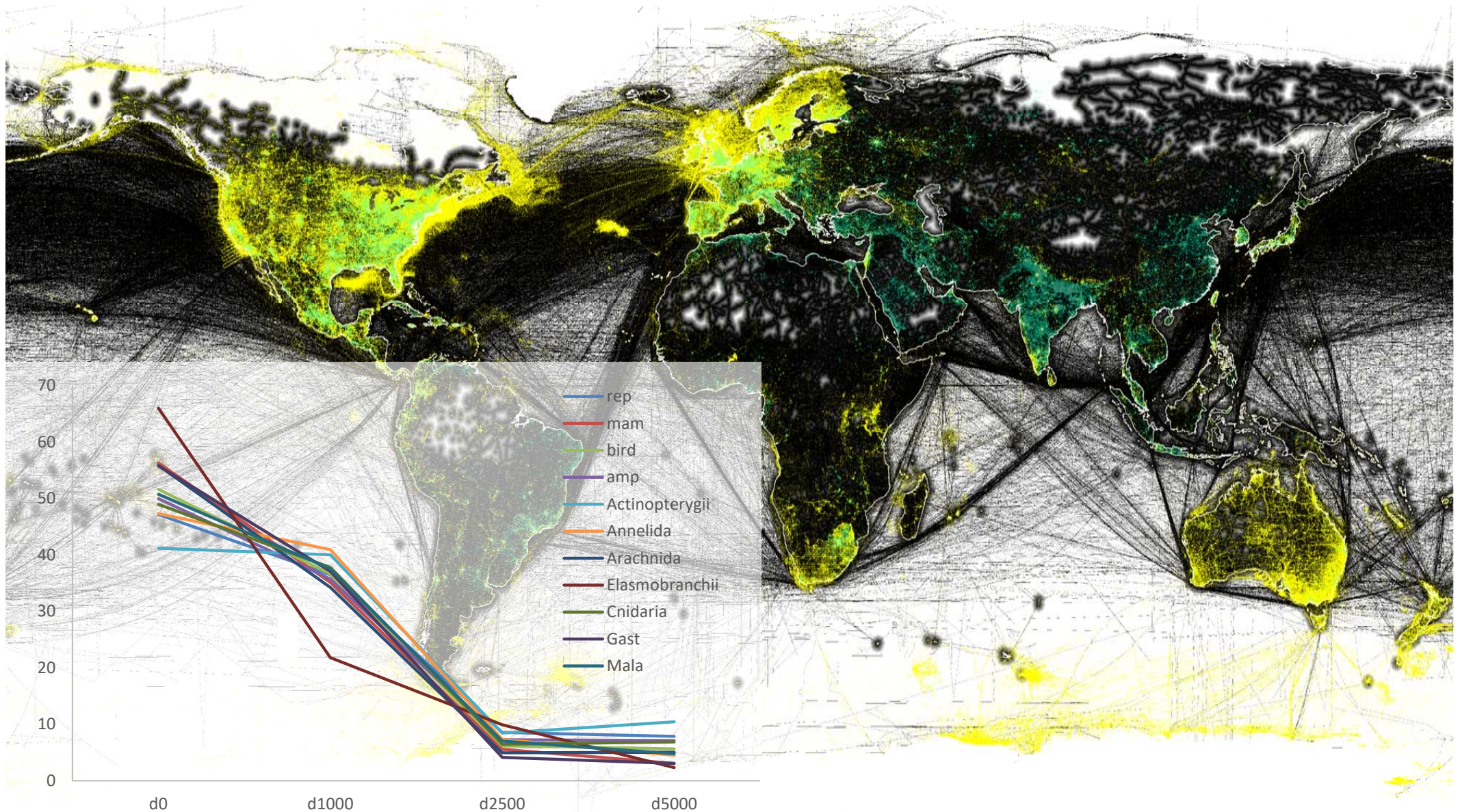


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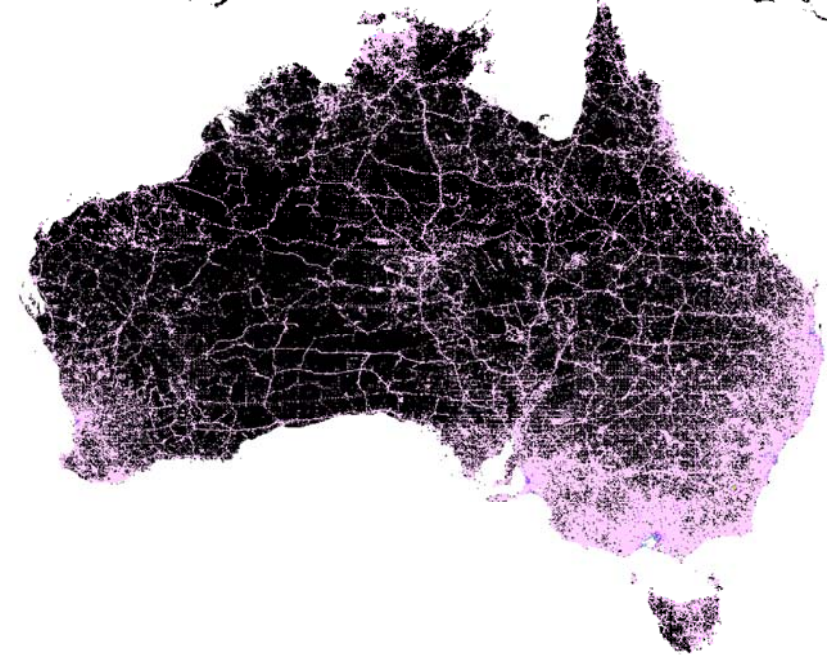


# Setting targets-do we have the data?





# Baselines



- Understanding the data
- Does the data allow us to develop pr

*No, data is full of gaps, especially in A  
exist it's biased to a few taxa and to developed areas*

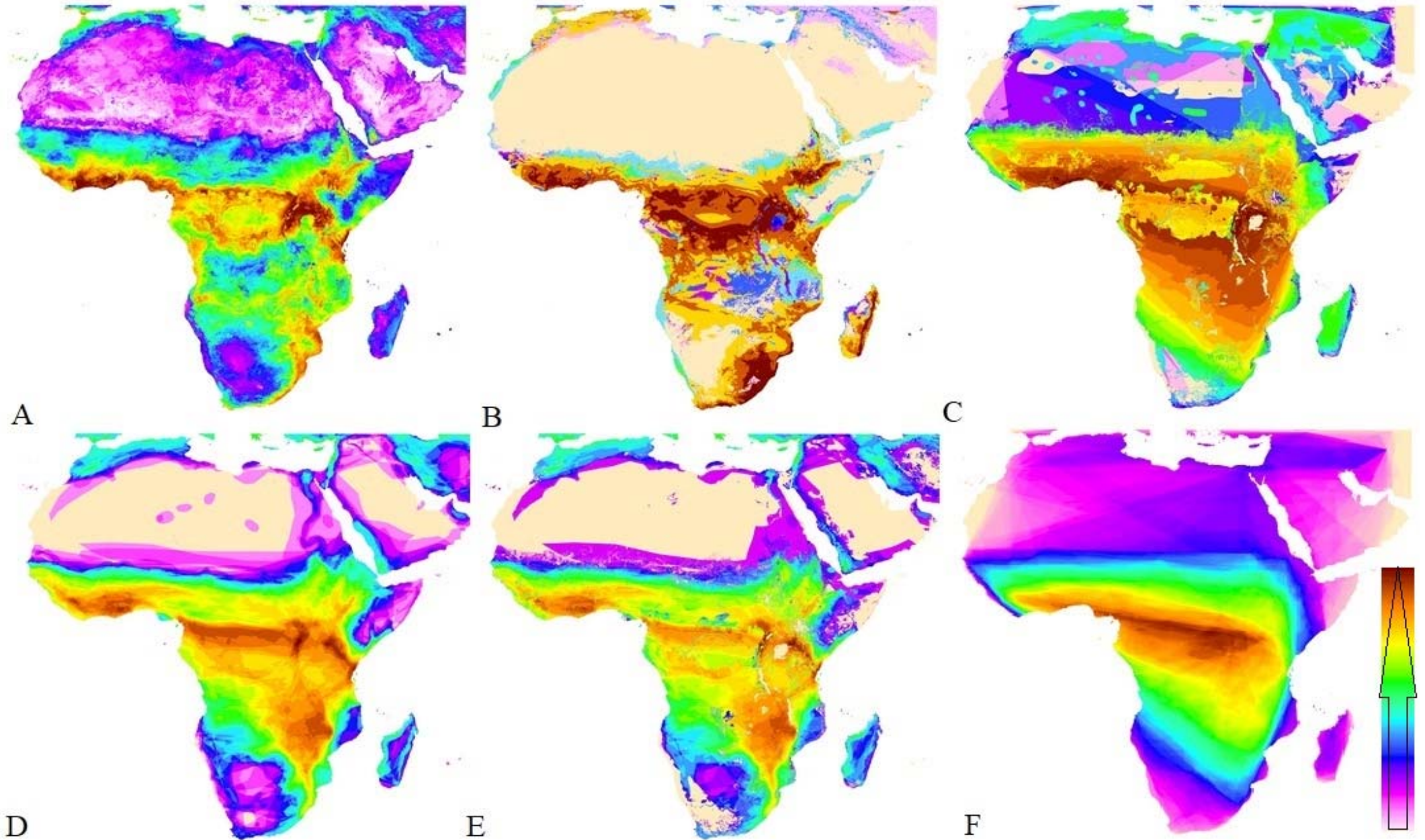
- Is there an alternative source of reliable data?

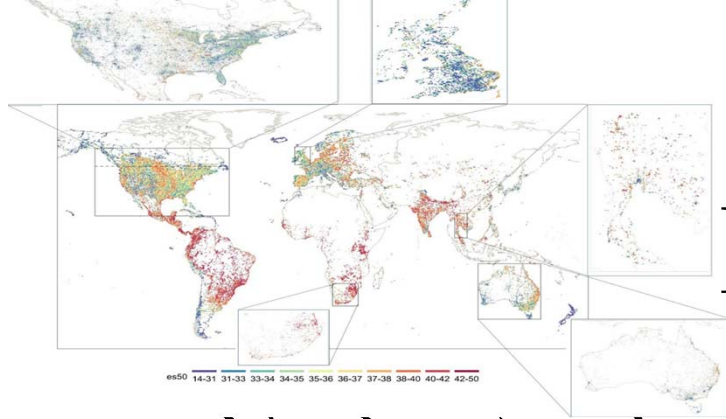
*Not really, range maps are not always representative, miss  
around 50% of recorded locations, and have demonstrable  
biases*

Group	dd	inredlist	%dd	described	estimate	% described species	%estimated species
Fungi	22	285	7.72	120000	12000000	0.22	0.0022
Plantae	2774	40468	6.85	390900	7000000	9.64	0.5385
Arthropoda	3735	13170	28.36	1000000	7000000	0.94	0.1348

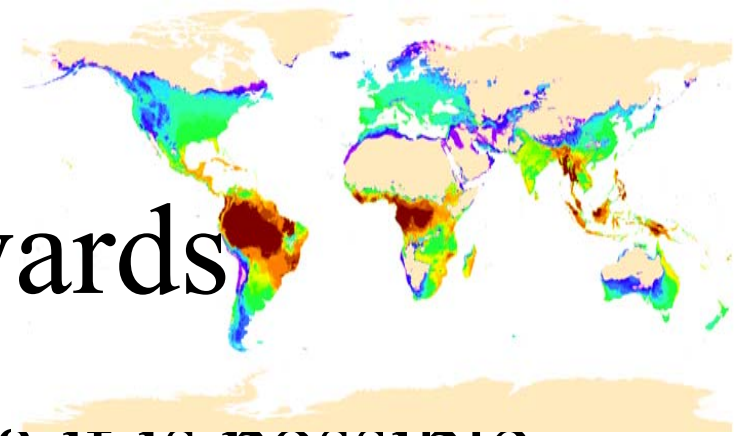


# Measuring diversity across scales





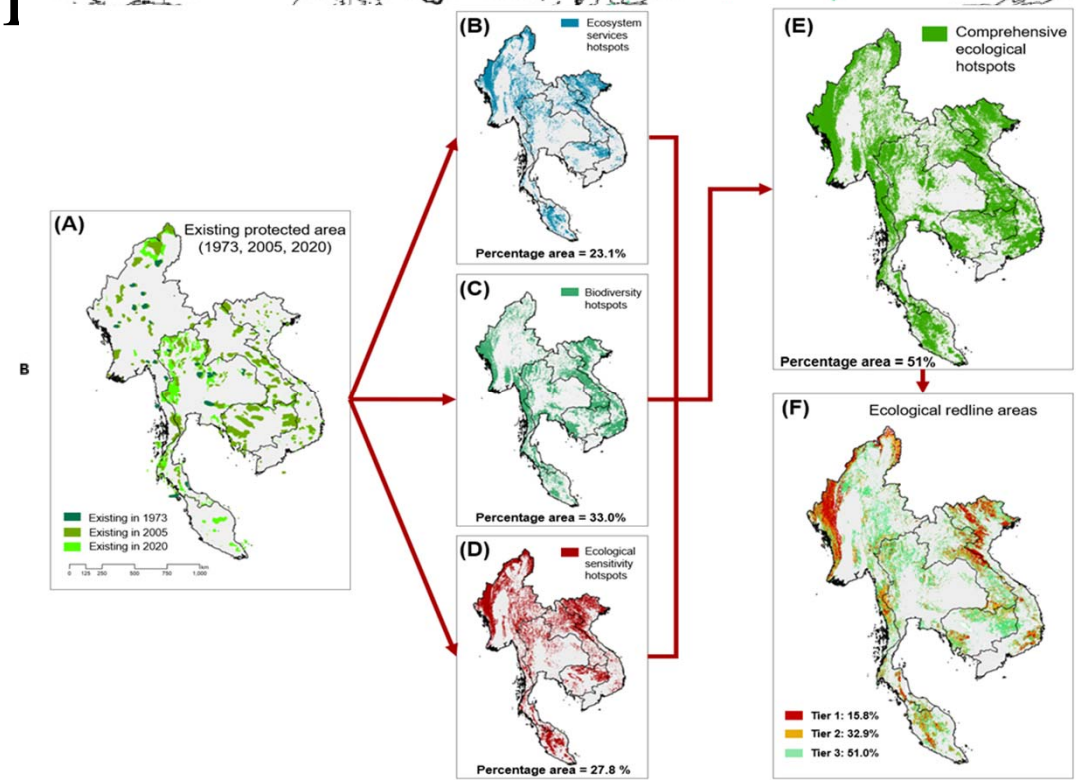
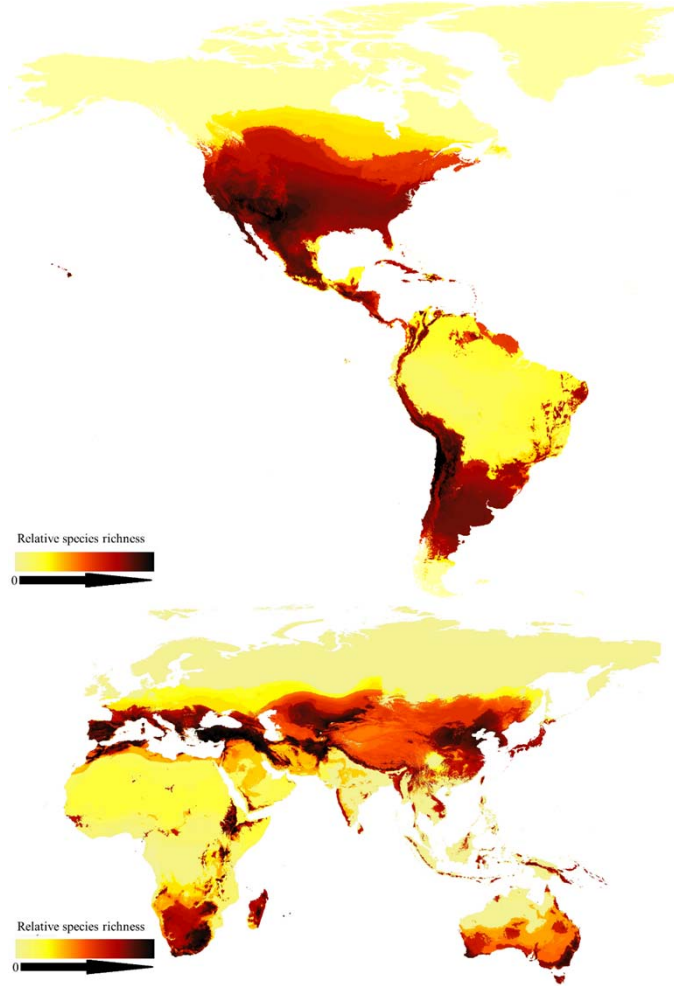
# Moving forwards



- Understanding the limits of data it is possible to monitor and implement more effectively

agreed on standards, and  
selection

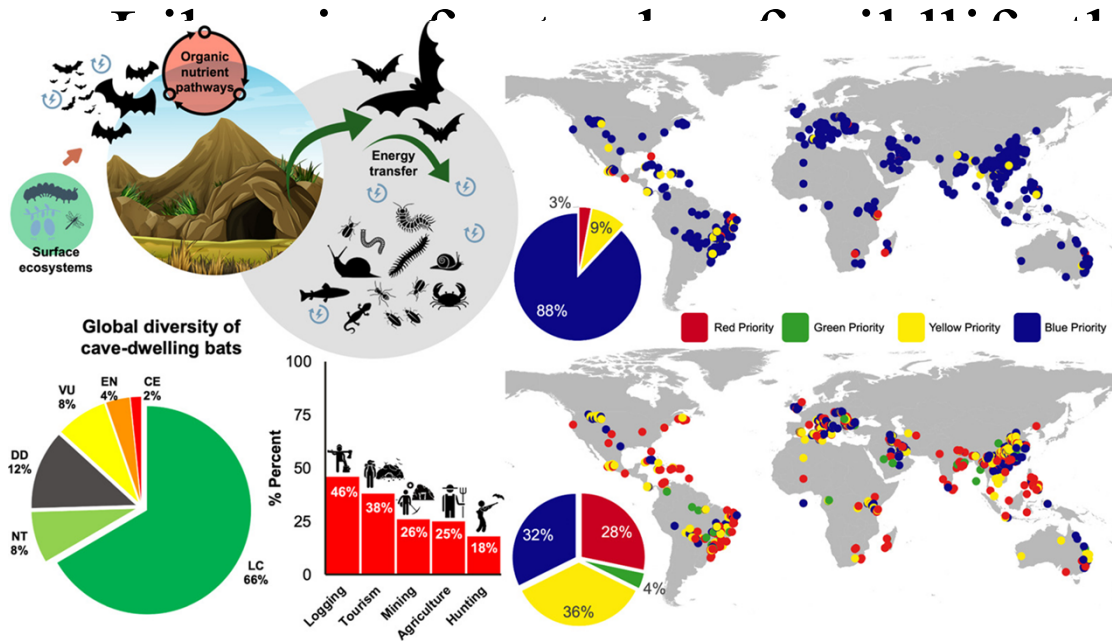
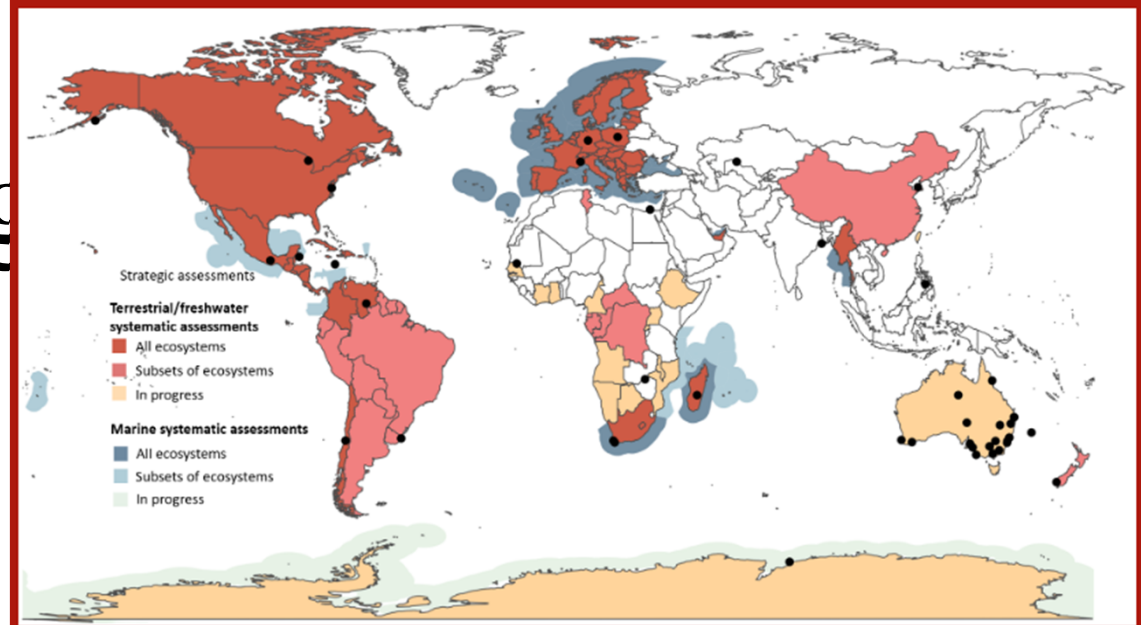
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# Moving

- Other metrics: most are not representative
- For example, redlist of ecosystems, 4,000 ecosystem units have been assessed following the IUCN Red List of Ecosystems Categories and Criteria-only 509 are available- and many (like China) do not follow standards



There are two targets, but there is no data available to collect. For example, the US alone imports 45% coming from the wild-





# Where to from here?

- Bad analysis is too easy-but undermines our ability to maintain credibility or develop good solutions
- We need to advocate for better targets and indicators, but also better link these to other processes to ensure the collation of data for assessment and monitoring is feasible
- We also need to engage better with parties to allow better indicator development and facilitate data collation-we need to think how we can do this within Asia

谢谢

