Measuring benefits from ecosystem services in monetary terms – using market and non-market based methods

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Breakout Session B1

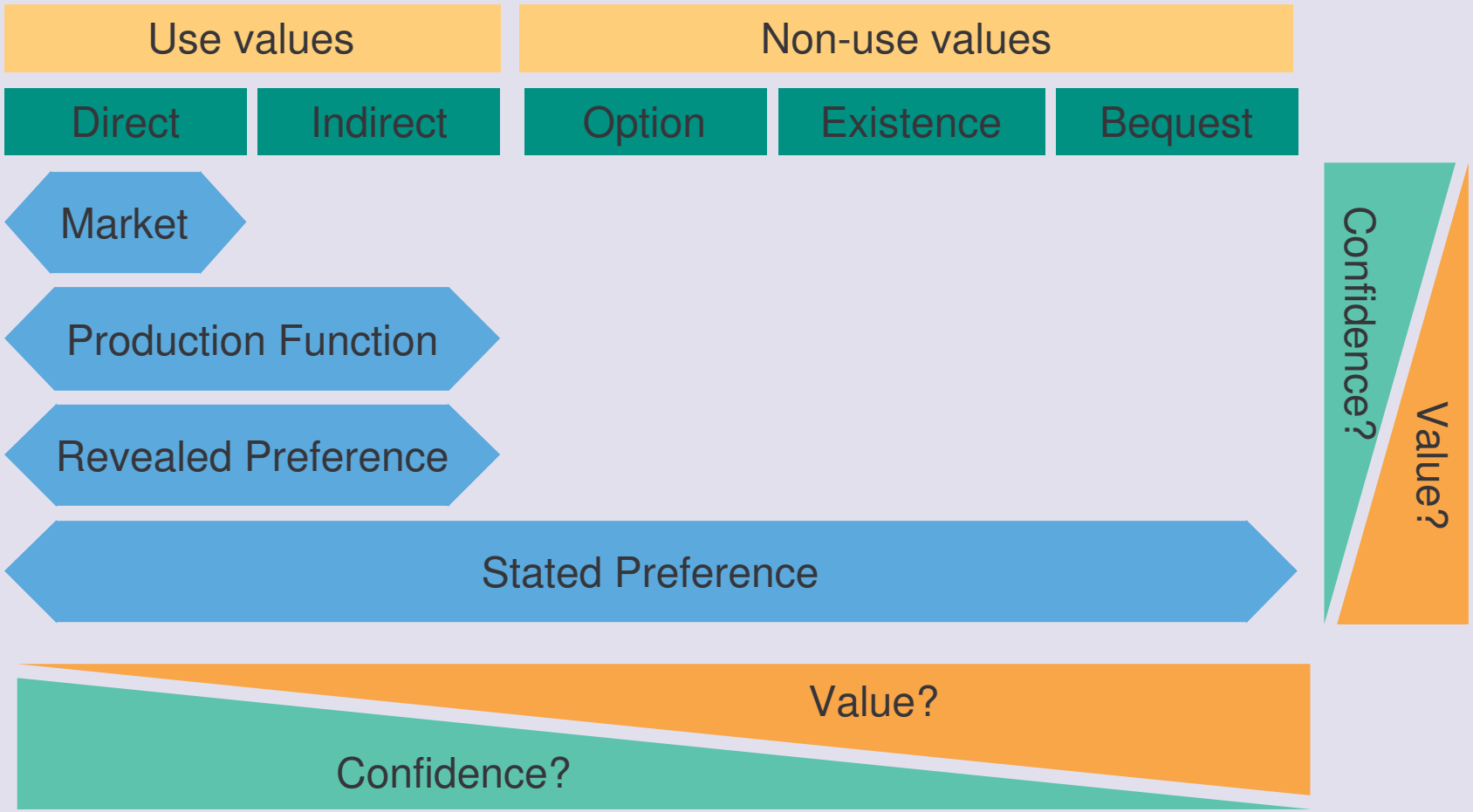
Session aims

- This session should include an evaluation of economic techniques for assessing the importance of biodiversity to people.
  - *What is common practice and what are promising developments?*
- This session will also explore the potential use of quantitative socio-economic models in combination with case study based approaches to evaluate the welfare changes associated with different scenarios.
  - *What are the methodological challenges ahead in making an efficient, policy relevant evaluation of ecosystem goods and services?*

What are we trying to do?

- Represent the value of biodiversity (or ecosystem goods and services) given a current loss trajectory relative to a counterfactual of spending more on conservation
- Ideally the “spending more” would yield greater social benefits (conversely avoided costs of loss)
- We need to characterise the likely costs and value them
- Physical losses characterised by ecologists and conservation biologists – can they do this given the need to describe losses in terms of a spending scenario versus a counterfactual?

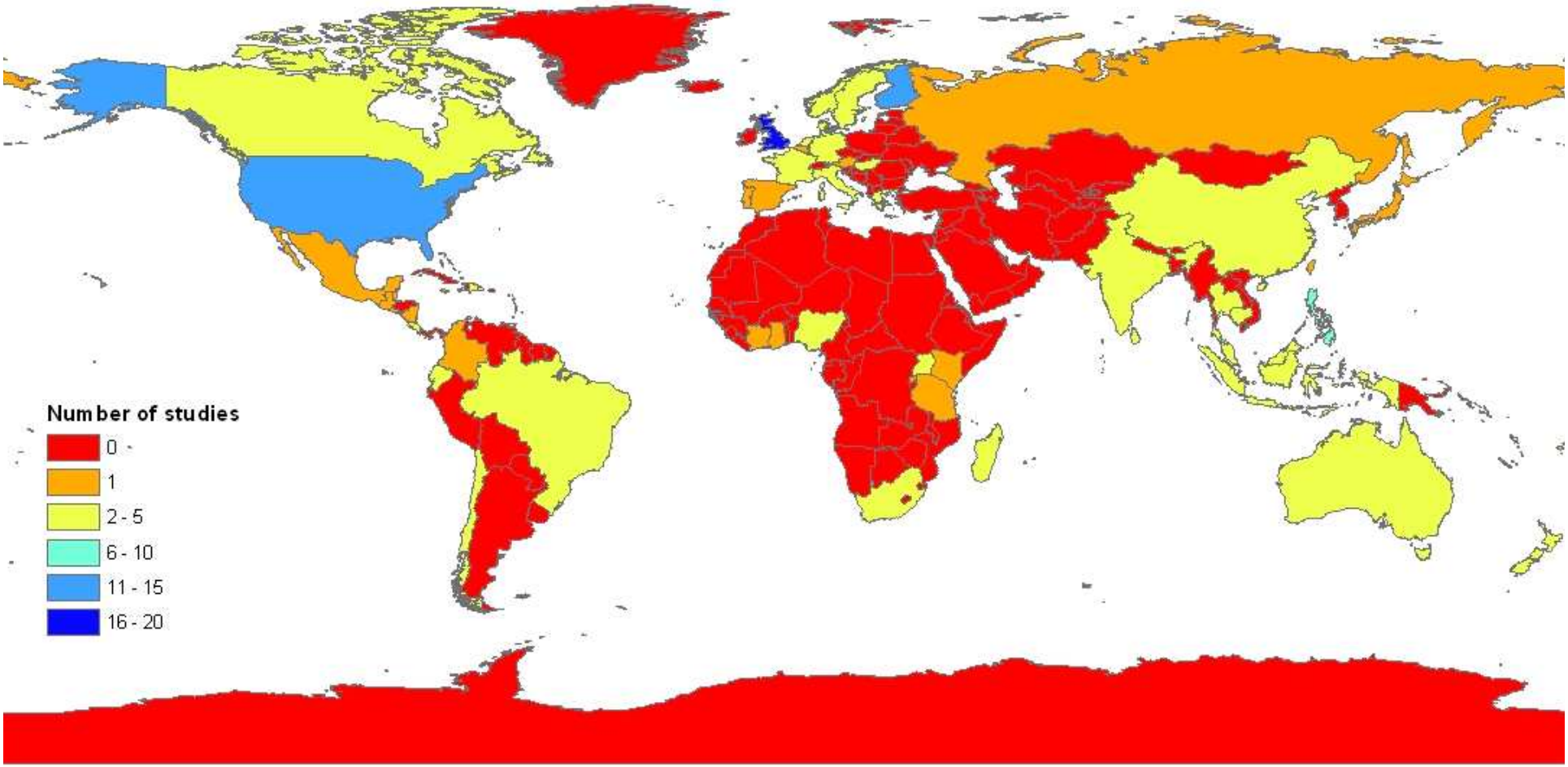
TEV framework



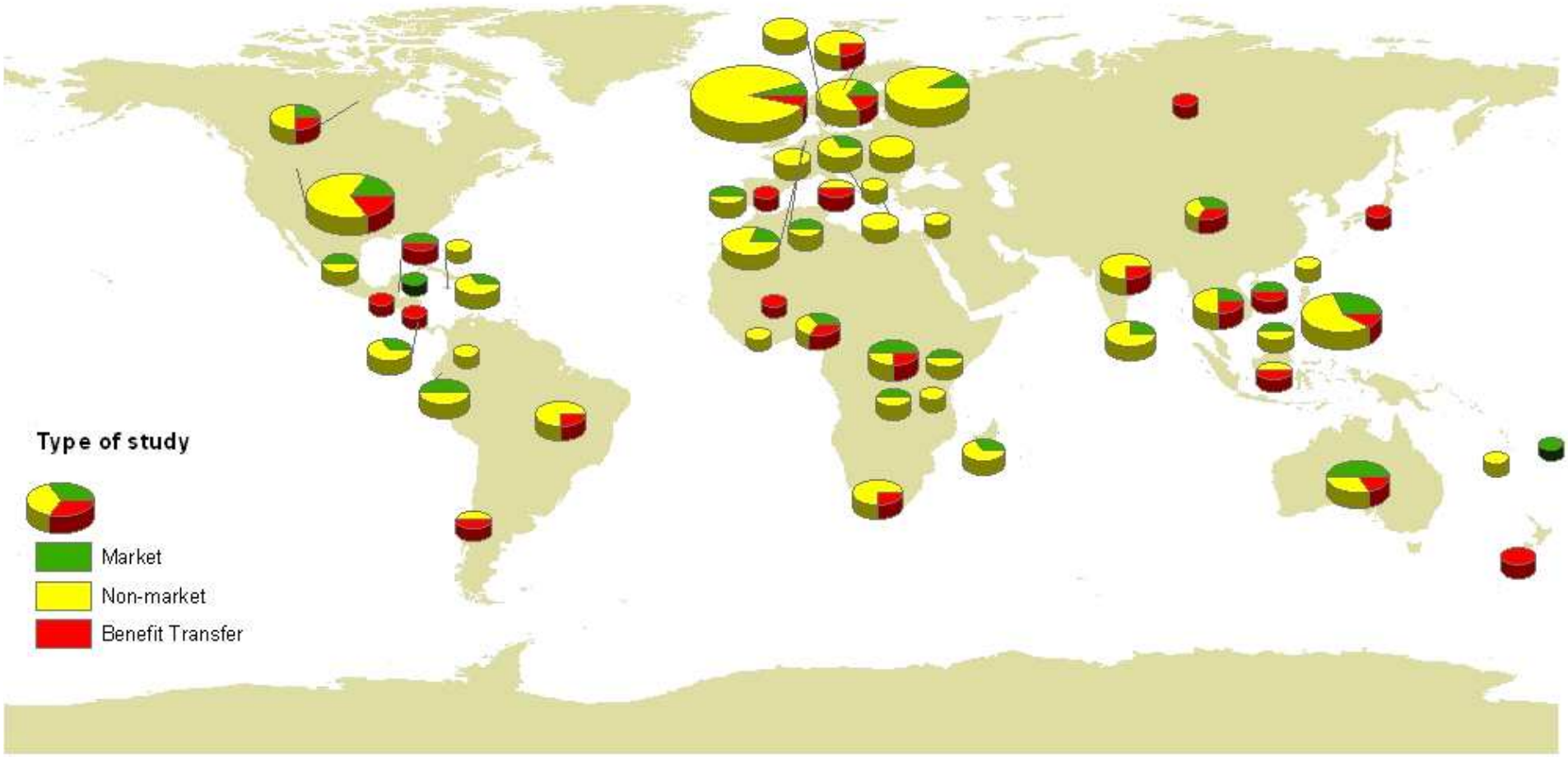
What do we know?

- We know a lot about opportunity costs! (provide a benchmark)
- Happiest with direct use – markets
- Indirect uses more obvious in terms of climate change/shadow price of carbon*/carbon trading
- Lack of production functions linked to endpoints
  - Marine work (presentation tomorrow): what is the link between area conserved and fish productivity?
  - What about resilience and resistance?
- Lots of SP work on existence, but aggregation issues…..can this be a defensible policy evidence-base?
- How good is benefits transfer?

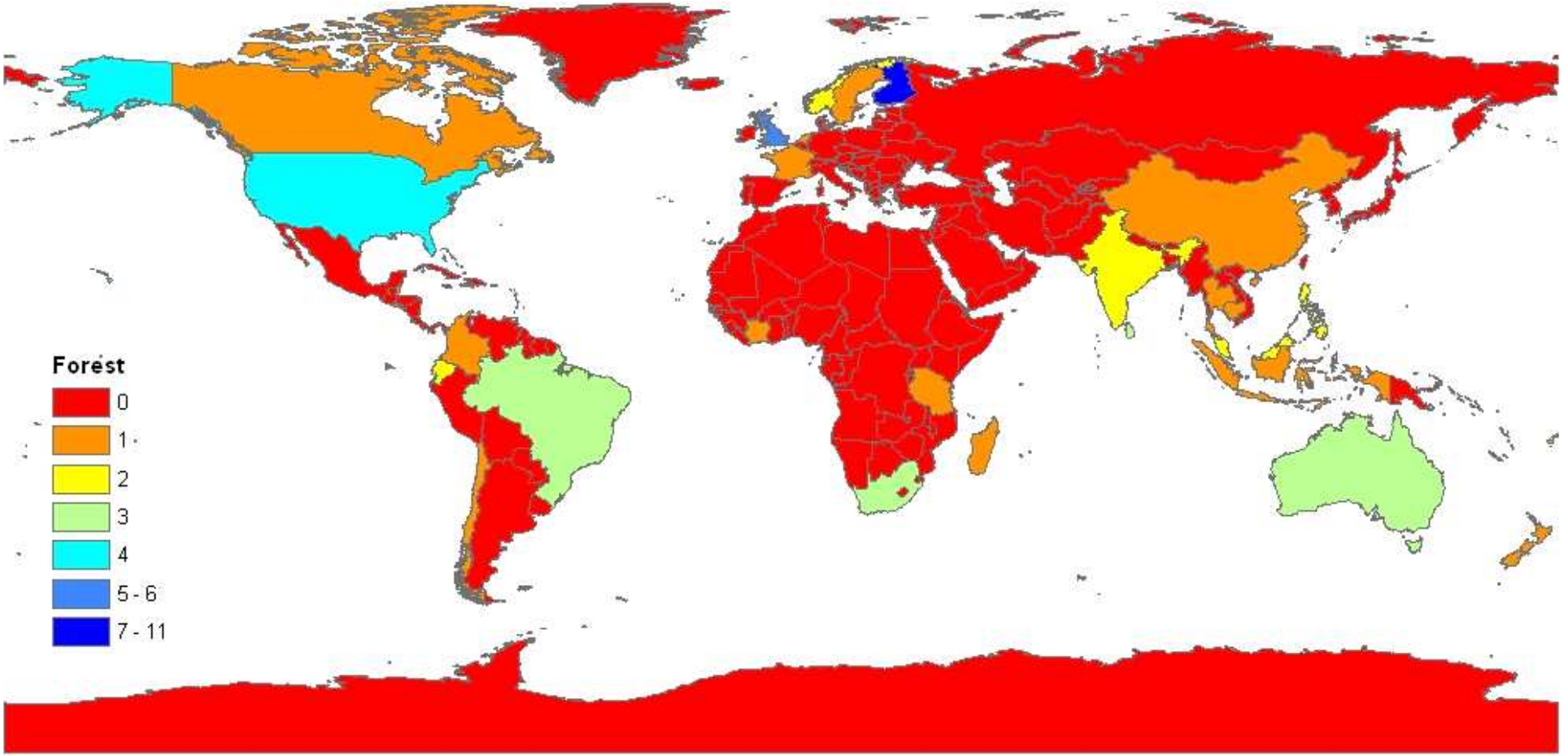
EVRI database – “Biodiversity”



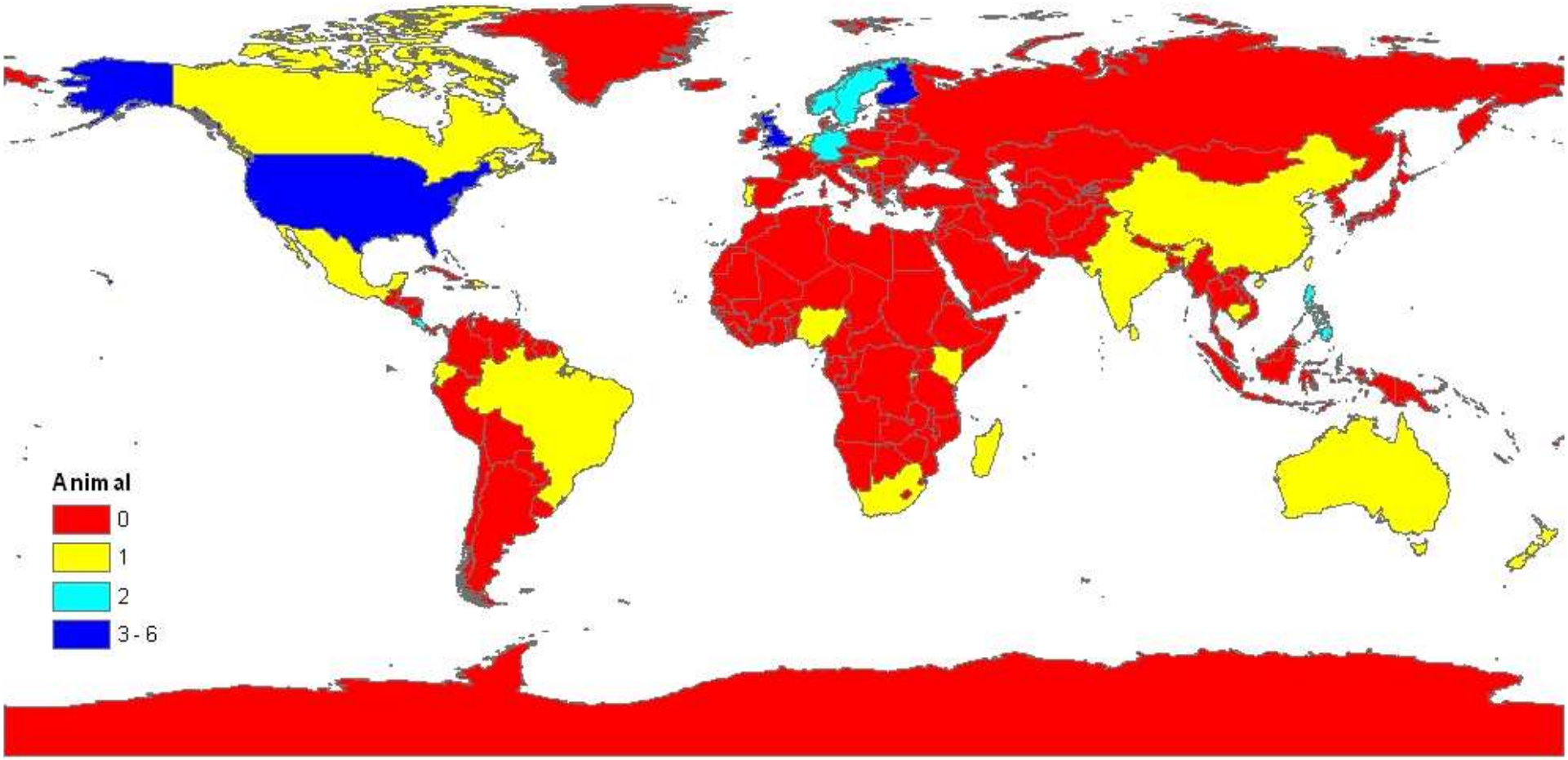
Study type



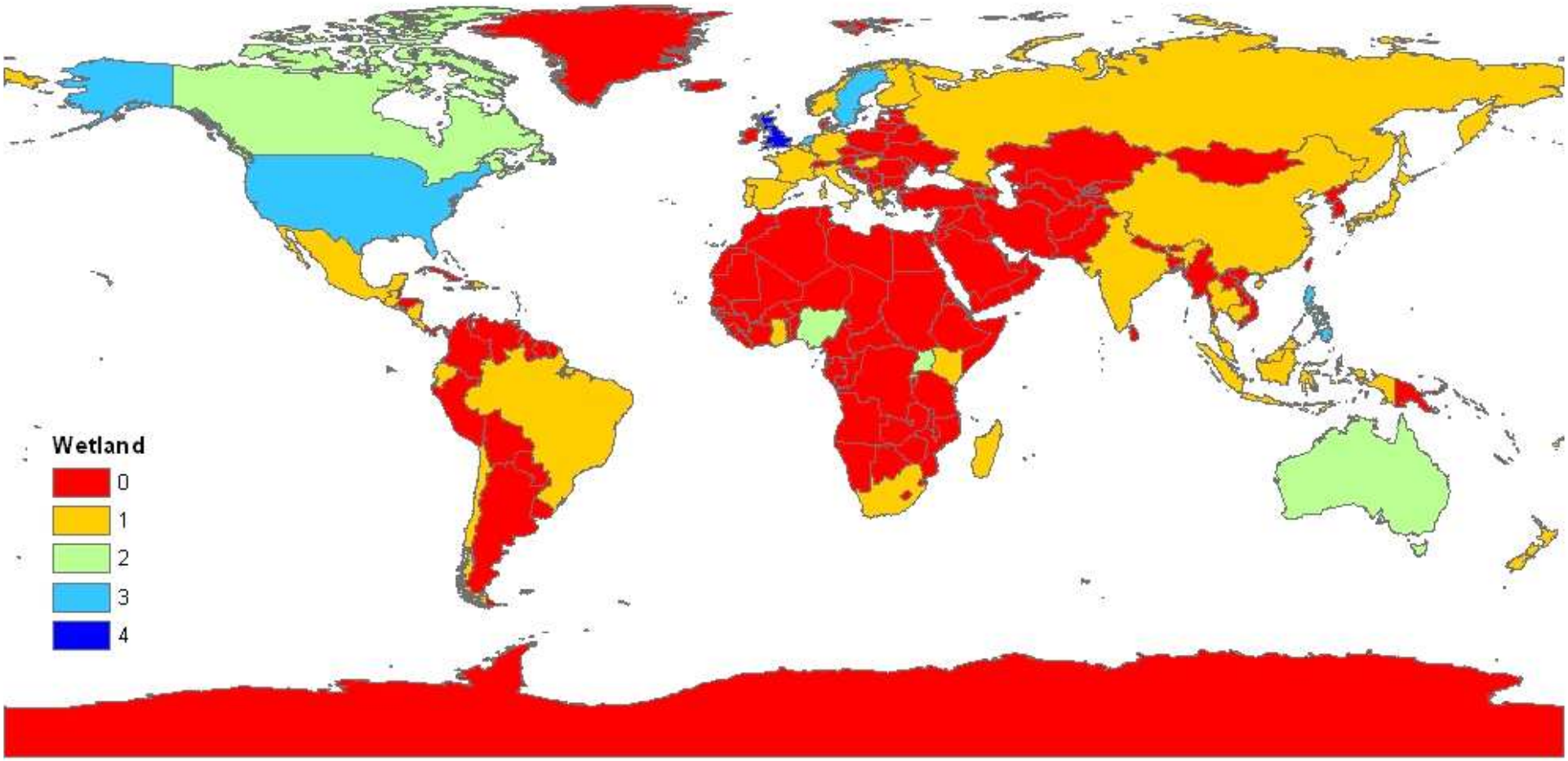
Data coverage - forests



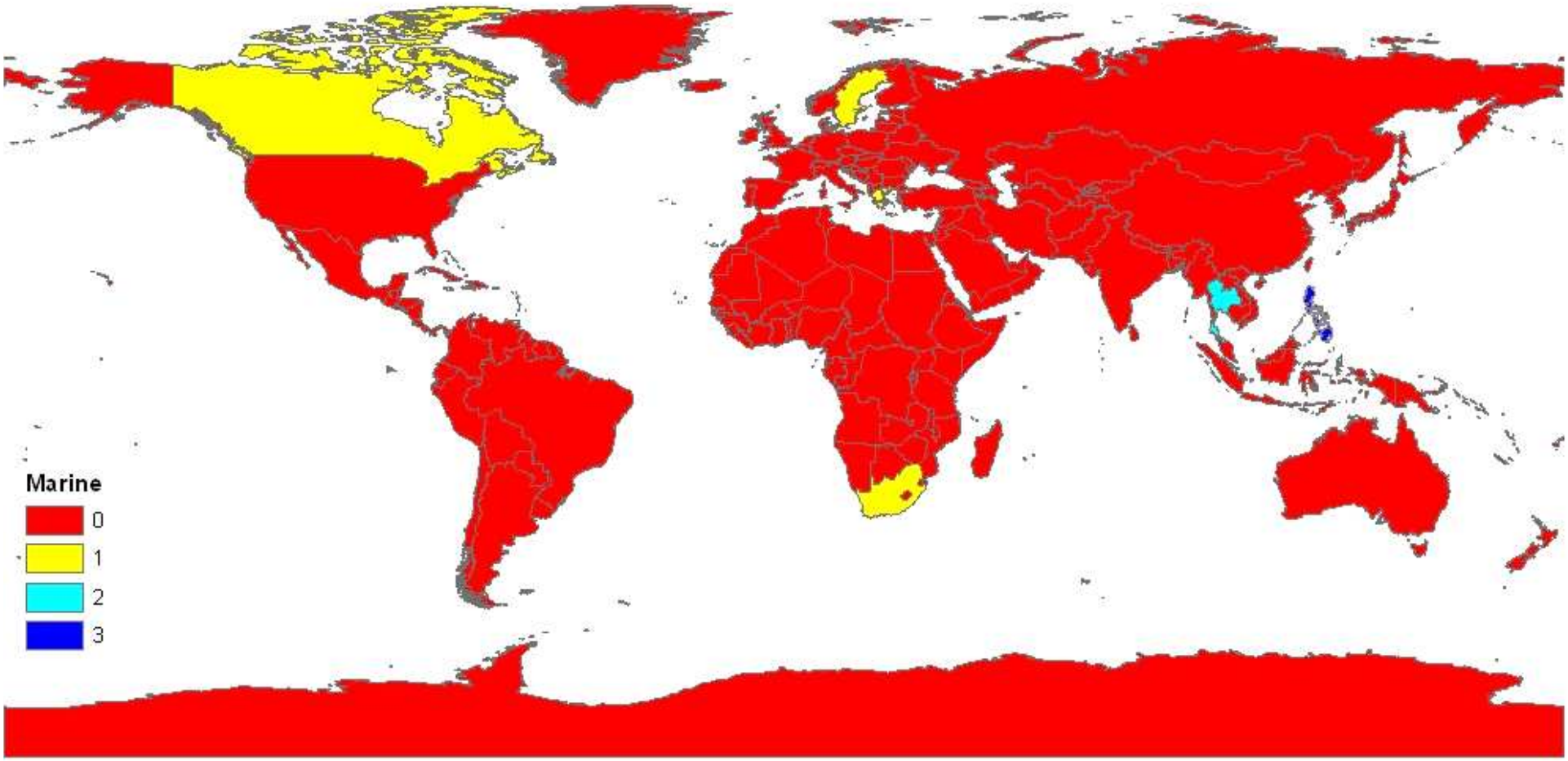
Data coverage - fauna



Data coverage - wetland



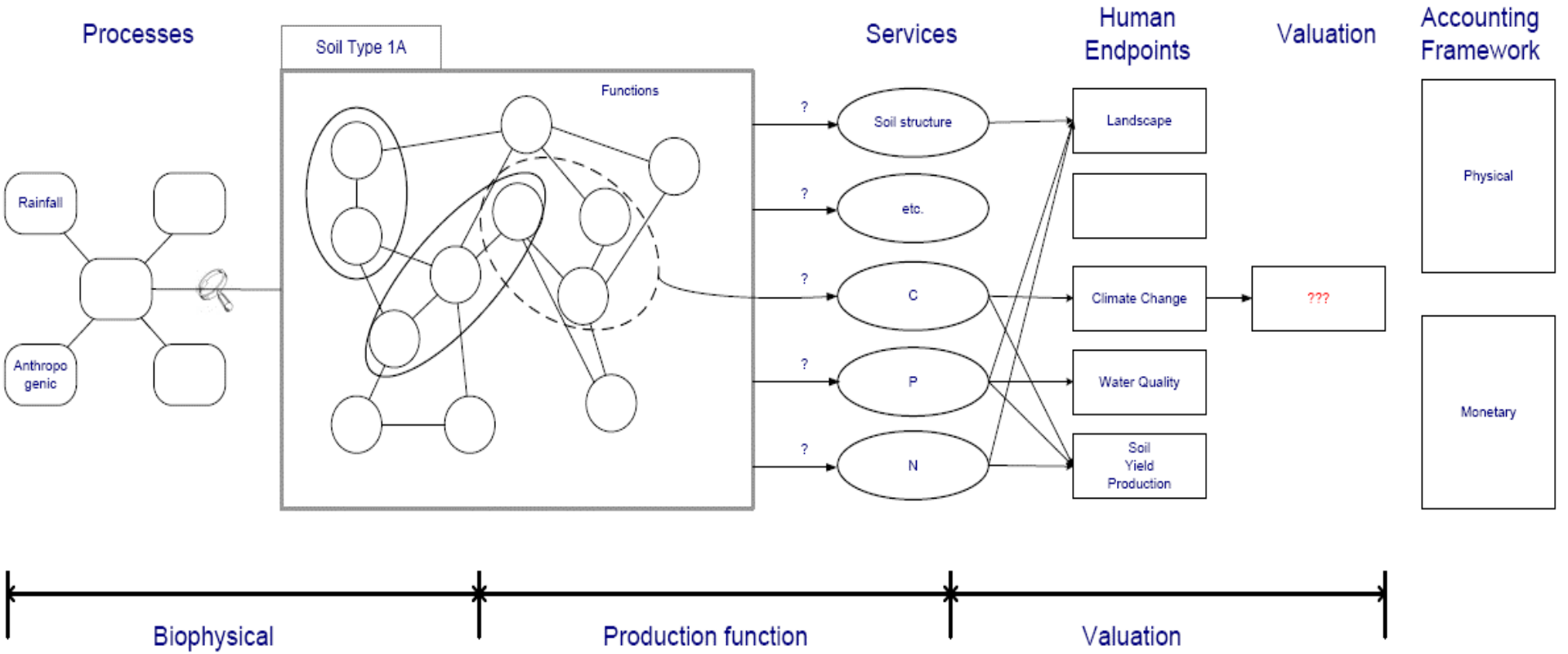
Data coverage - marine



Valuation issues

- MEA and ecosystem goods and services approaches have focused on processes, functions and services
  - Antecedence to endpoints economists recognise
- Limited knowledge of production functional forms – linking ecological and economic
  - Scales, processes, values

Accounting framework for soil ecosystem goods and services (Moran et al, 2008)



Spatial unit

Time

Session outputs

- What do we know now?
- What are the short term priorities for the review and research in the next two years?
- What are the major gaps and medium term research challenges?