



Pushpam Kumar;
Chief, Ecosystem
Services
Economics Unit,
UNEP



The Economics of Ecosystems & Biodiversity

Ecological and Economic Foundations: Key Messages

Dr Pushpam Kumar

**Chief, Ecosystem Services Economics Unit Division of
Environmental Policy Implementation (DEPI),
United Nations Environment Programme (UNEP)**

And

**School of Environmental Sciences
University of Liverpool**



Federal Ministry for the
Environment, Nature Conservation
and Nuclear Safety



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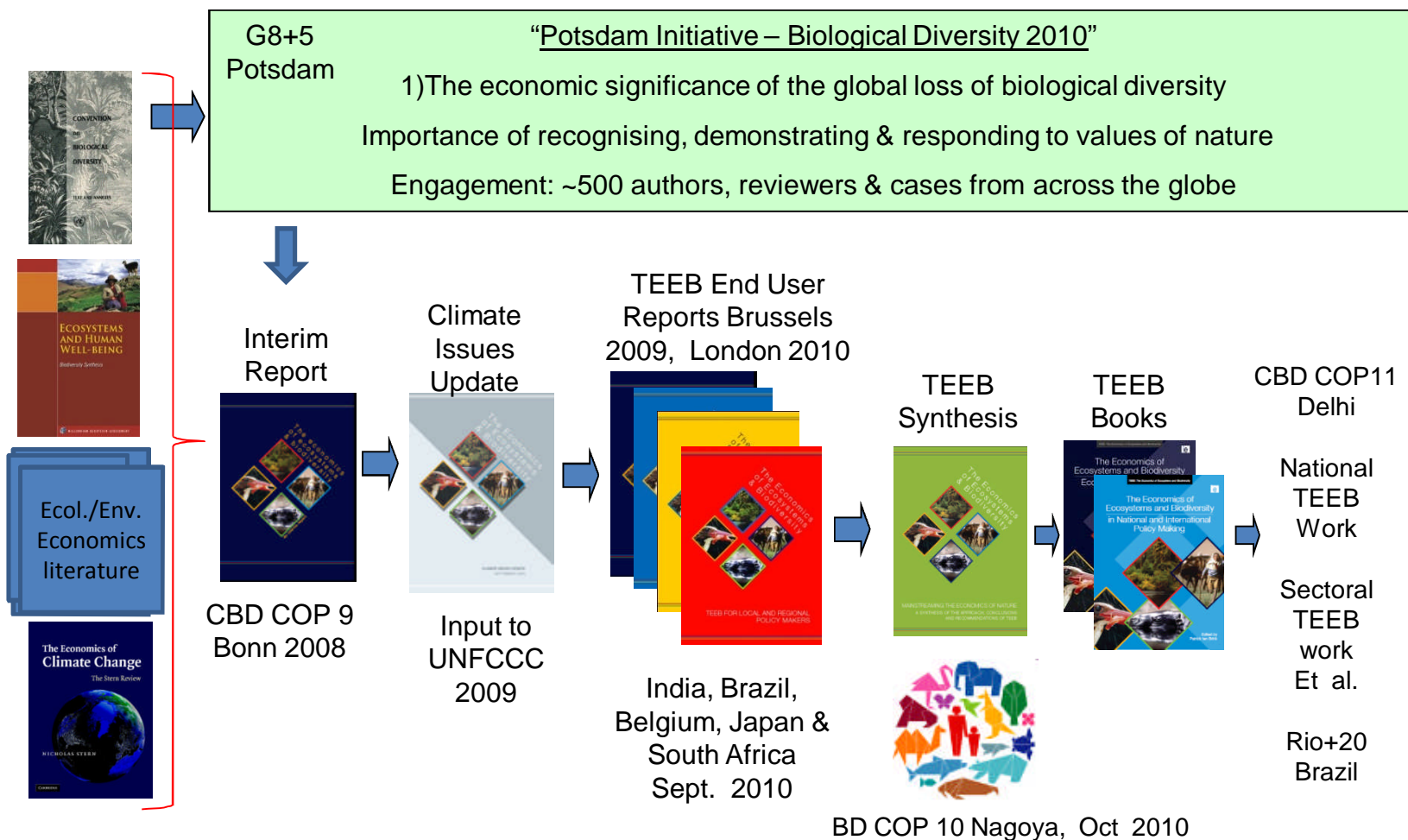
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TEEB: Genesis, Aims and Progress



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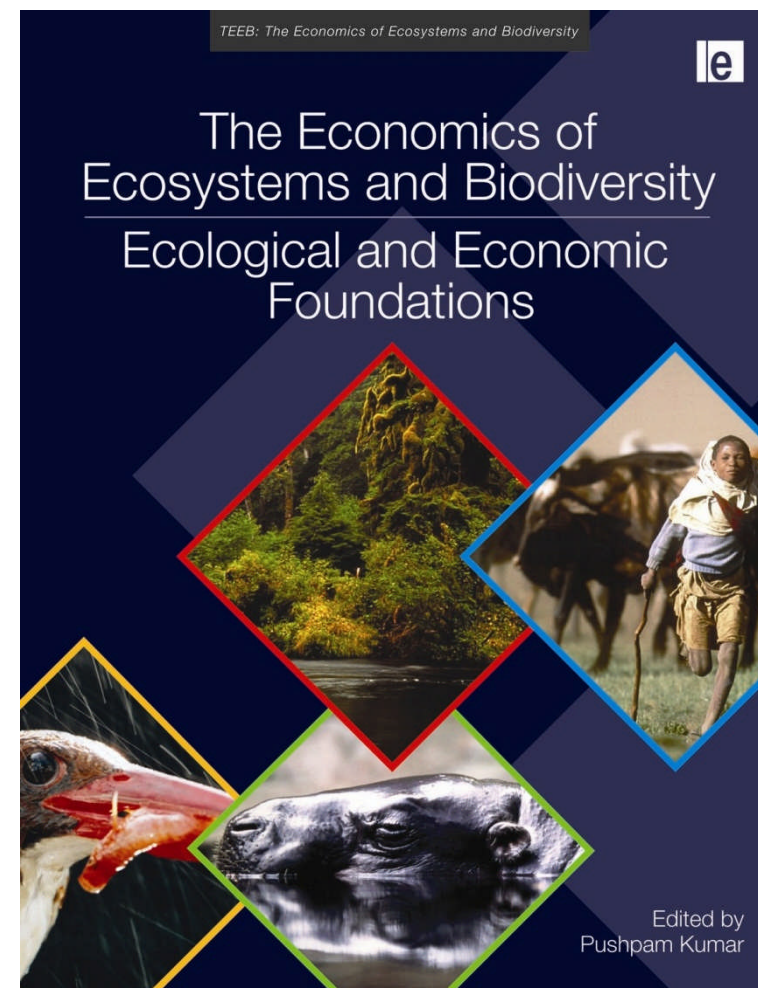
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Key Messages:

1. Framework
2. Methodology
3. Challenges from ecology
4. Challenges from economics
5. Ways forward
6. Database
7. Ways forward
8. Recommendations



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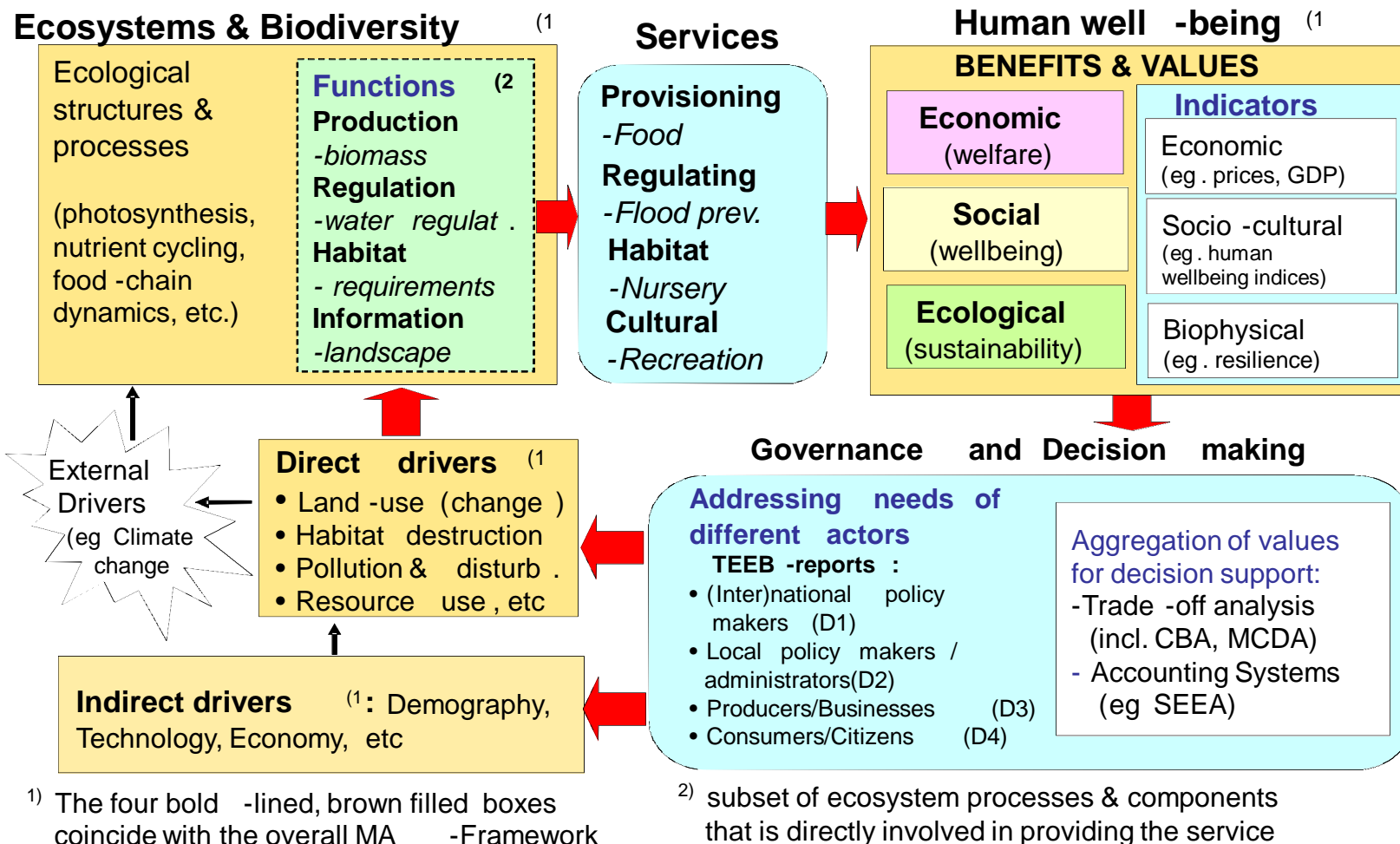
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1: Framework Revisited



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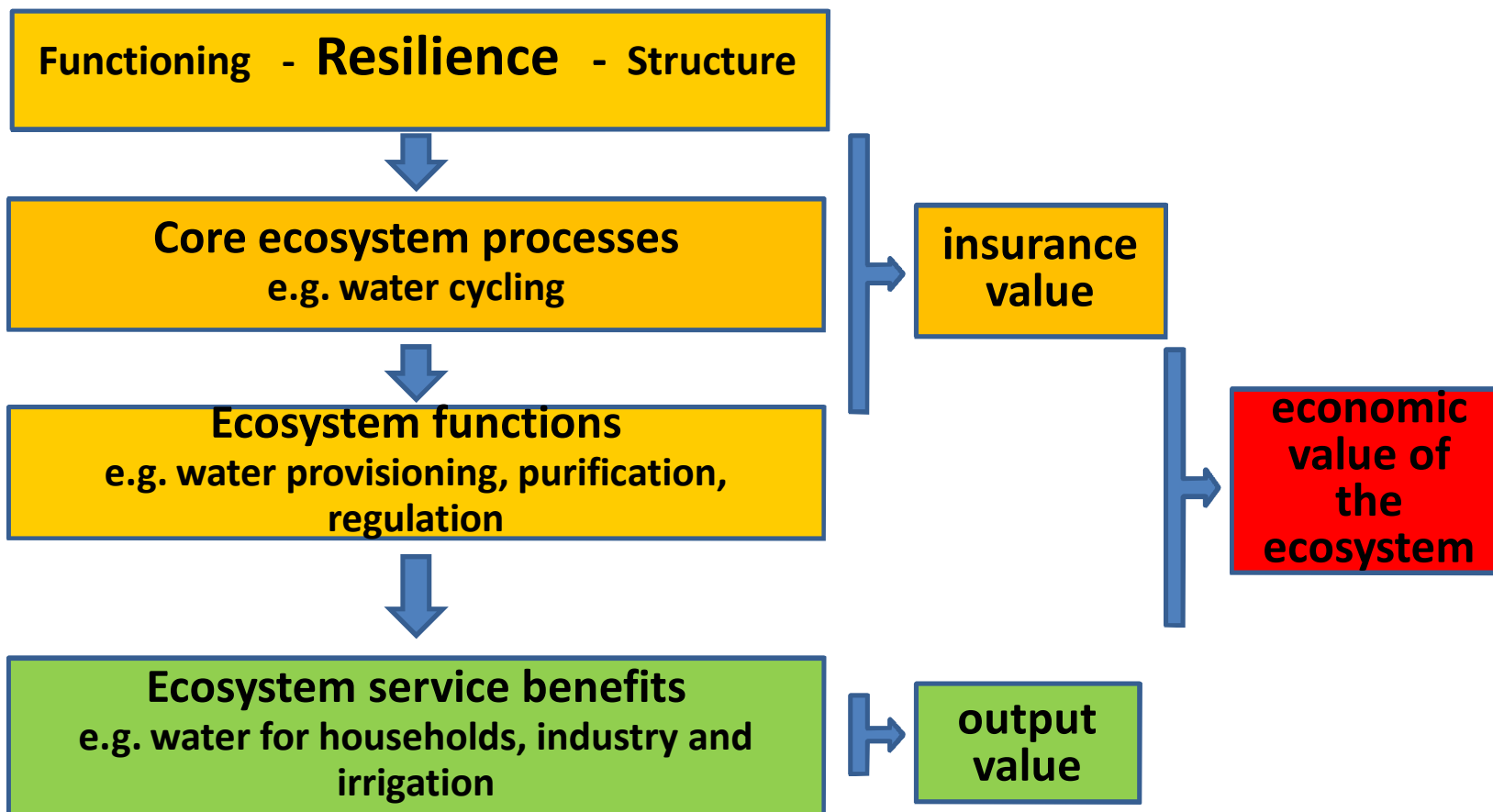
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2.1: Ecosystems and Valuation: Perspective



Insurance and output value as part of the economic value of the ecosystem

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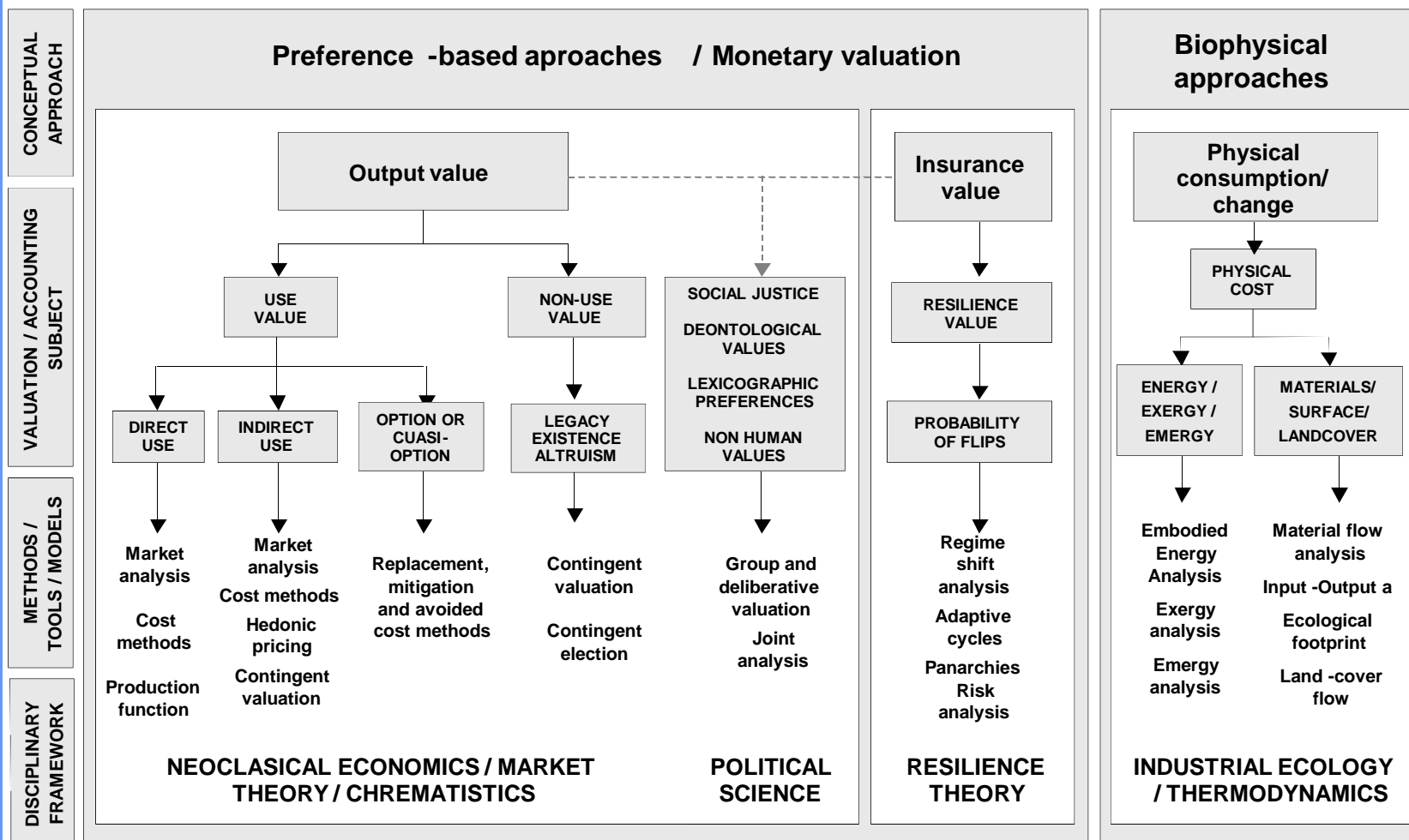
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2.2: Methodological outline for valuation



Source: G ómez-Baggethun, deGroot, et al. in progress

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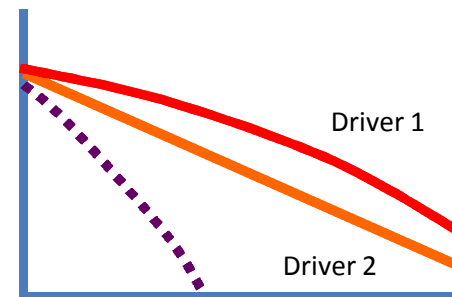
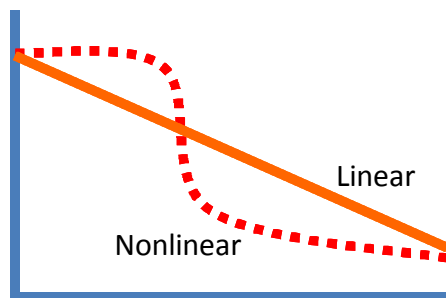


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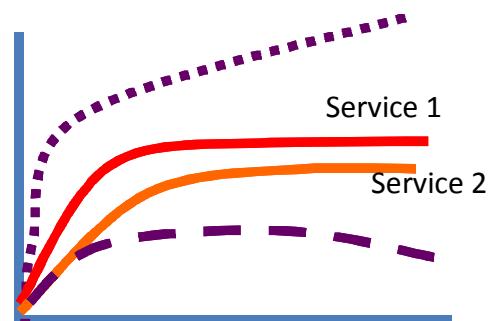
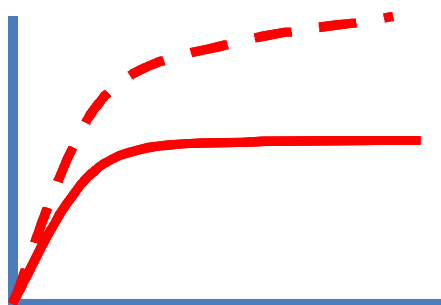
3: Challenges from ecosystem science

Biodiversity



Environmental change

Ecosystem services



Biodiversity

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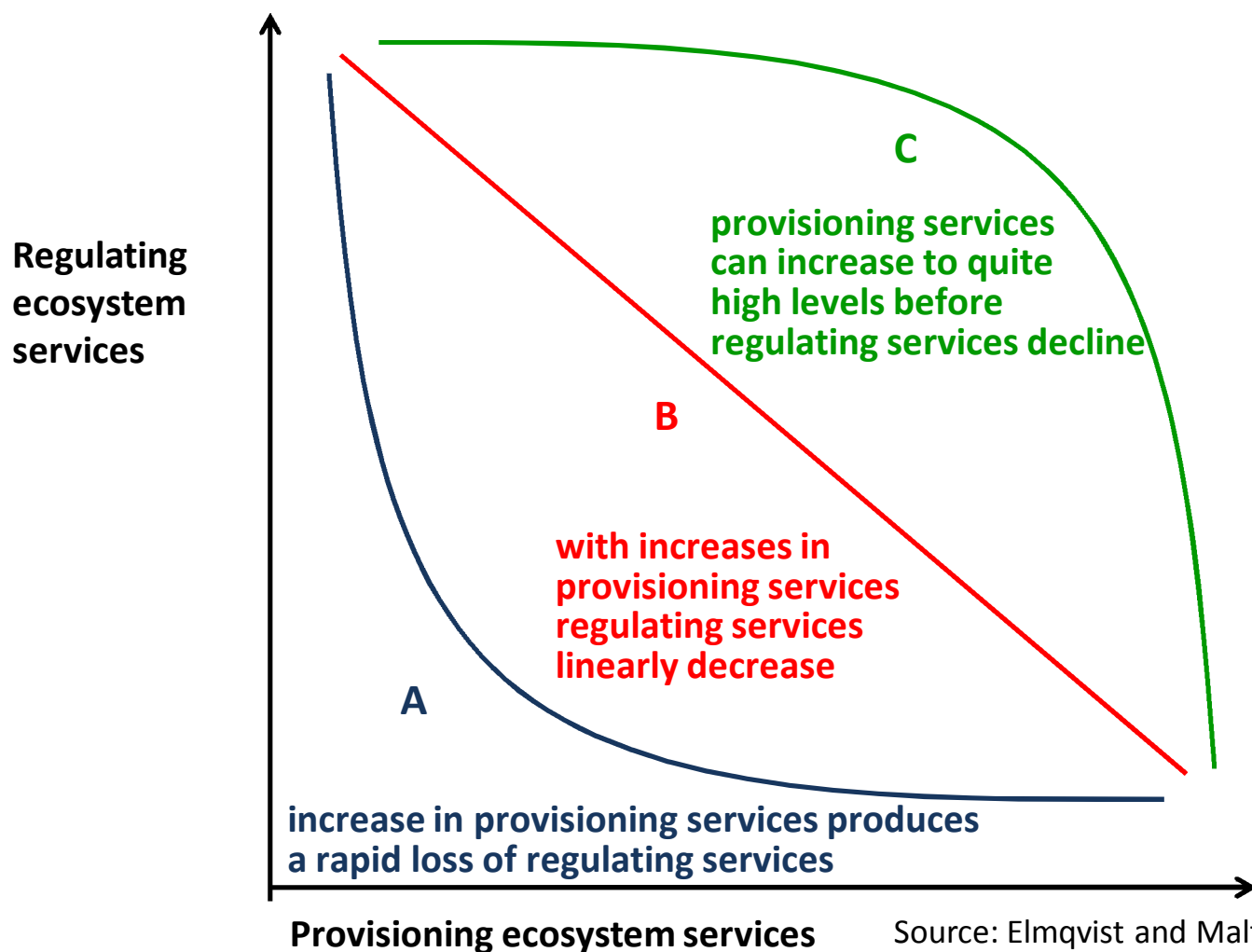
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3.1: Trade offs



Source: Elmqvist and Maltby et al Ch2,
TEEB 2010

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4.1: Challenges from economics science

Increasing system complexity
ecosystem, scales, no. of actors



Commodity-
type values

Ethical/cultural
convicitons

Legend:
predominant type of
value appreciation



Capturing

Demonstrating

Recognising

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5: Valuation Database: Information Organised and Explained

Descriptors

More than 1300 valuation studies

Location name

Latitude /Longitude

Country name with socio economic
context

Purpose and assumption of valuation

Valuation method

12 main ecosystem types; with 43 sub-
categories

22 Ecosystem Services; 53 sub-categories

Representative data source

Peer reviewed Literature

Grey Literature

TEEB 1 / COPI 1 no online version (?)

CI - www.consvalmap.org/

ESD / ARIES – esd.uvm.edu [but
currently offline]

NV&F - www.naturevaluation.org [casebase]

EVRI - www.evri.ca

EnVAlue - www.epa.nsw.gov.au/envalue/

Valuebase Swe
www.beijer.kva.se/valuebase.htm

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6: Valuation Methodologies: Un-realized Pitfalls

- Economic value of ecosystem services - assessed in terms of financial sacrifices people would make for it, or economic/physical trade-offs. E.g. CVM studies- while valuing for large or small landscape, value remains the same, implying people are valuing the idea of conservation & not the object in question.
- People do not express utility or even think in economically logical way. People make statements about their personal & collective values- to define who they are through the causes they support (Ritov & Kahneman, 1997).
- Behavioral foundation of rationality (e.g. different motivations can underlie behavior in different spheres of life)

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7: Ways forward

- Methodological pluralism (besides economics and ecology, behavioral sciences, social anthropology are necessary)
- Interdisciplinary collaboration.
Individual's identification with nature, capriciously changing preferences and dynamic learning, ecological identity are important concepts in valuation
- Discourse based valuation
Come up with a consensual societal value of scarcity indicators, derived through participatory process
- Joint appraisal of positional and relational goods would an ideal beginning.

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8: Lessons and Recommended Actions

1. Indicators like GDP are distorted and does not reflect the changes in the level of welfare
2. Growth accounting does not incorporate ecosystem services leading to erroneous sense of gain / losses
3. Drivers like Trade and Investment impacting the Ecosystems have far reaching impact for society
4. Missing Links of Sectoral Policies causing unsustainable policies

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