

Science & policy interfacing of ecosystem services



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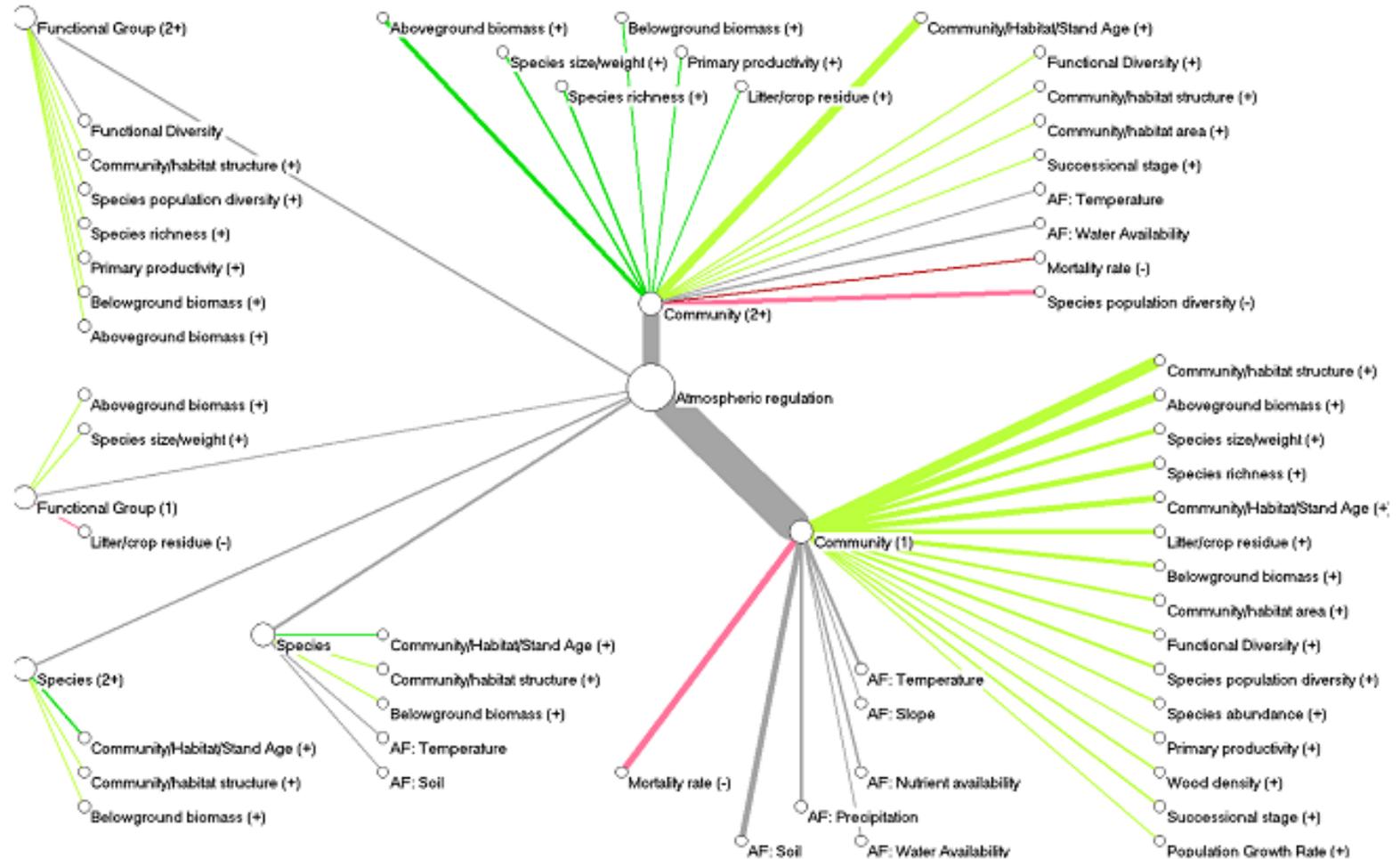
Ecological challenges for assessment of ES

- ES delivered by different components of biodiversity (habitats, species, genetics) i.e. more than just ecosystems, so how do we capture these other elements?
- How to translate maps of ecosystems to assessment of ES delivery, especially for some e.g. cultural services?
- How about ES not/less directly dependent on biodiversity?
- Where will there need to be trade-offs between ecosystem services and how can these be handled?
- How does the delivery of ES link to ecological concepts e.g. condition, resilience?
- What are the limits to ES capacity to deliver ES?
- To what extent can ES delivery also deliver conservation objectives?
- To what extent can ES contribute to different policy agendas e.g. no net loss, NBS, GI

ES delivery by different components of biodiversity

P.A. HARRISON ET AL. / *Ecosystem Services* ■ (■■■■■) ■■■■-■■■■

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How to translate maps of ecosystems to assessment of ES delivery?



Production:

Timber, meat

Regulation:

Water flow

Erosion control

Cultural:

Recreation

Tourism

Conservation

ES not/less well-captured by LU mapping ecosystems

Hydroponics

Intensive livestock units

Urban cultural services

Inspirational



Trade-offs between ES and how can these be handled?



Same category – different service e.g. woodland to agriculture

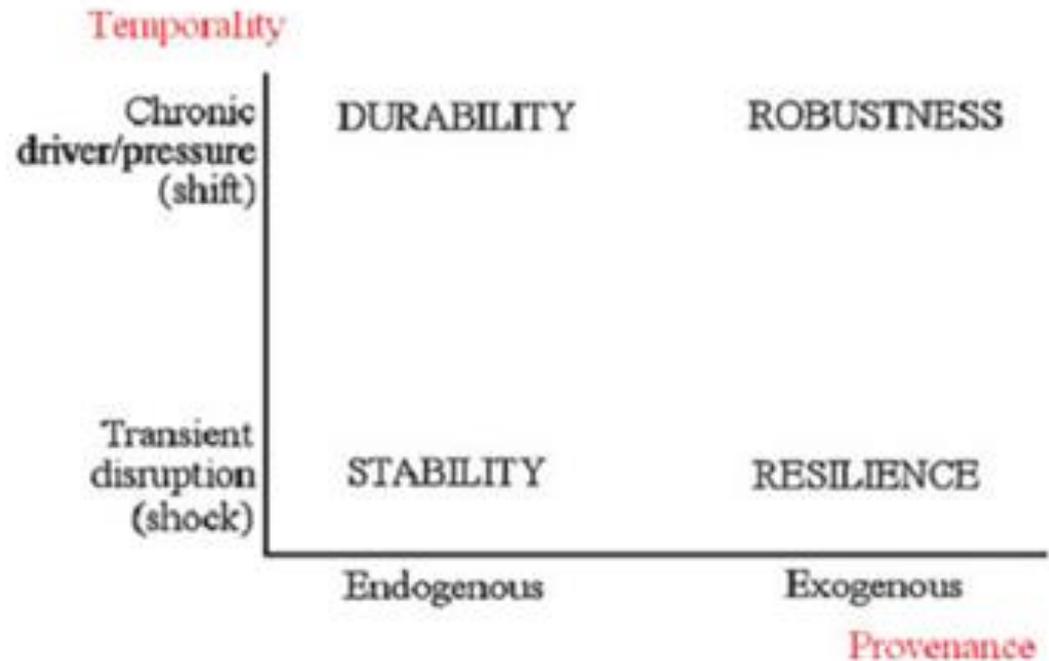
Same category – same service e.g. peatland to forest

Service changed and reduced e.g. urbanisation of farmland

Changed and “enhanced” – e.g. afforestation of abandoned land

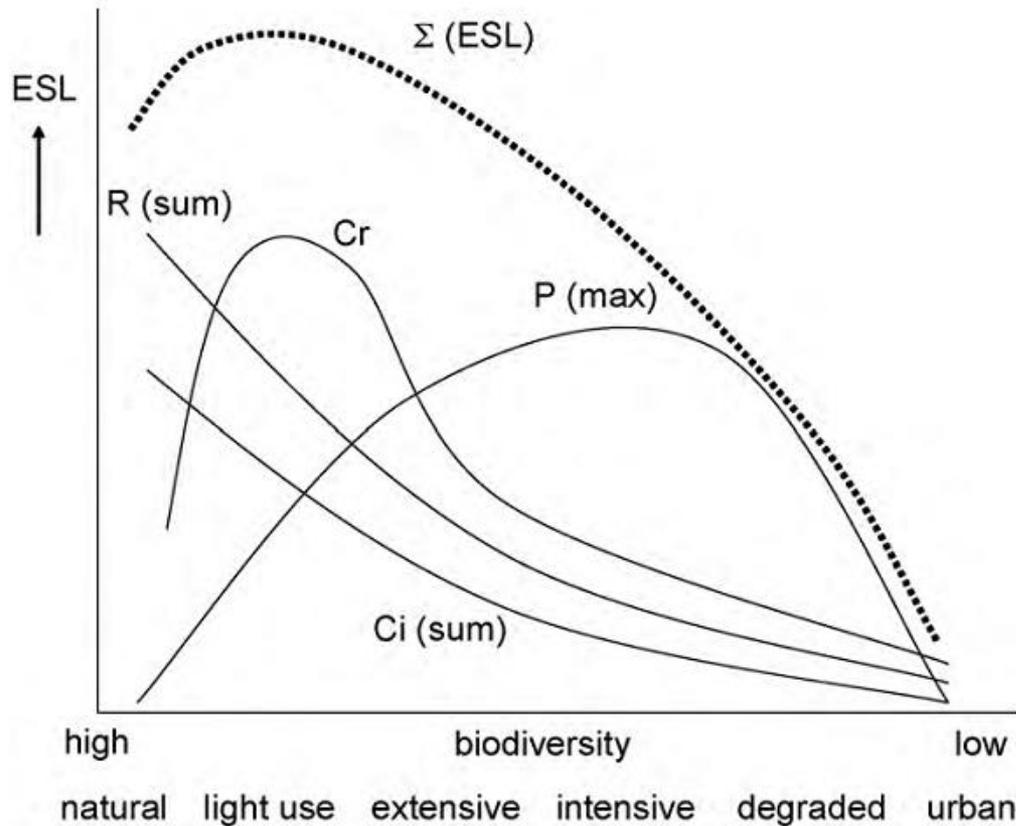
How does the delivery of ES link to other ecological concepts

Fig. 1 Dynamic system properties in terms of their temporality, shown on the *vertical axis*, and provenance of drivers and pressures, shown on the *horizontal axis* (adapted from Stirling 2007)



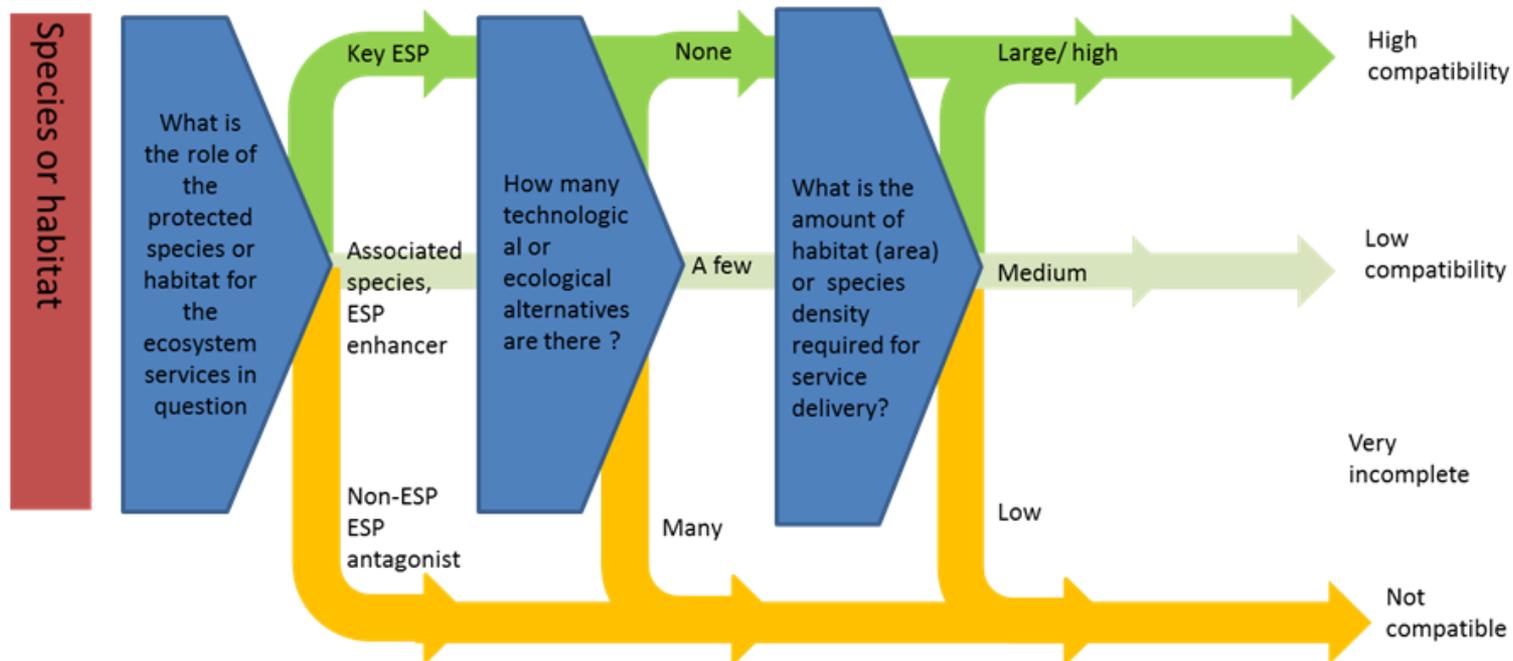
From Dawson et al., 2010

What are the limits to the capacity ecosystems to deliver ES?



De Groot et al., 2010, Ecological complexity

To what extent can ES also deliver biodiversity conservation objectives?



Mapping of Ecosystems and their Services in the EU and its Member States (MESEU) Draft report Braat et al., 2014

To what extent can ES contribute to different policy agendas

Various biodiversity policy agendas/strategy

Other sectoral agendas – agriculture, forests, seas

“Human health and well-being”

All???

*Our life insurance,
our natural capital:
an EU biodiversity
strategy to 2020*

Clean Air Programme for Europe

**EU Social Cohesion
policy 2014-2020**