



Photo: <http://knowledge.allianz.com>

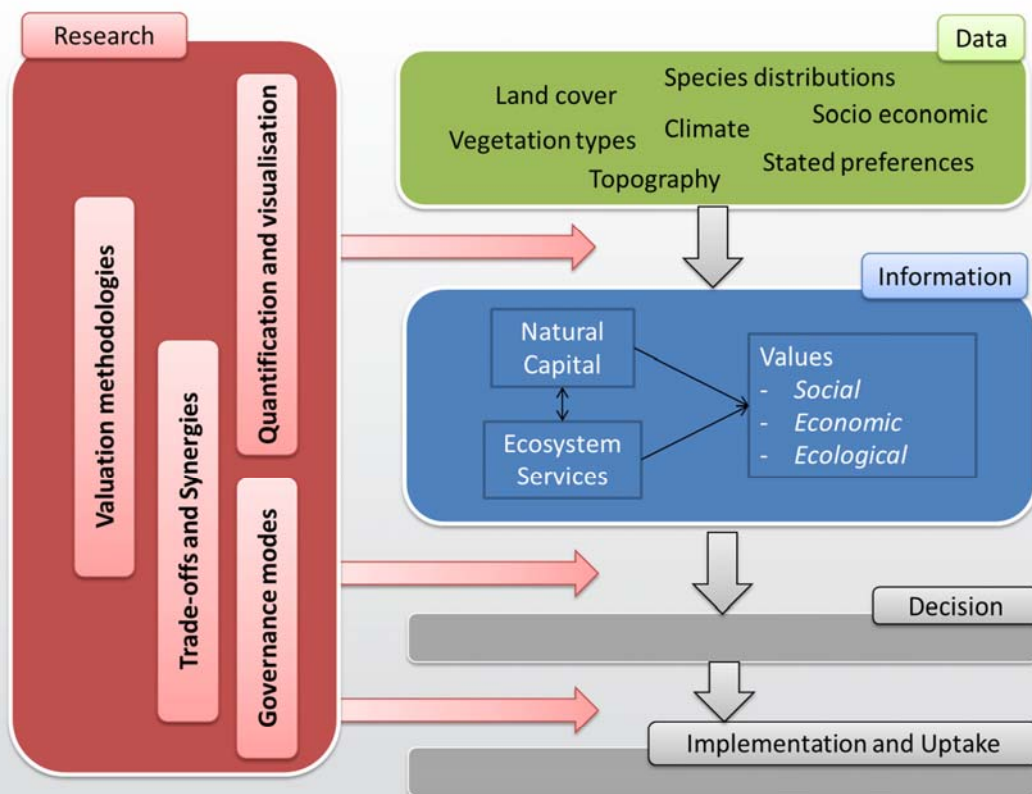
WP3 Knowledge

User board meeting

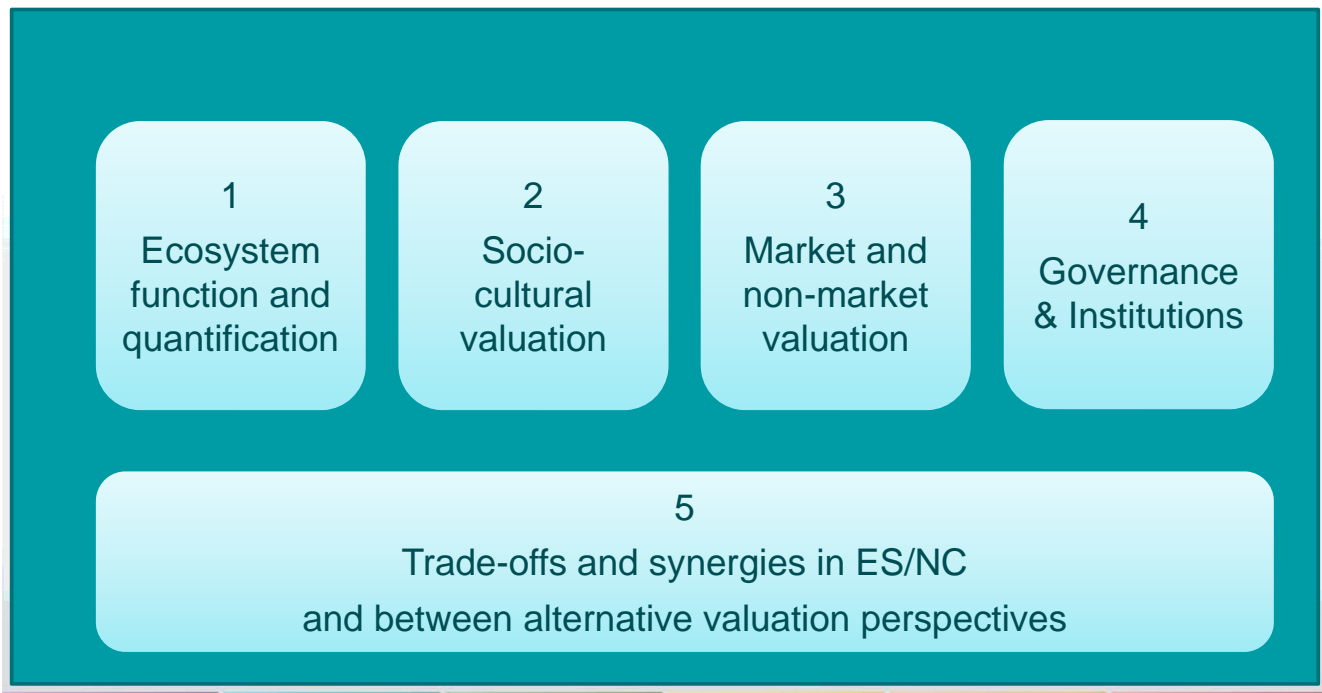
Brussels, 28-29 Oct 2013

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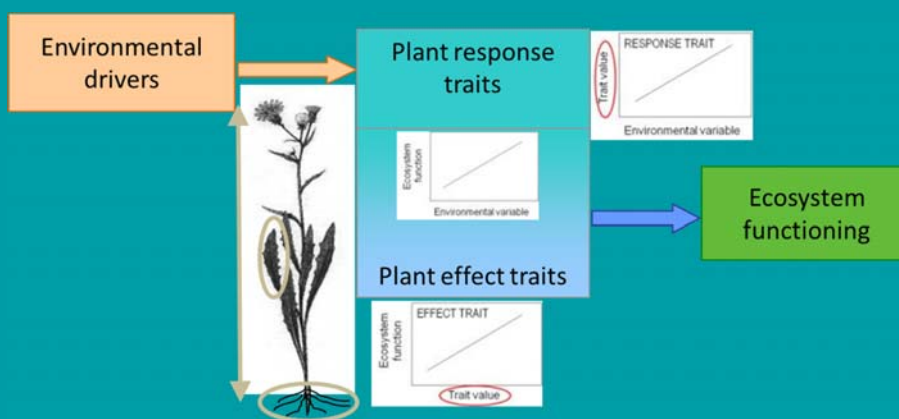
Work Package *Knowledge* – 5 tasks



1 Ecosystem function and quantification

Work Package *Knowledge* – Task 1

1) Links between ecosystem function, biodiversity and ES provision



Chapin et al. Nature 2000, Lavorel & Garnier *Funct. Ecol.* 2002, Suding et al. *GCB* 2008



Task coordination:
- Karlsruhe Institute of Technology (Almut Arneth & Anita Bayer)

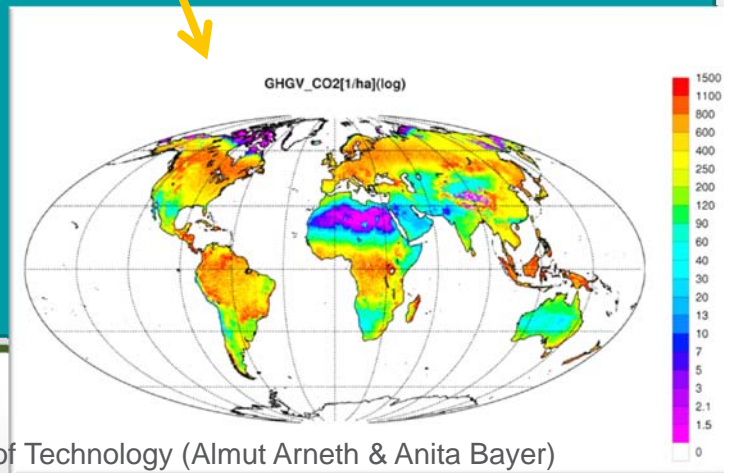
Work Package *Knowledge* – Task 1

1

Ecosystem
function and
quantification

- 1) Links between ecosystem function, biodiversity and ES provision
- 2) Apply process-based modeling frameworks to derive metrics

*Digital vegetation model /
climate model (LPJGuess)
Arneth et al.*

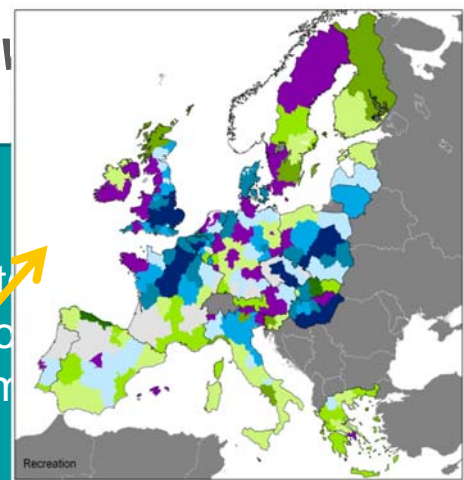


Task coordination:
- Karlsruhe Institute of Technology (Almut Arneth & Anita Bayer)

1
Ecosystem
function and
quantification

Work Package *Know*

- 1) Links between ecosystem biodiversity and ES provision
- 2) Apply process-based modeling frameworks to derive metrics



Schulp et al. submitted

- 3) Assess uncertainty in methods for EC/NC quantification
- 4) Explore the temporal and spatial dimensions of the ES/NC concept



Task coordination:
- Karlsruhe Institute of Technology (Almut Arneth & Anita Bayer)

3

Market and
non-market
valuation

Work Package *Knowledge* – Task 3

Improve estimates and transferability of economic values for environmental services.

- (1) providing a state-of-the-art review of environmental valuation techniques
- (2) expanding existing meta-analysis databases with socio-economic and biophysical data, and testing and validating the improved environmental value functions
- (3) providing a critical review of existing accounting techniques and ways to integrate economic ES values in accounting frameworks
- (4) comparing ES value estimates with existing ES payments and assessing the effectiveness and efficiency of mixing different policy instruments

Task coordination: VU University Amsterdam (Mark Koetse)

2

Socio-
cultural
valuation

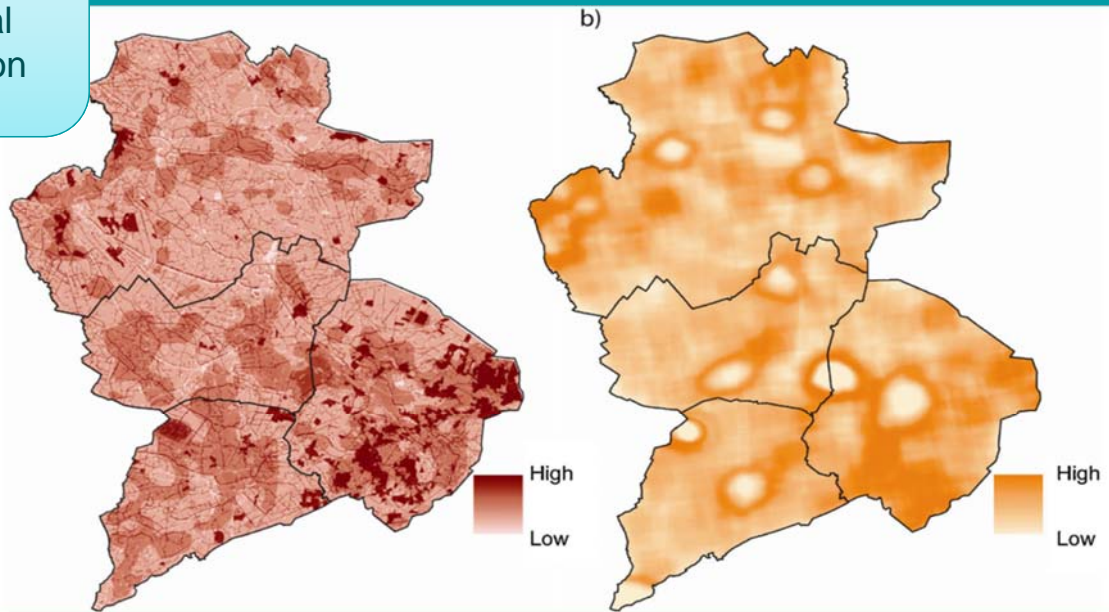
Work Package *Knowledge* – Task 2

1. Develop and test methods to measure social and cultural values attached to ES especially in cases where existing economic valuation methods are less effective.
2. To demonstrate the relationship with economic and individual values/motivations.
3. To integrate values with ES function quantification and economic valuation to support the development of new instruments.

2

Socio-cultural valuation

Work Package *Knowledge* – Task 2



Maps for social value hotspots with respect to (a) landscape features and (b) landscape structure and composition (van Berkel & Verburg 2012)



Task coordination:

- University College Dublin (Marcus Collier & Graig Bullock)

4

Governance
&
Institutions

Work Package *Knowledge* – Task 4

Provide insights into how ecosystem services and natural capital can and should be governed.

- 1) Develop a typology of governance modes of ES/NC based on the nature of the services
- 2) Clarify role of property rights in relation to selected ES/NC in the context of the exemplars
- 3) Study existing and potential policy integration examples in EU
- 4) Analyse cross-scale and cross-jurisdiction aspects of selected ES/NC governance



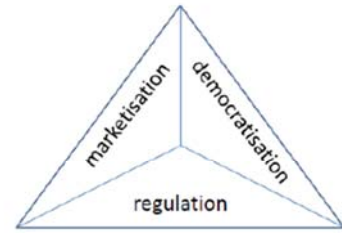
Task coordination:

- University of Lund (Lennart Olsson)

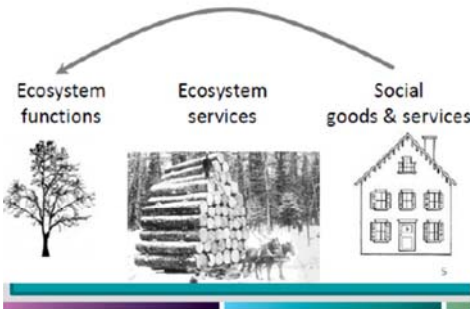
4
Governance
&
Institutions

Work Package *Knowl*

Governance modes



Boundary object



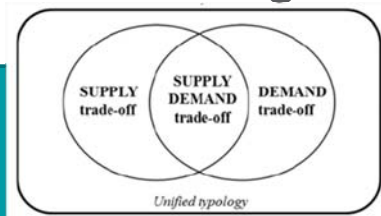
Task coordination:
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(Lennart Olsson)

Key questions

- Property rights arrangements: Are the PR arrangements well defined or unclear?
- User rights: Are there user rights that are different from property rights?
- Issues of spatial scale and definability of geographical extent of ES and EF
- Issues of temporal scale. Are there lags and inertia in the relationship between EF and ES
- What are the most important stakeholders (state, private, civil society)
- What are the power relationships among stakeholders.

5
Trade-offs and synergies & alternative valuation perspectives

Work Package *Knowledge* – Task 5



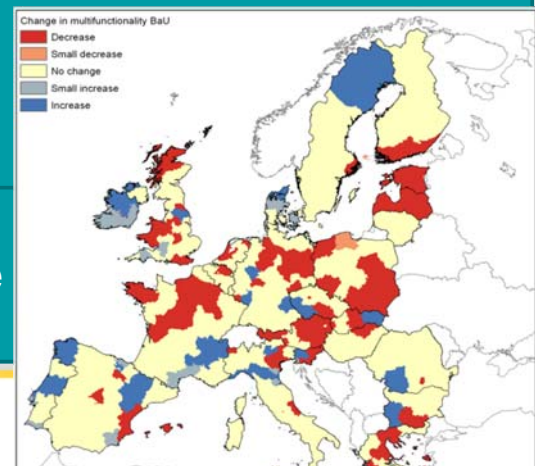
- Between services and supply and demand

Mouchet et al. in review

- Between different valuation perspectives, for different stakeholders

- Across spatial scales (extent and resolution, land sparing / land sharing)

- Across spatial and temporal scales (land use, policy and climate change scenarios)



Task coordination:
- VU University Amsterdam
(Astrid van Teeffelen & Peter Verburg)

Schulp/Van Teeffelen et al. in prep