UNITED NATIONS DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS, STATISTICS DIVISION (UNSD)
International Seminar
"Towards Linking Ecosystems and Ecosystem Services to Economic and Human Activity"
UNHQ, New York, 27-29 November 2012

Implementation of Simplified Ecosystem Capital Accounts for Europe

Jean-Louis Weber

Adviser to the European Environment Agency
on Economic-Environmental Accounting

jlweber45@gmail.com

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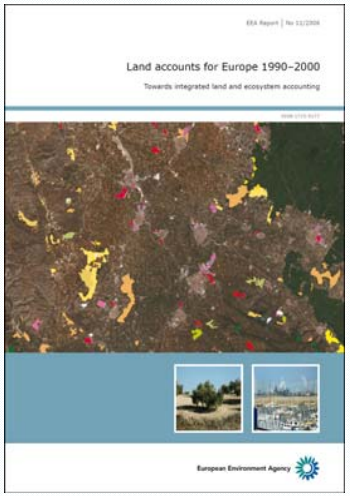
EEA's involvement in ecosystem accounting



Land cover accounts for Europe 1990-2000 (26 countries), 2006

Updated for year 2006 (34 countries), next update: for year 2012

Ecosystem accounting and the cost of biodiversity losses — the case of coastal Mediterranean wetlands, 2010, a report for TEEB

Activities within thematic processes:
UNEP/water
JRC/ES mapping
WB/WAVES
…

Activities within SEEA process, UNCEEA, EB

Fast Track implementation of ecosystem capital accounts, 2010-2012 (with Eurostat)

An experimental framework for ecosystem capital accounting in Europe
EEA Technical report No 13/2011

http://www.eea.europa.eu/publications/an-experimental-framework-for-ecosystem

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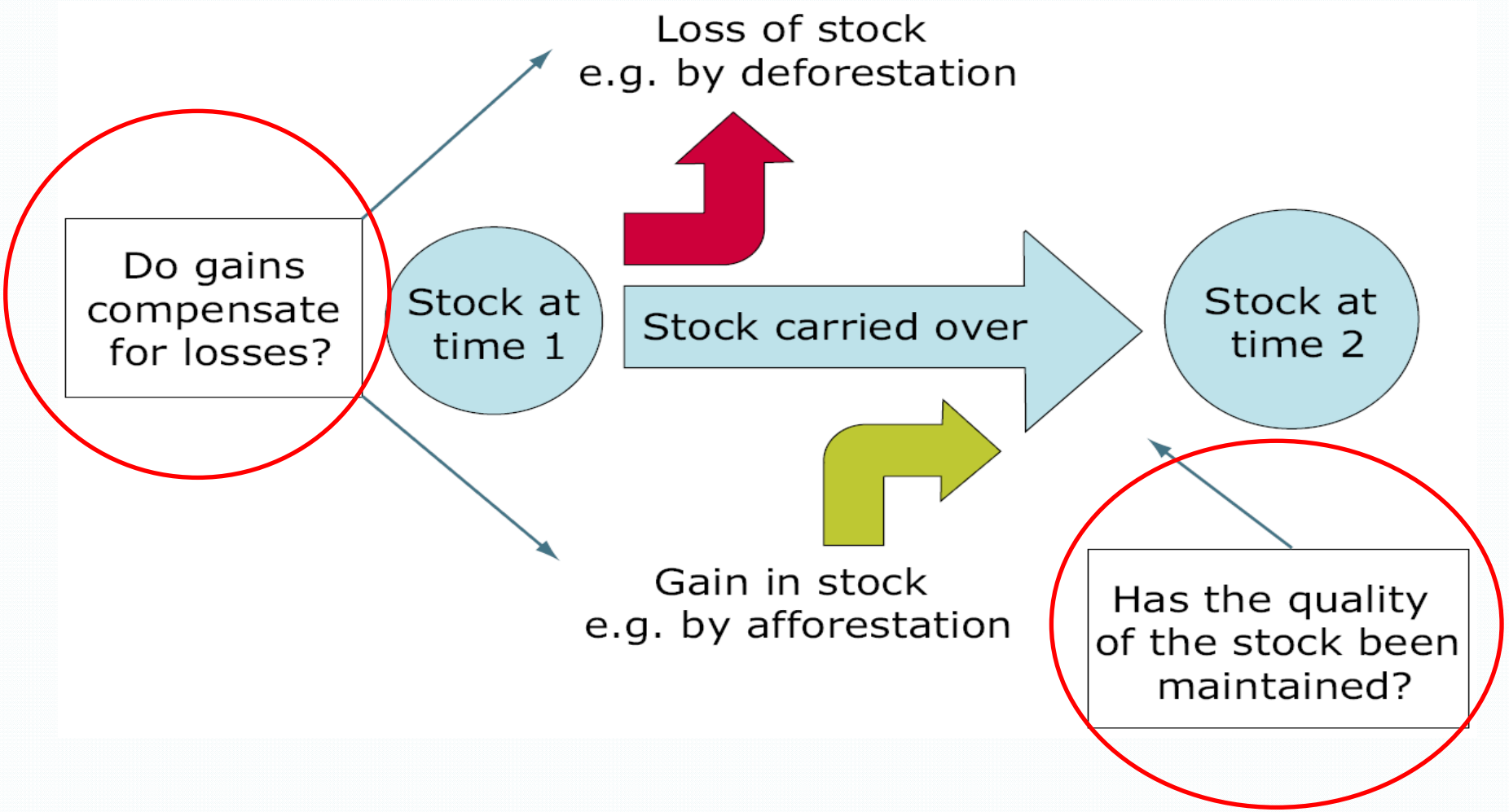
“fast track implementation of simplified ecosystem capital accounts in Europe”

- Based on:
  - **European experience**: Land cover accounts (EEA), MFA/NAMEA, expenditures (Eurostat)
  - Current reflection on experimental ecosystem accounts in the UN **SEEA process**
  - The **EU policy demand**: Beyond GDP, Resource Efficiency, environmental policies (Nature protection/Environmental liability directive, Water framework directive…)…
- Objectives:
  - Accounts for **27 EU countries,** top-down, downscalable
  - **Annual** accounts 2000-2010 to match the policy making agenda
  - **Integrated** accounts of all ecosystems (wetlands, forests, cropland, sea, atmosphere-climate…), connected to the SNA via the SEEA Part1.
  - **Integrating transactions** between ecosystems, scales, countries…
  - **Use of existing monitoring data** (land cover, vegetation index, meteo, biodiversity, data inputs to other programmes, environmental reporting…)
  - **Use of official statistics** for socio-economic data (e.g. crops and timber harvests…)
  - Best use of **geographical information** (e.g. when possible, 1 km x 1 km grid)
  - **Physical accounts first**, by 2012, followed by monetary accounts (on ad hoc basis)

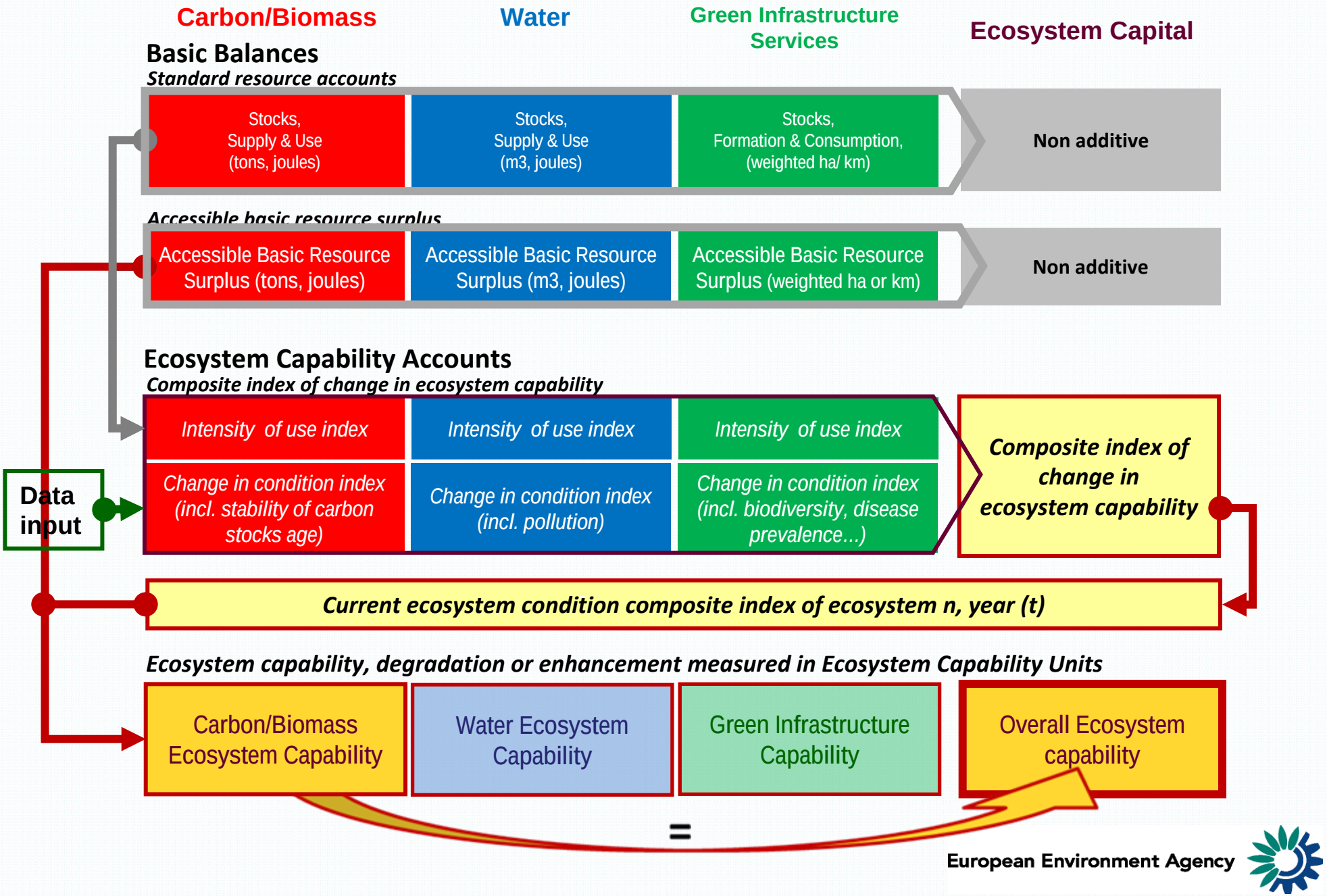
➔ make it relevant but simple (feasible, transparent, verifiable…), experiment & adjust

The basic questions when accounting



Source: Roy Haines-Young

Integration of quantities and qualities & Measurement of Ecosystem Capital Capability



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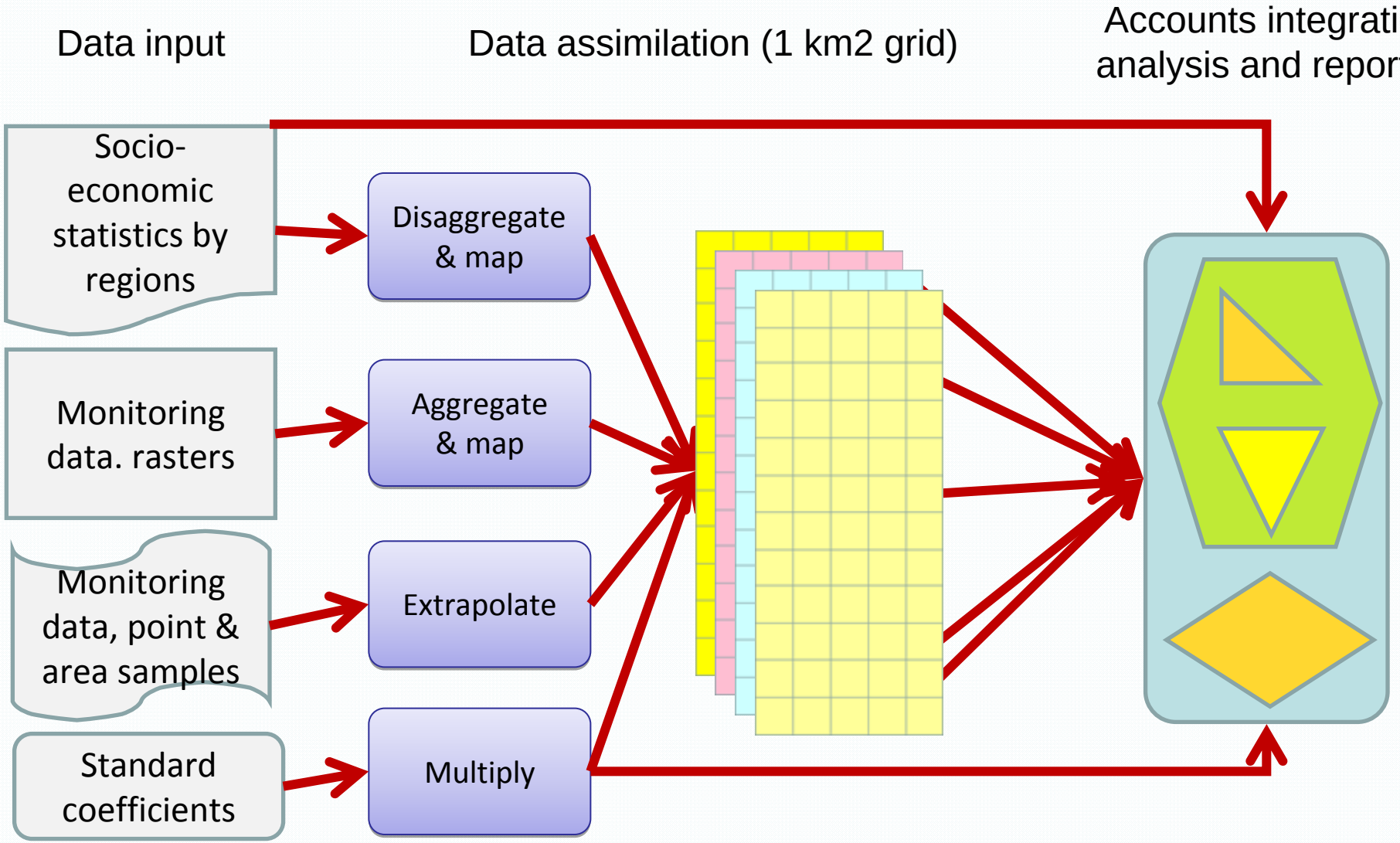
Main data flows to compile ecosystem capital accounts



From ecosystem physical degradation to capital consumption, ecological debts and sustainable benefits

Consumption of ecosystem capital (unpaid costs) & ecological debts (in $)

Degradation

Enhancement

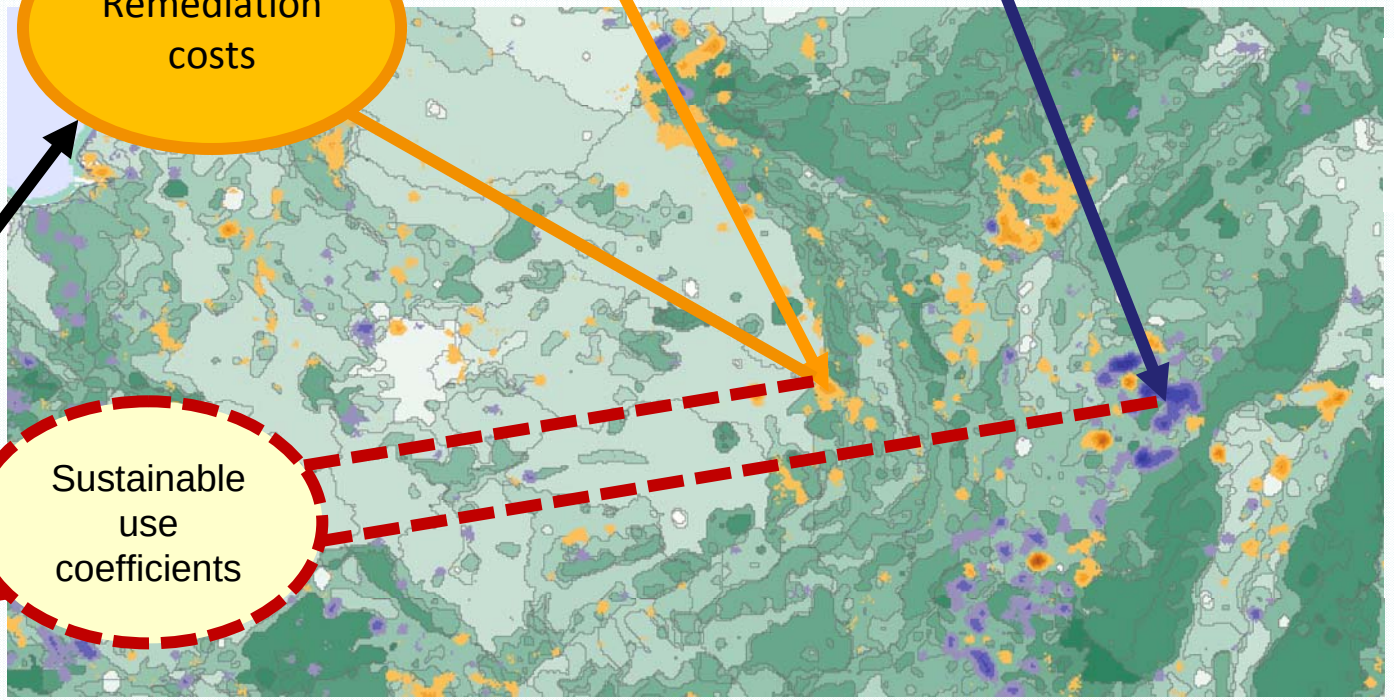
Balance sheet of ecological debts & credits (ECU)

Remediation costs

Economic statistics & national accounts

Sustainable use coefficients

Ecological sustainability of **Value Added supported by ecosystem services**



Landscape Ecological Potential change 1990-2006, by ecosystem landscape units

(J-L Weber and E. Ivanov, 2011)

Preliminary results:

The Net Ecosystem Carbon Balance 2000 (provisional results – 5 June 2012)

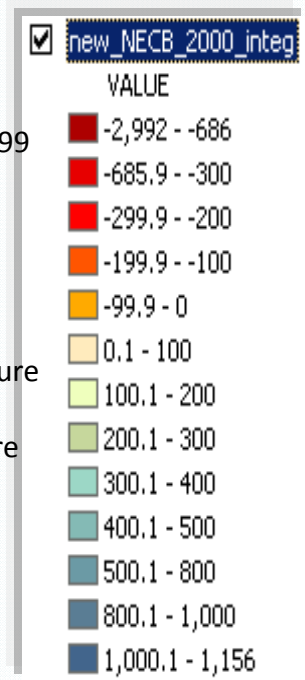
Tree felling, 1999 Xmas storm

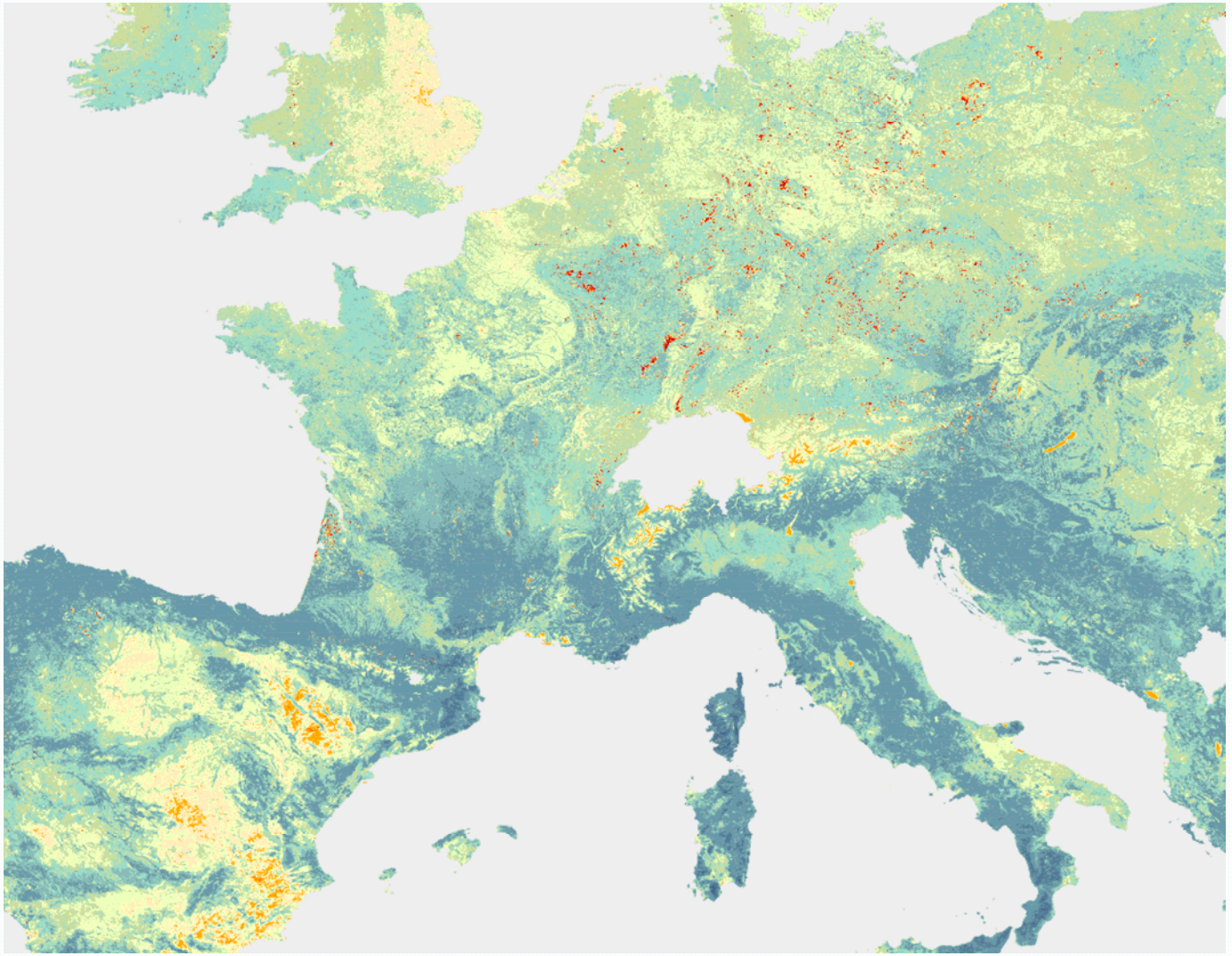
Greenhouses, plastic sheets

Intensive agriculture

Mixed agriculture

Forest



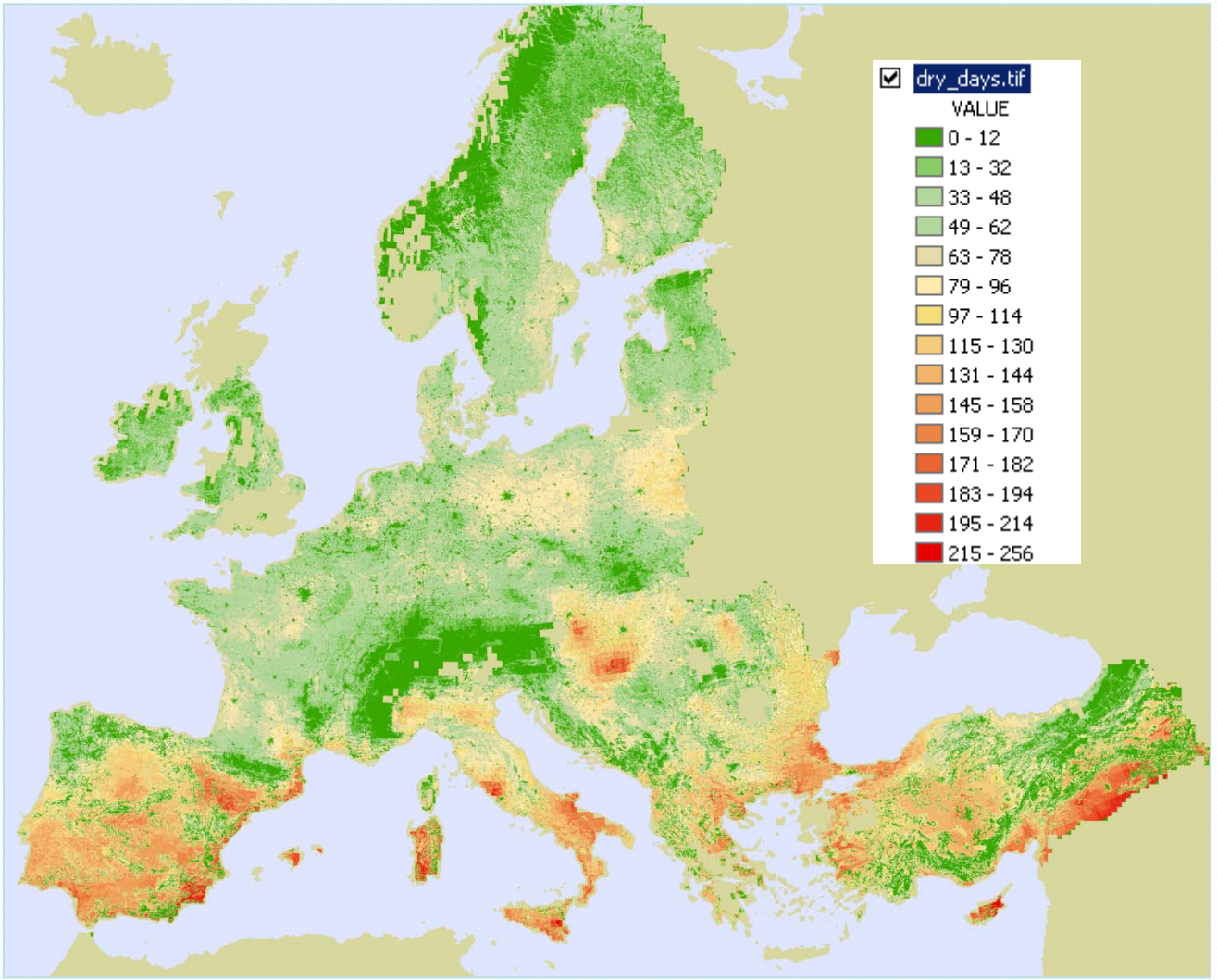


NB: over-estimation of NPP in the South

Preliminary results:

Accessible water adjustment for risks of water stress (« dry days index »)

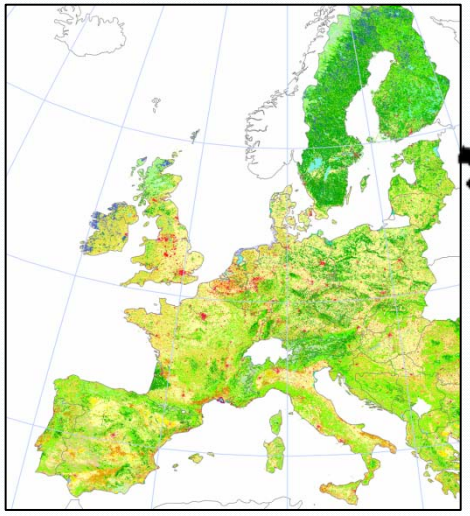
based on the number of days when no water was available for plants in 2001, 1 km² grid



Source: Blaz Kurnik, EEA, 2011

Preliminary results:

Landscape Integrity & Systemic Services: Landscape Ecological Potential



Corine land cover map *(CLC is derived from satellite images)*

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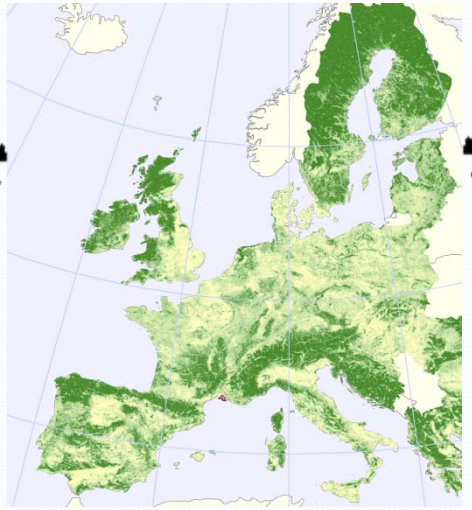

Green Landscape Index *(derived from CLC)*

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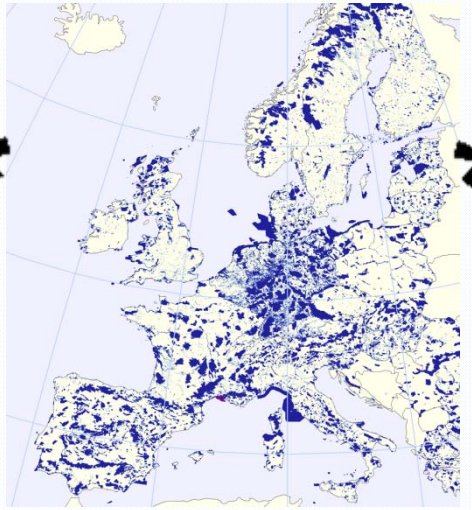

Nature Value (*Naturilis, derived from Natura2000 designated areas)*

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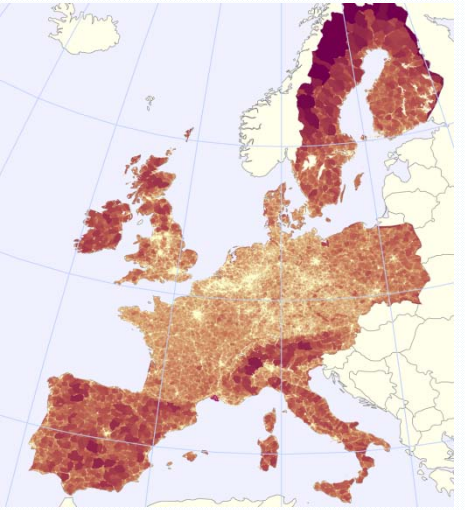
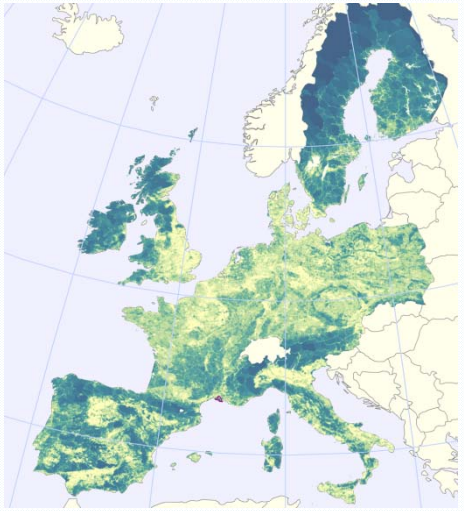


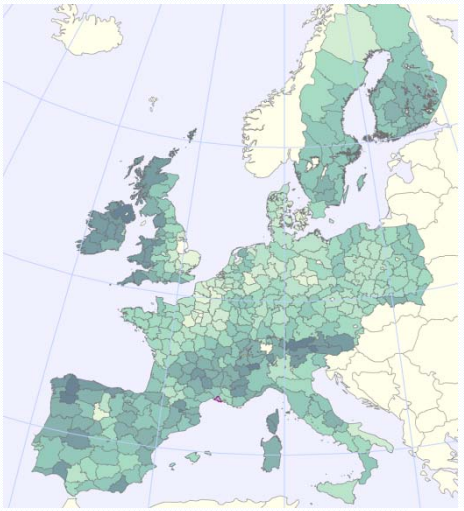
Fragmentation (*Effective Mesh Size (MEFF) derived from TeleAtlas Roads and CLC)*

➔



Landscape Ecological Potential (LEP) 2000, by 1km² grid cell

and



LEP 2000 by NUTS 2/3

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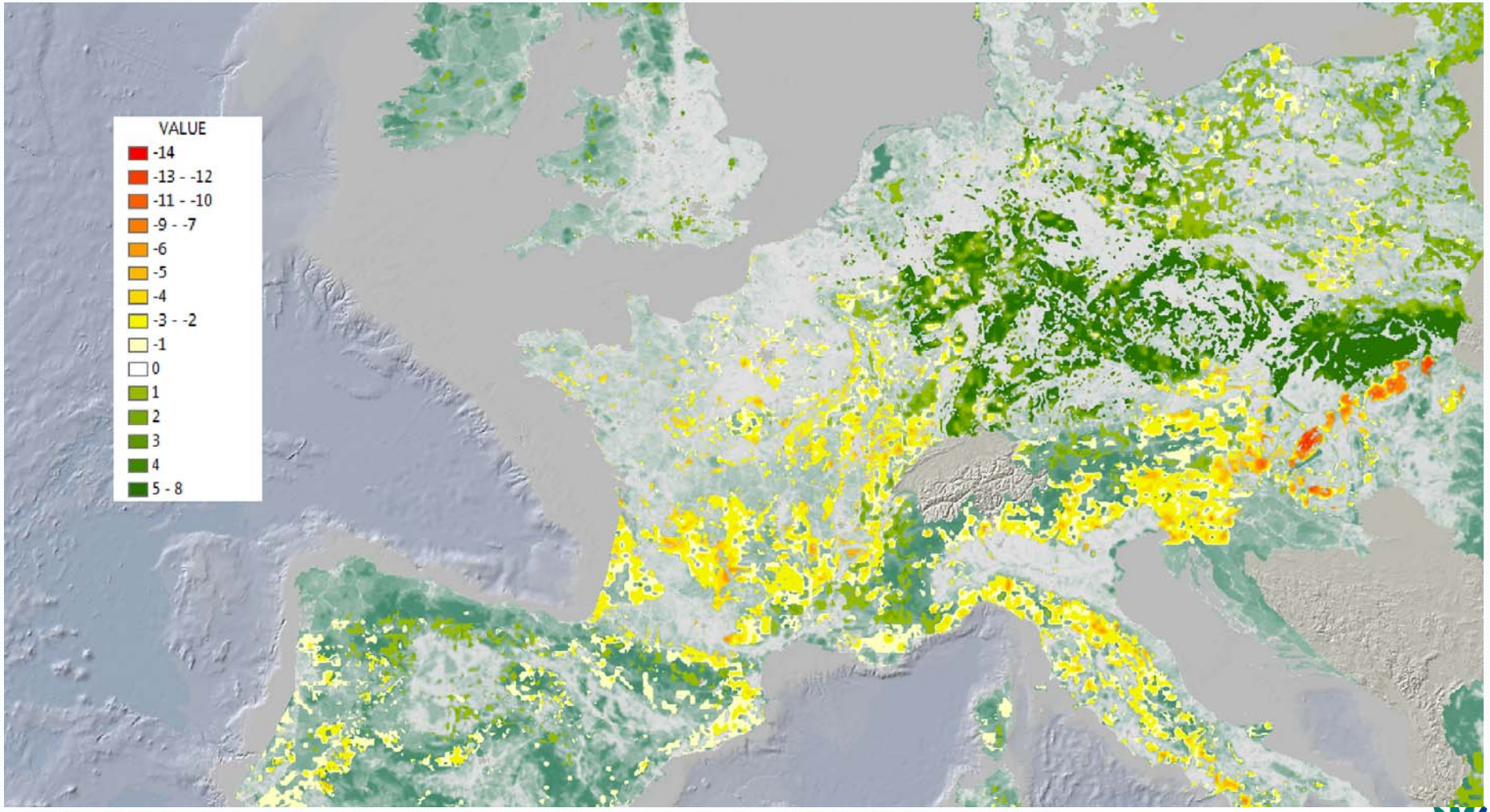
Preliminary results:

Final index for forest species population:

Number of species with population “increase” and “stable” *minus* number of species with “population decrease”



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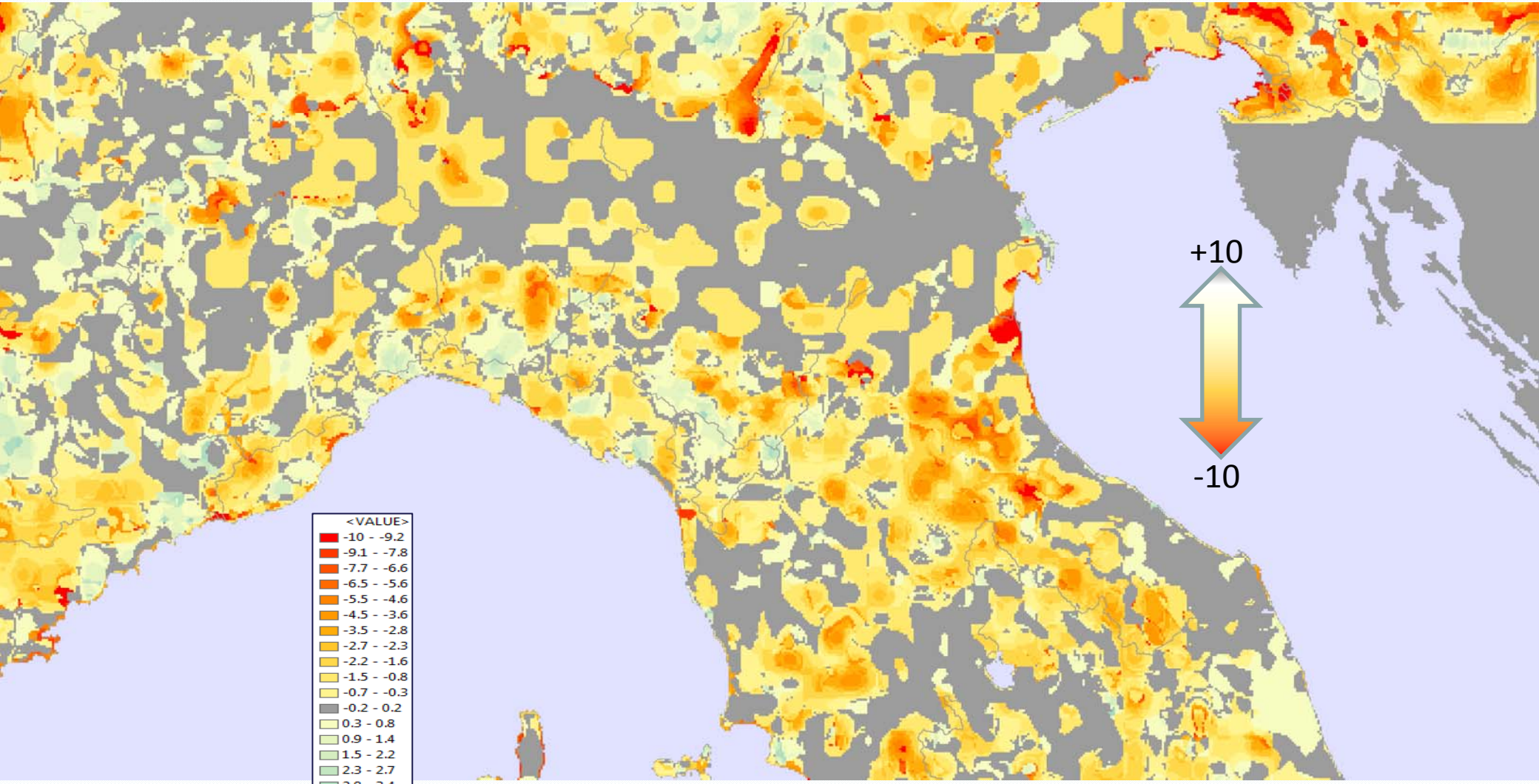
Preliminary results:

Species biodiversity index: “Art.17” reporting to the EC on Future prospects (after 2006)



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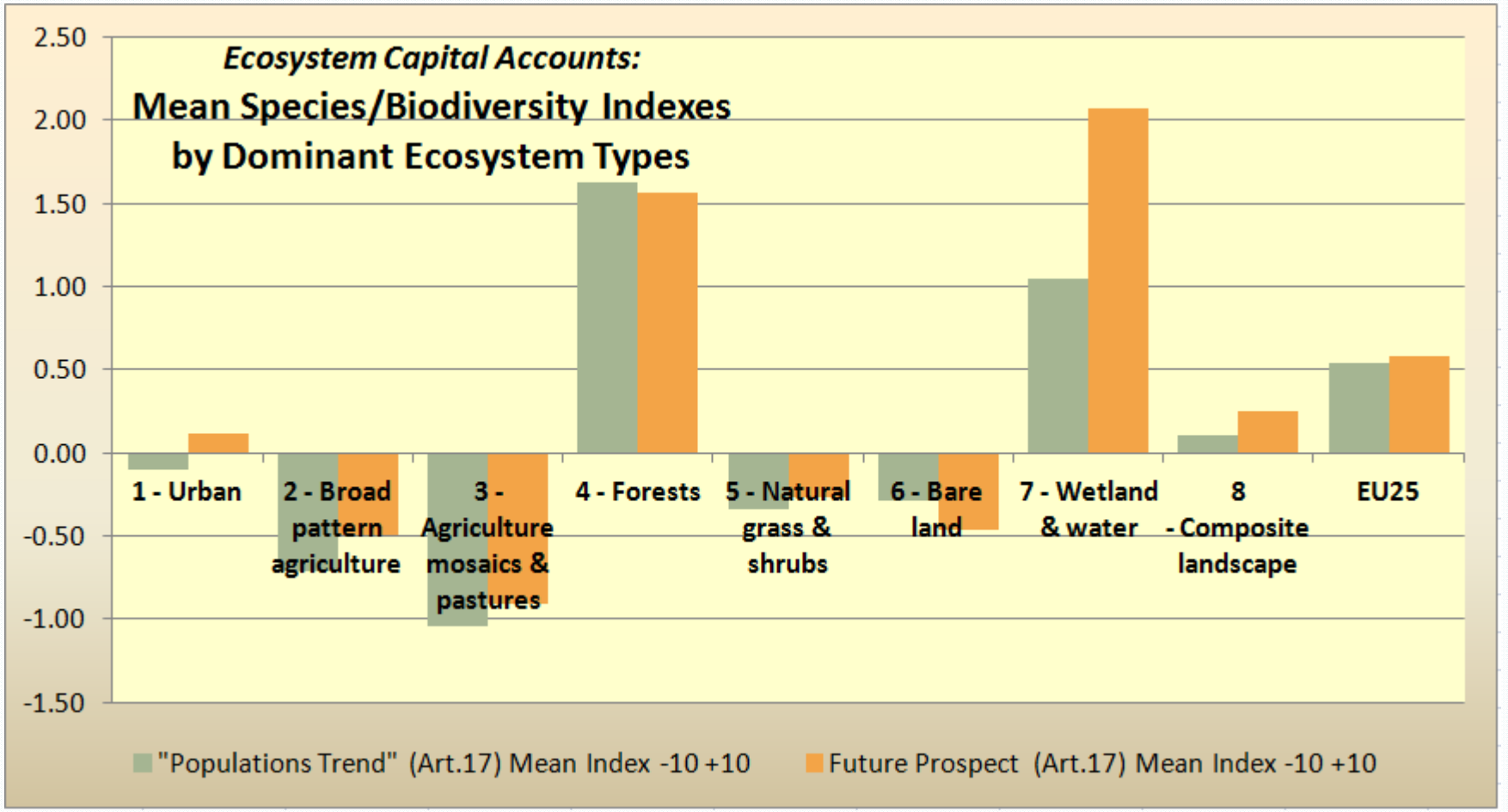
Preliminary results:

Ecosystem Capital Accounts: Landscape/Biodiversity Capacity Account

Species/biodiversity change mean indexes pre- and post 2006, by ecosystems



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Merci de votre attention!

Jean-Louis Weber

jlweber45@gmail.com
Skype: jean-louis.weber