The European Commission’s science and knowledge service
Joint Research Centre
Research Area 2
Ecosystem condition

Joachim Maes
Your annual physical check-up

Which questions?

Indicators

Units

Type

Reference

Aggregate

yes/no

kg

pressure

no

19<BMI<25

healthy

120/80

unhealthy

mm Hg

state

60-200

performance
The condition of ecosystems

**What?** Reflects the overall quality of an ecosystem asset in terms of its characteristics.

- Which *characteristics* are relevant to measure ecosystem condition
- Which *indicators* are relevant to measure specific characteristics
- Against which *reference* can we evaluate indicator values
- How to *aggregate* indicators
- Condition for what?
Working group on ecosystem condition

• Joachim Maes (European Commission - Joint Research Centre, Ispra, Italy)

• Bálint Czúcz (European Topic Centre on Biological Diversity, Muséum national d’Histoire naturelle, Paris, France)

• Mandy Driver (South African National Biodiversity Institute, Cape Town South Africa)

• Bethanna Jackson (Victoria University of Wellington, Wellington, New Zealand)

• Heather Keith (Australian National University, Canberra, Australia)
Characteristics of ecosystem condition
Characteristics of ecosystem condition

• Propose a general typology of characteristics or attributes for ecosystem condition

• Clarify the link between non-ecological characteristics (pressures, drivers of change, ecosystem properties) and ecosystem condition.

• Pressures as a surrogate for condition
Indicators for ecosystem condition

Marine ecosystems
Pressure indicators
Water quality

Freshwater ecosystems
Biodiversity indicators
Water quality

Terrestrial ecosystems
Land cover and land use statistics
Indicators for ecosystem condition

• What are criteria to include or exclude indicators from an indicator framework to measure ecosystem condition with the specific purpose of ecosystem accounting

• (Reviewing existing indicators or indicator frameworks)

• (Proposals for indicators or examples of indicators)
Reference conditions

• Develop advice on how to define a reference condition

• Develop advice on what to do if no reference condition can be defined. ( Desired condition)
Aggregation

Aggregation of indicators to

- Analyse trends within ecosystem types
- Compare condition between ecosystem types

Proposals for a composite indicator on ecosystem condition (advantages, drawbacks, methods)

Proposals for reporting the account
The link between ecosystem condition and ecosystem services
The link between ecosystem condition and ecosystem services

• Review definitions of ecosystem capacity (or of capacity used in other disciplines as well); describe the differences; develop a set of options for a definition which allow linking condition and service accounts;
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