Meeting of technical expert group on ecosystem accounts
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Issue 9 – prioritisation of ecosystem services

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Unit E7 - Environmental accounts and climate change

Overview of presentation

- **Issue 9 task**
  - Prioritise ecosystem services (prioritise accounts of ecosystems?)
- **Issues with a direct effect on the task (=What)**
  - Clarify: Classification and coverage; Definition of ecosystem; Definition of ecosystem services vs SNA goods and services; relations among services (‘intermediate’ and ‘final’, competitive services, etc.)
- **Criteria for prioritisation and their ranking (=How)**
  - Importance/scale; criticality/risk; endangeredness; do-ability (data, methods), policy relevance/user needs
- **Assessment (=apply the criteria to the objects)**

Papers

- **4 papers**
  - Simone Maynard+Stephen Cork (‘qualitative’ - underlines current lack of harmonisation of prioritisation approaches – also lack of harmonised underlying lists/classifications)
  - Lars Hein (‘scientific’ - based on survey - doability focus, ‘full’ scoring)
  - Roy Haynes-Young (‘policy-driven’ - prioritisation should be driven by needs, risk and restoration costs rather than data)
  - Hauser et al (discovered on the agenda – indicator lists and how they fit to accounts – reminds us of physical vs monetary priority)
- Objectives of papers of Lars vs Roy: potential for inclusion in accounting vs utility to or demand from decision makers

Task

- **Task** as defined in the List of Issues:
  - Review criteria for prioritising ecosystem services measurement
  - Analyse interrelations among (ecosystem) services
  - Determine relevance and feasibility (of compilation)
  - Investigate data availability at different levels, and physical and monetary
- **Prioritise what**
  - (size of) ecosystem services to be measured (='output' of ecosystem), or (state of) ecosystems (= 'asset'), or change in one of these?
    (*It seems we agree that the service determines the scale and boundary of the ecosystems we look at. Matrices showing services by ecosystem*)
- **Prioritisation for what**
  - For SEEA part 2 (i.e. indicating experimental accounts areas, research agenda) or for national applications (i.e. rules for applying a framework to circumstances) or for any assessment (not just accounts)
- **Preconditions**: we agree on working definitions of terms, a list of ecosystem services, on 'A' or 'B' or joint production – do we do goods?

Issues with direct impact on the task

- **Services only or also goods?** (e.g. the ‘service’ is biomass or water, or is it the potential to withdraw biomass or water)
- **What do we want to cover (ecosystem vs environment) – has an impact on the list of ecosystem services**
  - Ecosystem = functional unit of living and non-living things or can it be entirely non-living, i.e. must there be interaction between the two so if the living part collapses then the ecosystem service stops?
  - Examples where that is not the case: solar, thermal, wind or tidal energy. Land as pure space. Salt or sand for construction. Quantitative water cycling (and e.g. use as cooling water). Decomposition of pollutants by chemical reactions/sunlight in air.
- **Classification**
  - Groups in CICES agreed (provisioning, regulation, cultural)?
  - Detailed classes, groups and types agreed?

Issue with direct impact on the task

- **Agreement on links among services achieved?**
  - 'Competition': carbon sequestration versus material extraction/biofuels (can we count both?), provisioning and depollution services (services captured via the quality of other goods or services – water, food), etc.
  - Economic recording (valuation) – which services are already captured in national accounts (e.g. in tourism), captured but at a price of zero (e.g. pollination), captured but only in asset values - not in output and value added (amenities in land or enterprise value - dehezas), not captured (biodiversity protection outside touristic areas)
- **Intermediate (or supportive) vs final services: term is used in different ways.**
  - Ecosystems use intermediate ecosystem services to produce final ecosystem services ('intra-ecosystems' use)
  - Intermediate services used by economic production but do not become final product (e.g. soil fertility, pollination)
  - Intermediate services = supporting service = regulating services?
  - Intermediate services better measure asset status ('ecosystem health')
  - Is it accepted to look only at final services to avoid double counting?

Criteria for prioritisation

- **Economic importance**
  - Economic size; large scale; direct benefits
- **Criticality/being 'essential' for wellbeing** (for society)
- **Endangeredness/vulnerability/irreversibility (risk)**
  - can be low economic size, but have **significant restoration costs**
- **Feasibility of compilation -** physical and monetary
  - We have or can get data and accepted methods (sustainable data)?
- **Manageability** (can the measured feature be (politically) influenced)
- **Policy/user needs**
- **'Ecosystem link or scale'** (importance of large scale functioning eco-systems for the service at stake)
- **Nagoya**: restore 'essential' services, UK NEA (are there 'external' lists?)

Assessment – (mis)interpreting the results of Hein

Service (excludes provisioning!)	Economic importance	Data and methods	Manageability, risk	Strength of ecosystem link (or scale)(?)	Score
Carbon sequestration	+++	+++	+++	++	+++
Recreation and tourism	+++	+++	++	++	+++
Air quality	++	+++	++	0	++
Flood protection	++	++	+++	+	++
Amenity service (living envt)	++	+	++	+	++
Hydrological flow regulation	++	+	++	+	+
Erosion control	+	+	++	+	+
Soil fertility	++	++	++	0	+
Pollination	++	++	+	+	+
Pest control	+	+	+	+	+
Nursery service	+	++	+	+	+
Inspiration	0	0	0	+	0

Questions for discussion

- **Prioritising 'for what'** (global experimental list vs selection method for countries), policy relevance vs accountability
- **Prioritising 'what'** (CICES - which classes are 'in' – solar, tidal, chemical reactions…environment vs ecosystem)
- **What to do with 'final' vs 'intermediate' ('supportive', 'underpinning') and competition?**
- **Agree on ranking and usefulness of criteria -** Economic importance, Criticality, Risk, Endangeredness, Feasibility, Manageability, Policy/user demand, Ecosystem scale)
- **Make a draft list**– you propose items and justify why they should be in. Hints:
  - Peter Unwin and JL Weber: carbon easy, water so-so, biodiversity hard
  - Physical only is OK
  - **food, water, biofuels, carbon, tourism, air quality, biodiversity?**