Challenges and Solutions to Measuring the Present Value of Ecosystem Assets

Parallel sessions, Thursday 10 - 11 am
Measuring the Present Value of Ecosystem Assets

1. What are the main considerations in estimating **future flows** of benefits and associated asset lives?

   ▶ **changes in demand** (population, income, policy measures & decisions / institutions, and preferences), **physical changes in supply** (political decisions in e.g. fisheries, soil protection, condition changes through natural changes such as climate change) and **price changes** (development of scarcity)

   ▶ Uncertainty in projections / forecasting (e.g. IPCC / IPBES scenarios)

   ▶ Scenarios (BAU, alternative pathways), if so under clear rules such as ...

   ▶ Reduce scope of assumptions as far as possible
Measuring the Present Value of Ecosystem Assets

1. **What discount rates** are appropriate for ecosystem assets and what is the relationship to market rates of interest?

   - Chosen rates highly influence the results and thus a high degree of transparency on the choice is required (and sensitivity analysis may provide further insights)

   - Discount rate for benefits needs to be the same for costs (just one discount rate) *but* they may vary over time

   - Do all countries need to choose the same discount rates or do we rather need a standard for how countries choose a discount rate?

   - The rates of change in condition (and ecological thresholds) may influence the choice of discount rate ...

   - A zero discount rate implies that policy measures for ecosystem improvement have the same value irrespective when they are taken

   - **At the end, we need principles how to set a discount rate**
Measuring the Present Value of Ecosystem Assets

1. Do ecosystem assets that supply no final ecosystem services have a zero value in monetary terms?
   - Yes, but there will be very few ecosystem assets that this applies to.
   - Yes, but it needs a lot of efforts to define the linkages, assess them and value the contributions to improvements. E.g. if there is a intermediary contribution to a final ES that should not be left out.
   - However, in bio-physical terms their contribution to other assets needs to be taken into account / be mapped
   - There is a biophysical and a monetary part of ES accounting and both provide information that is relevant for different purposes
   - Yet, this needs to be clarified further.
Measuring the Present Value of Ecosystem Assets

1. How should differences between observed market values for land and the present value of ecosystem services from a given area of land be interpreted?
   - We would not expect them to be the same.
   - Land has (expected) rents and that determines the value at which it is traded.
   - ES accounting covers non-traded / non-SNA benefits and thus the two values are likely different.
   - Our interpretation of the difference in values is: the non-traded benefits of land.
Measuring the Present Value of Ecosystem Assets

1. Given that these issues have been unresolved for quite some time, what are **needed and realistic next steps** to advance them further?
   - Principles need to be set / be advanced for e.g. discounting rates (but differentiated between e.g. ecosystem services)
   - Historical discount rate can provide a test case for validation
   - IPCC / IPBES scenarios can provide starting points for SEEA-EEA projections
     - Time frames need to discussed in relation to ecological processes
   - For informing policy, complexity needs to be reduced as far as possible
   - Move on from case studies and applied experimentation