Ecosystem and Species Appreciation –
Measuring Service Flow, Biodiversity
Wealth and Biodiversity Debt

Key findings and questions for discussion

Account for appreciation of ecosystems and species services in physical and monetary terms as close as possible to accounting principles (simulated exchange values), based on the following core elements:

- **Comprehensive** and consistent German wide **data on ecosystem extent and condition** (about 300 ecosystem/ ecosystem condition types) using:
  - German Land Cover Model (CLC-compatible)
  - Land use and agricultural land use statistics
  - Line based cadastre data for hedges, tree rows, streams, paths, etc.
  - Federal Forest Inventory
  - Monitoring of High Nature Value farmland

- **List of „Biotope Value Points“** from the National Compensation Ordinance for about 1000 ecosystem/ecosystem condition types, used there like ratios, are added, divided etc., as proxies for their contribution to biodiversity

- **(Average) cost to create one Biotope Value Point** (future developments and cost are discounted)

- **Cross check with willingness to pay** for conservation programmes

- **Obligations** regarding the conservation and **restoration of biodiversity** to calculate the biodiversity debt

**Questions**

- What possibilities exist to adapt the methodology even more closely to the existing accounting principles?
- How do other countries see the possibility of transferability and, furthermore, the development of a common standard inspired by the methodology presented?
- What changes are proposed to the methodology for this?
- Are there similar or alternative applicable and tested methodologies for quantifying ecosystem and species appreciation services for integration into ecosystem core accounts or supplementary valuations under SEEA Chapter 12?

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**Biodiversity wealth and biodiversity debt by 2018**

- Biodiversity wealth
  - (billion euros)
  - 45.3
- Biodiversity debt
  - (Habitat Directives only)
  - ( Implicit) appreciation services and expenditures for nature conservation
  - (billion euros per year)
  - Direct and indirect public and private expenditures for nature conservation by
  - 2016 (direct public expenditures only about 0.7 billion per year)
  - Implicit flows of ecosystem and species appreciation services 2018
  - 6
  - 1,395
  - 2012 and 2015)
  - 3.9