

Recommendations of the meeting of the European Platform for Biodiversity Research Strategy

held under the German Presidency of the EU

“Sustainable use of Biodiversity”

Leipzig, 5th-7th May, 2007

concerning

Biodiversity and ecosystem services – the Millennium Ecosystem Assessment framework in a European perspective

The Communication of the Commission of the European Communities to halt biodiversity loss by 2010 and beyond (Com (2006) 216 final) emphasizes the importance of biodiversity for ecosystem services which ensure human well-being. In order to safeguard these services, the participants of this meeting place high priority on research to:

- 1. Improve knowledge on the links between biodiversity, ecosystem functions, ecosystem services, and their dynamics, in particular by**
 - 1.1 Understanding the contribution of biodiversity to ecosystem services;
 - 1.2 Understanding the influence of drivers and pressures, such as global changes and policies for conservation and use of ecosystems;
 - 1.3 Identifying complex dynamics, nonlinear responses and abrupt or irreversible shifts in ecosystems;
 - 1.4 Developing concepts of resource accounts for ecosystem services, to support ecosystem assessment and management (e.g. service providing unit, ecosystem accounts, bundles of services).
- 2. Improve knowledge on, and methodologies for, valuation of biodiversity and ecosystem services, in particular by investigating**
 - 2.1 the environmental, economic, and social impacts of changes in ecosystem services;
 - 2.2 the contribution of natural capital and ecosystem services to sustainable economies;
 - 2.3 utilitarian and non-utilitarian values of biodiversity and advantages and shortcomings of the ecosystem services concept in this respect;
 - 2.4 the articulation of plural values and their integration in decision-making processes;
 - 2.5 valuation techniques enabling the estimation of costs of changes in ecosystem services.
- 3. Improve the political and institutional knowledge base, particularly by**
 - 3.1 Better understanding social, economic and political settings for making policy with impact on biodiversity and analysing options for improved governance schemes, e.g. adaptive management, or the Ecosystem Approach;
 - 3.2 Evaluating and developing response strategies, policies and governance structures for safeguarding biodiversity and how their effects vary among ecological and social contexts.
- 4. Improve methodologies and tools for ecosystem assessment, particularly by further developing**
 - 4.1 the multi-scale approach of the MA framework for a pan-European context, taking into account the ecosystem services used outside Europe;

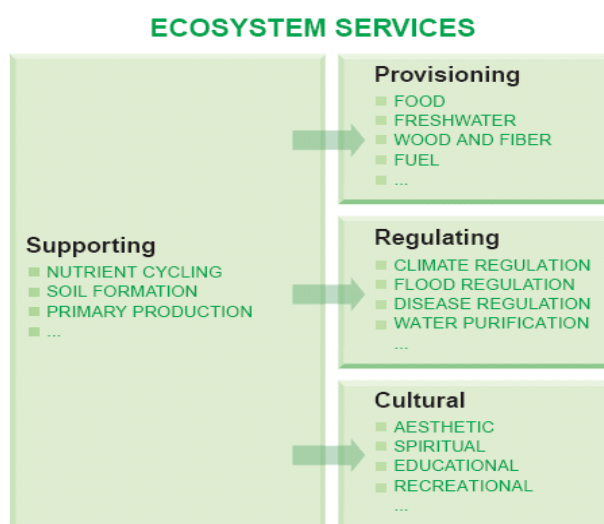
- 4.2 baseline data, data integration, and indicators for ecosystem functions and services;
- 4.3 approaches and methods to deal with uncertainties, irreversibilities, complex dynamics and non-linear changes multi-level participatory methods appropriate to biodiversity assessment;
- 4.4 scenarios and other tools for projecting future trends.

These research priorities were derived in particular from the following considerations:

- The Millennium Ecosystem Assessment and its concept of ecosystem services, by making a link between biodiversity and human well-being, is of high importance to develop new ways of safeguarding natural resources and biodiversity. Nevertheless, the ecosystem services approach is complementary to non-utilitarian rationales for biodiversity conservation e.g. those based on intrinsic values.
- In order to make aspects of the MA-concept operational, many knowledge gaps have to be filled. To approach these gaps, inter- and transdisciplinary research is needed which should be coordinated on the European scale to develop specific, multi-scale policy advice.
- Institutional changes will be needed including in the research community to build the scientific capacity and the science-society interfaces required to meet the challenges of the MA.

Box: Ecosystem Services

Ecosystem services are the benefits people obtain from ecosystems. These include *provisioning services* such as food, water, timber, and fiber; *regulating services* that affect climate, floods, disease, wastes, and water quality; *cultural services* that provide recreational, aesthetic, and spiritual benefits; and *supporting services* such as soil formation, photosynthesis, and nutrient cycling.



Source: MA (2005)