

## Recommendations from the European Platform for Biodiversity Research Strategy meeting

in Budapest, Hungary, 31<sup>st</sup> March- 4<sup>th</sup> April 2005 on

## Landscape scale biodiversity assessment: the problem of scaling

Acknowledging that research on the issue of scaling in biodiversity assessment is important to reach the target of halting the loss of biodiversity by 2010 and beyond, the participants of this meeting place high priority on research to:

- 1. develop methods for integrating data collected from genetic to global ecosystem scales
- 2. better understand and where possible find new methods to improve up-scaling and down-scaling procedures
- 3. understand the relationships between ecological, social and economic processes at different scales and their impact on biodiversity
- 4. understand and overcome scaling problems in developing hierarchies (nested sets) of indicators of biodiversity, particularly the EU headline indicators
- 5. understand the viability of populations, ecosystems and persistence of ecosystem function under different scales of disturbance and habitat fragmentation
- 6. explore and consider evidence for biological thresholds at which loss of diversity of genes, populations and ecosystems become irreversible at different scales
- 7. understand (i) impacts of globalisation of economic activities, trade, and technological choices on biodiversity at different spatial and temporal scales and (ii) responses to these impacts (e.g., governance structures and their articulation across scales).
- 8. study multi-level biodiversity governance in particular: (i) the dynamics of EU biodiversity policy and its links with upper and lower level governance; (ii) mismatches between different levels of biodiversity governance (international, EU, national, sub-national) that result in obstacles to implementation; and (iii) methods for policy evaluation (including policy coherence) and feed-back mechanisms across different scales.
- 9. explore inherent conflict of scales in time and space in different societal actors' perceptions, attitudes, values, and cultural identities related to biodiversity, including how these influence legitimacy, effectiveness and acceptance of policy decisions at all levels.
- 10. link biodiversity knowledge from global observation technologies with socioeconomic, political and ecological knowledge at different scales for sustainable development.
- 11. explore how the construction and management of knowledge on biodiversity is related to power relations characterising different societal levels.
- 12. explore how equity and social justice aspects of biodiversity conservation, restoration and management depend on spatial and temporal scales.

## To develop the necessary high quality and policy relevant research on the above priority areas, particular attention should be paid to:

- developing, promoting, and applying interdisciplinary methodologies to deal with the complex nature of biodiversity issues, addressing in particular phenomena of scales and emergence inherent to complex systems<sup>1</sup>.
- obtaining or reconstructing scale-appropriate time series of biological and environmental data, to understand and forecast biodiversity change.
- o issues of participation and representation in multi-level biodiversity governance
- the spatial mismatch between ecosystems and institutional systems at different levels and to the delay between decision and implementation of conservation measures and the response of ecosystems

<sup>&</sup>lt;sup>1</sup> Larger units can show collective behaviours that are not simple combinations of behaviours of component units.