



The mission of the European Platform for Biodiversity Research Strategy (EPBRs) is to ensure that research contributes to halting the loss of biodiversity by 2010.

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

held under the Irish Presidency of the EU
Killarney, Ireland, 21st – 24th May 2004

concerning

SUSTAINING LIVELIHOODS AND BIODIVERSITY

ATTAINING THE 2010 TARGET IN THE EUROPEAN BIODIVERSITY STRATEGY

“The significant problems we face cannot be solved at the same level of thinking we were at when we created them.” – Albert Einstein

To achieve the objectives of the European Community biodiversity strategy and the target of halting biodiversity loss by 2010, the participants of this meeting place high priority on research to:

Status and trends

1. Further develop an accessible Europe-wide geo-referenced inventory of species and habitat distribution, status and trends, underpinned by significant new taxonomic effort, and support similar research in developing countries. This should include quantification of genetic diversity for species of economic or conservation importance, and improved understanding of traditional knowledge and uses of species and habitats.
2. Develop, test and evaluate indicators, and harmonise habitat and landscape classifications, to deliver policy-relevant information on the status and trends of biodiversity, the drivers of biodiversity change and the success of policies designed to halt the loss of biodiversity by 2010, and progress towards targets of the EC Biodiversity Strategy. Develop indicators of sustainable management of renewable resources, ecosystem integrity and ecosystem goods and services, vulnerability of livelihoods, public awareness and participation, and funding to biodiversity.

Pressures and drivers of change

3. Improve understanding of the major anthropogenic and natural drivers of biodiversity change, and their individual and combined impacts. Important drivers and pressures include:
 - i. Sea- and land-use change
 - ii. Habitat fragmentation, connectivity and destruction
 - iii. Harvesting and hunting pressure
 - iv. Climate change
 - v. Natural and anthropogenic catastrophes
 - vi. Pollution, including eutrophication and nitrogen deposition
 - vii. Non-indigenous and invasive organisms and emergent diseases
 - viii. Loss of genetic diversity and key functional groups (e.g. pollinators and bio-turbators)
 - ix. Globalisation, trade, consumption patterns, business practices and social conflicts
 - x. Institutional structures and property rights
 - xi. Policy conflicts
 - xii. New technologies including GMOs and renewable energy
4. Further develop models at relevant scales, within and across disciplines, to understand and predict the effects of these drivers on biodiversity. Produce and implement decision support tools incorporating these models.
5. Improve understanding of public beliefs, perceptions, attitudes and preferences regarding

biodiversity, and how these relate to behaviour and public policy; increase knowledge of the various values of biodiversity (not limited to economic) and improve methods for their evaluation.

6. Improve understanding of the ways humans use biodiversity, and the ways those uses affect biodiversity, ecosystem goods and services and ecological-economic system resilience. Quantify the contribution of biodiversity to livelihoods and further understand how changes in biodiversity and ecosystem functions influence livelihoods, and improve and assess strategies for sustainable livelihoods and lifestyles.

Response and policy evaluation

7. Further develop participatory and conflict management methods and effective and cost-effective policy instruments, implementing sustainable use, conservation and restoration of species and habitats, and improve methods to implement the ecosystem approach and to monitor and evaluate policy.
8. Investigate forms of governance and management of biodiversity use, conservation and restoration in different sectors, taking into account uncertainty, irreversibility, and the complex nature of ecosystems, including research into implementation of the precautionary principle, addressing legal issues including cross-border and multi-level governance and jurisdiction.

Specific priorities for Biodiversity Action Plan on Conservation of Natural Resources

9. Assess and evaluate legislation, policy and sectoral activities, at all scales, that impact the conservation of natural resources, and identify solutions to conflicts.
10. Develop and assess methods of conserving natural resources that achieve sustainable lifestyles and that reduce impact on biodiversity.
11. Develop concepts, tools and methods to achieve favourable conservation status of habitats and species and establish baselines and targets.
12. Understand how species interact and contribute to ecosystem function, structure and services, and discriminate anthropogenic and natural dynamics in ecosystems.
13. Develop concepts, tools and methods to enable species recovery and to restore and manage the various functions of degraded ecosystems with reference to their resilience.

Specific priorities for Biodiversity Action Plan on Agriculture

14. Assess the performance of the reformed CAP in achieving the target of halting biodiversity loss by developing a harmonized framework for evaluation, and urgently support the development of monitoring systems using agreed indicators.
15. Define harmonized farming and landscape classification systems for the identification of priority biodiversity objectives, establish reference condition and targets and develop appropriate policy instruments for specific farm contexts and habitats.
16. Improve the design, implementation, monitoring and evaluation of agri-environmental instruments at the scales at which they most effectively deliver on the 2010 biodiversity targets.
17. Develop ecologically-based agricultural and food supply systems that enhance biodiversity and utilize its benefits, starting with research for conservation programmes for the most vulnerable and potentially useful species.
18. Analyse land managers' attitudes, motives and behaviour in order to promote and enhance their role as conservers of biodiversity in different farming contexts.

Specific priorities for Biodiversity Action Plan on Fisheries

19. Develop the ecosystem-based approach to the management of fisheries and aquaculture supported by appropriate sociological and socio-economic research.
20. Improve the understanding of the population structure of commercial species, using genetic and traditional approaches, to optimise stock management.

21. Improve understanding of the ecosystem effects of fishing activities and how they may be reduced in particular through fishing gear developments including selectivity.
22. Pursue further research into the ecological impacts of aquaculture to facilitate informed and sustainable development and management.
23. Investigate new and alternative approaches to ensure the future economic and environmental sustainability of the aquaculture sector.

Specific priorities for Biodiversity Action Plan on Economic and Development Cooperation

24. Identify and quantify the causes of biodiversity change in developing countries and the impact of this change on livelihoods.
25. Develop and evaluate economic, social, institutional, political, policy and environmental instruments in developing countries to alleviate the impacts of biodiversity change on livelihoods and to develop sustainable use and management of renewable resources.
26. Develop and evaluate long-term biodiversity monitoring programmes and indicators that contribute to the assessment of the 2010 WSSD target in developing countries.

While uncertainty or gaps in knowledge are not excuses for inaction, targeted biodiversity research stimulates and guides action towards meeting the 2010 target.

To develop the necessary high quality and policy relevant research on the above priority areas, and to ensure that the necessary information is available to decision-makers, particular attention should be paid to:

- focusing research priorities on the political agenda, addressing societal concerns and values;
- developing and testing methods which successfully engage public participation in research and monitoring;
- further developing participatory interfaces between science and policy, including scientists, policy makers and stakeholders;
- building capacity in biodiversity research both within the European Union and in developing countries, in interdisciplinary research bringing together natural and social science and traditional and local knowledge;
- enhancing communication and dissemination of biodiversity research results and increasing awareness of scientists on policy and governance issues;
- expanding focus from single species research and management approaches to more holistic approaches; focussing on life-support systems, conservation and restoration; and bridging the gap between different scales;
- encouraging better integration of research and management, recognising the ability to learn through systematic experimentation in resource management;
- studying historical interactions between societies and nature, how they evolved to reach the present time, and what can be learned from this for the future;
- maximizing the value and accessibility of existing data including archives and the interoperability of existing data bases;
- encouraging the development of national and regional networks that can then be linked to form European networks, paying particular attention to newer and less well established research groups, and link these networks to international ones.