

Stakeholders' Conference
Biodiversity and the EU - Sustaining Life, Sustaining Livelihoods
Grand Hotel, Malahide, Ireland
25-27 May 2004

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FINAL
MESSAGE FROM MALAHIDE
HALTING THE DECLINE OF BIODIVERSITY -
PRIORITY OBJECTIVES AND TARGETS FOR 2010
27 May 2004
Final version incorporating amendments from Plenary 27 May 2004

PREAMBLE

To be completed by Irish Presidency and Commission.

- Presents priority objectives to 2010.
- For each objective, presents priority targets for 2010 – as far as possible SMART – and where appropriate earlier targets; where not otherwise specified, targets are to be achieved by 2010.
- Represents the outcome of a broad consultative review and prioritisation process culminating in the Malahide Conference.
- Achievement of the targets will require strengthened institutional arrangements for coordination (intra-EC and EC-MS-civil society).
- The Malahide Conference calls on the Commission, MS and civil society to respond rapidly with appropriate coordinated action to achieve the targets.
- Structured on ECBS Sectors and Themes (with one new sector, one new theme).

**SECTOR 1: CONSERVATION AND SUSTAINABLE USE OF
NATURAL RESOURCES**

OBJECTIVE 1: To ensure conservation of Europe's most important wildlife habitats and species within a thriving wider environment.

2010 and earlier targets

- 1.1 Natura 2000 network completed on land by 2005, marine sites by 2008 and management objectives for all sites agreed and instigated by 2010.
- 1.2 Natura 2000 contributes to the establishment of effectively managed, comprehensive and ecologically representative networks of protected areas at land and at sea, integrated into a global network.
- 1.3 Arrangements established which ensure adequate and guaranteed community co-financing for the Natura 2000 network. This should include *inter alia* the enhancement of Life-Nature funding in the new Financial Instrument for the Environment alongside enhanced funding from the structural and rural development funds. These funds should be accessible to all those who manage Natura 2000 sites. Funds should also promote awareness raising and networking initiatives.
- 1.4 Appropriate protection status, management and adequate financial support identified and provided to areas of biodiversity importance in parts of the EU not covered by the Habitats and Birds Directives.
- 1.5 Action plans prepared and implemented to enhance the status of those species under particular threat, with a view to establishing their favourable conservation status.
- 1.6 Scientific review of the annexes of the Birds and Habitats Directives initiated in 2008 following the next periodic reports of these Directives.
- 1.7 Article 6 (avoidance of damages to Natura 2000 sites) of the Habitats Directive fully transposed into national legislation and planning policies, and routinely implemented; where development proposals cannot avoid damage to sites, special effort given to the adequate design and implementation of compensation measures.
- 1.8 Protected areas integrated into broader landscapes and seascapes by applying the ecosystem approach, and where appropriate, developing tools for ecological connectivity, such as ecological corridors.
- 1.9 Support strengthened for *ex situ* conservation programmes which are operated in line with best practice.

OBJECTIVE 2: To ensure that biodiversity concerns are fully recognised in the conception and implementation of community legislation and instruments in both environment and other sectors.

2010 targets

- 2.1 Integration of biodiversity concerns in the further development and implementation of horizontal environmental legislation and instruments ensured, in particular regarding water, soils, marine, liability, eco-labelling, Environmental Monitoring and Audit Schemes (EMAS), IPP, Precautionary Principle, Environmental Impact Assessment, Strategic Environmental Assessment, Århus, chemicals and GMOs.
- 2.2 In the conception and development of broader EU policies, assessment of the likely impacts on biodiversity carried out so as to ensure that these policies do not prejudice achievement of the Gothenburg target.

OBJECTIVE 3: To develop and implement measures for the prevention and control of invasive alien species and alien genotypes.

2010 and earlier targets

- 3.1 Strategy on IAS adopted by 2005, taking into account the CBD's guiding principles on IAS, considering potential legal instruments, and identifying priorities for eradication programmes and measures capable of the prevention of further intentional or non-intentional introductions of potential IAS.
- 3.2 MS encouraged to develop national strategies by 2007 and implement them fully by 2010.
- 3.3 Adequate funding provided in the 7th Framework Programme and from national sources for research on the extent and scale of IAS and possible solutions to the problems they cause.
- 3.4 Ratification by MS of the International Convention for the Control and Management of Ship's Ballast Water and Sediments under the IMO encouraged.
- 3.5 Early warning system established for the prompt exchange of information between neighbouring countries on the emergence of IAS and cooperation on control measures across national boundaries.

OBJECTIVE 4: To prevent or minimise the negative impacts on biodiversity and optimise opportunities to benefit biodiversity, in relation to climate change adaptation and mitigation.

2010 and earlier targets:

- 4.1 Commitments made under the Kyoto Protocol respected, and further ambitious measures agreed in line with the long-term Intergovernmental Panel on Climate Change (IPCC) assessments.
- 4.2 All climate change adaptation and mitigation measures assessed to ensure they have no negative impacts and, wherever possible, provide positive benefits to biodiversity.
- 4.3 The ecological connectivity of Natura 2000 network supported in order to achieve or maintain favourable conservation status of species and habitats in the face of climate change, including the promotion of cross-border ecological corridors between the EU and neighbouring states.
- 4.4 Habitats and species most at risk from climate change assessed by 2007, and appropriate management plans subsequently prepared.

SECTOR 2: AGRICULTURE

OBJECTIVE 5: To further integrate biodiversity issues into the Common Agricultural Policy in order that the agricultural sector can fulfil its contribution to the 2010 biodiversity target

2010 and earlier targets

Within the Rural Development context

- 5.1 The Rural Development Regulation strengthened within the Financial Perspectives 2007-2013 including its funding and in particular those measures including Less Favoured Areas and areas with environmental restrictions and agri-environment that contribute to the delivery of biodiversity.
- 5.2 High Nature Value areas (including the Natura 2000 network) threatened with loss of biodiversity and abandonment identified, and measures to address those threats provided.
- 5.3 Habitats and species in other agricultural areas also at risk of biodiversity loss identified and support for their protection provided.
- 5.4 High-Nature Value areas and traditional farming systems included in Less Favoured Areas and their continued support provided for.
- 5.5 Rural Development support underpinned by identified Good Farming Practices that provide a basic level of protection for biodiversity.
- 5.6 Agri-environmental schemes – in addition to their other tasks – specifically targeted to provide positive incentives for biodiversity conservation in the longer-term;
- 5.7 Extension services and farm advisory system broadened, and biodiversity training for farmers, land owners and farm workers strengthened.

Within the market pillar

- 5.8 Provisions of the 2003 CAP reform (eg. decoupling, national envelope, Single Farm Payment) implemented in such a way as to benefit biodiversity.
- 5.9 Cross-compliance effectively implemented in ways that benefit biodiversity, including possible extension of scope following its evaluation in 2007.

Genetic resources

- 5.10 Measures in place to ensure the conservation and availability for use of genetic resources, and in-situ conservation (varieties, breeds and races)¹ promoted.

Monitoring and evaluation

- 5.11 Effectiveness of rural development and key market policy reform measures (single farm payment, cross-compliance, national envelopes etc) for biodiversity monitored and evaluated.

¹ This includes the Community commitment to the International Treaty on Plant Genetic Resources for Food and Agriculture.

SECTOR 3: FORESTRY

OBJECTIVE 6: To conserve and enhance biodiversity through sustainable forest management at national, regional and global levels.

2010 and earlier targets

National and EU level

- 6.1 Biodiversity considerations fully integrated with economic and social considerations in implementation of sustainable forest management.
- 6.2 Forest species and habitats listed under the Birds and Habitats Directives in favourable conservation status.
- 6.3 Adequate financial support secured for the conservation of forest biodiversity both inside and outside Natura 2000 sites by 2007.
- 6.4 Biodiversity of all ancient and semi-natural woodland of significant importance secured.
- 6.5 No overall long-term negative impact of afforestation and deforestation on biodiversity in EU from 2004.

Global level

- 6.6 Wood imported by the EU derived only through sustainable forest management.
- 6.7 EU imports driving deforestation identified and reduced.
- 6.8 Bilateral agreements made between the EU and the major timber exporting countries with the aim of supporting forest law enforcement, governance and trade (FLEGT).

SECTOR 4: FISHERIES

OBJECTIVE 7: To further promote conservation and sustainable use of commercial stocks and to continue reduction of adverse impacts of fishing and aquaculture on species and habitats making full use in particular of the CFP instruments.

2010 and earlier targets:

- 7.1 New Regulation on Structural Funds in the field of fisheries, with an increased allocation of funds for investments aiming at environmentally-friendly management adopted by 2006.
- 7.2 Recovery plans prepared and implemented as soon as needed for any stocks outside safe biological limits.
- 7.3 Technical measures, including marine protected areas, effectively implemented to help ensure favourable conservation status of marine habitats and species not commercially exploited, in line with the process initiated at the Dundalk Conference² including measures aimed at the reduction of unwanted by-catch and of damage to the benthos.
- 7.4 Community Plans of Action on sharks and seabirds adopted by 2006 with progressive implementation thereafter.
- 7.5 Fishery protection measures required for Natura 2000 implementation adopted following CFP procedures.
- 7.6 Restoration programmes for diadromous species (eg. eel, trout, salmon, sturgeon) designed and adopted in collaboration with the appropriate authorities and in close consultation with relevant stakeholders.
- 7.7 Appropriate environmental impact assessment techniques applied to new aquaculture and new fisheries to identify impacts on biodiversity and these assessments acted on from 2004.
- 7.8 Funds made available regularly to undertake assessments of the short- and long-term effects on marine ecosystems of principal fishing and aquaculture techniques and practices.
- 7.9 A strategic plan for making operational the ecosystem-based approach to fisheries management developed and adequately funded as soon as possible.
- 7.10 Reports on progress of environmental integration in the CFP made available by 2005, 2007 and 2009.
- 7.11 Regional Advisory Councils (which will be instrumental for the delivery of biodiversity objectives) established, adequately funded and fully operational by 2005 in order to strengthen stakeholder participation in fisheries management and promote biodiversity awareness.

² 'Fast-tracking the development of environmentally-friendly fishing methods', Dundalk, Ireland, 2004.

Footnote to targets:

There was discussion of a potential further target to be worded: 'Reduction of fishing capacity facilitated where the exploitation rate exceeds the sustainability of the resource.' There was, however, no agreement on inclusion of such a target.

SECTOR 5: REGIONAL POLICY & SPATIAL PLANNING

OBJECTIVE 8: To ensure that Cohesion policy and spatial planning support conservation and sustainable use of biodiversity.

2010 and earlier targets

- 8.1 Substantial proportion (10%) of structural funds guaranteed under Financial Perspectives 2007-2013 for positive measures for the conservation and sustainable use of biodiversity, in particular to enhance ecological connectivity.
- 8.2 Projects co-financed by structural funds not causing significant negative impact on biodiversity and complying with Community nature and environmental legislation.
- 8.3 All territorial plans subject to Strategic Environmental Assessment Directive take full account of impacts on biodiversity from July 2004.
- 8.4 Spatial plans have ensured the maintenance and enhancement of the ecological functioning of landscapes and of the coherence of the Natura 2000 network.
- 8.5 An Environment Objective established within the Structural Funds to address nature conservation issues in regions of high biodiversity value implemented through the new Regulation for 2007-2013.

**SECTOR 6: ENERGY & TRANSPORT, CONSTRUCTION
& EXTRACTIVE INDUSTRIES**

OBJECTIVE 9: To prevent, minimise and mitigate negative impacts on biodiversity of construction, infrastructure and extractive industries, or related to the use of infrastructure.

2010 and earlier targets

- 9.1 All environmental assessments of transport, energy, urban, industrial and extractive projects under the EIA Directive and/or Art. 6 of the Habitats Directive, take full account of impacts on biodiversity in the authorisation procedure, whether or not the project receives EU financing.
- 9.2 All environmental assessments of transport, energy, urban and industrial and extractive programmes and plans under the SEA Directive take full account of impacts on biodiversity from July 2004.
- 9.3 All new Trans-European Networks (TENs) provide for environmental assessment, taking full account of biodiversity impacts.
- 9.4 All EU pollution and accident prevention legislation and post-Prestige measures fully implemented to schedule.

SECTOR 7: TOURISM

OBJECTIVE 10: To make all tourism sustainable.

2010 targets

- 10.1 All Natura 2000 management arrangements ensure that recreation and educational use of the site is sustainable.
- 10.2 CBD guidelines on sustainable tourism promoted, adopted and implemented as appropriate by key stakeholders.

SECTOR 8: ECONOMIC AND DEVELOPMENT COOPERATION

OBJECTIVE 11: To ensure an improved and measurable contribution of EU economic and development cooperation to achieving the global target ‘to significantly reduce the current [2002] rate of biodiversity loss by 2010’ in support of the Millennium Development Goals.

2010 and earlier targets

- 11.1 EU Regional and Country Strategy Papers and Sectoral Strategy Papers have integrated implementation of the CBD by 2007.
- 11.2 Partner countries³ have integrated implementation of the CBD in national development strategies, including Poverty Reduction Strategies by 2007.
- 11.3 EC and Member States funding for supporting implementation in partner countries of the CBD, its work programmes and its Biosafety Protocol, significantly increased by 2007.
- 11.4 Adequate dedicated EU funding secured to support international implementation of the CBD where these actions fall outside development cooperation.
- 11.5 All programmes and projects funded by the EU in partner countries have *ex ante* strategic environmental assessments and environmental impact assessment, and actions are taken to prevent and mitigate negative impacts on biodiversity in a timely manner.
- 11.6 Adequate long term capacity has been established in EU delegations and development cooperation agencies to sustainably achieve the above targets by 2006.
- 11.7 EC and Member States cooperate and coordinate their efforts to support the above targets, with corresponding reporting mechanisms by 2006.
- 11.8 Effective mechanisms are in place to enable NGOs and local communities to access EU funding and to increase synergies between governments, NGOs and the private sector.

³ The term “Partner countries” includes Overseas Territories

SECTOR 9: INTERNATIONAL TRADE

OBJECTIVE 12: To contribute to the global 2010 target by promoting ecologically sustainable international trade.

2010 targets

- 12.1 Major negative impacts of trade on third countries' and EU's biodiversity identified, and mechanisms proposed and adopted and action taken to significantly reduce them.
- 12.2 All trade agreements between the EU and third countries avoid or at least mitigate negative effects on biodiversity.
- 12.3 All trade in CITES species effectively controlled to ensure that it is not detrimental to their conservation and sustainable use.
- 12.4 Biodiversity conservation and sustainable use fully integrated into EC trade-related technical assistance and capacity-building activities.
- 12.5 Mutual supportiveness between biodiversity-related agreements and the WTO and other trade-related agreements ensured, consistent with the precautionary principle.

THEME 1: CONSERVATION OF NATURAL RESOURCES

No objective – see Policy Area 1

**THEME 2: SHARING OF BENEFITS, TRADITIONAL
KNOWLEDGE**

OBJECTIVE 13: To ensure the fair and equitable sharing of benefits arising out of the use of genetic resources while promoting their conservation and sustainable use.

2010 and earlier targets

- 13.1 Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of Benefits Arising out of their Utilisation fully applied in the EU by 2006.
- 13.2 Capacity built in developing countries for the implementation of the ABS provisions of the CBD.
- 13.3 International regime on ABS concluded according to the mandate adopted at COP7.
- 13.4 International Treaty on Plant Genetic Resources for Food and Agriculture effectively implemented by 2007.

OBJECTIVE 14: To ensure the implementation of CBD decisions on knowledge, innovations and practices of indigenous and local communities embodying their traditional lifestyles.

2010 targets

- 14.1 Ensure application of the principle of prior informed consent when commercially using traditional knowledge
- 14.2 Apply the CBD Akwe-Kon Guidelines for projects affecting terrestrial lands of indigenous and local communities both within the EU Member States and in third countries.

THEME 3: RESEARCH, MONITORING AND INDICATORS

OBJECTIVE 15: To implement an agreed set of biodiversity indicators to monitor and evaluate progress towards the 2010 targets, with the potential to communicate biodiversity problems effectively to the general public and to decision-makers and provoke appropriate policy responses.

2010 and earlier targets

- 15.1 *Indicators*: biodiversity headline indicators adopted in 2004, tested, optimised, finalised by 2006; biodiversity indicator adopted in list of Sustainable Development Indicators for reporting on Sustainable Development Strategy by 2004; interim biodiversity structural indicator developed by 2005 and finalised by 2006.
- 15.2 *Monitoring*: use, and if necessary develop, monitoring frameworks (building on existing monitoring approaches and methods including those of civil society) in order to establish adequate harmonised data flows for the biodiversity headline and structural indicators to reveal and communicate key trends from 2006.
- 15.3 *Reporting*: adopt best approaches to streamline national reporting to European Community, pan-European and international agreements from 2006 onwards; headline indicators applied for reporting on progress in implementation of the ECBS and BAPs 2007 and 2010.
- 15.4 *Funding*: adequate financial resources allocated to biodiversity indicators, monitoring, reporting and their coordination.

Note: The Malahide Conference endorsed the first set of biodiversity headline indicators for testing, optimising and finalising in line with target 15.1 (Annex 1)

OBJECTIVE 16: To improve and apply the knowledge base for the conservation and sustainable use of biodiversity.

2010 and earlier targets

Knowledge outcomes

- 16.1 Status⁴, trends and distribution of all habitats and species of Community Interest and of additional habitats and species of policy relevance known.
- 16.2 Impacts of the most significant pressures⁵ on biodiversity for each key sector of the European Community Biodiversity Strategy discriminated, ranked and quantified where possible, and prevention and mitigation options developed and tested.
- 16.3 Tools for measuring, anticipating and improving the effectiveness of the most important policy instruments for conservation and sustainable use of biodiversity in each of the sectors of the European Community Biodiversity Strategy developed and applied.

Enabling outcomes

- 16.4 Adequate financial resources (to achieve knowledge and enabling outcomes) allocated by 2006 to European and national biodiversity research and to the dissemination of its results, including sufficient funding under the Community's FP7.
- 16.5 Effective and inclusive European Research Area for biodiversity established, research capacity in key disciplines (e.g. taxonomy) with interdisciplinary and participatory science strengthened by 2008.
- 16.6 Institutional arrangements in place to ensure essential policy-relevant research is done and research outcomes are assimilated by policy-makers.
- 16.7 Common data standards and quality assurance procedures established and promoted to enable interoperability of key European and national biodiversity databases and inventories by 2008.

Note: The Malahide Conference endorsed the Killarney Declaration and EPBRS recommendations on research priorities (Annex 2).

⁴ Here 'status' is used to refer to the abundance of species, extent of habitats and the favourable conservation status of habitats and species of Community Interest. Composition and function to be included here.

⁵ Pressures include sea- and land-use change, habitat fragmentation, connectivity and destruction, climate change, pollution, including eutrophication and nitrogen deposition, harvesting and hunting pressure, natural and anthropogenic catastrophes, non-indigenous and invasive organisms and emergent diseases, globalisation, trade, consumption patterns, business practices and social conflicts, institutional structures and property rights, loss of genetic diversity and key functional groups (e.g. pollinators and bio-turbators), policy conflicts, and new technologies including GMOs and renewable energy.

**THEME 4: EDUCATION, TRAINING & AWARENESS,
PARTICIPATION**

OBJECTIVE 17: To reinforce measures for public communication, awareness and participation.

2010 and earlier targets

- 17.1 “El Teide Declaration” implemented through the development of partnerships, involving the broad range of stakeholders in the conservation and management of Natura 2000 sites, the sharing of experience and good practice in managing the Network, the sustainable use and management of Natura 2000 areas for educational and recreational purposes.
- 17.2 Positive dialogue with Member States and stakeholders continued through charters, guidance documents, to improve efficiency of communication channels on the implementation of the Natura 2000 Network and Birds and Habitats Directives.
- 17.3 Ten thematic conferences under the “Countdown 2010” initiative (launched at Malahide in 2004) to halt the loss of biodiversity supported from 2004 to 2010, and parallel processes in other regions, or by other partners encouraged.
- 17.4 Public participation and related access to justice requirements of the Århus Convention applied to projects, and plans and programmes, relating to or having an impact on biodiversity conservation.

THEME 5: INTERNATIONAL ENVIRONMENTAL GOVERNANCE

OBJECTIVE 18: EU contributes to improved international environmental governance to increase implementation of the CBD and other biodiversity related agreements

2010 targets

- 18.1 Coordinated and effective compliance and dispute settlement mechanisms established for all biodiversity related international agreements.
- 18.2 Effectiveness and synergy of implementation of biodiversity-related agreements strengthened through the global partnership for biodiversity.

[Note: while there was preliminary agreement on the need for this objective, the Conference felt there was a need for more thorough examination of the issues and legal context]

ANNEX 1

A FIRST SET OF EU HEADLINE BIODIVERSITY INDICATORS

First set of EU headline biodiversity indicators based on CBD decision and focal areas⁶

<i>Status and trends of the components of biological diversity</i>
• Trends in extent of selected biomes, ecosystems and habitats
• Trends in abundance and distribution of selected species
• Change in status of threatened and/or protected species
• Trends in genetic diversity of domesticated animals, cultivated plants, and fish species of major socioeconomic importance
• Coverage of protected areas
<i>Sustainable use</i>
• Area of forest, agricultural, fishery and aquaculture ecosystems under sustainable management
<i>Threats to biodiversity</i>
• Nitrogen deposition
• Numbers and costs of invasive alien species
• Impact of climate change on biodiversity
<i>Ecosystem integrity and ecosystem goods and services</i>
• Marine trophic index
• Connectivity/Fragmentation of ecosystems
• Water quality in aquatic ecosystems
<i>Status of access and benefit sharing</i>
• Patents (to be developed)
<i>Status of resource transfers and use</i>
• Funding to biodiversity
<i>Public opinion</i>
• Public awareness and participation

⁶ UNEP/CBD/COP/7/L.27

ANNEX 2
KILLARNEY DECLARATION
AND RECOMMENDATIONS ON BIODIVERSITY RESEARCH



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.

**KILLARNEY DECLARATION
AND
RECOMMENDATIONS
ON
BIODIVERSITY RESEARCH**



Adopted by the EPBRS Meeting

***Sustaining livelihoods and biodiversity –
Attaining the 2010 targets in the European Biodiversity Strategy***

under the
Irish Presidency of the EU
in Killarney, Co Kerry 21-24 May 2004



KILLARNEY DECLARATION

Emphasises:

- **that biodiversity is essential for sustaining human life and well-being**
- **that biodiversity is critical in sustaining livelihoods**
- **the vital role of biodiversity as a provider of natural capital, goods and services underpinning the Lisbon agenda across all sectors**

Recognises:

- **the alarming rate of biodiversity loss in the EU and globally**
- **that urgent and effective action is needed to meet the 2010 target**

Stresses:

- **that knowledge is essential for conservation and sustainable use of biodiversity and that investment in an improved understanding of biodiversity will deliver new and exciting opportunities for development**
- **the crucial role the European Research Area/7th Framework Programme must play in supporting the achievement of the biodiversity targets**
- **the critical importance of research in delivering the EC Biodiversity Strategy and thereby meeting the EU and Member States' international obligations as Parties to the Convention on Biological Diversity**
- **the need for immediate research actions to fill gaps in current knowledge, brought about by targeted biodiversity research funding from EU sources and Member States**

***KILLARNEY RECOMMENDATIONS FOR BIODIVERSITY
RESEARCH PRIORITIES FOR THE 2010 TARGET***

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.