

Biodiversity monitoring

Policy and research needs



European Commission
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EUMON

Overall objectives

To review, evaluate and improve the appropriateness of methods and approaches to monitor trends in species and habitats...

To compare and integrate the most promising methods, approaches and techniques (schemes) into a comprehensive, coherent, and consistent framework...

To disseminate a comprehensive database on monitoring schemes and recommended methods...

EUMON

Legal and policy context

- Legal frame for monitoring:
Arts. 11 and 17 of the Habitats Directive
Art. 10 and 12 of the Birds Directive
- “Policy frame”
Supply information to decision makers and general public about the state of biodiversity (2010 target)
- “Policy frame”
Respond to the specific actions foreseen in the **BIODIVERSITY COMMUNICATION and ACTION PLAN**

EU Biodiversity Policy

The 2006 Communication

- Communication on halting the loss of biodiversity to 2010 – and beyond

Sustaining ecosystem services for human well-being

- COM (2006) 216 Final



A firm political commitment from the Barroso Commission to prioritise biodiversity



EU Biodiversity Policy

Promoting a wider concept

- EU biodiversity policy has - in the past - had a focus on species and habitats
 - Birds Directive, Habitats Directive
- Communication promotes a focus on 'ecosystem services'
- The basic idea:
 - that biodiversity (at genetic, species and ecosystem levels) underpins the flow of ecosystem services – and that these services in turn underpin prosperity and well-being

EU Biodiversity Policy

The Commission's proposal

- Recommends action in 4 key policy areas:
 - Biodiversity in EU
 - EU and global biodiversity
 - Biodiversity and climate change
 - **The Knowledge base**
- Identifies 10 priority objectives and 4 key supporting measures
- Lays down EU Action Plan to 2010 and Beyond
 - targets and actions relating to each objective and supporting measure

EU Biodiversity Policy

The Commission's proposal

10 priority objectives

1. Safeguard EU's most important habitats & species
2. Conserve/restore biodiversity & ecosystem services in wider countryside
3. Conserve/restore biodiversity & ecosystem services in wider marine environment
4. Regional and territorial development compatible with biodiversity
5. Substantially reduce impact of invasive alien species
6. Strengthen international governance
7. Strengthen international external assistance
8. Reduce impact of international trade
9. Support biodiversity adaptation to climate change
10. **Strengthen knowledge base** for conservation and sustainable use

EU Biodiversity Policy

The Biodiversity Action Plan

- **Annual Reporting (C.1.1)**
- **Indicators (C.1.2)**
Indicators in place and informing policy-decisions by 2010
- **Monitoring (C.1.3)**
Monitoring providing adequate data flow for implementation of indicator set, for reporting on favorable conservation status, and for broader assessment of effectiveness of this Action Plan by 2010
- **Evaluation & Review (C.1.4)**



EU Biodiversity Policy The Biodiversity Action Plan

SEBI 2010

- “**Streamlining European 2010 Biodiversity Indicators**”
to further develop a European set of indicators and ensure consistency across global, regional, EU and national indicators
- EEA holding the initiative

EuMon Conference
Leipzig, 28-30 January 2008



EU Biodiversity Policy The Biodiversity Action Plan

Lessons learned from SEBI

- Lack of data on IAS, genetic diversity
- Need to better understand impact of Climate Change on Biodiversity
- Need to further develop methodologies for Sustainable Use
- EU challenge: develop common approach (e.g. habitat classification, data organisation, interoperability of databases, agreements on data access and use)

EuMon Conference
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Monitoring Target

ACTION C1.3.2:

Use, and as necessary develop, **monitoring tools, approaches and frameworks** (building on those existing, including those of civil society) in order to establish and coordinate adequate harmonised data flows for the biodiversity indicators to reveal key trends [2007 onwards].

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Monitoring Target

ACTION C1.3.3:

Develop **shared information system** for biodiversity monitoring and reporting in the EU, based on agreed biodiversity indicators, which

- makes data available to all interested users,
- streamlines reporting and
- supports policy evaluation and development at national, regional and global levels.

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SEIS - Basic principles

- **information provided once, and shared with others for many purposes;**
- **information readily available to public authorities and enabling to easily fulfil their reporting obligations;**
- **information readily accessible to end-users, primarily public authorities at all levels from local to European;**
- **information enabling end-users (both public authorities and citizens) to make comparisons at the appropriate geographical scale and at national level in the relevant national language.**

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SEIS - thematic approach

- **WISE** (Water Information System for Europe), a modern approach to the production, exchange and use of data and information, initially designed as a reporting tool in the context of the Water Framework Directive and now being extended to integrate reporting data flows from a number of existing and upcoming water-related directives as well as water relevant statistical data by 2010.
- **INSPIRE** (Directive 2007/2/EC) establishing an infrastructure for spatial information in Europe which aims to improve the accessibility and interoperability of spatial data -it will not directly address data of a non-spatial or non-numerical nature, and will not by itself guarantee organisational consolidation within Member States or lead to an improvement in the quality and comparability of data.

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Towards SEIS

- Develop an **EU Biodiversity Data Centre** with the European Environment Agency as leading partner, in close collaboration with relevant national, European and international organisations;
- Support **LIFE WATCH**, the European initiative to establish a research infrastructure linking ecological monitoring data collected from marine and terrestrial environments with physical data.
See <http://www.lifewatch.eu>
- Provide **financial support** at Community (e.g. LIFE+, Research Framework Programmes, the Competitiveness and Innovation Programme and the Structural Funds) and national level to create new data ...

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EU Biodiversity Policy Sustaining ecosystem services for human well-being

ECOSYSTEM ASSESSMENTS What do we understand them to be?

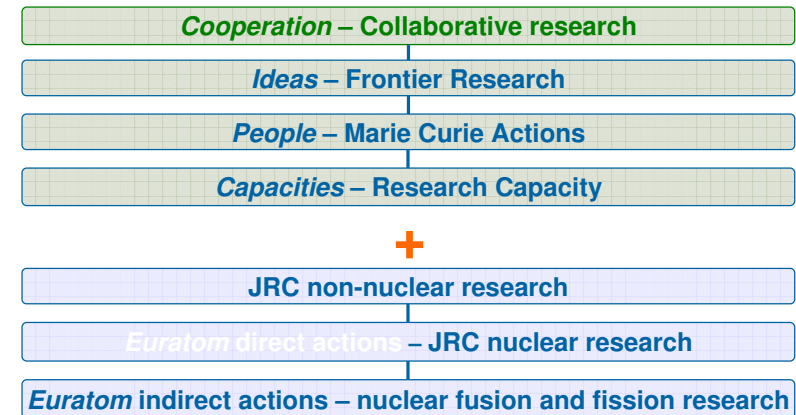
- Maps showing patterns of ecosystem change over time:
 - at various scales
 - within various administrative regions or zones
- Linked 'ecosystem accounts' which reflect
 - changes in stocks ('natural capital' – including biodiversity)
 - changes in actual and potential flows of ecosystem services
- A means to more cost-effective monitoring, reporting and evaluation

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ECOSYSTEM ASSESSMENTS

Some issues requiring further study

- the link between biodiversity (composition, structure, function) and the flow of ecosystem services
- the link between biodiversity and ecosystem resilience – eg. to climate change
- ecosystem thresholds or tipping points



Cooperation – Collaborative Research

Ten themes

1. Health
2. Food, agriculture and fisheries, and biotechnology
3. Information and communication technologies
4. Nanosciences, nanotechnologies, materials and new production technologies
5. Energy
6. Environment (including climate change)
7. Transport (including aeronautics)
8. Socio-economic sciences and the humanities
9. Space
10. Security

FP7 2007-2013 'Cooperation' budget

I. Cooperation	Budget (€ million, current prices)
1. Health	6 100
2. Food, agriculture and fisheries, and biotechnology	1 935
3. Information and communication technologies	9 050
4. Nanotechnologies, materials and production	3 475
5. Energy	2 350
6. Environment	1 890
7. Transport	4 160
8. Socioeconomic research	623
9. Space	1 430
10. Security	1 400
Total	32 413

6. Environment (inc. climate change)

- Climate change, pollution and risks
- Sustainable management of resources
- Environmental technologies
- Earth observation and assessment tools

FP7 2007 –2013 second call

Call Title:

Environment (including climate change)

- Call identifier: *FP7-ENV-2008-1*
- Date of publication: 30 November 2007
- Deadline: 25 February 2008
- Indicative budget: EUR 212 million

FP7 2007 –2013 Biodiversity topics

2.1.4.1

Improving the capacity to protect and manage the biodiversity of continental waters

2.1.4.2

Rehabilitation of data from biodiversity-related projects funded under previous framework programmes

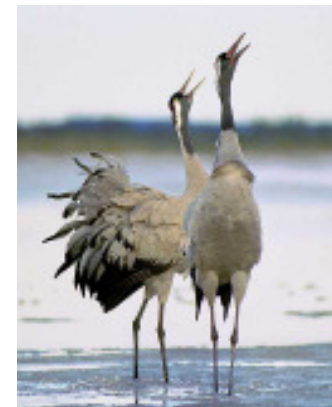
2.1.4.3

Increasing the integration of biodiversity research results into policy making

2.1.4.4

Scale dependency of sustainable use of biodiversity

Biodiversity monitoring Policy and research needs



Thank you for your attention!