

Natural Systems and Vulnerability Programme  
Biodiversity Group

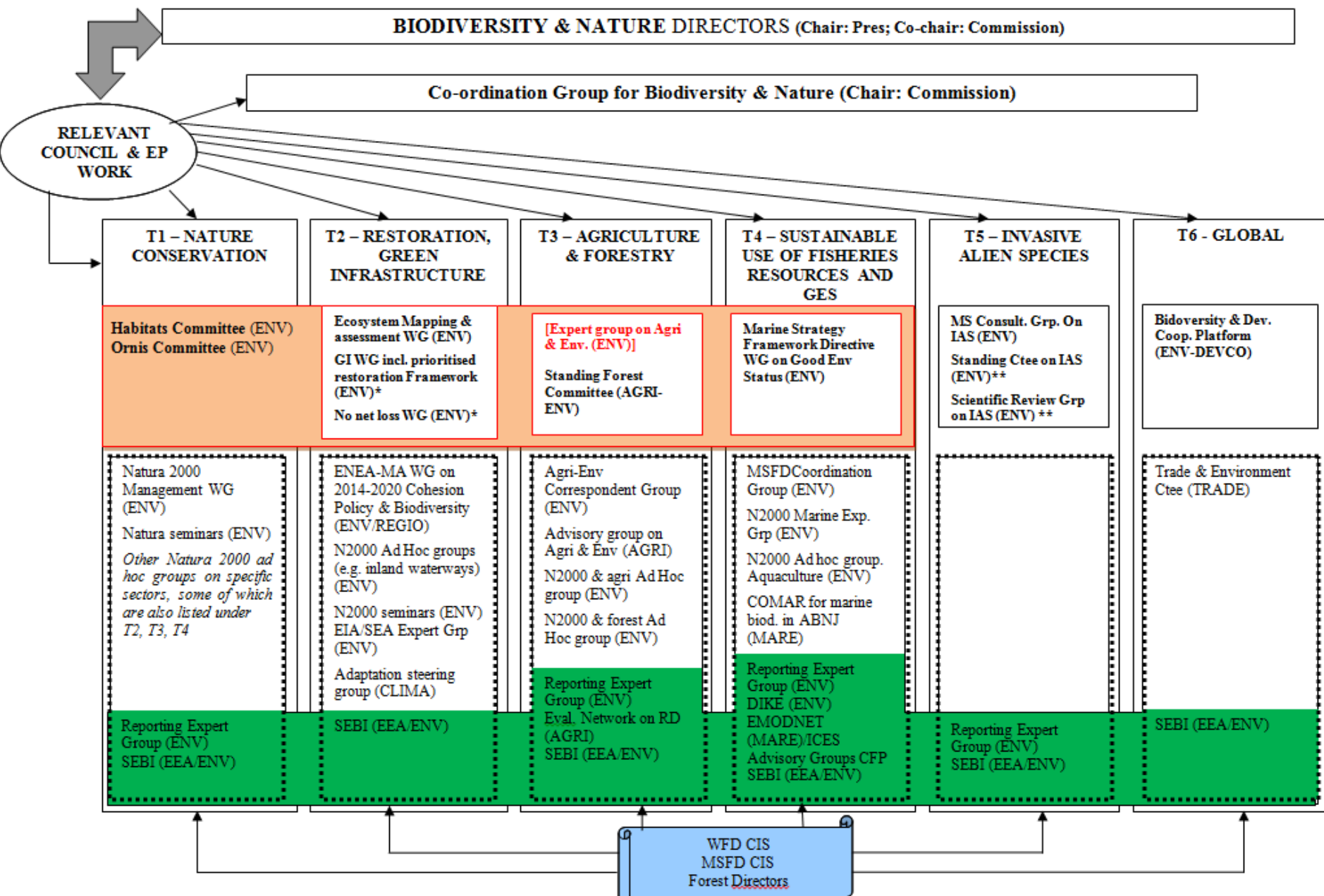
# **BUILDING THE BIODIVERSITY KNOWLEDGE BASE FOR THE 2020 BIODIVERSITY TARGETS**



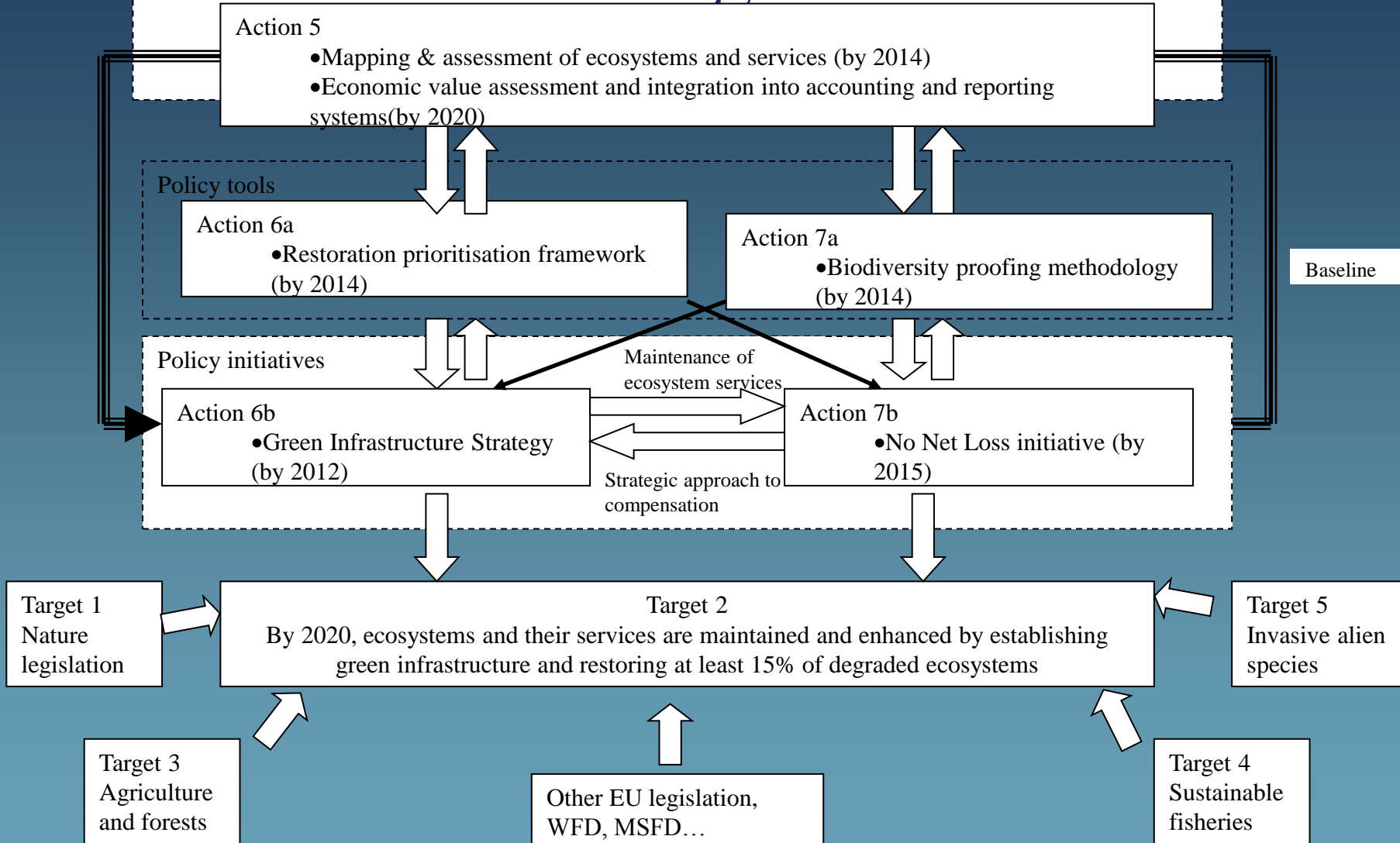
# 1. THE EU CONTEXT - DEVELOPMENT OF A COMMON MONITORING FRAMEWORK ( CIF)



# CIF GOVERNANCE CHART



# The EU knowledge-base



## 2. THE EEA RESPONSE

# EEA response - Improving the knowledge base

- ❑ Further Develop the BISE (Biodiversity Information System for Europe) and the BD Data centre
- ❑ Further develop (and streamline) Biodiversity relevant Indicators - SEBI, AEI
- ❑ Continued reporting support to EU policy and legislation
- ❑ Preparing new data (layers) - the GMES/GIO; Art 17
- ❑ Producing assessments - building on diverse sources of data and information - towards SOER2015



# EEA works on

## Reporting support to EU policy and legislation

- Continue support to the implementation of the Nature directives including the Natura 2000 data flow
- Reporting on conservation status of species and habitats (Art 17 Habitat Directive/Art 12 of the Birds Directive)
- Feed into the BD Target 1 & 2 activities
- Continued support to establishment of the EMERALD network



# EEA works on Indicators

- Further develop Biodiversity relevant indicators based on experience with the SEBI2010 and
- adapt/adopt indicators and reporting methodologies to the needs of the 2020 EU and global biodiversity targets - as well as
- input to forthcoming 7th EAP, Europe 2020 flagship initiatives, in particular Resource Efficiency (Roadmap).





# EEA works on Assessments

- Conduct comprehensive DPSIR-based assessments on BD trends & status, for selected ecosystems (Marine, coastal, water) or topics for **SOER2015**
- Maintain the BD baseline as the European biodiversity reference benchmark
- Reinforce assessments of biodiversity in agriculture and forest policies ( + water framework directive & the marine strategy framework directive within a land based policy context)
- Ecosystems assessments in support of global and regionalized processes (TEEB, MA, MAES).



# EEA works

## Support to Global Policies

- Continue to follow the UN Convention on BD namely on the AICHI targets and respective indicator work, using experience from the SEBI model as a lead process on streamlining country-to-global indicators
- Support the IPBES global and regional development (and relate to the EU Mechanism for policy-science interface)
- Follow-up of GEOSS.



# EEA's specific mandate - The report on the State of Environment of EUROPE (SOER)

Year	SOER Title	Focus of SOER	Input to EU environmental policy
1995	Environment in the European Union 1995	<ul style="list-style-type: none"> <li>• addresses SEAP targets</li> <li>• focus on sectoral integration</li> </ul>	Report for the mid-term review of the SEAP (1993-2000)
1999	Environment in the European Union at the turn of the century	<ul style="list-style-type: none"> <li>• addresses environmental trends</li> <li>• focus on DPSIR, interconnections</li> </ul>	Input to global assessment of SEAP (1993-2000)
2005	The European Environment: State and Outlook 2005	<ul style="list-style-type: none"> <li>• addresses air, water, land</li> <li>• focus on DPSIR, core indicators</li> </ul>	Input to the mid-term review of the 6EAP (2002 to 2012)
2010	The European Environment: State and Outlook 2010	<ul style="list-style-type: none"> <li>• addresses 6EAP priorities</li> <li>• focus on systemic challenges</li> </ul>	Input to the final assessment of the 6EAP (2002 to 2012)

*Note that these have been complemented by 'Europe's Environment' reports in 1995, 1998, 2003, 2007, as well as an Assessment of Assessment in 2011, that focussed on the state of environment across the pan-European region.*



# SOER from 2010 to 2015: How to integrate the biodiversity assessment?

*Box 1 – From SOER 2010 to SOER 2015: What will stay the same? And what will differ?*

Two elements that stay the same ...

Maintain continuity regarding structure

– The SOER 2015 will build on the structure used in the two previous reports in 2005 and 2010, namely distinct Parts A (global), Part B (European) and Part C (countries).

Keep and build on the existing narrative

– Rather than starting with a 'blank page', the SOER 2015 will further explore the main arguments developed in the SOER 2010 and subsequent Indicator Reports.

Two elements that differ ...

Build more explicitly on existing EEA information

– Instead of developing 'new' thematic and country assessments, the SOER 2015 will take stock of indicators and complement them with short briefings.

Involve stakeholders more in developing conclusions

– The SOER 2015 will explicitly aim to engage key stakeholders in synthesising, developing cross-cutting conclusions and reflecting on their implications.



### 3. Biodiversity System for Europe - BISE

The challenge of a single entry point for EU biodiversity information  
in support of the implementation of the 2020 strategy



# BISE - biodiversity.europa.eu



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Topics

Policy

Data

Research

Countries

Networks



## Biodiversity Information System for Europe

BISE is a single entry point for data and information on biodiversity in the EU. It also serves as the EU Biodiversity Clearing House Mechanism to CBD.

### BISE Highlights

- Towards the 2020 biodiversity targets
- Ecosystem Assessments in Europe
- European Network of Biodiversity CHMs

### Other European information systems

### News - Europe

- LIFE, 31/10/2012: 'Malta Seabird' project radio tracks storm petrel 
- LIFE, 30/10/2012: Assessing LIFE's impact on EU noise and air policy 
- SCALES, 29/10/2012: Toward an European Open Biodiversity Knowledge Management System Making high quality ... 
- LIFE, 26/10/2012:

### News - World

- CBD, 02/11/2012: British Antarctic Survey merger plan ruled out 
- CBD, 02/11/2012: Setback for Antarctic wildlife: Nations fail to agree on plan to protect seas around Antarctica 
- CBD, 02/11/2012: Disappointment as Antarctic protection bid fails 
- CBD, 02/11/2012:



# BISE - who is working on this?



- BISE is a partnership project (DG ENV, DG Research, JRC, EUROSTAT, EEA = biodiversity knowledge group)
- DGENV (+ IT contract)
- EEA and ETC-BD
  - BISE concept (June 2010) - draft
  - Implementation Plan (January 2012) - draft
- Country involvement: EIONET, European Biodiversity CHM network



- A single entry point to EU biodiversity information

## BISE

Scale is **European**

linked to

Global (upstream, CBD)

National (downstream, Countries)

## BISE

**Biodiversity** is Genes,  
Species, Habitats,  
Ecosystems ...

Building the  
knowledge base  
for the 2020  
biodiversity  
targets

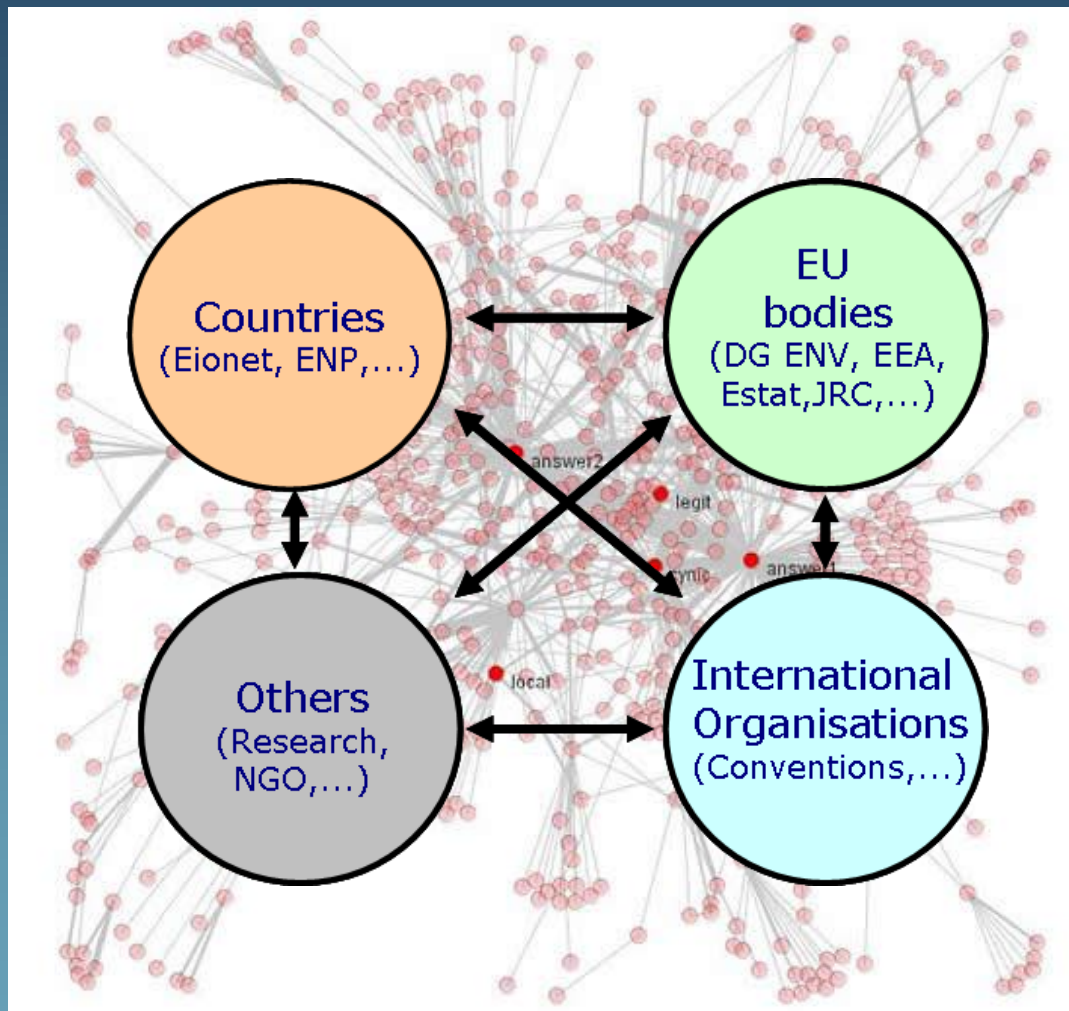
## BISE

**Information system** is

Technically compatible with  
other European portals



# BISE - information sharing



## *SEIS principles*

*information should be*

- managed as **close** as possible to its source;
- collected **once**, and shared with others for many purposes;
- readily **available** and easy **accessible**
- accessible to enable users to make **comparisons** at the appropriate geographical scale
- fully available to the general **public** at national level in the relevant **national language(s)**
- supported through common, free **open** software standards

# BISE - what it is



- A **portal** presenting data and information from products developed by EU institutions and Member States
- A **building block** within the wider Shared Environmental Information System **SEIS**
- **Serves** as EU Biodiversity Clearing House Mechanism to CBD
- A **process** of developing tools for re-using data and information products, adding to the EC-CHM Toolkit
- A **overarching approach** to connect biodiversity information from various sources





Topics

Policy

Data



Research

Countries









Networks



## ▶ Biodiversity data centre (BDC)

- > BDC overview 
  - Natura 2000 map viewer 
  - Natura 2000 data 
- > EUNIS 
- > Indicators 


## ▶ Other enviromental data centres from EU

- > Air 
- > Climate change 
- > Forest 
- > Land use 
- > Natural resources and products 
- > Soil 
- > Waste 
- > Water 

## BISE Highlights

- Towards the 2020 biodiversity targets
- Ecosystem Assessments in Europe

## News - Europe

- LIFE, 31/10/2012:  
['Malta Seabird' project radio tracks storm petrel](#) 
- LIFE, 30/10/2012:

## News - World

- CBD, 02/11/2012:  
[British Antarctic Survey merger plan ruled out](#) 
- CBD, 02/11/2012:

## Data

- CDDA, EEA Biodiversity Data Centre, INSPIRE

## Policy

- 2020 biodiversity targets, strategies EU + national

## Topics

- EUNIS, semantic services - taxonomy,
- Ecosystem assessment

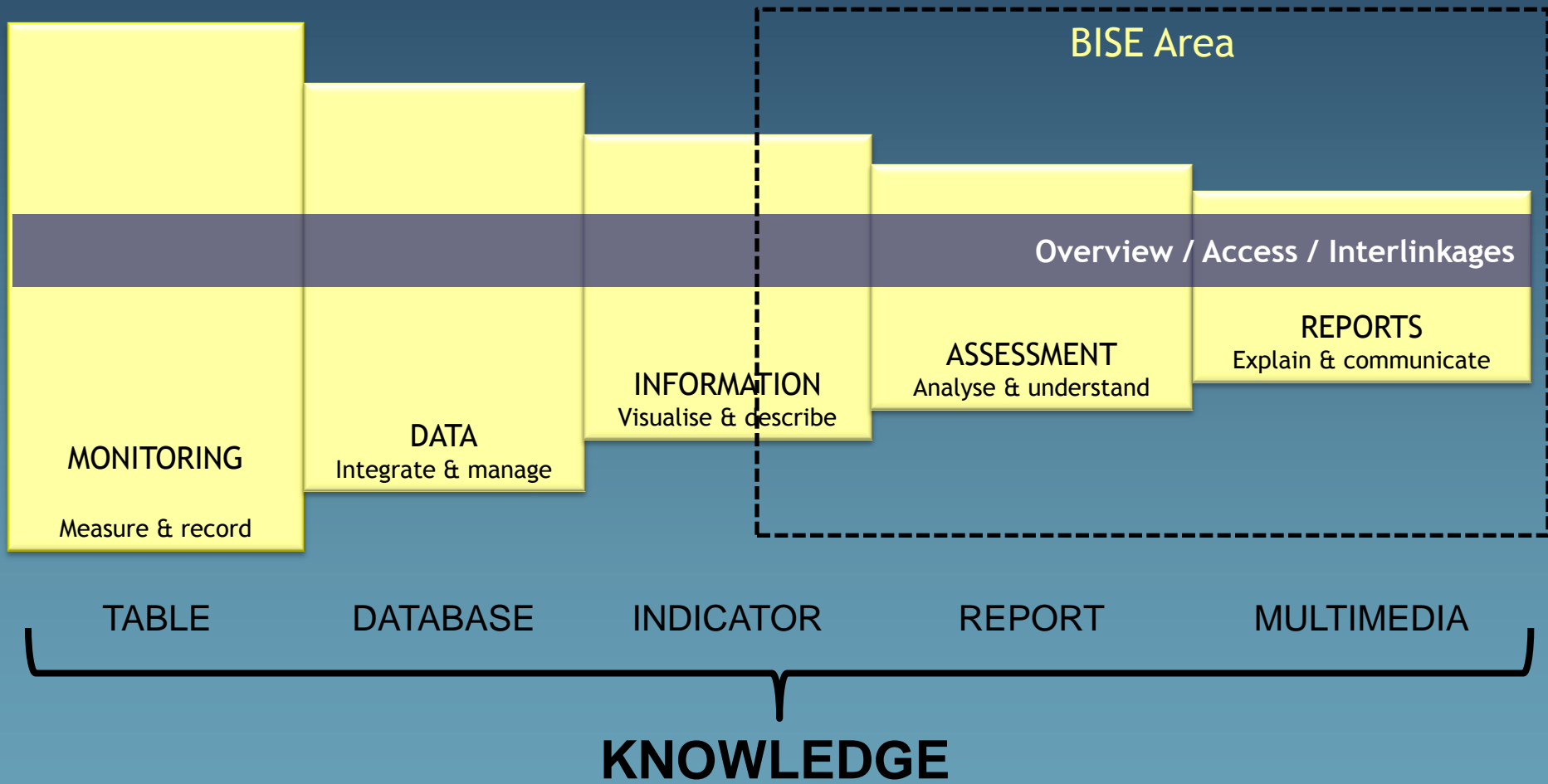
## Countries

- Country presentations, national settings

## Networks

- EIONET + CHM

# Knowledge and the BISE Area



## GLOBAL – CBD HEADLINE TARGET FOR 2020

### EU targets

ST 1

NATURE  
CONSERVATION

ST 2

ECOSYSTEMS AND GREEN  
INFRASTRUCTURE

ST 3

AGRICULTURE AND  
FORESTRY

ST 4

FISHERIES

ST 5

INVASIVE ALIEN  
SPECIES

ST 6

CONTRIBUTION TO  
GLOBAL  
BIODIVERSITY

*National level*

*Biodiversity Targets, Action Plans, products and reports*

# Main BISE tasks [identified for 2012-2015]



## Discussion 1

1. systematically integrating relevant products from Data Centres and other sources, relevant to all Targets of the EU Biodiversity Strategy.
2. ensuring update of information and transparency of the work done under the Common Implementation Framework of the EU Biodiversity Strategy at European scale.
3. ensuring the accessibility, integration and comparability of assessments and reporting of progress from the national to the European level [similar to the 2010 BAP reporting].
4. enabling the accessibility and re-use of national products related to CBD reporting, following SEIS principles
5. enabling uptake and re-use of products from research [relevant to the science-policy interface needs of the EU biodiversity strategy]





# 4. THE EEA BIODIVERSITY DATA CENTER

# BDC is one of five European data centres at EEA

The screenshot shows the EEA website header with the logo and navigation menu. The main content area features a breadcrumb trail, a title, a description, and several interactive elements including search boxes, a 'Biodiversity homepage' link with a database icon, and a 'Browse catalogue' section with tabs for 'All data products', 'Datasets', 'Maps', 'Interactive maps', 'Indicators', and 'Graphs'. A map of Europe is displayed on the right, showing spatial overlaps between Natura 2000 and CDDA sites in Estonia.

European Environment Agency 

Search Europe's environment... **Search**

[Advanced search](#) [A-Z Glossary](#)

[Topics](#) [Data and maps](#) [Indicators](#) [Publications](#) [Multimedia](#) [Press room](#) [About EEA](#)

You are here: [Home](#) > [Environmental topics](#) > [Biodiversity](#) > [Data centre overview](#)

## Data centre overview

Last modified : Apr 13, 2011 09:49 PM

**The Biodiversity data centre (BDC) provides access to data and information on species, habitat types and sites of interest in Europe and to related products for biodiversity indicators and assessments. Priority is given to policy-relevant data and information for European and national institutions, professionals, researchers and the public.**

**Search** [Advanced search](#)

Search data, maps, indicators... **Search**

 **Biodiversity homepage**

**Browse catalogue**

All data products **Datasets** [Maps](#) [Interactive maps](#) [Indicators](#) [Graphs](#)

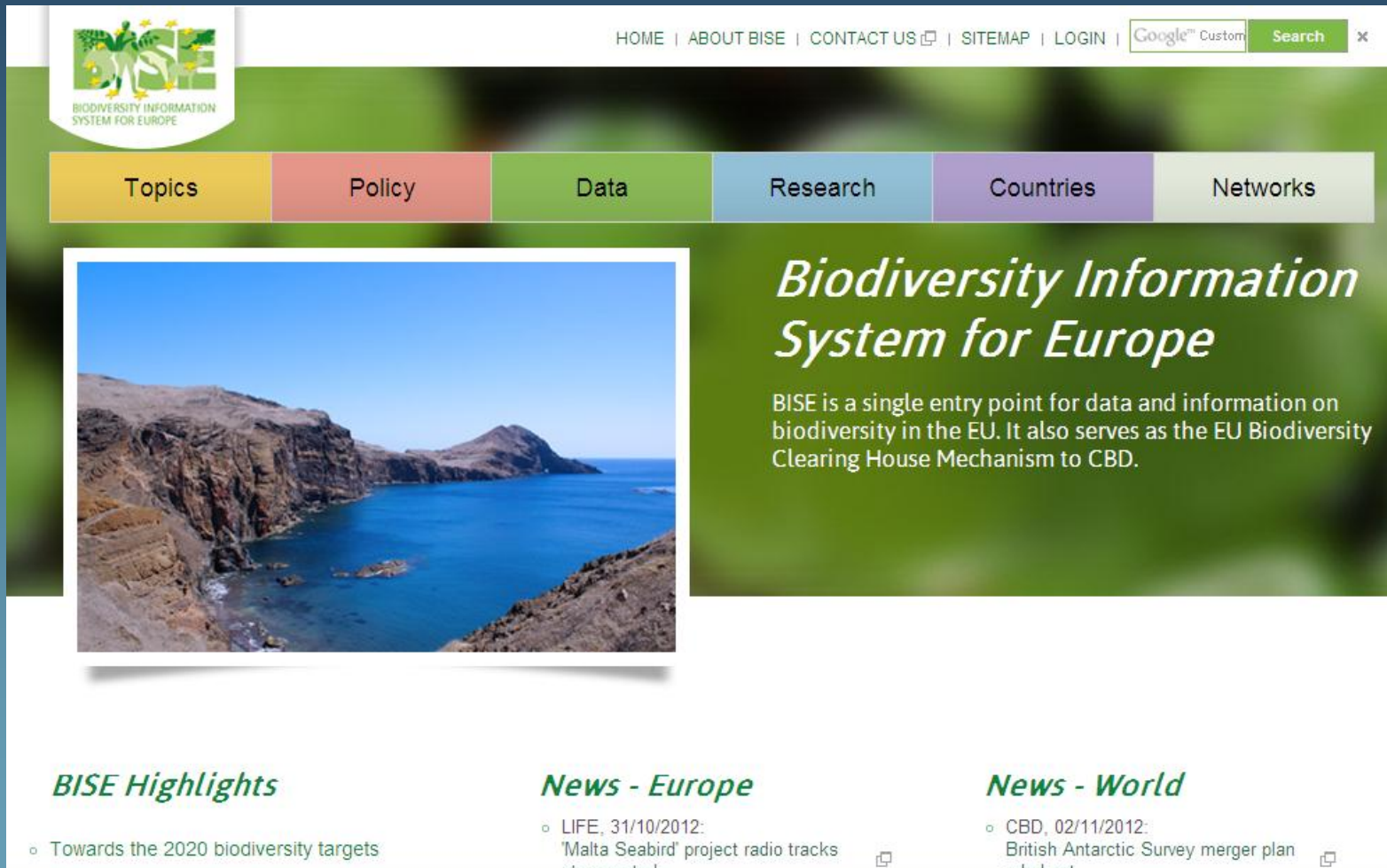
    

**Spatial overlap between Natura 2000 and nationally designated sites in Estonia (only terrestrial part), all EUCN categories considered**

- Overlap between Natura 2000/CDDA
- Natura 2000
- CDDA

0 50 100 150 km

# BDC is a component of BISE



The screenshot shows the homepage of the Biodiversity Information System for Europe (BISE). At the top left is the BISE logo, which features a stylized green plant and the text "BIODIVERSITY INFORMATION SYSTEM FOR EUROPE". To the right of the logo is a navigation menu with links for "HOME", "ABOUT BISE", "CONTACT US", "SITEMAP", and "LOGIN". A search bar with the text "Google Custom Search" and a magnifying glass icon is also present. Below the navigation menu is a horizontal bar with six colored buttons: "Topics" (yellow), "Policy" (red), "Data" (green), "Research" (blue), "Countries" (purple), and "Networks" (grey). The main content area features a large photograph of a rocky coastline with a blue sea. To the right of the photo is the title "Biodiversity Information System for Europe" in a large, bold, italicized font. Below the title is a paragraph of text: "BISE is a single entry point for data and information on biodiversity in the EU. It also serves as the EU Biodiversity Clearing House Mechanism to CBD." At the bottom of the page, there are three columns of news items. The first column is titled "BISE Highlights" and contains one item: "Towards the 2020 biodiversity targets". The second column is titled "News - Europe" and contains one item: "LIFE, 31/10/2012: 'Malta Seabird' project radio tracks". The third column is titled "News - World" and contains one item: "CBD, 02/11/2012: British Antarctic Survey merger plan".

HOME | ABOUT BISE | CONTACT US | SITEMAP | LOGIN |

Topics Policy Data Research Countries Networks

## *Biodiversity Information System for Europe*

BISE is a single entry point for data and information on biodiversity in the EU. It also serves as the EU Biodiversity Clearing House Mechanism to CBD.

### *BISE Highlights*

- Towards the 2020 biodiversity targets

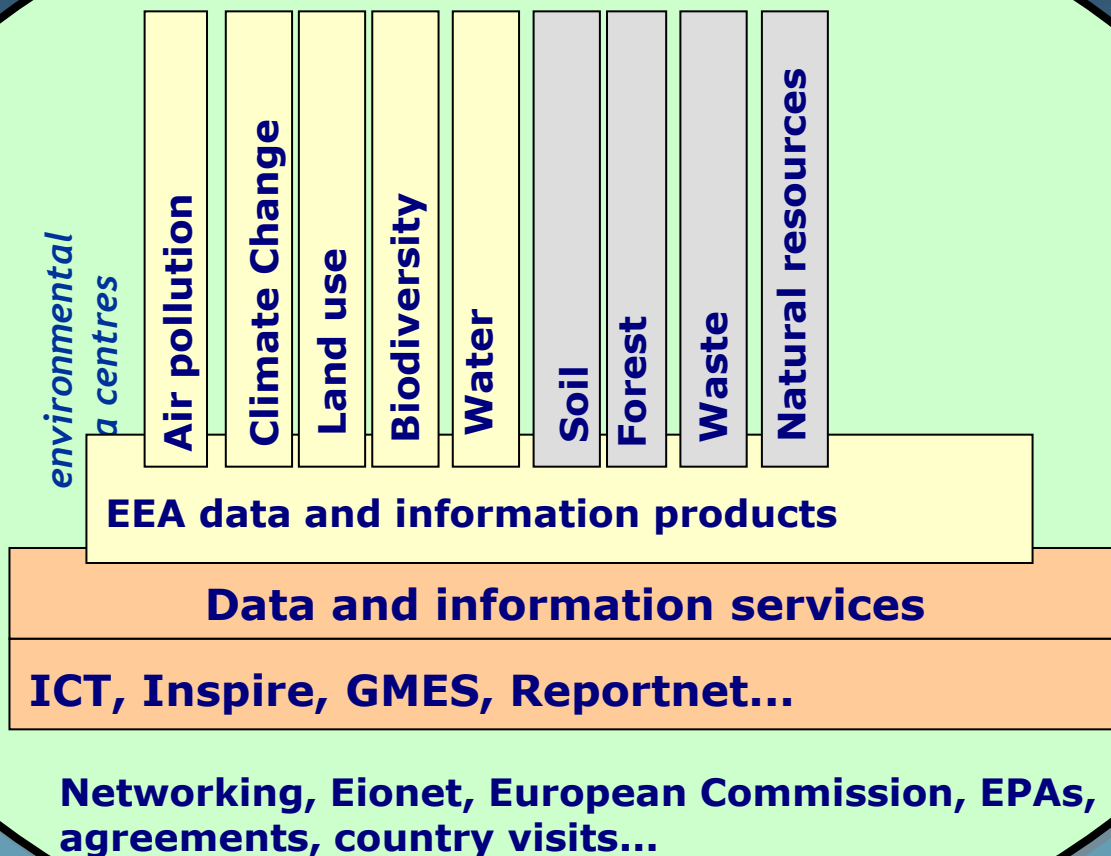
### *News - Europe*

- LIFE, 31/10/2012: 'Malta Seabird' project radio tracks

### *News - World*

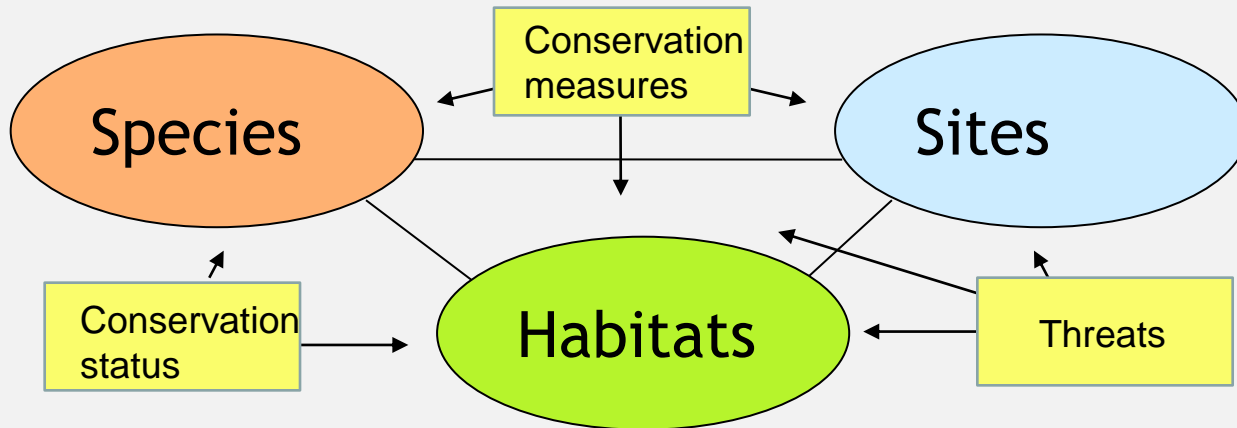
- CBD, 02/11/2012: British Antarctic Survey merger plan

# Overview of European data centres in EU institutions



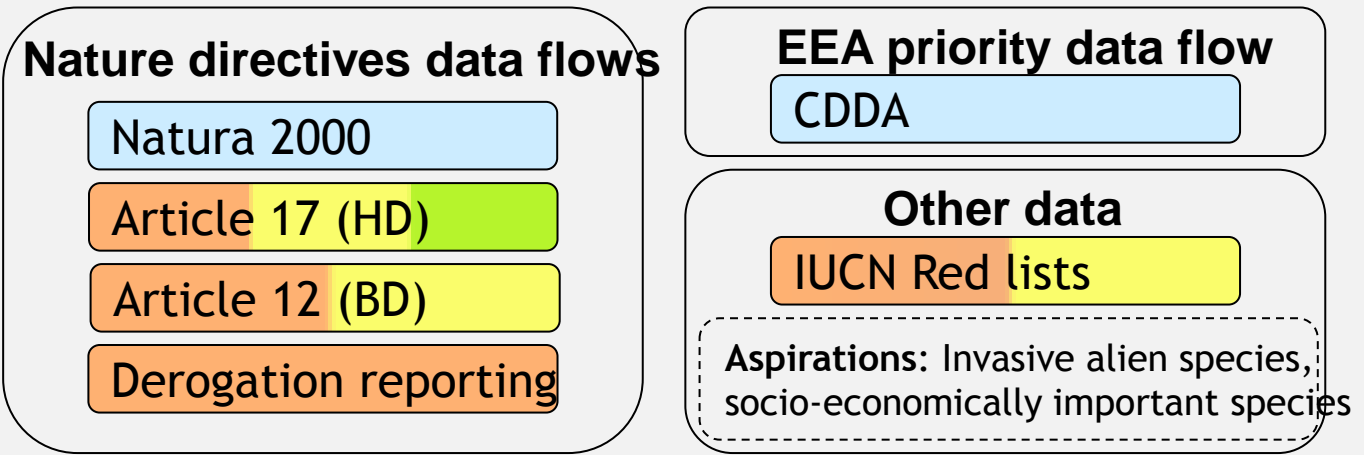
# Biodiversity Data Centre

Illustration according to content:



Tools for exploring:  
Data viewers,  
Map viewers,  
EUNIS, ...

Illustration according to data flow:



# New in 2012

- Datasets
  - Natura 2000
  - Common Dataset for Designated Areas
  - Biogeo regions
- Statistics
  - Natura 2000 stats broken down by NUTS and Corine land cover
- Graphics
  - Maps and graphs for reports, e.g. Protected areas and SEBI
- Other
  - Eionet Forum  
<http://forum.eionet.europa.eu>
  - Semantic data service  
<http://semantic.eea.europa.eu/>



# CDDA feeds Protected Planet (WDPA) for Europe

The screenshot displays the Protected Planet website interface. At the top, there's a navigation bar with 'protectedplanet.net', 'Explore', 'Blog', 'About', 'Help', a search bar, and a 'Sign in' button. The main content area is titled 'Denmark' and 'Europe'. It features a map of Denmark with a 'Transferring data' notification. Below the map, there are three data cards:

Protected areas value in Denmark	Designations
<b>145</b> total area (sq. km) 0% DIFFERENCE 45,313 km <sup>2</sup> of land area in this location 41,700 km <sup>2</sup> of marine area in this location	<ul style="list-style-type: none"><li>Protected by Conservation Order</li><li>Protected by conservation order, excl. Church</li><li>Nature Reserve</li><li>Hunting Reserve</li><li>Major Conservation Area</li><li>Bird Reserve</li><li>Reserve</li><li>Other designations</li></ul>
<b>4.86%</b> land area protected 6.6% LESS THAN AVG 45,313 km <sup>2</sup> of land area in this location 2,203 km <sup>2</sup> of land area is protected	
<b>3.22%</b> marine area protected 1.1% LESS THAN AVG 41,700 km <sup>2</sup> of marine area in this location 1,342 km <sup>2</sup> of marine area is protected	

Below these cards is a 'Conservation statistics' section:

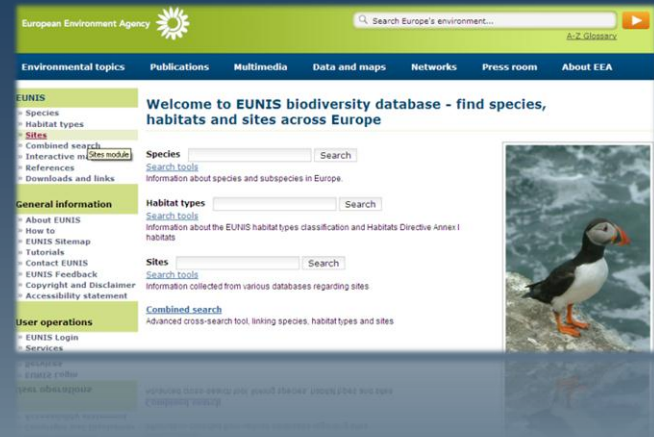
**2% Protected** (4.2% LESS THAN AVERAGE)  
**3975 Protected Areas** (3894 TERRESTRIAL PAS - 53 MARINE PAS)

3947 PROTECTED AREAS HAVE AN IUCN CATEGORY  
IUCN has defined a series of six protected area management categories, based on primary management objectives.

Not Reported  
Not Applicable  
Ia  
Ib

On the right, there are sections for 'Top contributors' (a grid of 12 power icons) and 'Popular locations' (a row of 6 small images).

• <http://protectedplanet.net/>



## 5. EUNIS web application



# EUNIS - European Nature Information System

- EUNIS goes back to 2005
- EUNIS has three modules
  - Species
    - 280 000+ species (incl synonyms)
  - Habitat types
    - EUNIS habitat types classification
    - Habitats Directive Annex I
  - Sites
    - Natura 2000
    - CDDA



# EUNIS species focus

- Species covered by international legislation
- Species covered by the European Red List
- Species used in European indicators
- Species of special interest
  - Invasive alien species
  - Wild crop relatives
  - Pollinators



# Species in the Annexes of...

- Habitats D. (92/43/EEC)
- Birds D. (2009/147/EC)
- Bern convention 1979
- Bonn - CMS 1979
- CITES 1973
- CITES EU regulations
- AEWa 2008
- EuroBats 1991
- ACCOBAMS 1996
- ASCOBANS 1992
- Wadden Sea Agreement 1990
- SPA/BD Mediterráneo
- OSPAR
- HELCOM



# Species used in indicators

## SEBI

- 001 148 common bird species; Grassland butterflies from 13-15 countries (2012 update)
- 002 Bird species
- 003 Those listed in Annexes II, IV, and V Habitats Directive
- 010 More than 12.000 alien species recorded in Europe; 163 "Worst invasive alien species threatening biodiversity in Europe"
- 011 124 bird species covered by the Pan-European Common Bird Monitoring Scheme (PECBMS)
- 012 Fish and invertebrate species landed from fisheries
- 021 Several species of commercial interest

## Outlook

- 004 Plant and vertebrate species



# EUNIS deep links to other online databases

- PESI (270 000 links)
- Catalogue of Life (64 000 links)
- GBIF (213 000 links)
- WorMS (38 000 links)
- IUCN redlists (5 000 links)
- CITES/UNEP-WCMC (900 links)
- ITIS (39 000 links)
- Fauna Europaea (173 000 links)
- Encyclopedia of Life (5 000 links)
- Wikipedia (13 000 links)
- 8 000 pictures - mainly Wikimedia



# EUNIS web application

European Environment Agency 

Search Europe's environment... 

[A-Z Glossary](#)

**Environmental topics**   **Publications**   **Multimedia**   **Data and maps**   **Networks**   **Press room**   **About EEA**

**EUNIS**

- » Species
- » Habitat types
- » **Sites**
- » Combined search Sites module
- » Interactive maps
- » References
- » Downloads and links

**General information**

- » About EUNIS
- » How to
- » EUNIS Sitemap
- » Tutorials
- » Contact EUNIS
- » EUNIS Feedback
- » Copyright and Disclaimer
- » Accessibility statement

**User operations**

- » EUNIS Login
- » Services

## Welcome to EUNIS biodiversity database - find species, habitats and sites across Europe

**Species**

[Search tools](#)  
Information about species and subspecies in Europe.

**Habitat types**

[Search tools](#)  
Information about the EUNIS habitat types classification and Habitats Directive Annex I habitats

**Sites**

[Search tools](#)  
Information collected from various databases regarding sites

**Combined search**  
Advanced cross-search tool, linking species, habitat types and sites





## General Information

## Conservation status

## Legal instruments

## Useful links

***Canis lupus***, Linnaeus 1758



### Taxonomic Information

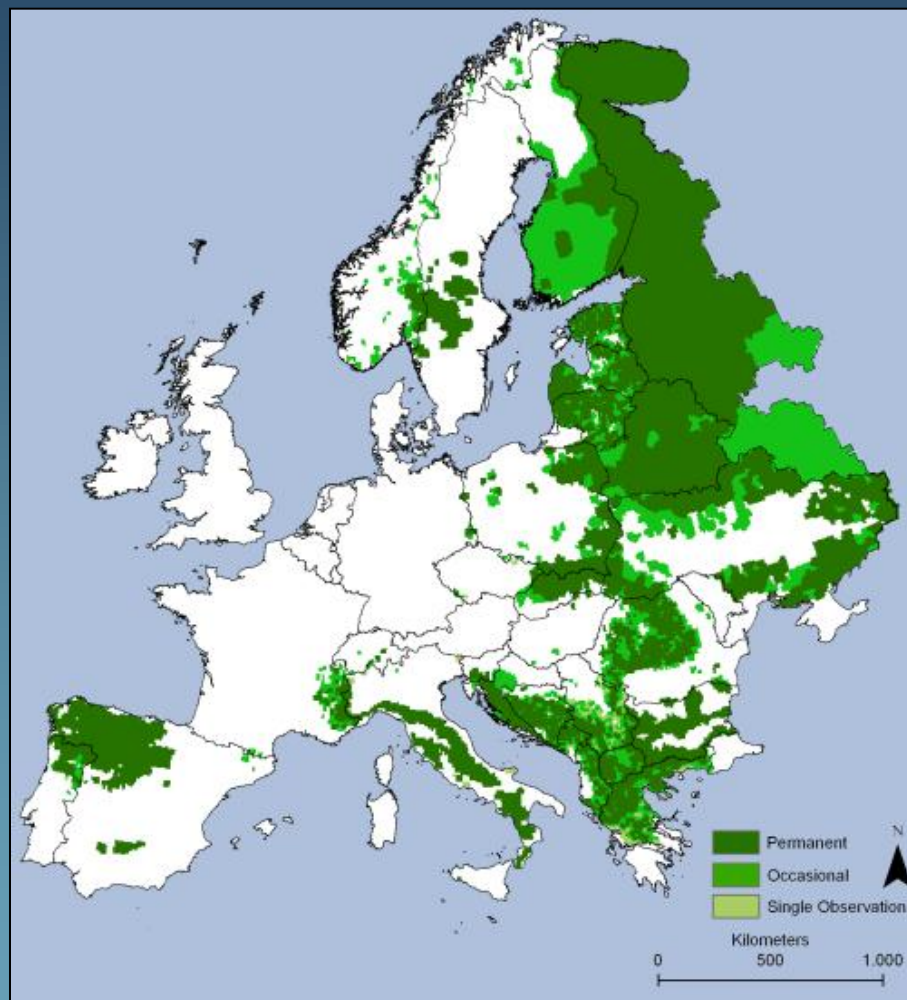
Kingdom: **Animalia**; Phylum: **Chordata** (Vertebrata);  
Class: **Mammalia**; Subclass: **Theria** (Eutheria); Order:  
**Carnivora**; Family: **Canidae**; Genus: **Canis**; Species:  
***Canis lupus***

Valid subspecies:

Synonyms:

**Vernacular names:** [Link to official country links](#)  
[Link to external sources](#)

Invasiveness of the species: [European Network on Invasive Alien Species, NOBANIS](#)





THANK YOU!

