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## **Information note to IPBES secretariat on EEA and EU information**

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**With the support of Sophie Condé and Eva Spehn**

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# 1 Aim

The aim of this document is to facilitate access to the comprehensive relevant information hosted by the European Environment Agency (EEA) to support the IPBES Regional Assessment for Europe and Central Asia.

## 2 Introduction

The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) was established in 2012 as an independent intergovernmental body with the goal of ‘strengthening the science-policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, long-term human well-being and sustainable development’ (<http://www.ipbes.net>).

As part of the work programme for 2014–2018, IPBES will conduct a set of Regional and subregional assessments for biodiversity and ecosystem services for Africa, the Americas, Asia-Pacific and Europe and Central Asia, respectively (IPBES deliverable 2b). The overall scope of the regional/subregional assessments of biodiversity and ecosystem services is to assess the status and trends regarding biodiversity, ecosystem functions and ecosystem services and their interlinkages, the impact of biodiversity, ecosystem functions and ecosystem services and threats to them on good quality of life and the effectiveness of responses, including the Strategic Plan for Biodiversity 2011–2020 and its Aichi Biodiversity Targets and the national biodiversity strategies and action plans developed under the Convention on Biological Diversity. The assessments will address terrestrial, freshwater, coastal and marine biodiversity, ecosystem functions and ecosystem services.

The Europe and Central Asia assessment will focus in particular on the following questions:

- (a) How can ecosystems that provide ecosystem services, such as those underpinning ecosystem-based adaptation to climate change and nature-based solutions to sustainable development, be protected through investments, regulations and management regimes for terrestrial, freshwater, coastal and marine systems?
- (b) What are the effects of production, consumption and economic development on biodiversity and ecosystem services and their contribution to human well-being? Major links with other regions will be assessed;
- (c) How can sectoral policies and new policy instruments make use of opportunities arising from the contribution of biodiversity and ecosystem services to human well-being?

The regional/subregional assessments will be based on existing data, scientific literature, and other information, including indigenous and local knowledge. Regional assessments will assess the state of knowledge on subregional-specific issues as an integral part of the overall analysis. This knowledge will be gathered from the published literature, including grey literature according to guidelines of the Platform, and also through bodies such as national academies of science, national research institutes, scientific societies and other research communities, government environmental agencies and statistical offices. The regional/subregional assessments will also use existing data and information held by global, regional, subregional and national institutions, such as the relevant multilateral agreements.

The scoping document for a regional assessment on biodiversity and ecosystem services for Europe and Central Asia lists the following under III Key datasets: ‘...*The assessment will draw on a wide variety of datasets addressing the specific components of the conceptual framework. Relevant datasets could include those arising from ongoing and planned activities, such as the European Union MAES initiative referred to above, as well as those from a wide range of sources, including*

*global, regional and national institutions and organizations, those from research projects, such as earth observation data, and analysis of the scientific literature. Data and information specific to the region might be retrieved from data centres such as the **European Environment Agency**, the Joint Research Centre, Eurostat, the Organization of the Black Sea Economic Cooperation, the Economic Cooperation Organization and relevant centres collecting earth observation data...*

This document aims to facilitate access to the comprehensive relevant information hosted by the European Environment Agency (EEA). The document has been developed by the EEA for the IPBES Secretariat to provide the expert group with an overview of relevant resources that might be of use for the Regional Assessment for Europe and Central Asia.

The document is structured around the 6 chapters of the regional assessment and lists a selection of relevant information sources based on the review of the environmental data held on the EEA web portal<sup>1</sup> and BISE – Biodiversity Information System for Europe<sup>2</sup>. It also highlights other key EU information and data sources held by Eurostat and JRC, the Joint Research Centre of the European Commission, including the ongoing EU work on Mapping and Assessment on Ecosystems and their Services (MAES) (see page 14)

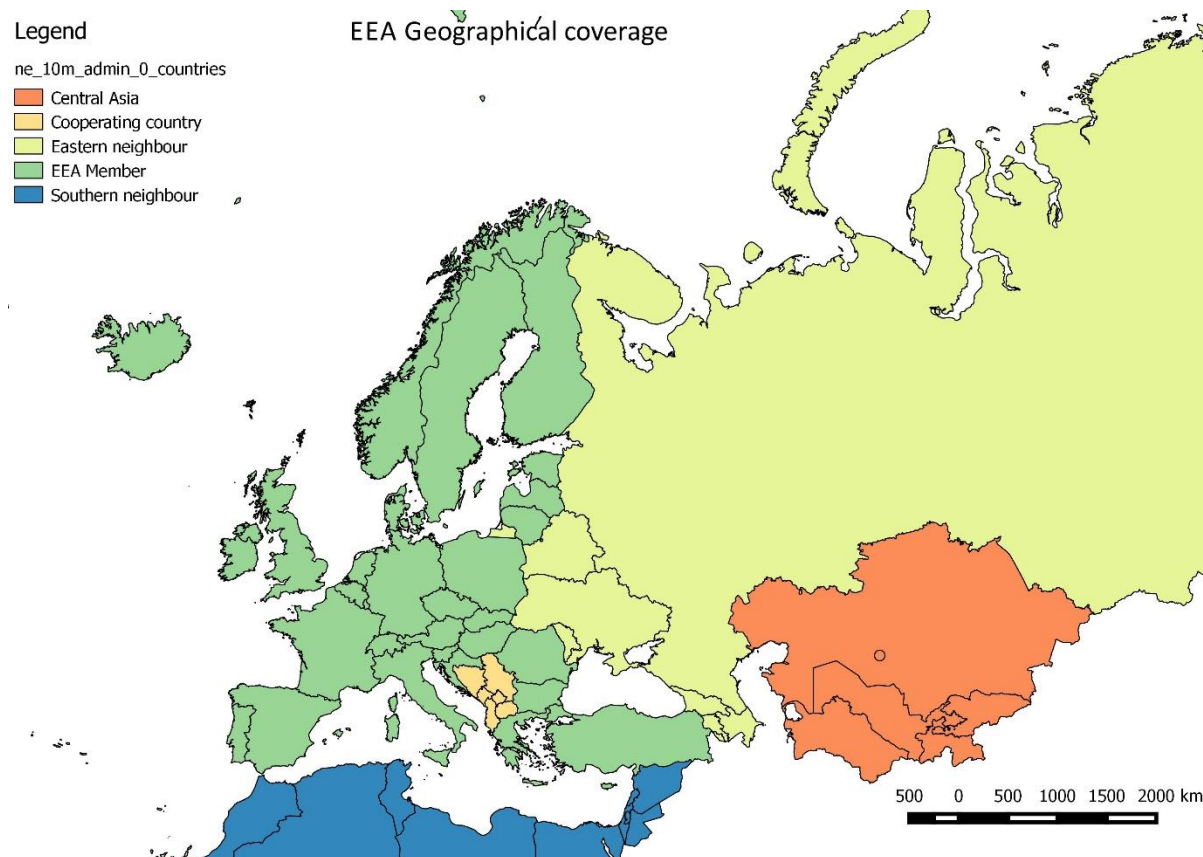
In the MS Excel sheet associated to this report (named ‘Annex EEA4IPBES database’), each entry was tagged with a number of selection criteria allowing specific queries and reports to be performed, some of which are presented as part of this document (in the results section). These include: main topic, temporal coverage, geographical coverage (according to the EEA typology, see Map 1), key words, resource type (publication, map, graph, dataset etc.), resource format (docx, pdf, xls, shp, gif, tiff etc.), DPSIR category, relevance (core, supporting, background), as well as three criteria linking each resource to the IPBES exercise: chapter (1-6), chapter topic and Aichi target.

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<sup>1</sup> <http://www.eea.europa.eu/>

<sup>2</sup> <http://biodiversity.europa.eu/>

## Map 1 Regions as distinguished by the EEA



For the purpose of the regional assessment for Europe and Central Asia, three subregions have been identified which include the following countries and territories, including marine and coastal areas:

<b>Subregions</b>	<b>Countries and territories within the Europe and Central Asia region</b>
Central and Western Europe	Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia, the former Yugoslav Republic of Macedonia and Turkey (Group of Central European countries) Andorra, Austria, Belgium, The Kingdom of Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Liechtenstein, Luxembourg, Malta, Monaco, Netherlands, Norway, Portugal, San Marino, Spain, Sweden, Switzerland and United Kingdom of Great Britain and Northern Ireland (Group of Western European countries)
Eastern Europe	Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova, Russian Federation and Ukraine
Central Asia	Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan

### 3 Methods

The Advance Report of the third session of the Plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services<sup>3</sup>, that was held from 12 to 17 January 2015, in Bonn, Germany, was the reference for the search of information.

This document describes the scope, geographic boundary rationale, utility, assumptions and chapter outline for the regional assessments of biodiversity and ecosystem services.

The document Decision IPBES-3/1 Annex III (advance version)<sup>4</sup> describes the generic regional assessments and Decision IPBES-3/1 Annex VII (advance version)<sup>5</sup> gives more details about the assessment for Europe and Central Asia.

In order to allow a systematic and efficient search for relevant information a simple database structure was developed to record and describe the resources useful for the IPBES regional assessment for Europe and Central Asia.

For the purpose of later analysis and searchability, the relevant EEA metadata fields were included in the database structure.

- ID
- Reference
- Title
- Publication Date
- Temporal Coverage Start
- Temporal Coverage End
- URL
- Owner
- Report Number
- Description
- Keywords (see list on page 61)
- DPSIR

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<sup>3</sup> <http://www.ipbes.net/plenary/ipbes-3.html#one>

<sup>4</sup> Decision IPBES-3/1 Annex III (advance version) - GENERIC SCOPING REPORT FOR THE REGIONAL AND SUBREGIONAL ASSESSMENTS OF BIODIVERSITY AND ECOSYSTEM SERVICES. Adopted by the third session of the plenary meeting held from 12 – 17 January 2015 in Bonn, Germany. [http://www.ipbes.net/images/decisions/ipbes3/Decision\\_IPBES\\_3\\_1\\_Annex\\_III\\_Advance.pdf](http://www.ipbes.net/images/decisions/ipbes3/Decision_IPBES_3_1_Annex_III_Advance.pdf)

<sup>5</sup> Decision IPBES-3/1 Annex VII (advance version) - SCOPING FOR A REGIONAL ASSESSMENT ON BIODIVERSITY AND ECOSYSTEM SERVICES FOR EUROPE AND CENTRAL ASIA. Adopted by the third session of the plenary meeting held from 12 – 17 January 2015 in Bonn, Germany. [http://www.ipbes.net/images/decisions/ipbes3/Decision\\_IPBES\\_3\\_1\\_Annex\\_VII\\_Advance.pdf](http://www.ipbes.net/images/decisions/ipbes3/Decision_IPBES_3_1_Annex_VII_Advance.pdf)



- Resource Type
- Format
- Topic
- EEA Regions

To these fields were added some additional descriptors specific for this assessment which should help the reader filter the required information:

- Relevance: a three category field including values: 'core', 'supporting', 'background' [a subjective assessment of the author]
- Chapters: the six chapters from the IPBES ToC
- Chapter Themes: a list of themes extracted by the author from the chapter contents description.
- Aichi Targets: the 20 Aichi Targets
- IPBES Regions: these were included as an option, but finally not used in the assessment.
- Countries: the full list of European, Central Asian, Middle East and North African countries.
- Comment: a memo field to record any comment

Key issues were extracted from the two IPBES regional assessment documents and added to the database in the field Chapter Themes:

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#### Chapter Themes

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Ch. 1 - pollinators, pollination and food production  
 Ch. 1 - land degradation and restoration  
 Ch. 1 - sustainable use and conservation of biodiversity and strengthening capacity and tools  
 Ch. 1 - invasive alien species

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Ch. 2 - values of nature's benefits to people  
 Ch. 2 - interrelationship between biodiversity, ecosystem functions and society  
 Ch. 2 - geographical difference between production and use of ecosystem services  
 Ch. 2 - impacts / changes of nature benefits with regard to food security  
 Ch. 2 - impacts / changes of nature benefits with regard to energy security  
 Ch. 2 - impacts / changes of nature benefits with regard to livelihood security  
 Ch. 2 - impacts / changes of nature benefits with regard to health security  
 Ch. 2 - cultural ecosystem services  
 Ch. 2 - impact of ecosystem services on society  
 Ch. 2 - innovation and nature based solutions for employment  
 Ch. 2 - multiple values of biodiversity

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Ch. 3 - past and current trends and future dynamics of biodiversity and ecosystems  
 Ch. 3 - effects of change in biodiversity on ecosystem services  
 Ch. 3 - structural and functional ecosystem diversity  
 Ch. 3 - ecosystem range and distribution (changes)  
 Ch. 3 - species of special concern and importance

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Ch. 4 - status, trends and future dynamics of indirect drivers  
Ch. 4 - status and trends of direct drivers  
Ch. 4 - impacts of drivers on nature  
Ch. 4 - land degradation and restoration  
Ch. 4 - invasive alien species  
Ch. 4 - sustainable intensification of agriculture  
Ch. 4 - special attention for fire and floods as drivers

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Ch. 5 - scenario, modelling, analysis of dynamic society / nature interactions  
Ch. 5 - feedback, synergies, time lags, tipping points, resilience and trade-offs  
Ch. 5 - impacts of bio-based economy  
Ch. 5 - climate change in relation to society and nature  
Ch. 5 - food provisioning from land and water  
Ch. 5 - water availability  
Ch. 5 - integration of biodiversity and ES in planning  
Ch. 5 - integration of biodiversity and ES in accounting

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Ch. 6 - governance systems  
Ch. 6 - private and public decision making  
Ch. 6 - policy options, policy mixes  
Ch. 6 - policy instruments, market tools (certification, labelling, NNL, PES, GI)  
Ch. 6 - international and regional agreements  
Ch. 6 - management practices  
Ch. 6 - positive and negative incentives (subsidies etc)  
Ch. 6 - measures for sustainable production and consumption  
Ch. 6 - lessons learned, best practices, projects  
Ch. 6 - capacity building  
Ch. 6 - mainstreaming through sector policies  
Ch. 6 - cost of policy inaction

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The EEA website<sup>6</sup> and the Biodiversity Information System for Europe (BISE)<sup>7</sup> were systematically reviewed and resources of interest recorded in an MS Access form. All available metadata were recorded for each entry. In the first collection phase, all potentially relevant information was harvested. Halfway the exercise a number of overviews was produced to highlight the possible gaps in information (geographical and temporal coverage, themes, chapters etc.).

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<sup>6</sup> <http://www.eea.europa.eu/>

<sup>7</sup> <http://biodiversity.europa.eu/>

## 4 Results

### 4.1 Introduction

In this section we present the **core resources** identified for each of the six IPBES Regional Assessment chapters of the generic scoping and the scoping report for Europe and Central Asia (Decision IPBES-3/1 Annex III and VII). The full list of resources, including supporting and background documents are presented in the annexes and the MS Excel sheet associated to this report.

Please note that the overview below represents the status as of 23 March 2015. As much EEA information, e.g. indicators, are regularly being updated, we recommend to consult the EEA website for most recent information for a given information source.

### 4.2 EEA core information sources on biodiversity

#### 4.2.1 Reports

EEA Reports summarise and analyse the data and information according to environmental themes. In relation to biodiversity and ecosystem services assessment, these reports cover overviews of the state of biodiversity and assessments of threats and pressures. Twenty-one EEA Reports were identified as part of this exercise of which 4 were tagged as core reports for biodiversity:

- ‘Assessing biodiversity in Europe — the 2010 report’ (62)<sup>8</sup>
- ‘Climate change, impacts and vulnerability in Europe 2012’ (108)
- ‘Landscape fragmentation in Europe’ (102)
- ‘Protected areas in Europe - an overview’ (190)

The SOER, State of Europe’s Environment Report (159), published on 3 March 2015, presents the most comprehensive and recent overview of Europe’s environment including nature, biodiversity and an analysis of drivers and future outlooks.

Relevant upcoming EEA reports:

- ‘State of Europe’s seas’ (planned for the second quarter of 2015)
- ‘Mapping and assessment of ecosystems’ (planned for the second quarter of 2015)
- ‘Forests ecosystems’ (planned for the second quarter of 2015)

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<sup>8</sup> Numbers between brackets refer to the number of the resource in the Reference list starting on page 27

#### 4.2.2 Indicators

The EEA develops and manages a series of indicators at EU level to monitor progress in the different environmental policy areas. In the framework of the SEBI (Streamlining European Biodiversity Indicators) process (120), a subset of 27 indicators has been developed specifically on biodiversity which includes indicators for the state of drivers, state, pressures, impacts and response. All 27 biodiversity indicators are included in this overview. In addition, a number of relevant indicators from other sets has also been added to this overview. These include 8 climate related indicators (CLI), 1 air pollution indicator (APE), 1 land and soil indicator (LSI), and two additional ones from the EEA core set of environmental indicators (CSI). A good introduction to the EEA environmental indicators is provided in the Digest of EEA indicators 2014 (147).

#### 4.2.3 Biodiversity datasets

The EEA website is a repository for environmental datasets that can be downloaded for specific analysis purposes. The full range of 107 environmental datasets can easily be browsed and queried at <http://www.eea.europa.eu/data-and-maps#tab-datasets>. European datasets are presented as MS Excel worksheets, MS Access databases, ESRI Shapefiles, GeoTIFF raster files, XML files and a number of other formats.

Twenty-six biodiversity related datasets have been included in this IPBES overview including the following core (interactive) datasets and graphs:

- ‘Article 17 of the Habitats Directive - Conservation status of habitats and species of Community interest’ [dataset] (144)
- ‘Conservation status by main type of habitats’ [graph] (182)
- ‘Conservation status of habitat types and species (Article 17, Habitats Directive 92/43/EEC) database and spatial dataset’ [graph] (46)
- ‘Conservation status, species by taxonomic group’ [graph] (44)
- ‘EUNIS, the European Nature Information System’ [dataset] (184)
- ‘Growth of the nationally designated protected areas and site number’ [graph] (169)
- ‘Nationally designated areas (CDDA) geospatial database’ [dataset] (153)
- ‘Natura 2000 barometer charts’ [graph] (187)
- ‘Natura 2000 data - the European network of protected sites’ [dataset] (136)

#### 4.2.4 10 Messages for Biodiversity

In 2010, as part of the celebration of the International Year of Biodiversity, the EEA published a series of 10 messages on biodiversity presenting a summary of major topics within the biodiversity field of work. Topics included in the 10 messages are:

- ‘Agricultural ecosystems’ (48)
- ‘Climate change and biodiversity’ (49)
- ‘Coastal ecosystems’ (50)

- ‘Cultural landscapes and biodiversity heritage’ (51)
- ‘Forest ecosystems’ (52)
- ‘Freshwater ecosystems’ (53)
- ‘Marine ecosystems’ (54)
- ‘Mountain ecosystems’ (55)
- ‘Protected areas’ (56)
- ‘Urban ecosystems’ (57)

#### 4.2.5 Technical Reports

Twenty EEA Technical Reports are included in this overview out of which 5 have been tagged as core documents for the IPBES regional assessment:

- ‘Digest of EEA indicators 2014’ (147)
- ‘EU 2010 Biodiversity Baseline’ (68)
- ‘Invasive alien species indicators in Europe - a review of Streamlining European Biodiversity (SEBI) Indicator 10’ (214)
- ‘The impacts of invasive alien species in Europe’ (213)
- ‘Towards an early warning and information system for invasive alien species (IAS) threatening biodiversity in Europe’ (90)

Relevant upcoming EEA technical reports:

- ‘Forest/water interactions’ (Planned for second quarter of 2015)
- ‘Spatial analysis of marine protected areas networks in Europe’s seas (MPA)’ (Planned for second quarter of 2015)
- ‘Development towards European marine ecosystem (services) assessment’ (Planned for fourth quarter of 2015).
- ‘The state of nature’ (the conservation status of species and habitats) (Planned for second quarter of 2015)
- ‘EU 2010 Biodiversity Baseline adapted to the MAES ecosystem classification’ (Planned for second quarter of 2015)
- ‘EEA ecosystem assessment: concept, data availability and results’ ((Planned for second quarter of 2015)
- ‘EU policies and their impact on land take and land degradation’ (Planned for second quarter of 2015)

## 4.3 Other EU information portals relevant for biodiversity and ecosystem services assessments

### 4.3.1 BISE

<http://biodiversity.europa.eu>

The Biodiversity Information System for Europe (BISE) is a single entry point for data and information on biodiversity supporting the implementation of the EU strategy and the Aichi targets in Europe. Bringing together facts and figures on biodiversity and ecosystem services, it links to related policies, environmental data centres, assessments and research findings from various sources. It is being developed to strengthen the knowledge base in support of the implementation of the EU biodiversity strategy and the assessment of progress in achieving the 2020 targets.

BISE is a partnership between the European Commission, DG Environment - Directorate B and the European Environment Agency, supporting the knowledge base for the implementation of the EU 2020 Biodiversity Strategy. It also serves as the Clearing House Mechanism for the EU within the context of the United Nations Convention on Biological Diversity (CBD) and as such it is supported by the collaboration of the European CHM network and the CBD Secretariat.

#### **The EU work on Mapping and Assessment on Ecosystems and their Services (MAES)**

The EU work on Mapping and Assessment on Ecosystems and their Services (MAES) is foreseen to be the main EU contribution to the regional IPBES assessment.

Action 5 of the EU Biodiversity Strategy to 2020 calls Member States to map and assess the state of ecosystems and their services in their national territory with the assistance of the European Commission. The results of this mapping and assessment should support the maintenance and restoration of ecosystems and their services. A Working Group on Mapping and Assessment on Ecosystems and their Services (MAES) currently works to implement Action 5 by the EU and its Member States.

A dedicated portal at BISE <http://biodiversity.europa.eu/maes> provides access to a wide range of relevant information arising from MAES, including the four key publications listed below:

- ‘MAES catalogue of case-studies’ (203)
- ‘MAES digital atlas’ (204)
- ‘An analytical framework for ecosystem assessments under Action 5 of the EU Biodiversity Strategy to 2020 (Discussion paper – Final, April 2013)’ (205)
- ‘Indicators for ecosystem assessments under Action 5 of the EU Biodiversity Strategy to 2020 (2nd Report – Final, February 2014)’ (206)

### 4.3.2 WISE

<http://water.europa.eu/>

The Water Information System for Europe (WISE) is the gateway to information on European water issues. It comprises a wide range of data and information collected by EU institutions to serve several stakeholders. It offers access to water related data that are important to biodiversity and ecosystems assessment mainly as measures for state (good ecological status), but also as pressures (water pollution, flooding, dessification, water depletion etc.).

### 4.3.3 Climate Adapt

<http://climate-adapt.eea.europa.eu/>

The European Climate Adaptation Platform (Climate-ADAPT) aims to support Europe in adapting to climate change. It is an initiative of the European Commission and helps users to access and share information on:

- expected climate change in Europe;
- current and future vulnerability of regions and sectors;
- national and transnational adaptation strategies;
- adaptation case studies and potential adaptation options; and
- tools that support adaptation planning.

Biodiversity and ecosystem services play an important role in both climate change mitigation and adaptation. This portal contains a wide range of projects, initiatives and case studies in which climate change initiatives are integrated with biodiversity.

### 4.3.4 European Commission

[http://ec.europa.eu/index\\_en.htm](http://ec.europa.eu/index_en.htm)

The European Commission on its web portal also collects much relevant information for biodiversity and ecosystems assessment in Europe. In particular the pages of DG Environment focused on Nature and Biodiversity are a good starting point to explore. Some important resources have been included in this overview:

- ‘Copernicus, the European Earth Observation Programme’ (27)
- ‘Delivering Alien Invasive Species Inventories for Europe’ (28)
- ‘Financing Natura 2000’ (32)
- ‘Infrastructure for Spatial Information in the European Community (INSPIRE)’ (33)
- ‘LIFE programme publications’ (35)
- ‘LIFE Projects database’ (36)
- ‘LifeWatch - European e-Science infrastructure for biodiversity and ecosystem research’ (37)
- ‘Nature and Biodiversity’ pages (29)

#### 4.3.5 Eurostat

<http://ec.europa.eu/eurostat/>

Eurostat is the statistical office of the EU, situated in Luxembourg. Its task is to provide the EU with statistics at European level that enable comparisons between countries and regions.

The Eurostat web portal provides a wide range of statistics and statistical overviews covering all EU policy areas. Some core data about the state of the environment and nature are included here, but many statistics about drivers and pressures (demographics, pollutants, agriculture, industry, transport etc.) can also be found at Eurostat. Specifically relevant, and included in this overview are:

- ‘Agricultural Statistics’ (192)
- ‘Environmental statistics and accounts’ (193)

#### 4.3.6 Joint Research Centre

<https://ec.europa.eu/jrc/>

The Joint Research Centre (JRC) is the European Commission's in-house science service which employs scientists to carry out research in order to provide independent scientific advice and support to EU policy.

The range of work carried out at the JRC also includes the compilation of a large number of databases in addition to the development of software and modelling tools. These resources are either available to all members of the public on <https://ec.europa.eu/jrc/en/scientific-tools/> or to specific research groups, providing assistance to scientists in carrying out their work.

Some interesting JRC resources and datasets, useful for further exploration include:

- ‘DOPA, the Digital Observatory for Protected Areas’ (196)
- ‘EASIN, the European Alien Species Information Network’ (197)
- ‘eHabitat - Ecological Forecasting for Policy Making’ (199)
- ‘Environment and Climate Change Portal’ (200)
- ‘European Forest Data Centre Viewer’ (39)
- ‘European Forest Fire Information System’ (201)
- ‘Floods Portal’ (202)
- ‘State of Soil in Europe’ (198)



## **4.4 Chapter 1: Setting the scene**

General scope for regional assessments: Chapter 1 of the IPBES regional assessment presents the policy-relevant questions identified for each region/subregion and how each assessment reflects the conceptual framework and the framework for the science-policy interface. It demonstrates how the assessment addresses policy questions, including those related to implementation of the CBD Strategic Plan for Biodiversity and its Aichi Biodiversity Targets. It presents regional and subregional aspects of priority thematic challenges identified by the Platform, such as land degradation and restoration, invasive alien species, and sustainable use of biodiversity as addressed in the thematic assessments. It also outlines the methodologies and approaches used in the assessment, including its approach to the use of different knowledge systems, and outline how the assessment will identify and address uncertainties and gaps in data and knowledge. It identifies the relevant stakeholders requesting the regional assessment and their priorities.

### **4.4.1 Indicators**

- Invasive alien species in Europe (SEBI 010) (78)
- SEBI 007 Indicator Nationally designated protected areas (104)

### **4.4.2 Publications**

- The European Environment - State and Outlook 2015 (159)
- The impacts of invasive alien species in Europe (213)
- Invasive alien species indicators in Europe a review of streamlining European biodiversity (SEBI 010) (214)

## **4.5 Chapter 2: Nature's benefits to people and quality of life**

General scope for regional assessments: Chapter 2 reflects the Conceptual Framework boxes 'Nature's benefits to people' and 'Good quality of life', and fluxes between them. It will assess the values of nature's benefits to people, including the interrelationship between biodiversity, ecosystem functions and society, the geographical difference between the production and use of ecosystem services, as well as the status, trends and future dynamics of ecosystem goods and services and nature's gifts to people. It will apply methods described in the guide for assessments (IPBES deliverable 2 (a)) and interact closely with the thematic assessments in deliverable 3 (b). It will also assess the different impacts of changes in nature's benefits to people with regard to food security, energy security, livelihood security and health security and identify aspects of biodiversity and ecosystem functions and services that are critical to social relationships, spirituality and cultural identity. It will also address issues of equity, including intergenerational and intergenerational equity, social relationships, spirituality and cultural identity with respect to biodiversity and ecosystem functions and services. The chapter reflects in particular Goal D of the Strategic Plan for Biodiversity and will address issues related to the three Aichi Targets under this goal (Aichi Targets 14, 15 and 16) as well as target 18. The Regional Assessment for Europe and Central Asia analysis will also address the impact of ecosystem services on society and on how innovation and nature-based solutions are influencing the job market in the region. The chapter will also examine the multiple values of biodiversity.

#### **4.5.1 Publications**

- The European Environment - State and Outlook 2015 (159)

### **4.6 Chapter 3: Status, trends and future dynamics of biodiversity and ecosystems underpinning nature's benefits to people**

General scope for regional assessments: Chapter 3 will reflect the Conceptual Framework box 'Nature', emphasizing the components and fluxes impacting on 'Nature's benefits to people'. It will assess what is known about the past and current trends and future dynamics of biodiversity and ecosystems and their positive and negative effects on the key ecosystem goods and services identified in chapter 2. It will consider both structural and functional ecosystem diversity and genetic diversity and the area and extent of ecosystems, and include fragile habitats and hotspots and species of special concern and importance, such as Convention on International Trade in Endangered Species (CITES) species, migratory species and International Union for Conservation of Nature (IUCN) threatened species, taking into account species listed at the national level where relevant. It will also include species that are important for the functioning of ecosystems and livelihoods. Available forecasts on current trends will also be outlined. The chapter will also explore how changes in 'Nature' impact 'Nature's benefit to people'. The chapter reflects in particular Goal C of the Strategic Plan for Biodiversity and will address issues related to the three Aichi Targets under this goal (Aichi Targets 11, 12 and 13), as well as relevant aspects of Aichi Targets 14.

#### **4.6.1 Data**

- Conservation status, species by taxonomic group (44)
- Conservation status of habitat types and species (Article 17, Habitats Directive 92/43/EEC) database and spatial dataset (46)

#### **4.6.2 Indicators**

- Abundance and distribution of selected species (SEBI 001) (58)
- Ecosystem coverage (SEBI 004) (66)
- Habitats of European interest (SEBI 005) (76)
- Impact of climate change on bird populations (SEBI 011) (77)
- Livestock genetic diversity (SEBI 006) (81)
- Marine trophic index of European seas (SEBI 012) (83)
- Red List Index for European species (SEBI 002) (87)
- Sites designated under the EU Habitats and Birds Directives (SEBI 008) (105)
- Species of European interest (SEBI 003/CSI 007) (88)

#### **4.6.3 Interactive data**

- Conservation status of the habitat types and species of Community interest (41)
- Conservation status, species by taxonomic group (44)

- Article 17 of the Habitats Directive - Conservation status of habitats and species of Community interest (2007-2012) (144)
- State of Nature Report 2015 (175)
- Conservation status by main type of habitats (182)
- EUNIS, the European Nature Information System (184)

#### **4.6.4 Maps**

- Conservation status of habitat types and species (Article 17, Habitats Directive 92/43/EEC) database and spatial dataset (46)
- Distribution of Natura 2000 sites across EU-27, 2012 (109)

#### **4.6.5 Publications**

- Assessing biodiversity in Europe: the 2010 report (62)
- Digest of EEA indicators 2014 (147)
- EU 2010 biodiversity baseline (68)
- European environment — state and outlook 2015 (SOER 2015) (159)
- Landscape fragmentation in Europe (102)
- State of Nature Report 2015 (175)

### **4.7 Chapter 4: Direct and indirect drivers of change in the context of different perspectives of quality of life**

General scope for regional assessments: Chapter 4 reflects the Conceptual Framework boxes and fluxes on ‘Institutions and governance and other indirect drivers’ and ‘Direct drivers’. It will assess the status and trends and future dynamics of indirect drivers, focusing in particular on those affecting ‘Nature’ and ‘Nature’s benefits to people’ as the foundation for ‘Good quality of life’. It will assess the status and trends in direct drivers, as well as the impact of these drivers on ‘Nature’ based on future predictions, and analyse the interrelations between and among direct drivers and indirect drivers. Indirect drivers include policy changes, changes in economic activity, population change and technology change. Consideration will be given to how institutional and governance arrangements contribute to changes in biodiversity, ecosystem functions and ecosystem services. Direct drivers include habitat conversion, use of aquatic resources – including through fisheries – land management practices, use of wild species, pollution, invasive alien species, the impacts of climate change on nature, and extreme events. The chapter reflects in particular Goals A and B of the Strategic Plan for Biodiversity and will address issues covered by the Aichi Targets under this goal (in particular Aichi Targets 4, 5, 6, 7, 8, 9 and 10). The Regional Assessment for Europe and Central Asia will specifically place emphasis on the regional and subregional aspects of land degradation and restoration as well as on invasive alien species and sustainable intensification of agriculture. Fire and floods will be included as a driver in the European and Central Asian assessment owing to its growing importance in the region.

### **4.7.1 Indicators**

- Agriculture: nitrogen balance (SEBI 019) (60)
- Aquaculture: effluent water quality from finfish farms (SEBI 022) (61)
- Critical load exceedance for nitrogen (SEBI 009) (63)
- Ecological Footprint of European countries (SEBI 023) (64)
- Fisheries: European commercial fish stocks (SEBI 021) (71)
- Forest: deadwood (SEBI 018) (72)
- Forest: growing stock, increment and fellings (SEBI 017) (73)
- Fragmentation of natural and semi-natural areas (SEBI 013) (74)
- Freshwater quality (SEBI 016) (75)
- Impact of climate change on bird populations (SEBI 011) (77)
- Invasive alien species in Europe (SEBI 010) (78)
- Nutrients in transitional, coastal and marine waters (SEBI 015) (84)

### **4.7.2 Publications**

- Climate change, impacts and vulnerability in Europe 2012 (108)
- Digest of EEA indicators 2014 (147)
- European environment — state and outlook 2015 (SOER 2015) (159)
- Invasive alien species indicators in Europe a review of streamlining European biodiversity (SEBI) 010 (214)
- Protected areas in Europe: an overview (190)
- The impacts of invasive alien species in Europe (213)

## **4.8 Chapter 5: Integrated and cross-scale analysis of interactions of the natural world and human society**

General scope for regional assessments: Chapter 5 reflects all the boxes and fluxes of the Conceptual Framework. It will build on the analysis in the previous chapter and make extensive use of scenarios and modelling in its analysis. It will focus on the key issues that society is expected to face over the next 40 years that will determine the dynamics of the interactions between society and nature. It will include integrated and cross-scale analysis of these dynamics, including feedback, synergies, time-lags, tipping points, resilience, cross-regional interrelations, and trade-offs. The chapter will explore various paths towards sustainable development; this involves exploring changes in the trajectories of multiple drivers and the role played by synergies, trade-offs and adaptive behaviour. The chapter relates to the long term 2050 vision of the Strategic Plan for Biodiversity and will help to identify possible pathways to achieve this vision. It will rely heavily on outputs of the thematic assessment on scenarios and models of biodiversity, ecosystem function and ecosystem services (Platform deliverable 3 (c) and recommendations in the guide for regional and global assessments (Platform deliverable 2 (a)). Chapter 5 of the Regional Assessment for Europe and Central Asia will in particular consider issues which include increasing demand for biological raw materials in a bio-economy context (bioenergy, fibres and organic matter), climate change, food provisioning from land and water, and water availability. It will assess how the value of biodiversity and associated

ecosystem services influences indirect drivers and how the integration of such values into national and local development planning and accounting may help address Aichi Biodiversity Target 2.

#### **4.8.1 Indicators**

- Impact of climate change on bird populations (SEBI 011) (77)

#### **4.8.2 Publications**

- Climate change, impacts and vulnerability in Europe 2012 (108)
- European Atlas of Soil Biodiversity (17)
- European environment — state and outlook 2015 (SOER 2015) (159)

### **4.9 Chapter 6: Options for governance, institutional arrangements and private and public decision making across scales and sectors**

General scope for regional assessments: Informed by the analysis in previous chapters, chapter 6 will reflect the Conceptual Framework boxes and fluxes on ‘Institutions and governance and other indirect drivers’. It will examine different policy ideas and possible options for decision makers at the regional and subregional levels, in response to the scenario set out in previous chapters, in particular chapter 5. Explorations of options will be policy relevant, but not policy prescriptive, as outlined in the principles of the Platform. Options explored will include different policy instruments, market tools, conservation and management practices, and international and regional agreements. The chapter will look at options at different hierarchical spatial and temporal scales, from the international level to local and indigenous communities and households. It will explore options for policy mixes and alignments in polycentric governance systems, assess the effectiveness of such options and consider who would gain or bear their cost. The chapter will analyse future challenges for sustainable use and conservation in key sectors in each region and assess options for integrating biodiversity, ecosystem function and ecosystem services into poverty reduction strategies and national accounting, and, where appropriate, the recognition of the rights of Mother Earth. The analyses will include incentives, subsidies harmful to biodiversity, positive incentives for the conservation and sustainable use of biodiversity, ecosystem function and ecosystem services, as well as measures taken to achieve sustainable production and consumption of biodiversity, ecosystem function and ecosystem services and rights-based approaches in order to address biodiversity conservation. The chapter will also identify the enabling environments and limitations for policy uptake and lessons learned, including solutions and methods for ensuring success and capacity-building needs. It will address issues related to Goals A and E of the Strategic Plan for Biodiversity and the relevant Aichi Targets (in particular Aichi Targets 1, 2, 3, 4, 17, 18, 19 and 20) as well as target 16. The Regional Assessment for Europe and Central Asia will in particular consider public decision-making across scales and sectors, future challenges for sustainable use and conservation in key sectors in the European and Central Asian region such as nature protection, agriculture, forestry, fisheries, water management, spatial planning, energy (including bioenergy), tourism, infrastructure and incentives (including subsidies harmful to biodiversity as well as positive incentives for the conservation and sustainable use of biodiversity).

#### **4.9.1 Data**

- Natura 2000 data - the European network of protected sites (136)
- Nationally designated areas (CDDA) geospatial database (153)

#### **4.9.2 Indicators**

- Financing biodiversity management (SEBI 025) (70)
- SEBI 007 Indicator Nationally designated protected areas (104)
- Sites designated under the EU Habitats and Birds Directives (SEBI 008) (105)

#### **4.9.3 Interactive data**

- Growth of the nationally designated protected areas and site number (169)
- Natura 2000 barometer charts (187)

#### **4.9.4 Maps**

- Distribution of Natura 2000 sites across EU-27 (109)
- Nationally designated areas (CDDA) geospatial database (153)

#### **4.9.5 Publications**

- Landscape fragmentation in Europe (102)
- European Environment - State and Outlook 2010 (159)
- Towards an early warning and information system for invasive alien species (IAS) threatening biodiversity in Europe (90)

#### **4.9.6 Policy instruments**

- Birds Directive (12)
- Habitats Directive (4)

## 5 Gap analysis of the selected EEA information

### 5.1 Thematic coverage of the information

The results of the selection of EEA resources have been analysed in order to highlight some gaps in relation to the IPBES needs to perform the Regional Assessment.

The current situation, after 200 resources were identified and processed shows a marked bias of the information towards chapter 3 and 4 which focus mainly on status and trends of biodiversity and ecosystem (services) and the status and trends of drivers and pressures.

What is still missing at this stage and could be the subject of more targeted search are issues relating biodiversity and ecosystem services to society (Chapter 2) and dynamic analysis and forecast of ecological processes (Chapter 5).

Chapter 1 and 6, although the IPBES TOC indicates a number of focus areas, will be very much about the whole range of issues, as they can be considered more like an introduction and a conclusion to the report. They will benefit from most of the collected information.

**Table 1 Number of EEA resources per IPBES Assessment chapter by relevance**

Chapter	Core	Supporting	Background
Chapter 1	7	6	4
Chapter 2	4	13	12
Chapter 3	27	10	7
Chapter 4	20	23	27
Chapter 5	6	11	20
Chapter 6	17	24	37

The analysis of the Aichi targets covered by the selected information also shows a strong bias, and if needed this table can also be used to focus the remaining time for the search.

**Table 2 Number of EEA resources per Aichi Target**

Aichi Target	Number of resources
Target 4 Plans for sustainable production consumption	10
Target 5 Rate of habitat loss halved, degradation reduced	20
Target 6 Sustainable fisheries	11
Target 7 Sustainable agriculture and forestry	30
Target 8 Pollution controlled	28
Target 9 IAS controlled or eradicated	14
Target 10 Climate change impacts minimized	32
Target 11 Network of protected areas in place	19
Target 12 Conservation status of most threatened species improved	18
Target 13 Agricultural genetic diversity safeguarded	5

<b>Aichi Target</b>	<b>Number of resources</b>
Target 14 Ecosystems (and services to well-being) conserved and restored	25
Target 15 Degraded ecosystems restored (esp climate change related)	11
Target 16 Access and benefit sharing operational	1
Target 17 Participatory NBSAPs implemented	0
Target 18 Traditional knowledge and biodiversity use respected	1
Target 19 Science base and technology related to biodiversity are shared	23
Target 20 Financial resources mobilised for strategy implementation	4

Much data and information relevant to Aichi targets 5 to 15 is included in the collected resources. These data and information relate to (the status) species, habitats and sites and to the main drivers (climate change, agriculture, forestry, fisheries), pressures (invasive alien species, pollution) and traditional responses (protected areas, species protection). The EEA resources also offer quite some useful information about the role of biodiversity and ecosystem services for society. The current selection of EEA and related data show gaps as far as Harmful incentives, Agricultural genetic diversity, NBSAP development, Access and Benefit Sharing and Traditional Use of Biodiversity are concerned.

**Table 3 Number of EEA resources per DPSIR category**

<b>DPSIR</b>	<b>Number of resources</b>
Driver	17
Pressure	64
State	66
Impact	32
Response	90

The EEA data covers the areas of pressure and state of biodiversity quite well. Also in terms of responses there is a good number of relevant resources. The collected information is much lower on drivers and impacts.

**Table 4 Number of EEA resources per resource type**

<b>Resource type</b>	<b>Number of resources</b>
Article	1
Case Study	1
Data	19
Graph	3
Indicator	36
Interactive data	15
Interactive map	12
Map	18
Policy instrument	11
Portal	21



Resource type	Number of resources
Project	5
Publication	85

## 5.2 Temporal coverage of the selected EEA information

The table of results (an MS Excel table presented as an annex to this document) includes information on the temporal coverage of the data, and this information can be retrieved from that overview.

**Figure 1 Temporal coverage of selected resources by DPSIR category**

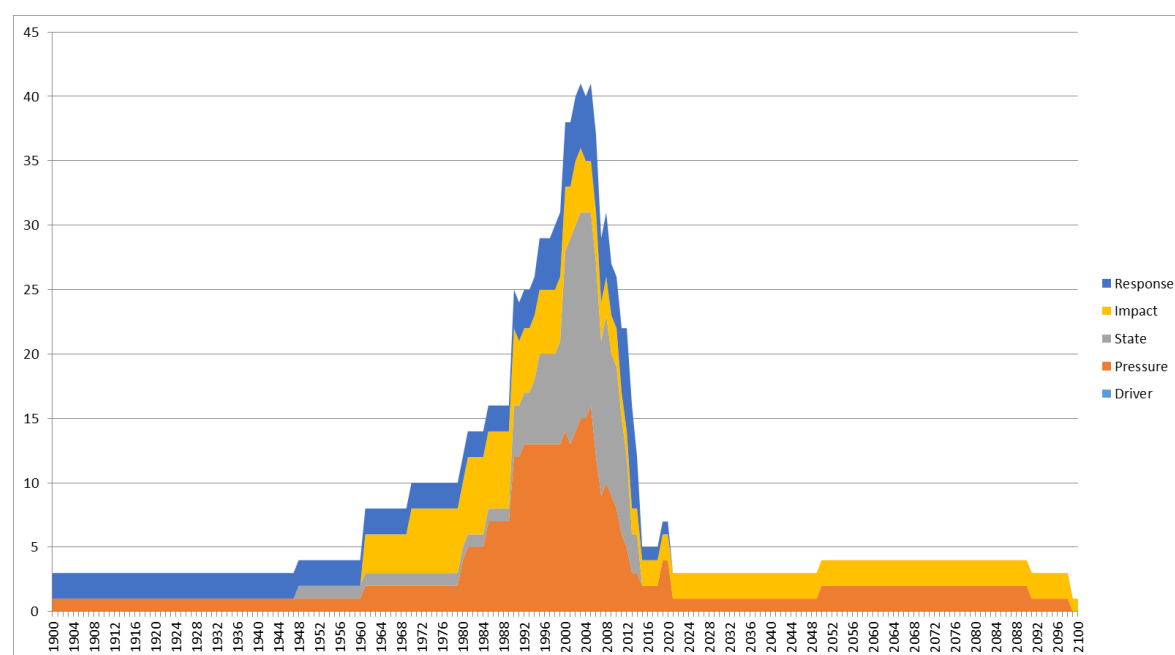


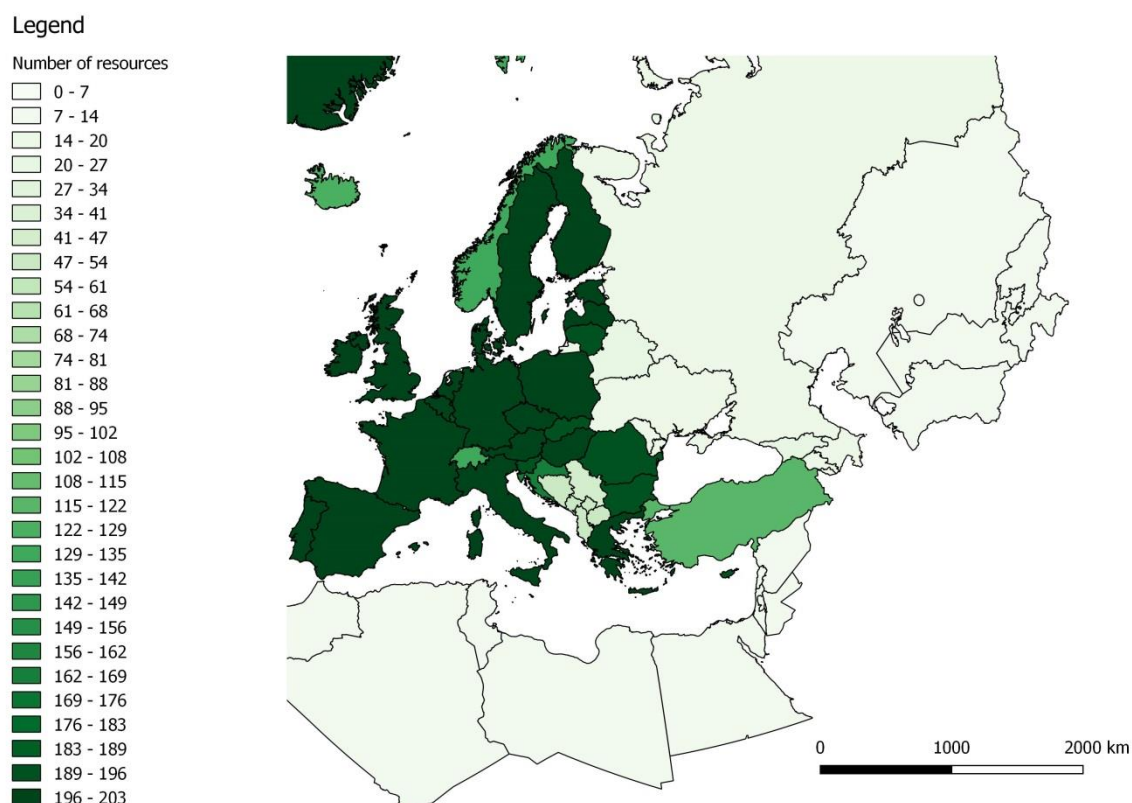
Figure 1 shows the temporal coverage of data and information contained in the selected resources. Only those resources for which an explicit temporal coverage of the data and information is given or could be traced are included in these figures. Indeed, the data used in the graph exclude publication dates of reports, and only refer to the temporal coverage of the data and information contained in the report. As could be expected there is a strong concentration of data and information in the time interval between the beginning of the 1990ies (Convention on Biological Diversity, Habitats Directive) and 2014 (end year of most assessment reports). Some publications contain projections and results of scenario and modelling exercises, some of which cover a period up to the year 2100.

The graph also shows that most information and data resources provided by the EEA concerns the state of biodiversity and the threats and pressures acting upon the biodiversity.

### 5.3 Geographical coverage of the selected EEA information

The geographical area covered by the EEA information does not overlap fully with the geographical coverage of the IPBES Regional Assessment for Europe and Central Asia. Most of the information collected and managed by the EEA is retrieved from the EU Member States, plus Iceland, Liechtenstein, Norway, Switzerland and Turkey. Historical data is often only available at the EU15, EU25, EU27 or EU28 levels. Where available, the geographical coverage of the data has been recorded. The results as on 5 March 2015 are presented in Map 2. It shows the number of selected EEA references per country, and should help the IPBES experts focus the efforts in the search of additional data and information to complete the assessment at the Europe and Central Asia regional level.

**Map 2 Geographical coverage: Number of selected EEA references per country**



In line with the expectations, the data and information about biodiversity and ecosystem services held and made available by the EEA is geographically biased towards the 28 EU member states and the 33 EEA member countries. The EU15 and EU25 countries have the best geographical coverage, followed by the EU27 and EU28 countries and some of the EEA member countries (in particular Liechtenstein, Norway and Switzerland).

The map shows that in order to achieve a balanced geographical coverage of biodiversity and ecosystem services information and data for the IPBES European and Central Asian Assessment, additional efforts will have to be made to find resources for Eastern neighbours and Central Asian countries.

# References

Please note that the hyperlinks provided in this reference list were checked at the moment of the publication of this report. However, it is widely known that URLs tend to change over time. If an URL is broken, the requested document can generally be found by inserting either the document title or reference in the search engine.

1. Brunel, S., E. Fernández-Galiano, P. Genovesi, V. H. Heywood, C. Kueffer and D. M. Richardson, 2013, Invasive alien species: a growing but neglected threat? In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/>
2. Drakou, E.G., N.D. Crossman, L. Willemen, B. Burkhard, I. Palomo, J. Maes, S. Peedell, A visualization and data-sharing tool for ecosystem service maps: Lessons learnt, challenges and the way forward, Ecosystem Services, Available online 14 January 2015, ISSN 2212-0416, <http://dx.doi.org/10.1016/j.ecoser.2014.12.002>. <http://esp-mapping.net/Home/>
3. EC, 1991, Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment [http://ec.europa.eu/environment/water/water-urbanwaste/index\\_en.html](http://ec.europa.eu/environment/water/water-urbanwaste/index_en.html)
4. EC, 1992, Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora [http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index\\_en.htm](http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm)
5. EC, 2000, Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy [http://ec.europa.eu/environment/water/water-framework/index\\_en.html](http://ec.europa.eu/environment/water/water-framework/index_en.html)
6. EC, 2005, Communication from the Commission to the Council and the European Parliament - Thematic Strategy on air pollution, COM/2005/0446 final <http://eur-lex.europa.eu/legal-content/EN/NOT/?uri=celex:52005DC0446>
7. EC, 2006, Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions - A thematic strategy on the sustainable use of pesticides, COM/2006/0372 final <http://eur-lex.europa.eu/legal-content/EN/NOT/?uri=CELEX:52006DC0372>
8. EC, 2006, Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration <http://ec.europa.eu/environment/water/water-framework/groundwater/framework.htm>
9. EC, 2007, Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32007L0002>
10. EC, 2007, Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks (Text with EEA relevance) <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32007L0060>
11. EC, 2008, Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive) (Text with EEA relevance) [http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index\\_en.htm](http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index_en.htm)
12. EC, 2009, Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds [http://ec.europa.eu/environment/nature/legislation/birdsdirective/index\\_en.htm](http://ec.europa.eu/environment/nature/legislation/birdsdirective/index_en.htm)

13. EC, 2009, Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment Text with EEA relevance <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32011L0092>
14. EC, 2009, White paper - Adapting to climate change: towards a European framework for action, COM/2009/0147 final. <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1424955136790&uri=CELEX:52009DC0147>
15. EC, 2010, Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions: Our Life Insurance, Our Natural Capital: An EU Biodiversity Strategy to 2020, COM/2011/0244 final <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52011DC0244>
16. EC, 2010, EUROPE 2020 A strategy for smart, sustainable and inclusive growth, COM/2010/2020 final. <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52010DC2020>
17. EC, 2010, European Atlas of Soil Biodiversity, Published by the Publications Office of the European Union, Luxembourg. [http://eusoils.jrc.ec.europa.eu/library/maps/biodiversity\\_atlas/](http://eusoils.jrc.ec.europa.eu/library/maps/biodiversity_atlas/)
18. EC, 2011, Commission staff working paper — Impact assessment accompanying the document 'Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions — Our life insurance, our natural capital: an EU biodiversity strategy to 2020', European Commission [http://ec.europa.eu/environment/nature/biodiversity/comm2006/pdf/2020/1\\_EN\\_impact\\_assesment\\_part1\\_v4.pdf](http://ec.europa.eu/environment/nature/biodiversity/comm2006/pdf/2020/1_EN_impact_assesment_part1_v4.pdf)
19. EC, 2011, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Roadmap to a Resource Efficient Europe, COM/2011/571. <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1424956600098&uri=CELEX:52011DC0571>
20. EC, 2012, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions — A Blueprint to Safeguard Europe's Water Resources COM(2012) 673 final, COM(2012) 673 final. <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1424956918718&uri=CELEX:52012DC0673>
21. EC, 2012, Proposal for a Decision of the European Parliament and of the Council on a General Union Environment Action Programme to 2020 'Living well, within the limits of our planet', COM(2012)710 final. <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1424957164542&uri=CELEX:52012PC0710>
22. EC, 2013, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Green Infrastructure (GI) — Enhancing Europe's Natural Capital, COM(2013) 249 final. <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52013DC0249>
23. EC, 2013, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee of the Regions. An EU Strategy on adaptation to climate change, COM(2013) 216 final. <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1424957806617&uri=CELEX:52013DC0216>
24. EC, 2013, Decision No 1386/2013/EU of the European Parliament and of the Council of 20 November 2013 on a General Union Environment Action Programme to 2020 'Living Well, Within The Limits Of Our Planet' (text with EEA relevance) <http://ec.europa.eu/environment/newprg/index.htm>
25. EC, 2013, Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the prevention and management of the introduction and spread of invasive alien species COM/2013/0620 final <http://eur-lex.europa.eu/legal-content/EN/NOT/?uri=CELEX:52013PC0620&qid=1425293649078>

26. EC, BISE - the Biodiversity Information System for Europe <http://biodiversity.europa.eu/>
27. EC, Copernicus, the European Earth Observation Programme <http://www.copernicus.eu/>
28. EC, Delivering Alien Invasive Species Inventories for Europe <http://www.europe-aliens.org/>
29. EC, DG Environment - Nature and Biodiversity [http://ec.europa.eu/environment/nature/index\\_en.htm](http://ec.europa.eu/environment/nature/index_en.htm)
30. EC, European Biodiversity Observation Network (EBONE) <http://www.wageningenur.nl/en/Expertise-Services/Research-Institutes/alterra/Projects/EBONE-2.htm>
31. EC, European Pollutant Release and Transfer Register (E-PRTR) <http://prtr.ec.europa.eu/Home.aspx>
32. EC, Financing Natura 2000 <http://www.financing-natura2000.eu/>
33. EC, Infrastructure for Spatial Information in the European Community (INSPIRE) <http://inspire.ec.europa.eu/>
34. EC, INSPIRE Geoportal <http://inspire-geoportal.ec.europa.eu/>
35. EC, LIFE programme publications <http://ec.europa.eu/environment/life/publications/lifepublications/index.htm>
36. EC, LIFE Projects database <http://ec.europa.eu/environment/life/project/Projects/index.cfm>
37. EC, LifeWatch - European e-Science infrastructure for biodiversity and ecosystem research <http://www.lifewatch.eu/web/guest/home>
38. EC, WISE - the Water Information System for Europe <http://water.europa.eu/>
39. EC-JRC EFDAC Viewer <http://forest.jrc.ec.europa.eu/efdac/applications/viewer/>
40. EEA, 2006, Urban and natural/semi-natural ecotones of Europe <http://www.eea.europa.eu/data-and-maps/explore-interactive-maps/ecotones-protected-areas-land-cover>
41. EEA, 2007, Conservation status of the habitat types and species of Community interest [http://bd.eionet.europa.eu/article17/index\\_html/habitatsummary](http://bd.eionet.europa.eu/article17/index_html/habitatsummary)
42. EEA, 2007, Estimating the environmentally compatible bioenergy potential from agriculture, European Environment Agency, Copenhagen, Denmark. [http://www.eea.europa.eu/publications/technical\\_report\\_2007\\_12](http://www.eea.europa.eu/publications/technical_report_2007_12)
43. EEA, 2007, EUNIS habitat classification <http://www.eea.europa.eu/themes/biodiversity/eunis/eunis-habitat-classification>
44. EEA, 2008, Conservation status, species by taxonomic group [http://www.eea.europa.eu/data-and-maps/daviz/conservation-status-species-by-taxonomic-group#tab-chart\\_1](http://www.eea.europa.eu/data-and-maps/daviz/conservation-status-species-by-taxonomic-group#tab-chart_1)
45. EEA, 2009 Exceedance of critical loads for eutrophication due to the deposition of nutrient nitrogen in 2020 under current legislation to reduce national emissions <http://www.eea.europa.eu/data-and-maps/figures/exceedance-of-critical-loads-for-eutrophication-due-to-the-deposition-of-nutrient-nitrogen-in-2020-under-current-legislation-to-reduce-national-emissions>
46. EEA, 2009, Conservation status of habitat types and species (Article 17, Habitats Directive 92/43/EEC) database and spatial dataset <http://www.eea.europa.eu/data-and-maps/data/article-17-database-habitats-directive-92-43-eeec#tab-metadata>
47. EEA, 2009, Ensuring quality of life in Europe's cities and towns - Tackling the environmental challenges driven by European and global change, EEA Report No 5/2009, European Environment

Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/quality-of-life-in-Europes-cities-and-towns>

48. EEA, 2010, 10 messages for 2010 - Agricultural ecosystems, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-agricultural-ecosystems>
49. EEA, 2010, 10 messages for 2010 - Climate change and biodiversity, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-climate-change>
50. EEA, 2010, 10 messages for 2010 - Coastal ecosystems, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-coastal-ecosystems>
51. EEA, 2010, 10 messages for 2010 - Cultural landscapes and biodiversity heritage, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-2013>
52. EEA, 2010, 10 messages for 2010 - Forest ecosystems, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-2014-3>
53. EEA, 2010, 10 messages for 2010 - Freshwater ecosystems, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-2014-1>
54. EEA, 2010, 10 messages for 2010 - Marine ecosystems, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-2014-2>
55. EEA, 2010, 10 messages for 2010 - Mountain ecosystems, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-mountain-ecosystems>
56. EEA, 2010, 10 messages for 2010 - Protected areas, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-2014>
57. EEA, 2010, 10 messages for 2010 - Urban ecosystems, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-urban-ecosystems>
58. EEA, 2010, Abundance and distribution of selected species (SEBI 001) - Assessment published Feb 2015 <http://www.eea.europa.eu/data-and-maps/indicators/abundance-and-distribution-of-selected-species/abundance-and-distribution-of-selected-2>
59. EEA, 2010, Agriculture: area under management practices potentially supporting biodiversity (SEBI 020) - Assessment published Feb 2015 <http://www.eea.europa.eu/data-and-maps/indicators/agriculture-area-under-management-practices/agriculture-area-under-management-practices-2>
60. EEA, 2010, Agriculture: nitrogen balance (SEBI 019) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/agriculture-nitrogen-balance/agriculture-nitrogen-balance-assessment-published>
61. EEA, 2010, Aquaculture: effluent water quality from finfish farms (SEBI 022) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/aquaculture-effluent-water-quality-from/aquaculture-effluent-water-quality-from>
62. EEA, 2010, Assessing biodiversity in Europe: the 2010 report, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/assessing-biodiversity-in-europe-84>
63. EEA, 2010, Critical load exceedance for nitrogen (SEBI 009) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/critical-load-exceedance-for-nitrogen/critical-load-exceedance-for-nitrogen>



64. EEA, 2010, Ecological Footprint of European countries (SEBI 023) - Assessment published March 2015 <http://www.eea.europa.eu/data-and-maps/indicators/ecological-footprint-of-european-countries/ecological-footprint-of-european-countries-2>
65. EEA, 2010, Ecosystem accounting and the cost of biodiversity losses — the case of coastal Mediterranean wetlands, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/ecosystem-accounting-and-the-cost>
66. EEA, 2010, Ecosystem coverage (SEBI 004) - Assessment published Feb 2015 <http://www.eea.europa.eu/data-and-maps/indicators/ecosystem-coverage-1/assessment-1>
67. EEA, 2010, Environmental Atlas of Europe <http://discomap.eea.europa.eu/map/environmentalatlas/>
68. EEA, 2010, EU 2010 biodiversity baseline, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/eu-2010-biodiversity-baseline>
69. EEA, 2010, Europe's ecological backbone: recognising the true value of our mountains, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/europes-ecological-backbone>
70. EEA, 2010, Financing biodiversity management (SEBI 025) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/financing-biodiversity-management/financing-biodiversity-management-assessment-published>
71. EEA, 2010, Fisheries: European commercial fish stocks (SEBI 021) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/fisheries-european-commercial-fish-stocks/fisheries-european-commercial-fish-stocks>
72. EEA, 2010, Forest: deadwood (SEBI 018) - Assessment published Feb 2015 <http://www.eea.europa.eu/data-and-maps/indicators/forest-deadwood-1/assessment-1>
73. EEA, 2010, Forest: growing stock, increment and fellings (SEBI 017) - Assessment published Feb 2015 <http://www.eea.europa.eu/data-and-maps/indicators/forest-growing-stock-increment-and-fellings/forest-growing-stock-increment-and-4>
74. EEA, 2010, Fragmentation of natural and semi-natural areas (SEBI 013) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/fragmentation-of-natural-and-semi-fragmentation-of-natural-and-semi>
75. EEA, 2010, Freshwater quality (SEBI 016) - Assessment published Mar 2015 <http://www.eea.europa.eu/data-and-maps/indicators/freshwater-quality/freshwater-quality-assessment-published-may-2>
76. EEA, 2010, Habitats of European interest (SEBI 005) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/habitats-of-european-interest/habitats-of-european-interest-assessment>
77. EEA, 2010, Impact of climate change on bird populations (SEBI 011) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/impact-of-climate-change-on/impact-of-climate-change-on>
78. EEA, 2010, Invasive alien species in Europe (SEBI 010) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/invasive-alien-species-in-europe/invasive-alien-species-in-europe>
79. EEA, 2010, Land in Europe: prices, taxes and use patterns <http://www.eea.europa.eu/publications/land-in-europe>
80. EEA, 2010, Land use - SOER 2010 thematic assessment, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/soer/europe/land-use>

81. EEA, 2010, Livestock genetic diversity (SEBI 006) - Assessment published May 2010  
<http://www.eea.europa.eu/data-and-maps/indicators/livestock-genetic-diversity/livestock-genetic-diversity-assessment-published>
82. EEA, 2010, Mapping the impacts of natural hazards and technological accidents in Europe, Technical report No 13/2010, European Environment Agency, Copenhagen, Denmark.  
<http://www.eea.europa.eu/publications/mapping-the-impacts-of-natural>
83. EEA, 2010, Marine trophic index of European seas (SEBI 012) - Assessment published May 2010  
<http://www.eea.europa.eu/data-and-maps/indicators/marine-trophic-index-of-european-seas/marine-trophic-index-of-european>
84. EEA, 2010, Nutrients in transitional, coastal and marine waters (SEBI 015) - Assessment published May 2010  
<http://www.eea.europa.eu/data-and-maps/indicators/nutrients-in-transitional-coastal-and-1/nutrients-in-transitional-coastal-and-1>
85. EEA, 2010, Patent applications based on genetic resources (SEBI 024) - Assessment published May 2010  
<http://www.eea.europa.eu/data-and-maps/indicators/patent-applications-based-on-genetic-resources/patent-applications-based-on-genetic>
86. EEA, 2010, Public awareness (SEBI 026) - Assessment published February 2015  
<http://www.eea.europa.eu/data-and-maps/indicators/public-awareness/public-awareness-assessment-published-may-1>
87. EEA, 2010, Red List Index for European species (SEBI 002) - Assessment published May 2010  
<http://www.eea.europa.eu/data-and-maps/indicators/red-list-index-for-european-species/red-list-index-for-european>
88. EEA, 2010, Species of European interest (SEBI 003/CSI 007) - Assessment published May 2010  
<http://www.eea.europa.eu/data-and-maps/indicators/species-of-european-interest/species-of-european-interest-assessment>
89. EEA, 2010, The European Environment - State and Outlook 2010, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/soer/europe/biodiversity>
90. EEA, 2010, Towards an early warning and information system for invasive alien species (IAS) threatening biodiversity in Europe, European Environment Agency, Copenhagen, Denmark.  
<http://www.eea.europa.eu/publications/information-system-invasive-alien-species>
91. EEA, 2010, Urban environment - SOER 2010 thematic assessment, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/soer/europe/urban-environment>
92. EEA, 2011, An experimental framework for ecosystem capital accounting in Europe, Technical report No 13/2011, European Environment Agency, Copenhagen, Denmark.  
<http://www.eea.europa.eu/publications/an-experimental-framework-for-ecosystem>
93. EEA, 2011, Datasheet — Revealing the costs of air pollution from industrial facilities in Europe  
<http://www.eea.europa.eu/publications/cost-of-air-pollution/>
94. EEA, 2011, EEA signals 2011: Globalisation, environment and you, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/signals-2011-1>
95. EEA, 2011, European forests — ecosystem conditions and sustainable use, European Environment Agency, Copenhagen, Denmark. [http://www.eea.europa.eu/publications/eea\\_report\\_2008\\_3](http://www.eea.europa.eu/publications/eea_report_2008_3)
96. EEA, 2011, European Red Lists <http://www.eea.europa.eu/data-and-maps/data/european-red-lists-2>
97. EEA, 2011, Europe's environment — An Assessment of Assessments, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/europes-environment-aoa>



- 98.EEA, 2011, Europe's forests at a glance — a breath of fresh air in a changing climate <http://www.eea.europa.eu/publications/europes-forests-at-a-glance>
99. EEA, 2011, Forests, health and climate change <http://www.eea.europa.eu/publications/forests-health-and-climate-change>
- 100.EEA, 2011, Green infrastructure and territorial cohesion, EEA Technical report No 18/2011, European Environment Agency, Copenhagen, Denmark <http://www.eea.europa.eu/publications/green-infrastructure-and-territorial-cohesion>
- 101.EEA, 2011, Hazardous substances in Europe's fresh and marine waters — An overview, EEA Technical report No 8/2011, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/hazardous-substances-in-europes-fresh>
- 102.EEA, 2011, Landscape fragmentation in Europe: joint EEA-FOEN report, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/landscape-fragmentation-in-europe>
- 103.EEA, 2011, Revealing the costs of air pollution from industrial facilities in Europe, Technical report No 15/2011, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/signals/signals-2013/articles/publications/cost-of-air-pollution>
- 104.EEA, 2011, SEBI 007 Indicator Nationally Designated Protected Areas - Assessment published Feb 2015 <http://www.eea.europa.eu/data-and-maps/indicators/nationally-designated-protected-areas/nationally-designated-protected-areas-assessment-3>
- 105.EEA, 2011, Sites designated under the EU Habitats and Birds Directives (SEBI 008) - Assessment published Apr 2015 <http://www.eea.europa.eu/data-and-maps/indicators/sites-designated-under-the-eu-1/assessment>
- 106.EEA, 2011, Safe water and healthy water services in a changing environment, EEA Technical report No 7/2011, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/safe-water-and-healthy-water>
- 107.EEA, 2012, Burnt forest area in five southern European countries <http://www.eea.europa.eu/data-and-maps/figures/burn-area-ha-in-5-1>
- 108.EEA, 2012, Climate change, impacts and vulnerability in Europe 2012, EEA Report No 12/2012, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/media/publications/climate-impacts-and-vulnerability-2012/>
- 109.EEA, 2012, Distribution of Natura 2000 sites across EU-27, 2012 <http://www.eea.europa.eu/data-and-maps/figures/distribution-of-natura-2000-sites-3>
- 110.EEA, 2012, Distribution of plant species (CLIM 022) - Assessment published Nov 2012 <http://www.eea.europa.eu/data-and-maps/indicators/distribution-of-plant-species-1/assessment>
- 111.EEA, 2012, European waters - assessment of status and pressures, EEA Report No 8/2012, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/european-waters-assessment-2012>
- 112.EEA, 2012, Exceedance of critical loads for acidification by deposition of nitrogen and sulphur compounds in 2020 under Current Legislation to reduce national emissions <http://www.eea.europa.eu/data-and-maps/figures/exceedance-of-critical-loads-for-acidification-by-deposition-of-nitrogen-and-sulphur-compounds-in-2020-under-current-legislation-to-reduce-national-emissions>
- 113.EEA, 2012, Percentage of green and blue urban areas — share of cities per class per country <http://www.eea.europa.eu/data-and-maps/figures/percentage-of-green-and-blue>

- 114.EEA, 2012, Plant and fungi phenology (CLIM 023) - Assessment published Nov 2012 <http://www.eea.europa.eu/data-and-maps/indicators/plant-phenology-1/assessment>
- 115.EEA, 2012, Projected changes in fire danger <http://www.eea.europa.eu/data-and-maps/figures/projected-meteorological-forest-fire-danger>
- 116.EEA, 2012, River floods (CLIM 017) - Assessment published Nov 2012 <http://www.eea.europa.eu/data-and-maps/indicators/river-floods-1/>
- 117.EEA, 2012, Share of HNV farmland per utilised agricultural area (UAA) <http://www.eea.europa.eu/data-and-maps/figures/share-of-hnv-farmland-per>
- 118.EEA, 2012, Soil erosion (CLIM 028) - Assessment published Nov 2012 <http://www.eea.europa.eu/data-and-maps/indicators/soil-erosion-by-water-1/assessment>
- 119.EEA, 2012, Soil organic carbon (CLIM 027) <http://www.eea.europa.eu/data-and-maps/indicators/soil-organic-carbon-1>
- 120.EEA, 2012, Streamlining European biodiversity indicators 2020: Building a future on lessons learnt from the SEBI 2010 process, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/streamlining-european-biodiversity-indicators-2020>
- 121.EEA, 2012, The impacts of endocrine disruptors on wildlife, people and their environments – The Weybridge+15 (1996–2011) report <http://www.eea.europa.eu/publications/the-impacts-of-endocrine-disruptors>
- 122.EEA, 2012, Towards efficient use of water resources in Europe, EEA Report No 1/2012, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/towards-efficient-use-of-water>
- 123.EEA, 2012, Urban adaptation to climate change in Europe, EEA Report No 2/2012, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/urban-adaptation-to-climate-change>
- 124.EEA, 2012, Water resources in Europe in the context of vulnerability - EEA 2012 state of water assessment, EEA Report No 11/2012, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/highlights/publications/water-resources-and-vulnerability>
- 125.EEA, 2012 Forest fires (CLIM 035) - Assessment published Nov 2012 <http://www.eea.europa.eu/data-and-maps/indicators/forest-fire-danger-1>
- 126.EEA, 2013, Adaptation in Europe - Addressing risks and opportunities from climate change in the context of socio-economic developments, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/adaptation-in-europe>
- 127.EEA, 2013, Biodiversity monitoring in Europe. Brochure No 2/2013 <http://www.eea.europa.eu/publications/biodiversity-monitoring-in-europe>
- 128.EEA, 2013, EEA coastline for analysis geospatial database <http://www.eea.europa.eu/data-and-maps/data/eea-coastline-for-analysis#tab-gis-data>
- 129.EEA, 2013, EEA reference grid <http://www.eea.europa.eu/data-and-maps/data/eea-reference-grids-2>
- 130.EEA, 2013, Environment and human health, EEA Report No 5/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/environment-and-human-health>
- 131.EEA, 2013, EU bioenergy potential from a resource efficiency perspective, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/eu-bioenergy-potential>

132. EEA, 2013, European protected sites. Interactive map <http://www.eea.europa.eu/data-and-maps/explore-interactive-maps/european-protected-areas-1>
133. EEA, 2013, Global megatrend update: 8 Growing demands on ecosystems, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/global-megatrend-update-8>
134. EEA, 2013, Impacts and consequences of climate change on forest growth and forest conditions <http://www.eea.europa.eu/data-and-maps/figures/impacts-and-consequences-of-climate>
135. EEA, 2013, Land take (CSI 014/LSI 001) - Assessment published Jun 2013 <http://www.eea.europa.eu/data-and-maps/indicators/land-take-2/assessment-2>
136. EEA, 2013, Natura 2000 data - the European network of protected sites <http://www.eea.europa.eu/data-and-maps/data/natura-5>
137. EEA, 2013, Natura 2000: Birds and Habitats Directives <http://www.eea.europa.eu/data-and-maps/figures/natura-2000-birds-and-habitat-directives-5>
138. EEA, 2013, PCB levels in grey seals (a), white-tailed sea eagle eggs (b), Guillemot eggs (c) and Baltic Herring (d) in the Baltic region between 1970 and 2010 <http://www.eea.europa.eu/data-and-maps/figures/pcb-levels-in-grey-seals>
139. EEA, 2013, The European Grassland Butterfly Indicator: 1990 - 2011. Technical report No 11/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/the-european-grassland-butterfly-indicator-19902011>
140. EEA, 2013, Towards a green economy in Europe - EU environmental policy targets and objectives 2010-2050, EEA Report No 8/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/towards-a-green-economy-in-europe>
141. EEA, 2014 Main pathways of introduction of marine non-indigenous species in regional seas of Europe <http://www.eea.europa.eu/data-and-maps/figures/mode-of-introduction-of-nis#tab-metadata>
142. EEA, 2014, Air quality in Europe - 2014 report, EEA Report No 5/2014, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/air-quality-in-europe-2014>
143. EEA, 2014, Ammonia (NH<sub>3</sub>) emissions (APE 003) - Assessment published Jan 2014 <http://www.eea.europa.eu/data-and-maps/indicators/eea-32-ammonia-nh3-emissions-1/assessment-4>
144. EEA, 2014, Article 17 of the Habitats Directive - Conservation status of habitats and species of Community interest (2007-2012) [http://bd.eionet.europa.eu/activities/Reporting/Article\\_17/Reports\\_2013](http://bd.eionet.europa.eu/activities/Reporting/Article_17/Reports_2013)
145. EEA, 2014, Climate change mitigation policies and measures (greenhouse gas emissions) <http://www.eea.europa.eu/data-and-maps/data/climate-change-mitigation-policies-and-measures-1>
146. EEA, 2014, Developing a forest naturalness indicator for Europe. Technical report No 13/2014, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/developing-a-forest-naturalness-indicator>
147. EEA, 2014, Digest of EEA indicators 2014. Technical report No 8/2014, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/digest-of-eea-indicators-2014>
148. EEA, 2014, Effects of air pollution on European ecosystems. Technical report No 11/2014, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/effects-of-air-pollution-on>

- 149.EEA, 2014, Environmental Indicator Report 2014 Environmental Impacts of Production-Consumption Systems in Europe, European Environment Agency, Copenhagen, Denmark.  
<http://www.eea.europa.eu/publications/environmental-indicator-report-2014>
- 150.EEA, 2014, EUNIS modular database <http://www.eea.europa.eu/themes/biodiversity/eunis/eunis-db>
- 151.EEA, 2014, European bat population trends – A prototype biodiversity indicator. Technical report No 19/2013, European Environment Agency, Copenhagen, Denmark.  
<http://www.eea.europa.eu/publications/european-bat-population-trends-2013>
- 152.EEA, 2014, European Union emission inventory report 1990–2012 under the UNECE Convention on Long-range Transboundary Air Pollution (LRTAP), Technical report No 12/2014, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/lrtap-2014>
- 153.EEA, 2014, Nationally designated areas (CDDA) geospatial database <http://www.eea.europa.eu/data-and-maps/data/nationally-designated-areas-national-cdda-9>
- 154.EEA, 2014, Nitrogen oxides (NOx) emissions (APE 002) - Assessment published Jan 2014  
<http://www.eea.europa.eu/data-and-maps/indicators/eea-32-nitrogen-oxides-nox-emissions-1/assessment.2010-08-19.0140149032-3>
- 155.EEA, 2014, Permafrost (CLIM 011) - Assessment published Jun 2014 <http://www.eea.europa.eu/data-and-maps/indicators/mountain-permafrost-1/assessment-1>
- 156.EEA, 2014, Report of the EEA Scientific Committee Seminar on Environment, Human Health and Well-Being - Advancing the Knowledge Base, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/about-us/governance/scientific-committee/reports/report-of-the-eea-scientific/view>
- 157.EEA, 2014, Species interactions (CLIM 026) - Assessment published Jul 2014  
<http://www.eea.europa.eu/data-and-maps/indicators/species-ecosystem-relationship-1/assessment-1>
- 158.EEA, 2014, Terrestrial habitat mapping in Europe: an overview. Technical report No 1/2014, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/terrestrial-habitat-mapping-in-europe>
- 159.EEA, 2015 European environment — state and outlook 2015 (SOER 2015), European Environment Agency, Copenhagen, Denmark. [www.eea.europa.eu/soer/](http://www.eea.europa.eu/soer/)
- 160.EEA, 2015, Changes in land cover between 2000 and 2006: Conversion of wetlands into other classes  
[http://www.eea.europa.eu/data-and-maps/daviz/changes-in-land-cover-between-1#tab-chart\\_1](http://www.eea.europa.eu/data-and-maps/daviz/changes-in-land-cover-between-1#tab-chart_1)
- 161.EEA, 2015, Changes in land cover between 2000 and 2006: Previous status of newly urban areas  
[http://www.eea.europa.eu/data-and-maps/daviz/changes-in-land-cover-between#tab-chart\\_1](http://www.eea.europa.eu/data-and-maps/daviz/changes-in-land-cover-between#tab-chart_1)
- 162.EEA, 2015, Conservation status of habitat types and species (Article 17, Habitats Directive 92/43/EEC)  
<http://www.eea.europa.eu/data-and-maps/data/article-17-database-habitats-directive-92-43-eeec-1>
- 163.EEA, 2015, Development towards European marine ecosystem (services) assessment. Technical report No xx/2015, European Environment Agency, Copenhagen, Denmark (in prep)  
[http://www.eea.europa.eu/publications#c14=&c7=en&c9=all&c11=5&b\\_start=0&c12=Technical+report](http://www.eea.europa.eu/publications#c14=&c7=en&c9=all&c11=5&b_start=0&c12=Technical+report)
- 164.EEA, 2015, EEA ecosystem assessment: concept, data availability and results. Technical report No xx/2015, European Environment Agency, Copenhagen, Denmark (in prep)  
[http://www.eea.europa.eu/publications#c14=&c7=en&c9=all&c11=5&b\\_start=0&c12=Technical+report](http://www.eea.europa.eu/publications#c14=&c7=en&c9=all&c11=5&b_start=0&c12=Technical+report)
- 165.EEA, 2015, EU 2010 Biodiversity Baseline adapted to the MAES ecosystem classification. Technical report No xx/2015, European Environment Agency, Copenhagen, Denmark (in prep)

- [http://www.eea.europa.eu/publications#c14=&c7=en&c9=all&c11=5&b\\_start=0&c12=Technical+report](http://www.eea.europa.eu/publications#c14=&c7=en&c9=all&c11=5&b_start=0&c12=Technical+report)
- 166.EEA, 2015, EU policies and their impact on land take and land degradation. Technical report No xx/2015, European Environment Agency, Copenhagen, Denmark (in prep)  
[http://www.eea.europa.eu/publications#c14=&c7=en&c9=all&c11=5&b\\_start=0&c12=Technical+report](http://www.eea.europa.eu/publications#c14=&c7=en&c9=all&c11=5&b_start=0&c12=Technical+report)
  - 167.EEA, 2015, Forest/water interactions. Technical report No xx/2015, European Environment Agency, Copenhagen, Denmark (in prep)  
[http://www.eea.europa.eu/publications#c14=&c7=en&c9=all&c11=5&b\\_start=0&c12=Technical+report](http://www.eea.europa.eu/publications#c14=&c7=en&c9=all&c11=5&b_start=0&c12=Technical+report)
  - 168.EEA, 2015, Forests ecosystems, European Environment Agency, Copenhagen, Denmark (in prep)  
[http://www.eea.europa.eu/publications#c14=&c7=en&c9=all&c11=5&b\\_start=0&c12=EEA+Report](http://www.eea.europa.eu/publications#c14=&c7=en&c9=all&c11=5&b_start=0&c12=EEA+Report)
  - 169.EEA, 2015, Growth of the nationally designated protected areas and site number  
[http://www.eea.europa.eu/data-and-maps/daviz/growth-of-the-nationally-designated-1#tab-chart\\_1](http://www.eea.europa.eu/data-and-maps/daviz/growth-of-the-nationally-designated-1#tab-chart_1)
  - 170.EEA, 2015, Land cover change: Area change for major ecosystems [http://www.eea.europa.eu/data-and-maps/daviz/land-cover-change-area-change#tab-chart\\_1](http://www.eea.europa.eu/data-and-maps/daviz/land-cover-change-area-change#tab-chart_1)
  - 171.EEA, 2015, Mapping and assessment of ecosystems, European Environment Agency, Copenhagen, Denmark (in prep)  
[http://www.eea.europa.eu/publications#c14=&c7=en&c9=all&c11=5&b\\_start=0&c12=EEA+Report](http://www.eea.europa.eu/publications#c14=&c7=en&c9=all&c11=5&b_start=0&c12=EEA+Report)
  - 172.EEA, 2015, Natura 2000 European protected areas — interactive map <http://natura2000.eea.europa.eu/>
  - 173.EEA, 2015, Spatial analysis of marine protected areas networks in Europe's seas (MPA). Technical report No xx/2015, European Environment Agency, Copenhagen, Denmark (in prep)  
[http://www.eea.europa.eu/publications#c14=&c7=en&c9=all&c11=5&b\\_start=0&c12=Technical+report](http://www.eea.europa.eu/publications#c14=&c7=en&c9=all&c11=5&b_start=0&c12=Technical+report)
  - 174.EEA, 2015, State of Europe's Seas, European Environment Agency, Copenhagen, Denmark (in prep)  
[http://www.eea.europa.eu/publications#c14=&c7=en&c9=all&c11=5&b\\_start=0&c12=EEA+Report](http://www.eea.europa.eu/publications#c14=&c7=en&c9=all&c11=5&b_start=0&c12=EEA+Report)
  - 175.EEA, 2015, State of Nature Report 2015, European Environment Agency, Copenhagen, Denmark (in prep) <http://www.eea.europa.eu/publications>
  - 176.EEA, Actual and potential future alien plant invasion hotspots under two emissions scenarios  
<http://www.eea.europa.eu/data-and-maps/figures/actual-and-potential-future-alien>
  - 177.EEA, Biodiversity Data Centre (BDC) <http://www.eea.europa.eu/themes/biodiversity/dc>
  - 178.EEA, Biodiversity observation schemes using citizen science <http://www.eea.europa.eu/data-and-maps/daviz/biodiversity-observation-schemes-using-citizen-science#tab-daviz-tabular>
  - 179.EEA, Climate Adapt <http://climate-adapt.eea.europa.eu/>
  - 180.EEA, Climate change data centre <http://www.eea.europa.eu/themes/climate/dc>
  - 181.EEA, Complementarity between European designations (Natura 2000 and Emerald networks) and national designations by share of terrestrial area [http://www.eea.europa.eu/data-and-maps/daviz/complementarity-between-european-designations#tab-chart\\_1](http://www.eea.europa.eu/data-and-maps/daviz/complementarity-between-european-designations#tab-chart_1)
  - 182.EEA, Conservation status by main type of habitats [http://www.eea.europa.eu/data-and-maps/daviz/conservation-status-by-main-type#tab-chart\\_1](http://www.eea.europa.eu/data-and-maps/daviz/conservation-status-by-main-type#tab-chart_1)

- 183.EEA, Corine Land Cover 2000 seamless vector data <http://www.eea.europa.eu/data-and-maps/data/corine-land-cover-2000-clc2000-seamless-vector-database-5#tab-gis-data>
- 184.EEA, EUNIS, the European Nature Information System <http://eunis.eea.europa.eu/index.jsp>
- 185.EEA, Floods Directive viewer <http://www.eea.europa.eu/themes/water/interactive/floods-directive-viewer>
- 186.EEA, List of EU research projects about biodiversity and ecosystems <http://www.eea.europa.eu/data-and-maps/data/eu-research-projects-on-biodiversity/projects/research/view>
- 187.EEA, Natura 2000 barometer charts <http://www.eea.europa.eu/data-and-maps/daviz/natura-2000-barometer#tab-dashboard-02>
- 188.EEA, Our Natural Europe <http://www.eea.europa.eu/highlights/atlas/our-natural-europe>
- 189.EEA, Programme on Land and Ecosystem Accounting (LEAC) [http://sia.eionet.europa.eu/LEAC/index\\_html](http://sia.eionet.europa.eu/LEAC/index_html)
- 190.EU & EEA, 2012, Protected areas in Europe: an overview, EUR-OP, Luxembourg. <http://www.eea.europa.eu/publications/protected-areas-in-europe-2012>
- 191.European Cooperative Programme for Plant Genetic Resources (ECPGR) <http://www.ecpgr.cgiar.org/>
- 192.Eurostat, Agricultural Statistics <http://ec.europa.eu/eurostat/web/agriculture/overview>
- 193.Eurostat, Environmental statistics and accounts <http://ec.europa.eu/eurostat/web/environment/overview>
- 194.Genovesi, P., Shine, C., 2011, European strategy on invasive alien species, Council of Europe Publishing, Strasbourg. [http://www.coe.int/t/dg4/cultureheritage/nature/bern/ias/Documents/Publication\\_Strategy\\_en.pdf](http://www.coe.int/t/dg4/cultureheritage/nature/bern/ias/Documents/Publication_Strategy_en.pdf)
- 195.Jobling S. And R. Owen, 2013, Ethinyl oestradiol in the aquatic environment. In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/late-lessons-2>
- 196.JRC, DOPA, the Digital Observatory for Protected Areas <http://dopa.jrc.ec.europa.eu/>
- 197.JRC, EASIN, the European Alien Species Information Network <http://easin.jrc.ec.europa.eu/>
198. JRC, EEA, 2013, The State of Soil in Europe, Luxembourg: Publications Office of the European Union [http://eusoils.jrc.ec.europa.eu/esdb\\_archive/eusoils\\_docs/other/EUR25186.pdf](http://eusoils.jrc.ec.europa.eu/esdb_archive/eusoils_docs/other/EUR25186.pdf)
- 199.JRC, eHabitat - Ecological Forecasting for Policy Making <http://ehabitat.jrc.ec.europa.eu/>
- 200.JRC, Environment and Climate Change Portal <https://ec.europa.eu/jrc/en/science-area/environment-and-climate-change>
- 201.JRC, European Forest Fire Information System <http://forest.jrc.ec.europa.eu/effis/>
- 202.JRC, Floods Portal <http://floods.jrc.ec.europa.eu/>
- 203.JRC, MAES catalogue of case-studies <http://biodiversity.europa.eu/maes/maes-catalogue-of-case-studies>
- 204.JRC, MAES digital atlas <http://biodiversity.europa.eu/maes/maes-digital-atlas>
- 205.Maes J, Teller A, Erhard M, Lique C, Braat L, Berry P, Egoh B, Puydarrieux P, Fiorina C, Santos F, Paracchini ML, Keune H, Wittmer H, Hauck J, Fiala I, Verburg PH, Condé S, Schägnér JP, San



- Miguel J, Estreguil C, Ostermann O, Barredo JI, Pereira HM, Stott A, Laporte V, Meiner A, Olah B, Royo Gelabert E, Spyropoulou R, Petersen JE, Maguire C, Zal N, Achilleos E, Rubin A, Ledoux L, Brown C, Raes C, Jacobs S, Vandewalle M, Connor D, Bidoglio G (2013) Mapping and Assessment of Ecosystems and their Services. An analytical framework for ecosystem assessments under action 5 of the EU biodiversity strategy to 2020. Publications office of the European Union, Luxembourg. [http://ec.europa.eu/environment/nature/knowledge/ecosystem\\_assessment/pdf/MAESWorkingPaper2013.pdf](http://ec.europa.eu/environment/nature/knowledge/ecosystem_assessment/pdf/MAESWorkingPaper2013.pdf)
206. Maes, J. , A. Teller, M. Erhard, P. Murphy, M.L. Paracchini, J. I. Barredo, B. Grizzetti, A. Cardoso, F. Somma, J.-E. Petersen, A. Meiner, E. Royo Gelabert, N. Zal, P. Kristensen, A. Bastrup-Birk, K. Biala, C. Romao, C. Piroddi, B. Egoh, C. Fiorina, F. Santos, V. Naruševičius, J. Verboven, H. Pereira, J. Bengtsson, K. Gocheva, C. Marta-Pedroso, T. Snäll, C. Estreguil, J. San Miguel, L. Braat, A. Grêt-Regamey, M. Perez-Soba, P. Degeorges, G. Beaufaron, A. Lillebø, D. Abdul Malak, C. Liqueste, S. Condé, J. Moen, H. Östergård, B. Czúcz, E. G. Drakou, G. Zulian, C. Lavalle, 2014, Mapping and Assessment of Ecosystems and their Services. Indicators for ecosystem assessments under Action 5 of the EU Biodiversity Strategy to 2020. 2nd Report – Final, February 2014. Publications office of the European Union, Luxembourg. [http://ec.europa.eu/environment/nature/knowledge/ecosystem\\_assessment/pdf/2ndMAESWorkingPaper.pdf](http://ec.europa.eu/environment/nature/knowledge/ecosystem_assessment/pdf/2ndMAESWorkingPaper.pdf)
207. Maxim L. And J. Van der Sluijs, 2013, Seed-dressing systemic insecticides and honeybees. In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/>
208. McGlade, J. and S. van den Hove, 2013, Ecosystems and managing the dynamics of change. In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/>
209. Meiner, A., Reker, J., Hildén, M., O'Doherty, J. J. And European Environment Agency, 2013, Balancing the future of Europe's coasts: knowledge base for integrated management., Publications Office, Luxembourg. <http://www.eea.europa.eu/publications/balancing-the-future-of-europes>
210. Naumann, Sandra, Gerardo Anzaldúa, Pam Berry, Sarah Burch, McKenna Davis, Ana Frelih-Larsen, Holger Gerdes and Michele Sanders (2011): Assessment of the potential of ecosystem-based approaches to climate change adaptation and mitigation in Europe. Final report to the European Commission, DG Environment, Contract no. 070307/2010/580412/SER/B2, Ecologic institute and Environmental Change Institute, Oxford University Centre for the Environment [http://ec.europa.eu/environment/nature/climatechange/pdf/EbA\\_EBM\\_CC\\_FinalReport.pdf](http://ec.europa.eu/environment/nature/climatechange/pdf/EbA_EBM_CC_FinalReport.pdf)
211. Price, A. R. G. And J. W. Readman, 2013, Booster biocide antifoulants: is history repeating itself? In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/>
212. Quist, D. A., J. A. Heinemann, A. I. Myhr, I. Aslaksen and S. Funtowicz Hungry for innovation: pathways from GM crops to agroecology. In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/>
213. Scalera, R., Genovesi, P., Essl, F., Rabitsch, W. and European Environment Agency, 2012, The impacts of invasive alien species in Europe, Publications Office, Luxembourg. <http://www.eea.europa.eu/publications/impacts-of-invasive-alien-species>
214. Scalera, R., Genovesi, P., Rabitsch, W. and European Environment Agency, 2012, Invasive alien species indicators in Europe a review of streamlining European biodiversity (SEBI) Indicator 10., Publications Office, Luxembourg. <http://www.eea.europa.eu/publications/streamlining-european-biodiversity-indicators-sebi>

215. Schweiger, O., Heikkinen, R. K., Harpke, A., Hickler, T., Klotz, S., Kudrna, O., Kühn, I., Pöyry, J. und Settele, J., 2012, 'Increasing range mismatching of interacting species under global change is related to their ecological characteristics', *Global Ecology and Biogeography*, 21(1), S.88–99  
<http://www.eea.europa.eu/data-and-maps/figures/projected-spatial-mismatches-of-the>
216. Shine, C., Kettunen, M., Genovesi, P., Essl, F., Gollasch, S., Rabitsch, W., Scalera, R., Starfinger, U. and ten Brink, P. 2010. Assessment to support continued development of the EU Strategy to combat invasive alien species. Final Report for the European Commission. Institute for European Environmental Policy (IEEP), Brussels, Belgium.  
[http://ec.europa.eu/environment/nature/invasivealien/docs/IEEP%20report\\_EU%20IAS%20Strategy%20components%20%20costs.pdf](http://ec.europa.eu/environment/nature/invasivealien/docs/IEEP%20report_EU%20IAS%20Strategy%20components%20%20costs.pdf)



# Annex 1 All selected EEA information grouped by IPBES Regional Assessment Chapters

This section presents all selected information resources grouped by IPBES Regional Assessment Chapters. Some references that seem relevant to more than one chapter appear more than once in this list. This list includes the core information as presented in chapter 3, but also the supporting and background information.

## Chapter 1: Setting the scene

### Data

EEA, 2014 Main pathways of introduction of marine non-indigenous species in regional seas of Europe <http://www.eea.europa.eu/data-and-maps/figures/mode-of-introduction-of-nis>

### Indicator

EEA, 2010, Invasive alien species in Europe (SEBI 010) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/invasive-alien-species-in-europe/invasive-alien-species-in->

EEA, 2011, SEBI 007 Indicator Nationally Designated Protected Areas - Assessment published Feb 2015 <http://www.eea.europa.eu/data-and-maps/indicators/nationally-designated-protected-areas/nationally-designated-protected-areas-assessment-3>

EEA, 2012, Soil erosion (CLIM 028) - Assessment published Nov 2012 <http://www.eea.europa.eu/data-and-maps/indicators/soil-erosion-by-water-1/assessment>

EEA, 2012, Soil organic carbon (CLIM 027) <http://www.eea.europa.eu/data-and-maps/indicators/soil-organic-carbon-1>

### Map

EEA, 2012, Share of HNV farmland per utilised agricultural area (UAA) <http://www.eea.europa.eu/data-and-maps/figures/share-of-hnv-farmland-per>

EEA, 2014 Main pathways of introduction of marine non-indigenous species in regional seas of Europe <http://www.eea.europa.eu/data-and-maps/figures/mode-of-introduction-of-nis-tab-metadata>

EEA, Actual and potential future alien plant invasion hotspots under two emissions scenarios <http://www.eea.europa.eu/data-and-maps/figures/actual-and-potential-future-alien>

### Publication

Brunel, S., E. Fernández-Galiano, P. Genovesi, V. H. Heywood, C. Kueffer and D. M. Richardson, 2013, Invasive alien species: a growing but neglected threat? In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/late-lessons-2>

EEA, 2010, The European Environment - State and Outlook 2010, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/soer/europe/biodiversity>

EEA, 2011, EEA signals 2011: Globalisation, environment and you, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/signals-2011-1>

Maxim L. And J. Van der Sluijs, 2013, Seed-dressing systemic insecticides and honeybees. In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency,

Copenhagen, <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/late-lessons-ii-chapter-16>

Quist, D. A., J. A. Heinemann, A. I. Myhr, I. Aslaksen and S. Funtowicz Hungry for innovation: pathways from GM crops to agroecology. In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, Denmark.

<http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/late-lessons-ii-chapter-19>

Scalera, R., Genovesi, P., Essl, F., Rabitsch, W. and European Environment Agency, 2012, The impacts of invasive alien species in Europe, Publications Office, Luxembourg.

<http://www.eea.europa.eu/publications/impacts-of-invasive-alien-species>

Scalera, R., Genovesi, P., Rabitsch, W. and European Environment Agency, 2012, Invasive alien species indicators in Europe a review of streamlining European biodiversity (SEBI) Indicator 10., Publications Office, Luxembourg. <http://www.eea.europa.eu/publications/streamlining-european-biodiversity-indicators-sebi>

## **Portal**

EC, BISE - the Biodiversity Information System for Europe <http://biodiversity.europa.eu/>

Eurostat, Environmental statistics and accounts <http://ec.europa.eu/eurostat/web/environment/overview>

JRC, Environment and Climate Change Portal <https://ec.europa.eu/jrc/en/science-area/environment-and-climate-change>

## Chapter 2: Nature's benefits to people and quality of life

EEA, 2010, Ecosystem accounting and the cost of biodiversity losses — the case of coastal Mediterranean wetlands, European Environment Agency, Copenhagen, Denmark.

<http://www.eea.europa.eu/publications/ecosystem-accounting-and-the-cost>

### Article

EEA, Our Natural Europe <http://www.eea.europa.eu/highlights/atlas/our-natural-europe>

### Data

EEA, Biodiversity observation schemes using citizen science <http://www.eea.europa.eu/data-and-maps/daviz/biodiversity-observation-schemes-using-citizen-science>

JRC, MAES digital atlas <http://biodiversity.europa.eu/maes/maes-digital-atlas>

### Graph

EEA, 2012, Percentage of green and blue urban areas — share of cities per class per country

<http://www.eea.europa.eu/data-and-maps/figures/percentage-of-green-and-blue>

EEA, 2013, PCB levels in grey seals (a), white-tailed sea eagle eggs (b), Guillemot eggs (c) and Baltic Herring (d) in the Baltic region between 1970 and 2010 <http://www.eea.europa.eu/data-and-maps/figures/pcb-levels-in-grey-seals>

### Indicator

EEA, 2010, Agriculture: area under management practices potentially supporting biodiversity (SEBI 020) - Assessment published Feb 2015 <http://www.eea.europa.eu/data-and-maps/indicators/agriculture-area-under-management-practices/agriculture-area-under-management-practices-2>

EEA, 2010, Patent applications based on genetic resources (SEBI 024) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/patent-applications-based-on-genetic-resources/patent-applications-based-on-genetic>

EEA, 2010, Public awareness (SEBI 026) - Assessment published February 2015 <http://www.eea.europa.eu/data-and-maps/indicators/public-awareness/public-awareness-assessment-published->

### Publication

EC, 2009, White paper - Adapting to climate change: towards a European framework for action, COM/2009/0147 final. <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1424955136790&uri=CELEX:52009DC0147>

EC, 2012, Proposal for a Decision of the European Parliament and of the Council on a General Union Environment Action Programme to 2020 'Living well, within the limits of our planet', COM(2012)710 final. <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1424957164542&uri=CELEX:52012PC0710>

EEA, 2007, Estimating the environmentally compatible bioenergy potential from agriculture, European Environment Agency, Copenhagen, Denmark. [http://www.eea.europa.eu/publications/technical\\_report\\_2007\\_12](http://www.eea.europa.eu/publications/technical_report_2007_12)

EEA, 2009, Ensuring quality of life in Europe's cities and towns - Tackling the environmental challenges driven by European and global change, EEA Report No 5/2009, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/quality-of-life-in-Europes-cities-and-towns>

EEA, 2010, 10 messages for 2010 - Cultural landscapes and biodiversity heritage, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-2013>

EEA, 2010, 10 messages for 2010 - Mountain ecosystems, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-mountain-ecosystems>

EEA, 2010, 10 messages for 2010 - Urban ecosystems, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-urban-ecosystems>

EEA, 2010, Europe's ecological backbone: recognising the true value of our mountains, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/europes-ecological-backbone>

EEA, 2010, The European Environment - State and Outlook 2010, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/soer/europe/biodiversity>

EEA, 2010, Urban environment - SOER 2010 thematic assessment, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/soer/europe/urban-environment>

EEA, 2011, EEA signals 2011: Globalisation, environment and you, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/signals-2011-1>

EEA, 2011, Europe's forests at a glance — a breath of fresh air in a changing climate <http://www.eea.europa.eu/publications/europes-forests-at-a-glance>

EEA, 2011, Forests, health and climate change <http://www.eea.europa.eu/publications/forests-health-and-climate-change>

EEA, 2011, Green infrastructure and territorial cohesion, EEA Technical report No 18/2011, European Environment Agency, Copenhagen, Denmark <http://www.eea.europa.eu/publications/green-infrastructure-and-territorial-cohesion>

EEA, 2011g, Safe water and healthy water services in a changing environment, EEA Technical report No 7/2011, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/safe-water-and-healthy-water>

EEA, 2012, Urban adaptation to climate change in Europe, EEA Report No 2/2012, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/urban-adaptation-to-climate-change>

EEA, 2013, Environment and human health, EEA Report No 5/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/environment-and-human-health>

EEA, 2014, Report of the EEA Scientific Committee Seminar on Environment, Human Health and Well-Being - Advancing the Knowledge Base, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/about-us/governance/scientific-committee/reports/report-of-the-eea-scientific/view>

Maxim L. And J. Van der Sluijs, 2013, Seed-dressing systemic insecticides and honeybees. In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/late-lessons-ii-chapter-16>

Quist, D. A., J. A. Heinemann, A. I. Myhr, I. Aslaksen and S. Funtowicz Hungry for innovation: pathways from GM crops to agroecology. In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/late-lessons-ii-chapter-19>

**Portal**

EC, BISE - the Biodiversity Information System for Europe <http://biodiversity.europa.eu/>

EC, DG Environment - Nature and Biodiversity [http://ec.europa.eu/environment/nature/index\\_en.htm](http://ec.europa.eu/environment/nature/index_en.htm)

EC, WISE - the Water Information System for Europe <http://water.europa.eu/>

Eurostat, Agricultural Statistics <http://ec.europa.eu/eurostat/web/agriculture/overview>

Eurostat, Environmental statistics and accounts <http://ec.europa.eu/eurostat/web/environment/overview>

JRC, Environment and Climate Change Portal <https://ec.europa.eu/jrc/en/science-area/environment-and-climate-change>

JRC, Floods Portal <http://floods.jrc.ec.europa.eu/>

## Chapter 3: Status, trends and future dynamics of biodiversity and ecosystems underpinning nature's benefits to people

### Data

EEA, 2008, Conservation status, species by taxonomic group [http://www.eea.europa.eu/data-and-maps/daviz/conservation-status-species-by-taxonomic-group - tab-chart\\_1](http://www.eea.europa.eu/data-and-maps/daviz/conservation-status-species-by-taxonomic-group - tab-chart_1)

EEA, 2009, Conservation status of habitat types and species (Article 17, Habitats Directive 92/43/EEC) database and spatial dataset <http://www.eea.europa.eu/data-and-maps/data/article-17-database-habitats-directive-92-43-eeec - tab-metadata>

EEA, 2011, European Red Lists <http://www.eea.europa.eu/data-and-maps/data/european-red-lists-2>

EEA, 2015, Conservation status of habitat types and species (Article 17, Habitats Directive 92/43/EEC) <http://www.eea.europa.eu/data-and-maps/data/article-17-database-habitats-directive-92-43-eeec-1>

### Graph

EEA, 2008, Conservation status, species by taxonomic group [http://www.eea.europa.eu/data-and-maps/daviz/conservation-status-species-by-taxonomic-group - tab-chart\\_1](http://www.eea.europa.eu/data-and-maps/daviz/conservation-status-species-by-taxonomic-group - tab-chart_1)

EEA, 2010, Abundance and distribution of selected species (SEBI 001) - Assessment published Feb 2015 <http://www.eea.europa.eu/data-and-maps/indicators/abundance-and-distribution-of-selected-species/abundance-and-distribution-of-selected-2>

EEA, 2010, Ecosystem coverage (SEBI 004) - Assessment published Feb 2015 <http://www.eea.europa.eu/data-and-maps/indicators/ecosystem-coverage-1/assessment-1>

EEA, 2010, Habitats of European interest (SEBI 005) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/habitats-of-european-interest/habitats-of-european-interest-assessment>

EEA, 2010, Impact of climate change on bird populations (SEBI 011) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/impact-of-climate-change-on/impact-of-climate-change-on>

EEA, 2010, Livestock genetic diversity (SEBI 006) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/livestock-genetic-diversity/livestock-genetic-diversity-assessment-published>

EEA, 2010, Marine trophic index of European seas (SEBI 012) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/marine-trophic-index-of-european-seas/marine-trophic-index-of-european>

EEA, 2010, Red List Index for European species (SEBI 002) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/red-list-index-for-european-species/red-list-index-for-european>

EEA, 2010, Species of European interest (SEBI 003/CSI 007) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/species-of-european-interest/species-of-european-interest-assessment>

EEA, 2011, Sites designated under the EU Habitats and Birds Directives (SEBI 008) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/sites-designated-under-the-eu/sites-designated-under-the-eu>

EEA, 2014, Species interactions (CLIM 026) - Assessment published Jul 2014 <http://www.eea.europa.eu/data-and-maps/indicators/species-ecosystem-relationship-1/assessment-1>

### Indicator

#### Interactive data

EEA, 2007, Conservation status of the habitat types and species of Community interest [http://bd.eionet.europa.eu/article17/index\\_html/habitatsummary](http://bd.eionet.europa.eu/article17/index_html/habitatsummary)

EEA, 2008, Conservation status, species by taxonomic group [http://www.eea.europa.eu/data-and-maps/daviz/conservation-status-species-by-taxonomic-group - tab-chart\\_1](http://www.eea.europa.eu/data-and-maps/daviz/conservation-status-species-by-taxonomic-group - tab-chart_1)

EEA, 2014, Article 17 of the Habitats Directive - Conservation status of habitats and species of Community interest (2007-2012) [http://bd.eionet.europa.eu/activities/Reporting/Article\\_17/Reports\\_2013](http://bd.eionet.europa.eu/activities/Reporting/Article_17/Reports_2013)

EEA, 2015, Changes in land cover between 2000 and 2006: Conversion of wetlands into other classes [http://www.eea.europa.eu/data-and-maps/daviz/changes-in-land-cover-between-1 - tab-chart\\_1](http://www.eea.europa.eu/data-and-maps/daviz/changes-in-land-cover-between-1 - tab-chart_1)

EEA, 2015, Land cover change: Area change for major ecosystems [http://www.eea.europa.eu/data-and-maps/daviz/land-cover-change-area-change - tab-chart\\_1](http://www.eea.europa.eu/data-and-maps/daviz/land-cover-change-area-change - tab-chart_1)

EEA, 2015, State of Nature Report 2015, European Environment Agency, Copenhagen, Denmark.

EEA, Conservation status by main type of habitats [http://www.eea.europa.eu/data-and-maps/daviz/conservation-status-by-main-type - tab-chart\\_1](http://www.eea.europa.eu/data-and-maps/daviz/conservation-status-by-main-type - tab-chart_1)

EEA, EUNIS, the European Nature Information System <http://eunis.eea.europa.eu/index.jsp>

### **Interactive map**

EEA, EUNIS, the European Nature Information System <http://eunis.eea.europa.eu/index.jsp>

### **Map**

EEA, 2009, Conservation status of habitat types and species (Article 17, Habitats Directive 92/43/EEC) database and spatial dataset <http://www.eea.europa.eu/data-and-maps/data/article-17-database-habitats-directive-92-43-eeec - tab-metadata>

EEA, 2012, Distribution of Natura 2000 sites across EU-27, 2012 <http://www.eea.europa.eu/data-and-maps/figures/distribution-of-natura-2000-sites-3>

EEA, 2014, Terrestrial habitat mapping in Europe: an overview. Technical report No 1/2014, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/terrestrial-habitat-mapping-in-europe>

EEA, 2015, Conservation status of habitat types and species (Article 17, Habitats Directive 92/43/EEC) <http://www.eea.europa.eu/data-and-maps/data/article-17-database-habitats-directive-92-43-eeec-1>

### **Publication**

EEA, 2010, 10 messages for 2010 - Coastal ecosystems, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-coastal-ecosystems>

EEA, 2010, 10 messages for 2010 - Forest ecosystems, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-2014-3>

EEA, 2010, 10 messages for 2010 - Freshwater ecosystems, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-2014-1>

EEA, 2010, 10 messages for 2010 - Marine ecosystems, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-2014-2>

EEA, 2010, Assessing biodiversity in Europe: the 2010 report, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/assessing-biodiversity-in-europe-84>

EEA, 2010, EU 2010 biodiversity baseline, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/eu-2010-biodiversity-baseline>

EEA, 2010, The European Environment - State and Outlook 2010, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/soer/europe/biodiversity>

EEA, 2011, European forests — ecosystem conditions and sustainable use, European Environment Agency, Copenhagen, Denmark. [http://www.eea.europa.eu/publications/eea\\_report\\_2008\\_3](http://www.eea.europa.eu/publications/eea_report_2008_3)

EEA, 2011, Landscape fragmentation in Europe: joint EEA-FOEN report, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/landscape-fragmentation-in-europe>

EEA, 2012, Streamlining European biodiversity indicators 2020: Building a future on lessons learnt from the SEBI 2010 process, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/streamlining-european-biodiversity-indicators-2020>

EEA, 2013, Biodiversity monitoring in Europe. Brochure No 2/2013 <http://www.eea.europa.eu/publications/biodiversity-monitoring-in-europe>

EEA, 2013, The European Grassland Butterfly Indicator: 1990 - 2011. Technical report No 11/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/the-european-grassland-butterfly-indicator-19902011>

EEA, 2014, Developing a forest naturalness indicator for Europe. Technical report No 13/2014, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/developing-a-forest-naturalness-indicator>

EEA, 2014, Digest of EEA indicators 2014. Technical report No 8/2014, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/digest-of-eea-indicators-2014>

EEA, 2014, Effects of air pollution on European ecosystems. Technical report No 11/2014, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/effects-of-air-pollution-on>

EEA, 2014, European bat population trends – A prototype biodiversity indicator. Technical report No 19/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/european-bat-population-trends-2013>

EEA, 2014, Terrestrial habitat mapping in Europe: an overview. Technical report No 1/2014, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/terrestrial-habitat-mapping-in-europe>

EEA, 2015 European environment — state and outlook 2015 (SOER 2015), European Environment Agency, Copenhagen, Denmark. [www.eea.europa.eu/soer/](http://www.eea.europa.eu/soer/)

EEA, 2015, State of Nature Report 2015, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/soer>

EEA, 2015, The European environment — state and outlook 2015, European Environment Agency, Copenhagen. <http://www.eea.europa.eu/soer>

## **Portal**

EC, BISE - the Biodiversity Information System for Europe <http://biodiversity.europa.eu/>

EC, Copernicus, the European Earth Observation Programme <http://www.copernicus.eu/>

EC-JRC EFDAC Viewer <http://forest.jrc.ec.europa.eu/efdac/applications/viewer/>

EEA, Biodiversity Data Centre (BDC) <http://www.eea.europa.eu/themes/biodiversity/dc>

Eurostat, Environmental statistics and accounts <http://ec.europa.eu/eurostat/web/environment/overview>

JRC, Environment and Climate Change Portal <https://ec.europa.eu/jrc/en/science-area/environment-and-climate-change>



## Chapter 4: Direct and indirect drivers of change in the context of different perspectives of quality of life

### Data

EC, European Pollutant Release and Transfer Register (E-PRTR) <http://prtr.ec.europa.eu/Home.aspx>

EEA, 2011, Datasheet — Revealing the costs of air pollution from industrial facilities in Europe <http://www.eea.europa.eu/publications/cost-of-air-pollution/spreadsheet>

EEA, 2013, Impacts and consequences of climate change on forest growth and forest conditions <http://www.eea.europa.eu/data-and-maps/figures/impacts-and-consequences-of-climate>

EEA, 2014 Main pathways of introduction of marine non-indigenous species in regional seas of Europe <http://www.eea.europa.eu/data-and-maps/figures/mode-of-introduction-of-nis - tab-metadata>

JRC, DOPA, the Digital Observatory for Protected Areas <http://dopa.jrc.ec.europa.eu/>

### Graph

EEA, 2013, PCB levels in grey seals (a), white-tailed sea eagle eggs (b), Guillemot eggs (c) and Baltic Herring (d) in the Baltic region between 1970 and 2010 <http://www.eea.europa.eu/data-and-maps/figures/pcb-levels-in-grey-seals>

### Indicator

EEA, 2010, Agriculture: nitrogen balance (SEBI 019) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/agriculture-nitrogen-balance/agriculture-nitrogen-balance-assessment-published>

EEA, 2010, Aquaculture: effluent water quality from finfish farms (SEBI 022) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/aquaculture-effluent-water-quality-from/aquaculture-effluent-water-quality-from>

EEA, 2010, Critical load exceedance for nitrogen (SEBI 009) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/critical-load-exceedance-for-nitrogen/critical-load-exceedance-for-nitrogen>

EEA, 2010, Ecological Footprint of European countries (SEBI 023) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/ecological-footprint-of-european-countries/ecological-footprint-of-european-countries>

EEA, 2010, Fisheries: European commercial fish stocks (SEBI 021) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/fisheries-european-commercial-fish-stocks/fisheries-european-commercial-fish-stocks>

EEA, 2010, Forest: deadwood (SEBI 018) - Assessment published Feb 2015 <http://www.eea.europa.eu/data-and-maps/indicators/forest-deadwood-1/assessment-1>

EEA, 2010, Forest: growing stock, increment and fellings (SEBI 017) - Assessment published Feb 2015 <http://www.eea.europa.eu/data-and-maps/indicators/forest-growing-stock-increment-and-fellings/forest-growing-stock-increment-and-4>

EEA, 2010, Fragmentation of natural and semi-natural areas (SEBI 013) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/fragmentation-of-natural-and-semi/fragmentation-of-natural-and-semi>

EEA, 2010, Freshwater quality (SEBI 016) - Assessment published Mar 2015 <http://www.eea.europa.eu/data-and-maps/indicators/freshwater-quality/freshwater-quality-assessment-published->

EEA, 2010, Impact of climate change on bird populations (SEBI 011) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/impact-of-climate-change-on/impact-of-climate-change-on>

EEA, 2010, Invasive alien species in Europe (SEBI 010) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/invasive-alien-species-in-europe/invasive-alien-species-in->



EEA, 2010, Nutrients in transitional, coastal and marine waters (SEBI 015) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/nutrients-in-transitional-coastal-and-1/nutrients-in-transitional-coastal-and>

EEA, 2012, Distribution of plant species (CLIM 022) - Assessment published Nov 2012 <http://www.eea.europa.eu/data-and-maps/indicators/distribution-of-plant-species-1/assessment>

EEA, 2012, Plant and fungi phenology (CLIM 023) - Assessment published Nov 2012 <http://www.eea.europa.eu/data-and-maps/indicators/plant-phenology-1/assessment>

EEA, 2012, River floods (CLIM 017) - Assessment published Nov 2012 <http://www.eea.europa.eu/data-and-maps/indicators/river-floods-1-further-work>

EEA, 2012, Soil erosion (CLIM 028) - Assessment published Nov 2012 <http://www.eea.europa.eu/data-and-maps/indicators/soil-erosion-by-water-1/assessment>

EEA, 2012, Soil organic carbon (CLIM 027) <http://www.eea.europa.eu/data-and-maps/indicators/soil-organic-carbon-1>

EEA, 2012 Forest fires (CLIM 035) - Assessment published Nov 2012 <http://www.eea.europa.eu/data-and-maps/indicators/forest-fire-danger-1>

EEA, 2013, Land take (CSI 014/LSI 001) - Assessment published Jun 2013 <http://www.eea.europa.eu/data-and-maps/indicators/land-take-2/assessment-2>

EEA, 2014, Ammonia (NH<sub>3</sub>) emissions (APE 003) - Assessment published Jan 2014 <http://www.eea.europa.eu/data-and-maps/indicators/eea-32-ammonia-nh3-emissions-1/assessment-4>

EEA, 2014, Nitrogen oxides (NO<sub>x</sub>) emissions (APE 002) - Assessment published Jan 2014 <http://www.eea.europa.eu/data-and-maps/indicators/eea-32-nitrogen-oxides-nox-emissions-1/assessment.2010-08-19.0140149032-3>

EEA, 2014, Permafrost (CLIM 011) - Assessment published Jun 2014 <http://www.eea.europa.eu/data-and-maps/indicators/mountain-permafrost-1/assessment-1>

### **Interactive data**

EC, European Pollutant Release and Transfer Register (E-PRTR) <http://prtr.ec.europa.eu/Home.aspx>

EEA, 2015, Changes in land cover between 2000 and 2006: Previous status of newly urban areas [http://www.eea.europa.eu/data-and-maps/daviz/changes-in-land-cover-between-tab-chart\\_1](http://www.eea.europa.eu/data-and-maps/daviz/changes-in-land-cover-between-tab-chart_1)

JRC, DOPA, the Digital Observatory for Protected Areas <http://dopa.jrc.ec.europa.eu/>

### **Interactive map**

EC, European Pollutant Release and Transfer Register (E-PRTR) <http://prtr.ec.europa.eu/Home.aspx>

EEA, 2006, Urban and natural/semi-natural ecotones of Europe <http://www.eea.europa.eu/data-and-maps/explore-interactive-maps/ecotones-protected-areas-land-cover>

JRC, DOPA, the Digital Observatory for Protected Areas <http://dopa.jrc.ec.europa.eu/>

### **Map**

EEA, 2009 Exceedance of critical loads for eutrophication due to the deposition of nutrient nitrogen in 2020 under current legislation to reduce national emissions <http://www.eea.europa.eu/data-and-maps/figures/exceedance-of-critical-loads-for-eutrophication-due-to-the-deposition-of-nutrient-nitrogen-in-2020-under-current-legislation-to-reduce-national-emissions>

EEA, 2012, Burnt forest area in five southern European countries <http://www.eea.europa.eu/data-and-maps/figures/burn-area-ha-in-5-1>

EEA, 2012, Exceedance of critical loads for acidification by deposition of nitrogen and sulphur compounds in 2020 under Current Legislation to reduce national emissions <http://www.eea.europa.eu/data-and-maps/figures/exceedance-of-critical-loads-for-acidification-by-deposition-of-nitrogen-and-sulphur-compounds-in-2020-under-current-legislation-to-reduce-national-emissions>

EEA, 2012, Projected changes in fire danger <http://www.eea.europa.eu/data-and-maps/figures/projected-meteorological-forest-fire-danger>

EEA, 2014 Main pathways of introduction of marine non-indigenous species in regional seas of Europe <http://www.eea.europa.eu/data-and-maps/figures/mode-of-introduction-of-nis - tab-metadata>

EEA, Actual and potential future alien plant invasion hotspots under two emissions scenarios <http://www.eea.europa.eu/data-and-maps/figures/actual-and-potential-future-alien>

Schweiger, O., Heikkinen, R. K., Harpke, A., Hickler, T., Klotz, S., Kudrna, O., Kühn, I., Pöyry, J. und Settele, J., 2012, 'Increasing range mismatching of interacting species under global change is related to their ecological characteristics', Global Ecology and Biogeography, 21(1), S.88–99 <http://www.eea.europa.eu/data-and-maps/figures/projected-spatial-mismatches-of-the>

## **Publication**

Brunel, S., E. Fernández-Galiano, P. Genovesi, V. H. Heywood, C. Kueffer and D. M. Richardson, 2013, Invasive alien species: a growing but neglected threat? In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/late-lessons-ii-chapter-20>

EEA, 2007, Estimating the environmentally compatible bioenergy potential from agriculture, European Environment Agency, Copenhagen, Denmark. [http://www.eea.europa.eu/publications/technical\\_report\\_2007\\_12](http://www.eea.europa.eu/publications/technical_report_2007_12)

EEA, 2010, 10 messages for 2010 - Agricultural ecosystems, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-agricultural-ecosystems>

EEA, 2010, Land in Europe: prices, taxes and use patterns <http://www.eea.europa.eu/publications/land-in-europe>

EEA, 2010, Land use - SOER 2010 thematic assessment, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/soer/europe/land-use>

EEA, 2010, Mapping the impacts of natural hazards and technological accidents in Europe, Technical report No 13/2010, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/mapping-the-impacts-of-natural>

EEA, 2011, Hazardous substances in Europe's fresh and marine waters — An overview, EEA Technical report No 8/2011, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/hazardous-substances-in-europes-fresh>

EEA, 2012, Climate change, impacts and vulnerability in Europe 2012, EEA Report No 12/2012, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/media/publications/climate-impacts-and-vulnerability-2012/>

EEA, 2012, European waters - assessment of status and pressures, EEA Report No 8/2012, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/european-waters-assessment-2012>

EEA, 2012, The impacts of endocrine disrupters on wildlife, people and their environments – The Weybridge+15 (1996–2011) report <http://www.eea.europa.eu/publications/the-impacts-of-endocrine-disrupters>

EEA, 2013, EU bioenergy potential from a resource efficiency perspective, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/eu-bioenergy-potential>

EEA, 2013, Global megatrend update: 8 Growing demands on ecosystems, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/global-megatrend-update-8>

EEA, 2014, Air quality in Europe - 2014 report, EEA Report No 5/2014, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/air-quality-in-europe-2014>

EEA, 2014, Digest of EEA indicators 2014. Technical report No 8/2014, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/digest-of-eea-indicators-2014>

EEA, 2014, Effects of air pollution on European ecosystems. Technical report No 11/2014, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/effects-of-air-pollution-on>

EEA, 2014, Environmental Indicator Report 2014 Environmental Impacts of Production-Consumption Systems in Europe, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/environmental-indicator-report-2014>

EEA, 2014, European Union emission inventory report 1990–2012 under the UNECE Convention on Long-range Transboundary Air Pollution (LRTAP), Technical report No 12/2014, European Environment Agency, Copenhagen, <http://www.eea.europa.eu/publications/lrtap-2014>

EEA, 2015 European environment — state and outlook 2015 (SOER 2015), European Environment Agency, Copenhagen, Denmark. [www.eea.europa.eu/soer/](http://www.eea.europa.eu/soer/)

EEA, 2015, The European environment — state and outlook 2015, European Environment Agency, Copenhagen. <http://www.eea.europa.eu/soer>

EU & EEA, 2012, Protected areas in Europe: an overview, EUR-OP, Luxembourg. <http://www.eea.europa.eu/publications/protected-areas-in-europe-2012>

Jobling S. And R. Owen, 2013, Ethinyl oestradiol in the aquatic environment. In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/late-lessons-ii-chapter-13>

JRC, EEA, 2013, The State of Soil in Europe, Luxembourg: Publications Office of the European Union [http://ec.europa.eu/dgs/jrc/downloads/jrc\\_reference\\_report\\_2012\\_02\\_soil.pdf](http://ec.europa.eu/dgs/jrc/downloads/jrc_reference_report_2012_02_soil.pdf)

Maxim L. And J. Van der Sluijs, 2013, Seed-dressing systemic insecticides and honeybees. In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/late-lessons-ii-chapter-16>

Naumann, Sandra, Gerardo Anzaldúa, Pam Berry, Sarah Burch, McKenna Davis, Ana Freluh-Larsen, Holger Gerdes and Michele Sanders (2011): Assessment of the potential of ecosystem-based approaches to climate change adaptation and mitigation in Europe. Final report to the European Commission, DG Environment, Contract no. 070307/2010/580412/SER/B2, Ecologic institute and Environmental Change Institute, Oxford University Centre for the Environment [http://ec.europa.eu/environment/nature/climatechange/pdf/EbA\\_EBM\\_CC\\_FinalReport.pdf](http://ec.europa.eu/environment/nature/climatechange/pdf/EbA_EBM_CC_FinalReport.pdf)

Price, A. R. G. And J. W. Readman, 2013, Booster biocide antifoulants: is history repeating itself? In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/late-lessons-ii-chapter-12>

Quist, D. A., J. A. Heinemann, A. I. Myhr, I. Aslaksen and S. Funtowicz Hungry for innovation: pathways from GM crops to agroecology. In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/late-lessons-ii-chapter-19>

Scalera, R., Genovesi, P., Essl, F., Rabitsch, W. and European Environment Agency, 2012, The impacts of invasive alien species in Europe, Publications Office, Luxembourg. <http://www.eea.europa.eu/publications/impacts-of-invasive-alien-species>

Scalera, R., Genovesi, P., Rabitsch, W. and European Environment Agency, 2012, Invasive alien species indicators in Europe a review of streamlining European biodiversity (SEBI) Indicator 10., Publications Office, Luxembourg. <http://www.eea.europa.eu/publications/streamlining-european-biodiversity-indicators-sebi>

Shine, C., Kettunen, M., Genovesi, P., Essl, F., Gollasch, S., Rabitsch, W., Scalera, R., Starfinger, U. and ten Brink, P. 2010. Assessment to support continued development of the EU Strategy to combat invasive alien species. Final Report for the European Commission. Institute for European Environmental Policy (IEEP), Brussels, Belgium. [http://ec.europa.eu/environment/nature/invasivealien/docs/IEEP%20report\\_EU%20IAS%20Strategy%20components%20%20costs.pdf](http://ec.europa.eu/environment/nature/invasivealien/docs/IEEP%20report_EU%20IAS%20Strategy%20components%20%20costs.pdf)

## **Project**

EC, European Pollutant Release and Transfer Register (E-PRTR) <http://prtr.ec.europa.eu/Home.aspx>

## **Portal**

EC, BISE - the Biodiversity Information System for Europe <http://biodiversity.europa.eu/>

EC, Copernicus, the European Earth Observation Programme <http://www.copernicus.eu/>

EC, WISE - the Water Information System for Europe <http://water.europa.eu/>

EEA, Climate change data centre <http://www.eea.europa.eu/themes/climate/dc>

Eurostat, Agricultural Statistics <http://ec.europa.eu/eurostat/web/agriculture/overview>

Eurostat, Environmental statistics and accounts <http://ec.europa.eu/eurostat/web/environment/overview>

JRC, EASIN, the European Alien Species Information Network <http://easin.jrc.ec.europa.eu/>

JRC, Environment and Climate Change Portal <https://ec.europa.eu/jrc/en/science-area/environment-and-climate-change>

JRC, European Forest Fire Information System <http://forest.jrc.ec.europa.eu/effis/>

JRC, Floods Portal <http://floods.jrc.ec.europa.eu/>

## **Chapter 5: Integrated and cross-scale analysis of interactions of the natural world and human society**

### **Data**

EC, Delivering Alien Invasive Species Inventories for Europe <http://www.europe-aliens.org/>

EEA, 2013, Impacts and consequences of climate change on forest growth and forest conditions <http://www.eea.europa.eu/data-and-maps/figures/impacts-and-consequences-of-climate>

EEA, 2014, Climate change mitigation policies and measures (greenhouse gas emissions) <http://www.eea.europa.eu/data-and-maps/data/climate-change-mitigation-policies-and-measures-1>

JRC, eHabitat - Ecological Forecasting for Policy Making <http://ehabitat.jrc.ec.europa.eu/>

### **Indicator**

EEA, 2014, Species interactions (CLIM 026) - Assessment published Jul 2014 <http://www.eea.europa.eu/data-and-maps/indicators/species-ecosystem-relationship-1/assessment-1>

EEA, 2010, Impact of climate change on bird populations (SEBI 011) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/impact-of-climate-change-on/impact-of-climate-change-on>

EEA, 2012, Soil organic carbon (CLIM 027) <http://www.eea.europa.eu/data-and-maps/indicators/soil-organic-carbon-1>

EEA, 2012, Plant and fungi phenology (CLIM 023) - Assessment published Nov 2012 <http://www.eea.europa.eu/data-and-maps/indicators/plant-phenology-1/assessment>

EEA, 2012, Soil erosion (CLIM 028) - Assessment published Nov 2012 <http://www.eea.europa.eu/data-and-maps/indicators/soil-erosion-by-water-1/assessment>

EEA, 2014, Permafrost (CLIM 011) - Assessment published Jun 2014 <http://www.eea.europa.eu/data-and-maps/indicators/mountain-permafrost-1/assessment-1>

### **Interactive data**

JRC, eHabitat - Ecological Forecasting for Policy Making <http://ehabitat.jrc.ec.europa.eu/>

### **Interactive map**

Drakou, E.G., N.D. Crossman, L. Willemsen, B. Burkhard, I. Palomo, J. Maes, S. Peedell, A visualization and data-sharing tool for ecosystem service maps: Lessons learnt, challenges and the way forward, Ecosystem Services, Available online 14 January 2015, ISSN 2212-0416, <http://dx.doi.org/10.1016/j.ecoser.2014.12.002> <http://esp-mapping.net/Home/>

EC, INSPIRE Geoportal <http://inspire-geoportal.ec.europa.eu/>

EEA, 2010, Environmental Atlas of Europe <http://discomap.eea.europa.eu/map/environmentalatlas/>

JRC, eHabitat - Ecological Forecasting for Policy Making <http://ehabitat.jrc.ec.europa.eu/>

### **Map**

EEA, Actual and potential future alien plant invasion hotspots under two emissions scenarios <http://www.eea.europa.eu/data-and-maps/figures/actual-and-potential-future-alien>

EEA, Corine Land Cover 2000 seamless vector data <http://www.eea.europa.eu/data-and-maps/data/corine-land-cover-2000-clc2000-seamless-vector-database-5 - tab-gis-data>

Schweiger, O., Heikkinen, R. K., Harpke, A., Hickler, T., Klotz, S., Kudrna, O., Kühn, I., Pöyry, J. und Settele, J., 2012, 'Increasing range mismatching of interacting species under global change is related to their ecological characteristics', Global Ecology and Biogeography, 21(1), S.88–99 <http://www.eea.europa.eu/data-and-maps/figures/projected-spatial-mismatches-of-the>

### **Publication**

EC, 2010, European Atlas of Soil Biodiversity, Published by the Publications Office of the European Union, Luxembourg. [http://eusoiils.jrc.ec.europa.eu/library/maps/biodiversity\\_atlas/](http://eusoiils.jrc.ec.europa.eu/library/maps/biodiversity_atlas/)

- EEA, 2007, Estimating the environmentally compatible bioenergy potential from agriculture, European Environment Agency, Copenhagen, Denmark. [http://www.eea.europa.eu/publications/technical\\_report\\_2007\\_12](http://www.eea.europa.eu/publications/technical_report_2007_12)
- EEA, 2010, 10 messages for 2010 - Climate change and biodiversity, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-climate-change>
- EEA, 2010, 10 messages for 2010 - Mountain ecosystems, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-mountain-ecosystems>
- EEA, 2011, An experimental framework for ecosystem capital accounting in Europe, Technical report No 13/2011, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/an-experimental-framework-for-ecosystem>
- EEA, 2011, Europe's environment — An Assessment of Assessments, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/europes-environment-aoa>
- EEA, 2012, Climate change, impacts and vulnerability in Europe 2012, EEA Report No 12/2012, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/media/publications/climate-impacts-and-vulnerability-2012/>
- EEA, 2013, Adaptation in Europe - Addressing risks and opportunities from climate change in the context of socio-economic developments, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/adaptation-in-europe>
- EEA, 2013, Towards a green economy in Europe - EU environmental policy targets and objectives 2010-2050, EEA Report No 8/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/towards-a-green-economy-in-europe>
- EEA, 2015 European environment — state and outlook 2015 (SOER 2015), European Environment Agency, Copenhagen, Denmark. [www.eea.europa.eu/soer/](http://www.eea.europa.eu/soer/)
- EEA, 2015, The European environment — state and outlook 2015, European Environment Agency, Copenhagen. <http://www.eea.europa.eu/soer>
- Maxim L. And J. Van der Sluijs, 2013, Seed-dressing systemic insecticides and honeybees. In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/late-lessons-ii-chapter-16>
- McGlade, J. and S. van den Hove, 2013, Ecosystems and managing the dynamics of change. In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/late-lessons-ii-chapter-17>
- Meiner, A., Reker, J., Hildén, M., O'Doherty, J. J. And European Environment Agency, 2013, Balancing the future of Europe's coasts: knowledge base for integrated management., Publications Office, Luxembourg. <http://www.eea.europa.eu/publications/balancing-the-future-of-europes>
- Naumann, Sandra, Gerardo Anzaldua, Pam Berry, Sarah Burch, McKenna Davis, Ana Frelih-Larsen, Holger Gerdes and Michele Sanders (2011): Assessment of the potential of ecosystem-based approaches to climate change adaptation and mitigation in Europe. Final report to the European Commission, DG Environment, Contract no. 070307/2010/580412/SER/B2, Ecologic institute and Environmental Change Institute, Oxford University Centre for the Environment [http://ec.europa.eu/environment/nature/climatechange/pdf/EbA\\_EBM\\_CC\\_FinalReport.pdf](http://ec.europa.eu/environment/nature/climatechange/pdf/EbA_EBM_CC_FinalReport.pdf)
- Quist, D. A., J. A. Heinemann, A. I. Myhr, I. Aslaksen and S. Funtowicz Hungry for innovation: pathways from GM crops to agroecology. In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/late-lessons-ii-chapter-19>
- Project**
- EC, Delivering Alien Invasive Species Inventories for Europe <http://www.europe-aliens.org/>
- EC, European Biodiversity Observation Network (EBONE) <http://www.wageningenur.nl/en/Expertise-Services/Research-Institutes/alterra/Projects/EBONE-2.htm>
- EEA, 2010, Environmental Atlas of Europe <http://discomap.eea.europa.eu/map/environmentalatlas/>

EEA, Programme on Land and Ecosystem Accounting (LEAC) [http://sia.eionet.europa.eu/LEAC/index\\_html](http://sia.eionet.europa.eu/LEAC/index_html)

### **Portal**

EC, BISE - the Biodiversity Information System for Europe <http://biodiversity.europa.eu/>

EC, Delivering Alien Invasive Species Inventories for Europe <http://www.europe-aliens.org/>

EC, Infrastructure for Spatial Information in the European Community (INSPIRE) <http://inspire.ec.europa.eu/>

EEA, Climate Adapt <http://climate-adapt.eea.europa.eu/>

EEA, Climate change data centre <http://www.eea.europa.eu/themes/climate/dc>

Eurostat, Environmental statistics and accounts <http://ec.europa.eu/eurostat/web/environment/overview>

JRC, Environment and Climate Change Portal <https://ec.europa.eu/jrc/en/science-area/environment-and-climate-change>

### **Policy instrument**

EC, 2007, Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks (Text with EEA relevance) <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32007L0060>



## Chapter 6: Options for governance, institutional arrangements and private and public decision making across scales and sectors

EEA, 2010, Ecosystem accounting and the cost of biodiversity losses — the case of coastal Mediterranean wetlands, European Environment Agency, Copenhagen, Denmark.

<http://www.eea.europa.eu/publications/ecosystem-accounting-and-the-cost>

### Data

EC, Delivering Alien Invasive Species Inventories for Europe <http://www.europe-aliens.org/>

EEA, 2013, Natura 2000 data - the European network of protected sites <http://www.eea.europa.eu/data-and-maps/data/natura-5>

EEA, 2014, Climate change mitigation policies and measures (greenhouse gas emissions) <http://www.eea.europa.eu/data-and-maps/data/climate-change-mitigation-policies-and-measures-1>

EEA, 2014, Nationally designated areas (CDDA) geospatial database <http://www.eea.europa.eu/data-and-maps/data/nationally-designated-areas-national-cdda-9>

EEA, Biodiversity observation schemes using citizen science <http://www.eea.europa.eu/data-and-maps/daviz/biodiversity-observation-schemes-using-citizen-science - tab-daviz-tabular>

EEA, List of EU research projects about biodiversity and ecosystems <http://www.eea.europa.eu/data-and-maps/data/eu-research-projects-on-biodiversity/projects/research/view>

JRC, DOPA, the Digital Observatory for Protected Areas <http://dopa.jrc.ec.europa.eu/>

### Indicator

EEA, 2010, Financing biodiversity management (SEBI 025) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/financing-biodiversity-management/financing-biodiversity-management-assessment-published>

EEA, 2010, Patent applications based on genetic resources (SEBI 024) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/patent-applications-based-on-genetic-resources/patent-applications-based-on-genetic>

EEA, 2010, Public awareness (SEBI 026) - Assessment published February 2015 <http://www.eea.europa.eu/data-and-maps/indicators/public-awareness/public-awareness-assessment-published->

EEA, 2011, SEBI 007 Indicator Nationally Designated Protected Areas - Assessment published Feb 2015 <http://www.eea.europa.eu/data-and-maps/indicators/nationally-designated-protected-areas/nationally-designated-protected-areas-assessment-3>

EEA, 2011, Sites designated under the EU Habitats and Birds Directives (SEBI 008) - Assessment published May 2010 <http://www.eea.europa.eu/data-and-maps/indicators/sites-designated-under-the-eu/sites-designated-under-the-eu>

### Interactive data

EEA, 2015, Growth of the nationally designated protected areas and site number [http://www.eea.europa.eu/data-and-maps/daviz/growth-of-the-nationally-designated-1 - tab-chart\\_1](http://www.eea.europa.eu/data-and-maps/daviz/growth-of-the-nationally-designated-1 - tab-chart_1)

EEA, Complementarity between European designations (Natura 2000 and Emerald networks) and national designations by share of terrestrial area [http://www.eea.europa.eu/data-and-maps/daviz/complementarity-between-european-designations - tab-chart\\_1](http://www.eea.europa.eu/data-and-maps/daviz/complementarity-between-european-designations - tab-chart_1)

EEA, Natura 2000 barometer charts <http://www.eea.europa.eu/data-and-maps/daviz/natura-2000-barometer - tab-dashboard-02>

JRC, DOPA, the Digital Observatory for Protected Areas <http://dopa.jrc.ec.europa.eu/>

### Interactive map

EC, INSPIRE Geoportal <http://inspire-geoportal.ec.europa.eu/>

EEA, 2010, Environmental Atlas of Europe <http://discomap.eea.europa.eu/map/environmentalatlas/>



EEA, 2013, European protected sites. Interactive map <http://www.eea.europa.eu/data-and-maps/explore-interactive-maps/european-protected-areas-1>

EEA, 2015, Natura 2000 European protected areas — interactive map <http://natura2000.eea.europa.eu/>

EEA, Floods Directive viewer <http://www.eea.europa.eu/themes/water/interactive/floods-directive-viewer>

JRC, DOPA, the Digital Observatory for Protected Areas <http://dopa.jrc.ec.europa.eu/>

## Map

EEA, 2009 Exceedance of critical loads for eutrophication due to the deposition of nutrient nitrogen in 2020 under current legislation to reduce national emissions <http://www.eea.europa.eu/data-and-maps/figures/exceedance-of-critical-loads-for-eutrophication-due-to-the-deposition-of-nutrient-nitrogen-in-2020-under-current-legislation-to-reduce-national-emissions>

EEA, 2012, Distribution of Natura 2000 sites across EU-27, 2012 <http://www.eea.europa.eu/data-and-maps/figures/distribution-of-natura-2000-sites-3>

EEA, 2012, Exceedance of critical loads for acidification by deposition of nitrogen and sulphur compounds in 2020 under Current Legislation to reduce national emissions <http://www.eea.europa.eu/data-and-maps/figures/exceedance-of-critical-loads-for-acidification-by-deposition-of-nitrogen-and-sulphur-compounds-in-2020-under-current-legislation-to-reduce-national-emissions>

EEA, 2012, Share of HNV farmland per utilised agricultural area (UAA) <http://www.eea.europa.eu/data-and-maps/figures/share-of-hnv-farmland-per>

EEA, 2013, Natura 2000: Birds and Habitats Directives <http://www.eea.europa.eu/data-and-maps/figures/natura-2000-birds-and-habitat-directives-5>

EEA, 2014, Nationally designated areas (CDDA) geospatial database <http://www.eea.europa.eu/data-and-maps/data/nationally-designated-areas-national-cdda-9>

## Publication

Brunel, S., E. Fernández-Galiano, P. Genovesi, V. H. Heywood, C. Kueffer and D. M. Richardson, 2013, Invasive alien species: a growing but neglected threat? In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/late-lessons-ii-chapter-20>

EC, 2005, Communication from the Commission to the Council and the European Parliament - Thematic Strategy on air pollution, COM/2005/0446 final <http://eur-lex.europa.eu/legal-content/EN/NOT/?uri=celex:52005DC0446>

EC, 2006, Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions - A thematic strategy on the sustainable use of pesticides, COM/2006/0372 final <http://eur-lex.europa.eu/legal-content/EN/NOT/?uri=CELEX:52006DC0372>

EC, 2009, White paper - Adapting to climate change: towards a European framework for action, COM/2009/0147 final. <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1424955136790&uri=CELEX:52009DC0147>

EC, 2010, Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions: Our Life Insurance, Our Natural Capital: An EU Biodiversity Strategy to 2020, COM/2011/0244 final <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52011DC0244>

EC, 2010, EUROPE 2020 A strategy for smart, sustainable and inclusive growth, COM/2010/2020 final. <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52010DC2020>

EC, 2011, Commission staff working paper — Impact assessment accompanying the document 'Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions — Our life insurance, our natural capital: an EU biodiversity strategy to 2020', European Commission [http://ec.europa.eu/environment/nature/biodiversity/comm2006/pdf/2020/1\\_EN\\_impact\\_assesment\\_part1\\_v4.pdf](http://ec.europa.eu/environment/nature/biodiversity/comm2006/pdf/2020/1_EN_impact_assesment_part1_v4.pdf)

EC, 2011, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Roadmap to a Resource Efficient Europe, COM(2011)/571. <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1424956600098&uri=CELEX:52011DC0571>

EC, 2012, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions — A Blueprint to Safeguard Europe's Water Resources COM(2012) 673 final, COM(2012) 673 final. <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1424956918718&uri=CELEX:52012DC0673>

EC, 2013, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Green Infrastructure (GI) — Enhancing Europe's Natural Capital, COM(2013) 249 final. <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52013DC0249>

EC, 2013, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee of the Regions. An EU Strategy on adaptation to climate change, COM(2013) 216 final. <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1424957806617&uri=CELEX:52013DC0216>

EC, 2013, Decision No 1386/2013/EU of the European Parliament and of the Council of 20 November 2013 on a General Union Environment Action Programme to 2020 'Living Well, Within The Limits Of Our Planet' (text with EEA relevance) <http://ec.europa.eu/environment/newprg/index.htm>

EEA, 2007, Estimating the environmentally compatible bioenergy potential from agriculture, European Environment Agency, Copenhagen, Denmark. [http://www.eea.europa.eu/publications/technical\\_report\\_2007\\_12](http://www.eea.europa.eu/publications/technical_report_2007_12)

EEA, 2010, 10 messages for 2010 - Protected areas, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/10-messages-for-2010-2014>

EEA, 2010, The European Environment - State and Outlook 2010, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/soer/europe/biodiversity>

EEA, 2010, Towards an early warning and information system for invasive alien species (IAS) threatening biodiversity in Europe, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/information-system-invasive-alien-species>

EEA, 2010, Urban environment - SOER 2010 thematic assessment, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/soer/europe/urban-environment>

EEA, 2011, An experimental framework for ecosystem capital accounting in Europe, Technical report No 13/2011, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/an-experimental-framework-for-ecosystem>

EEA, 2011, Europe's environment — An Assessment of Assessments, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/europes-environment-aoa>

EEA, 2011, Landscape fragmentation in Europe: joint EEA-FOEN report, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/landscape-fragmentation-in-europe>

EEA, 2011, Revealing the costs of air pollution from industrial facilities in Europe, Technical report No 15/2011, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/signals/signals-2013/articles/publications/cost-of-air-pollution>

EEA, 2012, Towards efficient use of water resources in Europe, EEA Report No 1/2012, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/towards-efficient-use-of-water>

EEA, 2012, Water resources in Europe in the context of vulnerability - EEA 2012 state of water assessment, EEA Report No 11/2012, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/highlights/publications/water-resources-and-vulnerability>

EEA, 2013, Adaptation in Europe - Addressing risks and opportunities from climate change in the context of socio-economic developments, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/adaptation-in-europe>

EEA, 2013, Biodiversity monitoring in Europe. Brochure No 2/2013 <http://www.eea.europa.eu/publications/biodiversity-monitoring-in-europe>

EEA, 2013, Environment and human health, EEA Report No 5/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/environment-and-human-health>

EEA, 2013, Towards a green economy in Europe - EU environmental policy targets and objectives 2010-2050, EEA Report No 8/2013, European Environment Agency, Copenhagen, Denmark.  
<http://www.eea.europa.eu/publications/towards-a-green-economy-in-europe>

EEA, 2014, Air quality in Europe - 2014 report, EEA Report No 5/2014, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/air-quality-in-europe-2014>

Jobling S. And R. Owen, 2013, Ethinyl oestradiol in the aquatic environment. In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, Denmark. <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/late-lessons-ii-chapter-13>

Maxim L. And J. Van der Sluijs, 2013, Seed-dressing systemic insecticides and honeybees. In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/late-lessons-ii-chapter-16>

McGlade, J. and S. van den Hove, 2013, Ecosystems and managing the dynamics of change. In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/late-lessons-ii-chapter-17>

Meiner, A., Reker, J., Hildén, M., O'Doherty, J. J. And European Environment Agency, 2013, Balancing the future of Europe's coasts: knowledge base for integrated management., Publications Office, Luxembourg.  
<http://www.eea.europa.eu/publications/balancing-the-future-of-europes>

Price, A. R. G. And J. W. Readman, 2013, Booster biocide antifoulants: is history repeating itself? In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, <http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/late-lessons-ii-chapter-12>

Quist, D. A., J. A. Heinemann, A. I. Myhr, I. Aslaksen and S. Funtowicz Hungry for innovation: pathways from GM crops to agroecology. In: Late lessons from early warnings: science, precaution, innovation, EEA Report No 1/2013, European Environment Agency, Copenhagen, Denmark.  
<http://www.eea.europa.eu/publications/late-lessons-2/late-lessons-chapters/late-lessons-ii-chapter-19>

Shine, C., Kettunen, M., Genovesi, P., Essl, F., Gollasch, S., Rabitsch, W., Scalera, R., Starfinger, U. and ten Brink, P. 2010. Assessment to support continued development of the EU Strategy to combat invasive alien species. Final Report for the European Commission. Institute for European Environmental Policy (IEEP), Brussels, Belgium.  
[http://ec.europa.eu/environment/nature/invasivealien/docs/IEEP%20report\\_EU%20IAS%20Strategy%20components%20%20costs.pdf](http://ec.europa.eu/environment/nature/invasivealien/docs/IEEP%20report_EU%20IAS%20Strategy%20components%20%20costs.pdf)

## **Case Study**

JRC, MAES catalogue of case-studies <http://biodiversity.europa.eu/maes/maes-catalogue-of-case-studies>

## **Project**

EC, Delivering Alien Invasive Species Inventories for Europe <http://www.europe-aliens.org/>

EC, European Biodiversity Observation Network (EBONE) <http://www.wageningenur.nl/en/Expertise-Services/Research-Institutes/alterra/Projects/EBONE-2.htm>

EEA, 2010, Environmental Atlas of Europe <http://discomap.eea.europa.eu/map/environmentalatlas/>

## **Portal**

EC, BISE - the Biodiversity Information System for Europe <http://biodiversity.europa.eu/>

EC, Delivering Alien Invasive Species Inventories for Europe <http://www.europe-aliens.org/>

EC, Financing Natura 2000 <http://www.financing-natura2000.eu/>

EC, Infrastructure for Spatial Information in the European Community (INSPIRE) <http://inspire.ec.europa.eu/>

EC, LIFE Projects database <http://ec.europa.eu/environment/life/project/Projects/index.cfm>

EC, LifeWatch - European e-Science infrastructure for biodiversity and ecosystem research  
<http://www.lifewatch.eu/web/guest/home>

European Cooperative Programme for Plant Genetic Resources (ECPGR) <http://www.ecpgr.cgiar.org/>

Eurostat, Environmental statistics and accounts <http://ec.europa.eu/eurostat/web/environment/overview>

JRC, Environment and Climate Change Portal <https://ec.europa.eu/jrc/en/science-area/environment-and-climate-change>

### **Policy instrument**

2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment Text with EEA relevance <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32011L0092>

EC, 1991, Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment [http://ec.europa.eu/environment/water/water-urbanwaste/index\\_en.html](http://ec.europa.eu/environment/water/water-urbanwaste/index_en.html)

EC, 1992, Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora [http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index\\_en.htm](http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm)

EC, 2000, Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy [http://ec.europa.eu/environment/water/water-framework/index\\_en.html](http://ec.europa.eu/environment/water/water-framework/index_en.html)

EC, 2006, Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration <http://ec.europa.eu/environment/water/water-framework/groundwater/framework.htm>

EC, 2007, Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32007L0002>

EC, 2007, Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks (Text with EEA relevance) <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32007L0060>

EC, 2008, Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive) (Text with EEA relevance) [http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index\\_en.htm](http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index_en.htm)

EC, 2009, Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds [http://ec.europa.eu/environment/nature/legislation/birdsdirective/index\\_en.htm](http://ec.europa.eu/environment/nature/legislation/birdsdirective/index_en.htm)

EC, 2013, Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the prevention and management of the introduction and spread of invasive alien species COM/2013/0620 final <http://eur-lex.europa.eu/legal-content/EN/NOT/?uri=CELEX:52013PC0620&qid=1425293649078>

Genovesi, P., Shine, C., 2011, European strategy on invasive alien species, Council of Europe Publishing, Strasbourg. [http://www.coe.int/t/dg4/cultureheritage/nature/bern/ias/Documents/Publication\\_Strategy\\_en.pdf](http://www.coe.int/t/dg4/cultureheritage/nature/bern/ias/Documents/Publication_Strategy_en.pdf)

## Annex 2 Full details

One example of an entry with all recorded metadata. All data are included in the Excel Workbook provided as an annex to this report. The full database (in Excel or Access format) can be requested from Mark Snethlage email: [snethlage@ecnc.org](mailto:snethlage@ecnc.org)

### EU 2010 Biodiversity Baseline

**Reference:** EEA, 2010, EU 2010 biodiversity baseline, European Environment Agency, Copenhagen.

**URL:** <http://www.eea.europa.eu/publications/eu-2010-biodiversity-baseline>

**Resource:** Publication | **Format:** PDF

**Relevance:** Core

**Topic:** Biodiversity; Policy instruments

**Chapter:** Chapter 3: Status, trends and future dynamics of biodiversity and ecosystems underpinning nature's benefits to people

**Chapter themes:** Ch. 3 - past and current trends and future dynamics of biodiversity and ecosystems; Ch. 3 - ecosystem range and distribution (changes); Ch. 3 - species of special concern and importance

**Keywords:** soil; global; marine ecosystems; rivers; heath and scrub; species; endemic species; baseline; land cover; conservation; agro-ecosystems; habitats; ecosystem services; red list; genes; lakes; EU ecosystems; Natura 2000; biodiversity; grassland; coastal

**DPSIR:** State

**Description:** *The EU 2010 Biodiversity Baseline provides facts and figures on the state and trends of the different biodiversity and ecosystem components. It thereby supports the EU in developing the post-2010 sub-targets and provides factual data for measuring and monitoring [text truncated here—problem to be solved]*

**Aichi targets:** Target 1 People aware of biodiversity and actions; Target 2 Biodiversity values integrated into strategies; Target 19 Science base and technology related to biodiversity are shared

**Geographical coverage:** EU27

**Temporal coverage** – from: 1990 to 2010

# Annex 3 List of keywords

These are the keywords used in the database column “Keywords”. To a large extent they correspond to the keywords used as part of the EEA document metadata.

10 messages for 2010	Coastal and marine environment	EU action
access to EU information	coastal ecosystems	EU cohesion policy
access to information	coastal management	EU ecosystems
acidification	common strategy	eu emission inventory
adaptation	conservation	EU environmental policy
adaptation strategies	conservation of resources	EU financing
adaptation to climate change	conservation status	EU marine strategy framework
afforestation	consumption	directive
agricultural ecosystems	consumption and production patterns	EU policy
agriculture	contaminated land	EU programme
agriculture policy	conversion	eunis
agri-environment	corine land cover	Europe
agro-ecosystems	COST	eutrophication
air	countryside	evaluation
air emissions	critical load	expenditures
Air emissions accounts	csi	extinction
air pollutants	cultural landscapes	extreme events
air pollution	data	extreme temperatures
air pollution control	dataset	extreme weather events
air pollution indicator	deadwood	farm structure
air quality	deforestation	farming
Air quality and greenhouse gases	degree of pollution	farmland
alien species	designated areas	farmland abandonment
ammonia	Digital Earth	falling
animal welfare	disaster risk reduction	fertility
animals	disclosure of information	financial
aquaculture	drinking water	financing
aquatic ecosystems	drought	fire
Article 17	early warning	fisheries
Assessment of Assessments	Earth observation	fixing of prices
atmospheric nitrogen	ecological footprint	flood
baseline	economic and social cohesion	flood management
bats	economic growth	floods
belgrade	economic recession	food resources
biocapacity	economic resources	food safety and security
biodiversit	economic stabilisation	forecast
biodiversity	Ecosystem	forest
biodiversity indicators	ecosystem accounting	forest biodiversity
biodiversity loss	ecosystem based approaches	forest connectivity
biodiversity monitoring	ecosystem services	forest conservation
bioenergy	ecosystems	forest creation
bioenergy crops	Ecosystems and biodiversity	forest ecosystems
biogeographical regions	ecotone	forest fire
biomass	education	forest management
biomass energy	eea owned data sets	forest monitoring
birds	Eionet	forestry
birds directive	endemic species	forests
border control	endocrine disruption	FP5
bore hole measurement	energy consumption	FP6
building industry	energy policy	FP7
building insulation	energy resources	fragmentation
butterflies	environment	freshwater
cancer	Environment for Europe	freshwater ecosystems
cap	Environmental goods and services	genes
carbon	sector	genetic diversity
carbon sink	environmental impact	genetic resources
carbon stock	Environmental monitoring	geographic data
cattle	environmental policy	geographical information
cdda	environmental protection	geographical information system
chemicals	Environmental protection expenditure	geographical information systems
cities	environmental standard	geophysical hazards
citizen science	Environmental taxes	geospatial data
climate	environmental trends	global
climate change	environmentally-compatible bioenergy	global megatrends
climate change adaptation	E-PRTR	global warming
climate change impacts	erosion	globalisation
climate change mitigation	ESF	gmes
coastal	EU	graph

grassland	landscape protection	principle of subsidiarity
Green and resource-efficient Europe	landslides	priority data flow
green economy	legal instruments	private sector
green infrastructure	LIFE+	production
green solutions	living plant	productivity
green space	logging	protected area
green urban areas	long-range transboundary air pollution	protected areas
greenhouse gas emissions	low-carbon economy	protected sites
grid	lrta convention	protected species
groundwater	management	protection
habitat	management of resources	protection of animal life
habitat fragmentation	map	protection of forests
habitats	marine	protection of plant life
habitats directive	marine and coastal	public awareness campaign
Hazardous substances	marine ecosystem	public safety
health	marine environment	public sector
heat waves	marine pollution	quality of life
heath and scrub	Marine Strategy Framework Directive	recreational ar
high nature value	maritime sector	recreational areas
hmv	Material flows and resource	red list
hormones	productivity	reflation
housing	Mediterranean	reporting
human	megatrends	research and development
human health	migratory species	reserve
hunting	mining	resource efficiency
hydrometeorological	modelling	resource use
hydropower	monitoring	response
impact study	mountain ecosystems	risk management
import restriction	mountains	risk prevention
income	national parks	risk reduction
increment	nationally designated areas	rivers
indicator	Natura 2000	rural development
indicators	natural capital	SAC
industrial project	natural disaster	safe water
information network	natural hazard	scenarios
information system	natural heritage	SCI
information transfer	Natural resources	sea
infrastructure	natural resources consumption	sebi
inland waterway	nature	SEIS
innovation	nature and biodiversity	semi-natural habitats
INSPIRE	nature conservation	Shared Environmental Information
integrated farming	neonicotoids	System
Integrated sustainability assessments	neurodevelopmental disorders	sheep
integrated urban management	nh3	site
integrated water management	nitrogen	sites
intensive farming	nitrous oxide	social equity
interactive map	noise	social inequalities
Internet	non-indigenous species	SOER2010
inundations	nox	soer2015
invasive alien species	oestrogens	soer2015 communication
invasive species	organic farming	soil
investment	organic substances	soil biodiversity
job creation	orthophosphate	soil sealing
joint implementation	overexploitation	SPA
knowledge economy	oxidation	spatial planning
labour input	ozone	species
lakes	pan-Europe	species Article 17
land	pan-European environment	specific regions
land conservation	patent publication	status
land conversion	patents	storms
land cover	pcb	supply
land cover changes	permafrost	surface water
land development	pesticides	sustainability
land prices	pet shop	sustainable cities
land take	phenology	sustainable consumption and
land use	policies	production
land use change	policies and measures	sustainable development
land use planning	policy instruments	sustainable farming practices
land use taxes	pollutants	sustainable forest management
land use trends	pollution	sustainable forestry
landfill	pollution control	synthesis
landscape	population	taxonomy
landscape fragmentation	poverty	technological hazards
landscape management	prevention of pollution	temperatures
landscape planning	prices	terrestrial

territorial cohesion  
territorial waters  
thematic assessments  
threatened species  
threats  
threats to biodiversity  
tipping points  
toxic spills  
traceability  
traffic  
trans-European network  
transmission network  
transport  
urban  
urban air quality  
urban areas  
urban ecosystems  
urban environment  
urban forests  
urban lifestyle  
urban planning  
urban policy  
urban population  
urban sprawl  
urbanisation  
use  
use of water  
vector data  
vegetation  
volcanic eruptions  
Waste  
waste management  
water  
water accounts  
water analysis  
water consumption  
water framework directive  
water management  
water management in agriculture  
water pollutant  
water pollution  
water protection  
water quality  
water resource management  
water resources  
water scarcity  
water services  
water towers  
water use  
welfare  
well-being  
wetlands  
wildlife  
wind  
wood supply