The Biodiversity information system for Europe as a Clearing House Mechanism..

CLEARING-HOUSE MECHANISM



Clearing-House Mechanism

Towards a biodiversity knowledge network for scientific and technical cooperation

Mission

The Clearing-House Mechanism (CHM) of the Convention on Biological Diversity has been established further to Article 18.3 of the Convention

Further to decision X/15, its mission is to contribute significantly to the implementation of the Convention on Biological Diversity and its Strategic Plan for Biodiversity 2011-2020, through effective information services and other appropriate means in order to promote and facilitate scientific and technical cooperation, knowledge sharing and information exchange, and to establish a fully operational network of Parties and partners.

This mission is articulated around three major goals

- 1. The central clearing-house mechanism provides effective global information services to facilitate the implementation of the Strategic Plan for Biodiversity 2011-2020.
- 2. National clearing-house mechanisms provide effective information services to facilitate the implementation of the national biodiversity strategies and action plans.
- 3. Partners significantly expand the clearing-house mechanism network and services.

More »

| Implementation | Decisions |
|--|-----------|
| The implementation activities of the Clearing-House Mechanism has been quided by the Conference of the Parties. | • XIII/23 |
| The Charles Have Macharine environ fields for main environments | • XII/2 |
| The Clearing-House Mechanism consists of the following components: • The CBD website, acting as the central node. | • XI/2 |
| The network of national Clearing-House Mechanisms. | • X/15 |
| Various partner institutions. | • IX/30 |
| The Clearing-House Mechanism is constantly being improved to better contribute to the implementation of the Strategic Plan for Biodiversity 2011-2020 and the | • VIII/11 |
| the creating mode mechanism scription being movied to perform a compare to an implementation or the analytic matter building of the provided on the provided o | • VII/23 |
| Clearing-House Mechanism is available in document UNEP/CRD/CHM/IAC/2010/1/3 | • \/1/18 |



BISE serves as the European reference gateway for accessing data, information and knowledge regarding the status and progress towards EU biodiversity targets. This is derived from data collected through key nature-related policy instruments.

In the spotlight



What does the EU do to protect Biodiversity?



Recently released

Technical report: Quantification of landscape



Dr Brian MacSharry 9/11/2023 COOP4CBD CHM session

European Environment Agen

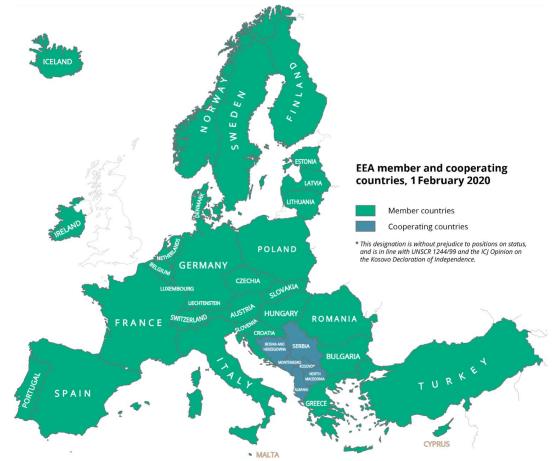
European Environment Agency

An EU body established under legislation that operates at the **interface of science and policy**.

Founded in 1993, with c. 270 staff, with a **network**, 'Eionet' which comprises more than 1 000 experts and 350 institutions in 38 European countries.

Gathering data and information from across Europe and translating this into **knowledge** to inform EU policy and **decision-making**.

EIONET: Environment Information and Observation Network





Clearing house mechanism

Goal 1 of the "Proposed Work Programme for the Clearing-House Mechanism in support for the Strategic Plan for Biodiversity **2011-2020**" highlighted the need to expand the knowledge base on biodiversity. The aim was to ensure this was done in a way that supported the implementation Strategic Plan for Biodiversity 2011-2020.

The Agency in cooperation with the Commission supported the creation of a European CHM for this purpose.

The key aim then, as it is now, is to promote and facilitate technical and scientific cooperation in the area of biodiversity.



Biodiversity, change in perspective since 2010?

This is ever more important given the state of biodiversity and (since 2010) the increasing awareness of the importance of biodiversity to us, our society, our economy and our physical and mental health.

We know that for example, In the EU 84% of crop species and 78% of wildflower species depend, at least in part, on animal pollination.

€15 billion of the EU's annual agricultural output is directly attributed to insect pollinators.







Provisioning services

Regulating services

♦ Fiber • •

Cultural services

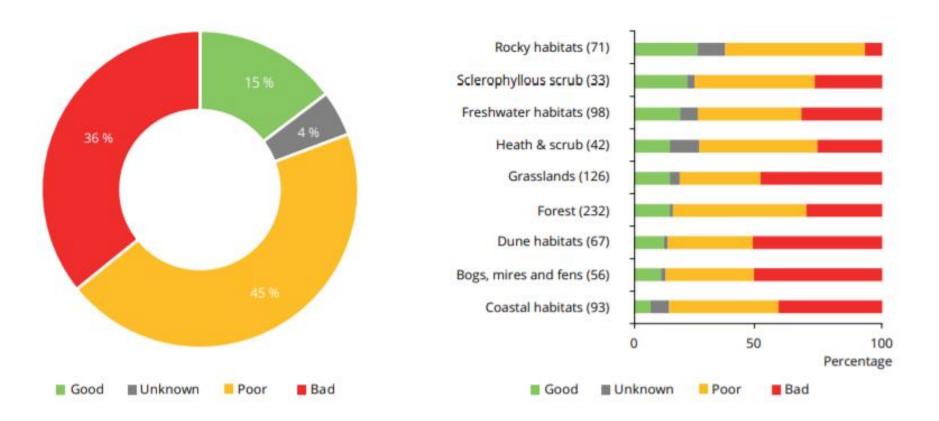


- Crops, soil fertility
- Livestock
- Timber
- Wild foods (e.g. mushrooms, berries, etc.)
- ♦ Fisheries
- Genetic resources, medicines
- ♦ Fresh water
- 💊 Clean air
- Pollination
- ♦ Temperature regulation
- Carbon sequestration and storage
- Pest regulation
- Erosion regulation
- Flood regulation
- Water purification
- Air purification
- Recreation (e.g. swimming, hiking, skiing etc.)
- Aesthetic (e.g. sceneries)
- Cultural identity



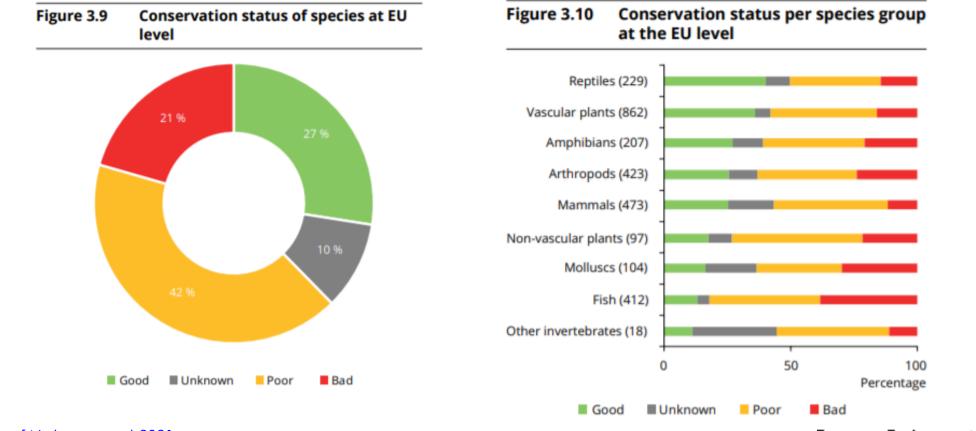
State of Nature: the scale of the problem

We know that **81% of protected habitats** are in a **poor** or **bad** state, with only **15%** of **habitat** area considered to have a **Good** conservation status. Only 17% of freshwater habitats are in a **good** state.



State of Nature: the scale of the problem

We know that **73% of protected non-bird species** are in a **poor** or **bad** state, with only **23%** of **species** considered to have a **Good** conservation status. Furthermore, over **50% of protected bird species** are in a **poor** or **bad** state.



European Environment Agency



We know the drivers of biodiversity loss.

Climate change is a rising threat, especially due to droughts and lower precipitation.

land abandonment and

urbanisation are the

major pressures for

habitats and species,

followed by pollution.



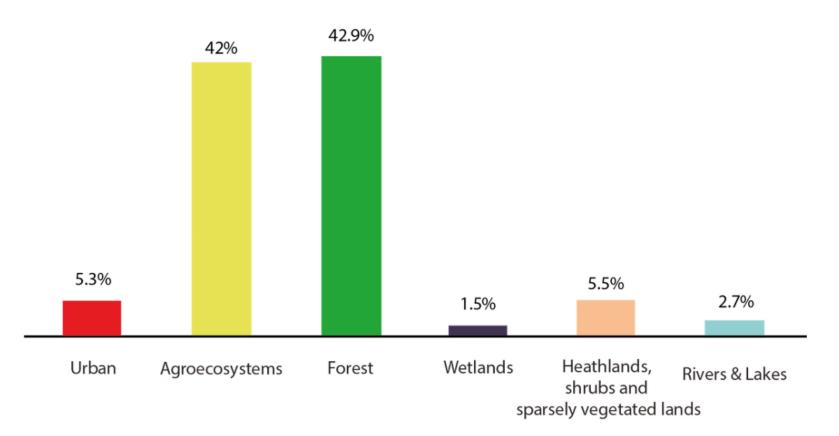
- Nearly half of the bird species have a 'good' population status, but farmland birds show least improving trends.
- Illegal killing and hunting are the biggest overall pressures for migratory birds.
- Habitats important for pollinators have a worse conservation status and trends than other habitats.
- Only 14 % of habitats assessments and 27 % of non-bird species have a 'good' conservation status.
- Forests show most improving trends and grasslands, dunes and **bogs** the most deteriorating trends.

• Natura 2000 sites cover 18 % of land and 10 % of marine waters in the EU.

Status and trends of marine species and habitats remain largely unknown.

Biodiversity

The EU is made up of a diverse array of habitats. Forest and Grassland habitats dominate the landscape of Europe, wetlands while small in area have a significant role in the biodiversity of our continent. There are 230 habitats and over 1,500 species protected under the EU Habitats and Birds Directives.



European Environment Agency

Biodiversity – threats

We know that biodiversity is not valued as much as it should be .

"Nature's worth to society – the true value of the various goods and services it provides – is not reflected in market prices because much of it is open to all at no monetary charge."

"Governments almost everywhere exacerbate the problem by paying people more to exploit Nature than to protect it, and to prioritise unsustainable economic activities."

(Dasgupta report)

All of this **reinforces** the need to "promote and facilitate technical and scientific cooperation."





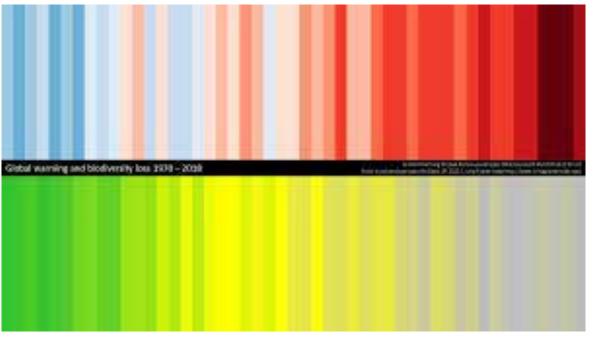
Not just a biodiversity crisis, there is also a climate crisis



Global and European ocean warming

Paris Agreement, legally binding international treaty adopted by 196 countries in 2015, an aim is to pursue efforts "to limit the temperature increase to 1.5°C above pre-industrial levels"

Increasing average temperatures



Decreasing biodiversity

Source: Ed Hawkins, University of Reading Miles Richardson, University of Derby



Biodiversity what are we doing?.

Developing policies to address biodiversity and the drivers of negative change.

At the **EU** level there are several policies to address this:

- EU nature directives, Habitats (1992) and Birds Directives (1979)
- EU Biodiversity Strategy (2020) EU Forest Strategy (2020)
- Nature Restoration Law (published in 2022/3, implemented ?)
- Marine Strategy Framework Directive (2008)
- Water Framework Directive (2000)

At a Global Level

- UN Sustainable Development Goals
- UNEP CBD Kunming-Montreal Global Biodiversity Framework to 2030.



What does the CHM look like now?

Since the end of 2020 we notice a decline in the use of the classic CHM hosted by the EEA. Furthermore, we noticed serious security vulnerabilities in the CHM. In addition, the ,technical, functionalities of the CHM we replicated in a host of web-hosting services. With the absences of a formal obligation, along little to no use of the system we decided to remove the system from our site.

This made us **reflect** upon the aim of the CHM to "promote and facilitate technical and scientific cooperation."

We would of course continue to do this, but how to do so in the best way?



What does the CHM look like now?

We realised we were doing this in two ways already

- The Biodiversity information system for Europe
- Our EIONET network of countries.

Though we needed to enhance these to ensure we were truly delivering what was needed. Other drivers focus were the EU Biodiversity Strategy and since December last year the Kunming-Montreal Global Biodiversity Framework.



2009: Concept note for a biodiversity information system for Europe

2010: <u>biodiversity.europa.eu</u> launched at Green Week

2010: Adoption of CBD global biodiversity targets (the Aichi Biodiversity Tar

2011: European Commission adopted a new strategy to halt loss of biodive

2011: 1st concept note delivered to "Group of 4", shared with National Reference Centres, & EEA awarded contract in November

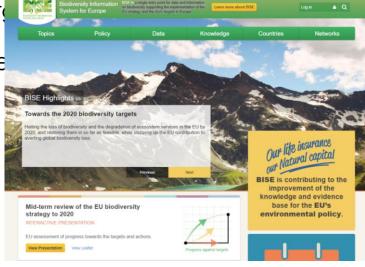
2012: Review of product and options towards its governance and implementation

2015: Concept for period from 2015-2020

2018: Policy papers of country pages, integration of Green Infrastructure, MAES, BISE towards 2020

2019: today

2020: Communication on progress towards EU Biodiversity progress



European Environment Ag

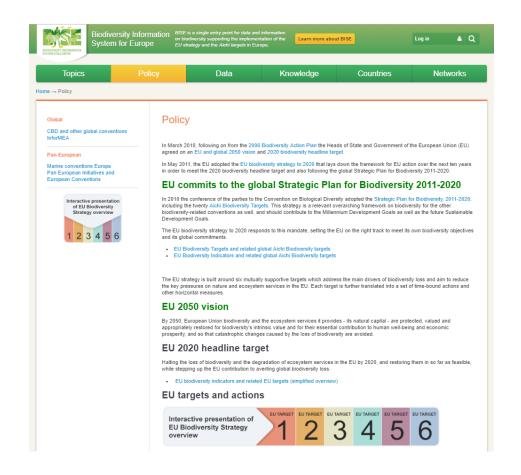


Historical...

Topic pages

| Topics | Policy | Da | ata | Knowledge | | Countries | Networks |
|---------------------------------|---------------------|---------------------|-----------------------------------|-----------------------|----------------|---|---|
| $e \rightarrow$ Topics | | | | | | | |
| Quick links | Topi | cs | | | | | |
| Climate change | | | | | | | |
| Ecosystem services | Welcome | e to the Topics sec | tion of the Biodiversi | ity Information Syst | em for Europe | e. | |
| Ecosystems and habitats | | | | | | | s the diversity within species, |
| Fragmentation | | | | | | | the different components of ell-being and on instruments |
| Genetic resources | impleme | nted (responses) | in order to stop the I | oss of biodiversity a | and to conser | ve nature. | |
| Green infrastructure | | Status | Ecosystems and | | Benefits | Ecosystem services | |
| nvasive species | | | Species | | | | |
| and use change | | | Genetic resource | s | | | |
| IFE+ Nature and Biodiversity Pr | ojects | Threats | | | Responses | | |
| Overexploitation | | | Climate change | | | Protected areas | |
| Pollution | | | Invasive species | | | Green infrastructure | |
| Protected areas | | | Fragmentation | | | LIFE+ Nature and Biod | liversity Projects |
| SEBI - Streamlined European | | | Land use change | 5 | | | |
| Biodiversity Indicators | | | Pollution | | | | |
| Species | | | Overexploitation | | | | |
| Fipping points | | Impacts | Tipping points | | | | |
| | The follo level: | wing flagship pro | jects provide import | ant information and | l knowledge ir | order to support the dec | cision process at European |
| | | | SOER - The Th | | nment — state | as and their Services and outlook 2015 tors | |
| | | | | | | more on j | projects from the EEA website |

Policy pages





Historical...

Data pages

| BIODMURSITY INFORMATION SYSTEM FOR LUBORE | Custom for Function on bi | is a single entry point for data and in odiversity supporting the implementa <i>trategy</i> and the <i>Aichi targets</i> in Europ | tion of the Learn more about | tBISE | Log in 🔺 Q |
|--|--|---|-----------------------------------|-----------------------------------|------------------------------|
| Topics | Policy | Data | Knowledge | Countries | Networks |
| ome → Data | | | | | |
| Data | | | | | |
| | ents selected entry points to reference dai tion is set on information infrastructures s | | versity in Europe, as developed | and managed by a range of ini | liatives and projects. The |
| Europe and to re | data centre (BDC) managed by the Euro ated products for biodiversity indicators a searchers and the public. | | | | |
| BDC - intera BDC - data a BDC - indica BDC - indica | tors | | | | |
| Selected highligh | ts from the BDC: Natura 2000 viewer, Nat | ura 2000 data, EUNIS (search on | species, habitats and sites) | | |
| | | | | to | the Biodiversity data centre |
| | tion useful for biodiversity indicator sets so onmental data centres: | uch as SEBI, as well as for assess | ments of biodiversity and ecosy | /stem services are also provide | d by the other eight |
| Air pollution | - Climate change - Water - Land use - Soi | - Forest - Natural resources - Wa | ste | | |
| | | | | | |
| | e Global Biodiversity Information Facili cess to millions of data records shared via | | | worldwide via the Internet to u | nderpin sustainable |
| GBIF Data P | ortal | | | | |
| | | | | | to the GBIF home page |
| | viously known as GMES (Global Monitorin far the most relevant services in the conte | | s the European Programme for | the establishment of a Europea | in capacity for Earth |
| Land monito | ring - Climate change - Marine environm | ent monitoring | | | |
| | | | | to | the Copernicus home page |
| 100 governmenta | arth Observations Biodiversity Observa II and non-governmental organizations are Inagers, experts and other users. | | | | |
| A formal listing a Systems can be | nd description of all the Earth observation found at the | systems, data sets, models and o | ther services and tools that toge | ther constitute the Global Earth | Observation System of |
| GEOSS regi | stry | | | | |
| | | | | 1 | o the GEO BON homepage |
| | ence European-Infrastructure for Biodivers | | | | |
| LifeWatch constr | ucts and brings into operation the facilities | hardware. software and governa | nce structures for all aspects of | biodiversity research. It consist | s of: facilities for data |

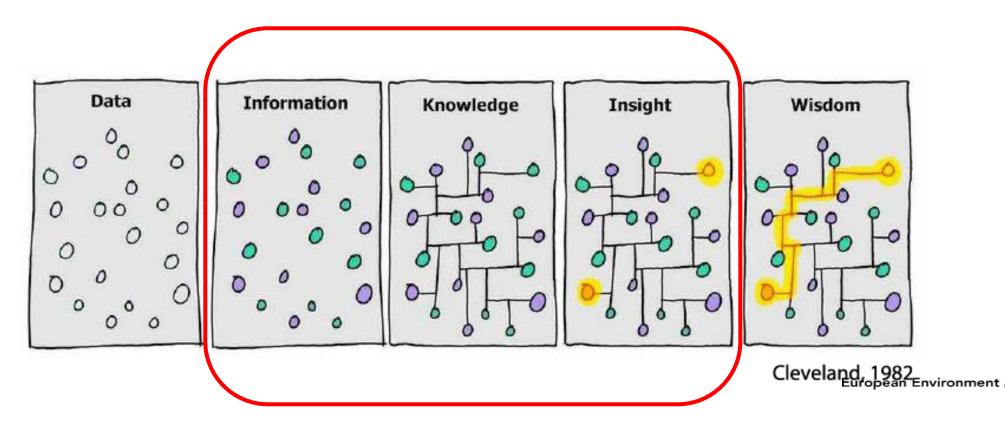
Knowledge pages

| | Policy | Data | | Countries | Network |
|---|---|--|---|---|---|
| | | | | | |
| - | | | | | |
| within the limits of our plas and societal challenges, iden Science-policy interfaces (support in particular the EU U Nations European Union: The sy science and policy on science-policy interface biodiversity interface biodiversity interface The EU funded SPIRAL of biodiversity. | tet calls for further improving th tify impacts and contribute to pri tify impacts and contribute to pri Soloversity Strategy to 2020: argovernmental Platform on Bio- mithesis report of a three-year or biodiversity and ecosystem so on biodiversity and ecosystem gen initiative resulting from the E clasions. The project produced in project that aimed to enhance to the solution of the solution of the solution of the solution of the solution of the solution of the project that aimed to enhance to the solution of the solut | es relies on continuous research le knowledge and evidence bas olicy solutions. acilitate the dialogue and exchar diversity and Ecosystem Servico ontract, by the European Comm ervices, provides a comprehen services in Europe. The Science Euf funder research group for a Network he connectivity between biodive ces at the European level includ | e for environment, and for resear nge between the research comm es, an independent intergovernm ission Directorate-General for th sive analysis of the lessons lear for Environment Policy servict U (PP7) to help all societal acto of Knowledge on Biodiversity ar rsity research and policy making | rch and innovation policies to in nunlty and policymakers at all in- nental body open to all membe le Environment towards an EU ned from the policy-side and pu- o offers digests of scientific pap rs in the field of biodiversity an d Ecosystem Services. | address scientific, indus evels. A number of SPI r countries of the Unite mechanism interfacii ofential for enhanceme bers of most relevance : d ecosystem services t |
| 2000 the framework • European Innovatio • LIFE programme, th • COST is an intergor It complements the to cooperation work • European Research | EU Research and Innovation P programmes are targeted spec n Partnerships, a new approach le EU's financial instrument sup ermnental framework for Europ EU Framework programmes by bvide. Council (ERC) complements o Funded by the 7 th Framework | rogramme from 2014 to 2020. It ifically at supporting the Europe to EU research and innovation porting environmental and natu sean Cooperation in Science an econtributing to reducing the fra- ther funding activities in Europe Programme, BiodivERSA is a ne | an Research Area. re conservation projects through d Technology, allowing the coorr gmentation in European researc such as those of the national re | out the EU tination of nationally-funded re h investments and opening the search funding agencies. | search on a European e European Research / |
| | | | etitiveness in a global setting. | | |



From 2019 onwards we starting thinking how can inform, connect and communicate better than we have been. To answer regional or global questions and track progress towards targets we need data. Not only do we need data we need to understand process of collecting, managing, analysis and discussing the data.

We started thinking about the mission, functionalities, look and feel of the platform.

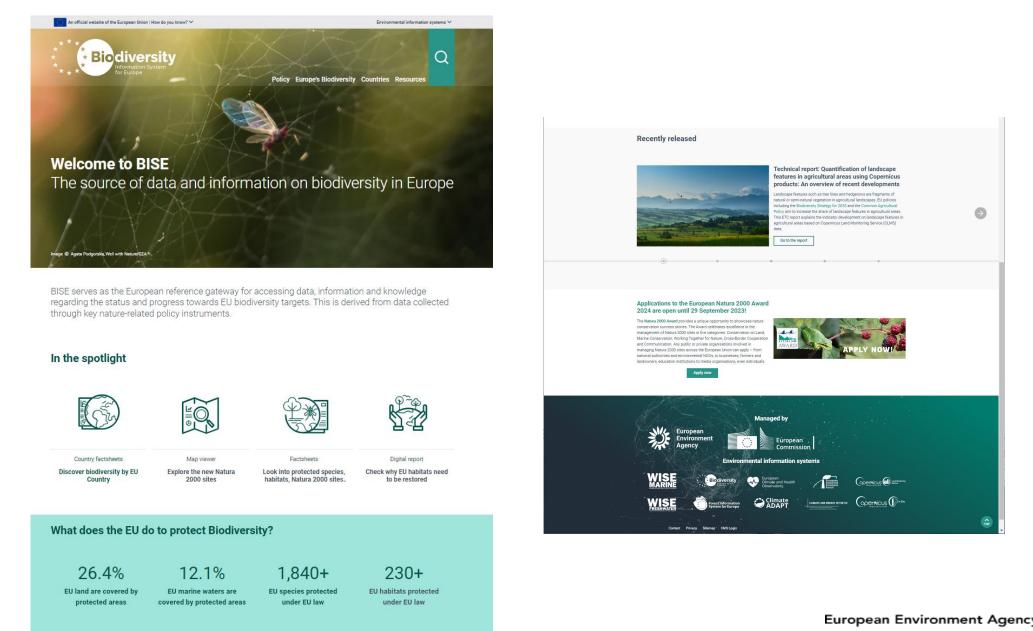




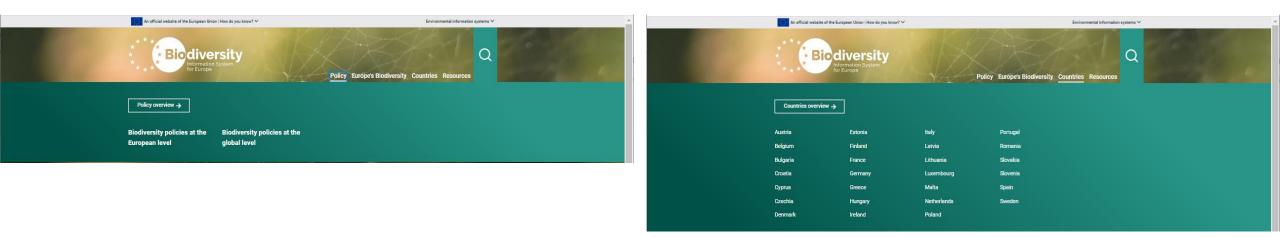
Our requirements:

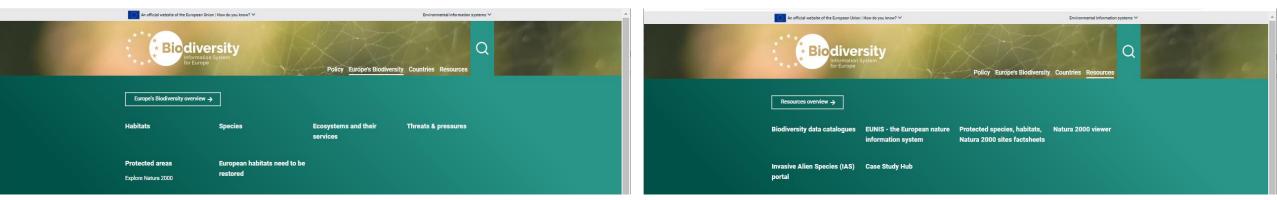
- Describe the implementation of EU and Global policies
- Track progress towards both EU and global targets
- Aim to be the trustworthy source of information on the environment in Europe



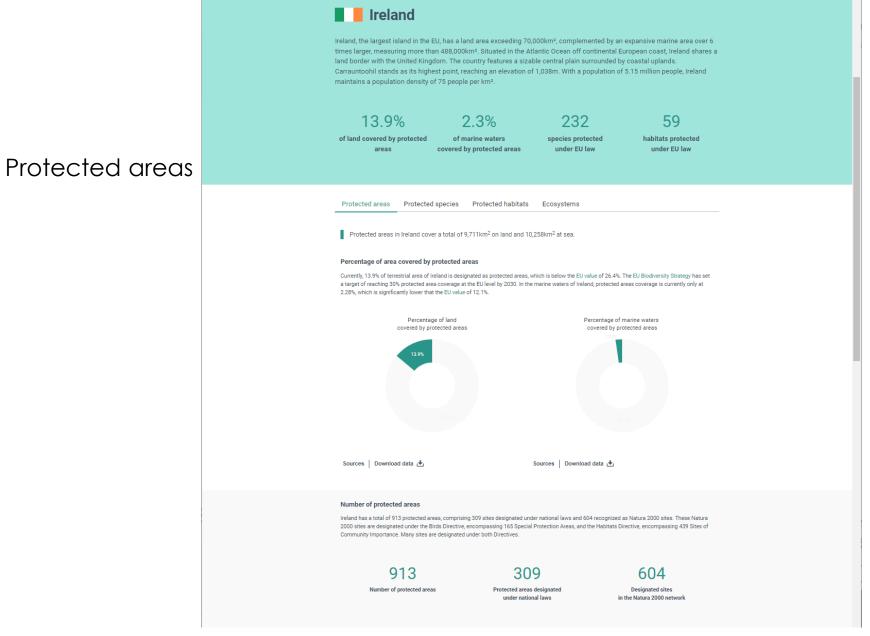






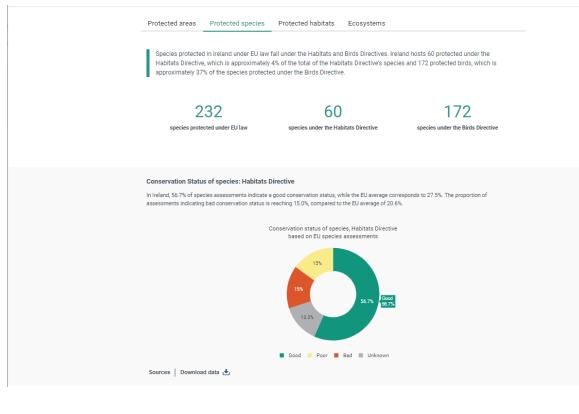






European Environment Agency

Protected species



Protected species composition by taxonomic group

In Ireland, the distribution of protected species across taxonomic groups highlights the prominence of birds, comprising the largest proportion at 74.1%. They are followed by mammals, accounting for 13.7% of protected species, and fishes, representing 3%.

Percentage composition of species by group

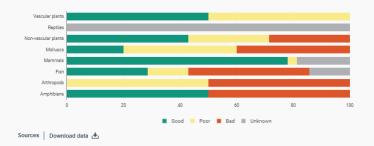


Sources | Download data 🗄

Conservation Status by Taxa

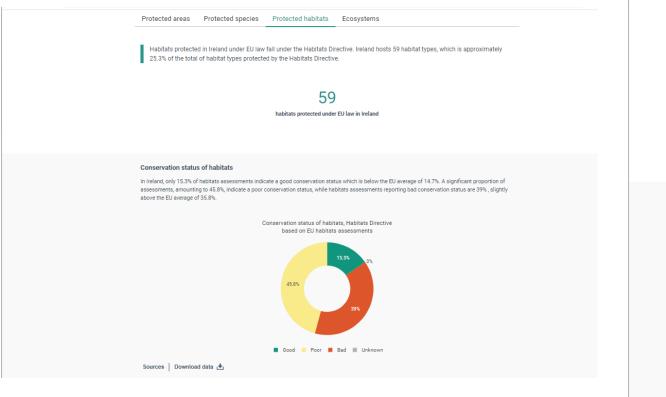
In Ireland, the assessment of species groups reveals that mammals have the highest proportion of species with a good conservation status, standing at 78.1%. Following behind are vascular plants and amphibians, with 50% of species in good conservation status. On the other hand, arthropods and amphibians have a big share of species with able conservation status, standing at 50%.







Protected habitats



Protected species composition by taxonomic group

In Ireland, the distribution of protected species across taxonomic groups highlights the prominence of birds, comprising the largest proportion at 74.1%. They are followed by mammals, accounting for 13.7% of protected species, and fishes, representing 3%.



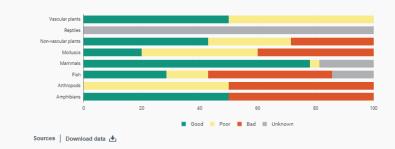


Sources | Download data 🛃

Conservation Status by Taxa

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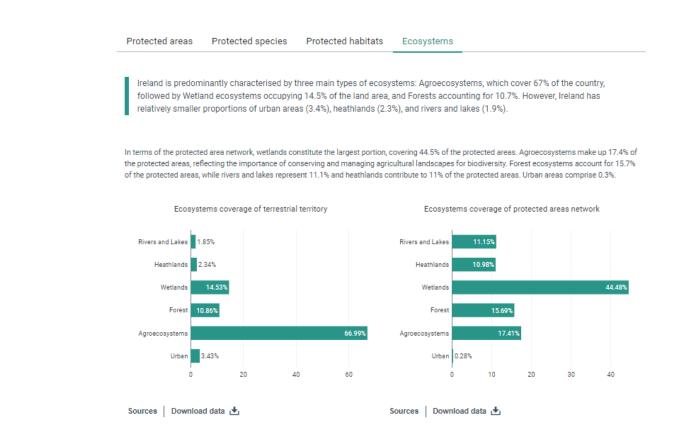
Percentage of conservation status assessments per species group







Ecosystems





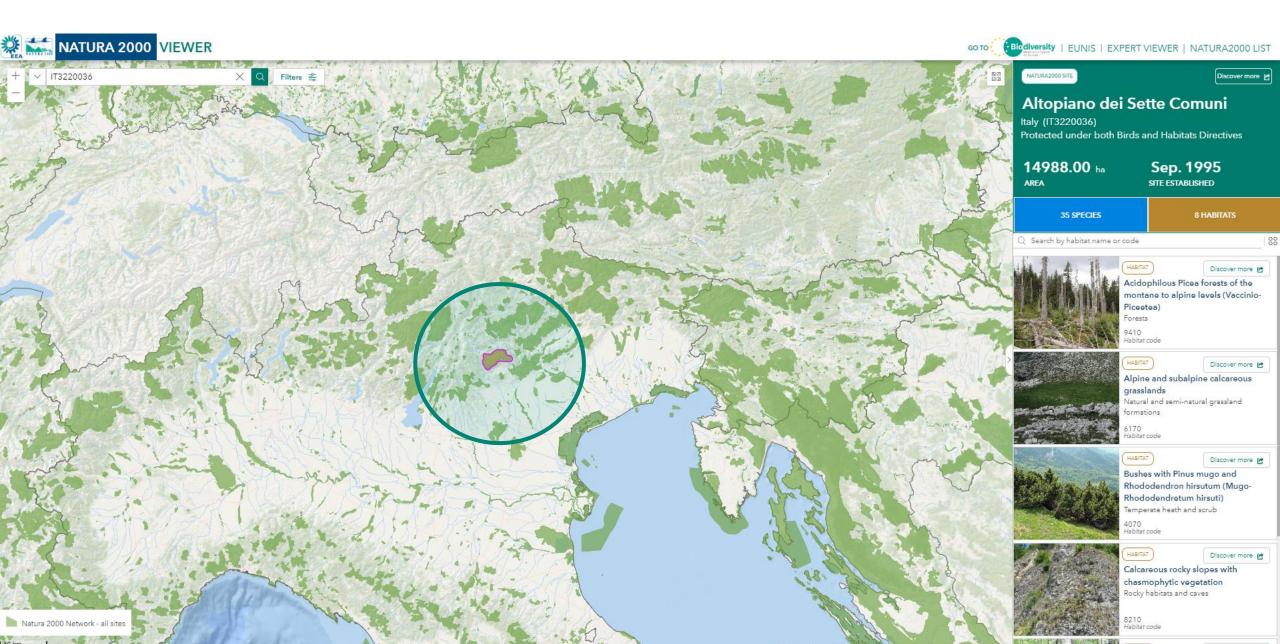
NATURA 2000 VIEWER

Biodiversity | EUNIS | EXPERT VIEWER | NATURA2000 LIST

GOTO



Nature 2000 viewer and Natura 2000 pages

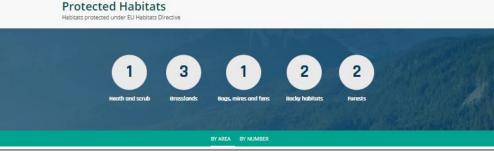


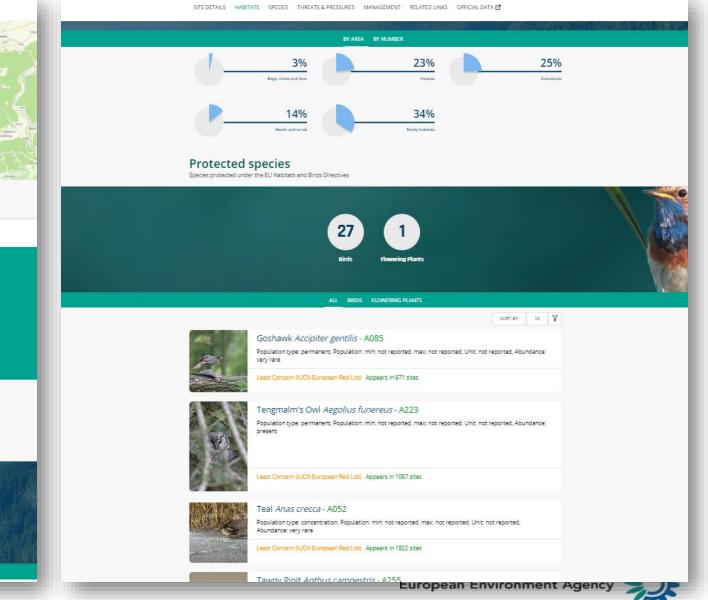


The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the European Union concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

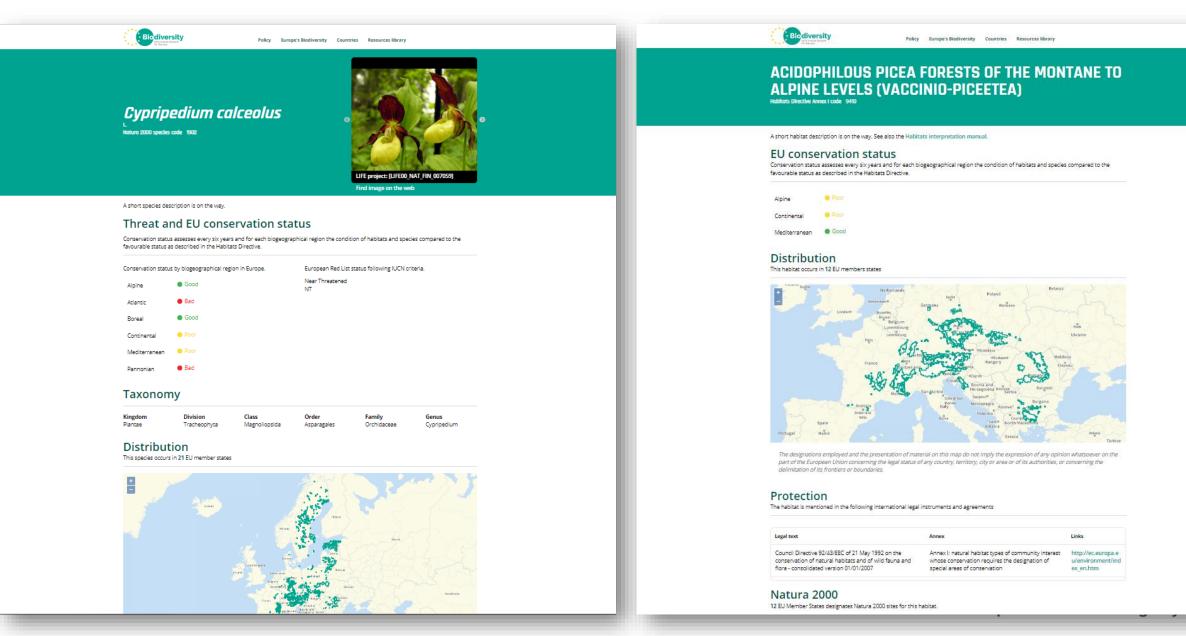
SITE DETAILS HABITATS SPECIES THREATS & PRESSURES MANAGEMENT RELATED LINKS OFFICIAL DATA 🗹

| IT3220036 | 14988 ha | 1995 |
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Nature 2000 viewer and Natura 2000 pages





Europe's Biodiversity Countries Resources library Policy

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NATURA 200

DISCOVER EUROPE'S NATURE WITH ITS STUNNING **DIVERSITY OF WILD PLANTS, ANIMALS AND**

LANDSCAPES, MANY OF WHICH ARE FOUND NOWHERE ELSE IN THE WORLD.

WELCOME TO NATURA 2000, THE EUROPEAN NETWORK OF NATURAL AREAS.



RIVERS AND LAKES

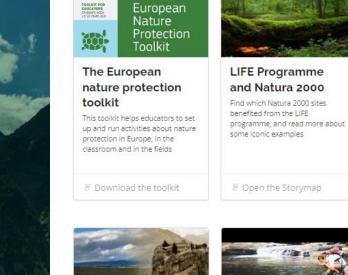


EN EN

GRASSLANDS



TOOLKIT



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The

11

And in the local division of



Commission Natura

Find more official references on

Natura 2000 and the Birds and

Natura 2000 and World Heritage Common Areas

Some sites of the UNESCO World Heritage are also within, or very close to, a Natura 2000 site. Find them, and learn more about some iconic sites

8 Open the Storymap

Ø Open the EC section

European

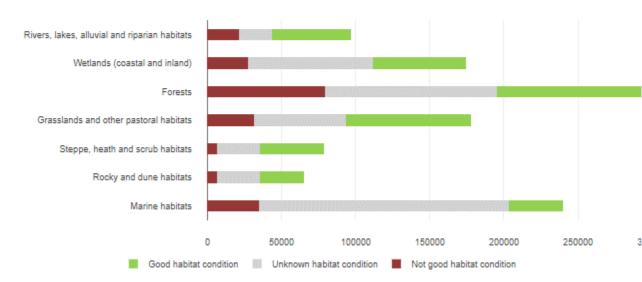
2000 section

Habitats directives



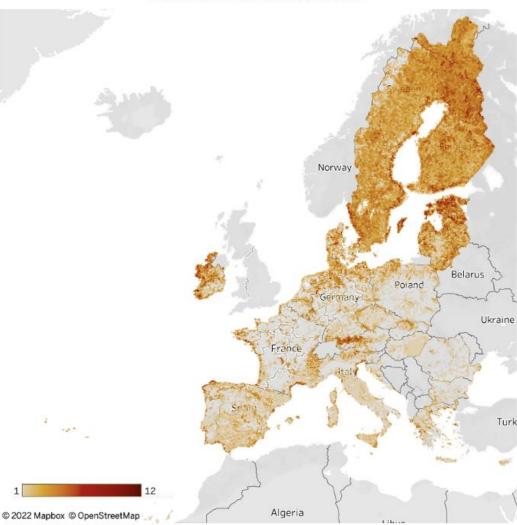
Nature 2000 viewer and Natura 2000 pages

Presenting facts and figure from the EU Habitats Directive's (Annex I habitats) show casing that European habitats that need urgent and extensive restoration



Source: Habitat condition reported by Member States under Article 17 reporting (period 2013-2018)

Habitat condition reported for European habitats



Distribution of 28 wetland habitats in the EU

Source: Distribution maps (10 km x 10 km) delivered by Member States under Article 17 reporting (period 2013-2018) Note: the shades of brown indicate the number of habitat types per 10 km x 10 km grid cell

Biodiversity Information System for Europe

Creating the Family of

Integrated information systems

Freshwater Information System for Europe

Marine Information System for Europe

Forest

Information

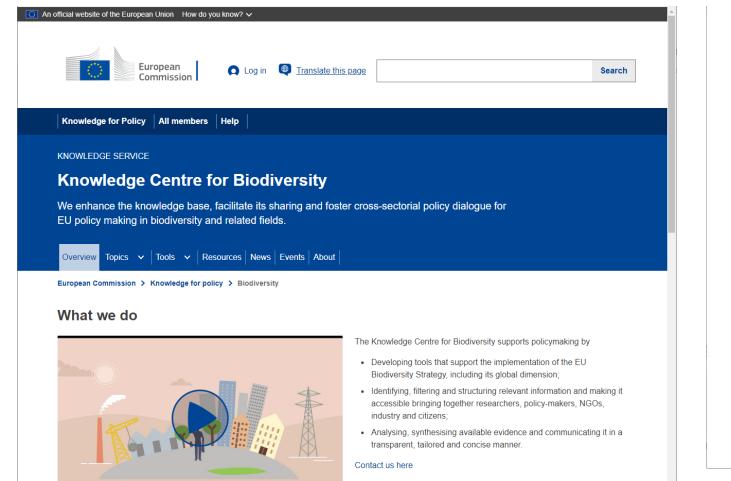
System for

Europe

Connecting

The platform does not stand alone, it connects internally to other such platforms as well as indicators used to track progress towards EU environmental acquis.

We also connect across to the EU <u>Knowledge Centre on Biodiversity</u> and we will also connect to the global knowledge support service.



Browse Biodiversity by topic









Biodiversity and education

Biodiversity and finance Biod

Biodiversity and its global governance

Biodiversity and trade





Dashboard





Biodiversity conservation

Actions Tracker

Nature-based solutions

Biodiversity and health

link explorer

Biodiversity, climate chang and energy

System for Europe (BISE)

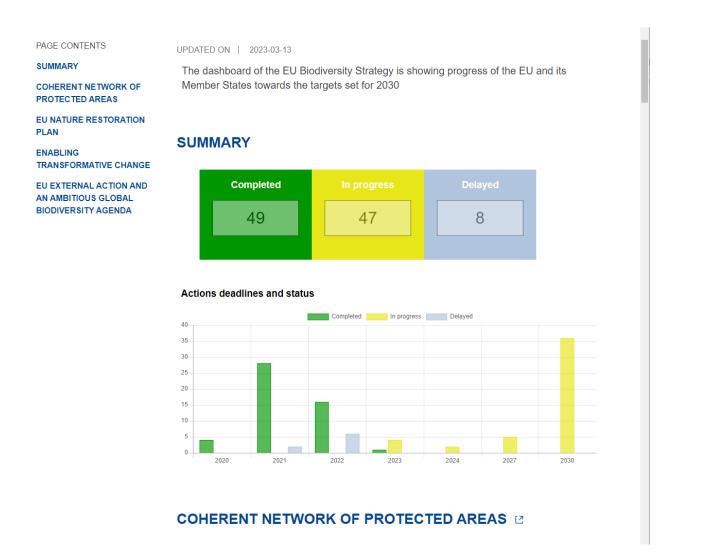
Browse Biodiversity tools



-

Connecting

A key component of the Knowledge Centre on Biodiversity is the **Biodiversity Strategy Dashboard**.





There is a question, with the updates to our platform are we covering the needs of the CHM, and countries needs under the GBF?

We think so, but perhaps there are some improvements that are needed. Our approach is to ensure the data collected under the different biodiversity acquis are available, that we analyse these and create knowledge products that inform and address progress towards targets. It is important that these needs to be findable, accessible, interoperable and reuseable (F.A.I.R).



We are continuously developing the platform, ensuring alignment with the new requirements of the Nature Restoration Law and integrating the Goals and Targets specified in the Global Biodiversity Framework. This process involves close collaboration with various stakeholders, spanning from countries to the Commission, and takes into account the potential requirements of the global and regional knowledge support services.

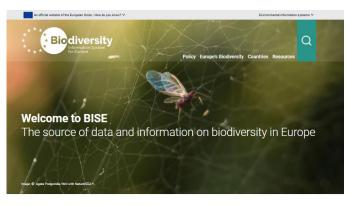
Our goal has been to enhance the accessibility, interoperability, and utility of the collected data. We are far from complete and remain committed to addressing the evolving policy and user needs.



Contact:

Dr Brian MacSharry, Head of Group, Biodiversity and Nature European Environment Agency

Brian.macsharry@eea.europa.eu



BISE serves as the European reference gateway for accessing data, information and knowledge regarding the status and progress towards EU biodiversity targets. This is derived from data collected through key nature-related policy instruments.

In the spotlight



| 26.4% | 12.1% | 1,840+ | 230+ |
|------------------------|----------------------------|----------------------|-----------------------|
| EU land are covered by | EU marine waters are | EU species protected | EU habitats protected |
| protected areas | covered by protected areas | under EU law | under EU law |
| ecently released | | | |

