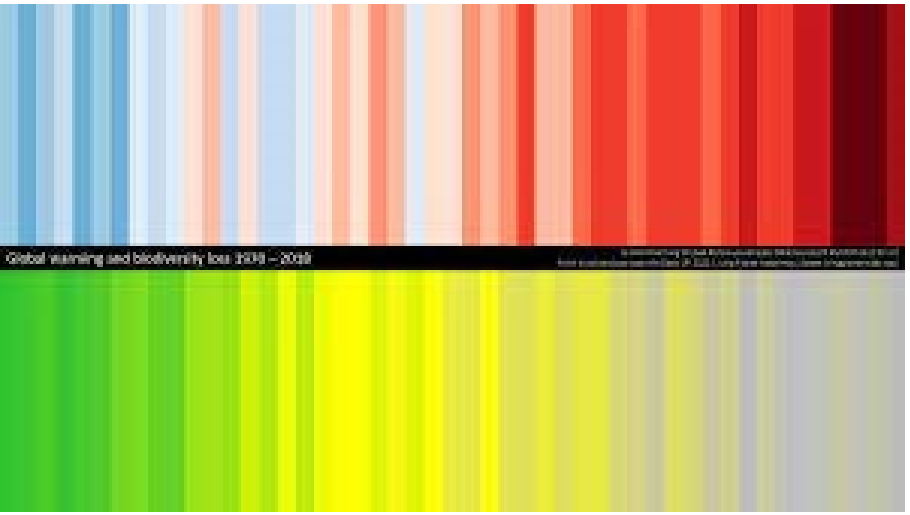
Measuring Change: the metrics of success
Protected areas in Europe



EU 27 coverage

26.4% Land

12.3% of Ocean

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

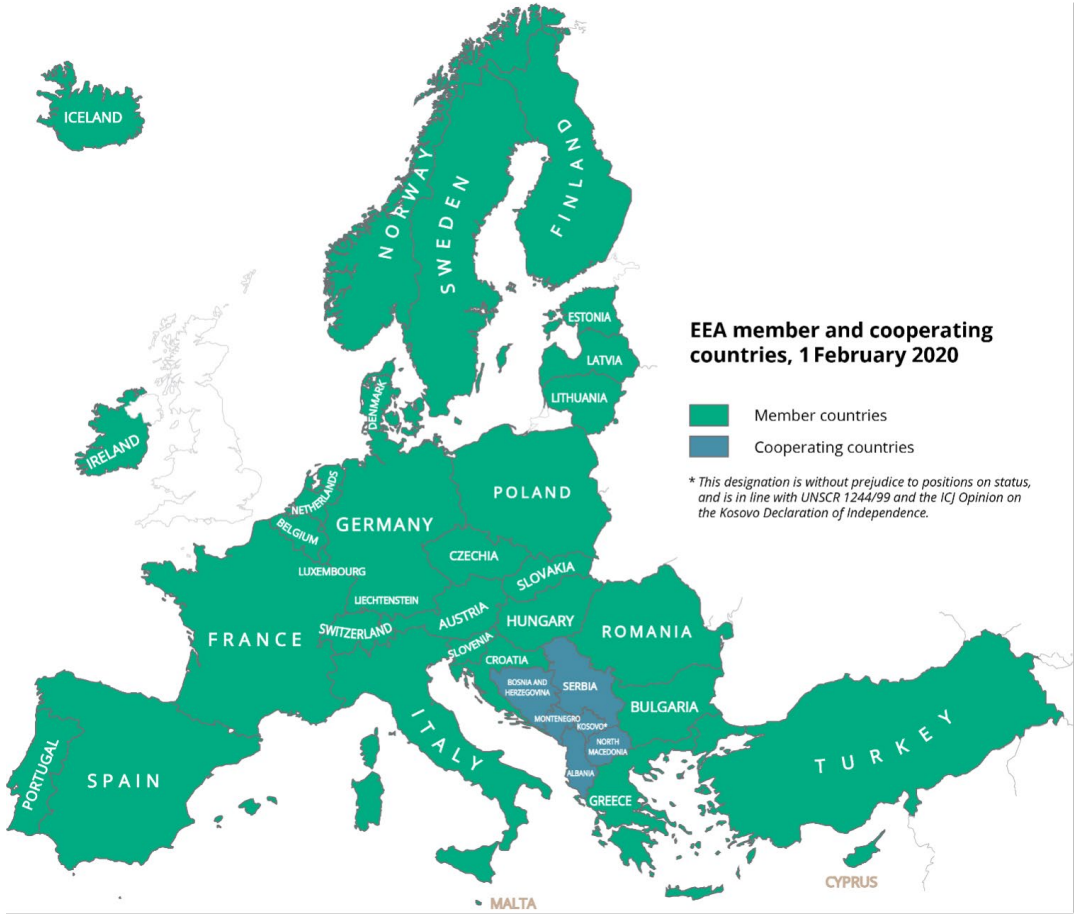
European Environment Agency

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



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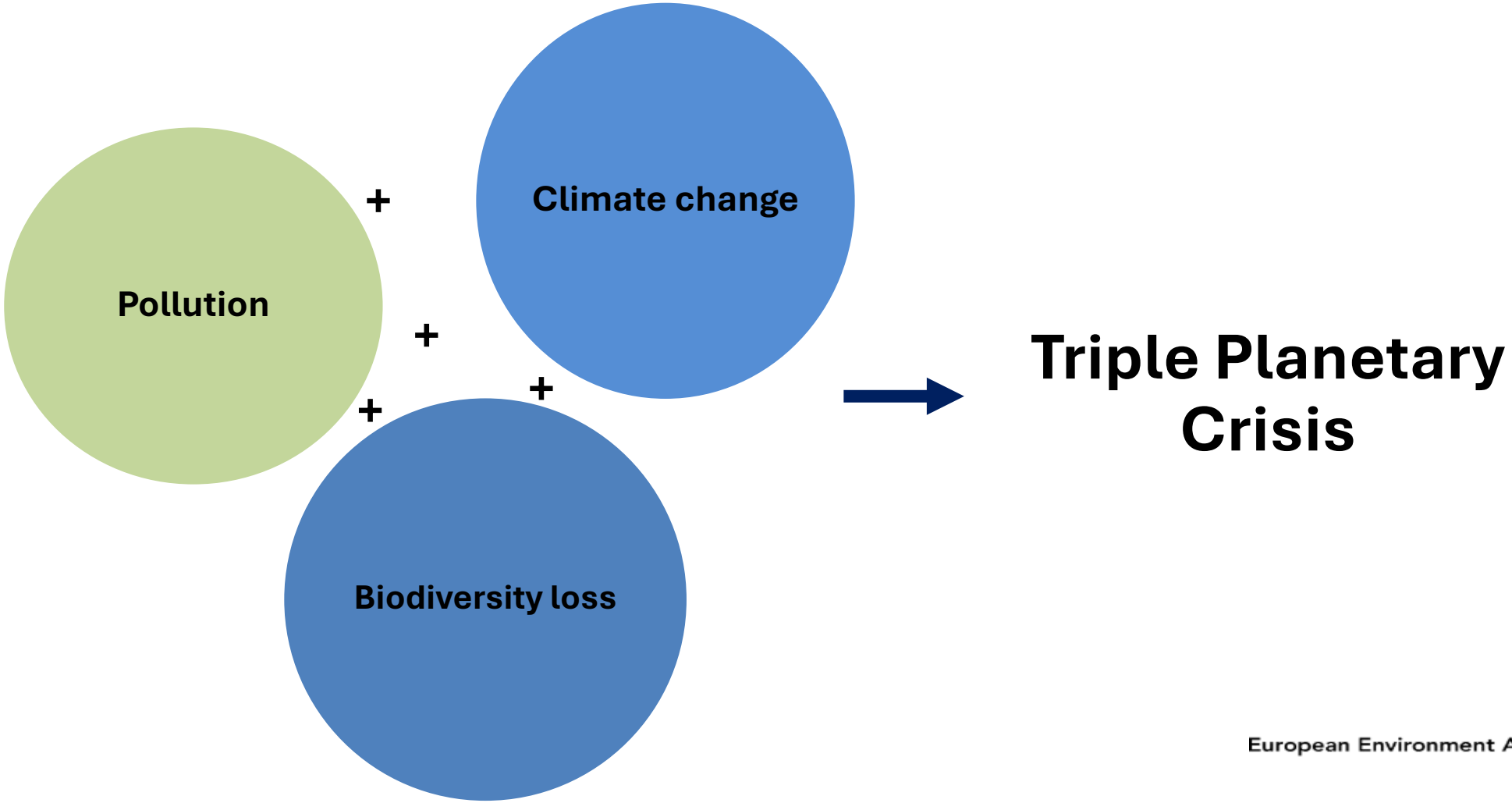
Facing the Triple Planetary crisis

However, we are confronting an unprecedented "triple planetary crisis." These interconnected threats endanger us all & demand immediate action.



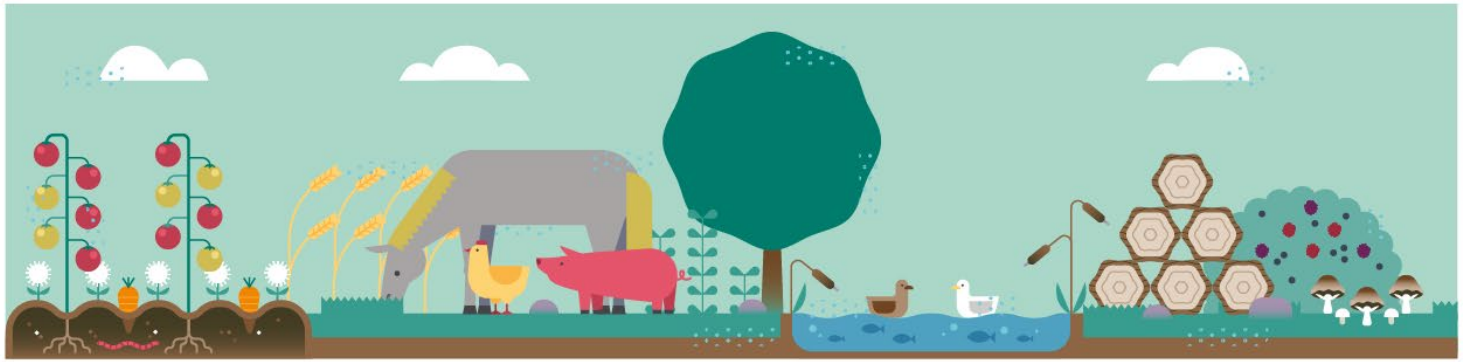
Biodiversity – what is it and why is it important?

Biodiversity is the **life support system** for our planet. It enhances our **resilience** to global challenges, **stabilises** Earth's natural processes, and **regulates** our climate. It is the cornerstone of our health, culture, and economy.

The value of Biodiversity

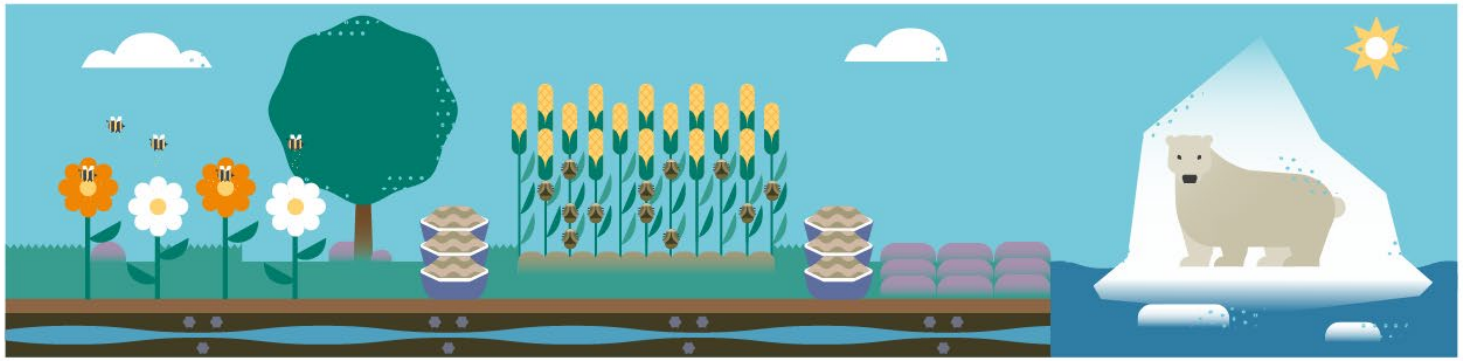
It provides us with essential resources such as food, water, & clean air. It shapes our cultural heritage & enhances our physical and mental health.

Provisioning services



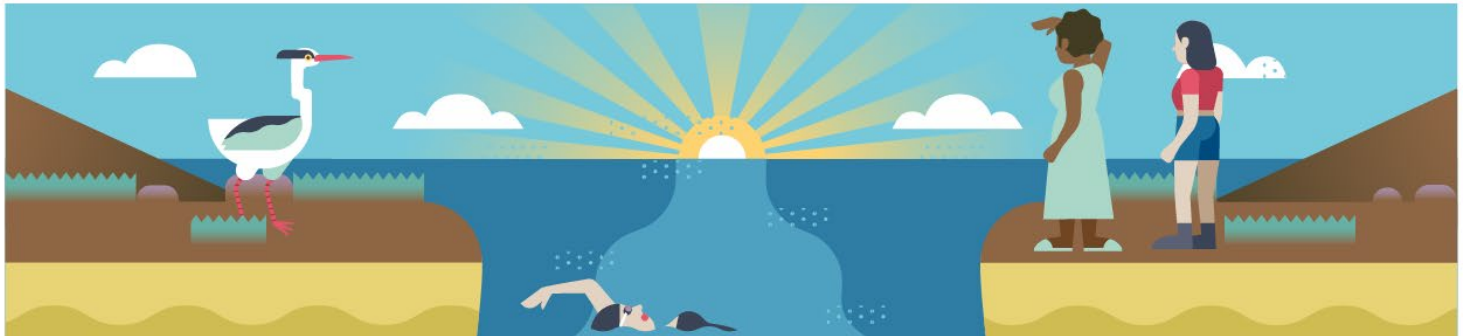
- Crops, soil fertility
- Livestock
- Timber
- Fiber
- Wild foods (e.g. mushrooms, berries, etc.)
- Fisheries
- Genetic resources, medicines
- Fresh water
- Clean air

Regulating services



- Pollination
- Temperature regulation
- Carbon sequestration and storage
- Pest regulation
- Erosion regulation
- Flood regulation
- Water purification
- Air purification

Cultural services



- Recreation (e.g. swimming, hiking, skiing etc.)
- Aesthetic (e.g. sceneries)
- Cultural identity

Biodiversity – The Crucial Role of Pollinators in the EU

In the EU, 84% of crop species and 78% of wildflower species rely on animal pollination. Insect pollinators contribute directly **to €15 billion** of the EU's annual agricultural output.

Without pollinators, we would, for example, have no almonds, apples, avocados, bananas, **chocolate**, coffee, tea, tequila, and tomatoes.

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The € value of Biodiversity

“$44 trillion of economic value generation – **over half the world’s total GDP** – is moderately or highly dependent on nature and its services and, as a result, exposed to **risks** from nature loss”

World Economic Forum report 2020

European Environment Agency

The value of Biodiversity

In the euro zone, **3 million companies** are highly dependent on at least one ecosystem service (ECB, 2023).

In the euro zone, **75%** of bank loans to companies are granted to those which are highly dependent on at least one ecosystem service.

EEA and EIB: 2023 Unlocking finance and investments in nature

The value of Biodiversity

"Humanity **needs** nature to survive, and so do the economy and banks".

Frank Elderson, Vice-Chair of the Supervisory Board of the ECB.

THE ECB BLOG

The economy and banks need nature to survive

Frankfurt am Main, 8 June 2023

By Frank Elderson

Frank Elderson
Member of the ECB's Executive Board

European Environment Agency

State of Nature: the scale of the problem

Proportion in a poor or bad state

Habitats

81%

Birds

39%

Non-bird species

64%

58% have an unknown or decreasing **trend**

47% of breeding birds have an unknown or decreasing **trend**

66% have an unknown or decreasing **trend**

European Environment Agency

Source: EEA State of Nature report 2021

State of Nature: the scale of the problem

Proportion in a good state

Habitats

15%

Birds

47%

Non-bird species

27%

8% show an increasing **trend**

23% of breeding birds show an increasing **trend**

6% have an increasing **trend**

European Environment Agency

Source: EEA State of Nature report 2021

We know the drivers of biodiversity loss.

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

Agricultural activities, land abandonment and urbanisation are the major pressures for habitats and species, followed by pollution.

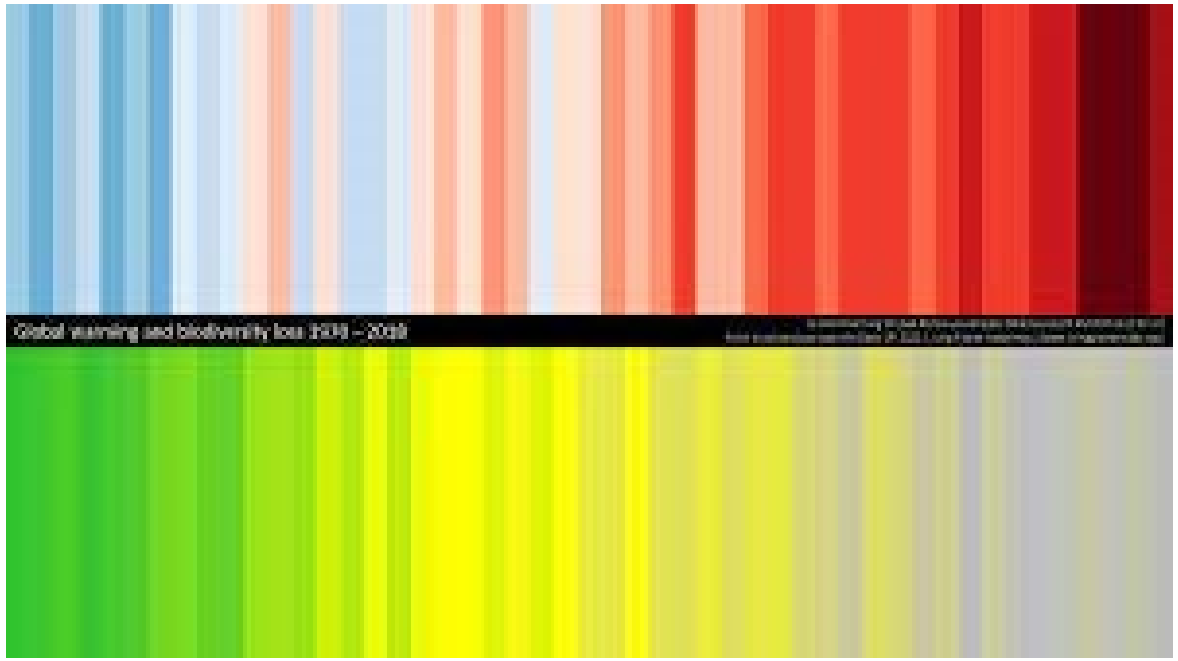
Status and trends of **marine species and habitats remain** largely unknown.

- 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.

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

Global and European ocean warming

Increasing average temperatures →



Decreasing biodiversity →

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

Paris Agreement adopted by 196 countries in 2015, aim "to limit the temperature increase to 1.5°C above pre-industrial levels"

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Problem, solutions, and what to do!

EU Biodiversity Strategy for 2030

The Kunming-Montreal Global Biodiversity Framework

Nature Directives

Nature Restoration Regulation

EU Biodiversity Strategy

There are four pillars to the Biodiversity Strategy:

1. Expand and enhance the network of **protected areas** in the EU, target of **30% by 2030**
2. **Restore** biodiversity in the EU through the EU Nature Restoration Law.
3. Enable transformative **change**
4. Tackle **global** biodiversity loss.

Kunming Montreal Global Biodiversity Framework

There are 23 targets to the Global Biodiversity Plan, two very related to what we are talking about.

THE BIODIVERSITY PLAN
For Life on Earth

GBF HOME // TARGET 2

Target 2

Restore 30% of all Degraded Ecosystems

Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and coastal and marine ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.

THE BIODIVERSITY PLAN
For Life on Earth

GBF HOME // TARGET 3

Target 3

Conserve 30% of Land, Waters and Seas

Ensure and enable that by 2030 at least 30 per cent of terrestrial, inland water, and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed

Protected Areas

Current coverage of protected areas..

EU 27

26.4% Land

12.3% of ocean

Source: EEA 2024

Protected area coverage across the world

	Land	Ocean
North America	**12.93%**	**15.08%**
Latin America	**24.56%**	**25.32%**
Africa	**14.51%**	**15.89%**
Asia-Pacific	**15.99%**	**19.65%**
West Asia	**13.15%**	**7.56%**
Global	**16.42%**	**8.33%**

Source: UNEP-WCMC, Nov. 2024

Protected Areas

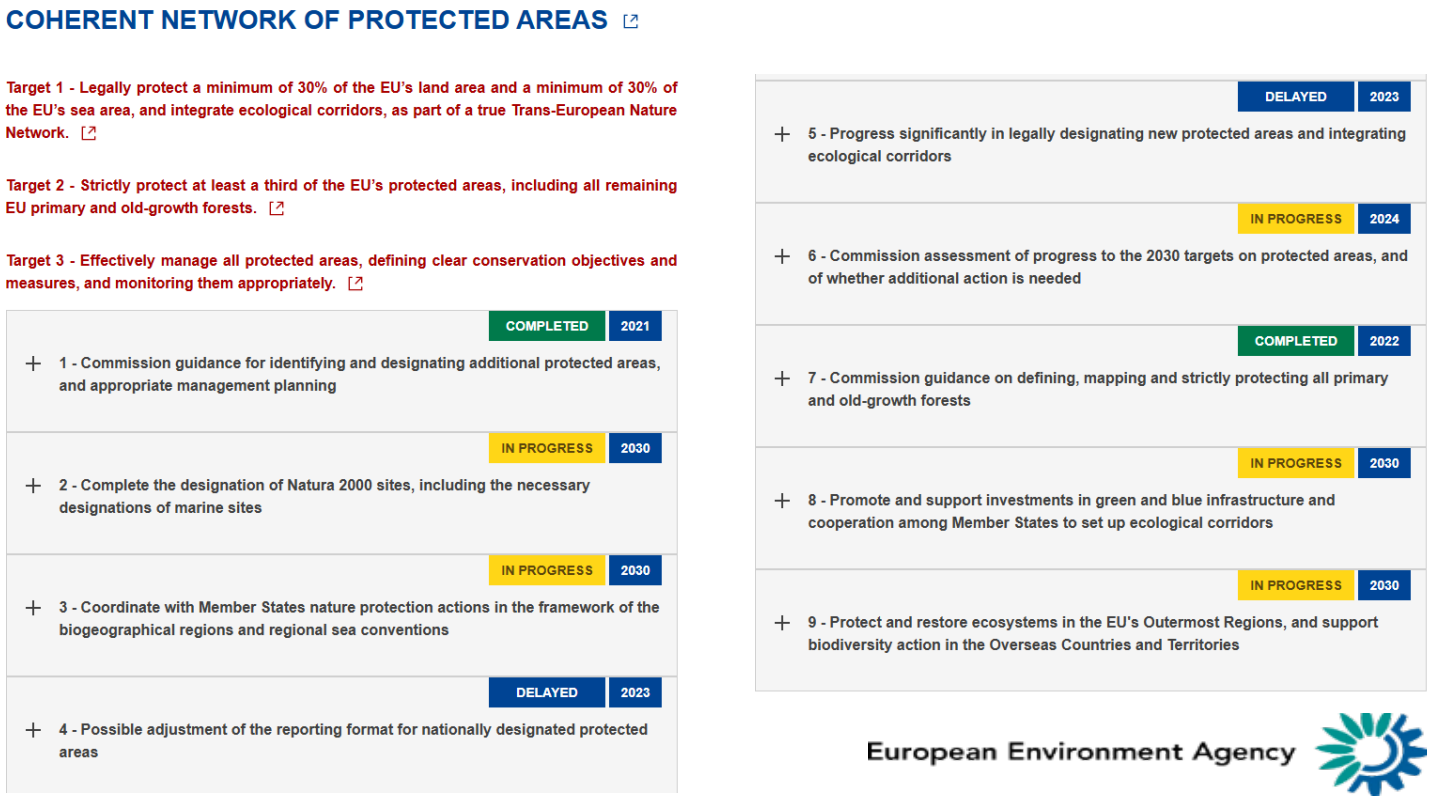
We have policy targets in the EU and Globally that call for a minimum of **30% coverage on land and sea.** However, they are more than just coverage targets.

Nature protection: key commitments by 2030

1. Legally protect a minimum of 30% of the EU's land area and 30% of the EU's sea area and integrate ecological corridors, as part of a true Trans-European Nature Network.
2. Strictly protect at least a third of the EU's protected areas, including all remaining EU primary and old-growth forests.
3. Effectively manage all protected areas, defining clear conservation objectives and measures, and monitoring them appropriately.

What we do

A key role we have is to develop indicators to **track** this progress. We have a series of indicators and work with the Joint Research Centre of the EU to supply the dashboard on the [Knowledge Centre on Biodiversity](Biodiversity).



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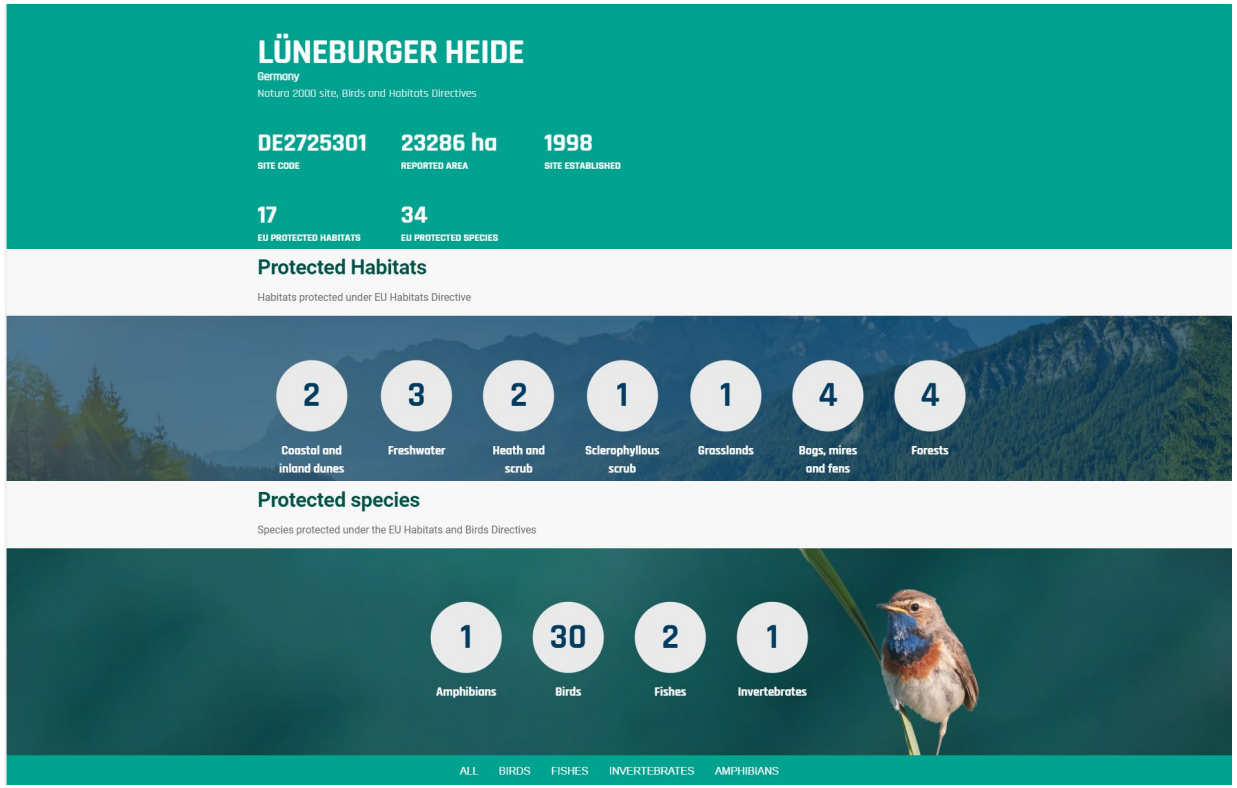
What we know

We have data on how many, how much, where and for the 27 000 Natura 2000 sites, what species and habitats are present and what the threats and pressures are for the site.



Threats, pressures and activities

The most important impacts and activities with high effects on the site

Threats and pressures	Rank
Human induced changes in hydraulic conditions	High
Species composition change (succession)	High
Abandonment / lack of mowing	Medium
Anthropogenic reduction of habitat connectivity	Medium
Forest replanting (non native trees)	Medium
Groundwater abstractions for public water supply	Medium

Activities, Management	Rank
Forest replanting (native trees)	Medium
Non- intensive timber production (leaving dead wood/ old trees untouched)	Medium

https://biodiversity.europa.eu/sites/natura2000/DE2725301

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What we are going to do

We know assessing effectiveness is a challenge., the proportion of sites that have been assessed is low, the standards are often unknown, resources are not consistent, we do not collect this information in systematic manner. We also have the issue of scale, local versus European.

However, we need to be able to answer this question.

What we are going to do

We are modifying the Natura 2000 Standard Data Form and the reporting for nationally designated site to ask for:

- Conservation objectives
- Conservation measures

And a renewed focus on management plan

What we are going to do

All of this will mean that we will know more than just the where a site is but what sites are designated for, what their objectives are, how they propose to get there, the threats and pressures for the site and a management plan for the site.

What we are going to do

We know the overall state of nature in the EU, we know a lot about the key tool used to protect nature (protected areas) and we will get additional information on these areas. Can we use all of this to answer the key question of **how effectively managed** are protected areas?

Contact:

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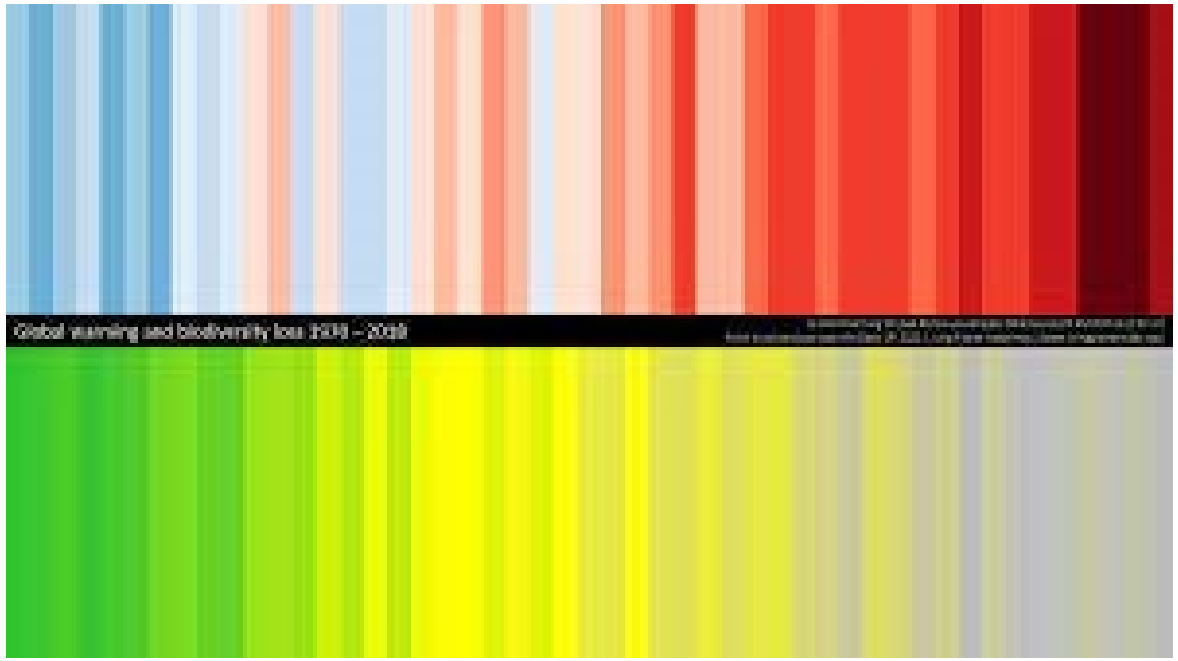
Head of Group, Biodiversity and Nature
European Environment Agency
Brian.macsharry@eea.europa.eu

Increasing average temperatures



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