



EU Biodiversity Strategy for 2030

Bringing nature back into our lives



Environment

Manuscript completed in May, 2021

1st edition

The European Commission is not liable for any consequence stemming from the reuse of this publication.

Luxembourg: Publications Office of the European Union, 2021

© European Union, 2021



The reuse policy of European Commission documents is implemented based on Commission Decision 2011/833/EU of 12 December 2011 on the reuse of Commission documents (OJ L 330, 14.12.2011, p. 39).

Except otherwise noted, the reuse of this document is authorised under a Creative Commons Attribution 4.0 International (CC-BY 4.0) licence (<https://creativecommons.org/licenses/by/4.0/>).

This means that reuse is allowed provided appropriate credit is given and any changes are indicated.

For any use or reproduction of elements that are not owned by the European Union, permission may need to be sought directly from the respective rightholders.

Print	KH-09-21-133-EN-C	ISBN 978-92-76-36456-6	doi:10.10.2779/048
PDF	KH-09-21-133-EN-N	ISBN 978-92-76-36472-6	doi:10.10.2779/677548

GETTING IN TOUCH WITH THE EU

In person

All over the European Union there are hundreds of Europe Direct information centres. You can find the address of the centre nearest you at: https://europa.eu/european-union/contact_en

On the phone or by email

Europe Direct is a service that answers your questions about the European Union. You can contact this service:

- by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),
- at the following standard number: +32 22999696 or
- by email via: https://europa.eu/european-union/contact_en

FINDING INFORMATION ABOUT THE EU

Online

Information about the European Union in all the official languages of the EU is available on the Europa website at: https://europa.eu/european-union/index_en

EU publications

You can download or order free and priced EU publications at: <https://op.europa.eu/en/publications>. Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre (see https://europa.eu/european-union/contact_en).

EU law and related documents

For access to legal information from the EU, including all EU law since 1952 in all the official language versions, go to EUR-Lex at: <http://eur-lex.europa.eu>

Open data from the EU

The EU Open Data Portal (<http://data.europa.eu/euodp/en>) provides access to datasets from the EU. Data can be downloaded and reused for free, for both commercial and non-commercial purposes.

Contents

Foreword	4
Introduction	6
Pillar 1: Protecting nature in the EU	9
Pillar 2: Restoring nature in the EU	13
Pillar 3: Enabling transformative change	21
Pillar 4: A global biodiversity agenda	27
Annex	32
Further reading	35
Photo credits	35

Foreword



The EU Biodiversity Strategy for 2030 sets out a truly ambitious and far-reaching programme of measures to halt and reverse biodiversity loss in the EU and across the globe. The challenge ahead is daunting and our ambition high, but it is actually not a matter of choice: halting biodiversity loss is a necessity for a stable future on this planet, and a socio-economic imperative to deliver the European Green Deal.

In preparing the EU Biodiversity Strategy we drew on a vast amount of scientific evidence on biodiversity loss, especially the landmark 2019 IPBES report, and evidence is growing by the day. The 2020 'State of Nature in the EU' report found that 81% of EU protected habitats and 63% of EU protected species are in "poor" or "bad" conservation status. Overall, Europe's protected habitats and species continue to decline at an alarming rate because the multiple pressures they face are simply too great to enable their recovery.

Without decisive action, this continued loss will have massive economic repercussions. The latest studies confirm that over half of global GDP is dependent on high-functioning biodiversity and ecosystem services and that globally, one fifth of countries are at risk of their ecosystems collapsing, compromising food security, clean water and air, and flood protection.

This is why the EU Biodiversity Strategy is now a central element of both the EU Green Deal and the EU Recovery Plan. Its ambitious

targets for nature protection and restoration should lead to a better balance between nature and economic activities, contributing to a transformational change that will filter through to all parts of society, ensuring the health and prosperity of people and nature.

We can make this happen if we take a whole-society approach, with action from all stakeholders across all sectors and at all levels. We are working to bring everyone on board to deliver the Biodiversity Strategy – land owners and land users, such as farmers, foresters, fishers; businesses and consumers; civil society organisations, and citizens across the EU. To this end, one important part of the Strategy focuses on strengthening the EU's biodiversity governance framework to make it as transparent and participatory as possible. Enabling also needs funding: we are using all tools at our disposal to unlock, as a minimum, EUR 20 billion/year for biodiversity through various sources, including all EU funds, national and private funding, supported by tools such as the Taxonomy, improved biodiversity tracking for EU funding, Invest EU, and much more besides.

With the Biodiversity Strategy, the EU is leading the way. But the biodiversity crisis is a global crisis. That is why we will negotiate an ambitious global framework to protect biodiversity across the globe at the next Conference of Parties of the UN Biodiversity Convention in China. Working together with the Member States and the EU External Action Service, we will use the full diplomatic weight of the EU to lead the way for global action. We owe it to nature, to people and to future generations.

Virginijus Sinkevičius
European Commissioner for Environment, Oceans and Fisheries



EU Biodiversity Strategy for 2030: Bringing nature back into our lives

Halting biodiversity loss has become a social and economic imperative.

Introduction



Biodiversity – the need for action

From the world's great rainforests to small parks and gardens, biodiversity is the extraordinary variety of life on Earth. We humans are part of this web of life, and we fully depend on it. It gives us the food we eat, filters the water we drink, and supplies the air we breathe. Nature is as important for our mental and physical wellbeing as it is for our society's ability to cope with global change, health threats and disasters. In short: we need nature in our lives.

But nature is in crisis. Changes in land and sea use, overexploitation of biological resources, climate change, pollution, and invasive alien species have eroded our once rich natural capital and pushed more species to the edge of extinction than at any other point in human history. In the last four decades alone, global wildlife populations have fallen by 60% as a result of human activities, and nature is now in steep decline in almost every corner of the planet.

The recent COVID-19 pandemic has brought into sharp focus the close links between our own health and that of our ecosystems. Protecting and restoring biodiversity is key to boosting ecosystem resilience and preventing the emergence and spread of zoonotic diseases.

Restoring biodiversity will also be a critical element for Europe's economic recovery following the COVID-19 crisis. When restarting the economy, it will be crucial to avoid falling back into damaging old habits. The European Green Deal, adopted in 2019, aims to transform the EU into a modern, resource-efficient and competitive economy in which growth is decoupled from resource use. The Green Deal will be the compass for our recovery, ensuring that the economy serves people and society and gives back to nature more than it takes away.

Protecting biodiversity is a global challenge and the next decade will be decisive. With its Biodiversity Strategy to 2030, the EU is ready to lead the world by example in reversing biodiversity loss, and in helping to agree and adopt a transformative post-2020 global framework at the 15th Conference of the Parties to the Convention on Biological Diversity to ensure that by 2050 all of the world's ecosystems are restored, resilient, and adequately protected.

ABOVE Titania's fritillary butterfly, *Boloria titania*.

BELOW Bog forest, Kemeru National Park, Latvia.

The EU Biodiversity Strategy for 2030

The EU Biodiversity Strategy for 2030 sets out a comprehensive package of commitments and actions to put Europe's biodiversity on the path to recovery by 2030 for the benefit of people, the planet, the climate and the economy, in line with the 2030 Agenda for Sustainable Development and with the objectives of the Paris Agreement on Climate Change.

The Strategy aims to address the five main drivers of biodiversity loss and put in place an enhanced governance framework, as well as fill any policy gaps, while at the same time consolidating existing efforts and ensuring the full implementation of existing EU legislation. Protecting and restoring nature will need more than regulation alone. It also requires action by citizens, businesses, social partners and the research and knowledge community, as well as strong partnerships between local, regional, national and European level. The Strategy therefore sets out measures to mobilise such actions and enable transformative change.

The biodiversity crisis and the climate crisis are intrinsically linked. Climate change accelerates the destruction of the natural world through droughts, flooding and wildfires, while the loss and unsustainable use of nature are in turn key drivers of climate change. But, just as the crises are linked, so are the solutions. Nature regulates the climate, and nature-based solutions, such as protecting and restoring wetlands, peatlands and coastal ecosystems, or sustainably managing marine areas, forests, grasslands and soils, will be essential for emission reduction and climate adaptation.

Because the biodiversity, climate and current economic crises are all interconnected, the actions undertaken to address each of these will need to be coherent and mutually supportive. Experience has shown that what is good for nature is also good for the economy. It is no longer a choice between nature on the one hand and the economy on the other, but an imperative of making the two work in partnership for the benefit of society as a whole.

That is why the EU Biodiversity Strategy has been given a central role in both the EU's Green Deal and its economic Recovery Package. Together, they mark a new determination to base the strengths and competitiveness of our economy on its sustainability, and to open the way to a future that is resource-efficient, climate-neutral and socially just.

ABOVE Young friends hiking together in nature.
BELOW Conger eel, *Conger conger*, Vis Island, Croatia.



The EU Biodiversity Strategy

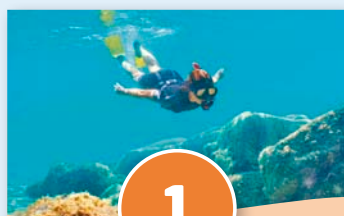
ONE VISION

By 2050, all of the world's ecosystems are **restored**, **resilient**, and adequately **protected**

ONE GOAL

Put Europe's biodiversity on the path to recovery by 2030 for the benefit of **people**, the **planet**, the **climate** and our **economy**

FOUR PILLARS



1

Protect Nature

Expand protected areas to 30% of the EU's land and sea, and put a third of these areas under strict protection



2

Restore Nature

Restore nature and ensure its sustainable management across all sectors and ecosystems



3

Enable transformative change

Strengthen the EU biodiversity governance framework, knowledge, research, financing and investments



4

EU action to support biodiversity globally

Deploy EU external actions to raise the level of ambition for biodiversity worldwide, reduce the impact of trade and support biodiversity outside Europe



ACTIONS AND COMMITMENTS TO 2030

PILLAR ONE: Protecting nature in the EU



By 2030, 30% of the EU territory should be protected for nature.

Protecting nature in the EU

The EU already has a strong legal framework to protect its most valuable, rare and threatened species and habitats across 27 countries. But more needs to be done to safeguard all of Europe's biodiversity. The existing network of protected areas needs to be expanded, reconnected and effectively managed so that it becomes a truly coherent Trans European Nature Network.

Member States will have until the end of 2023 to demonstrate significant progress in legally designating new protected areas, and integrating ecological corridors. On this basis, the Commission will assess by 2024 whether the EU is on track to meet its 2030 targets or whether stronger actions, including EU legislation, are needed.

1



Pillar one: Key commitments and goals

- Legally protect at least 30% of the EU's land area and 30% of its seas.
- Strictly protect at least a third of the EU's protected areas - representing 10% of the EU land and 10% of EU sea - including all remaining primary and old-growth forests as well as other carbon rich ecosystems, such as peatlands, grasslands, wetlands, mangroves and seagrass meadows.
- Create and integrate ecological corridors as part of a Trans European Nature Network to prevent genetic isolation, allow for species migration and to maintain and enhance healthy ecosystems.
- Effectively manage all protected areas, defining clear conservation objectives and measures, and monitoring them appropriately.
- As the EU's Overseas Countries and Territories also host important biodiversity hot spots not governed by EU environmental rules, encourage relevant Member States to consider promoting equal or equivalent rules in these countries and territories.

Protect 30% of the EU's land and 30% of its seas for nature

The Natura 2000 network of protected areas covers 18% of the EU's land and 8% of its seas. National protection schemes cover an additional 8% of land and 3% of sea.

Member States will therefore need to collectively protect a further 4% of their land and 19% of their seas in order to reach the 30% target set by the 2030 Biodiversity Strategy. Designations should either help to complete the Natura 2000 network or be under national protection schemes. All protected areas will need to have clearly defined conservation objectives and measures.

The Commission, working with Member States and the European Environment Agency will draw up guidance by the end of 2021 to help identify additional sites of highest biodiversity value or potential. Every Member State will then have to do its fair share of the effort to meet the EU target, recognising that each one has a different quantity and quality of biodiversity.

If, by 2024 Member States have not made sufficient progress in designating sites, the EU will consider whether stronger actions, including EU legislation, are needed.

Corn poppies in bean crop field.



Strictly protect 10% of our land and sea for nature

The new Strategy also calls for at least one third of these protected areas – representing 10% of EU land and 10% of EU seas – to be strictly protected by 2030. Today, only 3% of land and less than 1% of marine areas are strictly protected.

As a first step, all of the EU's remaining primary and old-growth forests should be defined, mapped, monitored and strictly protected. Primary and old-growth forests are not only amongst the richest forest ecosystems but they also remove carbon from the atmosphere and store significant carbon stocks.

Other carbon-rich ecosystems, such as peatlands, grasslands, wetlands, mangroves and seagrass meadows will also be targeted, in view of their importance for tackling climate change.

The Commission will provide guidance on the selection and designation of strictly protected areas to ensure all Member States apply the same principles and conditions across the EU. This will include a clear definition of the terms 'strict protection' and 'primary and old-growth forests'.

Again, if, by 2024, Member States have not made sufficient progress in designating sites, the EU will consider whether stronger actions, including EU legislation, are needed.

Forest with wild garlic in Central Balkan national park.



Ensuring a coherent Trans-European Nature Network

In order to have a truly coherent and resilient Trans-European Nature Network, the Biodiversity Strategy calls on Member States to create ecological corridors between protected sites. The aim is to prevent genetic isolation, allow for species migration and climate adaptation, and maintain and enhance healthy ecosystems.

In a coherent network, protected areas should not end up as isolated patches scattered across a hostile environment. Member States will therefore need to ensure sufficient ecological connectivity within the network, taking into account the specificities of the habitats and species present.

This could involve, for instance, the designation of additional protected areas, the restoration of high diversity landscape features outside protected areas, such as buffer strips, fallow land, coppices, ponds or hedgerows, the creation of buffer zones, or the use of other measures to improve the permeability of the landscape.

To assist Member States in achieving this target, the EU will promote investments in green and blue infrastructure and enhance cooperation across borders among the Member States through a variety of EU instruments.

Dry stone wall – a landscape feature with high biodiversity.



Effectively manage all protected areas

In order to put biodiversity on the path to recovery, protected areas don't just need to be legally designated; they must also be effectively managed for the benefit of the species, habitats and ecosystems present.

Member States will need to ensure that all protected areas have clearly defined conservation objectives and measures in place by 2030. To be effective, conservation objectives must be site-specific, comprehensive, realistic, correspond to the ecological requirements of the habitats species present, and wherever possible be quantifiable and measurable.

Management plans are a useful tool for setting conservation objectives in an open and transparent manner. They not only help to build a consensus view on the long-term management solutions for the site in close cooperation with all stakeholders and interest groups, but also create a sense of shared ownership and responsibility for the area.

Member States will also need to put in place governance systems and allocate sufficient resources to implement the necessary conservation measures on each site by 2024 at the latest, so that the species and habitats are put on the path to recovery by 2030.

White stork, *Ciconia ciconia*, searching for insects amongst hay, Lithuania.



PILLAR TWO: Restoring nature in the EU

Old-growth virgin forest, Velebit mountains, Croatia.

Restoring nature in the EU

The Strategy lays out a comprehensive plan of actions to restore EU biodiversity, reduce pressures on EU ecosystems, and ensure their sustainable management. This ambitious restoration agenda aims to address the main drivers of biodiversity loss and bring back diverse and resilient

nature while in turn ensuring the continued provision of the ecosystem services on which our wellbeing and prosperity depend. It will also create job opportunities, reconcile economic activities with nature and help maintain the productivity and value of our natural capital in the long run.



2

Pillar two: Key commitments

- Propose legally binding EU restoration targets by 2021, and restore significant areas of degraded and carbon rich ecosystems by 2030.
- Ensure habitats and species show no deterioration in conservation trends and status; and at least 30% reach favourable conservation status or at least show a positive trend.
- Reverse the decline of pollinators.
- Reduce the use of chemical pesticides by 50% and reduce the use of more hazardous pesticides by 50%.
- Ensure that at least 10% of agricultural area is under high-biodiversity landscape features.
- Place at least 25% of agricultural land under organic farming management, and significantly increase the uptake of agro-ecological practices.
- Reduce the loss of nutrients from fertilisers by 50%, resulting in the reduction of fertilizer use by at least 20%.
- Plant three billion new trees in the EU, in full respect of ecological principles.
- Make significant progress in remediating contaminated soil sites.
- Restore at least 25,000 km of free-flowing rivers.
- Substantially reduce the negative impacts of fisheries and extraction activities on sensitive marine habitats and species, including on the seabed in support of achieving good environmental status.
- Eliminate or reduce the by-catch of species to a level that allows their recovery and conservation.
- Adopt ambitious Urban Greening Plans for cities with at least 20,000 inhabitants.
- Minimise or eliminate the use of pesticides in sensitive areas such as urban green areas.
- Halve the number of Red List species threatened by invasive alien species.

Propose legally binding EU targets for restoration

Nature restoration is already partially required under existing EU legislation. However, there are no clear or binding targets and timelines for the restoration and sustainable use of Europe's ecosystems.

There is also no requirement for Member States to have biodiversity restoration plans or to comprehensively map, monitor or assess the health of ecosystems and their services, or restoration efforts. Stronger implementation support and enforcement are therefore required.

The Commission will put forward a proposal for legally binding EU nature restoration targets in 2021 to ensure that nature restoration across land and sea picks up, increases the EU's resilience, and contributes to climate change mitigation and adaptation as a key nature-based solution.

The legislative proposal will target all degraded ecosystems and, in particular, those with the most potential to capture and store carbon, and to prevent and reduce the impact of natural disasters. Subject to a comprehensive impact assessment, the legislative proposal will define the conditions in which the targets must be met, as well as the most effective measures to reach them.

Lake Toplitz, Styria, Austria.



Ensure 30% of EU protected species and habitats are in favourable conservation status or have positive trends by 2030

The Biodiversity Strategy also calls on Member States to raise the level of implementation of existing legislation, within clear deadlines – notably as regards the EU Birds and Habitats Directives, the Water Framework Directive, Floods Directive and Marine Strategy Framework Directive.

It will in particular request Member States to ensure that there is no further deterioration in conservation trends and status of all EU protected habitats and species by 2030.

In addition, Member States must ensure that at least 30% of species and habitats, not currently in a favourable status, reach that category or show a strong positive trend by 2030.

To assist Member States in this process, the Commission and the European Environment Agency will provide early guidance on how to select and prioritise the species and habitats for restoration measures.

This could also consider potential synergies with other EU targets, in particular in relation to climate policy or the EU's new Nature Restoration Plan.

Lanza's salamander, endemic to Cottian Alps, Monviso massif, Italy.



Bring nature back to agricultural land

As guardians of our land, farmers play a vital role in preserving biodiversity. At the same time, certain agricultural practices are a key driver of biodiversity decline. To support the long-term sustainability of both nature and farming, the Biodiversity Strategy will work in synergy with the Farm to Fork Strategy and the new Common Agricultural Policy (CAP).

To provide more space for nature, at least 10% of agricultural area should be transformed into high diversity landscape features by 2030 in order to provide space for wild animals, plants, pollinators and natural pest regulators. Such landscape features could include, for example, buffer strips, rotational or non-rotational fallow land, hedges, non-productive trees, terrace walls, and ponds.

Action will also be taken to reduce by 50% the overall use of – and risk from – chemical pesticides by 2030, and to reduce by 50% the use of more hazardous pesticides.

In addition, at least 25% of the EU's agricultural land will need to be organically farmed by 2030, and agro-ecological practices will be encouraged. In this context, the Commission will put forward an Action Plan on organic farming in 2021 to help Member States stimulate both supply and demand of organic products.

Countryside in the Val d'Orcia in Spring, Tuscany, Italy.



Restore soil ecosystems

Soil is one of the most complex of all ecosystems. It is a habitat in its own right, and home to an incredible diversity of organisms that regulate and control key ecosystem services such as soil fertility, nutrient cycling and climate regulation.

In the EU, the degradation of soil is having considerable environmental and economic consequences. It is essential to step up efforts to protect soil fertility, reduce soil erosion and increase soil organic matter. Significant progress is also needed on identifying contaminated soil sites, restoring degraded soils, defining the conditions for their good ecological status, introducing restoration objectives, and improving the monitoring of soil quality.

To this end, the Commission will update the EU Soil Thematic Strategy in 2021. The Zero Pollution Action Plan for Air, Water and Soil to be adopted in 2021 will also include measures to tackle soil pollution.

Measures to minimise soil sealing and rehabilitate contaminated brownfields will be set in the upcoming Strategy for a Sustainable Built Environment and a new thematic mission in the area of soil health and food will be included in the EU's research programme Horizon Europe to help develop solutions for restoring soil health and functions.

European Mole, *Talpa europaea*.



Reverse the decline of pollinators

Pollinators are key indicators of the health of ecosystems and are vital for agricultural production and food security. In Europe, around 84% of crop species and 78% of wild flowering species depend, at least in part, on animal pollination and around €3.7 billion of the EU's annual agricultural output is directly attributed to insect pollination.

Pollinators are however undergoing a dramatic decline across Europe. Actions to protect nature, restore ecosystems, halve the use of chemical pesticides and bring nature back to agricultural land will be key to reverse their decline.

The Commission will ensure the full implementation of the EU Pollinators initiative including actions to improve knowledge of the causes and consequences of pollinator decline and tackle these causes. It will also focus on raising awareness, engaging citizens and promoting collaboration between all interested parties.

Citizens will play an essential role in the EU efforts to gather better information about pollinator species. Citizen science will be an integral component of the upcoming EU Pollinator Monitoring Scheme.

The Commission will review the initiative by mid-2022 and propose additional measures if and where necessary.

Small garden bumblebee, *Bombus hortorum*.



Increase the quantity of forests and improve their health and resilience

Forests are not only hugely important for biodiversity, they also provide society with a wide range of vital ecosystem services. Foresters have a key role to play in restoring forest biodiversity and ensuring sustainable forest management.

The Biodiversity Strategy calls on Member States to increase forest quantity, quality and resilience against fires, droughts, pests, diseases and other threats likely to increase with climate change.

In 2021, the Commission will publish a new EU Forest Strategy and a roadmap for planting at least 3 billion additional trees across the EU by 2030, in full respect of ecological principles. Afforestation, reforestation and tree planting to support biodiversity and ecosystem restoration will also be promoted through the CAP Strategic Plans, and the Cohesion Policy funds.

The share of forest areas covered by management plans should also be increased to cover all managed public forests and an increased number of private forests, giving special attention to promoting biodiversity-friendly practices such as closer-to-nature-forestry.

Mixed woodland in the Rilska River valley, near Rila monastery, Bulgaria.



Restore Europe's free flowing rivers

The EU's legal framework on water is comprehensive but implementation is lagging behind and enforcement must be stepped up. Greater efforts are needed to restore freshwater ecosystems and the natural functions of rivers in order to achieve the objectives of the Water Framework Directive.

The Biodiversity Strategy calls on Member States to restore at least 25,000 km of rivers to a free-flowing state by 2030, primarily through the removal of obsolete barriers and the restoration of floodplains and wetlands. The Commission will draw up technical guidance for Member States in 2021 to help identify priority sites and mobilise funding.

Large-scale river and floodplain restoration investments can provide a major economic boost for the restoration sector and support local socioeconomic activities such as tourism and recreation. At the same time, such investments can improve water regulation, flood protection, nursery habitats for fish, and the removal of nutrient pollution.

Member State authorities should also review water abstraction and impoundment permits to implement ecological flows in order to achieve good status or potential of all surface waters and good status of all groundwater by 2027 at the latest, as required by the Water Framework Directive.

Loop of the Lech river, Upper Bavaria, Germany.



Create win-wins for energy generation

More sustainably sourced renewable energy will be essential to fight climate change and biodiversity loss. Under the Biodiversity Strategy, the EU will prioritise win-win solutions for biodiversity and renewable energy, such as ocean energy and offshore wind facilities that also protect fish stocks, or solar-panel farms that can be combined with biodiversity-friendly soil cover.

A Commission assessment of the EU and global biomass supply and demand, and related sustainability, will help to better understand and monitor the potential climate and biodiversity risks. It will inform the Commission's policy-making, including the review and revision, where necessary, of the level of ambition of the Renewable Energy Directive, the Emissions Trading Scheme, and the Regulation on land use, land use change and forestry (LULUCF) in 2021.

In line with the Renewable Energy Directive, the Commission will also develop operational guidance in 2021 on the new sustainability criteria on forest biomass for energy.

It will also review in 2021 the data on biofuels with high indirect land-use change risk, and establish a trajectory for their gradual phase-out by 2030.

Oystercatchers, *Haematopus ostralegus*, in flight with offshore wind turbines.



Restore marine ecosystems

Restored and protected marine ecosystems bring substantial health, social and economic benefits to coastal communities and the EU as a whole.

In order to achieve good environmental status of marine ecosystems, as required under the Marine Strategy Framework Directive, Member States need to ensure that marine resources are harvested sustainably, that carbon-rich ecosystems and important fish spawning and nursery areas are restored, and that there is zero-tolerance for illegal practices.

The Commission will propose a new action plan to conserve fisheries resources and protect marine ecosystems by 2021. Where necessary, measures will be introduced to limit the use of fishing gear most harmful to biodiversity and promote a transition towards more selective and less damaging fishing techniques.

By-catch of vulnerable species must also be eliminated or, where this is not possible, minimised so as not to threaten their conservation status. To support this, data collection on by-catch for all sensitive species will need to be stepped up.

In addition, the strategy calls for fisheries-management measures to be established in all marine protected areas according to clearly defined conservation objectives and on the basis of the best available scientific advice.

Loggerhead turtle, *Caretta caretta*, tangled in fishing net, Tenerife.



Bring nature back to urban spaces

The lockdowns during the COVID-19 pandemic have shown the value of green urban spaces for the health and quality of life of citizens. Beyond this, urban green areas can provide valuable biodiversity rich habitats. But, while protection of some urban green spaces has increased, green spaces often lose out to grey spaces in the competition for land.

The Biodiversity Strategy aims to stop and reverse this trend by promoting the systematic integration of healthy ecosystems, green infrastructure and nature-based solutions into all forms of urban planning.

To bring nature back to cities and reward community action, the Commission has called on all European cities of 20,000 inhabitants or more to develop ambitious Urban Greening Plans by the end of 2021. These should include measures to create further biodiverse and accessible spaces for urban dwellers, improve connections between green spaces, and limit biodiversity harmful practices.

To facilitate this work, the Commission will set up an EU Urban Greening Platform in 2021, under a new 'Green City Accord' with cities and mayors. This will be done in close coordination with the European Covenant of Mayors. The Urban Greening Plans will also have a central role in choosing the European Green Capital 2023 and European Green Leaf 2022.

Sedum or 'living roof' on a school classroom North Rhine-Westphalia, Germany.



Reduce pollution

Pollution is a key driver of biodiversity loss and has a harmful impact on our health and the environment. While the EU has a solid legal framework in place to reduce pollution, greater efforts are required to implement and enforce the requirements.

As part of the Commission's Zero Pollution Ambition for a toxic-free environment, a new EU Chemicals Strategy for Sustainability will be put forward along with a Zero Pollution Action Plan for Air, Water and Soil.

The Commission will also promote the goal of zero pollution from nitrogen and phosphorus flows from fertilisers through reducing nutrient losses by at least 50%, while ensuring that there is no deterioration in soil fertility. This will result in the reduction of use of fertilisers by at least 20%. To this end, the Commission will work with Member States to develop an Integrated Nutrient Management Action Plan in 2022.

The Farm to Fork Strategy will address the reduction in the use and risk of pesticides and support wider implementation of Integrated Pest Management. As part of this, the environmental risk assessment of pesticides will be strengthened. The pressure from plastics is notably addressed through the implementation of the European Strategy for Plastics and the new Circular Economy Action Plan.

Tractor dispensing pesticides, North Rhine-Westphalia, Germany.



Tackle invasive alien species

Invasive alien species represent a major threat to native plants and animals in Europe, causing damage worth billions of Euros to the European economy every year.

Besides inflicting major damage to nature and the economy, many invasive alien species also facilitate the outbreak and spread of infectious diseases, posing a threat to humans and wildlife.

The rate of release of invasive alien species has increased in recent years. Of the 1,872 species now considered threatened in Europe, 354 are under threat from invasive alien species. Without effective control measures, the rate of invasion and the risks it brings to our nature and health will continue to rise.

The implementation of the EU Invasive Alien Species Regulation and other relevant legislation and international agreements must therefore be stepped up. This should aim to minimise, and where possible eliminate, the introduction and establishment of alien species in the EU environment. The aim will be to manage established invasive alien species and decrease the number of Red List species they threaten by 50%.

Floating barrier to control invasive plant water hyacinth, Guadiana River, Spain.



PILLAR THREE: Enabling transformative change

Creating the right implementation conditions will be crucial for the actions proposed under the new EU Biodiversity Strategy to reach their full potential.

Enabling transformative change

Creating the right implementation conditions will be crucial for the actions proposed under the new EU Biodiversity Strategy to reach their full potential. An enabling environment is essential to change the way biodiversity is perceived and integrated into the wider

EU policy framework. Adopting a more integrated and whole-of-society approach to biodiversity will also ensure co-responsibility and co-ownership by all relevant actors in meeting the EU's biodiversity commitments.



3

Pillar three: Key commitments and goals

- Establish a strengthened European biodiversity governance framework.
- Step up implementation and enforcement of EU environmental legislation.
- Launch a new initiative for sustainable corporate governance and support a European Business for Biodiversity movement.
- Strengthen the Commission's biodiversity proofing framework to ensure that EU funding contributes to, and does not harm, biodiversity.
- Unlock at least €20 billion a year for nature and ensure that a significant proportion of the 30% of the EU budget dedicated to climate action is invested in biodiversity and nature-based solutions.
- Establish a common classification of economic activities that contribute to biodiversity, supported by the Renewed Sustainable Finance Strategy.
- Encourage changes in national fiscal systems to shift tax burden from labour to pollution, resource use and other environmental externalities.
- Introduce a new long-term strategic research agenda for biodiversity in the future Horizon Europe programme, set up a dedicated Biodiversity Partnership and a Knowledge Centre for Biodiversity.
- Propose a Council Recommendation on education for environmental sustainability.
- Use the new Skills Agenda to help biodiversity restoration and sustainable management, as well as a fair and inclusive transition to a green economy.

Create a new European biodiversity governance framework

In the EU, there is currently no comprehensive governance framework to steer the implementation of biodiversity commitments agreed at national, European or international level.

To address the gap, the Commission will put in place in 2021 an enhanced, cooperation-based European biodiversity governance framework. It will help map obligations and commitments and set out a roadmap to guide their implementation. As part of this new framework, the Commission will put in place a monitoring and review mechanism. This will include a clear set of agreed indicators to enable regular progress assessments to be made and corrective measures introduced as required.

The new governance framework will ensure co-responsibility and co-ownership by all relevant actors in meeting the EU's biodiversity commitments. The Commission will support administrative capacity building, transparency, stakeholder dialogue, and participatory governance for biodiversity at different levels.

The Commission will assess the progress and suitability of the cooperation-based approach in 2023, and consider whether a legally binding approach to governance is needed.

Hemicycle of the European Parliament.



Build on an integrated and whole-of-society approach

In the partnership spirit of this Strategy, all parts of the economy and society will have to play their role. Industry and business have an impact on nature, but they also produce important innovations, partnerships and expertise that can help prevent biodiversity loss.

To ensure that environmental and social interests are fully embedded into business strategies, the Commission will put forward a new initiative on sustainable corporate governance in 2021. This legislative proposal will address human rights and environmental duty of care and due diligence across economic value chains.

In addition, the Commission has launched a review of the reporting obligations of businesses under the Non-Financial Reporting Directive, with a view to improving the quality and scope of non-financial disclosures, including on environmental aspects such as biodiversity.

Through its existing B@B platform, the Commission will continue to support the development of a European Business for Biodiversity movement. It will also work with business to create incentives and eliminate barriers for the take-up of nature-based solutions that can lead to significant business and employment opportunities in various sectors, and are the key to innovation.

Duisburg-Nord Landscape Park, former Thyssen Stahlwerk, in Duisburg, Germany.



Unlock at least €20 billion a year for nature

Tackling biodiversity loss and restoring ecosystems will require significant public and private investments at national and European level. This will mean making the most of all relevant EU programmes and financing instruments.

To meet the needs of this strategy, including investment priorities for Natura 2000 and green infrastructure, at least €20 billion a year should be unlocked for spending on nature. This will require the mobilisation of both private and public funding at national and EU level. The Commission will also strengthen its biodiversity proofing framework to ensure that EU funding supports biodiversity-friendly investments.

As nature restoration will make a major contribution to climate objectives, a significant proportion of the 30% of the EU budget dedicated to climate action will be invested in biodiversity and nature-based solutions. Nature and biodiversity will also be a priority for the European Green Deal Investment Plan.

Under Invest EU, a dedicated natural-capital and circular-economy initiative will be established to mobilise at least €10 billion over the next 10 years, based on public/private blended finance.

Nature and biodiversity - a priority for the European Green Deal Investment Plan.



Ensuring the sustainability of the financial system

To help unlock the investments needed, the EU must provide long-term certainty for investors and help embed sustainability in the financial system.

In 2021, the Commission will propose a common classification of economic activities that substantially contribute to protecting and restoring biodiversity and ecosystems. This will be further supported by a Renewed Sustainable Finance Strategy which will help ensure that the financial system contributes to mitigating existing and future risks to biodiversity, and better reflect how biodiversity loss affects companies' profitability and long-term prospects.

In addition, the Commission will further promote tax systems and pricing that reflect environmental costs, including biodiversity loss to help shift the tax burden from labour to pollution, resource use and other environmental externalities.

The Commission will also aim to boost nature-based solutions when proposing further legislation and guidance on green public procurement. In 2021, it will develop methods to help measure the environmental footprint of products and organisations on the environment as well as support the establishment of an international natural capital accounting initiative.

The financial system should contribute to mitigating risks to biodiversity.



Step up implementation and enforcement of EU environmental legislation

Over the last 30 years, the EU has put in place a solid legislative framework to protect and restore its natural capital. However, recent evaluations show that although legislation is fit for purpose, implementation is lagging behind. This is having dramatic consequences on biodiversity and comes at a substantial economic cost, estimated to be around €50 billion /year.

The full implementation and enforcement of EU environmental legislation is therefore placed at the heart of the EU Biodiversity Strategy.

The Commission will prioritise political support and financial and human resources in order to ensure full implementation and enforcement of existing legislation. It will also strive to improve compliance assurance, working closely with Member States and European networks of environmental agencies, inspectors, auditors, police, prosecutors and judges.

In addition, the Commission will support civil society's role as a compliance watchdog and will engage with Member States to improve access to justice in national courts in environmental matters for individuals and NGOs. It will also broaden the standing of NGOs by proposing a revision of the Aarhus Regulation.

Regular field surveillance helps ensure respect of nature legislation.



Ensure the full and timely implementation of the EU Nature Directives

As regards the Birds and Habitats Directives, measures will focus on a number of shortcomings in their implementation, identified in their Fitness Check in 2016. This concluded that, within the framework of the broader EU biodiversity policy, the Nature Directives are fit for purpose but achieving their objectives and realising their full potential will depend upon substantially improving their implementation.

Key factors behind the shortcomings in implementation include limited resources, weak enforcement, poor integration of nature objectives into other policy areas, insufficient knowledge and access to data, as well as poor communication and stakeholder involvement.

Priority will be given in particular to completing the Natura 2000 network, especially at sea, effectively managing all sites and taking action to restore species and habitats that show declining trends. The Directives' species protection provisions will also be re-enforced to combat illegal activities.

Elsewhere, the Commission will ensure that environment-related legislation with an impact on biodiversity is better implemented, enforced and – where necessary – reviewed and revised.

Volunteers building a natural dam.



Improve knowledge and research

The fight against biodiversity loss must be underpinned by sound science. Research and innovation can develop and test 'green' solutions so that they can be prioritised over 'grey' infrastructure. It can also help authorities to support investments in nature-based solutions and green infrastructure, such as in old-industrialised, low-income or disaster-hit areas.

The Horizon Europe programme includes a long-term strategic research agenda for biodiversity, including a science-policy mechanism for research-based options for ratcheting up the implementation of biodiversity commitments, with increased funding. Horizon Europe's Missions will significantly contribute to filling knowledge gaps and finding solutions to improve the health of ecosystems and their contribution to human health.

In parallel, the Commission will promote and facilitate partnerships, including a dedicated Biodiversity Partnership, to make the bridge between science, policy and practice and to make nature-based solutions a reality on the ground.

The Commission will also establish a new Knowledge Centre for Biodiversity in close cooperation with the European Environment Agency to underpin policy development and track progress on the implementation of biodiversity-related international instruments.

Volunteers picking up litter on a beach.



Improve education and skills

To help integrate biodiversity and ecosystems into school, higher education and professional training, the Commission will propose a Council Recommendation on encouraging cooperation in education for environmental sustainability in 2021.

This will provide guidance for schools and teachers on how to cooperate and exchange experiences across Member States on environmental sustainability, including on biodiversity teaching. The Commission will also provide support materials and facilitate the exchange of good practices in EU networks of teacher-training programmes.

The rapid shift towards a climate neutral Europe and digital transformation is changing the way we work, learn, take part in society and lead our everyday lives. Europe can only grasp these opportunities if its people develop the right skills.

In this respect, Europe's new Skills Agenda will help individuals and businesses develop more and better skills and put them to use during the transition to a green economy, as set out in the Green Deal, focusing on training and re-skilling of the workforce across a wide range of sectors.

Teacher and pupils in an outdoor class.





PILLAR FOUR: EU action to support biodiversity globally

The EU will work with partners across the world to protect marine biodiversity hotspots.

A global biodiversity agenda

The final cornerstone of the EU Biodiversity Strategy sets out the EU's ambition to lead by example on biodiversity in the international arena. The EU will work with like-minded partners to agree an ambitious new global framework for post-2020 at the upcoming 15th Conference of the Parties to the Convention on Biological

Diversity and to set ambitious global 2030 targets that are in line with the EU commitments. It will also use its wide-ranging external policies, trade agreements and bilateral programmes to promote biodiversity outside Europe and to combat illegal wildlife trade.

4



Pillar four: Key commitments and goals

- Broker an agreement for an ambitious new global framework for post-2020 at the 15th Conference of the Parties to the Convention on Biological Diversity.
- Broker an agreement on marine biological diversity of areas beyond national jurisdiction and on the designation of Marine Protected Areas in the Southern Ocean.
- Work with partner countries and regional organisations to protect and sustainably use sensitive maritime ecosystems and species, with a focus on marine biodiversity hotspots.
- Apply zero tolerance towards illegal, unreported and unregulated fishing, and combat overfishing.
- In international negotiations, advocate that marine minerals in the international seabed area cannot be exploited before research into the effects of deep-sea mining technologies demonstrates no serious harm to the environment.
- Ensure full implementation and enforcement of the biodiversity provisions in all trade agreements, and better assess the impact of trade agreements on biodiversity.
- Introduce measures to avoid placing products associated with deforestation on the EU Market and promote forest-friendly imports and value chains.
- Revise the EU Action Plan against Wildlife Trafficking in 2021 and propose a further tightening of the rules on EU ivory trade.
- Cooperate with partners to mainstream biodiversity into all development and partnership policies, increase financial support and phase out subsidies harmful to biodiversity.

Broker an ambitious post-2020 global framework for biodiversity

The EU is ready to work with like-minded partners in a high-ambition coalition on biodiversity in order to agree an ambitious new global biodiversity framework for post-2020 at the 15th Conference of the Parties to the Convention on Biological Diversity.

In particular, the EU will negotiate for the following elements as a minimum:

1. Overarching global goals for 2050 for the world's ecosystems to be restored, resilient, and adequately protected.
2. Ambitious global 2030 targets in line with EU commitments in this strategy. These should clearly address the drivers of biodiversity loss and be specific, measurable, actionable, relevant and time-bound.
3. A much stronger implementation, monitoring and review process.
4. An enabling framework to bring the ambition to life, across areas such as finance, capacity, research, innovation and technology.
5. Fair and equitable sharing of the benefits from the use of genetic resources linked to biodiversity.
6. A principle of equality, based on an inclusive approach with the participation of all stakeholders.

Mangrove forest in Tha Pom Khlong Song Nam National Park, Thailand.



Protect marine biodiversity

In line with the International Oceans Governance agenda, the EU will support an ambitious legally binding agreement for protecting marine biodiversity in areas beyond national jurisdiction and in the high seas.

The EU will use all of its diplomatic leverage and outreach capacities to help broker an agreement on the designation of three vast Marine Protected Areas in the Southern Ocean, two of which were co-proposed by the EU in East Antarctica and in the Weddell Sea.

Meanwhile, work will continue with partner countries and regional organisations to put in place measures to protect and sustainably use sensitive maritime ecosystems and species, with a focus on marine biodiversity hotspots. The EU will also apply zero tolerance towards illegal, unreported and unregulated fishing and will combat overfishing.

In international negotiations, the EU will continue to advocate that marine minerals in the international seabed area cannot be exploited before the effects of deep-sea mining on the marine environment, biodiversity and human activities have been sufficiently researched, the risks are understood and the technologies and operational practices are able to demonstrate no serious harm to the environment.

Coral Reef, Namena Marine Reserve, Fiji.



Strengthen EU trade agreements

The EU is at the forefront of international efforts to promote economically, environmentally and socially sustainable development to address the planetary crisis and in particular to fight climate change and biodiversity loss. It is also one of the largest importers of goods and products and a major trading partner.

In this spirit, the Commission will aim to ensure full implementation and enforcement of the biodiversity safeguards in all trade agreements.

The Commission will also better assess the impact of trade agreements on biodiversity, with follow up action to strengthen the biodiversity provisions of existing and new agreements if relevant.

The Commission will also present, in 2021, a legislative proposal and other measures to avoid or minimise the placing of products associated with deforestation or forest degradation on the EU market, for instance from agricultural imports.

This is a logical progression from the Commission's communication adopted in 2019 on stepping up EU action to protect and restore the world's forests and to promote forest-friendly imports and value chains.

Guard alongside a Temminck's ground pangolin, *Smutsia temminckii*, South Africa.



Crack down on illegal trade

As the world's fourth most lucrative black market, illegal wildlife trade is a major source of the depletion or extinction of entire species, and is thought to be one of the causes of emergence and spread of zoonotic diseases. It is a human, economic and environmental duty to dismantle it.

The Commission will revise the EU Action Plan against Wildlife Trafficking in 2021 and propose a further tightening of the rules on EU ivory trade.

The Commission will also explore a possible revision of the Environmental Crime Directive, including by looking at expanding its scope and introducing provisions for types and levels of criminal sanctions.

It will consider strengthening the coordinating and investigative capacities of the European Anti-Fraud Office (OLAF) to work with Member States and non-EU countries to prevent illicit trade and the entry of illicit products into the Single Market.

The Commission will continue to engage with partner countries to ensure a smooth and fair transition, mobilising in particular Aid for Trade to ensure that partners reap the benefits of biodiversity-friendly trade.

Poached bull African elephant, *Loxodonta africana*, Kenya.



International cooperation, neighbourhood policy and resource mobilisation

Delivering an ambitious post-2020 global biodiversity framework will require strong cooperation with partners, as well as increased support and financing and phasing out of subsidies harmful to biodiversity.

In the last decade, the EU and its Member States collectively upheld their commitment to double financial flows to developing countries for biodiversity.

The EU is ready to continue working with its partners and further increase its support post-2020. This will be part of its work on biodiversity conservation, restoration, sustainable use and mainstreaming in all development and partnership policies. In addition, by integrating policy coherence for sustainable development in all its policies, the EU will reduce pressures on biodiversity worldwide.

The EU will step up support to partner countries across the world to achieve the new global targets, fight environmental crime, and tackle the drivers of biodiversity loss.

In Africa, the EU will launch the NaturAfrica initiative to protect wildlife and key ecosystems while offering local socio-economic development opportunities in green sectors. Similar projects will be developed in other regions. The EU will also support the Western Balkans and EU Neighbourhood Countries in their efforts to protect biodiversity.

In all of its work, the EU will strengthen the links between biodiversity protection and human rights, gender, health, education, conflict sensitivity, the rights-based approach, land tenure and the role of indigenous peoples and local communities.

As part of its global efforts, the EU will promote biodiversity coalitions with partners and civil society around the world. For example, in March 2020, the Commission launched the Global Biodiversity Coalition of national parks, aquariums, botanic gardens, zoos, natural history and science museums to help raise awareness around the world on the need to protect and nurture biodiversity.

The Commission will consider launching or joining other High Ambition Coalitions to help develop the post-2020 framework.

Phantom fishing net drifting in the Caribbean Sea.



ANNEX

Hiking in the Chamonix Valley of the French Alps, France.

Key actions to be taken by the Commission under the EU Biodiversity Strategy for 2030

Key actions to be taken by the Commission	Indicative timetable
Criteria and guidance for identifying and designating additional protected areas and ecological corridors, on appropriate management planning, and on how other effective area-based conservation measures and urban greening can contribute to the EU 2030 nature protection targets	2020
Assessment of the EU and global biomass supply and demand and related sustainability	2021
Guidance on the selection of species and habitats to ensure that at least 30% of protected species and habitats not currently in favorable status are in that category by 2030, or show a strong positive trend	2020
Review and possible revision of the EU Pollinators initiative	2021
Action Plan for Organic Farming for 2021–2026	2021
<u>Study on the sustainability of the use of forest biomass for energy production</u>	2020
Renewed Sustainable Finance Strategy	2021
<u>Establish a new Knowledge Centre for Biodiversity</u>	2020
Proposal for further tightening of the rules on EU ivory trade	2021
Broker an agreement for an ambitious post-2020 biodiversity framework at the 15 th Conference of the Parties to the Convention on Biological Diversity (CBD COP15)	2021
Measures to ensure that Member States' CAP Strategic Plans set explicit national values for relevant targets of the Biodiversity and Farm to Fork Strategies, supported, inter alia, by CAP instruments and implementation of the Habitats Directive	as of 2020
Further develop the Forest Information System for Europe	as of 2020
Help to build an EU Business for Biodiversity movement	as of 2020
Broker an ambitious agreement on marine biological diversity of areas beyond national jurisdiction and on three vast Marine Protected Areas in the Southern Ocean	2021
Better assess the impact of trade agreements on biodiversity, with follow-up action to strengthen the biodiversity provisions of existing and new agreements if relevant	2021
Revision of the Thematic Strategy for Soil Protection	2021
New EU Forest Strategy including a roadmap for planting at least 3 billion additional trees in the EU by 2030	2021
Guidelines on biodiversity-friendly afforestation and reforestation and closer-to-nature-forestry practices	2021
Operational guidance on the new sustainability criteria on forest biomass for energy	2021
Review of the data on biofuels with high indirect land-use change risk and setting up of a trajectory for their gradual phase out by 2030	2021

Key actions to be taken by the Commission	Indicative timetable
New action plan to conserve fisheries resources and protect marine ecosystems	2021
Guidance and support to Member States to identify sites and help mobilize funding for the restoration of 25,000 km of free-flowing rivers	2021
Set up the EU Urban Greening Platform under a new 'Green City Accord' with cities and mayors	2021
Technical guidance on urban greening and assistance to mobilise funding and capacity building for Member States, local and regional authorities, including for the development of Urban Greening Plans	2021
Review and possible revision of the Environmental Crime Directive	2021
New sustainable corporate governance initiative addressing human rights, and environmental duty of care and mandatory due diligence across economic value chains	2021
Delegated act under the Taxonomy Regulation to establish a common classification of economic activities that substantially contribute to the protection and restoration of biodiversity and ecosystems	2021
Methods, criteria and standards to better integrate biodiversity considerations into public and business decision-making at all levels, and to measure the environmental footprint of products and organisations	2021
Promote an international natural capital accounting initiative	2021
Proposal for a Council Recommendation on encouraging cooperation in education for environmental sustainability, including biodiversity education	2021
Measures to avoid or minimize the placing of products associated with deforestation or forest degradation on the EU market	2021
Revision of the EU Action Plan against Wildlife Trafficking	2021
NaturAfrica initiative to protect wildlife and key ecosystems	as of 2021
Integrated Nutrient Management Action Plan	2022
Technical guidance to Member States on their measures to review water abstraction and impoundment permits and to restore ecological flows in the revised River Basin Management Plans	2023
Assessment of the effectiveness of the new cooperation-based biodiversity governance framework, and of need for an enhanced, legally binding or other, approach to biodiversity governance	2023
Assessment of the EU's progress in meeting its 2030 targets on protected areas and whether additional action, legislative or other, is needed	by 2024

Further reading

The EU Biodiversity Strategy to 2030:

https://ec.europa.eu/environment/strategy/biodiversity-strategy-2030_en

EU Biodiversity Strategy key actions dashboard:

https://knowledge4policy.ec.europa.eu/biodiversity/topic/eu-biodiversity-strategy/key-actions_en

European Commission Natura 2000:

https://ec.europa.eu/environment/nature/natura2000/index_en.htm

The EU Green Deal:

https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

European Commission's report on State of Nature (2013–2018):

https://ec.europa.eu/environment/nature/knowledge/rep_habitats/index_en.htm

EEA Report on State of Nature No10/2020 (technical report):

<https://www.eea.europa.eu/publications/state-of-nature-in-the-eu-2020>

Searchable database on the status and trends of individual species and habitats under the Habitats Directive:

<https://nature-art17.eionet.europa.eu/article17/>

And under the Birds Directive:

<https://nature-art12.eionet.europa.eu/article12/>

Biodiversity Information System for Europe:

<https://biodiversity.europa.eu>

Knowledge Centre for biodiversity:

https://knowledge4policy.ec.europa.eu/biodiversity_en

Photo credits

Cover: Poppies with Corn marigolds © Paul Harcourt Davies / naturepl.com

Page 5: Honey bee flying to Flax © Phil Savoie / naturepl.com

Page 6: Titania's fritillary butterfly © Edwin Giesbers / naturepl.com; Bog forest © Wild Wonders of Europe / López / naturepl.com

Page 7: Young friends hiking © Jacob Lund / Alamy Stock Photo; Conger eel © Franco Banfi / naturepl.com

Page 8: Woman snorkeling underwater © Jan Wlodarczyk / Alamy Stock Photo; Bees and butterflies on wildflowers © Ida Vickers / Alamy Stock Photo; Group of children on a forest path © imageBROKER / Alamy Stock Photo; Taiwan yuhina pair © Staffan Widstrand / Wild Wonders of China / naturepl.com

Page 9: Dalmatian Pelican © Guy Edwardes / naturepl.com

Page 10: Woman snorkeling underwater © Jan Wlodarczyk / Alamy Stock Photo

Page 11: Corn poppies © Ernie Janes / naturepl.com; Meadow with wild garlic © Evgeni Dinev / Alamy Stock Photo

Page 12: Cotswolds dry stone wall © Nick Turner / naturepl.com; White stork following tractor © Wild Wonders of Europe / Hamblin / naturepl.com

Page 13: Old-growth virgin forest © Wild Wonders of Europe / Widstra / naturepl.com

Page 14: Bees and butterflies on wildflowers © Ida Vickers / Alamy Stock Photo

Page 15: Lake Toplitz © aroundtheworld.photography / Alamy Stock Photo; Lanza's salamander © Emanuele Biggi / naturepl.com

Page 16: Countryside in Tuscany © Guy Edwardes / naturepl.com; European Mole © Duncan Usher / Alamy Stock Photo

Page 17: Small garden bumblebee © Alan Williams / naturepl.com; Mixed woodland © Bob Gibbons / Alamy Stock Photo

Page 18: Lech river Germany © bavariainages / Alamy Stock Photo; Offshore wind turbines © Avalon/Construction Photography / Alamy Stock Photo

Page 19: Loggerhead turtle © Sergio Hanquet / naturepl.com; Living roof on a school in Germany © Clynt Garnham Environmental / Alamy Stock Photo

Page 20: Tractor with trailer © imageBROKER / Alamy Stock Photo; Floating barrier © agefotostock / Alamy Stock Photo

Page 21: Waves crashing against sea wall © Guy Edwardes / naturepl.com

Page 22: Group of children on a forest path © imageBROKER / Alamy Stock Photo

Page 23: European Parliament © Andia / Alamy Stock Photo; Duisburg-Nord Landscape Park © Jochen Tack / Alamy Stock Photo

Page 24: Financial accounting concept © Arthon Meekodong / Alamy Stock Photo; Financial graphs and diagrams © Aleksey Funtap / Alamy Stock Photo

Page 25: Forester © sdigital / iStockphoto; Volunteers building a natural dam © Nature Picture Library / Alamy Stock Photo

Page 26: Volunteers picking up litter © Peter Devlin / Alamy Stock Photo; Teacher and pupils at the wood © Image Source / Alamy Stock Photo

Page 27: School of Oriental sweetlips © Alex Mustard / naturepl.com

Page 28: Taiwan yuhina pair © Staffan Widstrand / Wild Wonders of China / naturepl.com

Page 29: Mangrove forest © Jan Wlodarczyk / Alamy Stock Photo; Coral Reef © Reinhard Dirscherl / Alamy Stock Photo

Page 30: Temminck's ground pangolin © Neil Aldridge / naturepl.com; Park rangers © Steve O. Taylor (GHF) / naturepl.com

Page 31: Abandoned net in the ocean © Franco Banfi / naturepl.com

Page 32: French Alps © Christophe Courteau / naturepl.com

Production credits

Author: Kerstin Sundseth, Ecosystems LTD, Brussels

Coordinators: Benjamin Caspar and Sofia Pachini, European Commission Natura 2000 unit, D.3 1049 Bruxelles/Brussel, Belgique/Belgie

Design: NatureBureau, United Kingdom. www.naturebureau.co.uk



Publications Office
of the European Union