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COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

EU biodiversity strategy for 2030
Bringing nature back into our lives

1. BIODIVERSITY – THE NEED FOR URGENT ACTION

From the world's great rainforests to the small garden outside the window, from the blue whale to microscopic fungi, biodiversity is the extraordinary variety of life on Earth. We humans are part of and fully dependent on this web of life: 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. **We need nature in our lives**.

Healthy and resilient societies depend on giving nature the space it needs**.** The recent outbreak of the COVID-19 pandemic is raising awareness of the links between our health, ecosystems, supply chains, consumption patterns and planetary boundaries. The risk of disease outbreaks and the spread of infectious diseases increases as nature is destroyed.[1] Protecting and restoring biodiversity and well-functioning ecosystems is therefore key to boost our resilience and prevent the emergence and spread of future diseases.

Protecting, restoring and keeping nature healthy will also be critical for Europe's recovery from the crisis. The European Green Deal is the EU's growth strategy and will be the compass for our recovery. It is about ensuring that economic development serves people and society and gives back more to nature than it takes away.

This makes **the business case for biodiversity** all the more compelling. Industry and companies rely on genes, species, and ecosystem services as critical input for production, notably for medicines. Almost half of global GDP is linked to nature[2], with the three largest economic sectors – construction, agriculture, and food and drink – all highly dependent on it. Research suggests that biodiversity conservation could generate increased annual profits close to €50 billion per year in the seafood industry alone.[3] These sectors will all be critical for EU's prosperity, sustainability and resilience in the recovery.

Despite this urgent moral, economic and environmental imperative, **nature is in a state of crisis**. The five main direct drivers of biodiversity loss[4] – changes in land and sea use, overexploitation, climate change, pollution and invasive alien species – are making nature disappear quickly. We see the change in our everyday lives: concrete blocks rising up on green spaces, wilderness disappearing in front of our eyes and more species being put at risk of extinction than at any point in human history. In the last four decades, global wildlife populations fell by 60% as a result of human activities. And almost three quarters of the Earth's surface has been altered[5], squeezing nature into an ever-smaller corner of the planet.

The biodiversity crisis and the climate crisis are intrinsically linked. Climate change accelerates the destruction of the natural world through droughts, flooding and wildfires,

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[1] Global assessment of biodiversity and ecosystem services by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES, 2019). Summary for policy-makers, pp. 12-13, A.2.

[2] World Economic Forum (2020) Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy.

[3] Idem.

[4] IPBES, 2019. Summary for policy-makers, pp. 17-19, B.10-B.14; European Environment Agency, The European environment – state and outlook 2020.

[5] Idem.

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. **Healthy nature can be our strongest ally in the fight against climate change**. Nature-based solutions such as protecting and restoring wetlands, peatlands or sustainably managing forests, grasslands and agricultural soils, will be essential for emission reduction and climate adaptation. Planting trees and deploying green infrastructure will help us to cool urban areas and mitigate the impact of natural disasters.

Biodiversity loss and ecosystem collapse is one of the biggest threats facing humanity in the next decade. The EU is ready to show ambition, lead the world by example and by action and help agree and adopt a transformative global framework for post-2020 at the 15th Conference of the Parties to the Convention on Biological Diversity. This should build on the headline ambition to ensure that by 2050 **all of the world's ecosystems are restored, resilient, and adequately protected.** The world should commit to the net-gain principle to give nature back more than it takes. As part of this, the world should commit to no human-induced extinction of species, at minimum where avoidable.

This strategy sets out how Europe can help make it happen. As a milestone, it aims to ensure that **Europe's biodiversity will be on the path to recovery by 2030** for the benefit of people, the planet, the climate and our economy. It addresses the five main drivers of biodiversity loss, sets out an enhanced governance framework to fill remaining gaps, ensures the full implementation of EU legislation, and pulls together all existing efforts.

This strategy is enterprising and incentivising in spirit and action. It reflects the fact that **protecting and restoring nature will need more than regulation alone**. It will require action by citizens, businesses, social partners and the research and knowledge community, as well as strong partnerships between local, regional, national and European level. This strategy is in line with the ambitions and commitment set out in President von der Leyen's Political Guidelines and in the European Green Deal.

2. PROTECTING AND RESTORING NATURE IN THE EUROPEAN UNION

The EU has legal frameworks, strategies and action plans to protect nature and restore habitats and species. But protection has been incomplete, restoration has been small-scale, and the implementation and enforcement of legislation has been insufficient.[6]

To put biodiversity on the path to recovery by 2030, we need to step up the protection and restoration of nature. This should be done by improving and **widening our network of protected areas** and by developing an ambitious EU Nature Restoration Plan.

2.1. A coherent network of protected areas

Biodiversity fares better in protected areas. However, the current network of legally protected areas, including those under strict protection, is not sufficiently large to safeguard biodiversity. Evidence shows that the targets defined under the Convention on Biological Diversity are insufficient to adequately protect and restore nature.[7] Global efforts are needed and the EU itself needs to do more and better for nature and build a truly **coherent Trans-European Nature Network**.

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[6] Mid-term review of the EU Biodiversity Strategy to 2020 (COM(2015) 478) and (SWD(2016) 472); Fitness Check of the Nature Directives (SWD(2016) 472).

[7] The Global Aichi biodiversity targets are 17% on land and 10% at sea, while scientific studies' figures range from 30% to 70%: See e.g. IPBES 2019.

Enlarging protected areas is also an economic imperative. Studies on marine systems estimate that every euro invested in marine protected areas would generate a return of at least €3.[8] Similarly, the Nature Fitness Check[9] showed that the benefits of Natura 2000 are valued between €200-300 billion per year. The investment needs of the network are expected to support as many as 500,000 additional jobs.[10]

For the good of our environment and our economy, and to support EU's recovery from the COVID-19 crisis, we need to protect more nature. In this spirit, **at least 30% of the land and 30% of the sea should be protected in the EU**. This is a minimum of an extra 4% for land and 19% for sea areas as compared to today.[11] The target is fully in line with what is being proposed as part of the post-2020 global biodiversity framework (see section 4).

Within this, there should be specific focus on areas of very high biodiversity value or potential. These are the most vulnerable to climate change and should be granted special care in the form of strict protection.[12] Today, only 3% of land and less than 1% of marine areas are strictly protected in the EU. We need to do better to protect these areas. In this spirit, at least one third of protected areas – representing **10% of EU land and 10% of EU sea – should be strictly protected**. This is also in line with the proposed global ambition.

As part of this focus on strict protection, it will be crucial to define, map, monitor and **strictly protect all the EU's remaining primary and old-growth forests**. These are the richest forest ecosystems that remove carbon from the atmosphere, while storing significant carbon stocks. Significant areas of other carbon-rich ecosystems such as peatlands, grassland, wetlands, mangroves and seagrass meadows, should also be strictly protected, taking into account projected shifts in vegetation zones.

Member States will be responsible for designating the additional protected and strictly protected areas.[13] 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 put forward in 2020 criteria and guidance for identifying and designating additional areas, including a definition of strict protection, as well as for the adequate management planning. In doing so, it will also indicate how other area-based conservation measures and the greening of the cities could contribute to the target.

The targets relate to the EU as a whole and could be broken down according to the EU bio-geographical regions and sea basins or at a more local level. **Every Member State will have to do its fair share of the effort** based on an objective ecological criteria,

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[8] Brander et al. (2020) The global costs and benefits of expanding Marine Protected Areas.
[9] Fitness check of the EU Nature Directives (SWD(2016) 472 final).
[10] Member States' Prioritised Action Frameworks 2020. Ten Brink et al. (2017). Natura 2000 and Jobs: scoping the evidence.
[11] Latest EU-27 statistics (European database of nationally designated protected areas) v. 2019, and Natura 2000 dataset "end 2018". Today, 26% of EU's land area is already protected, with 18% as part of Natura 2000 and 8% under national schemes. Of EU seas, 11% are protected, with 8% in Natura 2000 and 3% under additional national protection. To note: Offshore wind projects will be possible if in compliance with relevant environmental and nature protection legislation.
[12] Strict protection is not necessarily no-go, but leaves natural processes essentially undisturbed to respect the areas' ecological requirements.
[13] Additional Natura 2000 designation will be implemented with support from EU funds and enforcement as appropriate.

recognising that each country has different quantity and quality of biodiversity. Particular focus will be placed on protecting and restoring the tropical and sub-tropical marine and terrestrial ecosystems in the EU outermost regions given their exceptionally high biodiversity value.

In addition, in order to have a truly coherent and resilient Trans-European Nature Network, it will be important to set up **ecological corridors** to prevent genetic isolation, allow for species migration and maintain and enhance healthy ecosystems.[14]

The Commission will aim to agree the criteria and the guidance for additional designations with Member States by the end of 2021. Member States will then 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, is needed.

Finally, the **Overseas Countries and Territories** also host important biodiversity hotspots, not governed by EU environmental rules. The Commission encourages relevant Member States to consider promoting equal or equivalent rules in these countries and territories.

Nature protection: key commitments by 2030

1. Legally protect a minimum of 30% of the EU land area and 30% of the EU sea area and integrate ecological corridors, as part of a true Trans-European Nature Network.
2. Strictly protect at least 1/3 of the EU 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.

2.2. An EU Nature Restoration Plan: restoring ecosystems across land and sea

Protecting the nature we have will not be enough to bring nature back into our lives. To reverse biodiversity loss, the world needs to be more ambitious on nature restoration. With a **new EU Nature Restoration Plan**, Europe will lead the way.

The plan will help improve the health of existing and new protected areas, and bring diverse and resilient nature back to all landscapes and ecosystems. This means reducing pressures on habitats and species and ensuring all use of ecosystems is sustainable. It also means supporting the recovery of nature, limiting soil sealing and urban sprawl, and tackling pollution and invasive alien species. The plan will create jobs, link economic growth to nature's growth and help ensure the long-term productivity and value of our natural capital.

2.2.1. Strengthening the EU legal framework for nature restoration

Nature restoration is already partially required by Member States in existing EU legislation[15]. However, **significant implementation and regulatory gaps hinder**

[14] As set out in EU Guidance document on strategic EU-level green and blue infrastructure (SWD(2019) 193).

progress. For instance, there is no requirement for Member States to have biodiversity restoration plans. There are no clear or binding targets and timelines and no definition or criteria on restoration or the sustainable use of ecosystems. There is also no requirement to map, monitor or assess ecosystem services, health or restoration efforts. These issues are exacerbated by the gaps in implementation that prevent the existing legislation from achieving its objectives. [16] Stronger implementation support and enforcement is required.To ensure that nature restoration across land and sea picks up, increases EU's resilience and contributes to climate change mitigation and adaptation as a key nature based solution, this strategy puts forward two strands of actions:

- Firstly, and subject to an impact assessment, the Commission will put forward a proposal for legally binding **EU nature restoration targets** in 2021 to restore healthy and resilient ecosystems, in particular the most-carbon-rich ones. This will also identify the conditions in which they must be met, as well as the most effective measures to reach them. The impact assessment will also look at the possibility of an EU-wide methodology to map, assess and achieve good condition of ecosystems so they can deliver benefits such as climate regulation, water regulation, soil health and pollination.

- In that context, the Commission will request and support Member States to raise the level of implementation within clear deadlines. It will in particular request Member States to ensure **no deterioration in conservation trends and status** of all protected habitats and species by 2030[17]. In addition, Member States will have to ensure that at least 30% of species and habitats not currently in favourable status are in that category or show a strong positive trend. The Commission and the European Environmental Agency will provide guidance to Member States in 2020 on how to select and prioritise the species and habitats.

2.2.2. Bringing nature back to agricultural land

As guardians of our land, farmers play a vital role in preserving biodiversity. They are among the first to feel the consequences when biodiversity is lost but also among the first to reap the benefits when it is restored. This helps them provide us with **safe, sustainable, nutritious and affordable food** and provides them with the income they need to thrive and develop. European farmers are an essential part of EU's future and must continue to be the social and economic hub of many communities across our Union.

At the same time, certain agricultural practices are a key driver to biodiversity decline. This is why it is important to work with farmers to **support and incentivise the transition to fully sustainable practices**. Improving the condition and diversity of agroecosystems will increase the sector's resilience to climate change, environmental risks and socio-economic shocks, while creating new jobs, for example in organic farming, rural tourism or recreation.

To support the long-term sustainability of both nature and farmers, this strategy will work in tandem with the new **Farm-to-Fork Strategy** and the **new Common**

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[15] Notably EU Habitats Directive (92/43/EEC), Birds Directive (2009/147/EC), Water Framework Directive (2000/60/EC), Marine Strategy Framework Directive (2008/56/EC) and Floods Directive (2007/60/EC).

[16] See Fitness Check of the Nature Directives (SWD(2016) 472) and Fitness Check of Water Legislation (SWD(2019) 439). See below section 3.1.2..

[17] Habits and species listed under the Habitats and Birds Directives.

Agricultural Policy (CAP), including by promoting eco-schemes and result-based payment schemes. The Commission will ensure that the Common Agricultural Policy strategic plans are assessed against robust climate and environmental criteria, and that Member States set explicit national values for the relevant targets set in this strategy, as well as in the Farm to Fork Strategy. These plans should lead to sustainable practices such as precision agriculture, organic farming, agro-ecology, agro-forestry, low-intensive permanent grassland, as well as stricter animal welfare standards.

Farmland birds and insects, particularly pollinators, are key indicators of the health of agroecosystems and are vital for agricultural production and food security. Their alarming decline must be reversed. As set out in the Farm to Fork Strategy, the Commission will take action to reduce by **50% the use and risk of chemical pesticides by 2030** and reduce by 50% the use of high-risk pesticides by 2030. This must be supported by the full implementation of the EU pollinators' initiative. By the end of 2020, the Commission will review the initiative and propose additional measures if necessary.[18]

To provide space for wild animals, plants, pollinators and natural pest regulators, there is an urgent need to bring back **at least 10% of agricultural area under high-diversity landscape features**. These include, inter alia, buffer strips, rotational or non-rotational fallow land, hedges, non-productive trees, terrace walls, or ponds. These help enhance carbon sequestration, prevent soil erosion and depletion, filter air and water, and support climate adaptation. In addition, more biodiversity often helps lead to more agricultural production. Member States will need to translate the 10% EU target to a lower geographical scale to ensure connectivity among habitats, especially through the CAP instruments and CAP Strategic Plans, in line with the Farm to Fork Strategy, and through the implementation of the Habitats Directive.

Agro-ecology can provide healthy food while maintaining productivity, increase soil fertility and biodiversity, and reduce the footprint of food production. Organic farming, in particular, holds great potential for farmers and consumers alike. The sector is employing more people and attracting more young workers - a key challenge in the farming sector. Organic farming also provides 10-20 % more jobs per land area than conventional farms, and creates added value for agricultural products.[19] To make the most of this potential, at least **25% of the EU's agricultural land must be organically farmed by 2030**. A Commission Action Plan on organic farming will set out how to make this happen, including through measures to increase demand.

The uptake of agroforestry support measures under rural development should be increased as it has great potential to provide multiple benefits for biodiversity, people and climate.

The decline of **genetic diversity** must be also be reversed, including by facilitating the use of traditional varieties of crops and breeds. This would also bring health benefits through more varied and nutritious diets. The Commission is considering the revision of marketing rules for traditional crop varieties in order to contribute to their conservation and sustainable use.

[18] The EU Pollinators initiative (COM(2018) 395).
[19] OECD (2016). Farm Management Practices to Foster Green Growth. OECD Green Growth Studies.

2.2.3. Addressing land take and restoring soil ecosystems

Soil is one of the most complex ecosystems. It is a habitat in its own right, home to an incredible diversity of organisms that regulate and control key ecosystem services such as soil fertility, nutrient cycling and climate regulation. **Soil is a hugely important non-renewable resource**, vital for human and economic health, as well as the production of food and new medications.

In the EU, the degradation of soil is having considerable environmental and economic consequences. Poor land management, such as deforestation, overgrazing, unsustainable farming and forestry practices, construction activities and land sealing are among the main causes of this situation.[20] Despite recent reductions in the pace of soil sealing, fertile soils continue to be lost to land take and urban sprawl[21]. When compounded by climate change, the effects of erosion and losses of soil organic carbon are becoming increasingly apparent. Desertification is also a growing threat in the EU.[22]

It is therefore essential to step up efforts to **protect soil fertility, reduce soil erosion and increase soil organic matter**. This should be done by adopting sustainable soil management practices, including as part of the Common Agricultural Policy. 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 address these issues in a comprehensive way and help to fulfil EU and international commitments on land degradation neutrality, the Commission will update the **EU Soil Thematic Strategy**[23] in 2021. The **Zero Pollution Action Plan** for air, water and soil that the Commission will adopt in 2021 will also look at these issues. Soil sealing and rehabilitation of contaminated brownfields will be addressed in the upcoming Strategy for a Sustainable Built Environment.

2.2.4. Increasing the quantity of forests and improving their health and resilience

Forests are hugely important for biodiversity, climate and water regulation, the provision of food, medicines and materials, carbon sequestration and storage, soil stabilisation, air and water purification. They are also a natural home for recreation and learning about nature. Foresters have a key role to play in ensuring sustainable forest management and in restoring and sustaining biodiversity in forests.

In addition to strictly protecting all remaining EU primary and old growth forests, **the EU must increase the quantity, quality and resilience of its forests**, notably against fires, droughts, pest diseases and other threats likely to increase with climate change. More resilient forests can support a more resilient economy and they play an important role in providing materials, products and services, which are key for the circular bio-economy.

To make this happen, the Commission will propose a dedicated **EU Forest Strategy** in 2021 in line with our wider biodiversity and climate neutrality ambitions. It will include a roadmap for **planting at least 3 billion additional trees in the EU by 2030**, in full

[20] EEA Signals 2019: Land and Soil in Europe. European Environment Agency (2019).
[21] Urban sprawl in Europe, EEA-FOEN (2016).
[22] Combating desertification in the EU, Special Report of the European Court of Auditors n°33/2018.
[23] Thematic Strategy for Soil Protection (COM(2006) 231).

respect of ecological principles. This will create substantial up-front job opportunities linked to the collecting and cultivating of seeds, planting seedlings, and ensuring their development. Tree planting is particularly beneficial in cities, while in rural areas it can work well with agroforestry, landscape features and increased carbon sequestration.

Afforestation, reforestation and tree planting to support biodiversity and ecosystem restoration will be promoted through the Common Agricultural Policy Strategic Plans, and the Cohesion Policy funds. The new **European Urban Greening Platform** (see Section 2.2.8) will also facilitate urban tree planting, including under the LIFE programme.

The share of forest areas covered by management plans should be expanded to all managed public forests and an increasing number of private forests. To support this, the Commission will revise the guidelines on biodiversity-friendly afforestation and reforestation and closer-to-nature-forestry practices. This will be done in parallel with the new EU Forest Strategy.

To gain a better picture of the health of European forests, the Commission will work with other data providers to further develop the **Forest Information System for Europe**. This will help produce up-to-date assessments of the condition of European forests and link all EU forest data web-platforms. This will also be presented as part of the EU Forest Strategy.

2.2.5. Win-win solutions for energy generation

Decarbonising the energy system is critical for climate neutrality, as well as for the EU's recovery and long-term prosperity. More sustainably sourced renewable energy will be essential to fight climate change and biodiversity loss. The EU will prioritise solutions such as ocean energy, including offshore wind, which also allows for fish stock regeneration and solar panel farms that provide biodiversity-friendly soil cover.

Bioenergy will play a role in building a climate neutral economy. The Commission will ensure that the EU regulatory framework on bioenergy is in line with the increased ambition set out in the European Green Deal.

To mitigate climate and environmental risks created by the increasing use of certain sources for bioenergy, the revised Renewable Energy Directive[24] includes strengthened sustainability criteria. It also promotes the shift to advanced biofuels based on residues and non-reusable and non-recyclable waste. This approach should continue for all forms of bioenergy and the use of whole trees**,** and food and feed crops for energy production – whether produced in the EU or imported – should be minimised.

To better understand and monitor the potential climate and biodiversity risks, the Commission is assessing the **EU and global biomass supply and demand** and its sustainability.[25] As part of its increased ambition to protect and restore forest ecosystems, the Commission will publish the results of this work on the use of forest biomass for energy production by the end of 2020. This 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) set for 2021.

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[24] Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources.
[25] JRC Biomass Assessment Study.

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.**[26] 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.

2.2.6. Restoring the good environmental status of marine ecosystems

Restored and properly protected marine ecosystems bring substantial health, social and economic benefits to coastal communities and the EU as a whole. The need for stronger action is all the more acute as marine and coastal ecosystem biodiversity loss is severely exacerbated by global warming.[27]

Achieving good environmental status of marine ecosystems, including through strictly protected areas, must involve the restoration of carbon-rich ecosystems as well as important fish spawning and nursery areas. Some of today's sea uses endanger food security, fishers' livelihoods, as well as fishery and seafood sectors. **Marine resources must be harvested sustainably and there must be zero-tolerance of illegal practices**. In this regard, the full implementation of the EU's Common Fisheries Policy, the Marine Strategy Framework Directive, and the Birds and Habitats Directives are essential.

The application of an ecosystem-based management approach under EU legislation[28] will reduce adverse impacts of fishing, extraction and other human activities, especially on sensitive species and seabed habitats. To support this, **national maritime spatial plans**, which Member States should deliver in 2021, must cover all maritime sectors and include area-based conservation management measures.[29]

The Commission will also 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, including on the seabed. It will also look at how to reconcile the use of bottom-contacting fishing gear with biodiversity goals, given it is now the most damaging activity to the seabed. This must be done in a fair and just way for all. The European Maritime and Fisheries Fund should also support the transition to more selective and less damaging fishing techniques.

Healthy fish stocks are key to the long-term prosperity of fishermen and the health of our oceans and biodiversity. This makes it all the more important to maintain or reduce fishing mortality at or under **Maximum Sustainable Yield levels**. This will help achieve a healthy population age and size distribution for fish stocks.

The **by-catch of species threatened with extinction** must also be eliminated or reduced to a level that allows full recovery. This should also be the case for those in bad conservation or not in good environmental status. Furthermore, the by-catch of other species[30] has to be eliminated or, where not possible, minimised, so as not to threaten their conservation status. To support this, data collection on by-catch for all sensitive species need to be stepped up.

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[26] Art. 29 of EU Renewable Energy Directive 2018/2001.
[27] See for example IPCC (2019) Special Report On Oceans and the Cryosphere.
[28] The Common Fisheries Policy, the Marine Strategy Framework Directive, the Maritime Spatial Planning Directive 2014/89/EU.
[29] The Commission will report on the implementation of the maritime spatial planning Directive by March 2022 at the latest including the application of the ecosystem based management.
[30] Protected by international and European law.

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

2.2.7. Restoring freshwater ecosystems

The EU's legal framework on water is ambitious[31] 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**. This can be done by removing barriers that prevent the passage of migrating fish and improving the flow of water and sediments.

To help make this a reality, **at least 25,000 km of rivers will be restored into free-flowing rivers by 2030[32]** through the removal of barriers and the restoration of floodplains and wetlands. Technical guidance and support to the Member States to identify sites and mobilise funding will be provided by the Commission in 2021.

Member State authorities should review water abstraction and impoundment permits to restore 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.[33] To that effect, the Commission will provide recommendations on appropriate measures by 2023.

Overall, large-scale river and floodplain restoration investments[34] can provide a major economic boost for the restoration sector and for local socio-economic activities such as tourism and recreation, while at the same time enhancing water regulation, flood protection, fish nursery habitats and the removal of nutrient pollution.

2.2.8. Greening urban and peri-urban areas

Green urban spaces, from parks and gardens to green roofs and urban farms, provide a wide range of benefits for people, as well as opportunities for businesses and a refuge for nature. They reduce air, water and noise pollution, provide protection from flooding, droughts and heat waves, and maintain a connection between humans and nature.[35]

The recent lockdowns due to the COVID-19 pandemic have shown us the **value of green urban spaces for our physical and mental well-being**. While protection of some urban green spaces has increased,[36] green spaces often lose out in the competition for land as the share of the population living in urban areas continues to rise.

This strategy aims to reverse these trends and stop the loss of green urban ecosystems. The promotion of healthy ecosystems, green infrastructure and **nature-based solutions** should be systematically integrated into urban planning, including in the design of buildings and their surroundings, public spaces and infrastructure.

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[31] Fitness Check of water legislation (SWD(2019) 439) and Evaluation of the Urban Waste Water Treatment Directive (SWD(2019) 700).

[32] The target of 25,000 km is based on the Commission's assessment of what is achievable in the EU by 2030.

[33] These measures should be planned in the 3rd River Basin Management Plans to be adopted by Member States in 2021, under the Water Framework Directive.

[34] Fitness Check of water legislation (SWD(2019) 439).

[35] See EnRoute project.

[36] There are 11,000 Natura 2000 sites within, or partly within, cities, representing 15% of the total area of the Natura 2000 network.

To bring nature back to cities and reward community action, the Commission calls on European cities of at least 20,000 inhabitants to develop ambitious **Urban Greening Plans** by the end of 2021. These should include measures to create biodiverse urban forests, parks and gardens, urban farms, green roofs and walls, tree-lined streets, urban meadows and hedges. They should also help improve connections between green spaces, eliminate the use of pesticides and limit harmful practices, such as the use of leaf blowers and excessive mowing of urban green spaces.

To facilitate this work, the Commission will establish in 2021 an **EU Urban Greening Platform**, under a new 'Green City Accord'[37] with cities and mayors. This will be done in close coordination with the European Covenant of Mayors. The Urban Greening Plans will have a central role in choosing the European Green Capital 2023 and European Green Leaf 2022.

The Commission will support Member States, local and regional authorities through technical guidance and help to mobilize funding and capacity building. It will also reflect these objectives in the **European Climate Pact**.

2.2.9. Reducing pollution

Pollution is a key driver of biodiversity loss and has a harmful impact on our health and our environment. While the EU has a solid legal framework in place to reduce pollution, greater efforts are still required. Biodiversity is suffering from the release of nutrients, pesticides, pharmaceuticals, hazardous chemicals, urban and industrial wastewater, and other waste including litter and plastics. All of these pressures must be reduced.

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%. This target will also result in the **reduction of use of fertilisers by at least 20%** while ensuring that soil fertility does not deteriorate. This will be achieved by applying balanced fertilisation and sustainable nutrient management. To this end, the Commission will develop an Integrated Nutrient Management Action Plan in 2022.

The Farm-to-Fork strategy will address the reduction of the use and risk of pesticides and support wider implementation of Integrated Pest Management.[38] 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[39] and the new Circular Economy Action Plan.[40]

The Commission will develop a **set of indicators for the progressive reduction of pollution**, and will establish baselines to help monitor progress. Pressures from marine litter and underwater noise are being addressed under the Marine Strategy Framework Directive.

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[37] The Green City Accord.
[38] Sustainable Use of Pesticides Directive (2009/128/EC).
[39] European Strategy for Plastics in a Circular Economy (COM(2018) 28).
[40] A new Circular Economy Action Plan for a cleaner and more competitive Europe (COM(2020) 98).

2.2.10. Addressing invasive alien species

Invasive alien species can significantly undermine efforts to protect and restore nature. Besides inflicting major damage to nature and the economy, many invasive alien species also facilitate the outbreak and spread of infectious diseases posing threat to humans and wildlife.[41] Their rate of release has increased in recent years. Of the 1872 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 full implementation of the **EU Invasive Alien Species Regulation**[42] and other relevant legislation and international agreements must also 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%**.[43]

EU Nature Restoration Plan: key commitments by 2030

1. Legally binding EU nature restoration targets to be proposed in 2021, subject to an impact assessment. By 2030, significant areas of degraded and carbon-rich ecosystems are restored, 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.
2. The decline in pollinators is reversed.
3. The risk and use of chemical pesticides is reduced by 50% and the use of high-risk pesticides is reduced by 50%.
4. At least 10% of agricultural area is under high-diversity landscape features.
5. At least 25% of agricultural land is under organic farming management and the uptake of agro-ecological practices is significantly increased.
6. Three billion new trees are planted in the EU, in full respect with ecological principles.
7. Significant progress has been made in the remediation of contaminated soil sites.
8. At least 25,000 km of free-flowing rivers are restored.
9. There is a 50% reduction in the Red List species threatened by invasive alien species.
10. The losses of nutrients from fertilisers are reduced by 50% and nitrogen use is reduced by 20%.
11. Cities with at least 20,000 inhabitants have an ambitious Urban Greening Plan.
12. No chemical pesticides are used in sensitive areas such as EU urban green areas.
13. The negative impacts on sensitive species and habitats, including on seabed through fishing and mineral extraction activities, are substantially reduced to achieve good environmental status.
14. The by-catch of species is eliminated or reduced to a level that allows species recovery and conservation.

[41] See for example: Hulme P. (2014). Invasive species challenge the global response to emerging diseases. *Trends in parasitology (2014) Vol. 30, Issue 6*; Duscher et al. (2017).
[42] Regulation (EU) 1143/2014 on invasive alien species.
[43] Red List of the International Union for the Conservation of Nature (IUCN).

3. ENABLING TRANSFORMATIVE CHANGE

3.1. A new 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 **a new European biodiversity governance framework**. This 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** and will enable regular progress assessment and set out corrective action if necessary. This mechanism will feed the Environmental Implementation Review and contribute to the European Semester.

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

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

3.2. Stepping up implementation and enforcement of EU environmental legislation

All environmental legislation relies on proper implementation and enforcement. 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 on the ground is lagging behind.[44] This is having dramatic consequences on biodiversity and comes with a substantial economic cost.[45] **The full implementation and enforcement of EU environmental legislation is therefore at the heart of this strategy,** for which political support and financial and human resources will need to be prioritised.

As regards the Birds and Habitat Directives, enforcement will focus on **completing the Natura 2000 network**, the effective management of all sites, the species protection provisions and the species and habitats that show declining trends. The Commission will also ensure that environment-related legislation with an impact on biodiversity[46] will be better implemented, enforced and, where necessary, reviewed and revised.

The Commission will 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

[44] See 2015 State of Nature in the EU report (COM (2015) 219).
[45] The costs of non-implementation are estimated at 50 EUR billion per year.
[46] Such as the directives on environmental impact assessment (2014/52/EU), on strategic environmental assessment (2001/42/EC), on environmental liability (2004/35/CE) and on environmental crime (2008/99/EC).

environmental matters for individuals and NGOs. It will also broaden standing for NGOs by proposing **a revision of the Aarhus Regulation**.[47]

3.3. Building on an integrated and whole of society approach

3.3.1. Business for biodiversity

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 also produce the important innovations, partnerships and expertise that can help address biodiversity loss.

To ensure environmental social interests are fully embedded into business strategies, the Commission will put forward a new initiative in 2021 on **sustainable corporate governance**. This will help ensure shareholder and stakeholder interests are fully aligned with the objectives set out in this strategy. In 2020, the Commission also launched a review of the reporting obligations of businesses under the **non-financial reporting directive**, with a view to integrating environmental and biodiversity criteria, including investments in and contributions to nature-based solutions. In 2021, the Commission will present a legislative proposal for human rights and environmental duty of care and mandatory due diligence across economic value chains.[48]

Through its existing platforms[49], the Commission will help to build a **European Business for Biodiversity** movement, taking inspiration of recent initiatives[50] and making it an integral part of the European Climate Pact. Particular attention will be paid to measures to incentivise and eliminate barriers for the take-up of nature-based solutions, as these can lead to significant business and employment opportunities in various sectors[51] and are the key to innovation for economic or societal needs that rely on nature.

3.3.2. Investments, pricing and taxation

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. The Commission will strengthen its **biodiversity proofing framework**[52] to ensure that EU funding supports biodiversity-friendly investments.

To meet the needs of this strategy, including investment priorities for Natura 2000 and green infrastructure, **at least €20 billion a year[53] should be unlocked for spending on nature**. This will require mobilising private and public funding at national and EU level, including through a range of different programmes in the next long-term EU budget.

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[47] See https://ec.europa.eu/environment/aarhus/.
[48] Study on due diligence requirements through the supply chain – Final Report.
[49] EU Business @ Biodiversity Platform (B@B).
[50] See for example. Business for Nature or One Planet Business for Biodiversity.
[51] BenDor T. et al. (2015): Estimating the Size and Impact of the Ecological Restoration Economy, PLosOnE 10(6).
[52] See Common framework and guidance documents for biodiversity proofing of the EU budget.
[53] The cost estimate is based on the 2018 Impact Assessment of the LIFE Regulation (SWD(2018) 292), a Study on the costs of implementing the Target 2 of the EU Biodiversity Strategy to 2020 and data submitted by 16 Member States under Art 8(1) of the Habitats Directive. The Commission will update the estimate, notably based on Member States' Prioritised Action Frameworks under the Habitats Directive.

Nature restoration will make a major contribution to climate objectives. A significant proportion of the 25% of the EU budget dedicated to climate action will be invested on biodiversity and nature-based solutions. A substantial share of the minimum €20 billion a year spent on nature will contribute to climate mitigation and adaptation.

Under Invest EU, a dedicated natural capital and circular economy initiative of around €10 billion over the next ten years will be established, based on public/private blended finance. Nature and biodiversity is also a priority for the European Green Deal Investment Plan.

To help unlock the investment needed, the EU must provide long-term certainty for investors and help embed sustainability in the financial system. The EU **sustainable finance taxonomy** will help guide investment towards a green recovery and the deployment of nature-based solutions. In 2021, the Commission will adopt a delegated act under the Taxonomy Regulation[54] to establish a common classification of economic activities that substantially contribute protecting and restoring biodiversity and ecosystems. This will be further supported by a **Renewed Sustainable Finance Strategy** which will help ensure the financial system contributes to mitigating existing and future risks to biodiversity.

The Commission will further promote tax systems and pricing that reflect environmental costs, including biodiversity loss. This should encourage changes in national fiscal systems to shift the tax burden from labour to pollution, under-priced resources and other environmental externalities. The **"user pays" and "polluter pays" principles** have to be applied to prevent and correct environmental degradation.

Public authorities' purchasing power represents 14% of EU GDP and can serve as a powerful driver for the demand for the products and services of companies that invest in or contribute to nature-based solutions. To tap into this potential, when proposing further legislation and guidance on **green public procurement**, the Commission will integrate criteria and monitoring to boost nature-based solutions.

3.3.3. Measuring and integrating the value of nature

Biodiversity considerations need to be better integrated into public and business decision-making at all levels. Building on existing work[55], the Commission will develop in 2021 methods, criteria and standards to describe the essential features of biodiversity, its services, values, and sustainable use.

These will include **measuring the environmental footprint of products and organisations on the environment**, including using life cycle approaches, as well as natural capital accounting. In this context, the Commission will support the establishment of an international natural capital accounting initiative.

3.3.4. Improving knowledge, education and skills

The fight against biodiversity loss must be underpinned by sound science. Investing in research, innovation and knowledge exchange will be key to gathering the best data and developing the best nature-based solutions.

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[54] See EU taxonomy for sustainable activities.
[55] SWD(2019) 305.

The future Horizon Europe programme will include a **long-term strategic research agenda for biodiversity** with increased funding. Horizon Europe's Missions[56] 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 researchers and practitioners and make nature-based solutions a reality on the ground. The Commission will also establish in 2020 **a new Knowledge Centre for Biodiversity**, in close cooperation with the European Environment Agency. The Centre will track and assess progress by the EU and its partners, foster cooperation and partnership, including between climate and biodiversity scientists, and underpin policy development.

To help integrate biodiversity and ecosystems into school, higher education and professional training, the Commission will propose a Council Recommendation on **education for environmental sustainability** in 2021. This will provide guidance for schools and teachers on biodiversity. The Commission will also provide support materials and facilitate the exchange of good practices in EU networks of teacher-training programmes.

4. THE EUROPEAN UNION AT THE HEART OF AN AMBITIOUS GLOBAL BIODIVERSITY AGENDA

Biodiversity is a priority of the EU's external action and an integral part of efforts to meet the UN Sustainable Development Goals. It will be mainstreamed throughout bilateral and multilateral engagements, through the EU's 'Green Deal diplomacy', and forthcoming green alliances[57]. The Commission will work closely with Member States to mobilise all international efforts for the good of the world's biodiversity.

4.1. Raising the level of ambition and commitment worldwide

Protecting biodiversity is a global challenge and the next decade will be decisive. Global efforts under the United Nations Convention on Biological Diversity have largely been insufficient. Nature cannot afford any half measures or lack of ambition.

In this spirit, the EU is ready to lead all efforts - working with like-minded partners in **a high ambition coalition on biodiversity** – to agree an ambitious new global framework for post-2020 at the upcoming 15th Conference of the Parties to the Convention on Biological Diversity.

With this strategy, Europe will bring its own ambitious commitments to the table. And it should also support governments and stakeholders across the globe to significantly step up their ambition and their action.

The Commission proposes that the EU ensures that, as a minimum, the post-2020 global framework includes the following element.

- Overarching global goals for biodiversity for 2050, in line with the United Nation vision of "living in harmony with nature". The ambition should be that **by 2050**

[56] Missions on Adaptation to climate change including societal transformation, on Healthy oceans, seas coastal and inland waters, on Climate-neutral and smart cities, and on Soil health and food.
[57] Green Alliances focus on cooperation with African and other partners to implement the European Green Deal.

all of the world's ecosystems are restored, resilient, and adequately protected. The world should commit to the net-gain principle to give nature back more than it takes. The world should commit to no human induced extinction of species, at minimum where avoidable.

- 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.

- A much **stronger implementation, monitoring and review** process. Parties should revise their National Biodiversity Strategies and Action Plans by the end of 2021, or as a minimum, submit national commitments for the most important targets. There should be a **regular review cycle** to look at progress towards the targets, with the ability to ratchet up action if needed. These reviews should be based on an independent science-based gap analysis and foresight process, with common headline indicators for all Parties.

- **An enabling framework** to bring the ambition to life, across areas such as finance, capacity, research, innovation and technology.

- A **fair and equitable share of the benefits** from the use of genetic resources linked to biodiversity.

- **A principle of equality**. This includes respect for the rights and the full and effective participation of indigenous peoples and local communities. There should be an inclusive approach with participation of all stakeholders, including women, youth, civil society, local authorities, the private sector, academia and scientific institutions.

4.2. Using external action to promote EU's ambition

4.2.1. International Ocean Governance

In line with the International Ocean Governance agenda,[58] the EU will support the conclusion of an ambitious legally binding agreement on **marine biological diversity of areas beyond national jurisdiction** (BBNJ) by the end of 2020. It must set clear global procedures for identifying, designating and effectively managing ecologically representative marine protected areas in the high seas. It should be ratified and implemented as quickly as possible.

The EU should also use all of its diplomatic leverage and outreach capacities to help broker 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). If agreed this would constitute one of the biggest acts of nature protection in history.

Work will continue with partner countries and regional organisations to put in place measures to protect and sustainably use sensitive maritime ecosystems and species, including in areas beyond national jurisdiction, with a focus on marine biodiversity hotspots. The EU should support Small Island Developing States and other relevant

[58] International ocean governance agenda: an agenda for the future (JOIN(2016) 49).

partner countries to participate in meetings of regional and global organisations and bodies, and to implement relevant international commitments and regulations.

The EU will apply **zero tolerance towards illegal, unreported and unregulated fishing** and will combat overfishing, including through WTO negotiations on a **global agreement to ban harmful fisheries subsidies**.

In international negotiations, the EU should advocate that exploiting marine minerals in the international seabed Area cannot start 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, in line with the precautionary principle[59] and the call of the European Parliament.[60] In parallel, the EU will continue funding research on the impact of deep-sea mining activities and on environmentally friendly technologies. The EU should also advocate for more transparency in international bodies such as the International Seabed Authority.

4.2.2. Trade Policy

Trade policy will actively support and be part of the ecological transition. In this spirit, the Commission will ensure full implementation and enforcement of the biodiversity provisions in all trade agreements, including through the EU Chief Trade Enforcement Officer. The Commission will 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.[61]

The Commission will take a number of steps to **crack down on illegal wildlife trade**. This trade contributes to the depletion or extinction of entire species, is the world's fourth most lucrative black market and is thought to be one of the causes behind the emergence of zoonotic diseases. It is a human, economic and environmental duty to dismantle it.

With this in mind, the Commission will revise the Action plan against Wildlife Trafficking in 2021 and propose a further **tightening of the rules of EU ivory trade** later this year. It will explore a possible revision of the Environmental Crime Directive, including by looking at expanding scope and introducing specific 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 third countries to prevent illicit trade and the entry of illicit products into the Single Market.

4.2.3. International cooperation, Neighbourhood policy and resource mobilisation

Delivering an ambitious post-2020 global biodiversity framework will require greater cooperation with partners, increased support and financing and phasing out of subsidies harmful to biodiversity. In the last decade, the EU and its Member States collectively

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[59] Under Article 191.2 TFEU, the Union policy on the environment shall aim at a high level of protection and shall be based on the precautionary principle.

[60] European Parliament Resolution on international ocean governance (2017/2055(INI)).

[61] In line with the Commission Communication on Stepping up EU Action to Protect and Restore the World's Forests (COM(2019) 352).

upheld their commitment to **double financial flows to developing countries for biodiversity**.[62] The EU is ready to further increase its support to partners post-2020.

In all of its international cooperation, the EU should promote sustainable agricultural and fisheries practices and actions to protect and restore the world's forests. Particular attention will also be paid to sustainable water resource management, the restoration of degraded land, and the protection and restoration of biodiverse areas with high ecosystem services and climate mitigation potential. By better protecting natural ecosystems and reinforcing regulation of wildlife trade and consumption, these actions will help to prevent and build up resilience to possible future diseases and pandemics. The EU will enhance its support to global efforts to apply the **One Health approach**[63], which recognises the intrinsic connection between human health, animal health and healthy resilient nature.

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 opportunities in green sectors for local populations. 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 all 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, science and natural history museums national 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.

5. CONCLUSION

Protecting and restoring biodiversity is the only way to preserve the quality and continuity of human life on Earth. The commitments proposed in this strategy pave the way for ambitious and necessary changes – changes that will ensure the wellbeing and economic prosperity of present and future generations in a healthy environment. The implementation of these commitments will take into account the diversity of challenges across sectors, regions and Member States and will require a sense of responsibility and strong joint efforts from the EU, the Member States, stakeholders and citizens.

The Commission invites the European Parliament and the Council to endorse this Strategy ahead of the 15th Conference of the Parties to the Convention on Biological Diversity. To ensure full political ownership of this strategy, the Commission will suggest a standing progress point at the Council and at the European Parliament. It will

[62] Including international financing where biodiversity is the principal objective and where it is a significant secondary objective, in line with CBD COP11 Decision XI/4 and EU and Member States financial reports submitted to CBD in 2015 and 2018.
[63] See https://www.who.int/features/qa/one-health/en/.

review the Strategy by mid-2024 to assess progress and whether further action is needed to meet its objectives.