

An Advocacy Toolkit for Nature

Biodiversity loss, nature protection, and the EU strategy for nature

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Nature matters, because...

- **Biodiversity underpins all life on Earth**
- * Losing biodiversity means losing the vital services that societies depend on
- * Land and marine ecosystems absorb carbon and help us limit the effects of climate change

Biodiversity is the variety of life on Earth. This web of living things is the fabric of life, cleaning the water we drink, pollinating our crops, purifying the air we breathe, regulating the climate, keeping our soils fertile, providing us with medicine, and providing many of the basic building blocks for industry.

Ecosystems provide crucial services that maintain our life support system. When we destroy biodiversity, we destroy this system, sawing off the branch that we sit on. Damaged ecosystems are more fragile, and have a limited capacity to deal with extreme events and new diseases. Well-balanced ecosystems, by contrast, protect us against unforeseen disasters, and when we use them in a sustainable manner, they offer many of the best solutions to urgent challenges.

We need healthy ecosystems and biodiversity for many reasons. In addition to their intrinsic value, and non-material things they bring like spiritual enrichment and aesthetic value, ecosystems are the foundation of all economies and societies. They form the critical infrastructure that underpins our prosperity and existence.

More than half of the oxygen we breathe comes from marine organisms. Marine waters absorb one quarter of the CO2 emissions we put into the atmosphere each year. Moreover, this water are the greatest reservoir of actively cycled carbon on Earth (50 times larger than the atmosphere).

Losing biodiversity is dangerous. This loss is...

- a **climate** issue, because destroying and damaging ecosystems and habitats speeds up global warming
- **a health** issue, because nature improves air, water and soil quality, reduces exposure to pollutants, and cools our cities
- a business issue, because natural capital provides essential resources for industry
- ***** a **security** issue, because loss of natural resources, especially in the Global South, can lead to conflict
- **a food security** issue, because pollinators, soil and marine organisms play a vital role in our food system
- an **ethical** issue, because loss of biodiversity hurts the poorest most of all, making inequalities worse
- * an **intergenerational** issue, because we are robbing our descendants of the basis for a fulfilled life, and
- **a moral** issue, because we should not destroy the living planet.

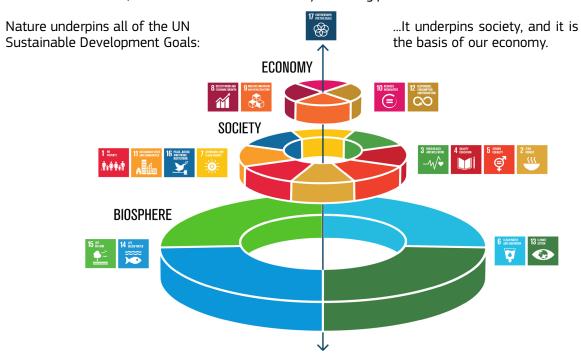


Image from https://www.stockholmresilience.org/images/18.36c25848153d54bdba33ec9b/1465905797608/sdgs-food-azote.jpg

We are losing the natural world faster than ever before...

- * Human activities have pushed the planet into a sixth mass extinction, with 1 million species at risk of extinction
- Between 1970 and 2014, the global wildlife population fell by 60%
- Biodiversity above and below ground and in the sea is declining in every region of the world at unprecedented speed
- This loss is closely linked to climate change, and part of a general ecological crisis

Extinction rates around the world are now 100-1000 times higher than in pre-human times. This is the largest extinction event since the dinosaurs disappeared. Some 42% of terrestrial animal and plant species with known trends have declined in population size over the last decade.

Tropical forests are being destroyed at fast rates, with an area the size of Greece lost every year. These forests are home to the highest levels of biodiversity on the planet. Global forested areas now cover only 68% of the area covered in the pre-industrial era.

If the average global temperature rises by 2°C, **tropical coral reefs will disappear**, destroying the livelihoods of half a billion people. In addition, **marine litter and pollution critically threaten ocean biodiversity**. It is estimated that well above 150 million tons of plastics have accumulated in the world's oceans, while 4.6-12.7 million tons are added every year. At this rate, by 2050 the oceans could contain more plastic by weight than fish.

Soils host an astounding diversity of life: 25-30% of all species on Earth live in soils for all or part of their lives. **Soil biodiversity** is strongly impacted by human activities. Land and soil degradation around the world is reducing biodiversity and ecosystem services such as the provision of clean water and nutritious food, carbon capturing or protection against erosion.

The decline in insects is particularly dramatic. Insects matter because they are food for larger animals like birds, bats, reptiles, amphibians and fish. If this food source is taken away, all these animals will starve to death. In the long term, this would lead to the degradation of terrestrial ecosystems and loss of the safe operating space for humans. Insects also perform services like pollination, pest control and nutrient recycling. Three out of every four fruit or seed crops around the globe depend, at least in part, on pollinators. Without them, many farmers would see reduced profits or go out of business. The total value of the direct contribution of insect pollinators to the EU agricultural output is estimated at around €15 billion per year.

Many studies show these declines in every corner of the globe. In 2018, a study of rainforests in Puerto Rico reported biomass losses between 98% and 78% for ground-foraging and canopy-dwelling <u>arthropods</u> since the 1980s, with annual losses of around 2.5%. Similar declines are seen in birds, frogs and lizards in the same areas as a direct result.

In 2019, a review of 73 historical reports on insect declines concluded that the current rates of decline could lead to 40% of world insect species going extinct in the next few decades.

The seas are also suffering from multiple and cumulative pressures. There are now more than 400 dead zones in oceans around the world, mainly as a result of fertilizer run-off entering the oceans, and marine litter and plastics have a devastating impact on marine life.

Europe's nature too is in alarming decline, with more than 80% of habitats in poor condition. Peatlands, grasslands and dune habitats are worst affected. In Western, Central and Eastern Europe wetlands have shrunk by 50% since 1970, while 71% of fish and 60% of amphibians have been declining over the last decade. In Western and Central Europe and the western parts of Eastern Europe, at least 37% of freshwater fish and some 23% of amphibians are currently threatened with extinction.

Intensive farming and forestry, urban sprawl and pollution are the top pressures to blame for this drastic decline in Europe's biodiversity, which is threatening the survival of thousands of animal species and habitats, and putting human health and prosperity at risk.

Links

IPBES https://ipbes.net/news/ipbes-global-assessment-preview

European Red list of trees https://www.iucn.org/news/species/201909/over-half-europes-endemic-trees-face-extinction

German insect study (Hallmann et al., 2017).

Porto Rico study (Lister and Garcia, 2018)

2019 Study in UK: Insect declines and why they matter

2019 Study on the decline of insects: Worldwide decline of the entomofauna: A review of its drivers

European Commission 'Our Oceans, Seas and Coasts'

State of Nature Report 2020 (European Commission, EEA), leaflet and brochure in all languages

The effects of biodiversity loss are already here

- Many benefits we get from nature are declining because of biodiversity loss
- These include habitat maintenance, pollination, regulation of freshwater quantity and quality, soil formation, regulation of floods, and carbon sequestration

The world has lost 60% of all vertebrate wildlife populations since 1970. That represents a loss of more than half of the world's birds, mammals, reptiles, amphibians and fish in the space of just 50 years.

This process is fuelled by global patterns of production and consumption, including our own. Between 30-50% of mangroves have died or been removed in the past 50 years, and nearly 50% of coral reefs have been destroyed. But there have been major losses in Europe as well. A 2017 study in Germany revealed a 76% decline in flying insect biomass in protected areas since 1990, a loss of nearly 3% per year.

If we do not change track, all of humanity will be affected. We need deep and transformative change to halt the loss of biodiversity above and below ground. At present, the people most affected are rural communities in the Global South who depend on nature to meet their day-to-day needs, but the eventual effects will be far more widespread.

It's not just about losing wildlife. When we lose biodiversity, we lose 'ecosystem services' —the processes sustaining life on Earth, which nature does for free. We destroy the foundations of economies, livelihoods, food security, health and quality of life around the globe. One quarter of the world's poor and over 90% of people living in extreme poverty depend on forests for some part of their livelihoods — and yet tropical forests are one of the major hotspots for biodiversity loss.

In the industrialized world, while the overall value of agricultural crop production has trebled since 1970, nature's other contributions, like soil organic carbon and pollinator diversity, have fallen, highlighting the unsustainable nature of these short-term gains in productivity.

Land degradation has already reduced the productivity of nearly one quarter of global land surface. European wild pollinators are declining dramatically in diversity and abundance, and many are approaching extinction. According to the European Red List of Trees, nearly half of Europe's endemic trees face extinction. The perception that the seas and ocean are a source of rich, bountiful resources capable of absorbing unlimited human waste and exploitation no longer holds true.

Links

IUCN https://www.iucn.org/tags/work-area/red-list WWF Living Planet Report 2020

These effects will get worse if we do not radically change our relationship with nature

- Biodiversity loss brings 'extinction cascades', where one species loss needs to another, which leads to another...
- Up to 5 billion people face higher water pollution and insufficient pollination for nutrition under future scenarios of land use and climate change
- When we damage ecosystems, they release carbon instead of storing it. These "feedback loops" accelerate the process of climate change

Losing biodiversity makes it impossible to deliver the UN Sustainable Development Goals. Already half of the 44 targets related to poverty, hunger, health, water, cities, climate, and ocean and land degradation are being undermined by substantial negative trends in nature and its contributions to people.

One of the biggest concerns about climate change and biodiversity loss is the existence of tipping points. Passing a tipping point can lead to large, abrupt changes, shifting a system into a different state. These shifts are difficult or impossible to reverse and can have drastic negative impacts. While the loss of species often causes gradual and incremental damage rather than a sudden plunge, biodiversity decline may well trigger a tipping point in climate change or oceans. What is worse, scientists are warning us that we are dangerously close to possibly passing cascading tipping points. This means passing one tipping point causes the passing of another like a domino.

Several major tipping points have been identified for the world's environment, including the Greenland ice sheet, Alpine glaciers, desertified soils and coral reefs. These tipping points could constitute points of no return – the point at which self-reinforcing feedback loops begin, with a risk of environmental collapse.

Almost one third of reef-forming corals, sharks and shark relatives, and more than a third of marine mammals are now threatened with extinction.

Biodiversity loss is a root cause for conflict and migration, affecting vital interests of all societies. And it is very bad news for businesses.

The World Economic Forum recently linked all of the biggest and most likely risks to human well-being to the environment (extreme weather, climate action failure, biodiversity loss and human-made environmental disasters). Some 25% of these environmental factors are related to global diseases, and could be avoided.

American biologist Paul Ehrlich once compared the loss of species to randomly removing rivets from the wing of an aeroplane. The plane might continue to fly for a while, but at some point, there will be a catastrophic failure.

BUT – there is still hope! We still have time to turn the tide on biodiversity loss and avoid the worst impacts of climate change – providing we take real action fast and at massive scale! Time is our biggest challenge. According to latest IPCC Special Report (SR 1.5 report on global warming of 1.5°C), the next 10 years will be decisive. Global greenhouse gas emissions need to be cut by half and destruction of nature halted and reversed. Without transformational action this decade, humanity is taking colossal risks with our common future. Societies risk large-scale, irreversible changes to Earth's biosphere and our lives as part of it.

There is now an existential need to build economies and societies that support Earth system harmony rather than disrupt it.

Links

World Economic Forum Global Risk Report 2020 https://www.weforum.org/reports/the-global-risks-report-2020

The European environment — state and outlook 2020 (SOER), European Environment Agency: https://www.eea.europa.eu/publications/soer-2020

IPCC Special Report (SR 1.5 report on global warming of 1.5°C)

Stockhol Resilience Center, Planetary boundaries https://www.stockholmresilience.org/research/planetary-boundaries/planetary-boundaries/about-the-research/the-nine-planetary-boundaries.html

But does it really matter?

- Biodiversity loss and ecosystem collapse are one of the biggest threats facing humanity in the next decade
- Humanity has been using more resources than the Earth can produce in a year since the 1970s. It would now take 1.6 Earths to meet the demands we make on nature each year
- Up to 300 million people already face a higher risk of floods and hurricanes because of loss of coastal habitats and protection
- None of the 20 Aichi biodiversity targets for 2020 have been fully met, threatening the achievement of the Sustainable Development Goals and undermining efforts to address the biodiversity and climate crises

Our collective impact on nature is unprecedented in the history of the planet. Human action has significantly altered three quarters of the land-based environment and two thirds of the marine environment. In 2019, Earth Overshoot day – the day on which we used more resources than the Earth can replenish in a year – was 29 July.

More than one third of the world's land surface and nearly three quarters of freshwater resources are now devoted to crop or livestock production.

Losing biodiversity means losing options for the future, such as developing new drugs. Some 70% of cancer drugs are either natural products or synthetic ones inspired by nature, and 4 billion people rely primarily on natural medicines. Biodiversity loss means the loss of countless medicines before they are ever discovered – an irretrievable loss to humanity.

It matters on a personal level as well. Nature has many preventive and restorative effects on health. Regular contact with nature can reduce stress and promote physical activity, with a positive effect on mood, concentration and health, and lowering the risks linked to inactive lifestyles. Recent reports from the CBD and WHO confirm that healthy ecosystems are key to disease prevention and should be viewed as a fundamental pillar of cost-effective healthcare.

Intensive agriculture systems have become a major driver of biodiversity loss. The widespread use of pesticides and fertilizers, soil erosion and the replacement of untouched forests with agricultural land are all having a negative effect on the health of the world's ecosystems. When soils degrade, they become less fertile, require more chemical inputs, and lose their capacity to retain water and carbon. This in turn makes floods more frequent and more intense, and contributes to greenhouse gas emissions, while excess fertilizers find their way into the sea, choking marine life.

In addition to the pressures our food system now places on water, ecosystems and biodiversity, around one third of all the food produced in the world is wasted. This amounts to some 1.3 billion tonnes every year. In the EU, approximately one fifth of our food production is lost or wasted. This is the equivalent of 88 million tonnes of food, at a cost of EUR 143 billion.

Links

CBD Biodiversity and health https://www.cbd.int/health/stateofknowledge/

Overshoot Day https://www.overshootday.org/

CBD Global Biodiversity Outlook (GBO5) Report

20 Aichi Biodiversity Targets

EU food waste figures http://www.eu-fusions.org/phocadownload/Publications/Estimates%20of%20 European%20food%20waste%20levels.pdf

What does this mean for business?

- * Over half of global GDP depends on nature and the value it provides
- * The costs of inaction are high and are anticipated to increase
- Biodiversity conservation has potential direct economic benefits for many sectors of the economy

Biodiversity loss and ecosystem collapse also **threaten the foundations of our economy**. According to the World Economic Forum, over half of global GDP depends on nature and the services it provides, with three key economic sectors – **construction**, **agriculture**, **and food and drink** – all highly dependent on it. The world lost an estimated $\[\le 3.5-18.5 \]$ trillion per year in ecosystem services from 1997 to 2011 owing to land-cover change, and an estimated $\[\le 5.5-10.5 \]$ trillion per year from land degradation.

Businesses are beginning to realise that they depend on natural resources for **food, fibres, and building material**. Ecosystems pollinate crops, filter water, help waste to decompose, and regulate the climate. Losing nature has immediate costs for businesses in terms of operational risks, continuity of supply chains, liability risks and risks to reputation, market share and finance. So with the current unprecedented rate of nature loss, natural capital is becoming a material issue for most business, leading **to scarcity problems and quality issues**.

Front-running businesses recognise these risks, but their understanding has not yet become mainstream. There is often **little knowledge** about how business models and sourcing of materials depend on nature and biodiversity, and little understanding of the interaction between resource efficiency, ecosystems services, biodiversity, the cost of non-action, and climate change. Policy makers need to provide **better accounting frameworks** that enable companies to understand their dependence and effects on nature.

In addition to accounting for their dependence and impact on nature, when businesses invest in ecosystems restoration, this can also bring tangible benefits. Conserving marine stocks could increase annual profits of the seafood industry by more than €49 billion, while protecting coastal wetlands could save the insurance industry around €50 billion annually through reducing flood damage losses. **Natural capital investment**, including restoration of carbon-rich habitats and climate-friendly agriculture, is recognised to be among the **five most important fiscal recovery policies**, which offer high economic multipliers and positive climate impact.

Links

World Economic Forum (2020), The Future of Nature and Business http://www3.weforum.org/docs/WEF The Future Of Nature And Business 2020.pdf

The Economics of Biodiversity: The Dasgupta Review https://www.gov.uk/government/publications/final-report-the-economics-of-biodiversity-the-dasgupta-review

EU Business and Biodiversity Platform

https://ec.europa.eu/environment/biodiversity/business/index en.htm

So why are we losing biodiversity?

- * Habitat loss, over-exploitation, climate change, pollution and invasive alien species all contribute to biodiversity loss
- **B**ut the underlying cause is unsustainable human activities
- Our demand for new resources is driving deforestation, changing patterns of land use, and destroying natural habitats all around the globe

The main reason behind the climate and ecological crisis is unsustainable patterns of production and consumption. The cumulative effect of an economic model where we design, manufacture, use, and then throw away rather than reducing, reusing or recycling has had unintended side-effects.

Extracting and processing materials, fuels and food is the reason for 90% of biodiversity loss and half of all greenhouse gas emissions, according to the International Resource Panel.

Our consumerist economic model often means that political cycles and public and financial institutions are focused on short-term concerns, ignoring the wider implications for the longer term.

Climate change is already having an impact on biodiversity loss, interacting with other drivers and making them worse. It is also likely to increase the effects of the other causes of biodiversity loss in the future. These effects will be even more marked as the temperature continues to rise.

In Europe, the main cause of biodiversity loss is land-use and sea-use change. Farming and forestry practices have become more intensive, with more chemical additives, fewer spaces between fields, and fewer varieties of crops. This lack of variety means far fewer insects, for example, and consequently fewer birds. Subsidies linked to production, encouraging quantity over quality and variety, are also a factor. European seas are also subject to a number of factors that impact biodiversity, including fisheries, sea floor damage, pollution and the spread of non-indigenous species.

Cities and urban areas have also expanded enormously, sealing soils and leaving less room for nature. And when farmland and urban developments leave no room for nature, the result is a loss of the natural world. Many citizens and businesses are unaware of the extent to which our society depends on biodiversity. The use of GDP as the main measurement of economic development can also obscure the full extent of our impact on the environment.

Links

SDGs Global Resources Outlook 2019 https://wedocs.unep.org/bitstream/handle/20.500.11822/27518/gR0_2019_SPM_EN.pdf?sequence=1&isAllowed

 $\underline{https://sdg.iisd.org/news/global-outlook-highlights-resource-extraction-as-main-cause-of-climate-change-biodiversity-loss/$

What is happening in our oceans?

- Cceans are crucial for regulating the climate on our planet and for global oxygen production
- The main drivers of the depletion of marine biodiversity are overfishing, unsustainable fishing practices and pollution
- Solutions are available, but they have to be implemented at scale

More than half of the oxygen we breathe comes from marine organisms, one quarter of the annual human-induced CO2 emissions into the atmosphere is absorbed by marine waters, and the greatest reservoir of actively cycled carbon on Earth is the ocean (50 times larger than the atmosphere).

In Europe, among the stocks that are fully assessed in the North-east Atlantic Ocean, the proportion of overexploited stocks has decreased from around 75% to close to 40% over the last ten years. Meanwhile, despite some progress, **75% remain overfished** in the Mediterranean. About 43% of Europe's shelf/slope area and 79% of the coastal seabed is considered to be physically disturbed.

As a result of the pressures created by our food system and in particular fishing, **incidental catches** remain the main pressure for threatened species such as sharks, skates and rays (where 32-53 % of all species are threatened), as well as endangered birds and marine mammals.

Pollution in our seas and oceans is also affecting marine biodiversity. While the levels of contaminants released into European seas have decreased, emerging pollutants like marine litter and underwater noise are increasing. For example, 93% of northern fulmar seabirds assessed in the North-East Atlantic had plastic in their stomachs, with cases of entanglement and ingestion of plastic waste having increased by 49% over the past two decades. Measures to prevent, reduce and control pollution of the marine environment from land-based sources, including of the seabed and its subsoil are therefore essential.

But solutions exist. Even for our seas, there are policy solutions for halting the loss of marine biodiversity and starting to restore some marine ecosystem resilience. The EU has put in place a solid legislative framework which allows for the sustainable use of Europe's seas. However, while solutions are already

covered by existing legislation (e.g. limiting the use of harmful fishing gear, marine protected areas and no-fishing zones, eliminating by-catch, etc.), they need to be better and more quickly implemented.

Links

Report on the implementation of the Marine Strategy Framework Directive <u>COM(2020)259</u>
Review of the status of the marine environment in the European Union, SWD (2020)61 <u>Part 1</u> – <u>Part 2</u> – <u>Part 3</u>

EEA Report: Marine messages 2 (2020)

UNEP, Plastics and Shallow Water Coral Reefs, 2019

FAO report The State of the Mediterranean and Black Sea Fisheries 2020 https://reliefweb.int/sites/reliefweb.int/files/resources/CB2429EN.pdf

Tell me more about the link between biodiversity loss and pandemics

- Pandemics are driven by our destruction of nature. The risk of future pandemics will increase unless we fix our broken relationship with nature
- When we destroy nature, we bring wildlife, livestock, and people into closer contact, enabling animal microbes to migrate to people and increasing the risk of pandemics

Integrated approaches like the WHO's One Health proposal can help us design better policies that bring together the health of people, animals, and the ecosystems we rely on

* The economic recovery from the pandemic is a unique opportunity to build back better

Covid 19 has shown how the health of communities is intricately connected to the health of our planet. There is growing evidence that **links the unsustainable exploitation of nature** (i.e. deforestation, trade and the consumption of wildlife) to an **increased risk of the spread of infectious diseases**.

When we cut down forests and destroy ecosystems, we **destroy natural barriers that normally protect us from pathogens**. The continued mismanagement of the natural world through deforestation, resource extraction, urbanisation, industrial farming and the wildlife trade created the conditions that allowed the current pandemic to emerge. This mismanagement is also behind recent outbreaks of new diseases such as Ebola, MERS, SARS and avian influenza, and could cause even deadlier pandemics in the future.

The best way to avoid pandemics is to leave enough space for wild animals, and to keep their numbers high. That way they act as a buffer against diseases that have no place among humans, and help prevent pandemic outbreaks.

The World Health Organisation's **One Health** approach enables the design of holistic, whole-of-government, whole-of-society policies which link human health, animal health and environmental well-being. As well as reducing risks from pandemics, this also addresses the close connection between biodiversity and human health.

The economic recovery from COVID 19 is an unprecedented opportunity to build a more sustainable economy that protects, restores and heals our life support systems instead of destroying them. Protecting and restoring nature can play a leading role in this process.

The EU recovery plan puts in place €1.8 trillion to help to build a greener, more digital and more resilient Europe. Some €750 billion is allocated to immediate recovery efforts, **37% of which are dedicated to the climate-friendly green transition**. The EU Biodiversity Strategy, in line with the European Green Deal, is a central element of this recovery plan and provides immediate business and investment opportunities for restoring the economy.

At the same time, a recent UNEP report highlights the fact that only **18% of the funds** currently released by governments around the world to cope with the consequences of the pandemic are invested sustainably. Global recovery spending has so far missed the opportunity for green investment.

Links

NTI (2019). https://www.nti.org/newsroom/news/inaugural-global-health-security-index-finds-no-country-prepared-epidemics-or-pandemics/

IPBES (2020). Biodiversity and Pandemics Report: Escaping the 'Era of Pandemics' https://ipbes.net/pandemics

UNEP (2020) Press release "Are we on track for a green recovery? Not Yet" https://www.unep.org/news-and-stories/press-release/are-we-track-green-recovery-not-yet

World Health Organisation's One Health approach

Tell me more about the link between climate change and the nature crisis

- In terms of impacts, the global biodiversity crisis is just as bad as climate change
- Biodiversity loss and the climate crisis are closely connected, and their effects reinforce each other
- Protecting biodiversity and restoring ecosystems is an excellent means of countering the effects of climate change

Tackling the climate crisis is the defining challenge of our time. If we fail to meet the challenge, the consequences for the environment, our health and livelihoods will be far worse than the Covid-19 pandemic. The decisions we make about the climate will determine the future of our economy, our society, and the future of humankind.

The climate crisis has a severe and direct impact on biodiversity. **Climate change makes ecosystems more fragile**, and intensifies the effects of other drivers of biodiversity loss, such as habitat loss and fragmentation, pollution, over-exploitation and the spread of invasive alien species.

Seascapes and polar landscapes are already seeing rapid change. Rising temperatures are increasing the frequency and intensity of wildfires and harming wildlife. The seas absorb more than 90% of the earth's excess heat, and as they warm, they release more carbon into the atmosphere and become less hospitable to marine life. Seas are also losing oxygen, with 3% lost since 1960. As a result of rising temperatures, grasslands and savannahs are being desertified and degraded faster than any other habitat type on the planet.

This loss of biodiversity is also having a negative effect on the climate. Instead of storing carbon in soils and biomass, ecosystems are releasing it back into the atmosphere. Deforestation increases the amount of carbon dioxide in the atmosphere, and this in turn causes further biodiversity loss.

Biodiversity loss and climate change are linked and interdependent. We cannot address biodiversity loss without addressing the climate crisis, and we cannot address the climate crises unless we tackle biodiversity loss at the same time.

On the upside, conserving and restoring biodiversity and ecosystems can make a vital contribution to addressing climate change – so much so that 30 percent of our climate mitigation targets could be met by nature-based solutions, such as restoring forests, soils and wetlands. Addressing behavioural change and consumption patterns, such as excessive consumption of meat, would further reduce pressures on both biodiversity and our climate.

Links

Global trends to 2030 report (ESPAS 2019) https://espas.secure.europarl.europa.eu/orbis/sites/default/files/generated/document/en/ESPAS Report2019.pdf

Climate change and biodiversity loss as two sides of the same coin: https://wwf.panda.org/our_work/climate_nature_future_report/

Do people know about this?

- * Awareness of the importance of biodiversity is still low, but rising, as the 2019 Eurobarometer on biodiversity revealed
- Climate change is clearly regarded as the main global challenge affecting the future of the EU

Studies like the 2019 IPBES Global Assessment on Biodiversity and Ecosystem Services, and television programmes like David Attenborough's *Blue Planet* series are helping redress the balance.

The global survey from the UN Development Programme (UNDP), which questioned 1.2 million people in 50 countries (many of them young), showed that 64% of people think climate change is a global emergency and call for wide-ranging action (UNDP, 2021). In a Eurobarometer survey of over 27 000 people in all Member States published in May 2019, 95% of respondents agreed that we have a responsibility to look after nature and that doing so is essential for tackling climate change. Some 93% also agreed that our health and well-being are based upon nature and biodiversity. A growing number of citizens are becoming aware of the positive role played by nature and ecosystems when it comes to health and food security, as well as mitigating and adapting to climate change and other benefits.

While the momentum on biodiversity is building among different actors, including businesses, different levels of government and citizens, not everybody is on the same page about the urgent need to address direct and indirect drivers of biodiversity loss.

Thanks to EU initiatives such as the #EUBeachCleanup or the Directive on Single-Use Plastics, the awareness of marine litter, notably plastics at sea, is high on the public agenda.

Links

Eurobarometer https://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/survey/getsurveydetail/instruments/special/surveyky/2194

Conference of Europe Eurobarometer (2021)

EU Directive Single-use plastics https://ec.europa.eu/environment/topics/plastics/single-use-plastics en

IPBES report https://ipbes.net/news/ipbes-global-assessment-preview

UNDP (2021) global survey, https://www.undp.org/content/undp/en/home/news-centre/news/2021/Worlds largest_survey_of_public_opinion_on_climate_change_a_majority_of_people_call_for_wide_ranging_action.html

How can we stop this loss?

- We need steep cuts in carbon emissions, and we need to scale up available solutions
- We need an ambitious global agreement to halt biodiversity loss at CBD COP 15 in China this year, as set out in the EU Biodiversity Strategy for 2030
- * The coming Global Biodiversity Framework for Post-2020 needs to put nature on a path to recovery, with fast and deep transformative change

Scientists say that the next 10 years are critical. We need profound changes in the way we live and do business, from our energy systems and the way we use land to buildings, cities, transport and food. We need to stop degrading land resources by 2030 and achieve climate neutrality by 2050. The European Green Deal is the EU's response to this crisis. It is a comprehensive package of measures that will cut greenhouse gas emissions and increase investments in green research and innovation, to decarbonise our economy and preserve Europe's natural environment.

Many solutions exist already, but we need to use them more widely and on a far greater scale. We need to implement them quickly, use cleaner energy sources, cut deforestation, manage land better and switch to sustainable agriculture.

We need to slash new CO2 emissions and start removing CO2 from the atmosphere. Photosynthesis by plants and plankton is the best carbon dioxide removal technology we have, so we should be protecting and restoring ecosystems and stopping their decline. And we need a transition that leaves nobody behind, to avoid a situation where people are more afraid of proposed measures than they are of the effects of climate change.

To show global leadership at CBD COP 15 in China, Europe needs to convince its partners that it is already acting on biodiversity at home and abroad.

We need to include the concern for biodiversity into policy decisions at all levels, from farming and agriculture to national plans for recovery, energy and transport so as to 'bend the curve' of biodiversity loss. This means not only **halting** the loss of biodiversity but starting to **recover** it by 2030, in order to ensure full recovery by 2050. Transforming our civilisation and our economy to make it more sustainable will require more connected thinking, and a more holistic approach to social policy.

Action on biodiversity should aim for:

- * protecting more of the remaining most valuable nature, so that by 2030, 30% of land and 30% of seas are protected through equitably and effectively managed networks of well connected protected areas
- restoring degraded ecosystems
- * eradicating **illegal and unsustainable harvesting**, trade and use of wild species of fauna and flora including by eliminating illegal, unreported and unregulated fishing and halting wildlife trafficking
- **reducing pollution** from all sources, including nutrients, nitrogen deposition, use of pesticides and plastic waste
- * ensuring that all **forests are sustainably managed** and an increased area of our agricultural land is under **agro-ecological practices** or other biodiversity-friendly practices.
- * keeping **human ecological footprint within Earth's carrying capacity**, enhancing positive incentives and eliminating harmful incentives

Links

The European Green Deal, Communication

EU Biodiversity Strategy for 2030, Communication

<u>EU Biodiversity Strategy – video on the international dimension</u>

EU Biodiversity Strategy - video

EU Biodiversity Strategy – brochure

EU Biodiversity Strategy - factsheet

Biodiversity stories

Biodiversity projects

Report - Promoting Nature-based Solutions in the Post-2020 Global Biodiversity Framework IUCN (2020)

Post2020 Biodiversity Framework - EU Support

Project Drawdown – the world's leading resource for climate solutions https://drawdown.org/

Solutions related to land sinks https://drawdown.org/sectors/land-sinks

Are there good examples we can follow?

- Many companies recognise the importance of assessing, valuing and accounting for their impact and their dependence on natural capital and ecosystem services
- * Targeted conservation actions have often proved effective in Europe
- Since 1992, the EU's LIFE fund has contributed over €3 billion to nature projects

More and more companies understand how assessing their impact and dependence on nature can help them assess financial risk, and equip them with a comprehensive sustainability metric for the 21st century. **This approach has many advantages**, bringing business models that are viable in the long term, cost savings, increases in operational efficiency, access to new markets, predictable and stable supply chains, and better relationships with stakeholders and customers.

Large companies are actively engaged in the nature-based solutions coalition that emerged from the Climate Action Summit in New York in 2019. A group of large asset-owners responsible for directing more than \$2 trillion in investments committed to move to **carbon-neutral investment portfolios by 2050** and **87 major companies** pledged to reduce emissions and align their businesses with what scientists say is needed to limit the worst impacts of climate change.

European financial frontrunners are developing methodologies to measure their impacts at a portfolio level. The Business@Biodiversity platform includes a number of case studies from around Europe.

The **Finance for Biodiversity initiative** unites **26 financial institutions** from around the world, who call on political leaders and commit through their finance and investment activities to protect and restore biodiversity for the COP15 summit. The **Business for Nature initiative** on the other hand brings together **530 businesses** committing and acting to help reverse nature loss, based on SDG 6, 14 and 15.

There are many good examples for environment policymakers to follow. In the last 30 years, the EU LIFE programme, Europe's key funding instrument for nature conservation, has safeguarded numerous species from extinction and it has been instrumental in many local and regional conservation successes. The Iberian lynx, for example, has come back from the brink of extinction (from 52 individuals in 2002 to 327 in 2014). Also in Spain, the Imperial eagle has recovered from around 30 breeding pairs in the 1970s to over 300 pairs in 2011. The EU LIFE fund was closely involved in both of these successes.

Links

Natura 2000 awards – rewarding excellence in the management of Natura 2000 sites

Bringing nature back through LIFE – study on the EU LIFE programme's impact on nature and society

LIFE and the marine environment study

Nature-based solutions in action around Europe

Best practice examples of marine measures to protect biodiversity and reduce pollution

Business@Biodiversity platform

Finance for Biodiversity initiative

Business for Nature initiative

EU LIFE programme

What is Europe doing to solve the problem at home?

- The European Green Deal provides an action plan to boost the efficient use of resources by moving to a clean, circular economy, restore biodiversity and cut pollution
- * The Biodiversity Strategy will put Europe's biodiversity on the path to recovery by 2030
- The EU Farm to Fork strategy aims for reduced pesticide and fertiliser use, reduced use of antimicrobials and more than 25% organic farming
- * The Zero Pollution action plan will further reduce the impacts of pollution on biodiversity
- The EU's Common Fisheries Policy pursues an approach of sustainability, through a variety tools such as capping annual catch- or capacity-limits to ensure that fish stocks can be kept at a sustainable level.

The European Green Deal includes a number of initiatives to halt biodiversity loss above and below ground, including the **EU Biodiversity** and **Farm to Fork Strategies** to protect and restore nature and move to a more sustainable food system, the **Zero Pollution Action Plan** to reduce the pollution of our air, water and soil, the **EU Forest Strategy** to ensure healthy, diverse and resilient EU forests and the **legislative proposal on deforestation-free products**, to reduce the impact of EU's consumption on global deforestation.

The EU has a solid legislative framework for protecting our fragile ecosystems on land and in the sea, such as the Birds and Habitats Directives with the Natura 2000 network of protected areas, the Water Framework Directive, and the Marine Strategy Framework Directive. The implementation of all these rules will be further strengthened under the European Green Deal.

EU free trade agreements include Trade and Sustainable Development chapters with provisions on environmental protection, climate change, biodiversity and forests, including an obligation to ensure that environmental agreements such as the Paris Agreement and the Convention on Biological Diversity are implemented effectively.

The 2030 **EU Biodiversity Strategy** sets ambitious EU targets and commitments for 2030 to achieve healthy and resilient ecosystems. It aims to establish a much larger EU-wide network of protected areas, with **30% of EU's land and 30% of EU's seas protected**, and with strict protection for areas of very high biodiversity and climate value. The Strategy puts forward an EU Nature Restoration Plan, with concrete commitments and actions to restore degraded ecosystems, like **reducing pesticide use, planting 3 billion trees**, **restore at least 25 000 km of the EU's rivers** to a free-flowing state, increasing **organic farming**, and **tackling bycatch** and seabed damage.

It also aims to encourage the integration of ecosystems and their services across all economic activities, in line with the **principle of "do no harm**" to biodiversity and climate. The Biodiversity Strategy will build **resilience to future threats** like climate change, food insecurity and outbreaks of disease, and support recovery in a post-pandemic world, bringing jobs and sustainable growth. It will also prepare the EU to take a **leading role in the upcoming international negotiations** on a new global framework to halt biodiversity loss under the UN Convention on Biological Diversity.

Links

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

The EU Biodiversity Strategy for 2030, Communication

EU Biodiversity Strategy – video on the international dimension

EU Biodiversity Strategy - video

EU Biodiversity Strategy - brochure

EU Biodiversity Strategy – factsheet

Biodiversity stories

Biodiversity projects

EU Forest Strategy

https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12674-Forests-new-EU-strategy

EU Zero Pollution Action Plan https://ec.europa.eu/environment/strategy/zero-pollution-action-plan en

Deforestation and forest degradation - reducing the impact of products placed on the EU market

https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12137-Deforestation-and-forest-degradation-reducing-the-impact-of-products-placed-on-the-EU-market

EU marine environment protection https://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index_en.htm

EU water protection https://ec.europa.eu/environment/water/water-framework/index en.html

Natura 2000 network https://ec.europa.eu/environment/nature/natura2000/index_en.htm

EU nature legislation https://ec.europa.eu/environment/nature/legislation/index en.htm

What is Europe doing to solve the problem abroad?

- Biodiversity and resilient ecosystems are essential for sustainable development efforts
- * The EU acts at all levels to help fight unsustainable practices that are threatening biodiversity and ecosystems around the world
- * The EU engages more than 350 million euros per year on biodiversity in partner countries

Biodiversity and healthy ecosystems are crucial for food and nutrition, security, access to health and water, good governance and peacebuilding. Maintaining them is key to **reducing poverty and the risks of natural disasters**.

EU actions in the field are in line with Sustainable Development Goals, in particular Goal 15 to protect, restore and promote sustainable use of terrestrial ecosystems, and the UN Convention on Biological Diversity (CBD).

Internationally, the EU is a major supporter of biodiversity protection and the sustainable use of natural resources. The EU and almost all its Member States have signed the **Leaders Pledge for Nature**, which was launched during last year's UN General Assembly, and by doing so **committed to reversing biodiversity loss by 2030**.

The EU engages more than 350 million euros per year on biodiversity in partner countries through programmes directly focused on biodiversity and programmes on mainstreaming biodiversity in other sectors. E.g. in 2018, the **EU funded 66 protected areas in 27 countries** in Sub-Saharan Africa. In addition, the EU fosters alliances across the globe and stakeholder groups such as the **United4Nature alliance** to utilize momentum on biodiversity for immediate action. Together with industry partners, the EU aims to create a level playing field for businesses when it comes to non-financial monitoring, taking into account companies' environmental footprints and limiting the impact on biodiversity from products put on the external markets.

Projects such as the ECOFAC6 programme targeting 17 protected areas in Africa, the governance project around the Pilcomayo River in Argentina, Paraguay and Bolivia or the Great Green Wall in the Sahel Region, which implements an 8000km long 'wall' spanning 20 African nations, all aim **to support international efforts and specifically disproportionally affected countries** in their adaptation and mitigation efforts as well as in implementing effective monitoring mechanisms.

Links

Leaders' Pledge for Nature 2020: https://www.leaderspledgefornature.org/

Ecosystems and Diversity: https://ec.europa.eu/international-partnerships/topics/ecosystems-and-biodiversity_en

Examples of Biodiversity stories from the field:

https://ec.europa.eu/international-partnerships/stories_en?f%5B0%5D=field_devco_tag_topics%3A2037&f%5B1%5D=field_devco_tag_topics%3A106

ECOFAC6 - Preserving Biodiversity and Fragile Ecosystems in Central Africa

https://ec.europa.eu/international-partnerships/programmes/ecofac6

Great Green Wall: https://ec.europa.eu/international-partnerships/programmes/growing-great-green-wall-ggw en

The Global Climate Change Alliance Plus (GCCA+)

https://ec.europa.eu/international-partnerships/programmes/global-climate-change-alliance-plus-gcca en

The Pilcomayo River: lives and landscapes across Argentina, Paraguay and Bolivia

https://audiovisual.ec.europa.eu/en/video/I-194632

What is CBD COP 15, why does it matter and what is EU's position?

- The fifteenth meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD COP 15) the biggest biodiversity conference in a decade is scheduled to take place in Kunming, China in October 2021
- World leaders are expected to agree on a new post-2020 Global Biodiversity Framework, a 'Paris style' deal for nature. This Framework must allow the world to achieve the 2050 Vision to live in harmony with nature, realise transformative change across our societies and, by 2030, put nature on a path to recovery
- The EU is ready to lead efforts and work with like-minded partners in high-ambition coalitions to agree this ambitious new global framework at the CBD COP 15

This summit is expected to deliver for biodiversity what the Paris summit did for climate – a global commitment to re-balance our unhealthy relationship with the planet.

The Convention on Biological Diversity (CBD) has three goals: the conservation of biodiversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising from access to genetic resources. The Global Biodiversity Framework for post-2020 will thus address all three goals to achieve the CBD vision of "Living in harmony with nature where by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people."

As outlined in the EU Biodiversity Strategy, the EU will negotiate for the following elements of the framework as a minimum:

- Overarching global goals for biodiversity for 2050 that will aim for all of the world's ecosystems to be restored, resilient, and adequately protected
- Ambitious global 2030 targets in line with EU commitments in the EU Biodiversity Strategy, such as the protection of at least 30% of land and 30% of the seas globally and sustainable use and management of the remaining 70%. The targets should clearly address the drivers of biodiversity loss
- * A much stronger implementation, monitoring and review process
- An enabling framework to bring the ambition to life, across areas such as **finance, capacity,** research, innovation and technology
- Fair and equitable sharing of the benefits from the use of genetic resources linked to biodiversity
- A principle of equality, based on an inclusive approach with participation of all stakeholders and indigenous peoples

The EU narrative for the post-2020 Global Framework for Biodiversity acknowledges:

- * The crucial importance of biodiversity for its intrinsic value and for sustainable development, climate, health, etc.
- The need to urgently **address the direct and indirect drivers of loss** and put in place the necessary tools and solutions, including means of implementation. This implies **transformative change** of our societies and economies.
- The **interdependence of climate and biodiversity**, the need for coherent solutions for both crises, including nature-based solutions
- The importance of biodiversity for health and reducing risk of pandemics
- The dependence of **business on ecosystem services**, and the need for companies to assess their impacts and dependence on natural capital across their supply chains
- The importance of **healthy ecosystems for sustainable development**, poverty eradication, the Agenda 2030 and the Sustainable Development Goals
- * The need to address the main indirect driver of biodiversity loss, **unsustainable production** and consumption, which triggers land conversion for food and feed production, and to bring our ecological footprint within Earth's carrying capacity

The Commission is mobilising all tools of external action and international partnerships to help develop this framework. In the run-up to the COP15, the European Commission has formed the **Global Coalition United for Biodiversity**, bringing together already over 250 institutions – national parks, research centres and universities, science and natural history museums, aquariums, botanic gardens and zoos – from more than 50 countries around the world calling for stronger mobilisation in raising awareness about the need to protect biodiversity.

In addition, the Commission President Ursula von der Leyen has endorsed the **Leaders' Pledge for Nature**, together with more than 80 of Heads of State and Government, committing to halt and reverse biodiversity loss and ecosystem degradation by 2030. The Commission also joined the intergovernmental **High Ambition Coalition (HAC) for Nature and People**, launched at the One Planet Summit in January this year, actively supporting an ambitious framework including the goal to conserve at least 30% of land and sea by 2030.

Links

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

Zero draft of the Post-2020 Global Biodiversity Framework https://www.cbd.int/doc/c/3064/749a/0f65ac7f 9def86707f4eaefa/post2020-prep-02-01-en.pdf

Leaders' Pledge for Nature https://www.leaderspledgefornature.org/

High Ambition Coalition for Nature and People https://www.hacfornatureandpeople.org/

IUCN (2020). https://www.iucn.org/sites/dev/files/promoting_nbs_in_the_post-2020_global_biodiversity_framework.pdf

Report - Promoting Nature-based Solutions in the Post-2020 Global Biodiversity Framework IUCN (2020)

Post2020 Biodiversity Framework - EU Support

What can I do personally?

- * Talk to your friends, family and colleagues about biodiversity loss
- Watch your consumption of resources and reduce your environmental footprint
- Join a campaign to get better informed and help spread these ideas
- * Participate in voluntary activities, such as clean-ups and awareness campaigns

Do not despair – take action! If you start with the small things, you will find it easier to progress to more ambitious steps. Start by talking about these problems with people close to you. Bring them up at work and at school. Researchers have shown that it only takes a small number of dedicated and peaceable individuals to bring about major social changes – sometimes only 3.5 percent of the population!

The **European Climate Pact** invites everyone to participate in climate action and build a greener Europe. It aims to help bring about a change in behaviour, giving every citizen, and especially young people, a role in designing new green actions, sharing information and supporting new and existing activities and solutions.

Put pressure on policymakers – letters and emails can have a remarkable effect.

There are plenty of possibilities. Start by thinking about your own carbon footprint and what you can do to reduce it – insulating your home, rethinking your energy supply, and favouring sustainable forms of transport. Think about the clothes you buy, which ones you really need, and whether they need to be new. Think about your holidays – you might prefer spending more time in one place, as opposed to visiting many. And think about your money – is your bank using your investments in an environmentally responsible way?

Look out for products and services that have been awarded the EU Ecolabel, a label of environmental excellence that is awarded to products and services meeting high environmental standards throughout their life cycle.

When shopping for food, try to favour local and seasonal goods. That way you cut down on hidden CO2 emissions from transport and storage. And if you can, buy organic – organic food contains fewer pesticides, it's usually fresher as it is locally sourced, it's kinder to the environment because organic farms are inherently more sustainable. And consider eating less meat – a well-balanced diet is much kinder to the environment.

Think about your consumption habits. Most biodiversity loss can be traced back to our demand for virgin resources such as timber and textiles. Are you part of that problem? If you favour the four 'r's – refuse, reduce, repair, recycle – you are already helping to fight biodiversity loss.

And why not nurture and observe wildlife around your home? You can create pollinator-friendly habitats by planting a variety of native flowers or just letting a part of your garden rewild. You can also become a citizen scientist and help scientists know more about pollinator decline by observing insects in your area.

Every year in September, the EU organizes an ocean-activism and awareness-raising campaign - #EUBeachCleanup - featuring events across the globe, to raise the alarm about the impact of marine litter and pollution on biodiversity and the well-being of the seas.

Links

European Climate Pact, tips for citizens https://ec.europa.eu/clima/citizens/tips en

55 Tips for Biodiversity, European Commission https://ec.europa.eu/environment/nature/info/pubs/docs/brochures/biodiversity_tips/en.pdf

European Climate Pact https://europa.eu/climate-pact/index_en

EU Beach Clean Up https://ec.europa.eu/info/events/eu-beach-cleanup-2020 en

UNEP campaign about sustainable living https://anatomyofaction.org/

Citizens for pollinator conservation – guide https://wikis.ec.europa.eu/display/EUPKH/Citizens

