Council of the
European Union

Brussels, 13 March 2024
(OR. en)

7702/24

ENV 293
CLIMA 112

COVER NOTE

From:	Secretary-General of the European Commission, signed by Ms Martine DEPREZ, Director
To:	Ms Thérèse BLANCHET, Secretary-General of the Council of the European Union
No. Cion doc.:	COM(2024) 123 final
Subject:	REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS on the 8th Environment Action Programme Mid-Term Review

Delegations will find attached document COM(2024) 123 final.

Encl.: COM(2024) 123 final

EUROPEAN
COMMISSION

Brussels, 13.3.2024
COM(2024) 123 final

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

on the 8th Environment Action Programme Mid-Term Review

{SWD(2024) 60 final}

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1. INTRODUCTION

The European Green Deal recognises the severity of the generational challenge of climate change and environmental degradation, which scientists and increasingly economists warn may hit the point of no return[1]. It has set the EU on a path to become the world's first '*climate-neutral continent by 2050, which is resource-efficient and leaves no person and no space behind*'[2]. It sets out a transformative agenda for the EU to become a modern and competitive economy that is resilient to external shocks and that enables people to live a fair and prosperous life in a healthy environment.

Building on the Green Deal, the **8th environment action programme**[3] establishes a framework for action on environment and climate policy until 2030 with six thematic priority objectives for 2030 and a long-term 2050 priority objective of living well, within planetary boundaries. It identifies the enabling conditions for all sectors to meet these objectives in a coherent manner. The implementation of this programme is fundamental to achieving the environmental and climate objectives under the UN 2030 Agenda, its sustainable development goals (SDGs) and multilateral environmental and climate agreements.

In line with Article 5(1) of the 8th environment action programme, this report presents a **mid-term review**[4] of progress in meeting the programme's thematic priority objectives. It looks at the status of the enabling conditions, and the progress made to monitor and assess systemic change. It is accompanied by a staff working document providing deeper insights into each priority objective, the enabling framework and monitoring, as well as the programme's vision for 2050.

This mid-term review draws on the **European Environmental Agency (EEA)'s monitoring report** on progress towards the objectives of the programme[5], which is based on the 8th environment action programme monitoring framework[6]. It also considers the discussions with Member State experts and stakeholders, the feedback received in response to the call for evidence[7] and other related findings.

Overall, the ambitious measures taken by the EU have led to progress, in particular in reducing greenhouse gas emissions, improving air quality and mobilising financing for the green transition. **Achieving the 2030 objectives is within reach** if the Member States meet their commitments to implement policies and laws.

However, **additional efforts are needed** to shift towards sustainable production and consumption. This would require, among other things, exploring with the relevant stakeholders suitable alternatives across key economic sectors, which could ensure, at the same time, EU

[1] https://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2024.pdf. The 2024 Global Risk Report from the World Economic Forum points to climate change and environmental degradation risks as the top short and long-term risks.
[2] COM(2019) 640 final.
[3] Decision (EU) 2022/591.
[4] Article 4 of Decision (EU) 2022/591.
[5] https://www.eea.europa.eu/publications/european-union-8th-environment-action-programme.
[6] COM(2022) 357 final.
[7] https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/14080-8th-Environment-Action-Programme-Mid-term-Review_en.

competitiveness. The EU consumption leads to impacts which are still crossing certain planetary boundaries. In addition, while considerable achievements have been realised over the last few years, including major uptake of renewable energy and less dependency on fossil fuels, EU could further reduce the use of raw materials and fossil resources. This would contribute to the reduction of levels of air, water and soil pollution, biodiversity loss, and, in so doing, would alleviate the pressure on ecosystems and on the value chains.

It is therefore crucial to **adopt and fully implement the ambitious actions taken under the European Green Deal as reflected in the 8th environment action programme** to achieve real impacts on the ground and the long-term resilience of the EU economy and society.

2. PROGRESS TOWARDS PRIORITY OBJECTIVES

2.1 Swift and predictable reduction of greenhouse gas emissions and enhancement of natural carbon sinks

Climate change is accelerating and it is having aggravating impacts on people, nature and economies, both in the EU and across the world.

The **EU has made good progress towards the target of reducing net GHG emissions. But it needs to do more to reach the target for net GHG removals by carbon sinks from the land use, land use change and forestry (LULUCF) sector**. Trends from this sector are negative in the EU, which is losing carbon sinks, with some Member States' land-use sector producing emissions instead of removals.

Overall, 2022 data show that the **EU's domestic greenhouse net emissions** (excluding international aviation) **are falling steadily**, down by 32.5% (compared to 1990) in 2022[8]. However, to meet the EU's 2030 greenhouse gas reduction target (at least –55% compared to 1990) and to achieve climate neutrality by 2050, the **pace of emission reduction needs to accelerate to reach almost triple the average annual reduction** rate achieved over the last decade. Relative to past mitigation efforts, the most significant cuts in emissions are needed in buildings and transport, where the pace of decarbonisation is sluggish or even moving in the opposite direction.

To **reach the target for net GHG removals by carbon sinks from the LULUCF**, a significant boost of carbon removals is essential**.**

The EU set itself a legally binding objective to achieve economy-wide **climate neutrality and resilience by 2050 in the European Climate Law**[9], which it adopted in 2021. The European Climate Law also sets an interim target of a domestic reduction in net greenhouse gas emissions (emissions after deducting removals) of at least 55% by 2030 compared to 1990 levels.

[8] COM(2023) 653 final.
[9] Regulation (EU) 2021/1119.

The **'Fit for 55' package**[10] of measures sets the EU on a path to reach its climate targets in a fair, cost-effective and competitive way. The EU has adopted most of the key proposals in the package[11] which, if fully implemented, will ensure that the EU meets its updated 2030 net GHG target. The **revised EU Emission Trading System is** now more ambitious and will cut emissions by 62% in 2030 compared to 2005 levels and is extended to cover international maritime transport. A new, separate emissions trading system will apply to greenhouse gas emissions from fuel combustion in road transport and buildings and small-emitting sectors (ETS2)[12] with a 42% emission reduction in 2030 compared to 2005.

The EU decided to raise the overall emissions reduction target set under the **Effort Sharing Regulation (ESR)**[13]**,** which covers GHG emissions from domestic transport (excluding CO_2 from aviation), buildings, agriculture, small industry and waste, from 29% to 40% by 2030 compared to 2005, **with revised 2030 targets for each Member State**.

The **new Regulation on LULUCF**[14] sets an overall EU-level objective to achieve 310 Mt CO_2 equivalent of land-based net removals in 2030.

In 2022 and 2023, the Commission made additional proposals to speed up the fair and inclusive transition to climate neutrality. For example, Parliament and Council reached agreement on the revised Fluorinated greenhouse gases (F-gases) Regulation,[15] which will further reduce emissions from those highly potent greenhouse gases. The Commission proposed more ambitious emissions reductions targets for heavy-duty vehicles[16]. It also put forward the REPowerEU plan[17] with specific measures to reduce the EU's energy dependence on Russian fossil fuels, and to speed up implementation of the European Green Deal with new actions, building on the 'Fit for 55' package. To enhance the EU's open strategic autonomy and competitiveness and boost innovation, in particular in green technologies, and ensure a smooth climate transition, the Commission put forward a Green Deal industrial plan. The Net-Zero Industry Act and the Critical Raw Materials Act[18] are the main pieces of legislation to achieve these objectives.

Carbon removals will be needed for the EU to reach climate neutrality in 2050 and move to negative emissions thereafter, in order to minimise the EU's cumulative GHG budget[19]. To

[10] COM(2021) 550 final.
[11] This includes the revised EU ETS Directive, a new ETS for buildings, road transport and fuels, the Market Stability Reserve, the Effort Sharing Regulation, CO_2 standards for cars and vans, the Land Use, Land Use Change and Forestry Regulation, the Carbon Border Adjustment Mechanism, the establishment of the Social Climate Fund, FuelEU Maritime, the Alternative Fuel Infrastructure Regulation (AFIR), ReFuel EU Aviation, the Energy Efficiency Directive and the Renewable Energy Directive. Only the proposed revised energy taxation directive is still pending agreement.
[12] Directive (EU) 2023/959 amending Directive 2003/87/EC.
[13] Regulation (EU) 2023/857.
[14] Regulation (EU) 2023/839.
[15] COM/2022/150 final.
[16] COM(2023) 88 final.
[17] COM(2022) 230 final.
[18] For more information, see the 2023 Climate Action Progress Report.
[19] ESABCC (2023), Scientific advice for the determination of an EU-wide 2040 climate target and a greenhouse gas budget for 2030-2050, DOI: 10.2800/609405.

ensure high-quality EU-certified carbon removals, the Commission proposed a regulatory framework for the **certification of carbon removals**[20]. The aim is to establish a transparent and credible governance framework, including for the development of certification methodologies, encouraging further investments in carbon removal activities and increasing their deployment. The Commission issued a communication on industrial carbon management in February 2024 to support EU action to reach climate neutrality by 2050 and negative emissions thereafter.

With the **biodiversity, soil and forest strategies,** the EU set ambitious targets to protect ecosystems, especially carbon-rich ecosystems. The Nature Restoration Law[21] will help **restore degraded ecosystems, in particular those with a high potential to capture and store carbon,** such as forests, peatlands and wetlands. The EU's commitment to plant at least **3 billion additional trees** by 2030 will also support climate mitigation action. By ensuring that EU's consumption and production do not contribute to deforestation, the Regulation on **deforestation-free products**[22] is another important tool in the fight against climate change and halt biodiversity loss.

Full implementation of the 'Fit for 55' package and mobilising **adequate investments** (see Section 3.2) are key. For some Member States, progress is not consistent with the level of action required to meet the long-term climate targets.

Based on the information provided in the draft **updated national energy and climate plans** (NECPs), by 2030, net GHG emissions in 2030 are estimated to be 51% lower than in 1990[23], 4 percentage points short of the 55% target set in the Climate Law. This estimate uses the cap imposed on the contribution of the LULUCF sector to the Fit-for-55 objective, set at 225 Mt CO2-eq. Adding the contribution of the LULUCF sector above this cap would lead to a total reduction of emissions of 51.7%. The trajectory identified in the draft updated NECPs forecasts the EU to fall short of reaching climate neutrality in 2050[24]. Although emissions in the EU have fallen by 32.5%[25] since 1990, the analysis of projected emissions in the draft updated NECPs highlights the need to step up the pace. The draft updated NECPs bring us closer to meeting the EU's 2030 targets, however there is a clear need for extra efforts to speed up implementation of the agreed Fit for 55 legislation. Member States are now in the process of updating their plans by June 2024 and are considering how to enhance policies and investments to deliver on the 2030 target of net GHG emission reductions of at least 55%.

In February 2024, as called for under the European Climate Law, the Commission published a communication and detailed impact assessment on **the EU's climate target for 2040**, to establish the path from the agreed, intermediate 2030 target **to net-zero emissions by 2050**. The 2040 target will provide predictability for decision-makers and investors to keep the EU

[20] COM(2022) 672 final.
[21] COM(2022) 304 final.
[22] Regulation (EU) 2023/1115.
[23] Net total GHG emissions, including the LULUCF sector and excluding international transport.
[24] The 2023 climate action progress report estimates that EU Member States still need to take additional mitigation measures to achieve climate neutrality by 2050 to cut around 1 600 million tonnes of CO_2 equivalent (or 34 percentage points). Data provided in the NECPs is in line with this finding.
[25] Climate Action Progress Report 2023, COM(2023) 653 final.

on track to climate neutrality and support the implementation of the 2030 targets. It will also send a strong signal to the EU's partners around the world on the need to step up global climate action.

The Commission communication launches a dialogue with stakeholders on the pathway to 2040. A legislative proposal to amend the European Climate Law to include this target, as well as the post-2030 policy framework, will be in the hands of the next Commission. The agreed target will be the basis for the EU's new nationally determined contribution, which all parties to the Paris Agreement must submit in 2025.

2.2 Strengthening and mainstreaming climate adaptation, including ecosystem approaches

The latest Intergovernmental Panel on Climate Change assessment reports project that weather- and climate-related extreme events such as floods, droughts and heatwaves will become more frequent and severe. This will happen even in the best-case scenario of a rapid and steep global cut in greenhouse gas emissions to meet the Paris Agreement goals.

The **effects of climate change** on ecosystems, socio-economic sectors and people's health and well-being are already being felt.

Weather- and climate-related events in Europe have caused a **high number of human fatalities**, estimated between 85 000 and 145 000 between 1980 and 2020[26], mostly due to heatwaves. In 2022, heatwaves were estimated to have caused over 60 000 excess deaths, a figure that was only superseded by the heatwaves of 2003, which caused 70 000[27]. All regions and socio-economic categories are affected by the effects of climate change, but not in the same way, vulnerable households being disproportionately exposed to the above threats.

Economic losses due to weather and climate-related extremes are increasing, reaching **EUR 52.3 billion in 2022**, with floods having the highest impacts (40%).

The extent of **drought-impacted areas** has increased in the EU between 2000 and 2022[28]. The area where vegetation productivity suffered increased five-fold in 2022 compared to the average over this period. For example, over 50% of vegetated area was affected by drought in Belgium, Luxembourg and Slovenia that year, against the long-term average of less than 10%. At the other extreme, Ireland saw no detectable impact at all. Drought stress hampers ecosystems' ability to store carbon, manage the impact of subsequent floods, to contribute to food production and provide a wide range of other benefits. Heatwaves are projected to increase in the future and continental and Mediterranean regions are expected to see less summer rainfall. This makes it increasingly urgent to build resilience through land management practices.

[26] Depending on the data sources (NatCatSERVICE and CATDAT). See https://www.eea.europa.eu/publications/economic-losses-and-fatalities-from.
[27] Heat-related mortality in Europe during the summer of 2022 | Nature Medicine
[28] EEA, 04-Drought impact on ecosystems in Europe-indicator — European Environment Agency (europa.eu)

The EU's 2021 **strategy on adaptation to climate change**[29] sets out the vision to achieve a climate-resilient EU by 2050, fully prepared to manage the unavoidable and already visible impacts of climate change.

The **EU Climate Law sets an obligation for** the EU and its Member States to make continuous progress on reducing vulnerability to climate impacts, increasing resilience and building adaptive capacity. The Commission issued an assessment under the EU Climate Law in December 2023. Almost all EU Member States have conducted **climate risk assessments,** although only a few provide robust comprehensive climate risk assessments across more than five sectors. Health, agriculture, forestry, biodiversity, energy and water management are reported to be the policy areas/sectors most affected by climate threats in Europe. All Member States have **national adaptation strategies** and/or **plans** in place. The Commission has issued a new **set of guidelines to assist Member States** in updating and implementing them.

Eight Member States have embedded elements of their adaptation policy in their **domestic legal frameworks**. Monitoring, reporting and evaluation mechanisms are lacking in several Member States. **Nature-based solutions** are included only to a limited extent at strategic level and through the policy documents, especially in sectoral strategies and plans. Assessing the **costs of adaptation** remains a challenge for many Member States and their plans and strategies often lack dedicated budgets or financing streams to implement the plans.

In parallel, wide-ranging action is underway to implement the EU's 2021 adaptation strategy. Policy coherence has improved by work to **mainstream adaptation into other EU policies**, for example health policies. More broadly, progress has been made in raising awareness of climate impacts and of the need to prepare for them[30].

In March 2024, the Commission issued a **communication on managing EU climate risks,** following evidence provided in a scientific European Climate Risk Assessment report and other sources**.** The communication put forward areas of action where a step-change is needed in order to effectively protect citizens and our economies. It also highlighted the European added value of supporting action at national and private levels of competence and risk ownership.

2.3 A clean circular economy

Circular economy has the potential to reduce carbon emissions, pressure on natural resources and biodiversity, and reduce pollution. It can help Europe boost resource productivity by up to 3% annually and reach the 2050 goal of climate neutrality. Circular economic models can also drive the long-term competitiveness of the EU economy, increase its resilience and safeguard security of supply[31].

[29] COM(2021) 82 final.

[30] See, for example, the European Drought Risk Atlas and the European Drought Impact Database, the Floods viewer and the Sendai framework for disaster risk reduction – Midterm review 2023, at: https://data.europa.eu/doi/10.2795/151300.

[31] Growth Within: A Circular Economy Vision for a Competitive Europe; McKinsey Centre for Business and Environment & Ellen Macarthur Foundation; June 2015. According to the Long-term competitiveness of the EU: looking beyond 2030, COM(2023) 168 final.

The EU now has a sound legislative framework to accelerate the shift **to a circular economy**. However, legislation takes time to take effect. Concerted action is needed to roll out this framework to tackle the negative environmental impacts of material consumption and unsustainable trends in waste generation observed over the last decade in the EU. Stepping up action at all levels and in all sectors will be essential to decouple growth from the use of natural resources, ensure a sustainable use of materials and boost resilience and the security of supply.

The EU's **material footprint** was 14.8 tonnes per capita in 2022, a 6% **increase over the last decade**. Most materials are non-metallic minerals, driven by construction activities, which saw the highest increase in material use (+22%)[32].

Total EU **waste generation** by all economic activities and households **fell by almost 3%** over the last decade to reach 4.8 tonnes per capita in 2020, showing a slight decoupling from GDP. However, waste from packaging, in particular plastic packaging, has increased by more than 20% in the last decade in the EU to reach 36 kg of plastic packaging waste per person in 2021[33]. More waste is recycled and recovered in the EU, but only a limited volume of materials (around 11.5%) re-enter the economy as recycled materials in 2022[34].

Thanks to an **increase in resource productivity** of about 35% since 2000[35], EU greenhouse gas emissions from production fell by around 25% from 2008-2021, showing that the transition to a circular economy plays an important role in the path to climate neutrality[36].

The **2020 circular economy action plan**[37] aims to decouple economic growth from resource use, reduce our consumption footprint, double the circular material use rate, significantly reduce overall volumes of waste and halve the volume of residual (non-recycled) municipal waste.

The Commission has put forward all **35 measures announced in the action plan**. A ground-breaking product policy initiative building on the lifecycle approach of the Ecodesign Directive, the **Ecodesign for Sustainable Products Regulation**[38], expands the framework for setting performance and information requirements, including a **digital product passport** for a wide range of products. It will be essential to implement this Regulation over the coming years to ensure that circular and sustainable products become the norm. The **Empowering Consumers Directive**[39] and the proposal for a **green claims directive**[40] will help consumer choice by enabling consumers to identify sustainable products for purchase without being misled.

[32] Eurostat dataset (cei_pc020)
[33] Eurostat dataset (cei_pc050)
[34] Eurostat dataset (cei_srm030)
[35] Eurostat dataset (cei_pc030)
[36] Eurostat dataset (cei_gsr011)
[37] COM(2020) 98 final.
[38] COM(2022) 142 final.
[39] COM(2022) 143 final.
[40] COM(2023) 166 final.

New initiatives have also been launched to tackle environmental concerns linked to the production and consumption of textiles, guided by the EU **strategy for sustainable and circular textiles**. The new **Batteries Regulation**[41] and the proposals for a Regulation on **packaging and packaging waste**[42] and on the **design and end-of-life management of vehicles**[43] are other **game-changing initiatives**.

The Commission has revised key pieces of legislation on waste, including the **Waste Shipments Regulation**[44] and an update of limits for **Persistent Organic Pollutants** in waste[45]. The Commission has also proposed a targeted revision of the Waste Framework Directive to tackle **food and textile waste**[46], with a particular emphasis on preventing waste and on extending the scope of extended producer responsibility.

The Commission launched initiatives to reduce plastics pollution, including measures to prevent the **release of microplastics**[47] into the environment, notably a proposal to **tackle pollution from pellet loss** and **a restriction on intentionally added microplastics**. It also put forward a new policy framework **for biobased, biodegradable and compostable plastic**[48] and made progress on implementing measures to reduce **single use plastics**. Internationally, negotiations on a new global treaty on plastic pollution are ongoing.

Circularity principles are **mainstreamed across EU policies** such as the European social action plan, the Renovation Wave, research and innovation. Circularity is also a cornerstone of the Critical Raw Materials Act[49], contributing to the European Green Deal industrial plan. It is also at the core of sector-specific transition pathways to decarbonise European industry, and a key driver to achieve the objectives of other priority objectives under the 8th environment action programme.

Policy makers, businesses, public authorities and members of the public have engaged with initiatives on the circular economy over the last 10 years, via the European Circular Economy Stakeholders' Platform. So far, 23 Member States have adopted circular economy strategies, action plans or roadmaps.

The EU launched and supported the Global Alliance on Circular Economy and Resource Efficiency to accelerate the **global transition**.

Actions such as more efficient resource use in production, extending the lifetime of products, or substituting primary raw materials with less carbon-intensive recyclates are estimated to potentially contribute with 20-25% to the EU's climate goals by 2050. Action is also ongoing to explore the synergies between the circular economy and a sustainable bioeconomy.

[41] Regulation (EU) 2023/1542.
[42] COM(2022) 677 final.
[43] COM(2023) 451 final.
[44] COM(2021)709 final
[45] Regulation (EU) 2022/2400 on Persistent Organic Pollutants
[46] COM(2023) 420 final.
[47] COM(2023) 645 final and Commission act C(2023) 6419.
[48] COM(2022) 682 final.
[49] COM(2023) 160.

Optimising material use significantly reduces **dependency on imported materials.** In the EU, around 23% of materials are imported[50], mostly fossil-energy materials, including plastics (71% of imports), and critical raw materials (like cobalt and silicon) needed for the green and digital transition[51].

Financing the green transition requires strong partnerships with Member States and businesses, driven by EU benchmarks and **well-targeted investments**, with the EU Taxonomy an essential reference point to mobilise and guide sustainable finance. Further use of **market-based instruments** and **green public procurement** at EU and national levels could help make sustainable products the norm.

A **globally shared understanding and agenda** on circular economy is gradually emerging. As a **multilateral mechanism would speed up the global transition,** the EU will continue to support the UN Sustainable Consumption and Production holistic approach.

2.4 Zero pollution for a toxic-free environment

Pollution is among the main causes of mental and physical diseases and it also leads to premature deaths. Pollution threatens people's well-being wellbeing and health and generates economic costs to society. It is also one of the five main drivers of biodiversity loss, reducing the ability of ecosystems to provide services such as carbon sequestration and decontamination.

The grounds have been laid to reach the 2030 targets of **zero pollution**, but achieving the objectives requires steady progress in a wide range of areas, from air pollution, where progress is encouraging, to water, marine and soil pollution, where further action is needed. The latest projections by the EEA[52] indicate that the EU is on track to reach its 2030 target to **reduce premature deaths** due to fine particulate matters by 55%, but not the 2030 target to reduce transport **noise exposure** by 30%. It will be very challenging to meet the target to reduce nutrient losses into groundwater by at least 50%. Plastic litter at sea also remains a major, multi-faceted problem.

In 2021, 253 000 premature deaths in the EU were attributable to fine particulate matter, a 41% drop since 2005[53]. Over the period 2016-2019[54], 14.1% of groundwater stations in the EU were polluted by nitrates, with annual average concentration exceeding the threshold of 50mg NO/l, almost one percentage point more than the previous period.

Around two thirds of agricultural soils in the EU area are affected by erosion, loss of organic carbon, nutrient (nitrogen) balance exceedances, compaction or secondary salinisation[55].

[50] Eurostat dataset (cei_gsr030)
[51] Eurostat dataset (cei_gsr020)
[52] EEA 07-Premature deaths due to exposure to fine particulate matter in Europe-indicator — European Environment Agency (europa.eu) and COM(2022) 674.
[53] EEA: 07-Premature deaths due to exposure to fine particulate matter in Europe-indicator — European Environment Agency (europa.eu)
[54] COM(2021) 1000 final.
[55] COM(2023)416 final.

Overall, while the sales of pesticides are not decreasing, the risk associated with their use is decreasing and the sales of the more hazardous pesticides (candidates for substitution) are reducing over time[56].

The goal to reach zero pollution for a non-toxic environment has **moved from tackling point sources of pollution to a systemic approach on environmental pressure**, with clear links to industry and other sectors of the economy.

For the first time, the EU has an **integrated and comprehensive zero pollution action plan**[57] **to reduce pollution in air, water and soil** to levels that are no longer harmful to health and natural ecosystems.

By now, most of the flagship initiatives and actions (over 75%) announced in the zero pollution action plan have been completed or are at an advanced stage of implementation[58]. EU laws were revised to **raise the ambition** by **extending their scope to cover more polluting activities**, such as the revised legislation **governing industrial emissions**[59] and **urban waste water treatment**[60], or to **adapt EU rules** on air quality[61] and water pollutants[62] **to the levels prescribed by science**. For the first time ever, **soils** [63] will have a similar level of protection as other ecosystems, through the Commission proposal for a soil monitoring law.

Complementing the zero pollution action plan, the **chemicals strategy for sustainability**[64] establishes a clear hierarchy that states that **preventing pollution** should always be the priority. To this end, a recommendation was adopted to make chemicals **safe and sustainable by design**, and the revised **Classification Labelling and Packaging Regulation**[65] will make labelling of hazardous chemicals clearer, including for online sales. The Commission proposed to simplify the processes for dealing with chemicals to implement the **one-substance-one-assessment** commitment made under the Green Deal[66]. It also proposed revising the **Mercury Regulation**[67] to further restrict the remaining uses of mercury in the EU: in February 2023 Council and European Parliament reached a provisional political agreement[68].

Policy coherence has improved by including action to prevent and reduce pollution in other Green Deal strategies and improving the **enabling framework**. The latest additions to the EU Taxonomy, applicable since the beginning of 2024, include activities for pollution prevention, control and reduction through sustainable water investments, along with other activities for the

[56] Source: Statistics | Eurostat (europa.eu); trends eu - European Commission (europa.eu)
[57] COM(2021) 400 final.
[58] Zero Pollution action tracker
[59] COM/2022/156 final/3.
[60] COM(2022) 541 final.
[61] COM/2022/542 final.
[62] COM(2022) 540.
[63] COM(2023) 416 final.
[64] COM(2020) 667 final.
[65] COM(2022) 748 final.
[66] This entailed three legislative proposals on chemicals data flows (COM(2023) 779), on reallocating work on chemicals across EU agencies (COM(2023) 783), and amending the Directive on the Restriction of Hazardous Substances in electric and electronic equipment (COM(2023) 781).
[67] COM(2023) 395 final.
[68] Press release

environmental objectives of the Taxonomy Regulation[69]. The EU financing instruments support zero pollution actions in many areas. The climate mainstreaming under the EU's multiannual budget and the recovery and resilience plans helped increasing support for measures to improve air quality. To improve the **knowledge base**, the Commission presented the first Zero Pollution Monitoring and Outlook Report and related research and innovation activities under Horizon Europe.

Swift **implementation of existing or proposed measures** at local, national, cross-border and global levels is key to achieving the 2030 objectives. The zero-pollution goal can only be achieved in conjunction with the EU's goals to reach climate neutrality, to protect biodiversity and to transition to a clean, circular economy. Mainstreaming zero pollution into other policy areas is also important. Exposing the links between **pollution, human health and inequalities** are crucial to forge public support for policy responses to tackle the causes of pollution. It is essential to apply the **polluter pays principle** across other sector-specific policies for fair and effective policies, building on experience with measures that work well, such as the recent change to include extended producer responsibility in the revised Urban Wastewater Treatment Directive[70].

Effective implementation of laws requires further **integration of data analytics** between environment and public health data, and integrated and geo-localised visualisation of pollution impacts[71]. These should be coupled with enabling action, notably investments and price signals, and action to promote skills, research, innovation and digitalisation focusing on zero-pollution solutions. The flagship initiatives in the zero pollution action plan, in particular those related to urban and regional policies, have already started to integrate data analytics and can be further developed. The Commission, together with the EEA, will work on better sharing and using the latest available data in the next Zero Pollution Monitoring and the **Outlook Report**, which is expected to be published by the end of 2024.

2.5 Protecting, maintaining and restoring biodiversity

The continuing loss of nature and biodiversity poses major risks to the ecosystem services that we all depend on. Nature provides food, clean water, helps prevent floods, purify the air, pollinate crops, store carbon dioxide and helps us adapt to a changing climate.

The first EU ecosystem assessment[72] revealed that Europe's ecosystems suffer from unrelenting pressure from intensive land and sea use, climate change, pollution, overexploitation and invasive alien species. Some progress has been made to designate protected areas for land and marine areas. The level of forest connectivity has not increased, and populations of common birds continue to decline in the EU. Although populations of forest birds has increased, farmland bird populations continue to be in sharp decline.

[69] Commission Delegated Regulation (EU) 2023/2486.
[70] COM(2022) 541 final.
[71] Including Copernicus services.
[72] https://publications.jrc.ec.europa.eu/repository/handle/JRC123783

The **EU biodiversity strategy for 2030**[73] sets ambitious targets for 2030 to **protect and restore nature.** It calls for action to tackle the five main drivers of biodiversity loss: changes in land and sea use, overexploitation, climate change, pollution and invasive alien species.

The **nature restoration law** sets targets to restore degraded ecosystems and reverse biodiversity loss. The EU has adopted strategies on **soil** and **forests**, and two legislative proposals to boost the **resilience** of these key ecosystems are under negotiation[74]. Additional measures were launched to protect **pollinators**[75]. The Commission has taken action to reduce pollution pressures on biodiversity, notably in the framework of the EU chemicals strategy for sustainability and the zero pollution action plan, with new initiatives on urban waste water treatment and industrial emissions[76].

Progress has also been made in **mainstreaming** biodiversity objectives into related EU policies, notably in forestry and agriculture policy, through the **climate adaptation strategy, the EU organic action plan**[77] and the **farm to fork strategy,** in fisheries policy through the **marine action plan**[78] and in the energy sector (e.g. through environmental impact assessments for energy infrastructures and increased renewable energy targets). Mainstreaming has also improved on trade, international cooperation, consumption and production, pollution reduction (in particular nutrients) and health.

Nature-based solutions are increasingly integrated in other policies and deployed on the ground, such as carbon removal measures (see Section 2.1) and flood risk reduction. As climate change and air pollution are two of the main drivers of biodiversity loss, **the replacement of energy production from fossil fuels by renewable sources** can contribute to biodiversity protection overall.

Full and swift implementation of the EU legal framework is a priority, including current legislation on birds, habitats, invasive alien species, water, the Marine Strategy Framework Directive and the law on nature restoration. The proposed new laws on soil or forests monitoring will, once they become EU law, contribute to reversing the negative trends. Adoption and effective implementation of national, cross-cutting biodiversity strategies or action plans by all Member States is a crucial step towards meeting the biodiversity objectives.

The recently launched strategic dialogue on the future of agriculture will feed into the reflection on how to support viable livelihoods, reducing burdens and ensuring competitive and sustainable food production in the future[79]. Businesses and the financial sector continue to increasingly factor in the economy's dependence and its impacts on nature and biodiversity, and the associated business and financial risks from biodiversity loss. The European Central Bank and national central banks now consider nature degradation and biodiversity loss-related

[73] COM(2020) 380 final.
[74] COM(2023) 416 final and COM(2023) 728 final.
[75] COM(2023) 35 final.
[76] COM(2022) 156 final/2 , COM(2022) 541 final.
[77] COM(2021) 141 final/2.
[78] COM(2023) 102 final.
[79] Strategic Dialogue on the future of EU agriculture - European Commission (europa.eu)

risk assessment as falling squarely under their mandate since most companies are highly dependent on ecosystem services[80], such as clean water, pollination and climate regulation. Further advances in natural capital accounting should improve the process of integrating the multiple values that nature provides into policy and investment decisions.

The EU's multiannual budget for 2021-27 includes for the first-time **biodiversity financing targets** (see Section 3.2). Estimates of national commitments indicate that the EU is well on track to reach the 7.5% biodiversity financing target ser for 2024. However, the 10% biodiversity financing target set for 2026 and 2027 might be missed. More **investment in nature is needed**, both from public and private-sector sources, including incentives for nature-positive impacts such as nature restoration, nature-based solutions and sustainable management practices in – inter alia - land, forestry, freshwater and marine ecosystems.

At **international level**, the **Kunming-Montreal Global Biodiversity Framework** (GBF) brings in a comprehensive set of ambitious targets and actions to stem biodiversity loss. The Commission is preparing the submission of EU targets to implement the GBF, which will cover the commitments laid down in existing and proposed legislation and policies. The submission will also indicate the degree of alignment between EU and GBF targets.

The Commission's assessment of the degree of **EU alignment with the Global Biodiversity Framework indicates** that current policy initiatives and recently proposed legislation (pending their adoption) cover most of the targets. Work is also ongoing to finalise a robust monitoring framework to track progress on all targets, improve existing dataflows and develop models and scenarios to underpin the work to develop policy options and measures for after 2030.

The EU's **international ocean governance** agenda embodies the commitment to an ambitious set of marine biodiversity targets. The successful conclusion of the **agreement on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction** is a major accomplishment for the depollution of the high seas and the restoration of marine life in the global ocean. The Commission pledged to **double international financing for biodiversity** as a contribution towards the target of USD 20 billion by 2025. The target of USD 30 billion by 2030 will require more resources and efforts, also at global level.

2.6 Reducing environmental and climate pressure from production and consumption

The EU has embarked on a **deep transformation** of its consumption and production patterns, building a climate-neutral and resource-efficient circular economy that is resilient to supply shocks, thereby strengthening the EU competitiveness and strategic autonomy.

The EU's **consumption footprint** has transgressed the planetary boundaries and went up by 4% between 2010 and 2021. This is driven mostly by current consumption patterns in the areas

[80] The Network for Greening the Financial System (NGFS) acknowledges that nature-related risks could have significant macroeconomic and financial implications; COM(2023) 376 final.

of **food, housing and transport**[81]. **Water scarcity**[82] affects almost one third of areas in the EU and is one of the most dangerous threats to society. The pressure on **land take**[83] has not abated.

Energy consumption has fallen thanks to energy efficiency[84], and **renewable energy** sources have more than doubled over the last 17 years[85]. Industry has slightly increased the **use of secondary materials** and slightly reduced GHG emissions. Agriculture is slowly shifting towards **organic farming**, but the sector still emits significant volumes of GHG and air pollutant emissions. EU sales of **antimicrobials** for farmed animals have fallen but the volume of **food waste** is not falling. In transport, the share of **public transport** (buses and trains) fell in 2020 due to the COVID-19 pandemic but is now recovering and the share of zero-emissions vehicles has increased considerably over the last 5 years.

The EU now has **integrated strategies for key production systems to boost systemic change**: the Energy Union, the Green Deal industrial plan, the smart and sustainable mobility strategy, the renovation wave, the bioeconomy strategy and the farm to fork strategy (see accompanying staff working document for details). The EU's long-term competitiveness strategy[86] underlines that we are at a make-or-break point to succeed in the twin green and digital transition and remain an attractive place for business.

The EU's climate and environmental strategies, such as the action plans on zero pollution and circular economy, include **measures in key sectors to reach the targets**. So does the 'Fit for 55' package, which also tackles land-use change. The EU initiatives on nature restoration and soil include ambitious measures to reverse **land take** and improve the capacity of the land to carry out valuable ecological functions (e.g. storing carbon and protecting land from flooding, flood prevention, pollination). The EU Taxonomy provides the incentives to allocate private capital to the achievement of these objectives. The European Semester further provides guidance on the reforms and investments that Member States should undertake to deliver on the EU's environmental sustainability goals.

Water is a vital resource that is already under pressure in many parts of Europe due to structural mismanagement, unsustainable land use, hydro-morphological changes, and pollution. Climate change is exacerbating these pressures and increasing water-related risks in the form of prolonged or more frequent droughts or extreme precipitation as highlighted in the Communication on Climate Risks. Protecting and restoring the water cycle, promoting a water-smart EU economy and safeguarding access to clean freshwater to all is crucial to ensure we have a water-resilient Europe.

[81] https://eplca.jrc.ec.europa.eu/ConsumptionFootprintPlatform.html

[82] Source: EEA, https://www.eea.europa.eu/publications/european-union-8th-environment-action-programme/indicators/24-water-scarcity-conditions-in/view

[83] Source: EEA, https://www.eea.europa.eu/publications/european-union-8th-environment-action-programme/indicators/23-land-take-net-land/view

[84] Including Council Regulation (EU) 2022/1369 on coordinated demand reduction measures for gas.

[85] Eurostat dataset (nrg_cb)

[86] COM(2023) 168 final.

Fully applying **circular economy approaches to additional industrial sectors**, in particular steel, cement, plastics and aluminium, could reduce global greenhouse gas emissions from key industry materials by 40% by 2050, according to estimates. It is particularly important to increase carbon removals, including natural carbon sinks, in these hard-to-abate sectors to reach climate neutrality. The EU ETS Innovation Fund and update of the Industrial Emissions Emissions Directive (IED)[87] will help the green transformation of EU industry and support innovation. While the revised Renewable Energy Directive[88] tightened up the **sustainability criteria of bioenergy**, including no-go areas for forest biomass.

Construction, buildings and infrastructure are still the most energy and material-intensive sector in the EU and a driver for land take and soil sealing. The 2023 State of the Energy Report concluded that the building **sector must significantly accelerate** the shift to sustainable practices. Material use for buildings could potentially decrease by 30% if used more efficiently, in particular by **extending the lifespan of existing buildings** and reducing demand for new buildings. The Social Climate Fund[89] supports **housing renovations**, which provide win-win opportunities for climate, social and energy objectives, with particular regard to the most vulnerable groups.

In the **food sector**, it will be key to **support farmers, fishers and foresters** to collectively achieve the ambitious objectives. Innovative financing tools, such as carbon and biodiversity farming approaches, can provide **win-win solutions** by rewarding farmers for preserving or increasing soil quality and its fertility, as well as water quality and availability. The proposed legally binding 2030 food waste targets[90] are designed to help reduce the environmental and climate impacts. The EU's research and innovation policy framework substantially supports the transition towards sustainable, healthy and inclusive food systems.

The EU needs to better monitor and minimise the potentially negative environmental impacts associated with trade. In 2021, the EU brought in rules on the **export, import and intra-EU shipment of plastic waste**, based on the Basel Convention. Exports of plastic waste to non-OECD countries from the EU have fallen from around 1 million tonnes in 2020 to around 0.5 million tonnes in 2022. With the recently adopted Waste Shipment Regulation[91], the EU took another key step in this direction. An ongoing evaluation of the Prior Informed Consent Regulation[92] will help design measures to ensure that hazardous chemicals banned in the European Union are not produced for export.

[87] Directive (EU) 2010/75.
[88] Directive (EU) 2023/2413.
[89] Regulation (EU) 2023/955.
[90] COM(2023) 420 final.
[91] https://www.europarl.europa.eu/doceo/document/TA-9-2024-0087_EN.html
[92] Regulation (EU) No 649/2012, L 201/60.

3. PROGRESS ON SELECTED ENABLING CONDITIONS

As part of the mid-term review, the Commission analysed progress in using enabling conditions clustered around the key challenges. The accompanying staff working document provides more details on the other enabling conditions referred to in the 8th environment action programme.

3.1 Implementation, enforcement and environmental rule of law

Effective implementation of existing legislation is the key to generate impact on the ground, in particular for the ambitious measures adopted under the Green Deal legislative framework. Fully implementing EU environmental laws could save the EU economy around EUR 55 billion every year in health costs and direct costs to the environment[93]. The 2022 Environmental Implementation Review confirmed that there has been good progress in some areas, but it is still not sufficient. 20% of all infringement cases handled dealt with by the Commission still relate to environment policy. The **compliance with the rule of law** is also a matter of public confidence in the political process. The revised Aarhus Regulation on Access to Justice[94] improves public strengthens civil society scrutiny of EU acts. The newly agreed Environmental Crime Directive[95] provides the basis for prosecution of new environmental crime offences and for issuing harmonised penalties, based on common criteria.

Closing the implementation gap will require significant efforts by building greater **administrative capacity** and stronger **governance mechanisms**. The level of enforcement of individual and collective rights related to environmental matters is uneven across the EU.

Working with Member States will remain crucial to improve the effectiveness and efficiency of implementation work[96].The Commission will continue to provide technical support to Member States, including on the design and implementation of reforms through the Technical Support Instrument.

3.2 Financing the transition

The Green Deal has built **momentum to mobilise public**[97] **and private-sector financing** for the transition.

The **EU's multiannual budget for 2021-2027** underpins the objectives of the Green Deal, notably by setting an ambitious climate target of 30%, which at this stage is likely to be exceeded (projected 32.6%). A 37% climate target also exists for the Recovery and Resilience Facility, the headline instrument under the NextGenerationEU, mobilising additional funding of over 42% of the total investments allocated to climate and environmental investments. This

[93] Study The costs of not implementing EU environmental law study - Publications Office of the EU (europa.eu)
[94] Regulation (EU) 2021/1767.
[95] COM(2021) 851 final.
[96] See SWD(2023) 254 final on how the Commission monitors the application of EU law.
[97] Public funding by Member States must be in line with State Aid rules which also apply to EU funds under shared management.

created significant synergies from investing in the circular economy for climate and biodiversity, and in biodiversity investments in climate adaptation or zero pollution.

The '**do no significant harm'** principle is instrumental to ensure that EU investments are future proof. The Commission issued guidance on how to apply this principle to the Recovery and Resilience Facility and is currently working on a coherent approach to applying it to other EU financing instruments (such as the Social Climate Fund, Cohesion policy, InvestEU) and the revised Financial Regulation[98], and to make this principle applicable across the EU budget.

The transparency created by the EU sustainable finance framework including the EU taxonomy has helped **reallocating private capital flows** and **drive down capital costs** for sustainable activities and investments. Further mainstreaming awareness of the opportunities as well as the financial risks of climate change and nature degradation[23] will enable financial markets to play their full role in helping to fund the transition. The most recent evidence of the impacts of the EU sustainable finance framework is broadly encouraging[99], also confirmed for example by the **strong increase in green bonds**: from 0.6% in 2014 to 8.9% in 2022 of all EU bonds. However, further action as set out in the Communication on the 2040 target is still needed[100].

There is potential to take further action to make polluters pay. For example, the Commission proposed including the principle of extended producer responsibility in the revision of the Urban Wastewater Treatment Directive. There are also new commitments made and interest in **market-based instruments** especially at national level to direct investments to green and climate objectives.

This could help reverse the **fall in the share of environmental taxes in total tax revenues** (from 6.0% in 2010 to 5.5% in 2021), due to political difficulties to implement changes in the tax system and associated social and economic challenges[101]. Less than 4% of all environmental taxes are linked to pollution and the use of virgin resources, while more than 96% are related to energy and transport.

The Green Deal fosters a greater use of **green budgeting tools** to redirect public investment, consumption and taxation to green priorities and away from harmful subsidies. **Green public procurement** rules are becoming increasingly mandatory (e.g. under the recent initiatives on batteries, energy performance of buildings[102], construction products[103] and sustainable products). Despite this work, fossil fuel subsidies remained more or less unchanged at around EUR 56 billion (2022 prices) over the 2015-2021 period, almost half used to subsidise oil and over a quarter to subsidise natural gas.

Fossil fuel subsidies increased by almost 120% between 2021 and 2022 in response to the energy price crisis. Under the Governance Regulation[104], Member States report on **all energy**

[98] Regulation (EU) 2022/2434.
[99] See e.g. the Platform on Sustainable Finance report on a compendium of market practices - European Commission (europa.eu)
[100] COM(2024) 63 final
[101] Eurostat dataset (ten00141)
[102] COM(2021) 802 final.
[103] COM(2022) 144 final.
[104] Regulation (EU) 2018/1999.

subsidies. The Commission is also developing a methodology for reporting non-energy environmentally harmful subsidies.

Carbon pricing, such as the EU ETS, is reducing emissions. It generates revenues for Member States to tackle climate change and to support industrial innovation and households for a fair transition. In the first three rounds, the EU ETS Innovation Fund allocated EUR 6.5 billion to around 100 pilot projects and demonstration plants for innovative low-carbon technologies.

Though the level of public and private-sector green investments has increased considerably, **there is still a substantial EU-wide environmental investment gap** which stands at between EUR 95 and 145 billion per year until 2030[105].

3.3 Governance for integrated policymaking

A broad range of **ambitious EU governance initiatives promote integrated solutions** for societal, environmental and climate challenges in Member States. For example, integrating circularity in national energy and climate plans and the EU competitiveness strategy, ensuring the uptake of nature-based solutions in national climate adaptation strategies, urban greening plans, including built environment, green infrastructure and land use strategies/plans.

The EU's annual cycle of macroeconomic governance framework, the **European Semester,** now embeds the Sustainable Development Goals and the EU Resilience Dashboard. It is structured around the **competitive sustainability framework,** which covers the transitions of key industries (energy, mobility, agri-food, built environment) to circular economic models and to carbon neutrality. It also covers nature protection, water resilience, the environmental investment gap, social and employment aspects of a fair and inclusive transition, the phase-out of environmentally harmful subsidies and the polluter pays principle, including taxes. This is reflected in the 2023 country-specific recommendations, which put a strong focus on the green transition, especially energy transition and green skills and the industrial and the built environment for most Member States. The focus on other environmental priorities may also sharpen further.

3.4 Sustainable business models for a resilient economy

Healthy ecosystems form the very bedrock of our economy. **Businesses are highly dependent on natural resources**: 72% of the 4.2 million companies in the euro area are highly dependent on at least one nature-related service such as pollination, clean water, healthy soil, or timber[106].

The roll-out of the Green Deal legislation is expected to **increase employment and gross added value in green economy sectors,** thereby boosting EU competitiveness. These sectors showed a considerable resilience during successive crises, outperforming the wider economy. However, the green economy still accounts for less than 3% of the economy in the EU[107].

[105] Provided that the relevant baseline investments, i.e. energy, transport, industry or agriculture, are implemented and deliver the necessary co-benefits for the environment.
[106] COM(2023) 376 final.
[107] Eurostat dataset (env_ac_egss2)

The **contribution and value of nature still tends to be overlooked in too many business and investment decisions**. To remedy this, strong partnerships will be needed with business, underpinned by the key benchmarks set under EU rules. The recent initiative on 'green claims' tackles the risk of greenwashing, which can be overcome by using standardised methodologies. The **Corporate Sustainable Reporting Directive** (CSRD)[108] and the proposed **Corporate Sustainability Due Diligence Directive**[109] support responsible corporate behaviour across value chains and prevent, mitigate, and address the adverse social, climate and environmental impacts of business activities by both EU and non-EU companies operating in the EU. Increased uptake of **new corporate natural capital management accounting methodologies** would provide valuable data for company disclosures, for example under the CSRD. More action is needed to help companies meet their reporting obligations.

Improving access to finance for EU start-ups and scale-ups, promoting research and innovation, **developing skills and providing the critical raw materials** needed are equally important to support sustainable businesses models.

3.5 Just transition and environmental fairness

The impacts of environmental degradation and pollution on EU citizens are not evenly distributed within and among EU Member States. **Vulnerable groups** – whether vulnerable for socio-economic reasons, health, age, gender or because they belong to a minority – **are disproportionally affected** by climate change, environmental hazards and related health risks and changes in the labour market. This **weakens social cohesion**, undermining trust in governments and thus the viability of the transition.

The EU **Just Transition agenda** aims to achieve a shift that benefits everyone. The Just Transition Mechanism is a fund to support workers and citizens living in the regions that are most affected by the transition (the fund is endowed with at least EUR 100 billion). The Emissions Trading System (ETS) reduces emissions and generates revenues for Member States to tackle climate change. The ETS-funded **Social Climate Fund** will mobilise EUR 87 billion to support vulnerable households, transport users and micro-enterprises. The first assessment[110] of the implementation of the Council Recommendation on ensuring a fair transition towards climate neutrality[111] showed that Member States are starting to implement measures for a fair transition, with significant differences across countries and room for improvement.

The EU **Gender Equality** Strategy 2020-2025 and the Recovery and Resilience Facility tackle gender and intersecting inequalities in this process[112]. The **EU Skills Agenda** supports learners of all ages and workers to access education, training and lifelong learning.

[108] Directive (EU) 2022/2464.
[109] COM(2022) 71 final.
[110] Key messages from EMCO and SPC on the implementation of the Council Recommendation on ensuring a fair transition towards climate neutrality pdf (europa.eu).
[111] Council Recommendation of 16 June 2022 on ensuring a fair transition towards climate neutrality 2022/C 243/04.
[112] See EIGE Gender Equality Index 2023 for links between gender and the environment.

The **evidence base** for the environment-social nexus is still largely underdeveloped, with a few exceptions. **Air pollution inequalities** have not improved from 2007 to 2020. The poorest regions (with the lowest 20% of GDP per person) have levels of PM2.5 that are consistently around one third higher than the average, with low prospects for swift improvement. People at risk of poverty or social exclusion have less access to quality drinking water and sanitation[113].

Greater awareness of the **potential of the green economy to create jobs** could increase public support. In 2021, 4.3 million people had jobs in the circular economy, a 11% increase on 2015[114], while the related added value increased by 27% to reach around EUR 299 billion[115]. The clean water, waste and remediation sector alone employs about 1 million people and investments in clean technologies are driving further job creation.

There has been a rise in awareness of the need to protect **vulnerable groups** (for example, under the proposed air quality directive and the Urban Waste Water Directive) and the implementation of the **European Social Pillar** of Rights on water access. These changes are an opportunity to step up action on environmental fairness. At global level, the EU has pioneered Just Transition Energy Partnerships with South Africa, Indonesia, Vietnam, Senegal and India. The Just Transition Work Programme established at COP28 will enable exchanges on just transition pathways.

3.6 The link between the environment and health

There is increased awareness about the role of nature and biodiversity for human health and well-being. Since 2021, the European Climate and Health Observatory supports cooperation on how climate change has an impact on human health and the EEA's Health and Environment Atlas provides maps to visualise the environmental impacts.

One in ten premature deaths in Europe can be linked to pollution, which affects more the disadvantaged and vulnerable population groups. Environmental causes are thought to be behind **over a quarter of a million cancer deaths** in Europe every year and pollution has a particularly harmful effect on **young children**[116]. The Communication on a comprehensive approach to mental health[117] underlines the **mental health** impacts of public exposure to air pollution or toxic chemicals, and the positive effect of a clean environment on both physical and mental health.

Scientists are increasingly concerned about the potential impact of **microplastics** on human health, and warn that exposure to chemicals can lead to **reproductive and developmental health** problems including infertility, miscarriage, abnormal foetal development and early puberty.

[113] See: European Commission, Access to Essential Services (European Pillar of Social rights): Evidence from EU Member States, Final Synthesis Report, 2023.
[114] Eurostat dataset (cei_cie011)
[115] Eurostat dataset (cei_cie012)
[116] COM(2021) 44 final.
[117] COM(2023) 398 final.

The '**One Health approach'** recognises that public health and the health of domestic and wild animals, plants, and the wider environment are interdependent. This approach is included in EU initiatives such as the farm-to-fork and pharmaceutical strategies, which include action to reduce the overall use of antimicrobials, including in animal farming, to prevent antimicrobial resistance.

At **global level**, the EU has been an early supporter of the One Health approach under the Convention on Biological Diversity and the Quadripartite Alliance (FAO, UNEP, WHO and WOAH). The **COP28 Declaration on Climate and Health**[118] commits parties to tackling climate-related health impacts and to promote collaboration on One Health.

3.7 Digitalisation

The 8th environment action programme emphasises that digitalisation holds untapped potential to accelerate the transition.

Implementing the **Green Data space initiative** and reviewing the rules on environmental geospatial data sharing ('GreenData4All') seek to make relevant environmental data available to strengthen evidence-based policy making and implementation.

One specific example is the new **Digital Product Passport**, which is a deliverable under the EU strategy 'A Europe Fit for the Digital Age'. The product passport will help using fewer materials and less energy, reduce emissions, minimise waste and even promote dematerialisation.

Further action on digitalisation is needed to **facilitate** Member States and businesses in **reporting** on climate and environmental performance.

Action on digitalisation can not only help governments but also empower members of the public to help monitor the state of the environment. Tapping the **full potential of modern data collection and analysis** (including through Copernicus satellites) will strengthen the monitoring and reporting framework under the 8th environment action programme. Using **citizens science** methods can raise awareness, put public pressure on governments and feed into environmental foresight.

As the environmental impacts of digitalisation are growing rapidly, it will be pivotal to tackle the potential **environmental downsides** (due to the related rise in energy use and the production, consumption and disposal of electronic devices).

3.8 Global uptake

The drivers of **climate change and biodiversity loss are global, and many forms of pollution are transboundary**. **The EU cannot achieve its climate and environmental objectives acting alone**.

[118] Focus on Health at COP 28 (who.int)

The Green Deal has given a new impetus to the EU's global green and climate action. **Green Deal diplomacy** has promoted the global uptake of climate, energy and environmental objectives and, in the wake of the COVID-19 pandemic, **sustainability in the global economic recovery**. The EU launched **Green Alliances** with Japan, Norway and Canada, and **Green Partnerships** with Korea and Morocco. . The EU has also stepped up its collaboration with like-minded donors, and launched Just Energy Transition Partnerships with South Africa, Viet Nam, Indonesia and Senegal, while strengthening engagement with several other countries and regional groupings. At multilateral level, the adoption of the **Kunming-Montreal Global Biodiversity Framework** at the 15th Conference of the Parties (COP15) of the Convention for Biological Diversity and the adoption of the **Biodiversity of Areas Beyond National Jurisdiction Treaty** were key milestones in international cooperation. Progress was made at the UN **climate conferences COP27 and COP28**, including the Global Stocktake commitments to double energy efficiency and triple renewable energy capacity and Global Methane Pledge covering energy, waste and agriculture sectors. The UN Global Framework on Chemicals, the 2023 UN Water Conference and the launch of negotiations on an intergovernmental mechanism to end plastic pollution were further important achievements. The Green Deal has also resulted in new EU legislation (on deforestation, CBAM etc.) aimed at more sustainable supply chains and leading to stronger engagement internationally on specific issues, including in the context of the EU trade policy. The first 2023 **EU voluntary review of the progress in the implementation of the 2030 Agenda for Sustainable Development** shows that the EU is fully committed to delivering the 17 Sustainable Development Goals (SDGs and has made progress towards them[119].

Given the current challenges to **multilateralism** due to deteriorating geopolitical relations, it is key to **mobilise third countries** to achieve shared climate and environmental objectives. The EU must build on its diplomatic networks, political influence, technological expertise, training provisions and financial resources to **engage with governments and businesses** and help **build global resilience** to prevent instability, food insecurity, population displacement and forced migration, and to promote global sustainable development in all its dimensions. It is also imperative to **co-finance the just transition at global level.**

4. MEASURING PROGRESS

To assess progress and facilitate high-level strategic political communication, the Commission presented the **8th environment action plan monitoring framework**, following consultations with stakeholders[120]. It includes 28 headline indicators, providing a strategic approach to track systemic change on the ground, fully in line with sector-specific climate and environmental monitoring tools. Based on the selected headline indicators, the EEA will publish **annual monitoring reports**.

[119] COM(2023) 700 final.
[120] COM(2019) 640 final.

As required under the 8th environment action programme, the monitoring framework should stay stable to ensure accountability. It was adopted in 2022 and the headline indicators it contains are still fit for purpose. Nonetheless, work is ongoing to improve the current indicators and develop new ones (see accompanying staff working document), and an update of the monitoring framework could be considered in the future.

Over the last few years, the Commission has developed several **new cross-cutting monitoring frameworks** to measure progress on systemic change, including progress on the SDGs and on resilience. In developing these frameworks, the Commission has used climate and environmental indicators from current thematic monitoring frameworks, including the 8th environment action programme monitoring framework. These indicators are also used in the European Semester. Work is ongoing to develop a framework **to measure progress 'beyond GDP**', towards a sustainable and inclusive well-being dashboard.

5. CONCLUSIONS

The EU has put in place ambitious long-term targets, initiatives and framework laws under the Green Deal and in line with the 8th environment action programme. This has put the EU **on the right trajectory** to reach a net-zero, clean, nature-positive and circular economy. It now has a solid legal framework setting climate and environmental objectives and cross-sectoral legislation to accelerate the transition in key sectors of the economy such as energy, industry and transport. Most initiatives still have to be fully implemented. It is therefore **too early to assess their full impact on the environment**.

The Green Deal charts the EU's path to a sustainable future in a way that avoids reaching social, climate and environmental tipping points, which would damage the economy and society. It is a systemic strategy, delivered in full coherence with the priority objectives and enabling conditions of the 8th environment action programme. It builds on synergies between climate, environmental, social, industrial and competitiveness objectives, with progress in one area creating a leverage effect in others.

The circular economy and zero-pollution initiatives will trigger positive changes that will help mitigate climate change and safeguard biodiversity. Safeguarding nature generates co-benefits for climate mitigation and adaptation. A resource-efficient economy reduces pressure on ecosystems, helps maintain long-term competitiveness and build resilience to external shocks. The vision for 2050 of the 8th environment action programme is at the heart of a just and fair green transition in the EU and beyond, guided by inter-generational responsibility.

Efforts from authorities at all levels and the private sector will be needed to ensure that the laws have effects on the ground, and **accelerate the pace** of emission reductions, biodiversity protection and restoration, and the uptake of clean and circular solutions. Simplification, modernisation, and digitalisation, and adequate funding will be key to successfully implement the policy and regulatory framework. It is also essential to understand and overcome the challenges of implementation for the legal framework to take root, produce effects and create

buy-in from everyone concerned. All sectors and groups need to see the benefit that the green transition brings for them.

To this end, the Commission will continue working closely with Member States and all stakeholders. Dialogues with economic actors and the social partners as well as citizen panels[121] are examples of this work to support key groups in understanding climate and environment risks, and increasing their support for the measures needed to build resilience and long-term sustainability in every segment of the socio-economic spectrum.

Substantial investment is needed to power the green transition in the EU and to reach the goal of climate neutrality. Financing the green transition is essential to avoid the cost of climate change and environmental degradation, which destroys the ecosystem services that nourish the economy and society. To bridge the financing gap, public and private-sector investments are needed and fossil fuel and other environmentally harmful subsidies should be phased out.

Investors and the industry are increasingly getting on board, understanding what sustainability means for the future of their business models and what strategic decisions they need to take for the long term. For the green transition to happen, it will need to be better integrated in economic coordination mechanisms such as macroeconomic coordination and the European Semester.

Lastly, global action on climate change and environmental objectives is key. The EU has led the way by putting climate change, biodiversity loss and more recently plastic pollution and water resilience at the core of the international agenda. It is mobilising the international community to achieve the 8th environment action programme vision of living well within the planetary boundaries.

[121] Citizens' Engagement Platform - European Commission (europa.eu)