

European Environment Agency



Zero pollution monitoring assessment

Summary for policymakers

December 2022



Introduction

The zero pollution action plan is a cornerstone of the EU's ambitions for future resilience for people and the planet. It sets a specific ambition: by 2050, the EU should have reduced pollution to the extent that it no longer presents a risk to human health and the environment.

To measure progress towards the plan's objectives and understand the likelihood of achieving them, robust monitoring and outlook mechanisms must be in place. Consequently, a monitoring and outlook framework has been established under the zero pollution action plan.

The EEA is responsible for delivering the zero pollution monitoring assessment and supporting policy implementation through its ongoing monitoring and reporting on the state of the European environment. The Agency also monitors and reports more broadly on progress towards reducing pollution and achieving wider environmental and climate policy objectives. The European Commission Joint Research Centre (JRC) is responsible for delivering the zero pollution outlook report.

This first zero pollution monitoring assessment largely serves as a baseline. Together with future assessments, it will support the Commission and Member States in assessing progress towards the current zero pollution targets. It will also inform future policies designed to support the zero pollution ambition.

This summary document accompanies the more detailed zero pollution monitoring assessment which is a [web-based report](#) available at the link below.

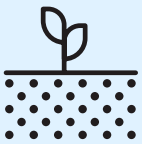


Key messages

- The zero pollution action plan sets six headline targets for 2030. Trends that relate to these targets show a mixed picture:



- Good progress in reducing the health impacts of air pollution has been achieved, with a 45% fall in premature deaths since 2005. If this past trend continues, the EU will be on track to meet the target of a 55% reduction.



- The area of land negatively affected by air pollution has fallen by 12% since 2005. If this past trend continues, the EU will not meet the target of a 25% reduction.

- Little progress has been made in reducing nutrient losses since the 2012-2015 baseline. Based on the limited progress to date, the EU is not on track to achieve the 50% reduction target.



- The use and risk of pesticides has fallen by 14% since the baseline period of 2015-2017, while the use of more hazardous pesticides has fallen by 26%. Based on this recent trend, the EU is on track to meet its target of cutting the use and risk of pesticides, and the use of the more hazardous pesticides, by 50%.



- Sales of veterinary antimicrobials have fallen by 18% since 2018. If this past trend continues, the EU will be on track to meet the target of a 50% reduction.



- There was no significant reduction in the share of people impacted by transport noise between 2012 and 2017. With no indications of noise levels having declined significantly since then, the EU is unlikely to meet the target of reducing the share of people chronically disturbed by transport noise by 30%.



- Provisional analysis suggests that the amount of plastic litter at sea has fallen in recent years. While this is encouraging, consistent and comprehensive EU-wide data is needed to assess progress towards the targets of reducing plastic litter at sea by 50% and reducing releases of microplastics into the environment by 30%.



- Total waste generation has been stable since 2010, while residual municipal waste generation has been stable since 2016. If these waste streams do not decline significantly in coming years, the EU will not meet the targets of significantly reducing total waste generation and of reducing residual municipal waste by 50%.

Key messages

- Good progress has been made towards reducing air pollution from industry, transport and homes — reducing the number of deaths linked to air pollution as a result. At the same time, Europe has been maintaining and improving its bathing and drinking water quality and reducing the risk of antimicrobial resistance. Encouraging trends are taking place in reducing pesticide use, although the resulting positive impact on the environment is yet to be seen.

- Progress is slower in other areas:



- Noise from transport continues to harm health, with little progress made towards reducing noise levels.



- Preventing excess nutrients and persistent chemicals from harming Europe's freshwater and marine ecosystems is proving to be a significant challenge.



- Efforts to reduce waste have delivered limited results to date. Europe's present systems of production and consumption are a barrier to a more sustainable and circular economy.

- Several emerging issues can be identified, even if evidence is not available for all EU countries:



- An increasing body of evidence demonstrates that citizens' health is being adversely affected by hazardous chemicals that pollute our bodies.



- Growing evidence of soil pollution highlights the long-term damage being done to ecosystems that are crucial for healthy food and biodiversity.



- Light pollution, which affects nocturnal species, is another potential area of concern where there are currently little or no legislative controls.

- There are clear inequalities in terms of exposure to pollution. People in lower socio-economic groups are more affected by air pollution, while noise disproportionately impacts those living in urban areas. Children are also particularly vulnerable to the effects of air pollution and chemicals.
- While Europe is making important progress towards its 2050 ambition of reducing pollution to levels no longer harmful to health and natural ecosystems, further efforts will be needed to eliminate all negative impacts. Several new policy proposals are currently under consideration that have the potential to accelerate progress towards this ambition.

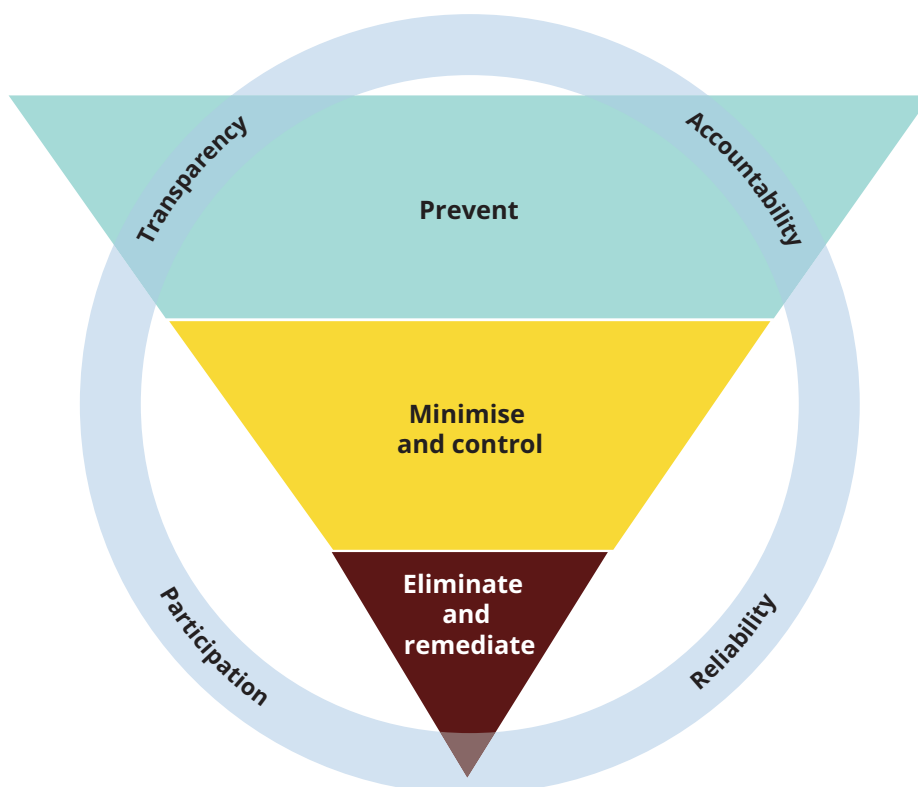
The zero pollution action plan

The EU [zero pollution action plan](#) aims to address the key pollution issues negatively impacting both the environment and human health. This plan is a fundamental element of the [European Green Deal](#) and is supported by the overarching [8th Environment Action Programme](#). It presents a vision for 2050: by that year, pollution should no longer be at levels harmful to human health and natural ecosystems.

The framing of 'zero pollution' signals the highly ambitious nature of the action plan and emphasises that systemic change will be required to deliver on its objectives. The zero pollution hierarchy (shown below) outlines the process that should be undertaken to meaningfully tackle pollution. It highlights the core importance of **preventing** pollution in the first place which gives the best chance of meeting the zero pollution action plan objectives.

Key to tracking progress towards the zero pollution ambition is the development of a 'monitoring and outlook framework'. This framework will help assess progress towards the action plan objectives in the following ways:

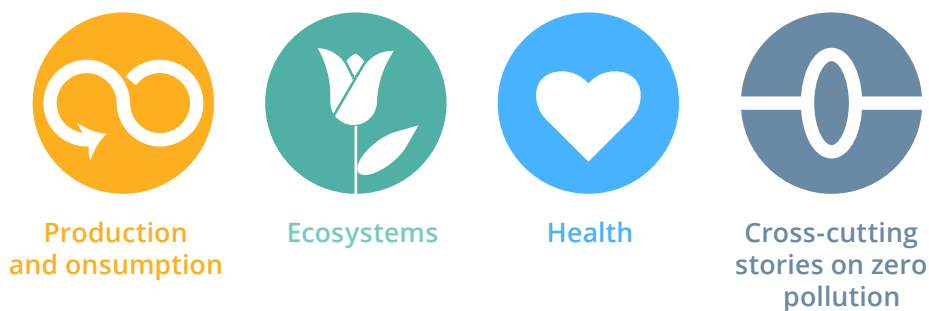
- **Monitoring:** assessing progress resulting from the measures implemented to support the zero pollution ambition, identifying the 'distance to target' to the objectives and highlighting the successes in achieving and risks of not achieving the overall objectives.
- **Outlook:** assessing the likelihood of achieving the objectives within the initial 2030 and longer-term 2050 timeframes. This outlook will also help identify potential challenges, taking into account current and future policies and relevant assessments (e.g. modelling/forecasting).



Accompanying resources



This summary document is based on the [EEA Zero pollution monitoring assessment 2022](#), which is a web-based assessment. The assessment is structured around the following components:



The assessment also presents 'Signals' in each section which highlight emerging issues and other sources of information include findings from research, country-level information and other knowledge that may help highlight pollution issues that are not fully addressed by legislative or other reporting.

Other available recently published zero pollution resources include:

- European Commission [zero pollution action plan webpage](#), including the Commission zero pollution monitoring and outlook report.
- The [zero pollution action plan outlook assessment](#), completed by the European Commission Joint Research Centre (JRC).
- [Horizon research projects supporting the zero pollution action plan](#) published by the European Commission, Directorate-General for Research and Innovation.



Commission zero pollution monitoring and outlook report



JRC zero pollution outlook report 2022



Horizon research projects supporting the zero pollution action plan

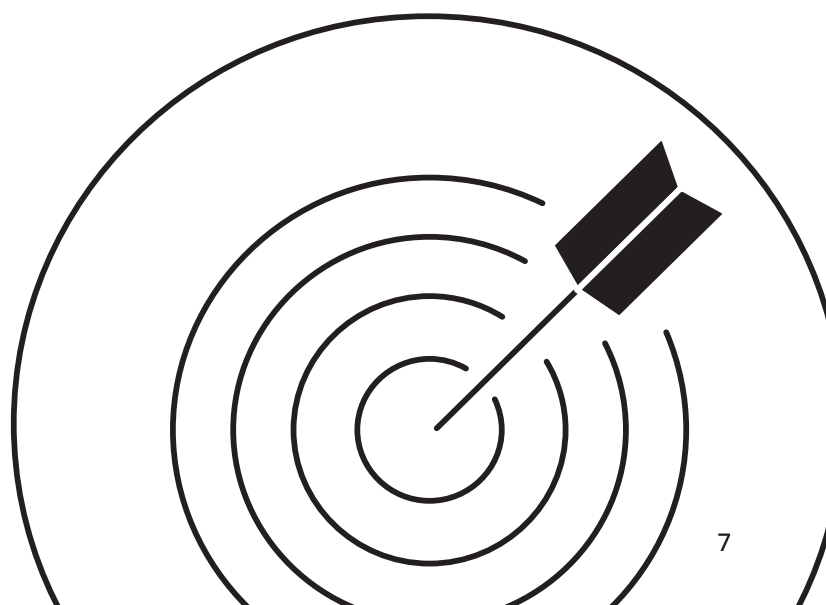
Summary: assessing progress towards the zero pollution targets

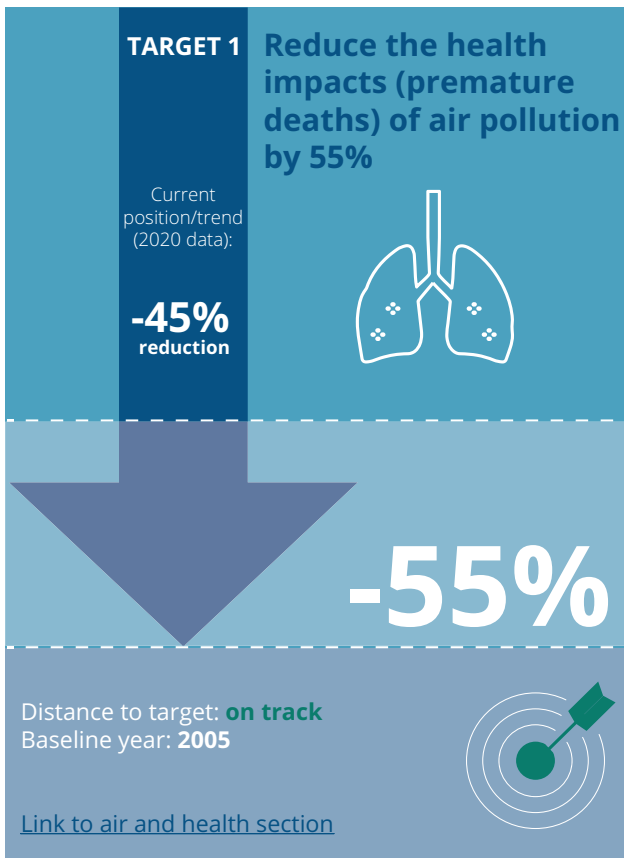
The zero pollution action plan lists six targets to be achieved by 2030. Certain targets include several sub-targets; therefore, the target card analysis below presents these as 10 separate targets so that each can be considered individually.

In addition to assessing the past trend, the current 'distance to target' is also considered, with an assessment of the likelihood of achieving the target based on recent trends. The distance to target is categorised on the following basis:

- **On track:** extrapolation of past trends suggests that the target will likely be met.
- **Mostly on track:** extrapolation of past trends suggests the target will be close to being met by 2030.
- **Partly on track:** extrapolation of past trends suggests progress will be made towards the target, but the target will not be met.
- **Not on track:** extrapolation of past trends indicates limited or no progress, the target will not be met.
- **Uncertain:** lack of clear evidence due to knowledge gaps.

Some element of expert judgement is also used where there are uncertainties in the available evidence.





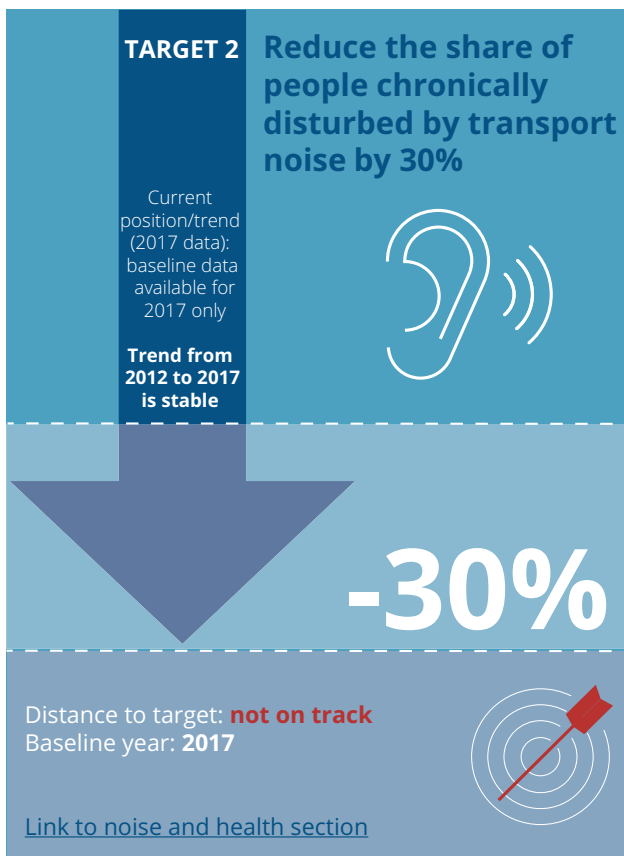
As a result of measures to reduce fine particulate matter (PM_{2.5}) emissions, associated premature deaths were 45% lower in 2020 compared to 2005.

Reaching the 2030 target will still leave a significant number of annual premature deaths linked to air pollution. Significant further efforts will be needed to meet the zero pollution vision for 2050 of reducing air pollution to levels no longer considered harmful to health.

This burden is also not evenly shared. Premature deaths per capita in central and eastern European countries are generally significantly higher than in western Europe.

More information:

- [EEA zero pollution assessment — air and health](#)
- [JRC outlook assessment](#)
- [Third clean air outlook](#)
- [EEA indicator on air pollution exposure](#)



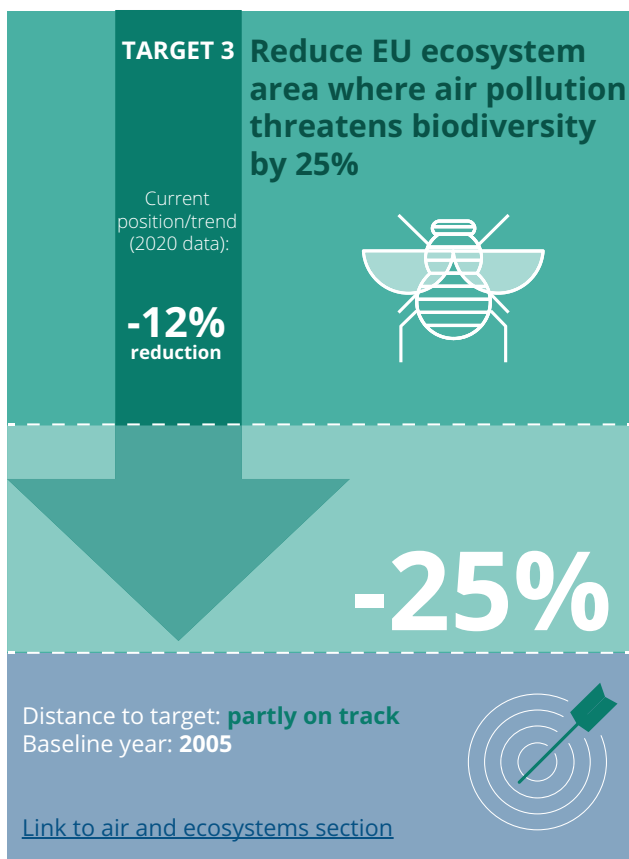
No significant decrease in the number of people exposed to harmful noise levels was observed between 2012 and 2017.

If this past trend continues, the EU will likely fail to meet the target of reducing the share of people chronically disturbed by transport noise by 30%.

The number of people 'highly annoyed' and 'highly sleep disturbed' must be reduced by 5.4 million and 1.5 million, respectively, to meet the 2030 zero pollution targets for noise pollution.

More information:

- [EEA zero pollution assessment — noise and health](#)
- [EEA indicator on noise exposure](#)
- [EEA briefing — noise outlook to 2030](#)
- [JRC outlook assessment](#)



In 2005 (the baseline year), more than 85% of the total ecosystem area in the EU was threatened by air pollution. By 2020, this had reduced by 12%. However, the area under threat remains high and improvement is relatively slow.

Ammonia from agriculture is the key source of nitrogen deposition — one of the greatest factors impacting ecosystems.

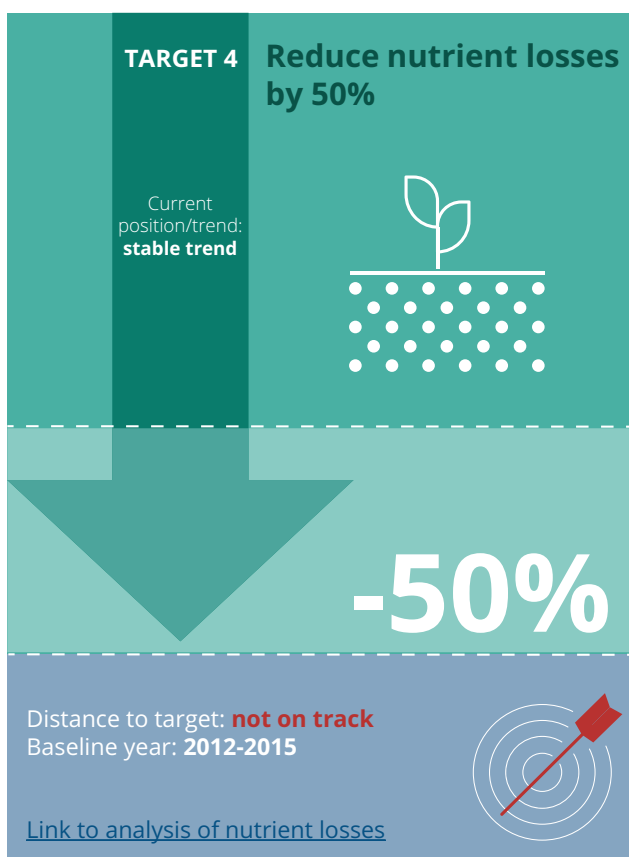
If this past trend continues, the EU will not meet the target of a 25% reduction.

More information:

[EEA zero pollution assessment — air and ecosystems](#)

[JRC outlook assessment](#)

[Third clean air outlook](#)



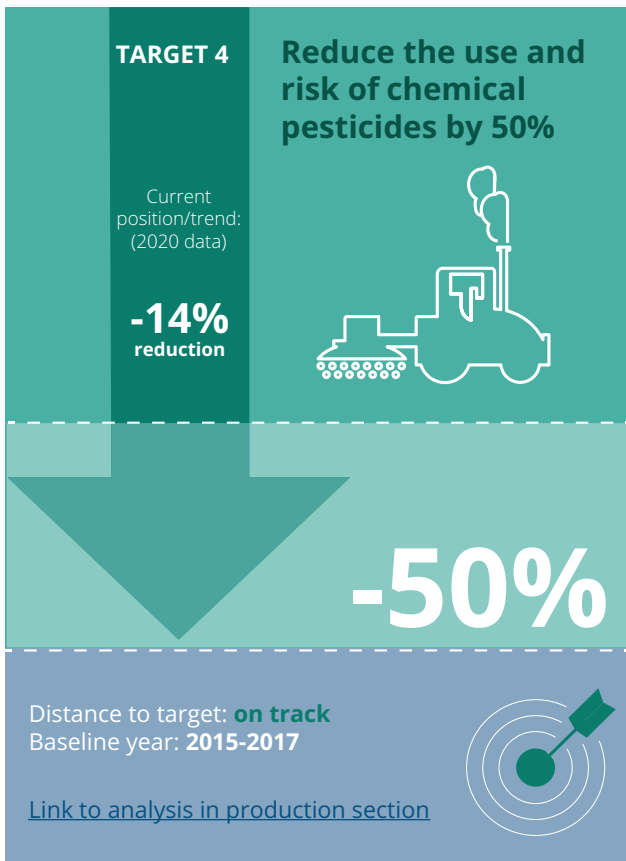
Over the past few years, trends around nutrient losses have remained stable — with no obvious evidence of reduction.

Based on the limited progress to date, the EU is not on track to meet the 50% target.

More information:

[EEA zero pollution assessment — nutrient losses](#)

[JRC outlook assessment](#)



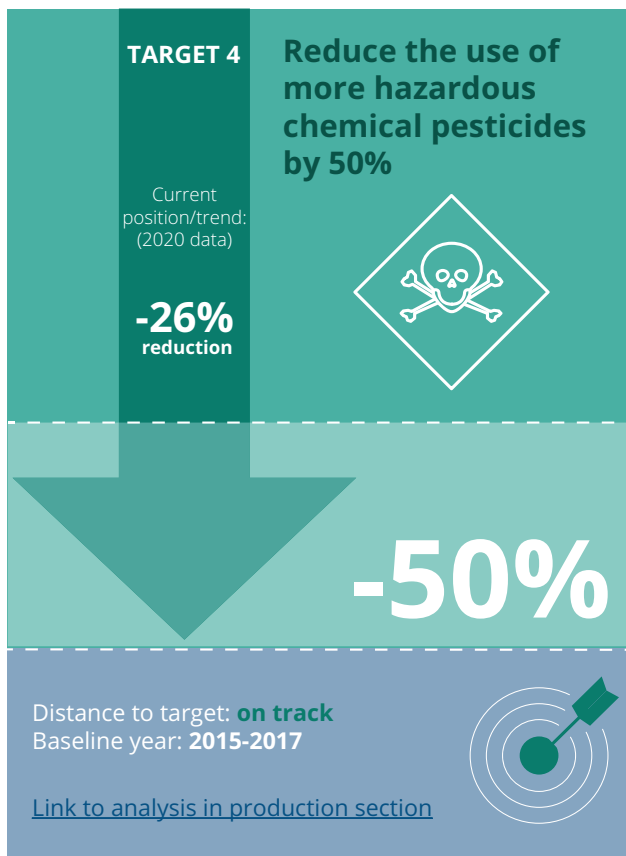
The European Commission’s analysis of the combined use and risk of chemical pesticides indicates a 14% drop between 2015-2017 and 2020.

Based on this recent trend, the EU is on track to cut the use and risk of chemical pesticides by the target of 50%.

More information:

[EEA zero pollution assessment — pesticides](#)

[European Commission trend assessment](#)



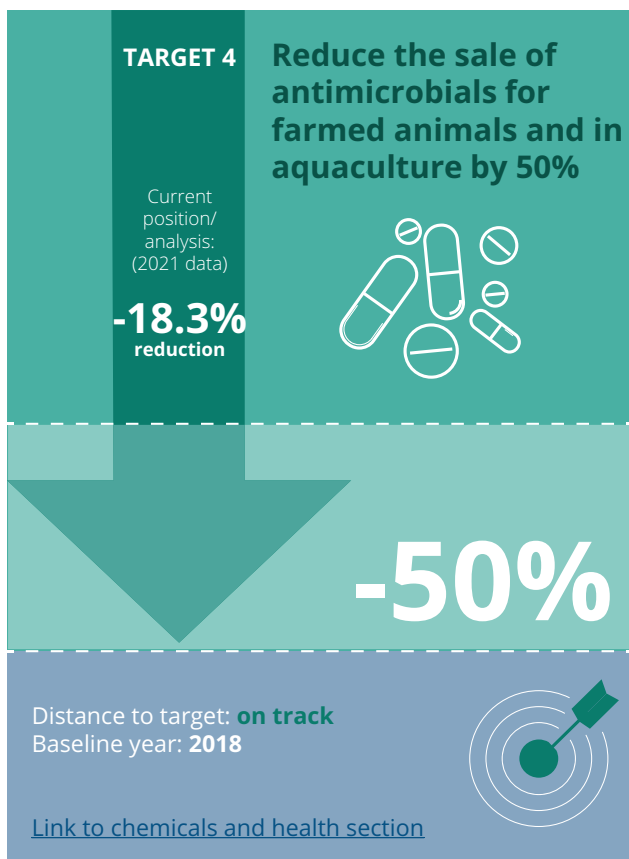
The European Commission’s analysis on the use of more hazardous pesticides indicates a 26% drop between 2015 and 2020.

Based on this recent trend, the EU is on track to cut the use of more hazardous pesticides by the target of 50%.

More information:

[EEA zero pollution assessment — pesticides](#)

[European Commission trend assessment](#)



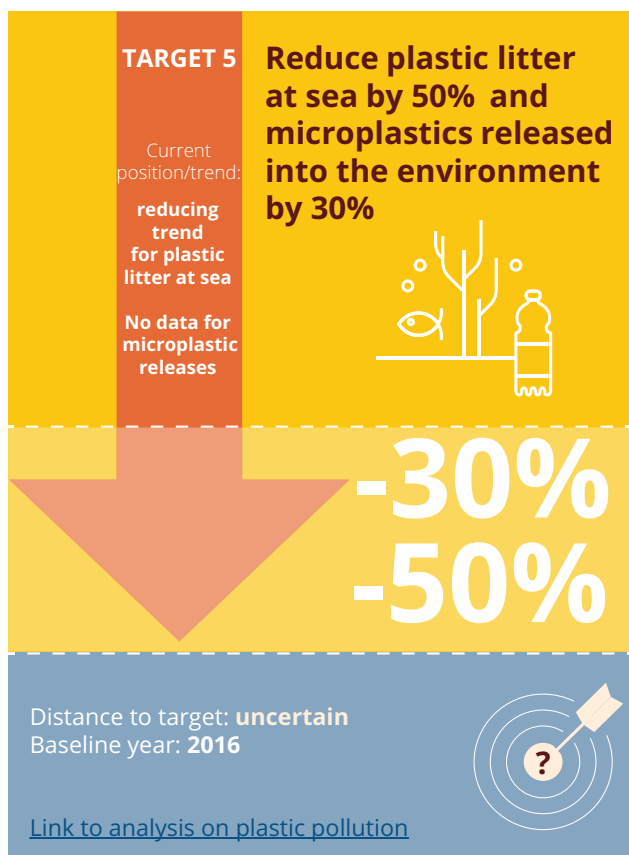
The most recent data for 2021 identify an 18.3% decrease in antimicrobial sales.

If this past trend continues, the EU will be on track to meet the target of a 50% reduction.

More information:

[EEA zero pollution assessment — antimicrobials](#)

[European Medicines Agency database](#)

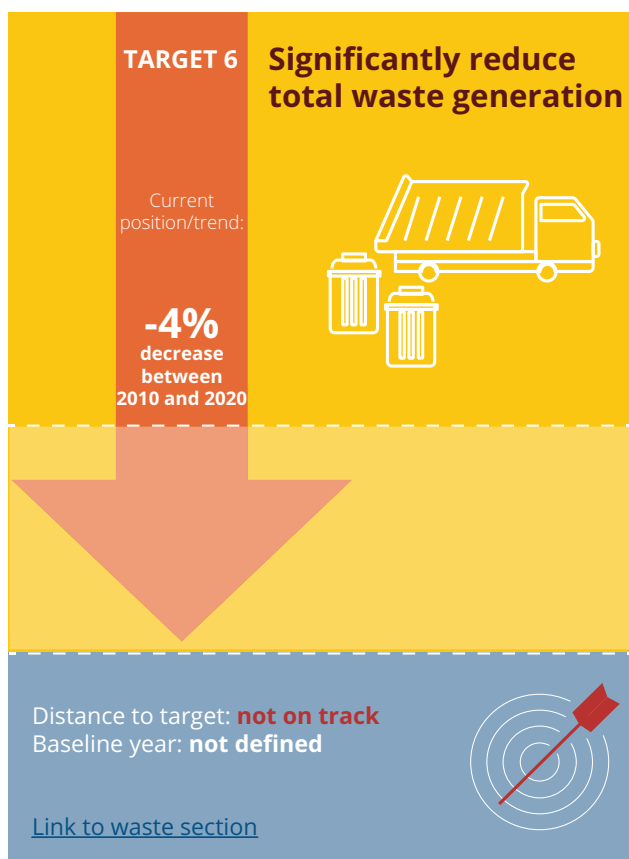


A provisional analysis of litter data, reported by Member States under the Marine Strategy Framework Directive, has been completed by the European Commission Joint Research Centre. The results point to a reducing trend in litter at sea. A quantitative assessment will be available in 2023.

At present, there is no data available to assess trends in microplastic release into the environment.

More information:

[EEA zero pollution assessment — plastics](#)



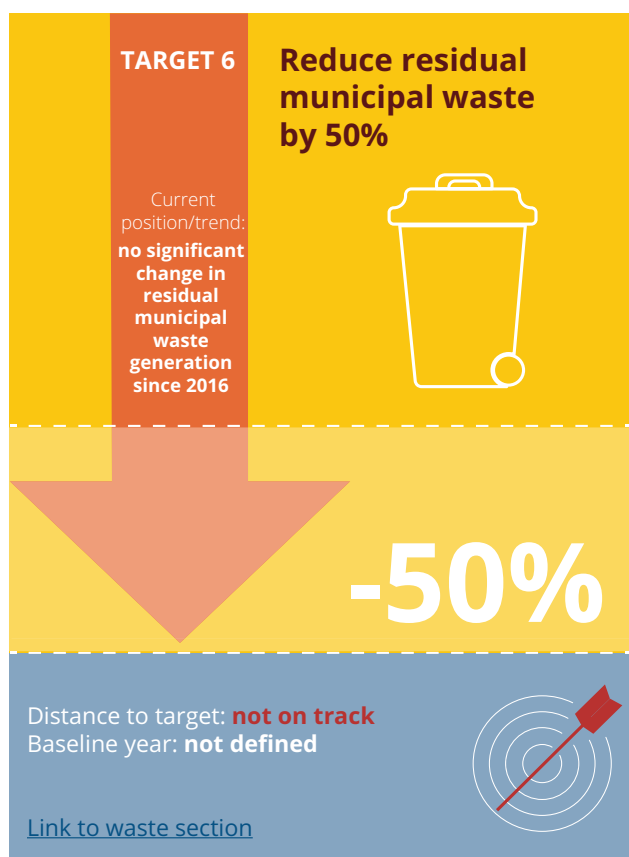
Waste generation had been slowly increasing between 2010 and 2018 with a sharp decrease in 2020. The decrease is related to the effects of the COVID-19 pandemic, so it is expected to be a temporary phenomenon.

If these past trends continue, the EU will not meet the target of significantly reducing total waste generation by 2030.

More information:

[EEA zero pollution waste assessment](#)

[EEA indicator on waste generation](#)



Residual municipal waste quantities reduced between 2004 and 2016, but since then, they have remained stable at around 113 million tonnes.

Reaching the target of a 50% reduction would mean reducing the amount of residual municipal waste by around 56.5 million tonnes (based on 2020 data).

If these past trends continue, the EU will not meet the target of reducing residual municipal waste by 50%.

More information:

[EEA zero pollution waste assessment](#)

[EEA briefing on residual municipal waste](#)

Next steps

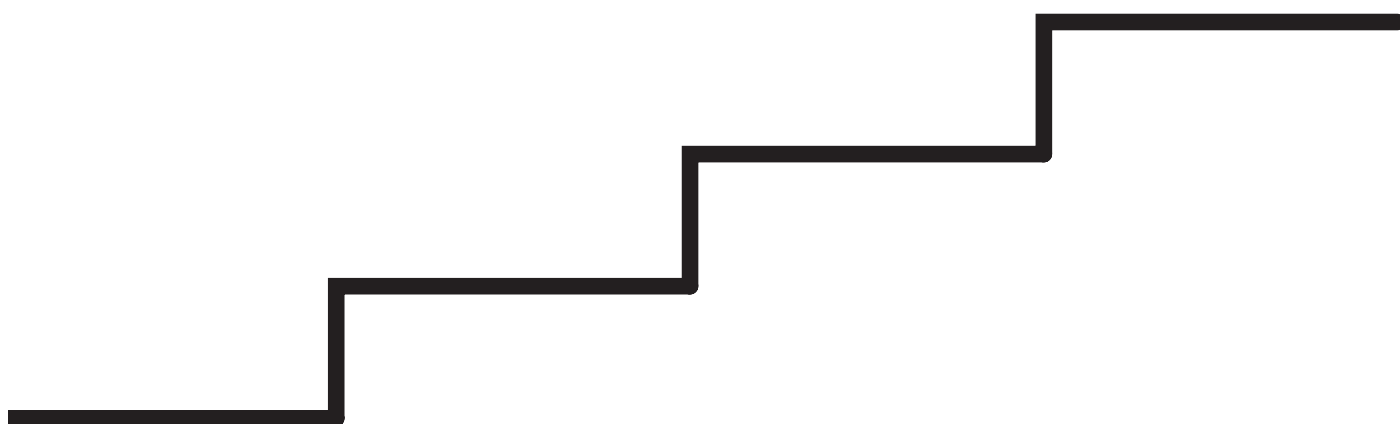
The EEA's [zero pollution monitoring assessment](#) provides the first review of progress towards the objectives outlined in the zero pollution action plan.

While clear progress is being made in some areas, the same cannot be said for others. In certain areas, the rate of pollution reduction has slowed or stopped completely. Although we lack complete knowledge about some areas, such as the risks posed by chemicals, data are nevertheless sufficient enough to prove that chemicals released into the environment are already impacting human and ecosystem health.

There are clear inequalities in exposure to and impacts from pollution, with little evidence of these inequalities reducing.

While the assessment indicates mixed progress, the EU is at a very early stage in the process of delivering on the objectives of the zero pollution action plan. The primary function of this assessment is to benchmark progress and support the European Commission and Member States in identifying areas where further measures are needed to move towards a zero pollution future.

A second monitoring and outlook assessment will be published in 2024 to review ongoing progress and revisit the most persistent barriers to achieving the zero pollution targets.





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