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Zero Pollution Stakeholder Workshop

“Zero Pollution Monitoring and Outlook”

Day 1, 24 January 2024



Agenda

13:30	Registration and welcome coffee
14:00	Welcome and introduction
14:15	Zero Pollution Monitoring and Outlook 2022 – results and lessons learnt
<i>15:30</i>	<i>Coffee break</i>
16:00	Zero Pollution Monitoring 2024
17:30	End of day 1 – Networking drink



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Introduction & objectives of the workshop

slido

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slido.com
#ZPMO2024





Stakeholder Workshop on Zero Pollution Monitoring and Outlook

Lessons learnt

24/25 January 2024



ZERO POLLUTION
MONITORING AND
OUTLOOK

Zero Pollution Monitoring & Outlook 2022

- **High ambition level** for the first edition of the ZP Monitoring and Outlook
- Aim to present the **available evidence in an integrated way** and the **best scientific advice** to support policy priorities under the Green Deal which affect the pollution of air, water and soil.
- The overarching questions were:
 - how the total pollution load affects **human health** and **biodiversity**?
 - What are the main **contributions** (sources/pressures) from the various economic sectors?
 - How much **progress** have we made towards the targets and will we be able to **achieve them in 2030**?

This high ambition was only partially fulfilled in the first edition but it remains valid.



Listening to stakeholders – 2022 conference messages

- **A solid basis for the policy agenda:** stakeholders generally welcomed the reports presenting a solid evidence base for ambitious action. They show that progress has been made, but also that more has to be done and can be done. Evidence is also important to support implementation.
- **A need for further research:** the reports provide sufficient evidence to act, but there is still need for further research. There are significant knowledge gaps (e.g. soil or foresight scenarios that include systemic challenges) that must be addressed.
- **A call that work must be done on all governance levels** to deliver on the zero pollution targets.
- And **support from stakeholders for a systemic perspective to tackle pollution** and the **importance of ensuring policy integration and coherence** targeting the pollution at source.
- Frequently mentioned, were also the **inequalities surrounding exposure to dangerous pollution levels**, the **need for citizen science in identifying the right solutions** and the **underrepresentation of certain issues such as noise and light pollution**.

How do collect more feedback systematically? E.g. through this workshop...



Lessons learnt - benefits

Moreover, integrating all pollution data into one Zero Pollution assessment has provided a number of benefits. In particular, it:

- offered **new, relevant insights**;
- **one-stop shop** for pollution assessments;
- gave an overview whether **policy implementation is on track**;
- exposed **synergies** and **trade-offs** between different EU policies;
- helped translate **‘early warnings’** into **recommendations** on pollutants of increasing concern based on the latest research findings.



Lessons learnt - shortcomings

- The monitoring was based on **existing data** mostly from regulatory monitoring. The **available data are very diverse** in terms of quality, completeness, timeliness and maturity .
- The **challenge of combining** not easily comparable data, stemming from different scientific sources or projects, into an **integrated picture**.
-> *However, exposing these data deficiencies has already led to actions to improve the situation.*
- The outlook was based on **existing modelling tools** developed in the past **only in some policy areas** and **often not fully integrated** yet (except for air pollution and nutrients).
- The **link to climate monitoring and modelling** can be further strengthened, building on the positive experience of the Clean Air Outlook, with the view to demonstrating better the synergies and possible trade-offs between policies.



Lessons learnt – shortcomings (format)

Improvements on the format are needed on:

- **Visualization**, e.g. by using more maps, dashboards or score cards as well as infographics for the monitoring and outlook part;
- **User-friendliness**, in particular user-friendliness of online products.
- **Policy summary**, e.g. by integrating the various reports into one product which will be published and printed.
- **Structure of content**, the main challenge was to find details in the wealth of information. Pollution topics can be structured around the impacts, the pressures and the sectors...also different users are looking for different entry gates or better index or search functionality.





EEA's Lessons Learnt



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- Simple navigation structure adequately covers complex topic.
- Complexity of integrated analysis of multiple different factors.
- Synergies with other related mechanisms and ensure consistent messaging.
- Knowledge gaps: microplastics, soil.
- Difficulties in reporting timelines across different data streams.



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JRC's Lessons learnt from the 2022 ZP Outlook

- JRC Editorial board
- Improve integration of monitoring and outlook
- Better integrate soil-water-air
- Strengthen link to climate monitoring and modelling
- Better demonstrate synergies and possible trade-offs between policies
- Maintain consistency of baselines and key messages





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Questions for discussion

- Do you agree with the lessons learnt so far?
- Which ones are missing?
- How can we make the Zero Pollution Monitoring & Outlook even more policy relevant?
- What issues/topics are missing from the assessment and need to be considered in preparing the next Zero Pollution monitoring and outlook assessment in 2024?



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Contact us

ENV-ZERO-POLLUTION@ec.europa.eu

https://ec.europa.eu/environment/zero-pollution-stakeholder-platform_en





COFFEE BREAK - we will reconvene at 16:00

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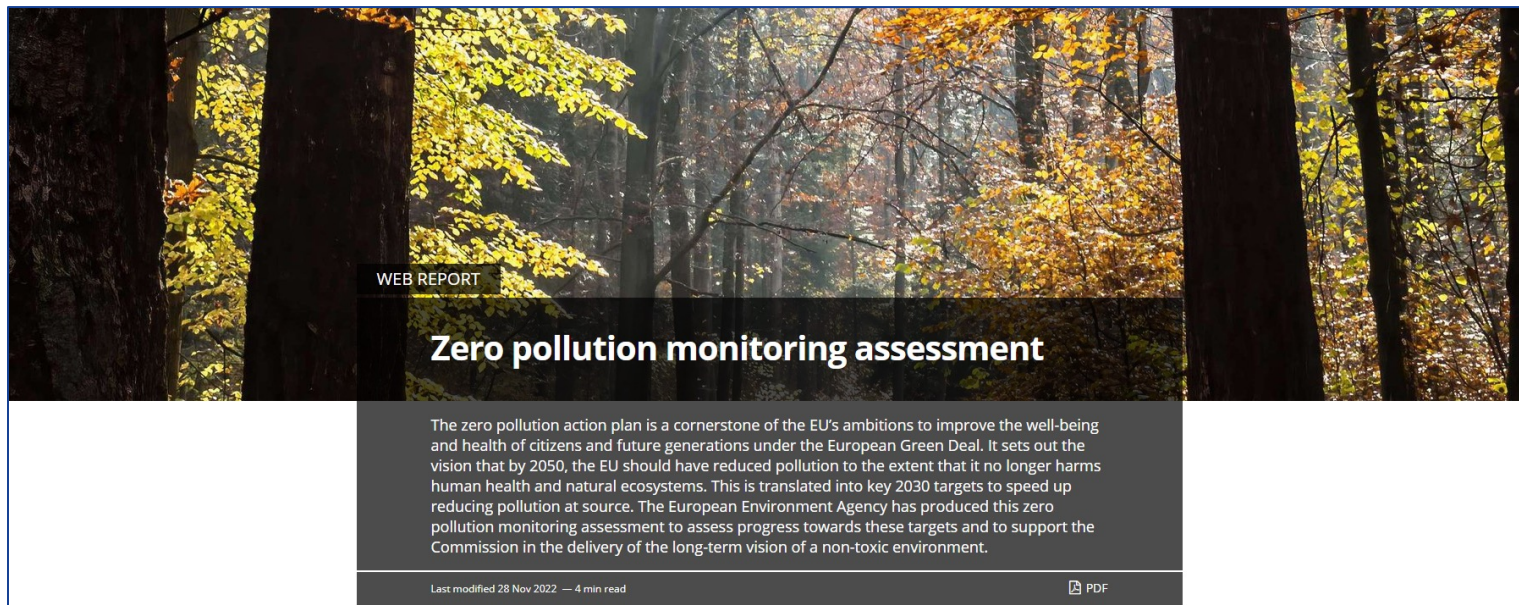


Zero Pollution Monitoring 2024



EEA Zero Pollution Monitoring Assessment 2022

Web report: <https://www.eea.europa.eu/publications/zero-pollution>

A screenshot of the web report page. The background is a photograph of a forest with trees in autumn. A dark semi-transparent box is overlaid on the image. At the top left of this box, it says 'WEB REPORT'. In the center, the title 'Zero pollution monitoring assessment' is displayed in white. Below the title, there is a paragraph of text. At the bottom left of the box, it says 'Last modified 28 Nov 2022 — 4 min read'. At the bottom right, there is a PDF icon and the text 'PDF'.

Summary
For policymakers - PDF



Structure of the first assessment report



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Chapters of the zero pollution monitoring assessment 2022:

- Production and consumption chapter and associated signals
- Ecosystems chapter and associated signals
- Health chapter and associated signals
- Zero pollution cross-cutting stories

Sections of the **health** assessment:



Air pollution and health



Noise pollution and health



Water pollution and health



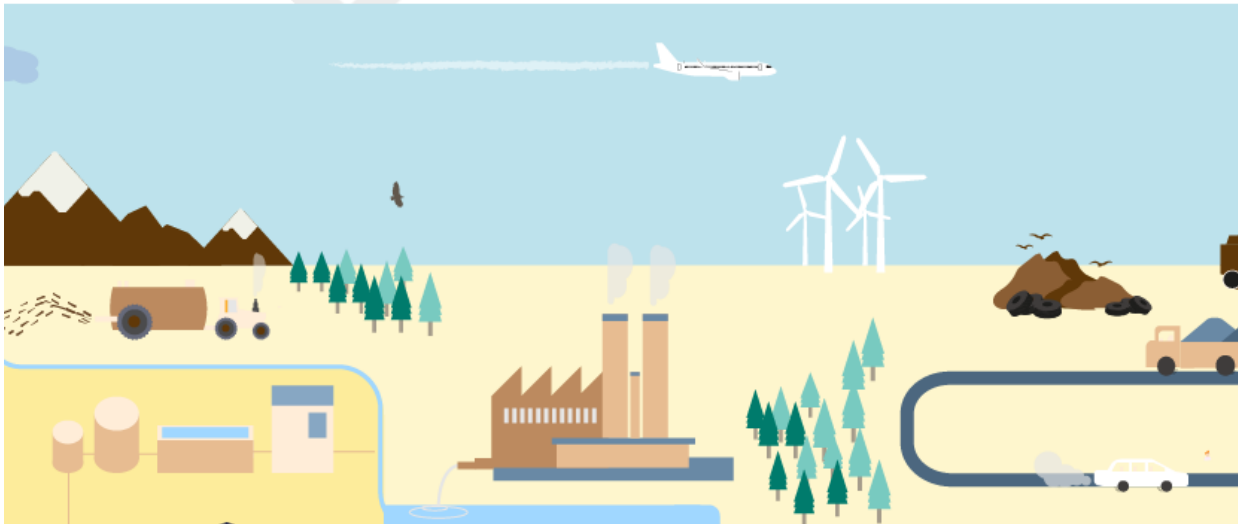
Chemicals and health



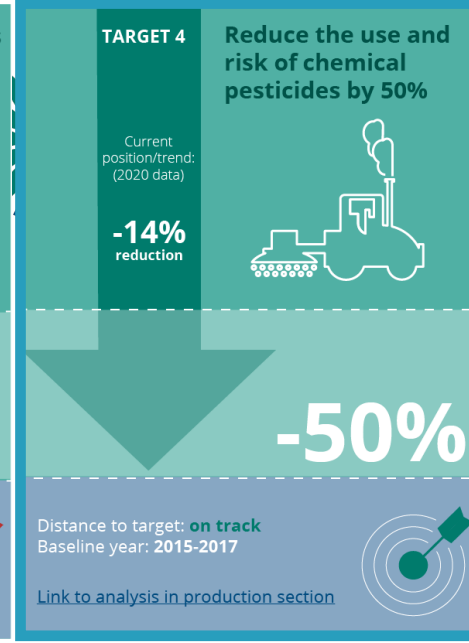
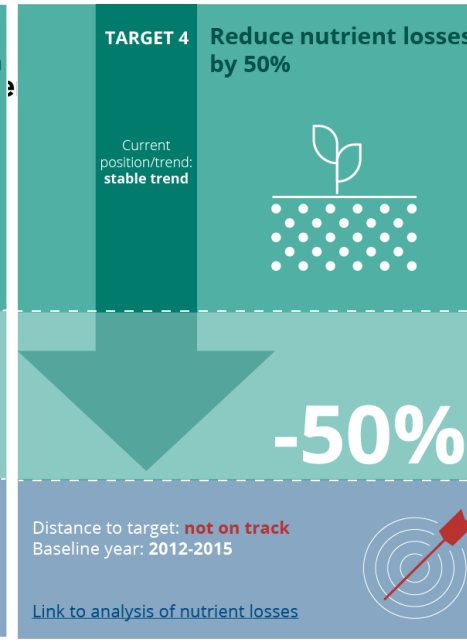
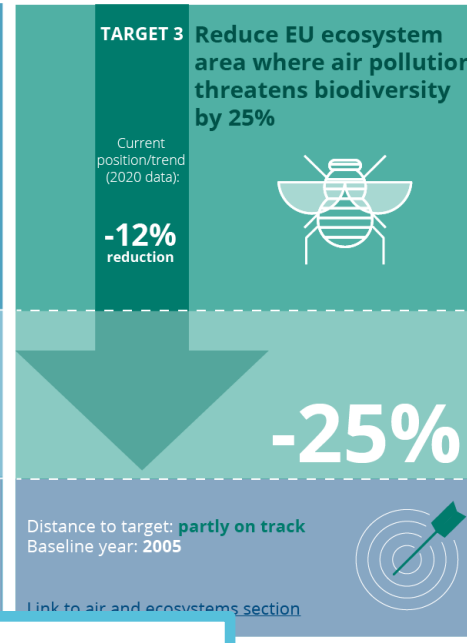
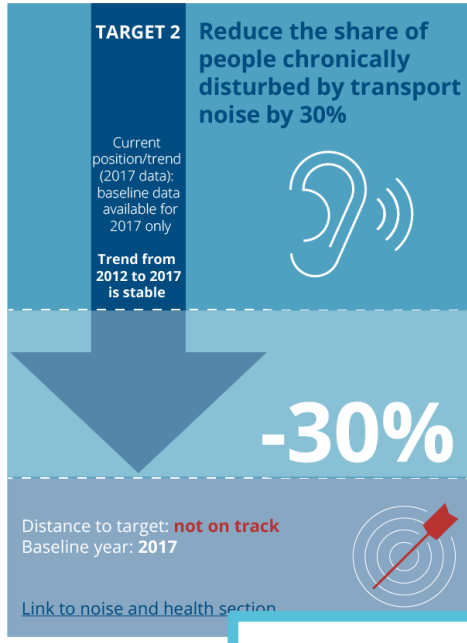
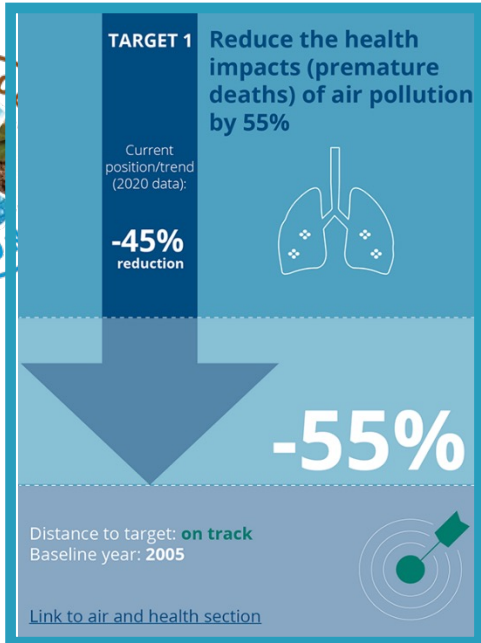
Soil pollution and health



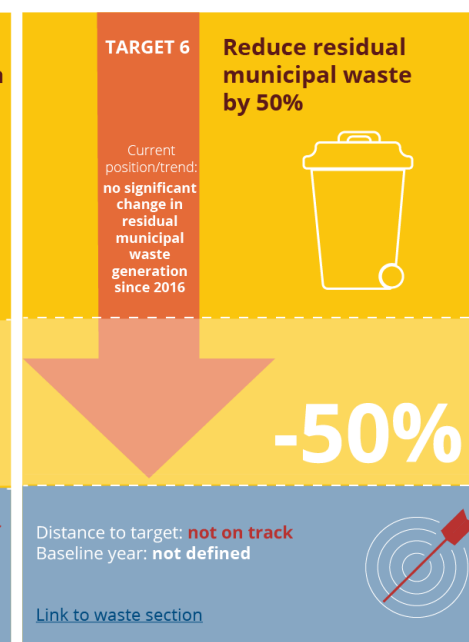
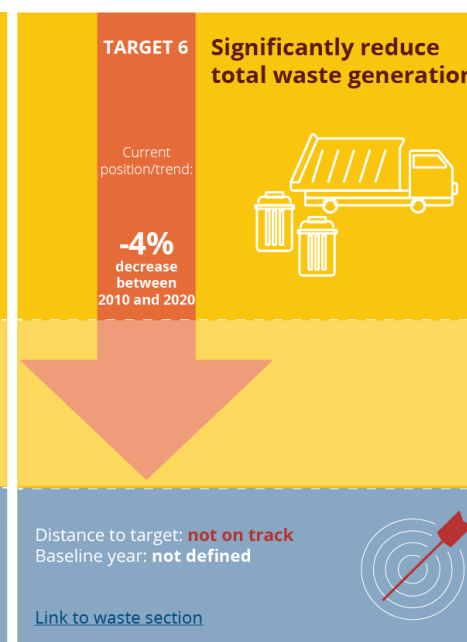
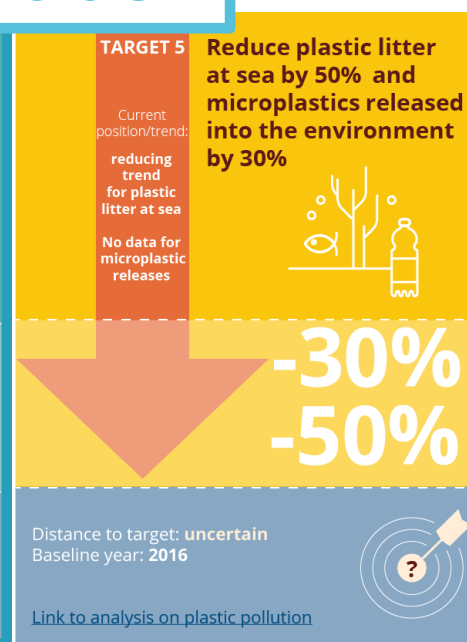
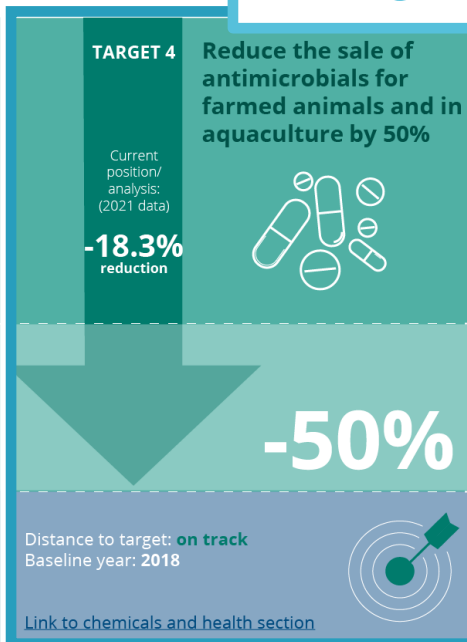
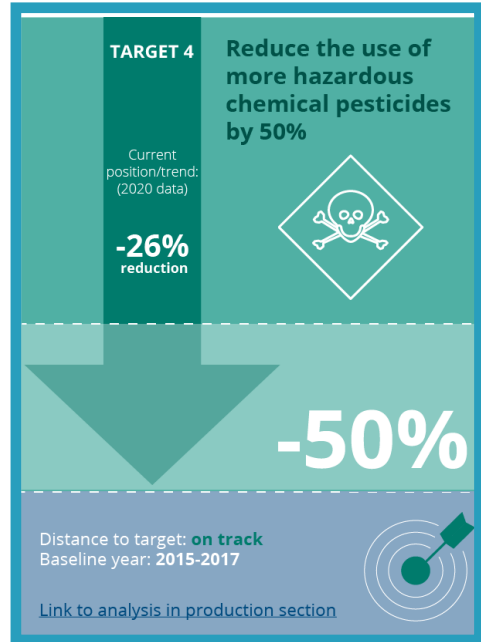
Health signals



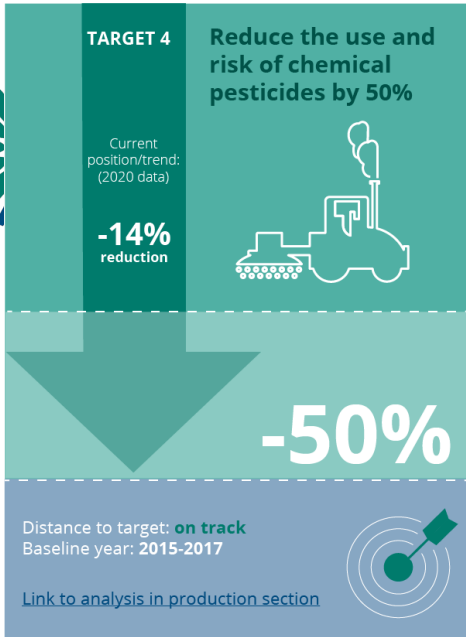
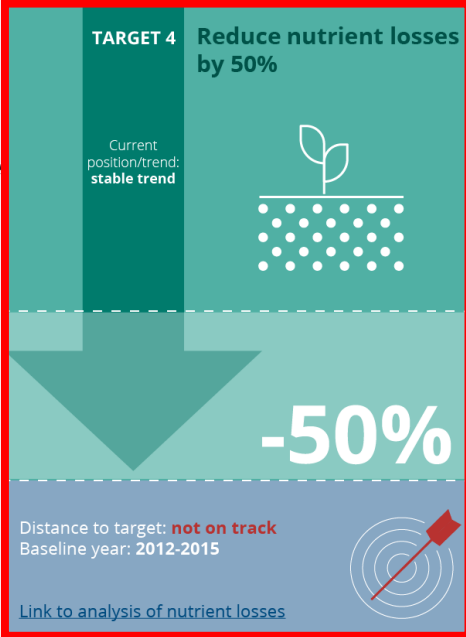
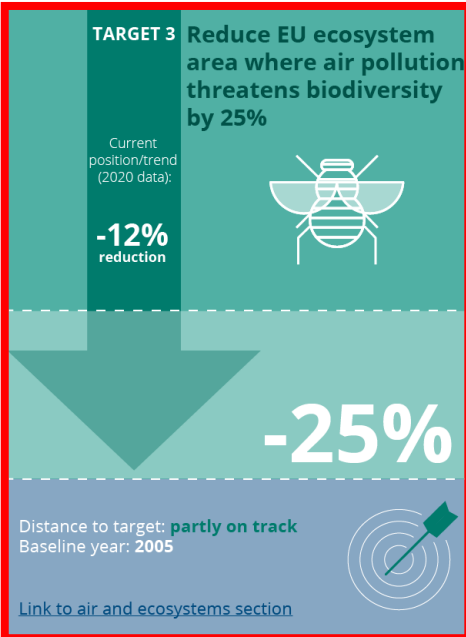
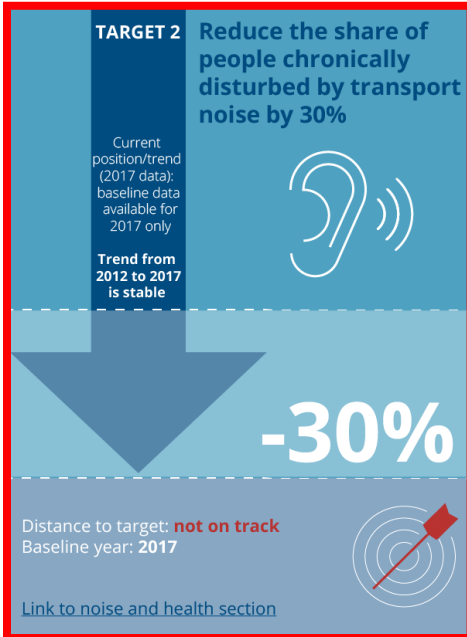
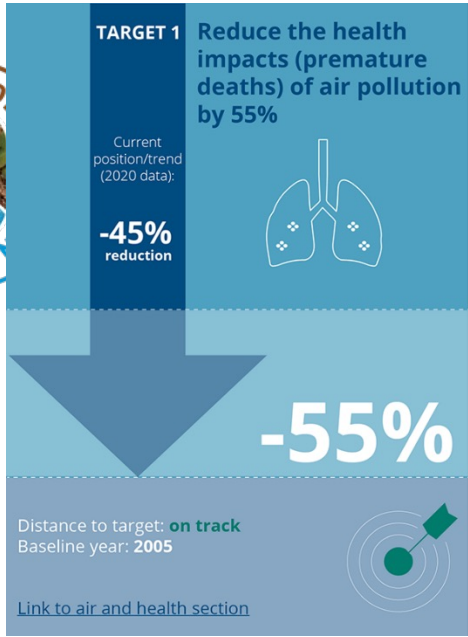
2030 targets and monitoring



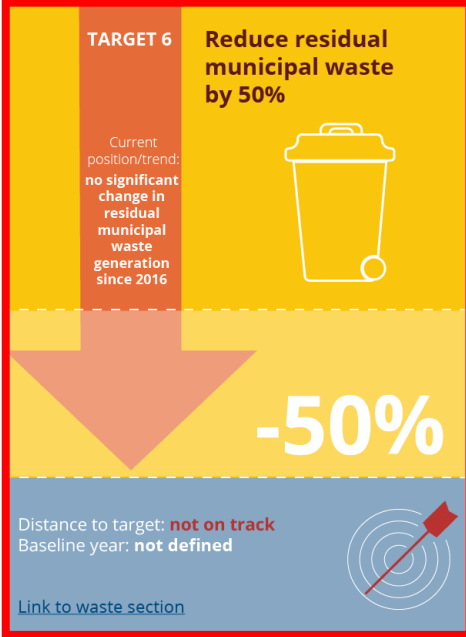
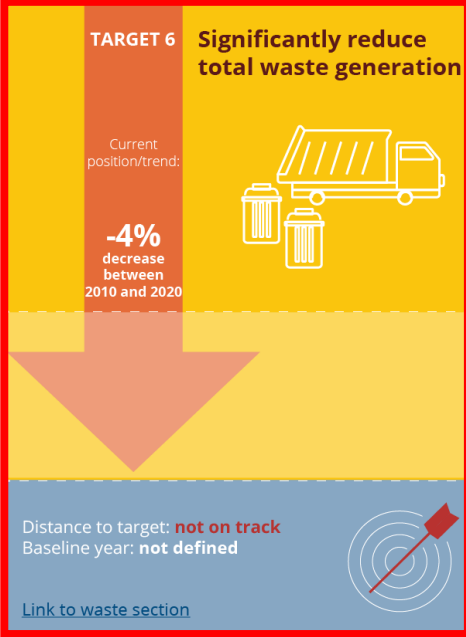
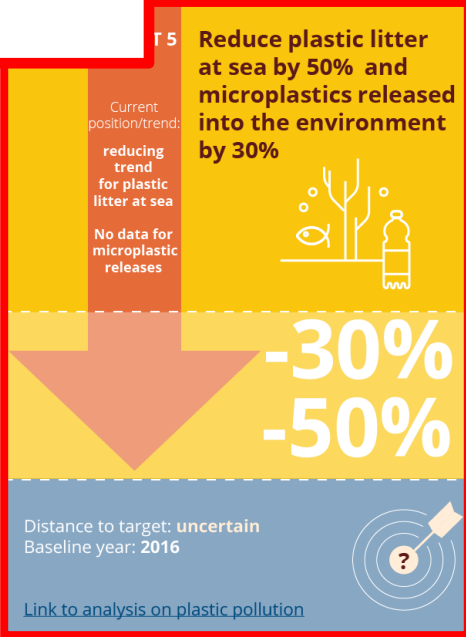
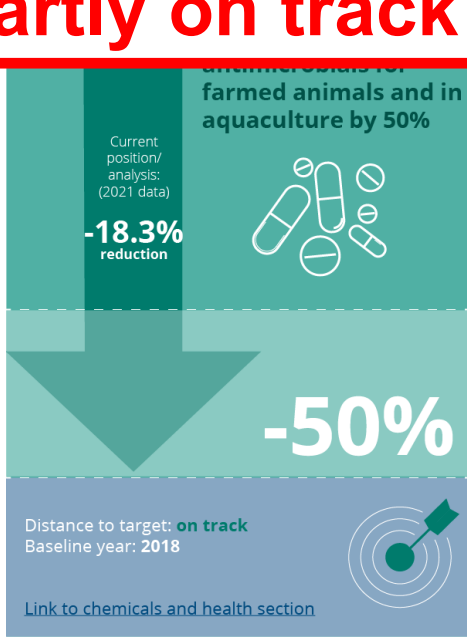
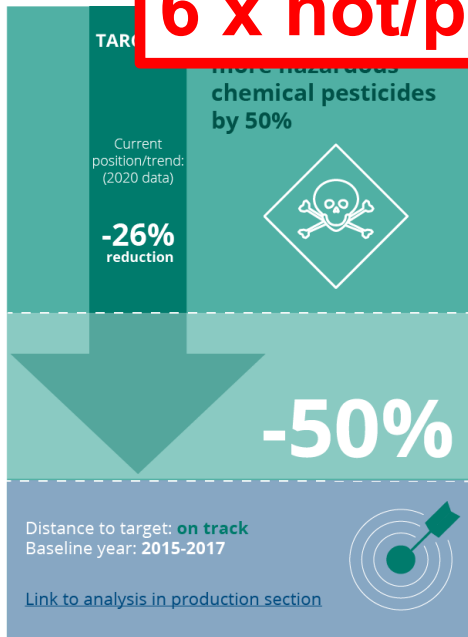
4 x on track



2030 targets and monitoring



6 x not/partly on track





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Zero Pollution Monitoring Assessment 2024

Zero Pollution Monitoring Assessment
 Page | Created 26 May 2023 | Modified 08 Sept 2023
 Image © Thomas Jaeger Well with Nature EEA

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Home > Sandbox > Zero Pollution (BHR) > Zero Pollution Monitoring Assessment

Ecosystems | Health | Production and Consumption | Synthesis Report

The zero pollution action plan is a cornerstone of the EU's ambitions to improve the well-being and health of citizens and future generations under the European Green Deal. It sets out the vision that by 2050, the EU should have reduced pollution to the extent that it no longer harms human health and natural ecosystems. This is translated into key 2030 targets to speed up reducing pollution at source. The European Environment Agency has produced this zero pollution monitoring assessment to assess progress towards these targets and to support the Commission in the delivery of the long-term vision of a non-toxic environment.

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 also 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:

Zero pollution targets for 2030

1. Reduce by more than 55 % the health impacts (premature deaths) of air pollution

Target analysis

Exceedance of air quality standards in Europe

Health impacts of exposure to fine particulate matter in Europe

2. Reduce by 30 % the share of people chronically disturbed by transport noise

3. Reduce by 25 % the EU ecosystems where air pollution threatens biodiversity

TOP

Dashboard

Joint Synthesis Report



Dashboard 2024



European Environment Agency

Freshwater Pollution Air Pollution Marine Pollution Soil Pollution

<p>Indicator</p> <p>Pesticides in rivers, lakes and groundwater in Europe</p> <p>22%</p> <p>of surface waters with pesticide levels exceeding safe effect thresholds in 2021</p> <p>Source: EEA</p>	<p>Indicator</p> <p>Oxygen consuming substances in European rivers</p> <p>Source: EEA</p>	<p>Indicator</p> <p>Nutrients in freshwater in Europe</p> <p>Source: EEA</p>	<p>Indicator</p> <p>Percent of sewage meeting treatment requirements in EU</p> <p>Source: EEA</p>
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<p>Indicator</p> <p>Nitrates in groundwater in Europe</p> <p>Source: EEA</p>	<p>Assessment</p> <p>Ecological and chemical status of water bodies</p> <p>Source: EEA</p>	<p>Assessment</p> <p>Groundwater Chemical Status</p>	<p>Assessment</p> <p>State of Water</p>
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Freshwater Pollution Air Pollution Marine Pollution Soil Pollution

<p>Indicator</p> <p>Atmospheric nitrogen deposition in terrestrial ecosystems in Europe</p> <p>Source: EEA</p>	<p>Indicator</p> <p>Exposure of Europe's ecosystems to ozone</p> <p>Source: EEA</p>	<p>Indicator</p> <p>Heavy metal emissions in Europe</p>	<p>Indicator</p> <p>Eutrophication caused by atmospheric nitrogen deposition in Europe</p>
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Indicator

Emissions of the main air pollutants in Europe

Source: EEA



Dashboard 2024 – EXAMPLE INDICATOR



European Environment Agency

Pesticides in rivers, lakes and groundwater in Europe

Page | Created 30 Jun 2023 | Modified 23 Aug 2023

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Zero pollution action plan 2030 target

Reduce the use of and risks from chemical pesticides and more hazardous ones by 50%.

Relevant objectives under the Chemicals Strategy for Sustainability

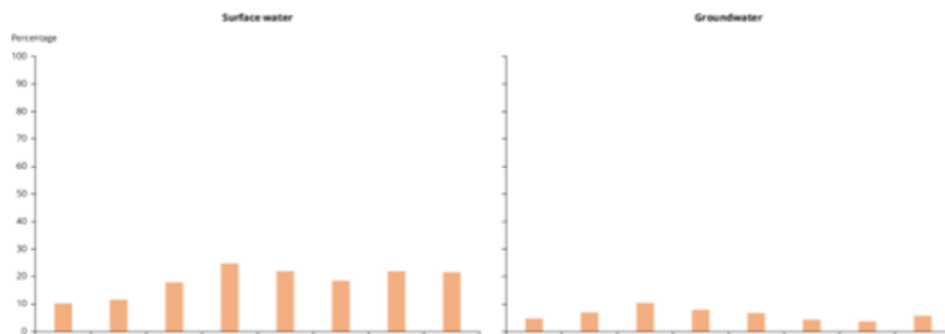
Restore health and environment to a good quality status

- Key messages
- Target Analysis
- Supporting information
- References

- In 2020, pesticide levels exceeded safe 'effect' thresholds in 22% of all reported monitoring sites in European surface waters.
- In groundwater, the exceedance rate was of 5%.

Pesticides were assessed against effect or quality thresholds between 2013 and 2020. One or more pesticides was detected above its effect threshold at 10% to 25% of all surface water monitoring sites in each year of assessment. No trends can be derived at this time and between-year changes may not be significant. Exceedances were mainly caused by the insecticide imidacloprid in surface waters, and the herbicides metolachlor and metazachlor. Exceedances of one or more pesticides were detected at between 4% and 11% of groundwater monitoring sites, mainly by atrazine and its metabolites. Imidacloprid, metolachlor and atrazine are no longer approved for use in the EU (EC, 2002; 2004; 2020).

The impact of unintentional mixtures is a specific focus area of the CSS. Addressing the combination effect of chemical mixtures with could lead to lower safe 'effect' thresholds and thereby increase the rate of exceedance of pesticide levels in surface water and groundwater bodies.



Sandbox > Zero Pollution (BHR) > Zero Pollution Monitoring Assessment > Ecosystems > Pesticides in rivers, lakes and groundw...

Ecosystems | Health | Production and Consumption | Synthesis Report

Zero pollution action plan 2030 target

Reduce the use of and risks from chemical pesticides and more hazardous ones by 50%.

Achieve good chemical status for all water bodies in Europe

Relevant objectives under the Chemicals Strategy for Sustainability

Restore health and environment to a good quality status

- Key messages
- Target Analysis
- Supporting information
- References

Pesticide concentrations were compared to the thresholds set by the Water Framework Directive (2000/60/EC) in surface water bodies. In groundwater, a precautionary quality standard of 0.1 µg/L is set for pesticides according to the Groundwater Directive (2006/118/EC). The results in terms of exceedance are weighted by country area.

Although data are available for 8 years, no trends can be derived at this time and between-year changes may not be significant; losses from the application of pesticides may vary considerably between years, depending upon, for example, crop type and the weather, while the frequency of monitoring of pesticides in surface waters can be limited to one year out of three. Monitoring sites might also not always be the same each year. Finally, changes to the approval status of pesticides influence their use and presence in water, which can also lead to difficulties in explaining trends over time. For instance due to its high persistence in the environment atrazine still causes exceedances. It is anticipated that a trend will become apparent in the next few years.

More information is available at the [EEA indicator page](#).



Joint Synthesis Report



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Outline

- ❖ Production and Consumption
- ❖ Ecosystems
- ❖ Health

Specific boxes

- ❖ Nutrients
- ❖ Pesticides
- ❖ Heavy Metals
- ❖ AMR
- ❖ PFAS
- ❖ Inequalities
- ❖ Digitalization, AI...

Details will be presented by JRC (Karin)
tomorrow





Synergies with other policy actions

8th Environment Action Programme



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- ❖ Chapter: Zero Pollution and a toxic free environment
- ❖ Common indicators:
 - Premature deaths due to exposure to fine particulate matter
 - Nitrates in groundwater
 - Common bird index
 - Consumption footprint
 - Area under organic farming
 - Environmental inequalities
- ❖ Same assessment methodology

<https://www.eea.europa.eu/en/topics/at-a-glance/state-of-europes-environment/environment-action-programme/8th-eap-indicator-based-progress-2023>

Chemicals Strategy for Sustainability (CSS)

The Indicator Framework under CSS sets up a number of indicators and signals on chemicals to monitor the drivers and impacts of chemical pollution and measure the effectiveness of chemicals legislation.

- ❖ Same structure: Dashboard and synthesis report
- ❖ Common indicators: long list, direct link to CSS under ZP.

EEA Circularity Metrics Lab (CML)

Common indicators

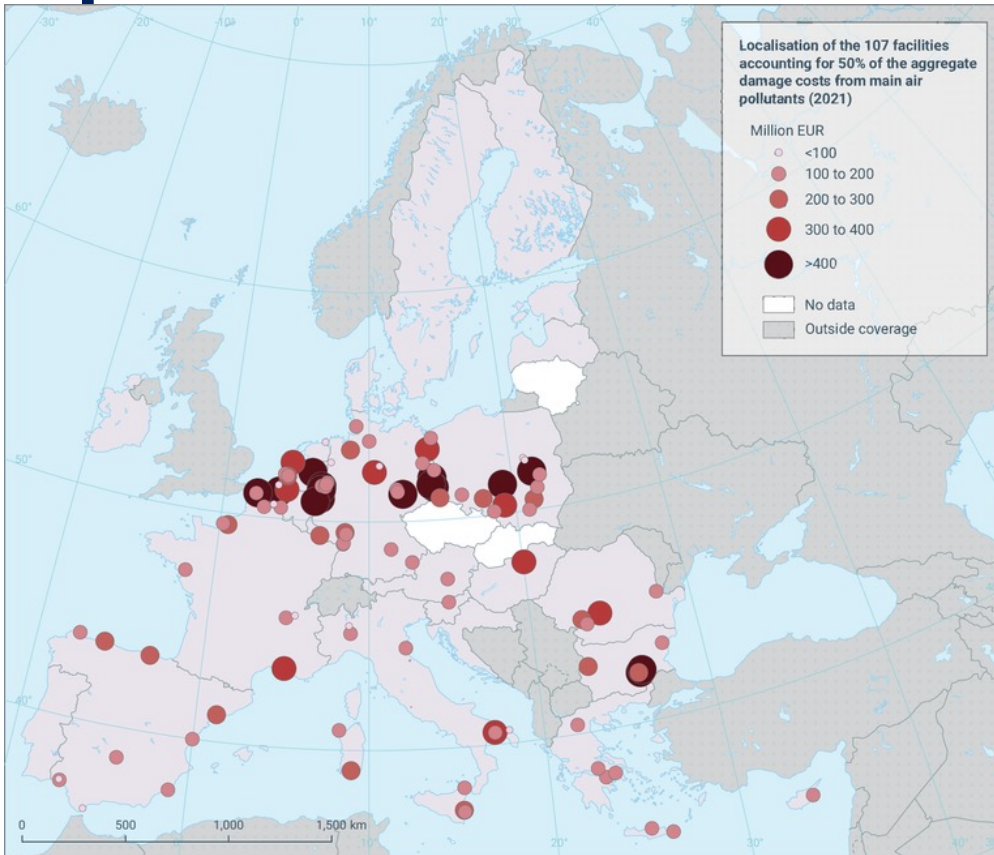
[Circularity Metrics Lab \(europa.eu\)](https://www.eea.europa.eu/en/circularity-metrics-lab)

BDS Dashboard

Common indicators



EEA briefing: External costs of industrial air pollution: 2024 update



Reference data: © EuroGeographics, © FAO (UN), © TurkStat Source: European Commission – Eurostat/GISCO

- Assessment of external costs of impacts caused by large industrial facilities (i.e. part of the E-PRTR, now the European Industrial Emissions Portal).
- The analysis covers 2012-2021. Annual costs have been EUR268-428 billion per year (average) but the trend is declining (35% decrease between 2012 and 2021).
- 2021 (latest year): EUR219-253million (~2% EU's GDP).
- 2021: Only 107 facilities (1% of total assessed) → 50% of total damage.

Interactive version of this map: [Link](#)



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Contact us

ENV-ZERO-POLLUTION@ec.europa.eu

https://ec.europa.eu/environment/zero-pollution-stakeholder-platform_en





Thank you for joining us and see you tomorrow!

For those joining us online, you will find us on the same link.

8:45	Registration and welcome coffee
9:15	Welcome and introduction
9:30	Zero Pollution Outlook
<i>11:00</i>	<i>Coffee break</i>
11:30	Link to other Monitoring frameworks – 8th EAP, biodiversity, circular economy and chemicals
12:15	Conclusions and next steps
12:30	Networking lunch

Keep in touch:

ENV-ZERO-POLLUTION@ec.europa.eu, zero.pollution.stakeholders@technopolis-group.com

https://ec.europa.eu/environment/zero-pollution-stakeholder-platform_en





Your opinion is important for us!

Complete the sli.do survey and let us know your feedback on the workshop



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