



Stakeholder Workshop

“Towards a Zero Pollution Monitoring and Outlook”

(with focus on integrated nutrient assessment)

24-25 May 2022

Hybrid meeting / In English only

More information on the website



Background document

1. Introduction: the zero pollution monitoring and outlook framework

On 5 May 2021, the Commission adopted an EU Action Plan 'Towards Zero Pollution for Air, Water and Soil', COM(2021) 400. This set out the threats to the health of humans, animals, ecosystems and the planet from pollution, as well as the urgency to act. In this context, the European Green Deal calls for the EU to better monitor, report, prevent and remedy air, water, soil and consumer products pollution.

An accompanying staff working document, SWD(2021) 141, set out the scope, initial outline and content for a zero pollution monitoring and outlook framework. The Zero Pollution Action Plan for air, water and soil offers the opportunity for the development and regular application of such an integrated monitoring and outlook framework, complementing the monitoring framework for greenhouse gases and the monitoring frameworks tracking targets in the Biodiversity and Farm to Fork strategies. Together with the Monitoring Framework for the Circular Economy and the indicator framework on chemicals, these are the core pillars for a new environmental monitoring framework under the 8th Environment Action Programme (8th EAP).

In addition to the monitoring framework which covers the current observations and past trends, a forward-looking or foresight dimension is valuable for policy making:

- The Zero Pollution Outlook models and projects the observed pollution trends into the future. It develops scenarios comparing different situations, such as where no further actions are taken ('baseline' or 'business-as-usual' scenario) vs specific policy scenarios with additional or more stringent/ambitious measures, under different socio-economic or climate mitigation and adaptation backgrounds.
- Foresight explores trends and developments (and breaks in current trends and developments) in a longer-term and more qualitative way (often referred to as 'horizon scanning'). A foresight methodology has been developed in the context of the 'foresight for the environment' (FORENV) activities, and the third FORENV cycle includes a dedicated 'Zero Pollution Foresight activity' as part of the wider Commission Strategic Foresight agenda.

These activities are now reporting their findings as part of the **2022 Zero Pollution Monitoring and Outlook report**.

2. Objectives of the Workshop

The main objective of the workshop is to present the preparations for the first Zero Pollution Monitoring and Outlook as well as the preparations for the INMAP and gather feedback and input from stakeholders. More specifically, the workshop will

- Allow presenting current ideas and early findings;
- Identify expectations from stakeholders;
- Collect input and further evidence;
- Identify knowledge gaps and how they can be closed by 2024.



The outcome of the workshop will feed into the preparations of the first Zero Pollution Monitoring and Outlook Report and the Integrated Nutrient Management Action Plan (INMAP).

3. Preparation of the Zero Pollution Monitoring

As part of the implementation of the Zero Pollution Action Plan the European Environment Agency (EEA) is responsible for delivering the 'Zero Pollution Monitoring' components of the envisaged Zero Pollution Monitoring and Outlook assessment, for further details see the [Zero Pollution Staff Working Document on a monitoring and outlook framework](#).

The EEA proposes to deliver a web assessment that is based primarily on published environmental pollution related indicators and assessments. The assessment will also take into account other general sources of information from, for example, research projects or monitoring carried out at a national level only, and these additional informal data sources are referred to as 'Signals' within the framework of the Zero Pollution Monitoring Assessment.

The structure of the assessment will be based around the three domains of 'health', 'ecosystems' and 'production and consumption', but will also seek to develop a more integrated assessment where specific issues or topics overlap across and between these different domains.

In preparing the assessment the EEA will also work closely with JRC who are developing the Zero Pollution Outlook as well as with other stakeholders who will provide a range of relevant knowledge to be included in the assessment. The first assessment is planned to be published in late 2022 with a second assessment published in 2024 (likely to be in the first half of 2024).

4. Preparation of the Zero Pollution Outlook

In addition to the monitoring framework which covers the current observations and past trends, a forward-looking or foresight dimension is valuable for policy making.

The Zero Pollution Outlook, which will be coordinated by the Joint Research Centre (JRC), will project the observed pollution trends into the future by using modelling tools. It may develop scenarios which compare different situations, such as where no further actions are taken ('baseline' or 'business-as-usual' scenario) are compared to alternatives, or specific policy scenarios with additional or more stringent/ambitious measures, under different socio-economic or climate mitigation and adaptation backgrounds.

For the first Zero Pollution Outlook report, a number of different contributions will feed into it, in particular the:

1. Third [Clean Air Outlook](#) prepared by DG ENV updating the modelling carried out for the previous outlooks;
2. Water and Marine Outlook based on modelling carried out by the JRC;
3. Clean Soil Outlook prepared by the JRC.



Moreover, the evidence base collected by the JRC in the context of the preparation for the Integrated Nutrient Management Action Plan (INMAP) will also feed into the outlook (see below).

5. Other input

5.1. Research

In October 2022, the European Commission will publish a report on the R&I contribution to the zero pollution action plan. Based on the assessment of existing H2020 projects, the report will identify those projects that address most relevant R&I activities contributing to the implementation of each of the 9 zero pollution flagships under the action plan.

The objective of the report is to learn from the results already achieved in various Horizon 2020 projects, which have been recently finished or are currently getting into their final stage. Sharing the experiences of these projects will certainly help to avoid research duplication (“reinventing the wheel”) and to support a faster achievement of ambitious goals defined under the 9 flagships.

Furthermore, the results of the selected projects will feed into the Zero Pollution Outlook and Monitoring Framework. The selection of projects is led by DG Research and Innovation and is based on the inter-service collaboration of several European Commission services and EU agencies.

This report will also feed into the preparation for the Zero Pollution Monitoring.

5.2. Zero Pollution foresight: the 2020-21 FORENV report on emerging issues for zero pollution

In 2017, the Environment Knowledge Community (EKC), established the EU foresight system for the systematic identification of emerging environmental issues ([FORENV](#)).

FORENV has now completed its third annual cycle, resulting in a [report on the emerging issues impacting the delivery of a zero-pollution ambition by 2050](#). Based on a horizon scanning exercise, the FORENV results are intended to raise some key questions and stimulate discussion on how emerging issues could change the societal, economic and environmental landscape for achieving zero pollution over the coming decades.

Ten priority emerging issues have been identified that may impact on the zero pollution ambition, representing risks and/or opportunities, for example: urban settlement patterns and demographic change, regenerative buildings or agriculture, post-pandemic resilience, and synthetic biology. In turn, a cross-cutting analysis has identified five key clusters of changes related to these priority emerging issues, together with key questions for zero pollution policy arising from these. The five clusters are:

- Pervasive digital tools and lifestyles
- Transformations in where and how we live and work



- New pollution monitoring and data methods
- Living buildings and new materials
- Multi-faceted food-system revolutions.

The report presents these clusters with associated implications for pollution, as well as uncertainties and key questions for policy, such as the pollution risks from territorial shifts, data informs or misinforms citizen behaviour scaling up new technologies and international cooperation for zero pollution. See the [synopsis report](#) for details.

This report will also feed into the preparation for the Zero Pollution Outlook.

6. Focus on nutrients – the preparation of the Integrated Nutrient Management Action Plan

Human activities have significantly altered the natural processes which continuously cycle nitrogen and phosphorous in various (chemical) forms between different compartments of the environment. We consequently observe nutrient pollution that significantly affects public health, climate and the environment and at levels that exceed safe planetary boundaries. Nutrient pollution also has important economic consequences and puts at risk the sustainability of agriculture and fisheries in the EU.

In the EU, environmental legislation has sought to tackle excess nutrients. However, progress in the reduction of pollution is not uniform and harmful pollution levels for human health and the environment still exist due notably to shortcomings in specific legislation, significant implementation gaps and possibly the absence of an integrated approach on nutrient pollution encompassing air, water, soil and climate.

Russia's invasion of Ukraine is driving up prices in agricultural and seafood product markets and exposing the vulnerabilities of the food system: our dependence on imports of energy, fertiliser and animal feed. Natural gas is a feedstock for most mineral nitrogen fertiliser production and reducing the reliance on such fertilisers has become a key objective. More than ever, we need more resource efficient fertilisers and better management of nutrients generally.

The [Biodiversity strategy](#) and the [Farm to Fork Strategy](#) announced that the Commission would draw up by 2022 an [Integrated Nutrient Management Action Plan](#) (INMAP) to help reduce nutrient losses by at least 50%, while ensuring that there is no deterioration in soil fertility.

The [INMAP](#) will complement the [Zero Pollution Action Plan](#) for air, water and soil.

The Joint Research Centre gathered scientific knowledge and data available in the EU to support the discussion and preparation of the Integrated Nutrient Management Action Plan, focussing on:

- the description of the current flows of nitrogen and phosphorus in the EU considering all sources and sectors involved;
- the evaluation of the distance to environmental targets in the EU legislation and strategies; and



- the analysis of measures to reduce nutrient pollution at different intervention points in the nutrient cycle.

Questions for discussion during the workshop

- What are your expectations for the Zero Pollution Monitoring and Outlook Report (day 1) or the Integrated Nutrient Management Action Plan (day 2)?
- Do you have any further information or evidence that could be useful to consider in the preparation of these initiatives?
- Which are the main knowledge gaps that should be prioritised for the preparation of the second report by 2024?