

ZERO POLLUTION PACKAGE



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INTRODUCTION

On 26 October, the Commission will present its “Zero Pollution Package” comprising of three initiatives in which the EU will review its air quality standards to align more closely with the recently updated World Health Organization recommendations and examine pollutants affecting surface and groundwater.

In the European Green Deal as well as the eighth environmental action programme, the EU set a goal of achieving zero pollution for a non-toxic environment by 2050. This will mainly be delivered through the Zero Pollution Action Plan for Air, Water, and Soil, published in May 2021, in addition to the Chemicals Strategy for Sustainability, published in October 2020.

Achieving the zero pollution ambition will require reducing air, water and soil pollution to levels no longer considered harmful to health and natural ecosystems and respecting the boundaries the planet can cope with.

Ahead of the publication, this explainer will delve into air and water pollution - the two types of pollution covered by the upcoming initiatives.

**In the EU
1 in 8
deaths
is linked to
environmental pollution**



WATER POLLUTION

Key Definitions

Point source pollution: *any single identifiable source of pollution from which pollutants are discharged, such as a pipe, ditch, ship or factory smokestack. Point source pollution can contaminate water with oxygen-consuming substances, nutrients, hazardous substances, emerging pollutants, pathogens and microplastics. While the discharge of pollutants from point sources has decreased in recent years, point source pollution still affects 15 % of all surface water bodies in Europe and 14 % of groundwater areas.*

Diffuse source pollution: *the release of potential pollutants from a range of activities that, individually, may have no effect on the water environment, but, at the scale of a catchment, can have a significant impact. Problems occur in both rural and urban settings. Agricultural runoff can include nutrients and chemicals such as pesticides, while metals, pesticides, hydrocarbons, solvents and more can come from urban areas. Diffuse source pollution affects 33 % of all surface water bodies and 34 % of groundwater area.*

EU Water Legislation

The Water Framework Directive (WFD) has been Europe's main legal instrument for water protection since 2000. It is supported by “daughter Directives”, the Environmental Quality Standards Directive (EQSD) and the Groundwater Directive (GWD).

The WFD sets a requirement for all bodies of surface water, including lakes, rivers, transitional and coastal water, and groundwater bodies to achieve 'good' status by 2015 unless there are grounds for exemption, with the latest possible deadline being 2027. For surface waters, achieving 'good' status requires the water to meet standards for its ecology and chemistry. For ground waters, achieving 'good' status requires the water to meet standards for its chemistry and quantity.

The WFD also sets a list of 45 chemical pollutants categorised as priority substances, meaning they pose the greatest concern and risk to and via the aquatic environment across the EU. 21 of these pollutants are considered priority hazardous substances. **The WFD covers 110 000 bodies of surface water in the EU and 13 400 bodies of groundwater.**

The Groundwater Directive (GWD) sets standards for pesticides and nitrates in groundwater and identifies a minimum list of other substances for which Member States should consider setting thresholds.



Integrated water management – revised lists of surface and groundwater pollutants

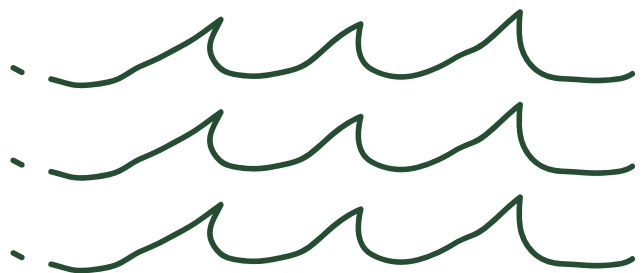
A 2019 fitness check of the WFD, ESQD and GWD showed that the legislation was broadly fit for purpose. However, a lack of funding, slow implementation and insufficient integration of environmental objectives in sectoral policies for the purpose of preventing pollution at the sources mean that the WFD's objectives have not been fully reached. The fitness check also confirmed the need to review the lists of pollutants in light of scientific developments, particularly related to pharmaceuticals, (micro)plastics and PFAS. The process of updating the lists of pollutants to keep up with science has been deemed too slow, and the evaluation of risks based on single substances does not take into account the combined effects of mixtures.

The proposal on integrated water management will assess options for revising the lists of pollutants affecting surface and groundwaters and their corresponding regulatory standards, taking account of recent

technical work including the risks from several emerging pollutants.

The key aim of the initiative is to improve aspects of EU water legislation such as investment, implementing rules, integrating water objectives into other policies, chemical pollution, administrative simplification and digitalisation. The initiative is an important part of the Zero Pollution ambition announced in the European Green Deal as well as the Chemicals Strategy.

The initiative will also be coordinated with work on the revision of the Urban Wastewater Treatment Directive (UWWTD) and it will consider other interacting policy areas such as the evaluation of the Sewage Sludge Directive, the implementation of the new Drinking Water Directive, and the implementation of the Marine Strategy Framework Directive.



Policy Options

- 1 updating or developing guidelines on monitoring or on thresholds
- 2 increasing the coherence between the substance lists in water legislation and other environmental legislation
- 3 improving data sharing with other policy sectors
- 4 improving the relationship between the watch list and the prioritisation process for priority substances

Stakeholder Reactions

The European Environmental Bureau emphasised that the substance-by-substance approach, while useful for evaluating measures to reduce emissions, should be expanded to assess a wider set of properties beyond toxicity. They believed properties such as persistence, accumulation and mobility as well as endocrine-disrupting properties should be included and that it should be possible to add substances as a group. The EEB also highlighted that the lists of pollutants for surface and groundwater should include as a minimum PFAS, pharmaceuticals and an expanded set of pesticides (including all their harmful metabolites).



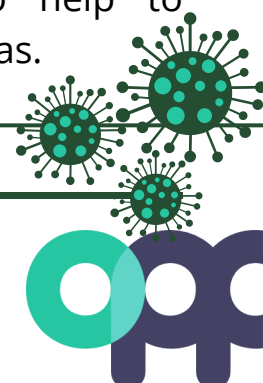
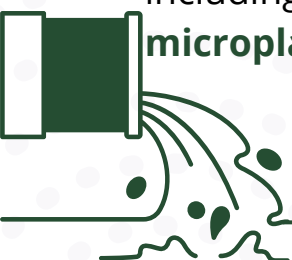
Review of the urban wastewater treatment directive

The upcoming proposal on EU rules on urban wastewater treatment will revise the UWWTD, which first entered into force in 1991 and ensures that urban wastewater is clean and safe in order to protect public health and the environment. The UWWTD was designed to protect the aquatic environment from the negative effects of urban wastewater effluents, including eutrophication. The Directive requires the collection and treatment of wastewater in urban areas with above 2000 population equivalents (p.e.).

A recent evaluation of the UWWTD showed that it was largely fit for purpose, but there were certain shortcomings of the Directive that needed to be addressed, particularly related to **stormwater overflows** and **untreated surface runoff** as well as the **treatment of contaminants of emerging concern**, such as **micropollutants**, including **pharmaceuticals** and **microplastics**, or **eutrophication**.

The evaluation of the UWWTD also showed that some contaminants are currently removed through wastewater treatment, but that others pass through wastewater treatment facilities and are discharged directly into receiving water bodies. Furthermore, if contaminants are captured in wastewater sludge, there is a risk of spreading these contaminants if the sludge is then used for agricultural purposes. Together with the evaluation of the Sewage Sludge Directive, the review of the UWWTD will increase ambition in removing nutrients from wastewater and ensure that sludge is ready for reuse.

The COVID-19 pandemic also showed the essential role of the water sector in protecting human health and the environment. It has shown that the virus could present in urban wastewater but would no longer be infectious if the wastewater is adequately treated. Tracking the presence of COVID-19 in wastewater can also help to identify contaminated areas.



The key objective of the proposal is to strengthen existing EU legislation for reducing the adverse effects of wastewater and making the existing legislation fit for decades to come. The monitoring and reporting requirements of the Directive also need to be updated.

Policy Options

- 1** preventive measures aimed at reducing pollution at the source and limiting quantities of water in the collection systems through improved spatial planning
- 2** new objectives to deal with pollution from overflows, urban run-off and small agglomerations
- 3** improved planning of investments combined with solid financial strategies



Stakeholder Reactions

In their report “Beyond water quality — Sewage treatment in a circular economy”, the European Environment Agency states that the treatment of sewage is not “one-size-fits-all” and that flexible approaches and solutions are needed. They believe that the first step is to become more water-efficient, which would reduce the amount of water to be treated. They also highlight that urban wastewater treatment is energy-intensive, but mentioned that wastewater treatment plants could act as “resource hubs” to recover reclaimed water, energy, nutrients and organic material. In addition, they note that restrictions, controls at the source, and the development of sustainable alternatives could help prevent the hazardous substances and persistent pollutants that contaminate sewage sludge.

The European Environmental Bureau emphasises that urban wastewater treatment is an end-of-pipe solution that comes at a resource and energy cost and cannot be a remedy for poor upstream work. They believe that sewer overflows and contaminants of concern in particular need to be urgently addressed.

“The revision of the UWWTD provides an opportunity to climate-proof the Directive, both in terms of including provisions for climate-adapted urban water systems based on nature-based solutions, but also by putting WWTPs on the path to becoming climate neutral through energy efficiency, reduction of greenhouse emissions and self-sustainable on energy.

-European Environmental Bureau”

AIR POLLUTION

Despite significant reductions in harmful air pollutant emissions over the past three decades, the latest estimates still point to around 400 000 premature deaths each year due to air pollution in Europe. Air pollution particularly affects the health of vulnerable groups, notably children, pregnant women and elderly citizens and those already suffering from pre-existing conditions.

Air pollutants, such as ozone, ammonia and nitrogen oxides, also have negative impacts on biodiversity, as they can highly damage terrestrial and aquatic ecosystems, through eutrophication and acidification. Finally, by triggering increased health-related issues, air pollution has considerable economic impacts, in terms of both market and non-market costs.

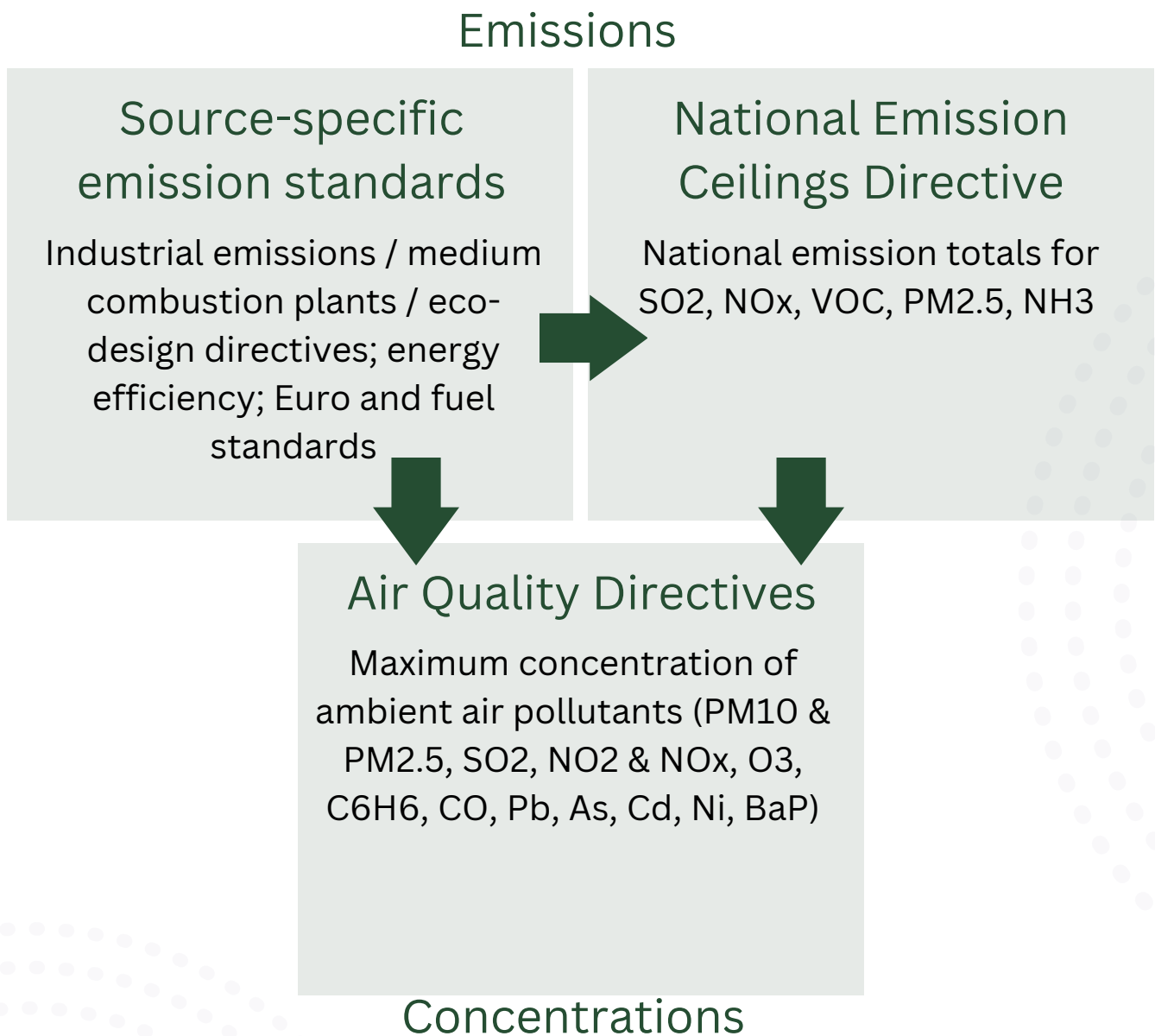
Revision of EU ambient air quality legislation

The proposal to revise the Ambient Air Quality Directives aims to improve overall EU legislation for clean air, building on the lessons learnt from the November 2019 Fitness Check. Following the objectives of the Green Deal, the EU is revising its standards to avoid the buildup of excessive pollution concentrations and to align more closely with the recommendations of the World Health Organisation, which were updated in September 2021. This revision will do so by updating the EU air quality standards based on the latest scientific evidence. In parallel, the Commission will also introduce stricter requirements to tackle air pollution at source, such as from agriculture, industry, transport, buildings and energy (e.g the Industrial Emissions Directive revision).

**Air pollution causes
400 000 premature deaths
each year in Europe**



On the EU agenda since the late 1970s, the legal framework for the EU's air policy rests on three pillars. First, the Ambient Air Quality Directive defines common methods to monitor, assess and inform on ambient air quality in the European Union, and establish objectives for ambient air quality to avoid, prevent or reduce harmful effects on human health and the environment as a whole. Second, the National Emission Ceilings Directive (NEC Directive) sets national emission reduction obligations for Member States and the EU for five air pollutants, until 2029. The third pillar relies on various source-specific legislations, setting specific emission standards for key air pollution sources in various sectors (e.g. the industry, transport, energy).



In 2019, the Commission's Fitness Check concluded that these Directives have been only partially effective in improving air quality. Indeed, EU air quality standards allowed higher air pollutant concentrations than was scientifically advisable, and the Fitness Check found that there was scope for further improvements to the legislative framework (for example, in relation to penalties, and public information) and to better support local authorities in achieving cleaner air through strengthening air quality monitoring, modelling and plans. Furthermore, the Fitness Check stressed the transboundary nature of air pollution, thus calling for a policy framework at EU level, respecting the subsidiarity and proportionality principles.



Stakeholder Reactions

Stakeholders welcomed the revision of the Ambient Air Quality Directives, as air pollution remained a big environmental health risk in Europe. They all called on the EU to align its air quality standards with the 2021 WHO Global Air Quality Guidelines and set concrete and legal binding targets.

The European Environmental Bureau urged the Czech Presidency to promote Member States' engagement towards an ambitious revision of the Ambient Air Quality Directives, ensure coherent and effective legislation to reduce air pollution, support the revision of the Gothenburg Protocol to the UNECE Long-Range Transboundary Air Pollution Convention and lead by example by revising the Czech National Air Pollution Control Programme.

The European Federation of Allergy and Airways Diseases Patients' Associations asked the Commission to improve public information on air pollution, address natural pollutants such as pollen and expand the existing standards to include indoor air pollution.

More recently, the Health and Environment Alliance and 100 other organisations in 17 EU countries called on the EU to fully align with WHO recommendations by 2030 at the latest, in order to protect people's health from air pollution.



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