

## SHORT PAPER

# Reshaping EU Legislation for Air Pollution Control: Main Features of the Proposed Directive in Comparison with the US Legislation

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### Abstract

*In October 2022, the European Commission released a draft of a new Directive aimed at securing more effective control and prevention of outdoor air pollution in Europe through the recasting and update of previous European legislation. The proposal is intended to reshape the current regulations in the field within the EU and its implementation at the Member State level and achieve lower air pollution in light of the recent advancements in environmental health and novel indications in the field from the World Health Organization. In addition, the proposed Directive provides a legal framework for air pollution control that falls within the wider legal context of the EU Green Deal and NextGenerationEU initiatives. The new rules are also remarkably consistent with corresponding and updated US regulations, though stricter in terms of air pollution control and more open to interactions with local authorities. In sum, the proposed EU Directive appears to take better stock of the emerging scientific evidence on the adverse effects of air pollution and may provide an effective legal instrument for adequate public health protection.*

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## Introduction

On October 26, 2022, the European Commission proposed the adoption of the “Directive of the European Parliament and of the Council on ambient air quality and cleaner air for Europe” (1), which promises to be a major legislative breakthrough in the area of public and environmental health. The proposal encompasses a set of major changes in the current legislation, mainly represented by Directives 2004/107/EC on ambient air toxics, 2008/50/EC on ambient air quality and cleaner air (as amended by Directive 2015/1480), i.e., the most recent legislation after the pioneering regulation issues in 1980 with the Directive 80/779/EEC. The proposed Directive also aims at putting the new regulations in the EU within the context of the major recent legislative endeavors of the European Union, the Green Deal-NextGenerationEU and the Zero Pollution Action Plan, implementing a more effective legal control of sources of air pollution and of its monitoring, to allow a healthier environment in Europe. The second reason for the proposed Directive is the advancement of the scientific literature on the adverse health effects of air pollution, following the comprehensive assessment of such evidence made in 2021 by the World Health Organization that updated air quality standards and guidelines (2). The assessment provided clear evidence that the adverse effects of air contaminants occur at much lower levels than previously believed, and therefore a tighter control of these pollutants is required to effectively protect human health. WHO has therefore lowered air quality standards in 2021 compared with the previous 2005 assessment made.

## Main features of the proposed Directive

The proposed Directive accounts for a

translational approach, based on the inherent transboundary nature of air pollution, which may affect Member States and large territories by moving far outside and beyond its source area (article 21 of the proposed text). Tighter EU-wide action in this sector is intended to avoid that limited efforts by Member States may undermine the entire EU approach and to ensure fairness and equality across the entire European territory. However, by its very nature the Directive — as opposed to European Regulations — allows for valuable adjustment to the state level, in terms of time and specific national, regional, and local circumstances. The “recasting” character of the Directive means that all the existing regulations will be incorporated into the novel one, to reduce the complexity of the legal body of evidence and to avoid inconsistencies across it. The proposed Directive also indicates tight rules and new standards for continuous air quality monitoring and modeling (article 5 and Annex 1 of the proposed Directive) based on a continuous and in-depth assessment of the scientific evidence (article 3). This sets the scene for effective control of the key issue of outdoor air pollution, allowing timely detection of breaches of the air quality standards, and ensuring real-time detailed information to the public about the state of air quality in the EU territory at the local level (articles 22-23). Under this perspective, the proposed Directive qualifies EU air quality standards as “limit values” (no longer defined only as “target values” and/or “ranges” — articles 7-12) to be achieved by 2030 (articles 19-20), based on different timelines and policy degree named “full alignment,” “closer alignment” and “partial alignment,” also providing the possibility of some temporary exceptions where clearly needed. By 2030 an aim at reducing by 55% the adverse effects of air pollution on human health, a complete alignment with the 2021 WHO Air Quality Guidelines is foreseen (article 13), with a further “zero pollution” extremely ambitious

target by 2050 (article 1). The expected costs required to achieve the three scenarios would range from 3.3 to 7 billion euros, in front of a net benefit increasing from 29 up to 38 billion euros, and with no charges to consumers and businesses with any direct administrative cost. Overall, the merge of the current two Air Quality Directives 2008/50/EC and 2004/107/EC into a single and updated piece of legislation is also expected to reduce uncertainty and administrative burden for the public health and administrative member state authorities.

### **A comparison with the US legislation on air pollution control**

It is of considerable interest to compare this upcoming EU legislation, in the form of the proposed Directive, with the current US legislation in the field, given the roughly comparable socioeconomic and cultural features of the two contexts. The air pollution regulations in the US are historically bound to the 1963 Clean Air Act (CAA), which is the comprehensive federal statute that regulates air emissions from stationary and mobile sources, using standards that have been updated several times — until January 2023 (3) — by the US Environmental Protection Agency (EPA) since they were first set in 1971. The EPA's vigorous role in enforcing air pollution control had historically resulted in the federal authority's replacement of state and local US authorities in case of ineffective implementation of the CCA, with sanctions being imposed and the direct enforcement of federally designed plans. In recent times, EPA's activity underwent increased scrutiny amid the context of the scholarly debate over the “nondelegation doctrine”, by which it is held that the powers the Constitution bestowed on a particular branch of government cannot be delegated to other entities — most notably, to administrative authorities (4). In the case of EPA, one topical issue was the

authority's tendency to interpret — in an extensive and “draconian” fashion — the powers delegated by Congress's statutes (5). In *West Virginia v. Environmental Protection Agency* of 2022 (6), the US Supreme Court majority affirmed that EPA lacked legislative authority under the CAA to impose “generation shifting” — i.e., a policy that mandated transitioning toward sources emitting lower levels of carbon dioxide — in order to reduce greenhouse gas release: express mention of the “major questions doctrine” — by which it is understood that generic delegation of authority cannot form the basis for an administrative agency's decision on an “issue of major national significance” (7) — foreshadows future limitations to the EPA's normative sway, thus calling on the US Congress to adopt express legislation in this area.

In contrast, because of their very nature, EU Directives leave significant autonomy to the Member States in terms of the timeline to implement (and even to strengthen (8)) the EU standards, and with regard to the methodologies aimed at making the legislation effective — in this case, in order to achieve the AQ standards within the territories of competence. Therefore, the policy effectively implementing air quality control in each State of the EU is expected to be a mixture of local, national, and European legislation and rules, while the US system mainly relies on a federal, EPA-driven approach (8, 9). Despite the “legal flexibility”, tightness of the enforced European standards has generally been stronger than that characterizing the US (8). Some differences also exist in the communication of current air quality to the public, for instance in the use of colors in labeling real-time the levels of outdoor air pollution, with direct reference to their implications for human health. An additional difference between the EU and US legislation appears to be the higher weight historically given by the latter to the economic implications (costs and efficiency, and market interferences), at

least looking at the text of the two legislations, with words such as “economic” and “business” recurring much more frequently in the US regulations, while “human health” and “precautionary principle” being more common in the EU regulations (10).

## Conclusions

Overall, the evolution over time of both the EU and the US rules about air pollution control and prevention is currently leading to a gradual standardization and similarity of the two legislations, with European regulations still appearing stricter in terms of public health protection and more open to different implementation at the regional level. Driven by recent breakthroughs in environmental health evidence and by the WHO updated guidelines, the proposed rules to control air quality in the two major Western contexts, Europe and the United States, provide a legal and substantially consistent framework to effectively counteract outdoor air contaminants and related adverse effects on human health.

**Conflict of interest statement:** The author declares no conflict of interest.

## Riassunto

*Ridisegnando la normativa europea sulla qualità dell'aria: principali caratteristiche della proposta di Direttiva e confronto con la legislazione statunitense*

Nell'ottobre 2022, la Commissione Europea ha pubblicato la bozza di una nuova Direttiva volta a portare ad un processo di più efficace controllo e prevenzione dell'inquinamento atmosferico in Europa, attraverso la sintesi e l'aggiornamento della normativa precedente. Tale proposta intende ridisegnare l'attuale assetto normativo in Europa e la sua implementazione al livello degli Stati Membri, al fine di conseguire un minore inquinamento dell'area alla luce di recenti scoperte nel campo della salute ambientale e di nuove indicazioni provenienti

dall'Organizzazione Mondiale della Salute. In aggiunta, la proposta di Direttiva istituisce un sistema giuridico per il controllo dell'inquinamento dell'aria che ben si integra nel più ampio contesto normativo delle iniziative del Green Deal europeo e del NextGenerationEU. Le nuove norme appaiono peraltro simili alle corrispondenti disposizioni regolamentari statunitensi nel campo del controllo dell'inquinamento atmosferico, pur essendo più rigide in termini di controllo della qualità dell'aria e più aperte ad una logica di integrazione con le autorità locali. In conclusione, la nuova proposta di Direttiva europea sembra prendere in più attenta considerazione le recenti evidenze scientifiche sugli effetti avversi dell'inquinamento dell'aria, e può costituire un efficace strumento giuridico per un'adeguata salvaguardia della salute pubblica.

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