

DEVELOPMENT OF UNITED NATIONS AND EUROPEAN UNION POLICY ON AIR POLLUTION

UDC 349.6(4-672EU)

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Abstract. *The aim of this paper is to briefly present the nature of air pollution as part of environmental law with reference to its scientific background, the history of development of this branch of law through activity of the United Nations and the European Union, the most significant regulations adopted by these organisations and measures for fighting air pollution. In the first part of the paper, the author focuses on the nature of environmental law, particularly on air pollution, the most common pollutants, its sources, and effects on human health and environment. The second part contains the review of the most important regulations regarding ozone depletion and climate change. In the third part, the author provides information on ambient air quality legislation, followed by specific measures imposed by this legislation. Finally, the fourth part reviews the contribution of the International Court of Justice and the European Court of Human Rights to the development of international environmental law.*

Key words: *environment, air pollution, emissions, monitoring, assessment*

1. ENVIROMENTAL LAW AND AIR POLLUTION

1.1. Nature of 'law in the area of air pollution

Air pollution is a scientific, social and legal challenge. The branch of law dealing with this phenomenon is highly complex and still developing. Its complexity is driven by the fact that air pollutants can be of both local and transboundary character since the human activity in one country can affect the environment and cause air pollution elsewhere (Fisher, Lange, Scotford, 2013: 603). This fact raises a question about the adequate regulation for dealing with air pollutants and their environmental and health consequences. Regulating air pollution has always been a challenge since pollutants or their effects are invisible at first. Therefore, legal actions have largely been taken *ad hoc* and with delay, while some solutions used decades ago included just a hope that the problems would go

Received June 30th, 2021 / Accepted October 26th, 2021

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away (Fisher, *et al.*, 2013: 605). As further explained, in the period between the 1930s and 1970s, the UK Government used strategy to clean up local air by introducing taller chimneystacks for industrial installations; taller chimneys allowed air pollutants to be dispersed at higher levels in the atmosphere which resulted in considerable local air quality improvement. However, pollutants carried by prevailing winds and reacting in the atmosphere caused disastrous environmental consequences in Northern and Central Europe. The so-called German and Scandinavian 'forest death' occurred in the 1960s, when acid rain partly caused by SO₂ emissions from the UK destroyed plant life as well as the ecology of surface waters (Fisher, *et al.*, 2013: 605).

The fact that there is '*no straightforward linear relationship*' between air pollutants and the environmental degradation only contributes to the regulatory complexity of these problems (Fisher, *et al.*, 2013: 606). As noted by Fisher *et al.* (2013), ecosystems are affected not only by air emissions but also by other human activity (e.g., tropical deforestation), Pollutants move fast with prevailing winds, reacting with other elements in the atmosphere and among themselves; hence, the casual chain between emissions and environmental damage is unpredictable (Fisher, *et al.*, 2013: 603).

The nature of environmental law, particularly the area of air pollution has particular characteristics, such as: very few judicial decisions; dependence on scientific knowledge; many different regulations, some of which overlap, while others introduce contradictory strategies (Fisher, *et al.*, 2013: 614). Yet, the most challenging issue is the administrative implementation of regulations. If the national administrative mechanism lacks flexibility, the potential for public law disputes arises (Fisher, *et al.*, 2013: 614). Furthermore, improvement of air quality is possible only if environmental policy is ranked higher in the political priority (Kraemer, 2012: 281). As noted by Kraemer (2012), where a Member State is determined to improve air quality by reducing emissions and working with clean-up programmes that are provided in EU legislation, then this legislation besides its complexity will lead to reduction of pollutants, air quality improvement and will reflect on climate change and the ozone layer (Kraemer, 2012: 281).

1.2. Air pollutants: origin, types and effects

Air pollution refers to "air that contains gases, dusts, fumes, chemicals, particulates or odour in harmful amounts", which "are or could potentially be harmful to the health and comfort of humans and animals, or could cause damage to plants and materials" (Australian Academy of Science, 2019)¹.

Air pollutants can be of both anthropogenic and of natural origin. Volcanic eruptions, windblown dust, sea-salt spray and emissions of volatile organic compounds from plants are examples of natural emission sources. Anthropogenic sources of hazardous air pollutants include burning of fossil fuels in electricity generation, transport, industry and households, agriculture, waste treatment, industrial processes and solvent use, etc (EEA, 2020)². Notably, air pollution is a common problem but sources differ depending on the economic and social development of each state (Secretariat for Environment Protection, City of Niš, 2017: 45).

¹ Australian Academy of Science (2019): Where does Air Pollution come from? <https://www.science.org.au/curious/people-medicine/where-does-air-pollution-come>

² European Environment Agency (2020): *Air Pollution*; <https://www.eea.europa.eu/themes/air/intro>

As cited in Fisher *et al.* (2013), the most common anthropogenic pollutants affecting human health, air quality, cause climate change or other environmental problems are:

- SO₂ and NO_x cause acid rain (a process of removing these acid pollutants from the atmosphere by wet deposition, causing the death of flora and fauna, corrosion of buildings and degradation of soils); sulphur dioxide can travel hundreds of kilometres on prevailing winds, causing acid rain beyond borders of the country of origin;
- Greenhouse gases (water vapour, carbon dioxide, methane, nitrous oxide, ground level ozone and chlorofluorocarbons); these gases “work together with clouds” and create “the greenhouse effect” which maintains a constant temperature on Earth; if their concentrations increase, their balance is changed, causing distortion to Earth’s climate system and leading further to climate change;
- Heavy metal particulates (cadmium, lead, mercury); these metals are highly toxic and harmful to human health, causing kidney, bone and lung problems;
- Benzene, polycyclic aromatic hydrocarbons, dioxins and furans; these pollutants are present in fossil fuels; many of them have toxic and carcinogenic effects, sometimes causing birth defects or altering DNA;
- Persistent organic pollutants, which can pass on to new generations due to their resistance to environmental degradation processes, causing harmful effects on neurological, reproductive and immune systems;
- Volatile organic compounds;
- Particulate matter (PM) which refers to any very small matter in the air, such as dust particles (Fisher, *et al.*, 2013: 607-610).

2. AIR POLLUTION IN THE POLICY OF THE EU AND THE UN

2.1. The rising problem of air pollution – first measures and conventions

Even though scientists had anticipated in the 19th century that increasing concentration of carbon dioxide in the atmosphere could affect Earth’s climate, the international community became aware of this rising problem in the mid-1980s (Beyerlin, Marauhn, 2011: 147). The first action in regulating air pollution issues in the UK was triggered by the 1952 killer smog in London, which resulted in the death of thousands of people. The first measures included restrictions or ban on the production of smoke, grit and dust (Fisher, *et al.*, 2013: 604-605).

The first EU measures on combating air pollution were taken in 1970, concerning emission limit values from products. Unfortunately, as noted by Kraemer (2012), the purpose of taking these first measures was not to reduce air emissions but to provide the free circulation of products. These first provisions, contained in the Council Directive 70/220/EEC³ concentrated mainly on cars, while emissions from trucks, airplanes, ships and railways were set aside (Kraemer, 2012: 287). It should be noted that each action on combating air pollution is strongly influenced by several basic factors, including the EU energy policy on the use of nuclear energy, oil, gas, coal and lignite, impossibility to separate air emissions from other environmental problems, dependence on the level of

³ Council Directive 70/220/EEC of 20 March 1970 on the approximation of the laws of the Member States relating to measures to be taken against air pollution by gases from positive-ignition engines of motor vehicles.

economic development and, lastly, the absence of readiness in European society to change habits concerning private passenger and truck transport (Kraemer, 2012: 280-281).

The turning point in the EU environmental policy was the acid damage caused to Scandinavian lakes and rivers in the late 1970s and early 1980s, which resulted in signing the 1979 UNECE Convention on Long-Range Transboundary Air Pollution (LRTAP).⁴ This framework convention was signed by European states, the USA and Canada, and Central Asian states. Interestingly, it remains the only regional multilateral instrument which regulates transboundary air pollution (Beyerlin, Marauhn, 2011: 146).

From the late 1970s, the EU started to introduce emission standards for vehicles. Three Directives⁵ were introduced, concerning minimum air quality standards for sulphur dioxide and suspended particulates, lead and nitrogen dioxide in the air (Fisher *et al.*, 2013: 618). In 1983, the Heads of State and Governments suggested effective action against air pollution which led to proposals for directives which would include air pollution from industrial installations, large combustion plants and quality objectives for Nox; ultimately, the action included the introduction of a catalytic converter for cars (Kraemer, 2012: 279).

2.2. Ozone depletion and climate change

By the time the LRTAP Convention was signed, states and scientists were unaware that stratospheric ozone layer was disappearing as a result of increasing concentration of noxious anthropogenic gases. But, in the early 1980s, it became clear that *the ozone depletion was the global environment treat* (Beyerlin, Marauhn, 2011: 146). According to Beyerlin and Marauhn (2011:146), the 1985 Vienna Convention on the Protection of the Ozone Layer was a prompt response of the international community to this issue.⁶ This framework convention was the first convention of any kind to be signed by every State Party involved (UN EPOS, 2020). Countries were committed to ‘*protect human health and the environment against the adverse effects of human-induced modifications of the ozone layer*’ (Article 2, para.1, Vienna Convention 1985).⁷ The Convention promoted cooperation among countries in exchanging information, systematic observations and research. The creators of the Convention hoped that, thus, the community and scientists would better understand ‘*the effects of human activities on the ozone layer and the effects on human health and the environment from modification of the ozone layer*’ (Article 2, para.2a, Vienna Convention 1985). Unfortunately, its rules were considered ‘vague and abstract’ (Beyerlin, Marauhn, 2011: 146); moreover, countries involved were not required to take any control actions to protect the ozone layer (UN EPOS, 2020).

It was the Montreal Protocol on substances depleting the ozone layer (1987) that incorporated stronger measurements regarding the production of greenhouse gases. It included the phase-out plan for the production and consumption of these gases (UN EPOS,

⁴ The UNECE Convention on Long-Range Transboundary Air Pollution of 13 November 1979, Geneva.

⁵ Council Directive 80/779/EEC of 15 July 1980 on air quality limit values and guide values for sulphur dioxide and suspended particulates (1980) OJ L229/30; Council Directive 82/884/EEC of 3 December 1982 on a limit value for lead in the air (1982) OJ L378/15; Council Directive 85/203/EEC of 7 March 1985 on air quality standards for nitrogen dioxide (1985) OJ L87/1.

⁶ Vienna Convention for the Protection of the Ozone Layer of 22 March 1985.

⁷ UN Environment Programme Ozone Secretariat (2020). Treaties: Vienna Convention for the Protection of the Ozone Layer; <https://ozone.unep.org/treaties/vienna-convention/articles/article-2-general-obligations>

2020)⁸. Countries were required to limit production and consumption of ozone-depleting substances by quantitatively specified amounts (Beyerlin, Marauhn, 2011: 146). According to Kraemer (2012: 327), measurements provided were less stricter for developing countries than for industrialised ones. Based on new scientific studies, the Protocol has undergone nine revisions in the past years. There is an assumption that the ozone layer may recover by 2050, only if states continue applying the present measures (Kraemer, 2012: 327).

The UN Conference on Environment and Development (UNCED) was the first major conference regarding climate change. An important achievement of this Conference was the UN Framework Convention on Climate Change (UNFCCC),⁹ which entered into force in 1994 and was ratified by 197 countries (UN Climate Change, 2021a)¹⁰. The main object of the Convention was *'to achieve stabilization of greenhouse gas concentration in the atmosphere at the level that would prevent dangerous anthropogenic interference with the climate system'* (Kraemer, 2012: 310). By the time the Convention was signed, it was clear that the countries were not determined in their intention to combat global warming, which called for both economic and political changes. Thus, the UNFCCC incorporated only general and abstract requirements for State Parties (Lilić, Drenovak-Ivanović, 2014: 82-83). The requirements included the state obligation to submit an annual inventory of their greenhouse gas emissions and to report regularly on their climate change policies and measures. Besides, industrialised states agreed to support climate change activities in developing countries by providing financial and technological assistance (UN Climate Change, 2021).

The UNFCCC was followed by the Kyoto Protocol¹¹, a legally binding implementing protocol which contained more specific requirements (Beyerlin, Marauhn, 2011: 147). It was signed in 1997 and entered into force in 2005 (UN Climate Change, 2021b)¹². The reason for a delayed entry into force were *'highly controversial negotiations'* between groups of states including European Union, the so-called Umbrella Group (the USA, Canada, Japan, Australia and Russia), the Group 77 (China), and the Alliance of Small Island States (Beyerlin, Marauhn, 2011: 148). The Protocol committed industrialised countries to reduce and limit their greenhouse gases emissions in accordance with agreed individual targets within a fixed period (Beyerlin, Marauhn, 2011: 147). Industrialised countries were committed to reduce their greenhouse gases emissions up to 5%, while this target for EU amounted 8% compared to the 1990 levels (Todić, 2010: 159). Countries were committed to reduce their emissions not only through national measures but also through three market-based mechanisms: international emission trading, clean development mechanism, and joint implementation. To ensure transparency and accountability, the Protocol established a rigorous monitoring, review and verification system, as well as a compliance system (UN Climate Change, 2021). Yet, many issues were still to be resolved by subsequent decision-making of the Conference of the Parties (COP), the supreme decision-making body of the UNFCCC (Beyerlin, Marauhn, 2011: 147-148).

⁸ Montreal Protocol on Substances that Deplete the Ozone Layer of 16 September 1987, which entered into force in 1989; <https://ozone.unep.org/treaties/montreal-protocol>

⁹ The United Nations Framework Convention on Climate Change, Rio de Janeiro, 9 May 1992.

¹⁰ UN Climate Change (2021a): *What is the United Nations Framework Convention on Climate Change?*; <https://unfccc.int/process-and-meetings/the-convention/what-is-the-united-nations-framework-convention-on-climate-change>

¹¹ The Kyoto Protocol of 11 December 1997.

¹² UN Climate Change (2021b): *What is the Kyoto Protocol?* https://unfccc.int/kyoto_protocol

Given that the Kyoto Protocol '*fulfilled its implementing function at best imperfectly*', it was obvious that a new legally binding international treaty had to be adopted (Beyerlin, Marauhn, 2011: 147). The Paris Agreement was adopted by 196 State Parties at the 21st Conference of the Parties to the UNFCCC in 2015 and entered into force in 2016 (UN Climate Change, 2021c).¹³ Its long-term goal is to '*limit global warming to well below 2°C, preferably to 1.5 degrees Celsius, compared to pre-industrial levels*' (Johnston, 2018: 69). The Paris Agreement (Art.4) states that this target should be reached by reducing emissions as soon as possible in order to '*achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century*' (Johnston, 2018: 69). Thus, countries were invited to formulate and submit their plans for climate action known as nationally determined contributions (NDC) and long-term low greenhouse gas emission development strategies (LT-LEDS) by 2020 (UN Climate Change, 2021c). As both mitigation and adaptations require huge finance resourcing, the developed countries were committed to provide financial assistance to less developed ones (UN Climate Change, 2021c). The Paris Agreement also provided a framework for technological support and capacity building for developing countries (UN Climate Change, 2021c). Countries are obliged to report every two years on their mitigation efforts and progress toward their climate targets. These reports are peer reviewed by a team of experts (Huang, 2017).¹⁴ Additionally, countries should establish an enhanced transparency framework (ETF), which should start 2024; thus, all measures and actions taken by countries, as well as provided or received support, will be reported under the ETF (UN Climate Change, 2021c).

3. AMBIENT AIR QUALITY

Ambient air quality is a term used to describe levels of harmful pollutants in the outdoor environment. The sources of these pollutants are mostly anthropogenic, including industry and energy production, road traffic, other means of transport, construction, waste sites, etc. (Fisher, *et al.*, 2013: 616). According to the World Health Organisation (WHO), particulate matter (PM) has the greatest effect on human health of all harmful pollutants. There is a close relationship between exposure to high concentration of small particulates and increased mortality or morbidity (WHO, 2018).¹⁵ As polluting emissions act '*in unpredictable ways and at unpredictable locations*', ambient air quality concerns both local and transboundary pollution levels (Fisher, *et al.*, 2013: 616). Each air quality problem is specific, thus requiring different kinds of regulatory instruments (such as: environmental quality standards and national pollutant emission ceilings) to limit hazardous pollutants (Fisher, *et al.*, 2013: 616).

¹³ The Paris Agreement of 22 April 2016; UN Climate Change (2021c): What is the Paris Agreement? <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>

¹⁴ Huang, J., (2017). *Why transparency makes the Paris Agreement a good deal*; Center for Climate and Energy Solutions; <https://www.c2es.org/2017/07/why-transparency-makes-the-paris-agreement-a-good-deal/>

¹⁵ World Health Organisation (2018): *Ambient (outdoor) air pollution*; [https://www.who.int/news-room/fact-sheets/detail/ambient-\(outdoor\)-air-quality-and-health](https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health)

3.1. Legislation and Aspects

The most important EU instrument on ambient air quality is Directive/2008/50,¹⁶ which deals with sulphur dioxide, nitrogen dioxide, benzene, carbon monoxide, lead, particulate matters, and tropospheric ozone. Article 1 specifies the general aims of this Directive: to define and establish objectives for ambient air quality; to assess the ambient air quality in the Member States; to obtain relevant information; to ensure that such information is transparent; to maintain and improve ambient air quality where it is not polluted; and to promote cooperation between Member States in reducing air pollution (Jans, Vedder, 2012: 419-420).

There are four main aspects of the Directive: monitoring and assessment obligations; mandatory environmental quality standards and targets; obligations to introduce air quality plans; and publicity and communication obligations (Fisher, *et al.*, 2013: 622). Air quality standards can be met and implemented only by collecting relevant data regarding air pollution. Thus, Member States are required to establish 'zones or agglomerations', to place a broad web of measuring stations throughout their territory, and to use international scientific measurement methods as references. Thus, acceptable air quality levels will be ensured over the territory of each State (Fisher, *et al.*, 2013: 622).

The Directive also provides series of air quality standards and targets with regulatory obligations and consequences, including allowed margins of tolerance for exceeding limit values (Fisher, *et al.*, 2013: 623-624). Considering the obligation of Member State to draw up air quality management plans, the Directive envisages that short-term action plans could include measures which would lead to reducing air pollution in the short term by limiting operations of industry plants or preventing heavily polluting vehicles on roads, etc. (Fisher, *et al.*, 2013: 625). Notably, such action plans may be limited by other EU laws, as seen in the case *Commission v Austria* (Fisher *et al.*, 2013: 625). This case¹⁷ concerned alleged breach of the TFEU¹⁸ and unlawful restriction of free movement of goods by the Austrian Government. In particular, the Austrian Government banned vehicles over 7.5 tonnes carrying certain goods (waste, rubber, building steel, etc.) to use a section of the Austrian A1 motorway, which is part of a major European transport route. The Government argued that this ban was adopted in order to improve air quality levels and to meet EU air quality standards especially for NO₂. The Court held that the ban was unlawful since the proportionality principle was breached and the Austrian Government failed to explore other less restrictive measures in order to improve air quality (Fisher, *et al.*, 2013: 628-629).

Due to the so-called 'daughter directives', the Directive contains limit values and target values. Furthermore, the Directive distinguishes between alert values, limit values, and critical levels regarding the effects of pollution on different ecosystems, but not on humans (Jans, Vedder, 2012: 420). Jans and Vedder (2012) consider that alert and limit values are relevant for effects on human health. Serious exceedances of the limit values may result in a duty to inform the public (information threshold) if some part of the population is at risk from brief exposure, or a duty to alert the public (alert threshold) if there is a risk for the population as a whole (Jans, Vedder, 2012: 420-421). Notably, under the Directive, Member States are allowed to claim that exceedances are caused by natural sources. In that case, such exceedances will not trigger any information duties for Member States. Despite

¹⁶ Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe; <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex%3A32008L0050>

¹⁷ CJEU Case C-320/03 *Commission v Austria* (2005) ECR I-9871 paras 66, 70-72, 73-77, 82-84.

¹⁸ The Treaty on the Functioning of the European Union of 25 March 1957.

this provision, it does not necessarily mean that such exceedances will ‘*fall outside the scope of the Directive*’ since the Commission is not obliged to approve or accept the notification given by a Member State (Jans, Vedder, 2012: 421). Moreover, Member States may also be exempt from the limit values in case of transboundary contributions, adverse climatic conditions, etc. This will trigger a duty for a Member State to draw up an air quality plan and provide evidence that all appropriate measures have already been taken. If there is a risk of exceeding alert thresholds, established action plans must contain ‘*the measures to be taken in the short term in order to reduce the risk or duration of the exceedance*’ (Jans, Vedder, 2012: 422).

Finally, Fisher *et al.* (2013) emphasize that one of the main disadvantages of introducing air quality standards as a regulatory tool is the technological and administrative difficulty in their implementation and enforcement. According to the Commission’s report, one-sixth of environmental infringement cases relate to air quality, mostly involving failure to meet PM₁₀ limit values (Fisher, *et al.*, 2013: 626). Beyond infringement proceedings, another significant enforcement tool is individual legal action in Member States. In *Janecek v Freistaat Bayern*,¹⁹ the EU Court of Justice held that ‘*an individual can require the competent national authorities to draw up an action plan in case where there is a risk that the limit values or alert thresholds may be exceeded*’. Individuals are also entitled to ‘*rely on the provisions of a directive which are unconditional and sufficiently precise...*’ (Fisher, *et al.*, 2013: 627).

3.2. Introduction of national emission ceiling and limitations on industrial emissions

Another important step in the process of improving air quality is the regime of national emissions ceilings for various pollutants. The crucial EU instrument regulating this issue is Directive 2001/81/EC on national emission ceilings for certain atmospheric pollutants²⁰, which covers SO₂, NO_x, VOCs and ammonia. The Directive set emission ceilings and prescribed ‘*the total amount of emissions for each pollutant from any source within the national geographical area*’ but Member States are to decide which measurement they will use in order to control polluting emissions and keep them beyond the critical limits (Fisher, *et al.*, 2013: 630). Despite this provision, States are still required to draw up national emission reduction programmes and make an inventory of national emissions. These must be reported to the Commission and the European Environment Agency (Jans, Vedder, 2012: 424). In part, the Directive was adopted to implement the Gothenburg Protocol²¹ to the UNECE Convention on long-range transboundary air pollution. The Directive covers all anthropogenic emissions, except for international maritime traffic and aircraft emissions beyond the landing and take-off cycle (Jans, Vedder, 2012: 423).

As of 1st July 2018, the Directive 2001/81/EC was repealed by the new National Emission Reduction Commitments Directive (EU/2016/2284), the so-called NEC Directive.²² The NEC Directive transposes the reduction commitments for 2020 taken by the EU and its Member States at the international level, and sets more stringent emission reduction commitments as

¹⁹ CJEU Case C-237/07 *Janecek v Freistaat Bayern* (2008) ECR I-06221, paras 34,36.

²⁰ Directive 2001/81/EC of the European Parliament and of the Council of 23 October 2001 on national emission ceilings for certain atmospheric pollutants.

²¹ The Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone (known as the Multi-effect Protocol or the Gothenburg Protocol) of 30 November 1999.

²² Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants.

from 2030 to reduce the impacts of air pollution on human health by half compared with 2005 (EC, 2020a).²³

Directive 2010/75 on emissions from industrial installations (the Industrial Emissions Directive, IED) is the main EU instrument regulating pollutant emissions from industrial installations.²⁴ This Directive sets out rules on integrated prevention and control of pollutant emissions, covering sources such as combustion plants, waste incineration plants and installations and activities using organic solvents as well as installations producing titanium dioxide (UNFAO, 2010)²⁵. It aims to achieve a high level of protection of the human health and environment by reducing harmful industrial emissions across the EU (IMPEL, 2021).²⁶ The IED is based on five main principles: an integrated approach, the use of best available techniques, flexibility, site inspections, and public participation (IMPEL, 2021). These ‘pillars’ are explained in more detail by the European Commission:

- 1) *The integrated approach* means that regulation of industrial installations (plants) must take into account environmental impacts as a whole, “covering emissions to air, water and land, generation of waste, use of raw materials, energy efficiency, noise, prevention of accidents, and restoration of the site upon closure”.
- 2) Permits given to installations and emission limit values must be based on *the Best Available Techniques (BAT)*. The Commission organises an exchange of information with relevant experts in order to define BAT and the BAT-associated environmental performance. This process results in BAT Conclusions and BAT Reference Documents which are published by the European Commission.
- 3) The IED allows some flexibility to competent authorities in order to set less strict emission limit values. This is possible only if “*an assessment shows that achieving the emission levels associated with BAT described in the BAT conclusions would lead to disproportionately higher costs compared to the environmental benefits due to the geographical location or the local environmental conditions or the technical characteristics of the installation*”. The IED also includes other flexibility instruments, such as: Transitional National Plan, limited lifetime derogation, etc.
- 4) Member States are required to set up a *system of environmental inspections* and draw up inspection plans. Site visits are required to take place at least every 1 to 3 years, using risk-based criteria.
- 5) *The public* has the right to participate in the decision-making process and to be informed of its consequences. This is possible only if data concerning permit applications, the issued permits, the results of the monitoring of releases and the inspection actions are available to the public (EC, 2020b).²⁷

²³ European Commission (2020a): *Reduction of National Emissions*; <https://ec.europa.eu/environment/air/reduction/index.htm>

²⁴ Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control).

²⁵ UN Food and Agriculture Organization (2010): *FAOLEX Database*; <http://www.fao.org/faolex/results/details/en/c/LEX-FAOC109066>

²⁶ IMPEL-European Union Network for the Implementation and Enforcement of Environmental Law (2021): *Industrial Emissions Directive 2010/75/EU*; <https://www.impel.eu/doing-the-right-things/legislation/industrial-emissions-directive-2010-75-eu/>

²⁷ European Commission (2020b): *Industrial Emissions Directive*; <https://ec.europa.eu/environment/industry/stationary/ied/legislation.htm>

Under this Directive, installations are obliged to obtain an environmental permit in order to operate. Those permits set limit values for emissions to air, land and water. Moreover, permits include provisions regarding energy efficiency, waste minimisation, site restorations, and emission monitoring requirements (Croner-I, 2020).²⁸ Around 50,000 installations are required to operate in accordance with these permits (EC, 2020b). Notably, in the period 2008-2012, the cost of damage caused by industrial emissions, primarily by the main air pollutants and CO₂, was estimated to at least 329 billion EUR (EEA, 2014).²⁹

3.3. Environmental impact assessment

Environmental impact assessment (EIA) is a procedure of identification and characterisation of the most likely impacts of proposed actions and an assessment of the environmental significance of those impacts (IAIA, 2021)³⁰. The EIA aims to provide a high level of environment protection by ensuring that a local planning authority is informed and aware of the probable environmental implications of their specific decisions (EC, 2020)³¹. This process should be undertaken in the early decision-making stage when there is still opportunity to modify, adjust or abandon the proposal (IAIA, 2021). It can be applied to individual projects and to public plans or programmes based on Directive 2011/92/EU³² and Directive 2001/42/EC³³. Sheate (2014)³⁴ provides an overview of the EIA process stages:

- Screening: considering whether the proposed project is likely to have a significant impact on environment; if those impacts are certain, the EIA process is required.
- Scoping: identifying the key issues that need to be addressed; this step is crucial for focusing the available resources on relevant issues.
- Baseline study: collecting ‘*all relevant data on the current status of the environment*’.
- Impact prediction: estimating the most likely effects which are expected to occur as a result of planned action.
- Impact assessment: assessing the identified effects by taking into account their importance and significance.
- Mitigation: considering measures which could reduce or remove damaging impacts on environment.
- Environmental Impact Statement (EIS): a formal and public document containing all relevant data gathered in the previous phases.
- EIS Review: examination of the EIS by competent authority in order to prevent possible omissions.
- EIA Follow-up: the post-approval phase which includes monitoring of project implementation, operation and impact auditing.

²⁸ Croner-i (2020): IED; <https://app.croneri.co.uk/topics/industrial-emissions-directive-ied/quickfacts>

²⁹ European Environment Agency (2014). *Costs of air pollution from European industrial facilities 2008–2012*; <https://www.eea.europa.eu/publications/costs-of-air-pollution-2008-2012>.

³⁰ International Association for Impact Assessment (2021): *Impact Assessment – overview and history*; <https://www.iaia.org/wiki-details.php?ID=4>

³¹ EC (2020c): Environmental Assessment; https://ec.europa.eu/environment/eia/index_en.htm

³² Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment.

³³ Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment.

³⁴ Sheate, W. (2014). Overview of the stages of the EIA process, In: *Environmental Assessment* (course), SOAS University of London, https://www.soas.ac.uk/cedep-demos/000_P507_EA_K3736-Demo/unit1/page_14.htm

4. THE INFLUENCE OF THE ICJ AND THE ECtHR

The contribution of the International Court of Justice (ICJ) to the development of international environmental law has been quite modest, considering the small number of cases. Most of these concerned Latin American countries and ‘*law profile issue areas*’, with an exception of the *Whaling case (Australia v. Japan)*.³⁵ This case concerned Japan’s alleged breach of obligations ‘*under the International Convention for the Regulation of Whaling as well as its other international obligations for the preservation of marine mammals and the marine environment*’ (Andresen, 2016: 73). Although the whaling case was considered ‘*a high-level, politicized environmental issue*’, another dispute is said to have contributed much more to the development of international environmental law. In the case *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*³⁶, Argentina claimed that Uruguay had breached its obligations under the 1975 bilateral statute of the River Uruguay by constructing two pulp mills on the river which ‘*would affect the quality of the water and the areas influenced by the river*’ (Andresen, 2016: 73). The significance of this case is in the Court’s recognition of environmental impact assessments as a duty under international law (Payne, 2010).³⁷

The role and the influence of the European Court of Human Rights in creating and developing international environmental law is far more notable. The ECtHR has so far ruled on approximately 300 environment-related cases (CoE, 2021).³⁸ Although the European Convention on Human Rights (ECHR)³⁹ does not recognize a right to a healthy environment, the analysis of the ECtHR case-law indicates that this right is indirectly protected by applying other fundamental rights, such as the right to life, free speech and family life, which were applied to ‘*a wide range of issues including pollution, man-made or natural disasters and access to environmental information*’ (CoE, 2021). Moreover, the ECtHR ‘*had paved the way for an enforcement of air quality directives by individual persons*’, but States still have a large discretion in choosing the number and location of measuring stations, measuring methods, the frequency of measuring, etc (Kraemer, 2012: 281). In addition, late publication of data is still quite common. *De facto*, it all leads to the situation that ‘*EU air quality values constitute policy guidance standards rather than legal instruments*’ (Kraemer, 2012: 281).

5. CONCLUSION

Air pollution problems are a global, ongoing challenge which should be considered not only by international organizations, their Member States and local governments but also by individuals. As long as there is a reluctance and hesitation on individual level to act in relation to air pollution by changing daily habits, the political process of implementing the envisaged measures will stagnate. On the other hand, individuals’ resolutions are insufficient

³⁵ ICJ: Whaling in the Antarctic (*Australia v. Japan*: New Zealand intervening), Judgment of 31 March 2014.

³⁶ ICJ: Pulp Mills on the River Uruguay (*Argentina v. Uruguay*), Judgment of 20 April 2010, ICJ Reports 2010.

³⁷ Payne, C. R. (2010). Pulp Mills on the River Uruguay: The ICJ Recognizes Environmental Impact Assessment as a Duty under International Law, *ASIL Insights*, American Society of International Law; <https://www.asil.org/insights/volume/14/issue/9/pulp-mills-river-uruguay-international-court-justice-recognizes>

³⁸ Council of Europe (2021). *Protecting the environment using human rights law*, <https://www.coe.int/en/web/portal/human-rights-environment>

³⁹ The European Convention on Human Rights of 4 November 1950, Council of Europe.

without strong political determination to fight air pollution and climate change. Air pollution problems are connected and ‘*are feed in to wider systemic environmental processes and effects*’ (Fisher, *et al.*, 2013: 604). Thus, they should be considered with respect to other environmental issues. It is important to include the principle of inter-generational equity when formulating environmental policies; otherwise, future generations will bear the burden of rising environmental problems (Fisher, *et al.*, 2013: 605-606). Environmental policy must be ranked higher in the political priority, while actions concerning air pollution should be less influenced by policies on the use of gas, oil, nuclear energy, etc. (Kraemer, 2012: 281). Despite the activity of EU governing bodies, a satisfactory number of different directives covering almost all relevant issues concerning air pollution, and precise provisions and measurements provided in these directives, Member States still seem to be omitting or delaying their obligations. However, the rising number of infringement cases instituted before national and international courts gives a hope that economic and political interests will not always be seen as having priority over environmental issues.

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RAZVOJ POLITIKE UJEDINJENIH NACIJA I EVROPSKE UNIJE U OBLASTI ZAGAĐENJA VAZDUHA

Cilj rada je da predstavi prirodu grane prava koja se bavi zagađenjem vazduha kao delom ekološkog prava, uz osvrt na naučnu osnovu, istoriju razvoja ove grane prava kroz aktivnost Ujedinjenih Nacija i Evropske Unije, najznačajniju regulativu koja je nastala kao rezultat rada ovih organizacija kao i mere koje su njima predviđene sa ciljem zaštite vazduha od daljeg zagađenja. U prvom delu rada autor se fokusira na prirodu samog ekološkog prava, tačnije dela koji se tiče zagađenja vazduha, najčešće zagađujuće materije, njihove izvore i uticaj na ljudsko zdravlje i životnu sredinu. Drugi deo sadrži pregled najvažnijih dokumenata koji se tiču oštećenja ozonskog omotača i klimatskih promena. U trećem delu autor pruža dodatne informacije o zaštiti ambijentalnog vazduha, legislativi i pratećim merama. Konačno, četvrti deo sadrži uticaj međunarodnih sudova na razvoj međunarodnog ekološkog prava.

Ključne reči: životna sredina, zagađenje vazduha, emisije, monitoring, procena