

# DIRTY SKIES ABOVE: REGULATION OF AIR POLLUTION IN UKRAINE AND THE EU

Comparative study of law,  
policy, and practice

KYIV-PRAGUE 2020



# DISCLAIMER

This study was prepared with the support of the Ministry of Foreign Affairs of the Czech Republic within the framework of the Transition Promotion Programme – a financial assistance programme supporting democracy and human rights using the Czech Republic’s experience with social transition and democratization. The views and opinions expressed in this study are solely those of its authors and in no way can they be taken to reflect any official position and/or opinion of the Ministry of Foreign Affairs of the Czech Republic or the government of the Czech Republic. The research for this study was completed during 2018 and 2019 and reflects legislative and political situation in Ukraine at the beginning of 2019. Although the authors are aware of rapid development of Ukrainian legislation afterwards, it was not possible to include them in the final text of the study.

## **DIRTY SKIES ABOVE: REGULATION OF AIR POLLUTION IN UKRAINE AND THE EU**

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Prague (Czech Republic) / Kyiv (Ukraine) – 2020

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# TABLE OF CONTENTS:

LIST OF ABBREVIATIONS:	4
EXECUTIVE SUMMARY	5
<b>1. UKRAINE'S INDUSTRIAL POLLUTION, ENVIRONMENTAL GOVERNANCE, AND POLICY</b>	<b>6</b>
1.1. Ukraine's Industrial Pollution	6
1.2. Ukraine's Environmental Governance	6
1.3. Ukraine's Environmental Policy	8
<b>2. UKRAINE'S INDUSTRIAL AIR POLLUTION REGULATIONS</b>	<b>10</b>
2.1. Process of Approximation of Ukraine's Environmental Legislation to EU Law	10
2.2. Environmental Permits in Ukraine	16
<b>3. ENVIRONMENTAL PERMIT PROCESS IN THE EU AND THE CZECH REPUBLIC</b>	<b>20</b>
3.1. Background to Environmental Permits in the EU	20
3.2. Environmental Permit Process in the Czech Republic	24
<b>4. AIR POLLUTION MONITORING AND INSPECTIONS</b>	<b>28</b>
4.1. Air Pollution Monitoring in Ukraine	28
4.2. System of Inspections in Ukraine	29
4.3. Air Pollution Monitoring in the Czech Republic	31
Case study: Air quality in the Ostrava/Karviná/Frýdek-Místek agglomeration	34
4.4. System of Inspections in the Czech Republic	36
About us	38

# LIST OF ABBREVIATIONS:

BAT	Best available techniques
CAPE	Clean Air Programme for Europe
CEI	Czech Environmental Inspectorate
CMU	Cabinet of Ministers of Ukraine
ČHMÚ	Czech Hydrometeorological Institute
EIA	Environmental Impact Assessment
FSCP	State Service of Ukraine for Food Safety and Consumer Protection
IPPC	Integrated pollution prevention and control
ISPOP	Integrated Reporting Compliance System
MAC	Maximum allowable concentration
MAE	Maximum allowable emissions
MENR	Ministry of Ecology and Natural Resources
MoE	Ministry of the Environment of the Czech Republic
NES	National Environmental Strategy
OSA	Oblast state administration
PRTR	Pollutant Release and Transfer Register
SEI	State Environmental Inspectorate
SEPS	State Environmental Protection Service
TMAE	Technological maximum allowable emissions

# EXECUTIVE SUMMARY

Air pollution and its management and governance remain one of Ukraine's key environmental challenges. In 2014, Ukraine began to decentralize the system of environmental governance to vest more authority and financial resources in local administrations. There is a multitude of agencies and administrations at central and local level responsible for environmental governance and the management of air pollution prevention that suffer from frequent organizational changes, overlapping responsibilities, and weak coordination. The responsibilities of environmental monitoring and inspection bodies at the national and regional levels are not clearly divided either. **It is necessary to adopt a consistent regulatory framework and clearly define the functions of various agencies to avoid gaps in local-level functions and overlaps with central-level functions.**

As regards environmental policy, most sectoral strategies and action plans lack clear prioritization among different policy goals, realistic target indicators, and clear time frames to achieve the targets. The environmental agenda is integrated into sectoral strategies, programmes, and activities without efficient implementation mechanisms.

As regards environmental legislation, quantity often precedes quality. Ukraine is significantly lagging behind the time schedule for implementing the *EU Environmental Acquis*, including the Industrial Emissions Directive introduced by the Association Agreement. The country has a fragmented environmental permit system, with large numbers of permits issued for different types of emissions by different authorities. This system disregards the overall environmental impact of the enterprises' activities. The conditions for issuing a permit are not determined on the basis of universal BAT (best available techniques) as envisioned by the Industrial Emissions Directive but rather somewhat vague maximum allowable emissions (MAE) and technological maximum allowable emissions (TMAE). No equivalent of the European Pollutant Release and Transfer Register (E-PRTR) exists.

The **concept of the implementation of state policy in the field of industrial pollution** prepared by the Ministry of Ecology and Natural Resources as a prerequisite for the further development of the draft law on **integrated pollution prevention and control should be elaborated in more detail to indicate clearly which authority will be responsible for issuing permits.** To introduce the notion of integrated permits requires **legislative changes** that will also **regulate the issuance of permits for types of facilities and industrial activities foreseen by the Industrial Emissions Directive** (e.g. combustion plants), thus preventing large installations with the greatest environmental impact from operating unrestrictedly.

The regulation also needs to safeguard the right of the public to access information and to participate in the environmental permit issuance process and create an efficient enforcement mechanism.

# 1. UKRAINE'S INDUSTRIAL POLLUTION, ENVIRONMENTAL GOVERNANCE, AND POLICY

## 1.1. Ukraine's Industrial Pollution

With a total area of 603,550 km<sup>2</sup> and a population of approximately 43 million,<sup>1</sup> Ukraine counts as the second largest country in Europe. Key industries include coal, electric power, ferrous and non-ferrous metals, machinery and transport equipment, chemicals, industrial farming, and food processing.<sup>2</sup> The National Environmental Strategy 2020<sup>3</sup> identifies air pollution as one of the country's key environmental challenges and nitrogen oxides (NO<sub>x</sub>), carbon dioxide (CO<sub>2</sub>), sulphur dioxide (SO<sub>2</sub>), and particulates as key air pollutants. Stationary sources account for approximately 60% of the emissions (the vast majority is produced from extractive and processing industries and from electricity generation). The transport sector accounts for 40% of total pollution.<sup>4</sup>

The biggest industrial cities are Kyiv (the capital), Kharkiv (north-east), Zaporizhia (south-centre), Dnipro and Kryvyi Rih (south-east), and Mariupol and Odessa (south). The Donetsk and Dnipropetrovsk regions ('oblasts') are particularly heavy on pollution. In 2013, for example, these regions accounted for 42% of the estimated air pollution load. As a paradox, even though Ukraine's ambient air quality standards are even stricter than the standards recommended by the WHO Air Quality Guidelines for Europe,<sup>5</sup> almost all large Ukrainian cities exceed the WHO standards for specific pollutants.<sup>6</sup>

## 1.2. Ukraine's Environmental Governance

Since gaining independence in 1991, Ukraine has made significant progress in its environmental management and governance. The country developed a wide regulatory and legal base for environmental legislation, became a signatory to major international and regional environmental agreements, and established the Ministry of Ecology and Natural Resources and a number of agencies and institutions to manage and enforce environmental protection.<sup>7</sup> Nevertheless, the environmental governance system in Ukraine has inherited a Soviet legacy and faces a number of challenges.

Following the approval of its concept in April 2014, Ukraine embarked on decentralization reform to delegate significant governance authority from central to local government. This reform is envisaged as taking place in five steps that comprise the creation of a three-tiered system of administrative and territorial structures (27 regions ("oblasts"), 120 to 150 districts ("rayons"), and 1,500 to 1,800 communities ("hromady"). Unlike the allocation of environmental responsibilities between oblasts and rayons, the reform concept is not clear on the division of responsibilities between district and community level.<sup>8</sup>

<sup>1</sup> UN estimate as of 2019.

<sup>2</sup> International Bank for Reconstruction and Development/World Bank (January 2016). *Ukraine Country Environmental Analysis*, p. 1.

<sup>3</sup> Starting from 1 January 2020, the new Law on "Basic Principles (Strategy) of the State Environmental Policy of Ukraine for the Period up to 2030" will come into effect.

<sup>4</sup> International Bank for Reconstruction and Development/World Bank (January 2016). *Ukraine Country Environmental Analysis*, p. 6.

<sup>5</sup> Air Quality Guidelines for Europe, second edition (2000) available at [http://www.euro.who.int/\\_data/assets/pdf\\_file/0005/74732/E71922.pdf](http://www.euro.who.int/_data/assets/pdf_file/0005/74732/E71922.pdf).

<sup>6</sup> International Bank for Reconstruction and Development/World Bank (January 2016). *Ukraine Country Environmental Analysis*, p. 6.

<sup>7</sup> Ibid. p. 1.

<sup>8</sup> Ibid. p. 13.

At the **central level**, the **Ministry of Ecology and Natural Resources (MENR)** is the chief state authority responsible for developing and ensuring the implementation of environmental policy. The MENR's role and functioning was affected by previous administrative decentralization reforms between 2010 and 2013. Under the 2012 Law on "Introducing Changes to Certain Legislative Acts of Ukraine with the Aim of the Optimization of the Powers and Authorities of the Executive Authorities in the Sphere of Ecology and Natural Resources, Including the Local Level", which transferred a number of functions (such as permits for certain activities, monitoring, and supervision) from the central government (MENR) to local administrations ("oblast" state administrations) and the Resolution of the Cabinet of Ministers No. 159 (2013), the MENR's oblast branches (regional departments) were abolished and their functions transferred to the newly created departments in oblast state administrations ("OSA").<sup>9</sup>

These reorganizations and restructurings of environmental governance at the central level led to a loss of environmental information and databases and the loss of experienced personnel and gaps in the implementation of environmental policy and legislation.<sup>10</sup> They also caused discontinuity in the work of the MENR's oblast branches and OSAs' environmental departments. The continuity of the MENR's work overall is also undermined by frequent changes of ministers (17 over the past 25 years).<sup>11</sup>

The MENR collaborates with other ministries, state agencies, and inspectorates. However, the level of collaboration is low and rather formal and consists mainly of raising "no objection" to drafts of legislative acts, programmes, and regulations issued by these agencies and bodies. The MENR coordinates the following subordinate environmental agencies:

- State Environmental Inspectorate (SEI) – implements state policy on monitoring and control in the areas of environmental protection, rational use, recreation, and protection of natural resources.
- State Agency of Water Resources – implements state policy on the management and use of surface water resources, development of the water industry, and maintenance of state waterworks facilities, inter-economic irrigation, and drainage systems. It issues the permits for dedicated water use.
- State Agency for Exclusion Zone Management – implements state policy in the management of the Chernobyl exclusion zone and its mandatory resettlement and also implements the state radioactive waste management policy.
- State Agency for Geology and Mineral Resources – implements state policy in geological research and the rational use of mineral resources. It issues permits for dedicated use of subsoil and mineral resources.
- Natural Reserve Fund Organization

**Figure 1: MENR and subordinated agencies**

Ministry of Ecology and Natural Resources		
State Ecological Inspectorate	State Enterprises (9)	Natural Reserve Fund Organization (46)
State Agency of Water Resources	Public Joint Stock Company	
State Agency for Exclusion Zone Management		
State Agency for Geology and Mineral Resources	Research Organizations (3)	

Source: International Bank for Reconstruction and Development/World Bank (2016).

<sup>9</sup> International Bank for Reconstruction and Development/World Bank (January 2016). *Ukraine Country Environmental Analysis*, p. 14.

<sup>10</sup> Ibid.

<sup>11</sup> Ibid. p. 29.

The cooperation between OSA departments/oblast branches of the MENR and oblast branches of the SEI is weak and problematic as these two agencies belong to different authorities (regional and national). For example, it is not required that information about approved decisions of ecological expertise or permits issued to enterprises by oblast branches of the MENR be communicated to the SEI.<sup>12</sup>

In addition to the MENR and its subordinated agencies, several other ministries and state services affect environmental management in the field of the prevention of air pollution:

- the Ministry of Health – approves the maximum allowable concentrations of pollutants. In the environmental permit issuance process it approves the set of documents submitted by an enterprise to the MENR or OSA to obtain an environmental (air emissions) permit;
- the State Statistics Service – collects data pertaining to air emissions from stationary industrial sources and from mobile sources. It also receives environmental data from the MENR, Ministry of Regional Development, Ministry of Health, State Agency of Forest Resources, and other bodies.

As is evident, there is a multitude of agencies at central level responsible for environmental governance and the management of the prevention of air pollution. As a result of frequent organizational changes, their responsibilities overlap and they suffer from weak coordination.

At the **local level**, from the second half of 2013, OSAs started creating their departments of environmental protection. They proceeded according to a general regulation on the “Structural Subdivision of Local State Administration” (No. 887 of 26 September 2012) as their only guideline and the departments, thus, ended up with a poor structure and outline of their functions. Conceptually, the names of directorates, divisions, and sectors are quite inconsistent from region to region. Such diversity naturally creates problems for interaction with the central government, which is supposed to regulate the activities of oblast departments.<sup>13</sup>

Each “oblast” has several government agencies with environmental responsibilities:

- branches of central government agencies (oblast environmental inspectorates); and
- oblast departments of the environment and natural resources.

Similarly as at central level, there is no coordination mechanism among them. The system of environmental management at the sub-national level requires considerable effort to develop and organize. It is necessary to adopt a consistent regulatory framework and clearly define the functions of various agencies to avoid gaps in local-level functions and overlaps with the central-level functions.

### 1.3. Ukraine’s Environmental Policy

The National Environmental Strategy (NES) 2020 was adopted in 2007.<sup>14</sup> At the beginning of 2020, it is to be replaced by the Law on “the Basic Principles (Strategy) of the State Environmental Policy of Ukraine for the period up to 2030”. NES 2020 foresaw the integration of the environment into sectoral policies, particularly in the areas of energy and industry, transport, and agriculture. Such integration requires close collaboration with the competent ministries and organizations and a detailed review of the regulatory framework. SEP 2030 mentions a number of problematic areas, including air and soil pollution, but offers no suggestions for tackling them. Except for the implementation of the Industrial Emissions Directive (2010/75/EU) as one of the priority pathways, it lacks reasonable targets.

Most sectoral strategies and action plans in Ukraine feature a number of weaknesses. They lack clear prioritization among the different goals to achieve the NES/SEP targets. What they also lack

<sup>12</sup> International Bank for Reconstruction and Development/World Bank (January 2016). *Ukraine Country Environmental Analysis*, p. 44.

<sup>13</sup> International Bank for Reconstruction and Development/World Bank (January 2016). *Ukraine Country Environmental Analysis*, p. 40-41.

<sup>14</sup> Ukraine’s government portal (not dated); available at <https://www.kmu.gov.ua/ua/npas/95215363>; note that UA government websites are not updated regularly, and references might be redirected to websites that no longer exist..





Swimming by Azovstal Iron and Steel Works, Mariupol.

Photo: Stanislav Krupař / Arnika



Smoke over ArcelorMittal Kryvyi Rih.

Photo: Stanislav Krupař / Arnika

is a clear baseline, realistic target indicators, and clear time frames in the national plans of measures. The environmental agenda is merely integrated into sectoral strategies, programmes, and activities without efficient implementation mechanisms in place.

The Ukrainian environmental legislation is quite comprehensive (more than 300 legal acts) and covers most areas of environmental protection and the management of natural resources. Similarly to the environmental policy, the environmental legislation features a number of weaknesses:

- it is largely declaratory<sup>15</sup> in nature and does not contain essential enforcement mechanisms for its implementation;
- many of the acts are not interrelated; and
- explanatory memoranda to draft laws are a rarity rather than a norm and the analysis of legislative impacts is minimal.

Until relatively recently Ukraine lacked and, in a number of areas, is still lacking comprehensive and enforceable legislation on public participation in environmental decision making, access to justice, and the system of environmental monitoring and inspection. In 2017, the Law on Environmental Impact Assessment<sup>16</sup> was adopted, which resulted in the Aarhus Convention Secretariat excluding Ukraine from the list of the countries that are non-compliant with the Aarhus Convention.<sup>17</sup>

In 2018, the Law on Strategic Environmental Assessment<sup>18</sup> was adopted, which provides for a systematic and comprehensive procedure for evaluating the implications of policies, plans, or programmes in order to prevent negative environmental impacts and ensure compliance with the principles of sustainable development. Ukraine's legal framework for environmental protection foresees the establishment of a nation-wide environmental monitoring system for the state of the environment and the level of pollution.

The concept of reforming the system of state supervision (control) in the field of environmental protection<sup>19</sup> provides for the creation of a single integrated environmental oversight (control) body and the elimination of the duplication of functions in this area. In particular, it is proposed to introduce a state system of environmental monitoring, to create a State Environmental Protection Service, and to abolish the State Environmental Inspectorate, and to create new inter-regional environmental services within the newly created service.

## 2. UKRAINE'S INDUSTRIAL AIR POLLUTION REGULATIONS

### 2.1. Process of Approximation of Ukraine's Environmental Legislation to EU Law

The process of the approximation of the Ukrainian environmental legislation to EU law is carried out according to the National Approximation Strategy in the Field of Environmental Protection.<sup>20</sup> The strategy is based on the provisions of Article 363 of Chapter 6 (Environment) and Annex XXX to the Association Agreement of 2014 between the European Union (and its Member States)

<sup>15</sup> A declaratory law/statute does not contain any legal norm; it merely declares the existing law without proposing any additions or changes.

<sup>16</sup> The original version (in Ukrainian) is available at <http://zakon.rada.gov.ua/laws/show/2059-19>.

<sup>17</sup> Available in Ukrainian at <https://ecology.unian.ua/naturalresources/2136749-ukrajinu-vikreslili-zi-spisku-porushnikiv-orguskoji-konventsiji-oon-minprirodi.html>.

<sup>18</sup> The original version (in Ukrainian) is available at <http://zakon.rada.gov.ua/laws/show/2354-19>.

<sup>19</sup> Ukraine's government portal (not dated); available at <https://www.kmu.gov.ua/ua/npas/250269536>.

<sup>20</sup> National Approximation Strategy of the legislation of Ukraine to the EU law in the field of environmental protection (2015), available at <http://ecology.donoda.gov.ua/wp-content/uploads/2015>

and Ukraine<sup>21</sup> and aims to ensure the fulfilment of the specified requirements of the Association Agreement by Ukraine.

In accordance with “pan-European” approaches, the approximation process comprises three stages: transposition (adaptation), implementation, and enforcement. The transposition (adaptation) of Ukrainian legislation to the EU law is performed within the framework of implementation of the relevant National Programme.<sup>22</sup> According to the Association Agreement, the adaptation process should take two to three years after the signature thereof. As implementation requires considerably more resources (time, finances, personnel), it is scheduled to take between two to ten years, depending on the particular environmental directive Ukraine needs to implement. In the case of certain directives and as stated in particular provisions of the Association Agreement, the Association Council – a ministerial-level body established to supervise and monitor the application and implementation of the Agreement – may set an individual deadline based on the assessment of the progress.

According to the Association Agreement, Ukraine is obliged to implement a number of EU Directives in the field of environmental protection, including Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control) (the “IED Directive”).<sup>23</sup> The process foresees and requires a number of legislative (in particular, preparation and adoption of BAT), technical (e.g. the definition of facilities requiring an integrated permit and creation of a pollutant register), and organizational (in particular, a framework for enabling public access to information and participation in environmental decision making) changes.

Under this process Ukraine is obliged:

- Within two years (by the end of 2016) after the entry into force of the Association Agreement:
  - to adopt national legislation and determine the authorized body for the implementation of the IED Directive;
  - to develop a concept for the implementation of an integrated permit system and a draft law on integrated permits.
- Within five years (by the end of 2019):
  - to establish a compliance monitoring mechanism;
  - to identify industrial facilities requiring a permit to operate;
  - to introduce the best available techniques based on the findings of BAT reference documents (BREFs);
  - to prepare a programme to reduce the total annual emissions from the existing facilities (and to establish emission limit values for the existing facilities, including combustion capacities).

The Ministry of the Environment and Natural Resources (MENR) is leading the current work on the implementation of the IED Directive. In November 2018, the MENR presented the concept of the implementation of state policy in the field of industrial pollution (the “IP Concept”)<sup>24</sup> for public discussion. The IP Concept is a prerequisite for the further development of the draft law on integrated pollution prevention and control, which is scheduled between 2019 and 2020. The process of developing the legislative framework on the integrated permitting system is scheduled to start in 2020 and should be completed by 2028. As is evident, Ukraine is significantly lagging behind the timeline introduced by the Association Agreement. While the draft law on integrated permits should already have been prepared in 2016, it will take eight more years than expected to develop the entire compliance and monitoring mechanism and BAT and determine emission limit values.

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<sup>21</sup> Association Agreement between the European Union and its Member States, on the one part, and Ukraine, on the other part, available in Ukrainian at [http://zakon.rada.gov.ua/laws/show/984\\_011](http://zakon.rada.gov.ua/laws/show/984_011) and in English at [https://trade.ec.europa.eu/doclib/docs/2016/november/tradoc\\_155103.pdf](https://trade.ec.europa.eu/doclib/docs/2016/november/tradoc_155103.pdf).

<sup>22</sup> Law of Ukraine on “the National Programme of Adaptation of Ukrainian Legislation to the Law of the European Union” of 18 March 2004, No. 1629-I.

<sup>23</sup> See Annex XXX to the Association Agreement.

<sup>24</sup> More on the IP Concept on the website of the Ministry of Environment and Natural Resources, available in Ukrainian at <https://menr.gov.ua/news/32895.html>.

## Environmental permits

Currently, environmental permits are issued either by environmental departments of regional (“oblast”) state administrations (for small and medium-sized enterprises – groups II and III), or by the MENR (for the biggest and most polluting facilities – group I). The permits for water discharges and waste production and management are all obtained from different agencies. The IP Concept does not clearly indicate which authority will be responsible for issuing permits; in some cases it will be the MENR, but in others it designates a “responsible body” without elaborating further.

There will be two main types of permits – integrated permits and unified permits. Some operations will require only registration.

Since the MENR possesses the greatest expertise and capacity in these fields, it will issue **Integrated Permits** for the categories of activities included in Annex I, points 2-4 of the IED Directive, i.e. energy industries, production and processing of metals, the mineral industry, and the chemical industry. Which authority will issue permits for waste management and other activities included in Annex I, points 5 and 6 of the IED Directive is still being determined.

A **Unified Permit** shall be issued for activities under Annex I and Annex 7 parts 2-4 of the IED Directive. The installations are not obliged to implement BAT but they are obliged to conform to the maximum allowable volume of emissions.

**Registration** is applicable to small-scale installations that do not cause any significant environmental impact.

By mid-2021, a registry of the installations shall be created, as well as the schedule of full transition to the integrated permitting system.

## Best Available Techniques

According to the IED Directive, the conditions of the integrated permit are set on the basis of the best available techniques (BAT) and BAT reference documents (BREFs) adopted by the decision of the European Commission. In Ukraine, the permit conditions are set on the basis of maximum allowable emissions (MAE) and technological maximum allowable emissions (TMAE). Both MAE and TMAE are calculated on the basis of the average emission figures for the types of equipment where the volumes of such emissions are the lowest. MAE and TMAE are set as binding standards and it is prohibited to derogate from them (in either direction – either to increase or reduce the volumes).

The current legislation of Ukraine contains standard conditions for environmental permits that can be developed with the consideration of BAT principles, although they are not legislatively enshrined as conditions for setting emission limits. As it is not possible to derogate from MAE and TMAE, taking advantage of the regulatory potential of the BAT principles is not enabled to the fullest. Another factor that would reduce the potential of BAT principles is that the current legislation of Ukraine neither considers nor foresees considering the need to protect water, reduce waste or protect important social interests when setting the permit conditions.

For the effective application of the BAT principles it is important not only to declare that BAT principles are to be applied as a basis for setting permit conditions, but also to set a system of clear rules for their application; rules flexible enough to allow derogation from the emission levels if it is proved that achieving them would lead to disproportionately higher costs compared to the environmental benefits, while at the same time making it impossible to arbitrarily reduce the emission values for most hazardous substances.<sup>25</sup>

Neither does the current legislation regulate the issuance of permits for a number of types of facilities and industrial activities envisaged by the IED Directive, for example, combustion plants or installations and activities in which organic solvents are used, thus allowing large installations with the greatest environmental impact to operate without restrictions.

The IP Concept foresees the implementation of specific regulation on BAT application, the possibility of derogating from MAE and TMAE, and balancing between the protection of air, water and

<sup>25</sup> The requirement to use the BAT and management methods as a condition for issuing permits for air emissions, Третяк Т.О., Часопис Академії адвокатури України – #18 (1’2013), УДК: 347.511.

soil, waste management and important social interests. The Best Available Techniques Reference documents (BREFs) are to be translated into Ukrainian and gradually transposed to the Ukrainian legislation (for some of the activities from Annex I by 2023, and for all the activities from Annex I by 2028).

## Public participation

The new Law on Environmental Impact Assessment and the new Law on Strategic Environmental Assessment strengthen the framework for public participation and environmental decision making. The IP Concept foresees the following aspects of public participation: access to data on industrial emission volumes; access to the documents related to the permit process (applications, permits, enterprises' annual reports, and reports of the supervisory body); participation in the process for granting permits (including the process for amending an environmental permit); ensuring the results of public discussion are duly taken into account.

## Access to justice

Under the Civil Procedure Code and the Administrative Code the citizens of Ukraine have the right to seek legal recourse in cases of the violation of their rights, freedoms, and interests, including in the area of environmental protection and environmental rights. Despite a certain amount of progress access to justice in environmental matters is limited, in general, by the overall weaknesses in the Ukrainian judiciary<sup>26</sup> and, in particular, by factors such as a lack of legal support and knowledge of court processes, a psychological barrier to accessing the judiciary for environmental matters, high legal costs, restrictive judiciary procedures, and the lack of effective enforcement mechanisms.

Residents' appeals concerning pollution levels and allegations of enterprises emitting harmful substances into the environment occasionally resonate with the authorities. In the case of PJSC "Fanplit", a plywood and wood-fibre board producer in Kyiv, for example, repeated accusations that the company was exceeding nitrogen dioxide and formaldehyde levels led to criminal prosecutions (in 2015) and subsequent suspension of its environmental permit for repeated failures to comply with the maximum allowable concentrations (in 2018).<sup>27</sup>

Following an inspection by the State Ecological Inspectorate of Ukraine of the Kharkiv Coke Plant, in 2016, finding out that the coke production from three out of its four coke batteries was carried out without dust-collecting equipment, which constituted a violation of the air emissions permit, the Inspectorate appealed to the court requesting the cessation of the operation of the coke batteries until dust-collecting equipment was installed. The court sided with the plant, stating that the plant does not have a legal obligation to operate the coke-producing complex with coke batteries with the above-mentioned equipment at each of the batteries, and thus, it was not violating the permit conditions. The appellate court also agreed with the court of first instance, which made the Inspectorate appeal to the Supreme Court of Ukraine (case pending).

In 2018, local residents, trying to conquer the environmental impact from the plant, appealed to the State Environmental Inspectorate to verify the legality of the extraction of artesian water by the plant for its technological needs. The inspection revealed the violation of the conditions of water use by the plant. The plant contested the inspection in court but the court confirmed that the Inspectorate had proceeded lawfully. The investigation showed that starting from 1 April 2017 the plant took fresh drinking water from a well for all its production and household needs (including the coal preparation workshop, cooling tower, concrete unit, and watering the cover and green plantations), which violated the permit for water consumption and drainage of the PJSC "Kharkiv coke plant".

**PJSC "ArcelorMittal Kryvyi Rih"**, the largest metallurgical enterprise in Ukraine, the production chain of which comprises everything from the extraction of iron ore to the manufacture of finished

<sup>26</sup> The Global Competitiveness Index (2017–2018) ranked Ukraine 129 out of 137 countries in terms of judicial independence.

<sup>27</sup> The case is registered under (only in Ukrainian) Рішення Окружного адміністративного суду міста Києва від 22.08.2018 <http://reyestr.court.gov.ua/Review/76135525>.

metal products, faced a number of criminal charges related to repeatedly exceeding the allowed emission levels (in 2017)<sup>28</sup> and suspicions of dysfunctional equipment and poor plant maintenance that could endanger the lives and health of employees (in 2018).<sup>29</sup> One of the most recent cases was brought against a casting-mechanical plant created by ArcelorMittal Kryvyi Rih for an alleged failure to undergo an EIA procedure.

## Pollutant Release and Transfer Register (PRTTR)

The MENR has been working on the concept of a platform titled “Open Environment”. Open Environment is the first of its kind, a nationwide automated information and analytical system for environmental protection, which should provide free access to information about the state of the environment and environmental risks in Ukraine. Within the framework of Open Environment the following should be created: (i) an environmental monitoring system and a pollutant release and transfer register (including access to its public part); (ii) an information exchange system with national and European registries, databases, and other information sources.<sup>30</sup>

Data on air and other types of emissions and waste is provided by the enterprises themselves. Open Environment will take this data from the regular reporting forms submitted by the enterprises to the State Statistics Service of Ukraine.<sup>31</sup> Other types of data on emissions will be taken from the environmental monitoring system, which is still to be created.

## Inspections and control

In 2017, the government approved the concept for the introduction of the state system of environmental monitoring, abolished the State Ecological Inspectorate, and set up the State Environmental Protection Service (SEPS) and, within the newly created service, also set up new interregional environmental services.<sup>32</sup>

As a result of this reform, which attempts to create a state system of monitoring and oversight involving the public and establish a unified integrated state environmental monitoring and supervisory body, the SEPS acquired a new function of nationwide environmental monitoring – currently non-existent in Ukraine. The SEPS will take over the powers from a number of agencies that have previously issued specific permits and control the fulfilment of the environmental permit conditions.<sup>33</sup> The service shall be subordinated to the MENR.

As of the end of 2018, the deed to establish the SEPS had not been approved.

The IP Concept envisages that the SEPS will contribute to the process of the development of IP conditions, systematically consider the risks to the environment, carry out scheduled and unscheduled inspections, and produce reports on how enterprises fulfil the conditions of the IP.

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<sup>28</sup> The case is registered under (only in Ukrainian) Ухвала Дзержинського районного суду міста Кривого Рогу Дніпропетровської області від 05.09.2017 <http://www.reyestr.court.gov.ua/Review/68666935>.

<sup>29</sup> The case is registered under (only in Ukrainian) Ухвала Касаційного кримінального суду Верховного Суду від 18 жовтня 2018 р. <http://reyestr.court.gov.ua/Review/77249237>; Рішення Дніпропетровського окружного адміністративного суду міста Кривого Рогу Дніпропетровської області від 13.09.2018 <http://reyestr.court.gov.ua/Review/76756416>.

<sup>30</sup> The Ministry of the Environment opens public discussion on the Concept for the Creation of the State Automated System „Open Environment“ <https://menr.gov.ua/news/32130.html>.

<sup>31</sup> The State Statistics Service: the Division of Natural Resources and Environment Protection Statistics within the Agriculture and Environment Statistics Department is responsible for environmental statistics.

<sup>32</sup> Розпорядження КМУ від 31.05.2017 р. №616-р «Про схвалення Concept of reforming the state environmental supervision (control) system» <https://www.kmu.gov.ua/ua/npas/250269536>; the plan is to create 10 interregional territorial offices and 27 special regional inspection offices.

<sup>33</sup> The State Environmental Inspection, State Service of Geology and Subsoil of Ukraine, the State Agency for Forest Resources, State Service of Ukraine on Geodesy, Cartography, and Cadastre, State Agency of Fisheries of Ukraine, State Committee for Consumer Safety and Consumer Protection, and State Service of Ukraine for Transport Safety.

Installation operators are obliged to perform self-monitoring and to report the emissions data to the general database (Open Environment). The MENR/responsible body is to compile a report on the fulfilment of the conditions of the permits that have been issued.

**Figure 2: Overview of Ukraine’s transposition of the IED Directive**

<b>IED Directive requirement</b>	<b>Transposition in Ukraine</b>	<b>Note</b>
Integrated prevention and control of pollution arising from the activities listed in the Directive	Not yet transposed	The environmental permit process is not integrated. Separate permits are issued for the pollution of air, water, and soil, and even for activities that extend beyond those listed in the IED Directive.
No new installations may operate without an integrated permit.	Not yet transposed	New installations require a permit, but not an integrated one; it is not a rarity that installations that would otherwise require a permit operate without one.
Existing installations must operate in accordance with the IED Directive.	Not yet transposed	Existing installations, if permits are issued for them, operate in accordance with laws and conditions that are not compliant with the IED Directive.
The conditions of the permit shall be determined and the installation operated through the application of the best available techniques.	Not yet transposed	The permit conditions are determined on the basis of maximum allowable emissions. BAT is yet to be developed.
Access to information and public participation	Not yet transposed	The IP Concept foresees access to data on industrial emission volumes, access to the documents related to the permit process, and participation in the permit process; how and where the information on particular stages of the permit procedure is accessible is not always clear.
Access to justice	Not yet transposed	Limited access to justice in environmental matters. It remains to be seen how the IED Directive will be implemented and whether anyone will be enabled to challenge the legality of decisions, acts, or omissions or only participants in the procedure.

## 2.2. Environmental Permits in Ukraine

Ukraine has a fragmented environmental permit system, featuring large numbers of permits for different types of emissions (air, water, and waste) issued by different authorities.<sup>34</sup> The system reduces cost-efficiency and increases the administrative burden for both the authority and the applicants. Neither does the environmental permit process consider the overall environmental impact of an installation: the environmental permits are usually limited to emission limit values without including other operational conditions such as energy efficiency, the use of raw materials and water, emergency preparedness, reporting and accident notification, etc.

In Ukraine, all enterprises are divided into three groups:

- Group I – includes plants that are registered by the state and have types of production processes or equipment that require the use of BAT;
- Group II – includes plants that are registered by the state and do not have types of production processes or equipment that require the use of BAT;
- Group III – plants that do not fall into either of the two previous categories.<sup>35</sup>

### Existing capacities

Environmental (air) permits for group III and group II are issued by “oblast” state administrations (OSAs) and for group I by the Ministry of the Environment and Natural Resources of Ukraine. The MENR has the right to revoke any permit approved by regional authorities. The subject-matter competence to issue environmental permits is not always complied with. Permits for air and greenhouse gas emissions for the “Kharkiv Coke Plant”, a coal and coke processor, for example, were allegedly issued by the Environmental Protection Agency of the Kharkiv regional state administration instead of the Ministry of the Environment and without an environmental review.

The permit for group I is issued for seven years, for group II for 10 years, and for group III for an unlimited period of time.<sup>36</sup> The permits are issued free of charge.<sup>37</sup>

### Procedure

In order to commence the procedure to obtain an environmental permit the enterprise needs to arrange for an inventory of emissions. This can be done either by the enterprise itself or by an outsourced company. The inventory should include information about all the existing sources of emissions, types of pollutants, and measuring equipment(s) installed.

All the data is then compiled into the report. This is a crucial document as it contains the parameters for the calculation of the environmental and technical details regarding the facility. The report is not publicly available as it may contain sensitive (financial) information.

The report is submitted to the relevant authority (according to the above-mentioned groups and geographical position) and the enterprise starts to prepare the documentation for the substantiation of its air emissions quota.

At the same time, the enterprise is required to place an announcement about the commencement of the process in local offline media. However, it is not specified what kind of media it should

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<sup>34</sup> Decree of the Ministry of the Environment No. 108 of 9 March 2006 “on the approval of the General Instruction on requirements for the registration of documents substantiating the volume of emissions, requesting permits for air emissions by stationary sources for enterprises, institutions, organizations, and entrepreneurs” available at <http://zakon.rada.gov.ua/laws/show/302-2002-%D0%BF?lang=ru>.

<sup>35</sup> Decree of the Ministry of the Environment No. 108 of 9 March 2006 “on the approval of the General Instruction on requirements for the registration of documents substantiating the volume of emissions, requesting permits for air emissions by stationary sources for enterprises, institutions, organizations, and entrepreneurs” available at <http://zakon.rada.gov.ua/laws/show/302-2002-%D0%BF?lang=ru>.

<sup>36</sup> Part 8 of Article 11 of the Law of Ukraine on the protection of atmospheric air <http://zakon.rada.gov.ua/laws/show/2707-12>.

<sup>37</sup> Decree of the Ministry of the Environment No. 108 of 9 March 2006 “on the approval of the General Instruction on requirements for the registration of documents substantiating the volume of emissions, requesting permits for air emissions by stationary sources for enterprises, institutions, organizations, and entrepreneurs” available at <http://zakon.rada.gov.ua/laws/show/302-2002-%D0%BF?lang=ru>.



be. In practice, such announcements are usually published in small-scale local newspapers that are often not available to the wider public.

After the publication of the announcement the public has 31 days to comment on it via the relevant OSA. It is difficult to do this as the information that should be commented on (the report) is not publicly available and the substantiation of emission quotas could be elaborated up to six months after the announcement is published.

After the expiry of the 31-day period the relevant OSA usually declares that no public comments/objections were received. The Ministry of Health gives its approval and the package of documents is submitted to the relevant body for the issuance of permits (depending on the group and geographical position).

Within 30 days of the reception thereof, the relevant body examines the package of documents. If the body has comments, the package of documents is returned to the enterprise to make the necessary adjustments/supplements. If no comments appear, the relevant body issues a permit.

The permit contains the following conditions:

- air emissions quota
- conditions of the technological process
- BAT, or more precisely maximum allowable levels
- methods for reducing air emissions
- methods used for control purposes

The volume of air emissions approved in the permit is calculated on the basis of the documentation submitted by the enterprise. Those documents are elaborated either by the the plant itself or by outsourced companies. The determination of the permitted emissions, which are specified in the permit, is based on the supporting documents that are developed by accredited companies.<sup>38</sup>

In Ukraine, there is a number of standards for volumes of emissions and their concentration.

*Maximum allowable concentration (MAC)* – the concentration of a pollutant in the air that is safe for human health as defined by the Ministry of Health.

*Maximum allowable emissions (MAE)* – the volume of pollutants that should not be exceeded per unit of time, so that the concentration of a pollutant at the border of the sanitary zone does not exceed the MAC of the pollutant. MAE are elaborated by the Ministry of Environment for certain types of equipment.<sup>39</sup>

*Technological maximum allowable emissions (TMAE)* – the maximum allowable volume of emissions that is approved by the Ministry of the Environment for specific technological processes that do not fit into the standard MAE.<sup>40</sup>

Both MAE and TMAE are binding for the respective enterprises.

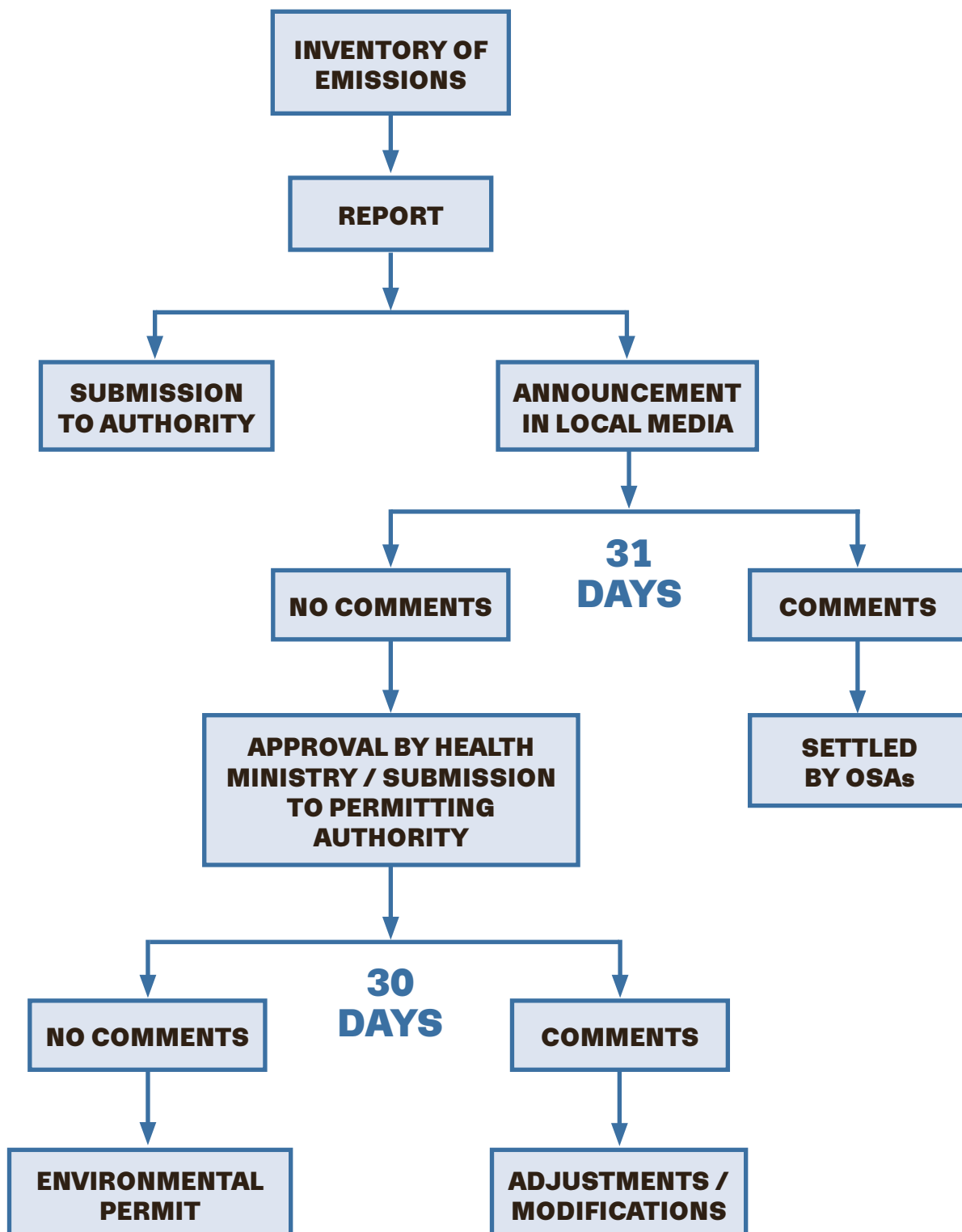
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<sup>38</sup> Article 11 (9) of the Law of Ukraine on the Protection of Atmospheric Air, available at <http://zakon.rada.gov.ua/laws/show/2707-12>.

<sup>39</sup> Decree titled Постанова Кабінету Міністрів України від 28.12.2001 року № 1780.

<sup>40</sup> Procedure for the development and approval of standards for maximum permissible emissions of pollutants from stationary sources, approved by the Decree of the Cabinet of Ministers of Ukraine dated 28 December 2001 No. 1780.

**Figure 3: Environmental permit process in Ukraine**



## **New industrial enterprises, extension/reconstruction of existing enterprises**

According to the Law on the Protection of Atmospheric Air new, reconstructed, or extended industrial facilities should receive permits under the Environmental Impact Assessment (EIA) procedure<sup>41</sup> regulated by the Law on Environmental Impact Assessment.<sup>42</sup> Article 3 of the Law on EIA contains a full list of the types of activities that are subject to the EIA procedure.<sup>43</sup>

The new EIA procedure contains a number of improvements compared to the previously existing "ecological expertise procedure". The current EIA covers a greater number of types of facilities and activities. More significantly, it considers and evaluates the transboundary influence of a project. The unified register for EIA has been introduced and the information added to it is freely available to the public through the Internet.

The Law on EIA has also introduced a post-project monitoring procedure. The public can comment on and suggest the specific monitoring and control measures to be included into the final permit. Such monitoring shall be used if this is provided for in the EIA conclusion in order to identify any differences and deviations in the projected levels of impact and effectiveness of measures to prevent and reduce environmental pollution.

The EIA procedure consists of the following steps:

- submission of an announcement of planned activity, which is subject to an EIA (both online and offline);
- preparation of the EIA report;
- public consultation;
- obtaining a conclusion from the EIA;
- decision on the implementation of the planned activity;
- post-project monitoring (if indicated in the EIA conclusion).

The sanctions that can be applied to business entities for violating the conditions of the permission are also expanded: a temporary ban and cessation of the enterprise's work.

## **Public participation**

The public has the right to seek access to information on the process of obtaining emission permits and the permits themselves under the Law on Access to Public Information,<sup>44</sup> according to which public authorities are required to disclose information they have at their disposal. The success of such requests, however, remains insignificant; while the authorities sometimes react, they often do not attach the permits or related information. Even when they do, the presentation is often incomplete or takes a very long time. Regarding the publication of permits and other information, no equivalent of an integrated pollution register according to European legislation exists in Ukraine.

Public consultations on an EIA are mandatory by law, but it is common that they are either not held at all, or, when they are held, the comments and suggestions that are garnered are disregarded.<sup>45</sup>

Even though the new Law on Environmental Impact Assessments has contributed to the transparency and openness of the process for issuing permits to new industrial facilities (or reconstructed or extended facilities), the current environmental permit process for existing industrial capacities still lacks a clear, efficient, and enforceable regulatory framework that prevents arbitrary decision making and safeguards the rights of the relevant stakeholders.

<sup>41</sup> Article 25 of the Law on the Protection of Atmospheric Air available at <http://zakon.rada.gov.ua/laws/show/2707-12?find=1&text=%EE%F6%B3%ED%EA>.

<sup>42</sup> The law is available in Ukrainian at <http://zakon.rada.gov.ua/laws/show/2059-19>.

<sup>43</sup> Article 3 of the Law on Environmental Impact Assessment available at <http://zakon.rada.gov.ua/laws/show/2059-19>.

<sup>44</sup> The law is available in Ukrainian at <http://zakon.rada.gov.ua/laws/show/2939-17>.

<sup>45</sup> One of the reasons is understaffing. The database containing EIA reports includes more than 1,000 entries but there are only three people working at the respective department of the Ministry of the Environment entrusted with the EIA process agenda.



Industrial waste at the metallurgical complex in Zaporizhia.

Photo: Stanislav Krupař / Arnika



Thermal power plant in Dnipro.

Photo: Stanislav Krupař / Arnika

# 3. ENVIRONMENTAL PERMIT PROCESS IN THE EU AND THE CZECH REPUBLIC

## 3.1. Background to Environmental Permits in the EU

The EU has been working for decades on improving air quality by controlling the emissions of harmful substances into the atmosphere and integrating environmental protection requirements into the industrial and energy sectors.<sup>46</sup> These efforts have comprised both legislative – the EIA Directive of 1985, IPPC Directive of 1996, and Industrial Emissions Directive of 2010 (as amended) – and policy instruments – such as, most recently, the (seventh) Environment Action Programme (“Living well, within the limits of our planet” (2013),<sup>47</sup> Clean Air Programme for Europe (CAPE) (2013),<sup>48</sup> or the First Clean Air Outlook (2018).<sup>49</sup>

The EU’s clean air policy framework comprises the following three pillars:

1. ambient air quality standards set out in the Ambient Air Quality Directives (EU, 2004, 2008);<sup>50</sup>
2. national emission reduction targets established in the National Emission Ceilings (NEC) Directive (EU, 2016);<sup>51</sup>
3. emission and energy efficiency standards for key sources of air pollution (from vehicle emissions to products and industry) set out in EU legislation targeting industrial emissions (in particular the Industrial Emissions Directive).<sup>52</sup>

For the purposes of this study further attention will be paid primarily to the Industrial Emissions Directive as the main EU instrument regulating pollutant emissions from industrial installations.

The Industrial Emissions Directive adopts an **integrated approach to environmental permits**. Unlike the **fragmented** regime employed in Ukraine, on the basis of which emissions to environmental media (water, air, soil) and a major facility’s operation permit are considered separately under different control regimes and usually by different regulators, under the integrated regime a facility’s whole environmental performance and impact is considered, covering, for instance, emissions to the air, water, and soil, the generation of waste, the use of raw materials, energy efficiency, noise, the prevention of accidents, restoration of the site upon its closure, etc.

The diagram below summarizes the main advantages of integrated pollution prevention and control.

<sup>46</sup> European Environment Agency (July 2018), Air Quality in Europe – 2018 Report, page 15.

<sup>47</sup> This action programme recognizes the long-term goal within the EU of achieving “levels of air quality that do not give rise to significant negative impacts on, and risks to, human health and the environment”. To achieve this goal requires effective air quality policies and cooperation and action at the global, European, national, and local levels.

<sup>48</sup> It aims to ensure full compliance with the existing legislation by 2020 at the latest, and to further improve Europe’s air quality, so that by 2030 the number of premature deaths is reduced by half when compared with 2005.

<sup>49</sup> It was published by the European Commission, which concluded that the package of measures that has been adopted since 2013 is expected to surpass the health impact reduction by 2030, as anticipated in the CAPE. However, it also recognizes that there is an urgent short-term need to take decisive action to achieve the objectives of the Ambient Air Quality Directives at all governance levels.

<sup>50</sup> 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.

<sup>51</sup> 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, amending Directive 2003/35/EC and repealing Directive 2001/81/EC.

<sup>52</sup> Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control); European Environment Agency (July 2018), Air Quality in Europe – 2018 Report, page 15 [<https://www.eea.europa.eu/publications/air-quality-in-europe-2018>].

**Figure 4: Integrated approach vs. fragmented approach to environmental permitting**

<b>Better overall solution</b>	Integrated approach	Comprehensive review of the facility's operations = better ways of controlling the overall environmental impact of production processes
	Fragmented approach	A permit covering pollution to a single environmental medium (e.g. reducing air pollution) may cause a spillover effect to other environmental media (e.g. increasing water pollution)
<b>Efficiency</b>	Integrated approach	Reduces administrative costs for both regulatory agencies and regulated facilities
	Fragmented approach	May be time-consuming, costly, and demanding in terms of staff dispersed in different agencies
<b>Pollution prevention</b>	Integrated approach	Integrated and comprehensive facility assessment is likely to prevent pollution
	Fragmented approach	Simply imposing "end-of-pipe" controls on facilities' different environmental media may leave loopholes in other aspects of their production
<b>Sustainability</b>	Integrated approach	Operational aspects such as natural resource use, the generation and recovery of waste, and habitat impact may promote long-term sustainability
	Fragmented approach	Disregarding operational aspects or considering them marginally may lead to short-term or non-comprehensive sustainability
<b>Public participation</b>	Integrated approach	Providing stakeholders with a broad, facility-wide assessment of environmental impacts facilitates public participation and fosters a comprehensive dialogue among industry and other stakeholders.
	Fragmented approach	Requires participation in several separate and time-consuming permit processes.

The EU has pursued an integrated approach since the early 1980s. The table below illustrates how it evolved until enshrined in legislation.

Environmental action programmes of the European Commission	EIA Directive	IPPC Directive	IE Directive
Identified the need to shift from the traditional fragmented (sector-by-sector) approach to integrated pollution prevention and control; no definition of the integrated approach yet. <sup>a)</sup>	The first piece of legislation that proposed concrete, cross-media-oriented measures and a holistic (rather than sectoral) approach to environmental protection; no use of the terms integrated pollution prevention or control. <sup>b)</sup>	The first directive that defined integrated pollution prevention or control. <sup>c)</sup>	Streamlines and underscores the principles contained in the IPPC Directive.

<sup>a)</sup> We mean the first four environmental action programmes issued by the European Commission between 1982 and 2010; Eberhard Bohne, *The Quest for Environmental Regulatory Integration in the European Union*, Kluwer Law International, page 26.

<sup>b)</sup> Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment. The directive was amended three times: by directive 97/11/EC of 3 March 1997, directive 2003/35/EC of 26 May 2003, and directive 2009/31/EC of 23 April 2009.

<sup>c)</sup> Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control (IPPC). The codified version, following several amendments, was issued in the form of Directive 2008/1/EC of the European Parliament and of the Council of 15 January 2008 concerning integrated pollution prevention and control, which was later recast by Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control).

The Industrial Emissions Directive merged the IPPC Directive and six sectoral directives into a single directive to clarify the interaction between these legal instruments and streamline its provisions. It is based on the following pillars:

1. **Integrated approach** – permits must comprise the facility’s entire environmental performance;
2. **Use of best available techniques (BATs)** – permit conditions, including emission values, must be based on best available techniques (BAT); BATs are defined at the exchanges between Member States’ experts, industry, and environmental organizations organized by the EU Commission, which results in BAT reference documents (BREFs). These BAT conclusions adopted as Commission implementing decisions constitute a reference for setting permit conditions;
3. **Flexibility** – In selected cases authorities may derogate and set less strict emission limit values if the emission levels described in BAT conclusions would lead to disproportionately higher costs than environmental benefits;
4. **Inspections** – Member States shall set up a system of environmental inspections and prepare inspection plans accordingly. Site visits shall take place at least every one to three years (using risk-based criteria), and
5. **Public participation** – The public is granted a right to participate in the decision-making process and to be informed of its consequences by having access to permit applications, permits, and the results of the monitoring of releases.<sup>53</sup>

Member States report emission data to the European Pollutant Release and Transfer Register (E-PRTR) – a publicly accessible register which provides environmental information on major industrial activities.<sup>54</sup>

<sup>53</sup> European Commission, 2018, *The Industrial Emissions Directive, Summary of Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control)*, [<http://ec.europa.eu/environment/industry/stationary/ied/legislation.htm>].

<sup>54</sup> The PRTR register is available at <https://prtr.eea.europa.eu>.

The Industrial Emissions Directive places great emphasis on BAT conclusions derived from the BREFs for setting permit conditions. As these BAT conclusions should be adopted as implementing acts with legal effect, it is expected that the implementation of BAT will be more clearly reflected in environmental permits.<sup>55</sup> As BAT is a dynamic concept that evolves over time, the permits need to be updated in order to foster ongoing environmental improvement in the industry. The Industrial Emissions Directive describes detailed rules on the review of permits and provides for the compulsory reconsideration of permits within four years of the publication of decisions on BAT conclusions.

The Industrial Emissions Directive further clarifies the legal status of BREFs and the role of various actors in the information exchange, which should ensure a high-quality outcome of the process and enhance the use of BAT conclusions in the implementation of the Directive. Compliance monitoring provisions have been further developed, a move that aims to adopt a risk-based approach to inspections and includes minimum frequencies for site visits.<sup>56</sup>

Regarding access to information and public participation, the Industrial Emissions Directive increases citizens' rights regarding access to information and, in particular, the need to make those decisions which involve a deviation from BAT conclusions in the IPPC process or the use of the Internet to guarantee these rights publicly available.<sup>57</sup>

## 3.2. Environmental Permit Process in the Czech Republic

The IPPC process in the Czech Republic is governed by the Act on Integrated Pollution Prevention and Control (IPPC Act),<sup>58</sup> which transposes the Industrial Emissions Directive.<sup>59</sup> The following state and regional administration bodies participate in fulfilling obligations under the IPPC Act and with respect to air pollution in general:

1. Ministry of Industry and Trade – formulates industrial and energy policy in the context of the EU single market and operates the IPPC portal,<sup>60</sup>
2. Ministry of the Environment – formulates environmental policy in the areas of air, water, and soil protection.<sup>61</sup> (The Ministry of the Environment issues environmental permits only for facilities with a significant negative cross-border impact),<sup>62</sup>
3. Ministry of Agriculture – formulates agricultural policy in relation to the IPPC Act,<sup>63</sup>
4. Czech Environmental Inspectorate – performs control and compliance activities with the IPPC Act, and imposes sanctions,<sup>64</sup>

<sup>55</sup> European Commission, Report from the Commission to the Council and the European Parliament: Report from the Commission on the implementation of Directive 2008/1/EC concerning integrated pollution prevention and control and Directive 1999/13/EC on the limitation of emissions of volatile organic compounds as a result of the use of organic solvents in certain activities and installations (October 2015), page 4.

<sup>56</sup> European Commission, Report from the Commission to the Council and the European Parliament: Report from the Commission on the implementation of Directive 2008/1/EC concerning integrated pollution prevention and control and Directive 1999/13/EC on the limitation of emissions of volatile organic compounds as a result of the use of organic solvents in certain activities and installations (October 2015), page 5.

<sup>57</sup> European Commission, Report from the Commission to the Council and the European Parliament: Report from the Commission on the implementation of Directive 2008/1/EC concerning integrated pollution prevention and control, and Directive 1999/13/EC on the limitation of emissions of volatile organic compounds as a result of the use of organic solvents in certain activities and installations (October 2015), page 6.

<sup>58</sup> Act No. 76/2002 Coll., on Integrated Pollution Prevention and Control, on the Integrated Pollution Register and on amendments to some laws, as amended.

<sup>59</sup> Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control).

<sup>60</sup> Ministry of Industry and Trade, Competence of the Ministry (2014) [<http://www.mpo.cz/dokument1926.html>].

<sup>61</sup> Ministry of the Environment, History and Competence of the Ministry (2015) [<http://www.mzp.cz/cz/ministerstvo>].

<sup>62</sup> Ministry of the Environment, IPPC – Integrated Prevention and Pollution Limitation (not dated) [<http://www.mzp.cz/ippc>].

<sup>63</sup> Ministry of Agriculture, about the Ministry of Agriculture (2015) [<http://eagri.cz/public/web/en/mze/ministry/>].

<sup>64</sup> Czech Environmental Inspectorate, Overview of the activities of the Czech Environmental Inspectorate and competencies in individual segments of the environment (2015) [<http://www.cizp.cz/>].



5. CENIA (Czech Environmental Information Agency) – issues expert opinions for authorities issuing IPPC permits,<sup>65</sup>
6. State Environmental Fund – ensures the complete agenda associated with the provision of financial subsidies for environmental initiatives; it is administered by the Ministry of the Environment,
7. Regional authorities<sup>66</sup> – issue the IPPC permits.<sup>67</sup>

The IPPC process is decentralized in the Czech Republic. Except for environmental permits for facilities with a negative cross-border impact, which are issued by the Ministry of the Environment, the integrated permits are issued at the regional level. Note that the IPPC-related policy is formulated at the state (ministerial) level. Also note that although several state authorities (ministries, inspectorates, agencies) are involved in the IPPC process, their competences are clearly defined and do not overlap.

In the Czech Republic, as well as other EU Member States that implemented the Industrial Emissions Directive (and related processes), only industrial and agricultural operations – energy industry, the production and processing of metals, the mineral industry, the chemical industry, waste management, and other operations, such as livestock farming – exceeding the threshold values stated therein require an integrated permit.<sup>68</sup> Other operators that do not exceed the threshold values can file for an integrated permit on a voluntary basis. Note that the intention is not to license all industrial and agricultural activities, but only those with a high pollution potential. Such an operator initiates the IPPC process by filing an application for an integrated permit to the relevant regional authority.<sup>69</sup>

The application needs to contain all the statutory requirements<sup>70</sup> and its template is, for facilitating purposes, included in the legislation implementing the IPPC Act.<sup>71</sup> Once the regional authority receives the application, it assesses its completeness within 20 days following its receipt. In the event that an incomplete application is received, the regional authority requests that it be corrected and sets a suitable deadline for this (usually between one week and 30 days). The IPPC process is suspended until the application is corrected.<sup>72</sup>

If the application is assessed as complete, the regional authority sends it within seven days for comments to the relevant administrative authorities and participants in the IPPC process.<sup>73</sup> On its official noticeboard,<sup>74</sup> the relevant regional authority also publishes, for the period of 30 days,

<sup>65</sup> CENIA (Czech Environmental Information Agency (2019) [<https://www.cenia.cz/#aktuality>].

<sup>66</sup> The Czech Republic consists of 13 regions and one capital city (Prague) with the status of a region. Each region has a regional authority (bureau) exercising state administration in matters entrusted to it by special regulations.

<sup>67</sup> Ministry of Industry and Trade, State administration authorities (2009) [<http://www.ippc.cz/obsah/kontakty-a-odkazy/organy-statni-spravy/#praha>].

<sup>68</sup> The list of industrial and agricultural operations requiring an IPPC permit is provided in Annex 1 to the IPPC Act and mirrors the list included in Annex 1 of the IPPC Directive.

<sup>69</sup> See Article 3 of the IPPC Act.

<sup>70</sup> The requirements of an integrated permit application are included in Article 4 of the IPPC Act. It is quite a complex application that, in addition to the identification of an applicant and industrial or agricultural facility, needs to contain quite a detailed description of the operation, processes, and technology used, emission sources, and measures to monitor emissions and prevent waste, suggests the binding conditions of operation, and needs to be accompanied by relevant submission documents (e.g., zoning permits, relevant administrative decisions, etc.). If the facility uses, produces, or discharges dangerous substances that may pollute soil or water, the applicant needs to submit a basic report (in Czech „základní zpráva“) according to Article 4a of the IPPC Act, prepared by a competent person for the approval of the regional authority. The report helps to determine the degree of soil or water contamination to facilitate a reasoned comparison with the conditions when the operation of a facility is fully completed.

<sup>71</sup> Decree No. 288/2013 Coll., which establishes a model application for an integrated permit, is implementing legislation relating to the IPPC Act.

<sup>72</sup> See Article 3 of the IPPC Act.

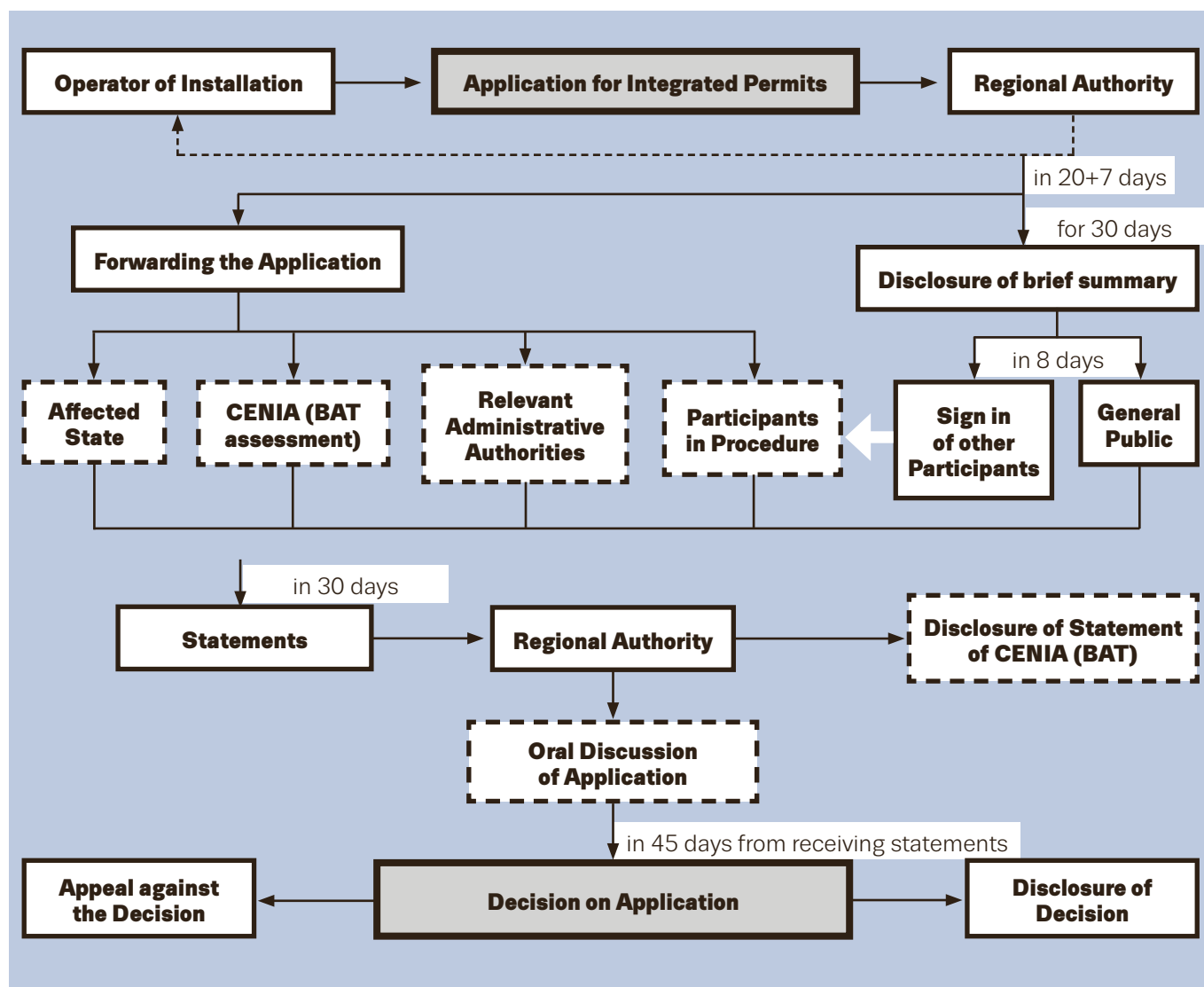
<sup>73</sup> Pursuant to Article 7 of the IPPC Act, the participants are always the facility operator and owner (if the latter is not its operator), the district and region where the facility is or should be situated, and civil society organizations representing the public interest.

<sup>74</sup> In addition to a regular noticeboard, all public authorities are also obliged to maintain an electronic noticeboard

a brief summary of data on the application as well as information about when and where the application can be copied and notes and excerpts taken therefrom. Anyone (i.e. not only participants in the procedure) can submit comments on the application within this deadline. In the event of any industrial or agricultural operation that might have a cross-border effect, the relevant regional authority also sends the application to the neighbouring state.<sup>75</sup>

The participants and administrative authorities to which the relevant regional authority sent the application may comment on it within 30 days of its receipt. The relevant regional authority decides on the application within 45 days of the receipt of comments from all stakeholders.<sup>76</sup>

**Figure 5: IPPC process in the Czech Republic**



Source: Jan Kolář, CENIA (2015)

In the Czech Republic, an oral hearing is an optional part of the IPPC process that is mostly conducted by way of an exchange of written submissions and documentation. Under the IPPC Act, an oral hearing is only mandatory if a participant in the procedure requests an oral hearing in its comments on the application.<sup>77</sup> This is not at all unusual. Most administrative proceedings,

(usually a section of their website) – widely used by civil society organizations as an information source.

<sup>75</sup> See Article 8 of the IPPC Act.

<sup>76</sup> See Article 13 of the IPPC Act.

<sup>77</sup> See Article 12 of the IPPC Act.; in most cases, civil society organizations are those participants in the IPPC

unlike court proceedings, are conducted without scheduling an oral hearing. On its own initiative, the regional authority usually resorts to an oral hearing in exceptionally complex cases that require many clarifications and where it is more efficient to hear all the comments from all the relevant stakeholders at once and in person.

To assess the application, the regional authority may, in addition to its own expertise, rely on the expertise of what is called a “*competent person*” (in Czech, “*odborně způsobilá osoba*”)<sup>78</sup> and request an expert opinion on the application of BAT (best available techniques), or, in exceptionally complex cases, on the entire application. Competent persons are authorized to provide expert opinions by the Ministry of the Environment and are included in the list of competent persons maintained by the Ministry. Should a competent person be needed, the regional authority can either contact a company on the list of competent persons maintained by the Ministry of the Environment, or more commonly, contact CENIA (the Czech Environmental Information Agency), the only competent entity providing expert opinions to the state authorities free of charge.

A key aspect of the IPPC process is to determine, on the basis of BAT, binding conditions for the operation and emission limits for a given industry. In determining BAT, the regional authority takes into consideration aspects stated in Annex No. 3 to the IPPC Act. The regional authority compares concrete and suggested technology, production, and manufacturing processes with BAT, in particular, in terms of the emission of pollutants into the atmosphere.<sup>79</sup> Determining BAT is an intellectual process of the regional authority (or rather the respective official thereof). While a lawgiver provides the regional authority with the basis to determine BAT, set emissions limits, and decide on an integrated permit, the regional authority needs to consider the facts of each case individually to be able to set reasonable conditions for its operation.

Every decision of the regional authority on an integrated permit application can be appealed within 15 days following its delivery. Once the decision comes into legal effect, it is published on the official noticeboard (and the Internet) for 30 days.<sup>80</sup> The conditions set in the permit for particular industrial and agricultural operation are binding. Under the IPPC Act, the operator must submit an annual report to the regional authority detailing how it fulfils the conditions set out in the integrated permit.<sup>81</sup> At least every eight years, the regional authority reviews whether circumstances have not changed in a way that may lead to a change in the binding conditions of the integrated permit.<sup>82</sup> If, during those eight years, the production and technologies used for it improve and develop in such a way so as to make the operation more environmentally friendly, the regional authority usually resorts to setting stricter conditions of operation in order to motivate the facility to invest in new technologies with less impact on the environment.

If the operator does not comply with the conditions of the integrated permit, the regional authority or inspection authority usually begins imposing remedial measures on the operator before resorting to fines. The fines are not in any way symbolic. Depending on the degree of the breach of the IPPC Act and the conditions of the integrated permit, the fine can range from CZK 2,000,000 to CZK 10,000,000 (approximately €70,000 to €350,000), and may be imposed repeatedly, thereby potentially leading to liquidation for the operator.<sup>83</sup>

The inspection authority (the Czech Environmental Inspectorate) checks not only compliance with the conditions of the integrated permit, but also overall compliance with the IPPC Act. For every calendar year, the inspection authority prepares a plan for facilities falling under the IPPC Act, on the basis of which it prepares the plan of standard monitoring inspections. The time between individual monitoring inspections is determined on the basis of a systematic evaluation of the

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process that request a public hearing.

<sup>78</sup> A *competent person* (in Czech “*odborně způsobilá osoba*”) is a legal entity or natural person with relevant expertise in the fields within the scope of the IPPC Act (e.g. application of BAT, emission limits, environmental legislation, etc.).

<sup>79</sup> See Article 14 of the IPPC Act.

<sup>80</sup> See Article 13 of the IPPC Act.

<sup>81</sup> See Article 16a of the IPPC Act.

<sup>82</sup> See Article 18 of the IPPC Act.

<sup>83</sup> See Article 37 of the IPPC Act.

risks that the given facilities pose to the environment and ranges between one (highest risk) and three years (lower risks).<sup>84</sup>

There are currently around 1,708 facilities subject to inspection by the inspection authority (or more precisely, its regional branches).<sup>85</sup> The fact that the inspection authority occasionally conducts extraordinary monitoring checks (e.g. in the event of an accident or complaint from the public) and repeated spot checks (e.g. in the event of a serious breach of the conditions of the integrated permit) evidences the demands placed on the bureau in terms of the frequency and extent of the inspections.<sup>86</sup> The data for 2017 suggests that 488 inspections were conducted.<sup>87</sup>

The Ministry of the Environment operates the IPPC information system – a nationwide information system that is a part of the uniform information system on the environment and enables the public to obtain free-of-charge and unrestricted access to information pursuant to the IPPC Act. The publicly accessible database allows searching for operators, the integrated permits that have been issued, the evaluation of BAT, information on pending IPPC processes, etc.<sup>88</sup> The system also serves as a functional archive of the published documents related to integrated permits, in general, and the IPPC process, in particular.<sup>89</sup> The Ministry has authorized the Czech Environmental Agency to operate the Integrated Pollution Register<sup>90</sup> as a publicly accessible database to which operators report the pollution that is generated and exceeds the set limits. A failure to report, or the reporting of false information, can result in fines of up to CZK 500,000 (approximately €25,000).<sup>91</sup>

In the Czech Republic, most large industrial and agricultural facilities have gone through the IPPC process. Though occasionally bureaucratic and heavy on paperwork, the IPPC process in the Czech Republic is a functional procedure governed by a well-structured regulation (IPPC Act) with clear rights and obligations for the relevant stakeholders, guaranteed safeguards of participants' procedural rights, and a well-established enforcement mechanism.

## 4. AIR POLLUTION MONITORING AND INSPECTIONS

### 4.1. Air Pollution Monitoring in Ukraine

There are several state bodies with responsibilities for environmental monitoring, but the responsibilities are not clearly divided between them at the national and regional levels. The efficiency of their work is also undermined by outdated facilities, the lack of qualified personnel, and insufficient funding.

At **state level**, air quality monitoring is carried out in accordance with the Decree of the Cabinet of Ministers of Ukraine (CMU) on "Organizing and Conducting Monitoring in the Sphere of Atmospheric Air Protection" (1999) by the State Emergency Service of Ukraine and the MENR, as well as by enterprises and organizations whose activity could lead to a negative impact on air quality.

Until 2017, the Sanitary and Epidemiological Service had been monitoring the air quality, but the Service was liquidated by the CMU of Ukraine<sup>92</sup> and replaced with the State Service of Ukraine

<sup>84</sup> See Article 20b of the IPPC Act.

<sup>85</sup> Antonín Kroupa, Data from the control activities of the Czech Environmental Inspectorate, November 2015 [<http://www.ippc.cz/dokumenty/DF0640/prezentace/data-z-kontrolni-cinnosti-cizp>].

<sup>86</sup> See Article 20b of the IPPC Act.

<sup>87</sup> Czech Environmental Inspectorate, Annual Report 2017 (2017) [<http://www.cizp.cz/file/mj8/vyrocní-zpráva-CIZP-2017.pdf>].

<sup>88</sup> The database is available at [www.mzp.cz/ippc](http://www.mzp.cz/ippc).

<sup>89</sup> Ministry of the Environment, IPPC – Integrated Prevention and Pollution Limitation (not dated) [<http://www.mzp.cz/ippc>].

<sup>90</sup> The Integrated Pollution Register is available at [www.irz.cz](http://www.irz.cz).

<sup>91</sup> Article 5 of Act No. 25/2008 Coll., on the Integrated Environmental Pollution Register and the Integrated System of Compliance with Reporting Duty in Environmental Areas, and on amendments to other Acts.

<sup>92</sup> Ukraine's government portal (not dated), available at [<https://www.kmu.gov.ua/ua/npas/250003281>].

for Food Safety and Consumer Protection (FSCP). However, there is currently no department/directorate in the FSCP structure that would take over the functions of the Sanitary and Epidemiological Service in terms of the monitoring of ambient air quality in residential and recreational zones, including the areas of highways, sanitary-hygienic zones, schools, and medical buildings. On the basis of the CMU's decree on the "Approval of Provision about the State Environmental Monitoring System" (1998), the State Emergency Service of the Ministry of Defence of Ukraine (Hydrometeorological Service) monitors air pollution and the chemical composition of atmospheric precipitation.

Air quality monitoring is conducted in 53 cities in Ukraine at 162 stationary stations, two route posts, and two transboundary transport stations. Mandatory monitoring of air quality at the national level comprises seven pollutants: dust, nitrogen dioxide (NO<sub>2</sub>), sulphur dioxide (SO<sub>2</sub>), carbon dioxide (CO<sub>2</sub>), formaldehyde (H<sub>2</sub>CO), lead, and benzopyrene. Some stations monitor additional pollutants. According to the Provision of Organizing and Conducting Monitoring in the Sphere of Atmospheric Air Protection, the monitoring of 29 other pollutants is carried out only at the oblast level according to particular regional programmes.

According to the concept of the reform of the state supervision (control) in the sphere of environmental protection,<sup>93</sup> a new body will be created that should also assume monitoring functions. This would require, however, significant institutional, technical, and financial capacities.

## 4.2. System of Inspections in Ukraine

In May 2017, the government of Ukraine approved a concept to introduce a state system for environmental monitoring and inspections, within which it should set up the State Environmental Protection Service (SEPS), abolish the State Ecological Inspectorate, and create new interregional environmental services within the newly created service.<sup>94</sup> As of now, the Law on the State Environmental Protection Service that should implement these changes is under review in the Parliament.<sup>95</sup>

The **State Ecological Inspectorate** (SEI) implements state policy on monitoring and control in the area of environmental protection, recreation, and the protection of natural resources. It is subordinated to the Cabinet of Ministers of Ukraine through the Minister of Ecology and Natural Resources. Territorial SEI bodies are located in the regions ("oblasts") of Ukraine, in the city of Kyiv, and in the Black Sea and Azov regions. Given the ongoing reform, there are two government agencies in charge of the monitoring of compliance with environmental legislation: the SEI and the State Environmental Protection Service (SEPS).

The structure and approaches of the SEI were inherited from the USSR, which considered nature as a commodity that does not merit protection and emphasized punishing violations, rather than preventing environmental damage.<sup>96</sup> After Ukraine had gained its independence, a number of reforms took place that weakened the SEI. Previously, the SEI could conduct spontaneous inspections, but after the series of reforms between 2007 and 2012 it was obliged to notify the enterprise in writing at least 10 days before the beginning of the inspection.

Regional SEI departments prepare quarterly and annual inspection plans that are approved by the central unit. The inspection plans take into consideration enterprises' risk categorization (I, II, and III). The inspectors carry out the monitoring on the basis of the permits for each enterprise. If a violation is identified, the enterprise usually first pays a fine. A second violation results in a fine and

<sup>93</sup> Ukraine's government portal (not dated), available at [<https://www.kmu.gov.ua/ua/npas/250269536>].

<sup>94</sup> Розпорядження КМУ від 31.05.2017р. №616-р «Про схвалення Concept of reforming of state environmental supervision (control) system» <https://www.kmu.gov.ua/ua/npas/250269536>.

<sup>95</sup> On approval of the concept of reform of systems of state supervision (control) in the sphere of environmental protection <https://www.kmu.gov.ua/ua/npas/250269536>.

<sup>96</sup> "Public administration reform in the field of environmental protection," presentation by the public interest environmental law organization Environment People Law, 2018 [http://epl.org.ua/wp-content/uploads/2018/11/Presentation\\_env\\_EPL-converted.pdf](http://epl.org.ua/wp-content/uploads/2018/11/Presentation_env_EPL-converted.pdf).

may result in legal action. The fines form a part of the central budget and, thus, become a resource for the environmental protection funds at all levels.

The SEI can carry out inspections at the request of citizens. If an inspector detects a violation of an environmental regulation, they make a record thereof. Violations that took place outside the sanitary protection zone of an enterprise cannot be attributed to the enterprise, but only to an individual. Such cases are forwarded to the police for investigation. As a rule, there are no specialists among the police who have the competence to conduct similar investigations.

Low wages, outdated material and technical and laboratory resources, insufficient funding, high levels of corruption, and a non-transparent system of decision making regarding violators of the law lead to a low level of qualifications of state inspectors. There is a lack of a system of liability of business entities for violations of environmental legislation. All these factors, as well as the absence of unified electronic registers of natural resources and an inadequate level of information exchange, lead to the low effectiveness of the SEI. Under the existing system of state environmental control, civil society cannot participate effectively in the decision-making process.

Cooperation between the ecological departments of the regional state administration and oblast branches of the SEI is another issue. This cooperation was rather weak between the "oblast" branches of MENR and the SEI (for example, there was no requirement that information about approved decisions of ecological expertise or permits issued to enterprises by oblast branches of MENR be made known to the SEI). Their cooperation became even more problematic, because these two agencies belong to different authorities (regional and national).<sup>97</sup>

As soon as the transition period within the ongoing legislative reform is over, the **State Environmental Protection Service** will replace the SEI as an inspection and supervisory body. The service is subordinate to the Ministry of the Environment and Natural Resources. The plan is to create 10 interregional territorial offices of the Service and 27 special regional inspection offices.

The purpose is to create an efficient state system for preventing violations of environmental legislation and monitoring of the state of the environment; thus, the decision was made to move from a system of planned inspections to a monitoring system, prevention of violations of environmental legislation, and control based on risk-oriented indicators.<sup>98</sup>

The draft Law on the State Environmental Protection Service remains problematic and perhaps controversial. It has been elaborated by independent experts and not through the Ministry of the Environment in order to avoid the necessity to agree the draft with other central executive bodies. If it is taken into account that the new body will take over powers from a number of agencies, there is a concern about significant corruption. Moreover, the system of territorial bodies of environmental control is narrowed from the oblast to the interregional level. Apart from reducing the staff (the opposite is needed), this will keep the activities of the new body non-transparent and inoperative, as used to be the case with the SEI. This means that although the body is new it will act according to the old rules, thus continuing to make environmental control ineffective.<sup>99</sup>

There is no clear indication either in the Concept of reforming the state environmental supervision (control) system or in the draft Law on the State Environmental Protection Service about the sources of funding of the reform. This especially puts at risk the creation of the state system of environmental monitoring, which virtually needs to be created from scratch.

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<sup>97</sup> The Parliamentary Committee on the Environment recommends that the Government ensure the resolution of issues related to the effectiveness of control over the receipt of environmental tax: <http://www.rada.gov.ua/fsview/163697.html>.

<sup>98</sup> Available in Ukrainian at <https://www.ukrinform.ua/rubric-economy/2457575-kabmin-zaprovadiv-rizikorientovaniy-pidhid-pid-cas-planuvanna-perevirok.html>.

<sup>99</sup> Available in Ukrainian at [http://epl.org.ua/announces/stvorennnya-derzhkobebezpeky-ne-diyevyj-ekologichnyj-kontrol/?fbclid=IwAR3VnPDcetB0lj2tbE4kEpzReUqfGra\\_5wDLphtwMqULEy5QjkGCWExHwWM](http://epl.org.ua/announces/stvorennnya-derzhkobebezpeky-ne-diyevyj-ekologichnyj-kontrol/?fbclid=IwAR3VnPDcetB0lj2tbE4kEpzReUqfGra_5wDLphtwMqULEy5QjkGCWExHwWM).

### 4.3. Air Pollution Monitoring in the Czech Republic

Air quality monitoring in the Czech Republic is regulated by Act No. 201/2012 Coll., on Air Protection. Both the state of the air (immissions) and the level of pollution (emissions) are evaluated.

Immissions are monitored through the network of automatic measuring stations operated by the Czech Hydrometeorological Institute (ČHMÚ) for the Ministry of the Environment (MoE). The basis of the monitoring was founded in the 1990s and underwent major changes in 2015 (thanks to a subsidy from the Environment operational programme). Basic monitoring is focused on all substances that are included in the law and for which there is a limit (limits based on EU standards).<sup>100</sup> Those are:

- dust aerosol/suspended particulates  $PM_{10}$ ,  $PM_{2.5}$ , and locally also for  $PM_1$
- harmful pollutants –  $SO_2$ , CO, NO/ $NO_2$ ,  $O_3$
- volatile organic compounds (benzene)
- heavy metal contents in  $PM_{10}$  – As, Pb, Cd, Ni
- contents of selected particles in  $PM_{10}$  – expressed as benzo(a)pyrene

The substances measured at a specific station are selected on the basis of knowledge about a locale. It is not the same at all stations. Some stations may also monitor other substances.

Data from the monitoring network is stored in the Air Quality Information System (ISKO) operated by the Czech Hydrometeorological Institute.<sup>101</sup> Other organizations, including companies, also store data in the system. The data from ISKO is evaluated annually. The results are published in the form of a publication titled "Air Pollution in the Czech Republic." The Yearbook has a graphical<sup>102</sup> and tabular section<sup>103</sup> and is freely accessible on the Internet.

The operator of the pollution source ensures emission monitoring in accordance with the Air Protection Act. The Act determines precisely which substances are to be monitored. The operating permit specifies exactly what, where, and how to measure. While certain substances are to be measured continuously (solid pollutants, sulphur oxides, oxides of nitrogen, chlorine compounds, fluorine compounds, carbon monoxide, volatile organic compounds, sulphate), emissions of certain substances are determined by one-off measurements at given intervals (e.g. heavy metal contained in dust). Continuous measurements are conducted with respect to larger sources; smaller sources can be determined by calculation. The operator reports the measurement results to the authorities electronically through the Integrated Reporting Compliance System (ISPOP).<sup>104</sup> The MoE makes an annual emission inventory for selected substances and evaluates the development thereof. Aggregate data is published in environmental reports and yearbooks.

Monitoring can also include checks on companies that are subject to what is called integrated licensing. The MoE administers the Integrated Prevention Information System,<sup>105</sup> where it is possible to find out what limits a given source has to fulfil and to what extent it achieved it (the operators of the facility must submit an annual report on the fulfilment of the conditions of the integrated permit).

Data on the monitoring of immissions and emission is used for modelling air quality in computer models. For that purpose ČHMI has approved programmes. Thanks to computer modelling, it is possible to specify air quality data throughout the entire Czech Republic and to assess the size of the territory where the limit value was exceeded. To avoid the impact of unfavourable scattering conditions, five-year averages are used (maps are freely available on the web).

<sup>100</sup> European Commission (2018), Air Quality Standards, Available at <http://ec.europa.eu/environment/air/quality/standards.htm>.

<sup>101</sup> The Czech Hydrometeorological Institute Portal is accessible through the website <http://portal.chmi.cz>.

<sup>102</sup> ČHMI, Graphical yearbooks (2018), available at [http://portal.chmi.cz/files/portal/docs/uoco/isko/grafroc/grafroc\\_CZ.html](http://portal.chmi.cz/files/portal/docs/uoco/isko/grafroc/grafroc_CZ.html).

<sup>103</sup> ČHMI, Tabular yearbooks (2019), [http://portal.chmi.cz/files/portal/docs/uoco/isko/tab\\_roc/tab\\_roc\\_CZ.html](http://portal.chmi.cz/files/portal/docs/uoco/isko/tab_roc/tab_roc_CZ.html).

<sup>104</sup> Integrated Prevention and Pollution Limitation, MoE (2019), available at <https://www.ispop.cz>.

<sup>105</sup> <https://www.mzp.cz/ippc>.

If the limit values are exceeded in the given region, this situation is solved. The National Programme for Reducing the Emissions of the Czech Republic, which is updated every four years, serves as a tool for reducing immissions and emissions. If the air pollution limit values are exceeded only in a certain area (for the purpose of air quality assessment, the Republic is divided into smaller units), the MoE will prepare an Air Quality Improvement Programme for this area in cooperation with the relevant region. These programmes are also updated regularly. An air quality improvement programme can be developed for smaller regions, as well as for some cities. For details, please refer to the Appendix, which describes an example of the Ostrava/Karviná/Frýdek-Místek agglomeration.

The Czech Republic has also prepared a medium-term strategy for improving air quality in the Czech Republic.<sup>106</sup> The strategy specifies the main current problems and presents a way to solve them. The European Commission called for this strategy because it makes it possible to justify the drawdown of money from the European Air Protection Funds.

Air quality monitoring has been conducted in the Czech Republic for more than 50 years. It may be worth noting that as a result of the construction of brown coal power plants in the 1960s and 1970s, the Czech Republic had to solve serious problems of air quality. The area of North Bohemia was one of the most affected areas in Europe. Since then, the air quality has improved significantly. The example of Ostrava shows that the situation can be improved even in areas with a high concentration of industry.

### **Pollutant Registers (EU-PRTR Systems – UA)**

The objective of introducing pollutant registers was to make available to the public information on emissions and transfers of selected pollutants and wastes from plants with significant environmental or human health impacts. Experience shows that such a step is a good precautionary measure and that as a result of the disclosure of pollution information pollution declines. To achieve such a decline, it is sometimes enough to reduce technology or replace a problematic substance with one that is less harmful. This was achieved, for example, by the Knauf Krupka company, which ceased to use formaldehyde in the production of thermal insulation and began using starch as a binder.

Integrated pollution registers at the EU and national levels exist in the EU. The data for 2007 was the first to be reported into the European Pollutant Release and Transfer Register (E-PRTR).<sup>107</sup> The reporting of emissions into air, water, and soil and in wastewater transmissions is included in Regulation 166/2006/EC<sup>108</sup> if it exceeds the thresholds for reported substances (a list of substances is included in Annex II of the Regulation). Data is reported each year. The E-PRTR publishes substantially more information than the EPER Registry<sup>109</sup> that functioned until then (see table).

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<sup>106</sup> The strategy is published on the website of the MoE: [https://www.mzp.cz/cz/strategicke\\_dokumenty\\_v\\_gesci\\_prehled](https://www.mzp.cz/cz/strategicke_dokumenty_v_gesci_prehled).

<sup>107</sup> EU-PRTR is available at <https://prtr.eea.europa.eu/#/home>.

<sup>108</sup> Regulation (EC) No 166/2006 of the European Parliament and of the Council of 18 January 2006 concerning the establishment of a European Pollutant Release and Transfer Register and amending Council Directives 91/689/EEC and 96/61/EC.

<sup>109</sup> <https://web.archive.org/web/20081108143338/>.



**Figure 6: Differences between E-PRTR and EPER**

	<b>EPER</b>	<b>E-PRTR</b>
<b>The form of the law setting up the register</b>	Decision of the EC	Regulation of the EP and the Council
<b>Number of substances in the register</b>	50	91
<b>Number of activities monitored</b>	56	65
<b>Emissions in air</b>	YES	YES
<b>Emissions in water</b>	YES	YES
<b>Emissions in soil</b>	NO	YES
<b>Transmissions in sewage</b>	YES	YES
<b>Emergency releases</b>	NO	YES
<b>Amount of waste produced</b>	NO	YES
<b>Scattered resources</b>	NO	YES
<b>Only IPPC devices</b>	YES	NO
<b>Reporting cycle</b>	3 years	annual
<b>Approximate number of advertisers</b>	12,000	50,000

The Czech National Register (IRZ)<sup>110</sup> was introduced in 2003 by Act No. 76/2002 Coll. on Integrated Prevention. Government Regulation No. 386/2003 Coll. then specified the final form of the register. This register was not inspired by the EU model but by the US, which first introduced the concept of a pollutant register and elaborated it further. The first data reported in the IZP was for 2004 (72 substances). In 2008, it was partially aligned with the E-PRTR. The number of reported substances was expanded, but unlike in the case of the E-PRTR, where only selected fields are reported, all the companies that exceed the threshold for a substance report their emissions and transmissions to the Czech IRZ. Thus, it is much wider than the E-PRTR. This is due to the fact that it was inspired by the US model, which monitors a wider number of substances than the EU register.

Czech companies also have to monitor and report the content of certain substances in waste. In addition, styrene and formaldehyde (93 substances in total) are also reported in the Czech register. In 2017, 1,332 plants reported emissions of monitored substances and 2,359 plants reported their waste production. A company that does not report its immissions is subject to financial sanctions (an administrative offence with a possible fine of up to CZK 500,000). The fulfilment of the duty is controlled by the Czech Environmental Inspectorate.

In addition to the IRZ, another PRTR application exists in the Czech Republic. It was created on its own initiative by the non-profit organization Arnika and its aim is to bring the data reported to the IRZ closer to the public. On the website <https://znecistovatel.cz>, you can generate 'top ten' lists of the companies with the highest levels of emissions, not only for the Czech Republic as a whole, but also by individual regions or a place of residence. Top tens can be chosen depending on whether we are interested in environmental or health impacts. The application also generates graphs that point to long-term trends. There is no detailed data on individual substances.

<sup>110</sup> <https://www.irz.cz/>.

## What can be expected from the Integrated Pollution Register?

- complete integration of the collection of existing information on emissions and transfers of hazardous substances monitored by the constituent registers (i.e. the removal of duplicates and missing data in “uniform format”),
- effective data management (electronic reporting, completeness check and data validation, data presentation),
- strong public control of the sources of risk hazardous substances and the monitoring of progress in reducing the burden on the environment.

## What is the Integrated Pollution Register good for?

Experience from the United States shows that a **freely accessible IRZ** is:

- for **anyone**, the first step in searching for information on how clean the environment in which they live is,
- for the **public**, input for dialogue with businesses operating in the city/municipality and neighbourhood,
- for **business directors and management**, a guideline for improving technology, troubleshooting operations, saving money, and providing information to the public
- for **trade unions**, the basis for negotiations on improving the working conditions of employees,
- for **state and international institutions**, a set of data for better environmental protection and public information,
- for **regions, local authorities, and municipalities** the basis for the creation of emergency plans, monitoring of pollution, and ultimately the improvement of legislation,
- for **members of the integrated rescue system** the basis for suitable measures to protect the health of people in the vicinity of industrial accidents (it is also important to know information about the substances entering the production, which will be missing in the Czech IPR),
- for the **state administration**, an important tool for risk management and help in preventing damage to property and agricultural production.

## Case study: Air quality in the Ostrava/Karviná/Frýdek-Místek agglomeration

The Ostrava/Karviná/Frýdek-Místek agglomeration lies in the territory of the Upper Silesian Coal Basin, which extends over much of Poland. It belongs among the most urbanized and industrial areas in Central Europe. In this agglomeration, unlike other parts of the Czech Republic, large sources are the predominant source of emissions. Major sectors of industry include coal mining and processing and iron and steel production. There are over 800,000 inhabitants in the region (on the Czech side).

Air quality in the agglomeration is measured in more than 20 locations. The concentration of all substances for which a limit value is set are monitored. The limit values for solid pollutants ( $PM_{10}$ ,  $PM_{2,5}$ ) and for polyaromatic hydrocarbons (benzo(a)pyrene) have been exceeded. Unlike other regions, the air pollution limits are also exceeded outside the winter period (in winter, they increase as a result of heating).

### Tools for improving the air quality in the agglomeration

The Ostrava/Karviná/Frýdek-Místek agglomeration has been struggling with air pollution for a long time. This is due to the geographical area, its historical development, and also the fact that in the past air pollution was not considered a big problem (Ostrava became an industrial centre in the 1950s). There are two steelworks in the area – Liberty House, formerly ArcelorMittal Ostrava,

and Třinecké železářny (the Třinec Ironworks). Their total annual production is 1.8 million tonnes of coke, 3.6 million tonnes of iron, and 4.3 million tonnes of steel (data for 2017).

At present, the air quality in the region is considerably better, yet it is not ideal and doctors here are concerned about the effects on human health. The annual dust limit for particulate matter (PM10) is usually exceeded only at one measuring station, but the 24-hour dust limit is usually exceeded at all stations. The limit for benzo(a)pyrene gets exceeded several times more.

The state has intervened to solve the situation. The air quality improvement programme for the region is regularly updated. Such a programme must be developed for each territory within which the limit value for immissions has been exceeded. The scope of the programme is set by law. This programme analyses the situation and lays down suitable measures. Both the programme and its updates must be subject to SEA approval.

The involvement of the public and non-profit organizations plays an important role throughout the process. To achieve this, however, it is necessary to make information available to them. Thanks to the fact that the Integrated Pollution Register (IRZ/PRTR) is fully operational in the Czech Republic, non-profit organizations can monitor and highlight high emissions from large sources. Non-profit organizations in the Czech Republic can also participate in permitting processes (IPPCs) for individual plants and, as already mentioned, the public has the opportunity to comment on air quality improvement programmes.

Thanks to EU membership, the right to a clean environment is enforceable through the courts. In the case of this region, non-profit organizations have filed a lawsuit against the state that the measures taken are not sufficient and that there is no clear timetable for their implementation. Specifically, it concerned a complaint about the air quality improvement programme that was adopted. At the end of 2017, the Supreme Administrative Court ruled that the complaint was justified. The Ministry of the Environment will therefore have to complete certain chapters.

## **Results achieved**

On the basis of a resolution of the Parliament of the Czech Republic in 2010, the Ministry of the Environment prepared a report on the situation in the region. To implement the measures that were proposed, it was possible to utilize funds from the EU Operational Programmes.

An air quality improvement programme was developed and updated for the agglomeration. Some of the larger cities in the region also have similar programmes. The programme is subject to public comment and few effective measures can be challenged in court (see above).

Pollution sources and their share in the overall situation were detailed.

Measures have been taken to reduce emissions from large sources; other projects are being implemented. Between 2002 and 2011, dust emissions (solid pollutants) decreased by about 50%.

Emission ceilings for 2020 have been set for plastics and metal processing plants. These ceilings also include fugitive emissions from industrial sites (data for 2015 showed that fugitive dust emissions can be even more than 100% higher than the direct emissions measured at exits).

Within the National Programme to Reduce Emissions (NPSE), steps have been taken to reduce the emissions of both small sources (domestic fires) and transport.

Cooperation with Poland has been established. Analyses have shown that cross-border dust transfer contributes to air pollution in the region, depending on the distance from the border, by 30% to 50%. On the other hand, the Czech Republic contributes from 5% to 30% of the pollution of the cross-border territory of Poland.

## 4.4. System of Inspections in the Czech Republic

Environmental inspections in the Czech Republic are conducted by the Czech Environmental Inspectorate (CEI). It was established in 1991 by the Act on the Czech Environmental Inspectorate and its Powers in Forest Protection. The CEI is an organized component of the state (in Czech "organizační složka") and subordinate to the Ministry of the Environment. Organizationally, the CEI is divided into central headquarters and territorial inspectorates,<sup>111</sup> of which there have been 10 since 1995. The Headquarters is a managing, organizational, and methodological body within the CEI structure.<sup>112</sup>

The role of the CEI within the public administration system of the Czech Republic fully matches its legal definition. As a specialized administrative authority its principal mission is thus the supervision of adherence to the law in the environmental area, encompassing all environmental components (water, air, waste, nature, and forests) and in this capacity it does preventive, inspection, and sanction work in the area of environmental protection.

The CEI conducts (i) **regular** inspections and (ii) inspections **upon request** (complaints from citizens, info in the media, etc.) and (iii) monitors industrial **accidents**. The Inspectorate's own activity is defined by the annual schedule of activities for the given year.

Generally speaking, 40-45% of each inspector's working time for supervisory inspection work is planned ahead. The rest is left for handling tasks that occur in the course of the year and the CEI has to deal with (such as unscheduled inspections, including checks on the performance of authorised emission measurements, etc.).

The inspectors have the competence to enter sites and facilities (with or without prior notification), check documentation, make measurements, suspend the operation of the facility, impose fines, or take decisions on remedial measures.

By law, the CEI is a first-instance administrative authority, meaning that its administrative decisions are conclusive either on the expiry of the appeal period for entities against which proceedings are held or, in the event of an appeal, after the decision of the appeals authority (the Ministry of the Environment); the Ministry makes second-instance decisions at its public administration departments located in Prague and regional cities (České Budějovice, Plzeň, Chomutov, Liberec, Hradec Králové, Brno, Olomouc, and Ostrava).

Following review proceedings by the appeal authority, the first-instance decision issued by the CEI can be confirmed or revoked, and then the matter is returned for a new hearing or revoked and the proceedings halted, or changed, but never to the detriment of the accused party. If someone feels deprived of their rights by a decision of the authority (OVSS), they can demand that an administrative court revoke the decision or declare it void.

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<sup>111</sup> IRZ is available at <https://www.irz.cz/>.

<sup>112</sup> Czech Environmental Inspectorate (2017), Annual Report 2017, [<http://www.cizp.cz/file/jl8/vyrocní-zpráva-CIZP-2017-eng.pdf>], p 10.

**Figure 7: Overview of Czech Environmental Inspectorate responsibilities**

	<b>Competencies of the Czech Environmental Inspectorate</b>	<b>Air</b>	<b>Water</b>	<b>Waste</b>	<b>Nature</b>	<b>Forest</b>
Supervision	Checks, reviews, investigations	X	X	X	X	X
Sanctions	Fines on private persons	X	X	X	X	X
	Fines on legal persons	X	X	X	X	X
	Restriction or stopping the operation or facility	X	X		X	X
Measuring	Measures to remedy shortcomings	X	X	X	X	X
	Dealing with old environmental burdens		X			
	Documenting accidents and cooperation on their solution	X	X	X		
	Confiscation of rare species					
	Confiscation of animals and goods	X			X	
Sanctions	Fees for emissions (waste water discharge, use of underground water)		X			
Statements	Statements and expert opinions for other state authorities	X	X	X	X	X
Suggestions	Dealing with suggestions	X	X	X	X	X

**Figure 8: Overview of CEI activities as of 2017**

Number of inspectors	396
Number of inspections	15,864
Decisions <sup>a)</sup> issued (in legal force)	10,249
Total amount of fines in legal force (CZK)	113,051,685

<sup>a)</sup> These decisions include decisions on fines and others including charges.

# About us

## Arnika – Citizens Support Centre (Czech Republic)

Established in 1996, the non-governmental organization Arnika has many years of experience promoting information openness, supporting public participation in decision making, and enforcing environmental justice. Its experts assist various civil society organizations, municipalities, and individuals in solving cases related to environmental pollution and its prevention throughout the Czech Republic. Arnika also participates in international projects focused on environmental protection and strengthening the implementation of the Aarhus Convention in Central and Eastern Europe, the Caucasus, and Central Asia. Arnika is a member organization of the Green Circle – an association of ecological non-governmental organizations of the Czech Republic, the European Environmental Bureau, and the European ECO Forum.

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## Ecoaction (Ukraine)

Center for Environmental Initiatives Ecoaction is a civil society organization that unites efforts of experts and activists to protect the environment. We advocate for energy efficiency, renewable energy, climate change mitigation, clean air for all and sustainable development in the field of transport and agriculture in Ukraine. Our advocacy activities help to influence more environmentally friendly policies.

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## Clean Air for Ukraine

Clean Air for Ukraine is a joint project of the Czech non-governmental organization ARNIKA and a network of local non-governmental organizations from the industrial regions of Ukraine. Our objective is to unite citizens and civic initiatives in industrial cities affected by air pollution, to improve free access to environmental information and helps to strengthen the public campaigns to achieve improvements at the local and national levels. The Clean Air for Ukraine project supports the development of a public monitoring network of air, soil, water and river sediments. We bring the transformation experience of the Czech Republic, involve scientists and experts in public campaigns and analytical research.

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**More information:**  
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