# ENSURING THAT POLLUTERS PAY

## Czech Republic

The Czech Republic's revenue from environmentally relevant taxes remains below the EU average. Environmental taxes stood at 2.05% of GDP in 2019 (EU-27 average: 2.37 %). The largest portion of the environmental taxes were the energy taxes at 1.92% of GDP, against an EU average of 1.84 %. Transport taxes represented 0.12% of GDP (EU average being 0.45%), taxes on pollution and resources represented only 0.01%. In the same year, the environmental tax came to 5.68% of total revenues from taxes and social security contributions (slightly below the EU average of 5.76 %).[1]

## Further options

### **Nitrogen fertiliser** tax

The Czech Republic could consider a nitrogen fertiliser tax to improve water quality. It ranks fourth highest user of nitrogen fertiliser per hectare of agricultural land causing pollution of drinking water aquifers and surface waters. The European Commission establishes that "For groundwater bodies the most significant pressure is diffuse pollution from agriculture" (Environmental Implementation Review of Czech Republic) and the European Court of Auditors stated that the Czech Republic lacked ambition to address eutrophication and was not fully complying with the Nitrates Directive. The OECD recommend that a tax on fertiliser use could be a very helpful instrument to reduce these emissions (Environmental performance review of the Czech Republic). Modelling carried out for the European Commission suggests that introducing a nitrogen fertiliser tax of €1.40 per kg nitrogen could raise €467 million in revenue (decreasing to 283 million as it does its regulating work), is expected to bring about a small increase to GDP of 0.13-0.24% in 2030, depending on the scenario chosen. This will lead to a shift in employment from agriculture to other sectors like service and construction, and when the tax revenues are recycled through income tax, a net increase of jobs of 0.01% is expected.

An example of how a fertiliser tax can be designed is in the factsheet for Denmark.

## **Water consumption** charge

The Czech Republic could consider introducing a water consumption charge, as it currently exhibits a Water Exploitation Index which is close to the threshold of 'water resources under stress'.

Modelling carried out for the European Commission suggests that introducing a water consumption charge in the Czech Republic would contribute around 0.02% to GDP by 2030 (when revenues are recycled) and lead to a slight increase of employment (depending on the model around 0.03 % in 2030].

An example of how such a tax works is in the factsheet for France.

## Examples of economic instruments

# **AIR POLLUTION** FEE

In the former Czechoslovakia, charges for air pollution were introduced in 1967. They were largely aimed at raising revenues for the state budget, and were therefore considered as fiscal revenues until 1991. Following the political and economic changes that occurred in the former Czechoslovakia after November 1989, the charges for air pollution were constituted within the new legislative framework (Act No. 389/1991 on state administration in air protection and charges for air pollution), with effect from 1992. Since 2002 the system of charges in the field of air protection has been set by the Act on air protection (86/2002). National legislation on air quality evaluation in the Czech Republic is harmonised with EU legislation for the protection and improvement of ambient air quality. Act No. 201/2012 Coll. on air protection (hereafter the Air Protection Act), as amended and repels the 2002 Act.[2]

The 2012 Air Protection Act makes a rapid change in comparison to its predecessors and divides pollution sources into specified sources and activities listed in Annex no. 2 of the Act, and sources and activities not mentioned in this Annex. Annex no. 2 includes 167 types of stationary source in 11 categories; the significance of each depends on the size of the facility. Air pollution fees are only paid by the operator of stationary sources listed in Annex no. 2, after fulfilment of other conditions specified in the law[3]. The charges are now decided by the 14 regional offices (i.e. regional governments) of the Czech Republic. An overview of development of air pollution fee rates is summarised in the table below.

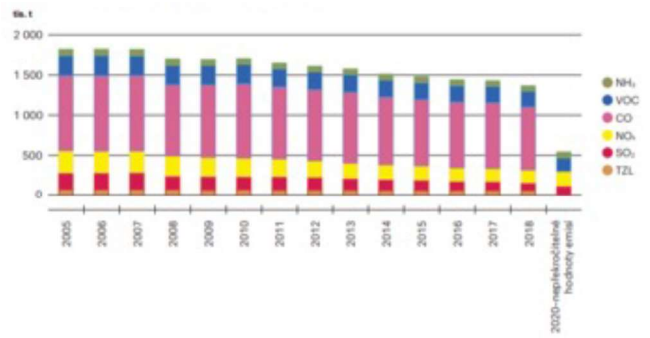
The impact of air pollution fees must be discussed in two separate groups, due to the change in legislation in 2012; impact of fees until 2012 and impact of fees since 2013. The impact until 2012 has previously been assessed as very limited for a number of reasons, e.g. lack of efficiency of the system, and lack of motivation for polluters[4]. The post-2012 appears somewhat more hopeful as the new Act itself stated that "increase of charges for air pollution should motivate operators to reduce emissions of major pollutants. This should contribute to reducing the environmental burden by substances harmful to human health, ecosystems and vegetation and also to contribute to protect the Earth's climate system". The impacts of the post-2012 system can be assessed based on CENIA's (Czech

| | 2002-2012 | 2003-2016 | 2017 | 2018 | 2019 | 2020 | 2021+ |
|---|---|---|---|---|---|---|---|
| $PM_{10}$ | 3,000 | 4,200 | 6,300 | 8,400 | 10,500 | 12,600 | 14,700 |
| $SO_2$ | 1,000 | 1,350 | 2,100 | 2,800 | 3,500 | 4,200 | 4,900 |
| NOx | 800 | 1,100 | 1,700 | 2,200 | 4,200 | 3,300 | 3,900 |

*Figure 1-1 Air pollution fee rates, 2002/2021 (in CZK/tonne). Source: Air Protection Act (2012)*

Environmental Information Agency) annual report on the status of the environment.

Annually, CENIA (Czech Environmental Information Agency) publishes a report on the status of the environment in the country. The most recent report[5] (2018) concluded that emissions of air pollutants decreased significantly between 1990 and 2000. The decline in emissions continued after year 2000, in the period 2005–2018, SO2 emissions decreased the most, namely by 53.0%, NOx by 42.1% and VOC emissions by 21.0%. The decline also continued in 2018, mostly in the case of SO2 emissions by 10.9%.




However, it is unclear whether there is a correlation between emission reduction and the air pollution fee or the developments in waste water treatment technologies. The CENIA report concludes that SO2 and NOx emissions are constantly decreasing due to the introduction of technologies and production processes in accordance with the requirements for the application of best available techniques, changes in the fuels used and a reduction in the energy intensity of the economy. An important role is currently also played by the diversification of electricity production, i.e. the decline in electricity production in solid-fuel steam power plants and, conversely, its increase in nuclear power plants, as well as the production of electricity from renewable energy sources. The obligation to meet the legislative requirements given by the transposition of Directive 2010/75/EU of on industrial emissions has also had a great influence.[6]

Stakeholder engagement is still not very common in the Czech Republic. This is further confirmed by the OECD, which states that the 'Czech Republic should standardise the public consultation process and stimulate stakeholders including the general public to contribute to consultations.

The implementation'[7]. The main stakeholders (and phases of introduction of the Air Protection Act) are as follows[8]:

- **Evaluation phase** started around 2007, when analysis of the current situation was requested from the University of Economics in Prague, by the Ministry of the Environment of the Czech Republic. Other professional stakeholders included the Technical University in Ostrava, or the Czech Academy of Sciences.
- **Analysis phase**. After evaluation of the current status, discussions took place between the Ministry of Environment, represented by various Commissions, and the biggest companies (including the biggest polluters, e.g. power plants, ironworks, etc.). Companies could intervene as individuals, or represented by the Confederation of Industry of the Czech Republic. The discussions were focused on the new rates and how to motivate emission reductions by companies. According to stakeholders interviewed, the companies were against any kind of fee increase and some proposed to cancel the fee and replace it by some kind of tax deduction. This proposal was not accepted.
- **Preparation of draft**. After the evaluation and analysis phases, the draft of the new legal document was prepared. After the draft was published, anyone could challenge the document; this is the stage when some NGOs became interested in the draft document. The environmental NGOs in Czech Republic are united under the platform "Zelený kruh" (Green circle), an association of 26 important ecological NGOs. Some NGOs are also active on air protection topics, e.g. the NGOs Arnika and "Čisté nebe" (Clear Skies).
- **Finalisation of the document.** The above-mentioned stages of the process took approximately 4 years and finished in 2011, when the amended draft document was handed over to the legislation process. The final document was approved after approximately 1 year.

# WATER POLLUTION FEE

Charges for water pollution (in its full name fee for discharge of waste water into surface waters) have been introduced in the Czech Republic (Czechoslovakia at the time) were introduced in 1966. At the time the reasoning behind the introduction of the fee was to motivate polluters to build waste water treatment facilities. It, however, did not turn out very effective as the fee was too low in comparison to the costs of establishment and consequent operation of the treatment facilities.[9]

The current regime of the water pollution fee is in place is codified in § 88 and 89 of the Water Law (Act 254/2001) where any natural or legal entity has the obligation to pay a fee for discharging waste water into surface waters. The fee is paid per each individual source of pollution. As a source is understood, for example, a municipality, an industrial area or an individual structure that discharge waste water. The fee must be paid if the discharged waste water exceeds given limits (of concentration and weight). The fees differ per pollutant (for example, if nitrogen exceeds its given limit the fee amounts to CZK 30 / kg, if phosphor exceeds its given limit the fee amounts to CZK 70 / kg and if mercury exceeds its limits the fee amounts of CZK 20 000 / kg). [10]

The fee is calculated as the sum of the partial fee from the volume and the partial fees from individual pollutants. The partial fee is calculated both by the difference between the product of the partial fee base and the rate for this partial fee base and the discount applied by the taxpayer to the partial fee. The fee period for the discharge of wastewater into surface waters is a calendar year.[11]

Cost-benefit analysis and effectiveness of environmental policies is not a common practice in the Czech Republic.[12] However, data on discharge of waste water are available. Annually, CENIA (Czech Environmental Information Agency) publishes a report on the status of the environment in the country. The most recent report[13] (2018) concluded that since 2000 the total volume of discharged wastewater has decreased by 14.5% to 1,540.8 million m3 (see Figure 2-1) below. However, at the same time there is no clear long-term trend in the development.

At the same time, from a longer-term perspective, the amount of nitrogen has decreased by 35.6% and phosphorus by 44.2% since 2003 (see Figure 2-2). However, as with the above MBI, it is unclear whether a correlation between the waste water fee or in developments in waste water treatment technologies. The 2018 CENIA concludes that the long-term decline is mainly influenced by the fact that in the technology of wastewater treatment at new and intensified WWTPs, biological nitrogen removal and biological or chemical phosphorus removal, but also by reducing the amount of phosphates used in detergents.[14]

The Water Law (in which the waste water fee is codified) was revised and amended in 2019. In the course of this amendment process, other than the 'usual' phases of an introduction of a new act (or its amendment) outlined under the previous case study on air pollution fee, a so called Commission for Drought ('Komise pro sucho') was also involved in the legislative process. The Commission of comprised of actors such as the Czech Hydrometeorological Institute, Water Authority and representatives of different regions / provinces.

**Academics** - CENIA prepares annual reports on the status of the environment in the Czech Republic: https://www.cenia.cz/o-cenia/kontakty/.

**NGOs** - 'Zeleny kruh' (Green Circle) is an association of environmental NGOs, gathering those NGOs that were involved in the drafting of the Air Pollution Act: http://zelenykruh.cz/en/

[1] https://ec.europa.eu/eurostat/databrowser/view/env_ac_tax/default/table?lang=en

[2] [3] [4] [8] IIEEP and Denkstatt (2017) The Air pollution fee in the Czech Republic. Available at https://ieep.eu/uploads/articles/attachments/7e40a844-5aab-490e-8eec-208d8095168c/CZ%20Air%20Pollution%20Fee%20final.pdf?v=63680923242

[5] [6] [13] [14] CENIA, 'Report on the Environment of the Czech Republic' (2018) available at <https://www.cenia.cz/wp-content/uploads/2020/05/Zprava_o_ZP_CR_2018.pdf>. An English equivalent exists, however it goes into far less detail.

[7] OECD, 'Regulatory Policy Outlook – Country Profile the Czech Republic' (2018) available at <https://www.oecd.org/gov/regulatory-policy/czech-republic-country-note-regulatory-policy-2018.pdf>

[9] Jana Soukupova, Eduard Baros, 'Ekonomika životního prostředí' available here <https://is.muni.cz/el/1456/podzim2010/MKV_EKZP/um/17711660/EZP-03.pdf>

[10] Ministry of Environment, Overview of environmental fees applicable in the Czech Rep.' (2013) available at <https://www.mzp.cz/C1257458002F0DC7/cz/poplatky/$FILE/oedn-poplatky_dane_CR-20130918.pdf>. Act 254/2001, paras 88 and 89

[11] Act 254/2001, paras 88 and 89

[12] OECD, 'OECD Environmental Performance Review – Czech Republic' (2018) available at <https://www.oecd.org/env/country-reviews/OECD_EPR_Czech_Rep_Highlights_ENG.pdf>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