

Wastewater fee in Polandⁱ

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Brief summary of the case

A wastewater fee is applied in Poland to discharge sewage to water or soil. In its current form the fee was introduced in 2002, strengthening earlier initiatives in this field including environmental charges introduced as part of the post-communist transition in Poland. The unitary fees (i.e. the fee per unit of pollutant) are decided by the Ministry of Environment and increase annually following the inflation index. They apply to legal and natural persons and cover different types of pollutant indicators such as biochemical oxygen demand, chemical oxygen demand, suspension, chlorines and sulphates, volatile phenols and other chemicals and elements. The fees are collected by the Marshal Offices in sixteen Polish voivodeships (regions), with revenues going to the National and Regional Funds for Environmental Protection and Water Management as well as local governments. They are then earmarked for environmental protection investment. The fees are generally effective but they are also rather selective (i.e. do not apply to some major pollutants) and suffer from weak enforcement. Although there is a correlation between the wastewater fee increase and the reduction of water pollution in Poland, the welcome trend in sewage treatment and related environmental impacts should be also attributed to major infrastructural investment and developmental changes that took place in Poland over recent decades. Stakeholder engagement in the design and application of the wastewater fee has been very poor so far. A recent legislative initiative of the Polish Government to introduce a new Water Law may bring significant changes to the current wastewater fee system, but the potential impacts of the reform require further examination. Its major drawback at this early stage is a lack of proper public consultation carried out before passing the draft law to the advanced stages of the law making process.

1 Description of the design, scope and effectiveness of the instrument

1.1 Design of the instrument

A wastewater fee is applied in Poland **to discharge sewage to water or soil**. It is one of the environmental charges regulated by the Act of 27 April 2001 on Environmental Protection (AEP of 2001).

Charges for introducing sewage to water and soil in Poland have existed since at least 1974 (Act on Water Law of 1974) and were substantiated in the early 1990s. The fee in its current form was introduced in 2002. The rationale for the fee introduction was to internalise costs and to use the fee revenues collected to compensate environmental impacts caused by specific pollutants introduced to water or soil.

The maximum rates (upper threshold) at the time of introduction in 2002 were PLN 175/kg (around EUR 43.75/kg¹) (AEP of 2001) of substances introduced in sludge to water or soil. In

¹ Using a simplified currency rate of 1EUR=4PLN

2017 the rate will reach PLN 249.17/kg (around EUR 62.29¹) (Ministry of Environment, 2016). Unitary fees apply for different types of pollutant indicators such as biochemical oxygen demand, chemical oxygen demand, suspension, chlorines and sulphates, volatile phenols and other chemicals and elements such as hexachlorocyclohexane, zinc, cadmium and many more.

Table 1 Unitary fee rates for pollutants introduced in sewage to water or soil (2017)

Pollutant indicator	Unitary fee (applicable in 2017) per kg
Biochemical oxygen demand (5-day)	PLN 4.28 (ca. EUR 1.07)
Chemical oxygen demand	PLN 1.71 (ca. EUR 0.43)
Suspended solids	PLN 0.52 (ca. EUR 0.13)
Sum of chlorines and sulphates	PLN 0.05 (ca. EUR 0.0125)
Volatile fenols	PLN 45.55 (ca. EUR 11.4)
HCH, CCl ₄ , PCP, aldrin, dieldrin, endrin, izodrin, HCB, HCBD, CHCl ₃ , EDC, TRI, PER, TCB, mercury, cadmium, zinc, copper, nickel, chromium, lead, arsenic, vanadium, silver	PLN 124.56 (ca. EUR 31.14)

Source: [Ministry of Environment decree of 29 June 2016, annex 2](#)

The actual fee rate therefore depends on the amount and type of pollutants contained in sewage, as well as their category (urban, household or industrial) and in some cases also the temperature and inflow surface (cooling water and rain water). Fees also apply to discharges of cooling water (if its temperature is higher than 26°C or that of the receiving water body; higher rates apply if water temperature exceeds 32°C, and the highest rate if above 35°C²), rainwater and snowmelt (different rates apply depending on the type of surface of discharge³), and water discharged from fishponds (for every 100 kg of weight gain of fish other than Salmonidae or other aquatic species⁴).

The wastewater fee is paid by entities whose operations require an environmental permit. The obligated party (polluter) calculates the amount of the fee they are liable to pay and submits the payment alongside an environmental report with the qualitative and quantitative information used to calculate the fee amount due. Fees must be calculated, reported and paid by the obligated parties to competent authorities by the end of the year. If the entities exceed the permitted emission levels, underreport or submit otherwise inaccurate information to the authorities, higher punitive charges may apply.

The legislator exempts the obligated parties from paying a fee (but not from reporting), in two situations; firstly if the overall amount of the annual fee is less than PLN 800 (EUR 200) (Article 289, AEP of 2001), and secondly if the entity discharged sewage water to water or soil

² Rates for 2017: PLN 0.68, 1.36, and 4.24 per dam³ respectively (Ministry of Environment decree of 29 June 2016, annex 2)

³ Rates for 2017: From PLN 0.04 per m² from water-tight surface roads and car parks located in towns of population density below 1,300/km², up to PLN 0.29 per m² from industrial site surfaces (Ministry of Environment decree of 29 June 2016, annex 2)

⁴ Rates for 2017: PLN 0.272 per 100 kg of weight gain (Ministry of Environment decree of 29 June 2016, annex 2)

during an emergency action. There is also a general block exemption for the following wastewater discharge categories (Article 295, AEP of 2001):

- Discharge to soil aiming at agricultural use, providing such use is allowed in the environmental permit of the entity;
- Discharge to soil or water of cooling water if its temperature does not exceed +26°C or natural water temperature if higher than +26°C;
- Discharge to water or soil of saline water if the sum of chlorine and sulphur ions is not higher than 500 mg/l;
- Discharge to water or soil of water used for fresh water farming of Salmonidae provided the substances contained in the wastewater do not exceed legally determined values; and
- Discharge to water or soil of water used for fresh water farming of fish other than Salmonidae or other aquatic organisms, provided that production of such fish or organisms does not exceed 1,500 kg of yearly weight gain.

Section 1.4 below outlines some concerns related to these exemptions.

The Voivodeship Inspectorates for Environmental Protection control and check the monitoring results submitted by the obligated entities. The inspectorates, based on the data received from the applicants, maintain a voivodeship database on environmental uses and prepare voivodeship reports that are submitted to the General Inspectorate for Environmental Protection, and the Ministry of Environment⁵. The Ministry of Environment maintains a central database on environmental uses including information on wastewater discharges.

1.2 Drivers and barriers of the instrument

Since 1989 Poland has been advancing in catching up with Western European countries in terms of economic development, but it also had many improvements to be made in the field of environmental protection, which was mostly neglected during the communist era. The strengthening of financial charges relevant to water protection in the early 1990s and again in 2002 was therefore carried on the wave of post-communist transition in Poland and adoption of the constitutional principle of sustainable development in 1997.

Today the wastewater fees are driven by and link clearly to EU legislation and policy, namely the Water Framework Directive (2000/60/EC), Urban Wastewater Treatment Directive (91/271/EC) and Common Agricultural Policy with the Nitrates Directive (91/676/EEC).

1.3 Revenue collection and use

Total revenues from water management and water protection fees collected in 2014 reached **PLN 459.8 million** (EUR 115 million) (NFOSiGW, 2015). The share of revenues raised from water fees accounted for around 30% of the total revenues collected from environmental fees in 2014 (air pollution fees accounted for some 41%, and waste disposal 29%).

⁵ The voivodeship databases are not publicly available – they inform the Minister in charge of environment and water management, as well as the President of the National Water Management Authority, marshalls, directors of Regional National Water Management Authorities, sanitary inspection, public statistics office and local authorities.

The fees are paid by **entities requiring an environmental permit** and that discharge sewage to water or soils. These include legal and natural persons such as enterprises, agricultural holdings, and households discharging sewage to water or soil in a quantity exceeding 5m³/day (few households reach this level). The wastewater fee is collected by the voivodeship marshals (Art. 277, Act on Environmental Protection of 2001).

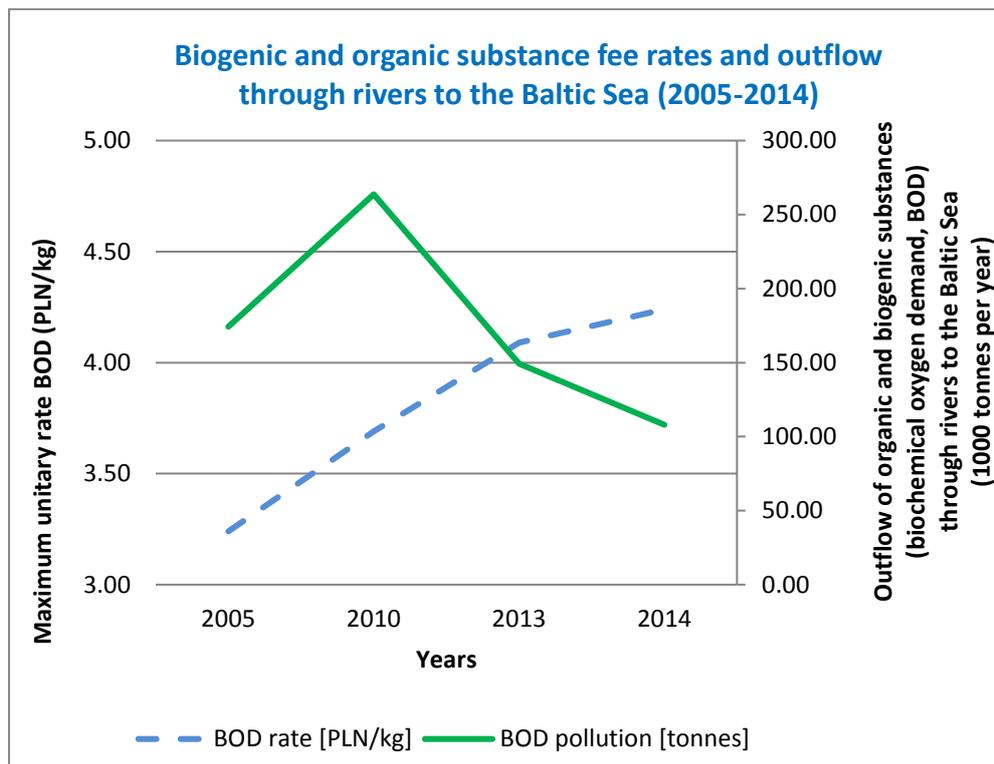
Revenue from the fees goes to the National Fund of Environmental Protection and Water Management, Regional Funds of Environmental Protection and Water Management, and local governments. Through the Funds the **revenues are earmarked** for investment in environmental protection. The National Fund's main mission, for instance, is to financially support "projects fulfilling environmental obligations imposed on Poland resulting from EU membership." (NFOSiGW, official website). The National Fund uses a stream of revenues, including wastewater fees, for investment in: water management plans, flood and drought risk management plans, projects related to water protection, mapping and water melioration, water infrastructure modernisation and development (Article 400a of the Act on Environmental Protection of 2001). Between 2007 and 2015 the National Fund spent over PLN 21 billion PLN (EUR 5.25 billion) on environmental protection and water management in Poland (Ministry of Environment, 2016); this also includes funding from the EU, EFTA and other donor organisations.

A small share of the revenues (from 1.5 to 3% depending on the total amount of collected revenues in a given year) is retained by the Marshal Office to be spent on fee collection and database maintenance and recovery (Article 402, AEP of 2001).

1.4 Environmental impacts and effectiveness

Wastewater treatment and water protection has been greatly improving for the last 40 years in Poland. For instance between 1980 and 2007 the amount of non-treated wastewater introduced to the environment was reduced by some 83.4% (Wałęga et al., 2009). Between 2000 and 2014 investment in wastewater management and water protection was huge and significantly higher than other outlays on fixed assets for environmental protection in Poland (Ministry of Environment, 2016). Official statistics show a constantly declining level of water and soil pollutants (GUS, 2015). There is also a negative correlation between the level of fee rates for certain substances contained in wastewater discharged to water or soil, and the amount of those substances found in Polish rivers (see figure 1). These **positive trends continue but cannot be attributed to the wastewater fees alone**. They are also driven by infrastructure investment in pursuit of general developmental goals such as quality of life improvements, regional cohesion, and compliance with the EU's environmental *acquis*.

Figure 1 Correlation between the level of wastewater fee and pollution



Source: Ministry of Environment decrees 2004 – 2013 and GUS, 2015

The main drawback influencing the environmental impacts of the wastewater fee is a relatively **weak system of enforcement**. The Marshal’s Offices and the Voivodeship Inspectorates of Environmental Protection have very limited resources to verify compliance with the legal requirement related to wastewater discharges to soils or to water. In addition, only a limited number of economic operators in Poland report on their environmental uses, so it is possible that many entities illegally remain outside of the environmental fee collection system. Thorough controls are beyond the resource and often even legal capacity of public authorities in charge of enforcement of the wastewater fees. The situation is further complicated by the fact that there is no data correlation between the official inventory of economic operators in Poland, and the register of economic entities requiring environmental permits (Rogulski, 2015). This could be addressed by enabling **standardised electronic reporting** related to wastewater fees.

The report of the Supreme Audit Office (NIK, 2009) showed that in most cases the entities operating under environmental permits submit reports but not the fees as they fall below the minimum threshold of cumulative amount of fee due annually. A high number of entities sending reports but exempted from fee payment creates **excessive administrative burden** on the Marshal Offices. It is argued that the authorities busy with processing of reports submitted even by relatively small operators, do not have capacity to verify to the accuracy of reported data from bigger operators or ensure that there are no entities illegally remaining outside of the system (Rogulski, 2014). There are voices that the fee’s efficiency would be increased if the threshold triggering fee payment obligation was set at a higher level (e.g. PLN 3000), sparing the Marshal Offices the unnecessary administrative burden (Rogulski, 2014).

Some environmental protection experts (interviewed during the preparation of this case study) point out that the current system of fees also has important **loopholes**: it effectively exempts thermal power plants from paying for most cooling water discharges even if they are significantly warmer than the temperature of the affected water reservoirs. Moreover, the wastewater fees do not apply to agricultural use of sewage as long as it remains within the limits of the environmental permit. The loopholes negatively affect the environmental integrity of the wastewater fee scheme, leaking sewage pollutants to soil and water. Experts also point out that many domestic water treatment plants and septic tanks in Poland are in practice dispersed sources of wastewater pollution to soils or water but are rarely controlled and remain outside of the environmental charge system.

1.5 Other impacts

Thanks to directing the revenue from fee collection to the National Fund for Environmental Protection and Water Management the **revenues can be redistributed** between more and less prosperous voivodeships in Poland and invested in environmental protection projects where they are most needed. This is an important economic and social driver given the depth of regional disparities that still exist in Poland (Rosiek, 2013).

Moreover, thanks to the impact of fees on the operations of many economic entities, including wastewater treatment plants, there is an **increased (economic) motivation to apply the best available techniques** of water treatment in order to reduce the amount of fees due. Also, the importance of **accurate information** about the quality and quantity of sewage and their sources has increased and become a vital input in wastewater treatment plant management (statement based on interviews).

However, weak enforcement of the environmental fees in Poland has a negative impact on the **public perception** of the environmental protection system and may create a sense that pollution from sewage is not a major issue for Polish sustainable development.

2 Stakeholder engagement

and

3 Windows of opportunity

The key stakeholders related to wastewater fees are: (i) operators whose activities require environmental permitting such as wastewater treatment plants, agricultural holdings, fish farms, and industrial sites; (ii) wider civil society represented by environmental and consumer organisations; and (iii) state and local authorities involved in fee collection and revenue earmarking.

It was difficult to find information about the engagement of key stakeholders in the initial design process for the wastewater fees in Poland. Regarding the current system introduced by the Act on Environmental Protection of 2001, no stakeholder engagement was carried out other than public consultation on the draft law. In practice, stakeholder consultation in environmental matters in Poland is poor, and there is **no sign of significant engagement** of environmental NGOs in the processes related to wastewater fees. Wastewater fees seem to be applied in isolation of stakeholder engagement, although there have been signs that their design and levels are largely influenced by lobbying from, among others, the fish farming, agriculture and energy sectors (source: interviews and civil society survey).

Moreover, experts and NGOs perceive the system of wastewater fees to be flawed by weak enforcement due to understaffed and underfunded public authorities being in charge of fee collection and control. **Lack of stakeholder engagement does not seem therefore to be the major weakness of the system.** Limited capacity of enforcement bodies, complexity of factors influencing water and soil quality, and limited water quality monitoring and scarce hydrological data (Zawadzki et al., 2016) make public engagement generally difficult in Poland.

4 Insights into future potential/reform

The key lesson learnt from application of wastewater fees in Poland so far is that the system's efficiency is significantly weakened by an inappropriate design leading to compromised environmental integrity (e.g. loopholes leaving important pollution sources unaffected, low fee waiver threshold, or lack of standardised electronic reporting as explained in detail above) and weak enforcement. Any future reform of the system should therefore take those two elements into account. Moreover any changes to level of fee rates that has a direct impact on the **cost of water and sewage for end-users** is a sensitive issue, and should be handled with care by Polish policy makers. This could be done *inter alia* **through (more) extensive public consultation and rigorous consideration of its results.**

4.1 Actual Planned reforms and stakeholder engagement

In August 2016, the Ministry of Environment's legislative proposal on the Act on Water Law passed to an advanced stage of the law making process in Poland and will be soon subjected to a vote by Parliament (RCL, 2015). The aim of the legislative proposal is to create a new public body, the "Polish Waters" state holding (100% state owned company) in charge of financing water management investment. "Polish Waters" would concentrate the competences relevant to, among others, wastewater fee collection. The new law would also replace the current system in which the obligated parties calculate the amount of the fee due based on the data they collect, with a system in which a "Polish Waters" officer takes the measurements and provides the entities with information on how much they are bound to pay (Article 283 of the draft Act on Water Law of 2016). Both changes have some potential to address inefficiencies of the current wastewater fee system in Poland.

Moreover the reform will also lead to increases in current rates of wastewater fees, and moving to a fee constituted of fixed and variable components. The proposed changes do not address the current loopholes exempting energy and agricultural wastewater from the wastewater fee payment obligation. On the positive side, the draft law mostly maintains the role of the National Fund for Environmental Protection and Water Management by putting it in charge of 90% of the revenues collected from the water service fees, including the wastewater fee. As much as 10% of the revenues (up from the current 1.5-3% for Marshal Offices) will be retained by the fee collector, "Polish Waters" (Article 272 of the draft Act on Water Law of 2016).

4.2 Suggestions for future reforms – instrument design and civil society engagement

Civil society has not been duly consulted on the draft Water Law. There is a concern that it will affect the water and sewage prices for end consumers, including the most economically vulnerable. "Klub Przyrodnikow", an environmental NGO active in Poland, criticised the law

making process as being in-transparent and open only to the Social Dialogue Council which it considers a poor substitute for proper public consultation (Klub Przyrodników, 2016). The Social Dialogue Council comprises representatives of the Government, trade unions and business associations, but not civil society (Dialog.gov.pl, 2016). “Klub Przyrodników” perceives the upcoming reforms as a major risk that would “cancel almost all achievements of the past years that have allowed for some degree of compliance of water management in Poland with environment and nature protection needs” (Klub Przyrodników, 2016).

4.3 Suggestions for replicability

Given the limited efficiency of the current system and uncertain outcome of the upcoming reform it is difficult to formulate suggestions for replicability of the wastewater fee. However, the earmarking of fee revenues for environmental protection investment across the country, tackling economic and social disparities, may be considered a good practice worth spreading. It also seems beneficial that this kind of **redistribution and earmarking** is managed by a specialised institution with independent financing economy and sufficient capacity to ensure environmental integrity and efficiency of the projects it supports.

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