

## WATER-LAW PERMISSION AS AN ADMINISTRATIVE AND LEGAL INSTRUMENT FOR THE MANAGEMENT AND PROTECTION OF WATER RESOURCES\*

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### ABSTRACT

In the Member States of European Union, including Poland, the legal framework for the management and protection of water resources is determined in the Water Framework Directive 2000/60/EC (WFD). The aim of the article is to determine the impact of the revision of legal provisions in the field of water law licensing caused by the Directive implementation on the currently applicable framework for the protection and management of water resources in Poland. Based on the legal regulations and statistical data it was found that the implementation of WFD and related directives regarding sewage treatment plants limiting the inflow of nitrogen compounds from agriculture and priority substances to surface waters, contributed to an extension of scope of the activities that require this permission. That scope extension concerns both the protection of water resources in terms of quantity and quality e.g. water abstraction, agricultural fertilization, reclamation of water reservoirs, protection of flood risk areas and use of waters for economic and service purposes. All this indicates a more restrictive approach of the legislator to the protection of the most valuable resource in the environment, which should contribute to possible achievement of a good state of surface water, as is the main goal of the WFD.

**Key words:** Water Framework Directive, legal provisions, water-law permission, wastewater treatment

### INTRODUCTION

Waters are a vital resource to human livelihood. Unfortunately, anthropogenic activities contribute to water deficits in both quantitative and qualitative terms. This problem includes not only poor coun-

tries but also ones with a well-developed economy in Europe. An example of such a country is Poland, which has the water resources at the level of about 1600 m<sup>3</sup> per capita during the year. It is the third last place in European countries, only Belgium and Malta having lower water resources (EUROSTAT 2017,

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Gutry-Korycka et al. 2014). Therefore, waters should be subject to special organizational and legal protection both at EU level and in national legislation.

In Europe, the legal framework for the management and protection of water resources is determined in Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1–73) – WFD. The main message contained in the preamble of the Directive is „Water is not a commercial product like any other but, rather, a heritage which must be protected, defended and treated as such”. This confirms that water is an indispensable and irreplaceable resource of the environment and hence, its protection is necessary to maintain life on Earth. The goals of the WFD were to establish a framework for the protection of all categories of waters such as inland surface waters, transitional waters, coastal waters and groundwater. Accordingly, the following measures were imposed:

- prevention of further deterioration and protection and enhancement of the status of aquatic ecosystems;
- promotion of sustainable water use based on a long-term protection of available water resources;
- enhancement of protection and improvement of the aquatic ecosystems;
- assurance of the progressive reduction of groundwater pollution. However, the most important aim of the WFD was to achieve a good ecological status of waters by 2015 in EU member states (Farmer 2012, Ciechanowicz-McLean 2014, Voulvoulis et al. 2017, Zębek 2018).

The good ecological status of water bodies is determined in the Annex V based on separate hydromorphological and physico-chemical water parameters, as well as on bioindicators, such as phytoplankton, other aquatic flora, benthic invertebrates and fish (Zębek 2017, Zębek and Napiórkowska-Krzebietke 2019).

In order to protect water resources, the WFD introduced provisions regulating water use and defined this activity in the Article 2(39) as water services together with any other activity identified under Article 5 and

Annex II having a significant impact on the status of water. Water services means all services provided to households, public institutions or any economic activity involving the collection, retention, storage, treatment and distribution of surface or ground, as well as sewage collection and treatment facilities which subsequently discharge into surface water. In this range, water reservoirs should be characterized in terms of anthropogenic pressure and the directions of their protection determined. Data that can be the basis for determining such impacts on the aquatic environment include:

- results of monitoring – quantitative, physicochemical, biological and morphological status of waters;
- land use, e.g. by agriculture, industry, urban planning, landfills, including unsafe, protected areas;
- water and sewage management, area and point sewage discharges;
- hydrotechnical facilities, i.e. retention reservoirs, water barriers, levees, metastatic channels and drained areas (Barszczyńska and Kubacka 2008, Durkowski et al. 2015).

Therefore, under Article 4 of the WFD the Member States are obliged to implement the necessary measures to prevent deterioration of the status of all bodies of surface water, including progressive reduction of priority substance pollution, as well as to protect, enhance and restore these water bodies.

In the field of water protection, Poland, being a member of the EU since 2004, has been obliged to implement the provisions of the Water Framework Directive in two Water Law Acts of 2001 and 2017 (Maciejewski and Walczykiewicz 2006, Zębek 2017, 2018). However, the provisions of the water law in force at that time had been shaped earlier, namely since the adoption of the first Water Law Act of 1974.

One of the important legal and administrative instruments in the water protection is the system of water law approvals containing water-law permits (Zębek et al. 2016). This permission takes the form of an administrative decision required by the Water Law Act. The purpose of the article is to determine the impact of the revision of legal provisions in the field of water law licensing caused by the Water Framework

Directive implementation on the currently applicable framework for the protection and management of water resources in Poland.

The article uses a dogmatic and legal method based on the following analyzed materials: literature, statistical data of Eurostat and the Polish Water Management, EU (Directives 91/271/EWG, 91/676/EWG, 2000/60/EC and Directive 2006/11/WE) and Polish legal regulations in the range water protection from 1974 of the first Water Law Act to 2001 and 2017 of the next Water Law Acts in force after Poland's accession to the EU.

### **THE FIRST STAGE OF WATER-LAW PERMISSION EVALUATION**

The water-law permission is an instrument created in the Water Law Act of 1974 (Journal of Laws No. 38, item 230 as amended) in Chapter 1a entitled Water management. According to Article 19a water management consists in shaping, protecting and using ground and surface water resources in accordance with the principle of sustainable development. It is worth noting here that the legislator referred to the most important principle of environmental law – sustainable development. This means using water resources to meet the basic needs of present and future generations while guaranteeing economic development. The water management mainly involved the protection of surface and groundwater resources against pollution and over-exploitation, protection against flooding and drought, shipping and energy use of water, providing the population and water of adequate quality, as well as satisfying the needs of the population in terms of health, hygiene and rest. According to this act, the water-law permission has been classified as one of the water management instruments currently in force.

Detailed legal solutions regarding water licensing were regulated by Chapter 2 Water law-permission in Articles 20–35. This permission was required for the use of water beyond common and ordinary use

of water – to special use of waters and for the construction of water facilities. The use of waters includes use for the needs of the population and the national economy; however, it cannot cause water pollution or damage in water environment (Article 41). The common use of water concerns surface public waters and serves to meet the needs of personal and household or agricultural use without the use of special devices and for leisure and tourism, water sports and fishing (Article 47 and 48). The ordinary use of water concerns the owners of land on which there are water for personal, household or agricultural purposes (Article 49). However, the scope of legal regulations for special use of water includes: abstraction of surface and underground waters; run off sewage into waters or into the ground; collecting sewage and waste on coastal land and within mining areas for medicinal waters; making inter-shore transport with fixed equipment; draining or water supply by means of devices passing through the land of another owner; ice mining and cutting plants; extraction gravel, sand and other materials in the area exposed to danger of flooding for purposes other than meeting the needs of a household or individual farm; floating wood or other materials; water use for fishing purposes and water transport (Article 53). Water law permits in accordance to Article 55(1–3) are issued by the staroste (county foreman) or voivode (province foreman) for undertakings that may have a significant impact on the environment (e.g. steel mills, mines, heavy industry) and by the Minister of the Environment for water transfers (Paczuski 1998, Zębek 2002).

Thus the legislator introduced the requirement to obtain a water permit for activities that could have a significant impact on water ecosystems in the range of water collection, sewage and waste collection on land near water bodies, extracting materials and cutting plants from water bodies, water transport, and use of waters for navigable and fishing purposes. It can be considered that these water law provisions initiated the creation of a full range of activities that require this permit currently in force.

## THE SECOND STAGE OF WATER-LAW PERMISSION EVALUATION

The next stage of water law evaluation included adopting a new Water Law Act of 2001 (Journal of Laws of 2017, item 1229). It was a very important period in shaping water law for two reasons. Firstly, a new Water Directive was adopted in 2000, and secondly, Poland became a member of the EU in 2004. This meant that it was obliged to fully implement the provisions of this directive into its national legislation. According to Article 2, the scope of activities included in water management was extended. Water resources management serves the needs of the population, economy, water protection and the environment associated with these resources, in particular ensuring adequate water quantity and quality for the population; protection of water resources against pollution and improper or excessive exploitation; maintaining or improving the condition of aquatic and water dependent ecosystems; flood and drought protection; providing water for agriculture and industry; meeting the needs related to tourism, sport and recreation; and creating conditions for energy, transport and fisheries use of waters. In comparison to earlier water law, the legislator paid more attention to the protection of not only water reservoirs but also ecosystems dependent on them, while expanding the scope of industrial activity and agriculture.

The water-law permit was also qualified for water management instruments but its scope was significantly expanded. This permission was required not only for special water use but also for others activities. The scope of special use of waters regulated Article 37 with the following elements: collection and drainage of surface or groundwater; discharge of sewage into waters or into the ground; water transfers and artificial groundwater supply; damming and retention of inland surface waters; use of water for energy, navigation and rafting purposes; extracting stone, gravel, sand and other materials from waters, as well as cutting plants out of water or from the shore and fishing use of inland surface waters. Therefore, it is noticeable that the scope of activity requiring a water law permit was

expanded, in particular concerning water transfer and artificial groundwater supply; damming and retention of inland surface waters and use of water for energy purposes. This is very important, especially because of the protection of watercourses used within small hydropower plants by hydroelectric power plants and the associated water damming. These actions cause negative effects on the functioning of such water reservoirs, e.g. change of water flow speed, reconstruction of biocenosis, creation of stagnation with slow flow rate enriched in nutrients and causing overgrowing of these parts of watercourses by macrophytes (Zębek 2014). Importantly, a limit value of 5 m<sup>3</sup> per day has been introduced that separates ordinary and special use of waters. This applies to the collection of surface and underground waters as well as the agricultural use of sewage (Article 36). The values exceeding 5 m<sup>3</sup> per day qualify a given activity for the special use of waters requiring a water permit. This applies to the discharge of treated sewage to a receiver (river) from a wastewater treatment plant (Zębek et al. 2016).

The water-law permit apart special use of waters was also required for other activities under Article 122. It was included:

- water regulation, development of mountain streams, shaping of natural watercourse beds, change of landform on land adjacent to water, affecting water flow conditions;
- execution of water facilities;
- leading levees of bridges, tunnels, pipelines, culverts through surface flowing waters;
- leading power and telecommunications lines on inland waterways;
- collecting sewage and waste within mining areas created for medicinal waters;
- drainage of building structures and mining plants;
- introduction substances that inhibit the development of algae into surface waters;
- remediation of surface or groundwaters;
- introducing industrial sewage containing substances particularly harmful to the aquatic environment into the sewage system;
- long-term reduction of the groundwater level;
- groundwater damming.

Thus, the water construction was ordered, especially in tourist infrastructure, fish farming, water transport, water power engineering as well as shaping water resources. This is reflected in the extensive definition of water devices under Article 9(19) as devices for shaping and using water resources. These include: buildings: damming, venting, flood and regulating, as well as canals and ditches; reservoirs and water steps; fish ponds and ponds for wastewater treatment, recreation or other purposes; facilities for the collection of surface and underground waters; hydropower facilities; outlets for sewage facilities for discharging wastewater into water or water facilities and outlets for discharging water into waters or water facilities; fixed equipment for fishing or for obtaining other aquatic organisms; retaining walls, boulevards, wharfs, bridges, marinas, bathing areas; and fixed equipment for inter-shore transport. Water devices are very important in the concepts of spatial development of urban areas, especially when planning the development of lake shores for tourist and recreational purposes by concreting the banks, building bridges (Antolak and Małkowska 2019). It is also worth noting that the scope of activities requiring a water law permit has been extended by two very important aspects related to water pollution. The first concerns the introduction into the water bodies of substances that inhibit the growth of algae. It is associated with the eutrophication process resulting from the excessive inflow of nutrients to water bodies and cyanobacterial blooms. To limit the growth of these algae, chemical compounds, e.g. aluminum sulfate, are applied to the water body. Admittedly, it limits their development but at the same time eliminates other water organisms necessary in the process of water self-purification (Szymańska and Zębek 2014, Zębek 2017). Secondly, it concerns the introduction of industrial wastewater containing particularly harmful substances into sewage systems. These substances are divided into two groups: 1) it should be eliminated from the aquatic environment, e.g. heavy metals and 2) their inflow to water reservoirs should be limited, e.g. nutrients (nitrogen and phosphorus). Thus, the legislator, by introducing these requirements,

significantly strengthened the quality protection of waters, such as restorative methods and limiting the inflow of harmful substances, respectively.

The staroste is the authority competent to issue water law permits under the Article 140(1). In special cases, the voivodeship marshal is the competent authority for the following activities: for projects that can always have a significant impact on the environment, the use of water and the construction of water facilities in artificial water reservoirs situated in flowing waters, construction of flood protection buildings, water transfers and introduction of inhibiting substances of algae growth to surface waters (Kałużny 2016, Łuczak and Tomaszewska 2017).

## THE LAST STAGE OF WATER-LAW PERMISSION EVALUATION

The Water Law Act of 2017 (Journal of Laws of 2018, item 2268 as amended) is currently in force, which is a significant extension of the provisions for the protection of water resources contained in the Water Law Act of 2001. In this Act, the scope of activities requiring a water law permit has been significantly expanded, both as part of the special use of waters and other activities affecting aquatic ecosystems. According to Article 34 in the special use of water has been added:

- drainage of land and crops;
- water use in ponds and ditches;
- introducing into the sewage system industrial sewage containing substances particularly harmful to the aquatic environment (early was as other activities required the water-law permission);
- practicing in waters of sport, tourism or recreation with the watercraft equipped of an engine power above 10 kW, excluding waterways;
- raising fish in cages;
- providing water for the operation of facilities enabling fish migration;
- water use for business purposes;
- the use of waters in artificial water reservoirs located in flowing waters, intended for farming or breeding fish and other aquatic organisms;

– organization of leisure or water sports as part of business operations.

Thus, the legislator pays special attention to the aspects of economic activity, especially in the field of water services and water sports, fish farms and protection of fish in regulated watercourses, enabling them to migrate at water damming devices for energy purposes. As part of other activities under the Article 389, the scope of activities related to carrying out bridge structures, pipelines or culverts through flowing surface waters and through levees, as well as overhead power and telecommunication lines through inland waterways and levees was clarified (Szachułowicz 2017, Szuwalski 2019). Here, there has been an enhanced protection of aquatic ecosystems

and flood protection structures during the implementation of investments in the field of water engineering and energy. The extension of these provisions is the requirement to obtain a water law permit in relation to activities included in the Article 390 precisely when locating new projects that may significantly affect the environment and new buildings in areas of particular flood risk. In addition, in these areas this requirement applies when collecting sewage, animal faeces, chemicals, as well as other materials that can pollute water, and carrying out recovery or disposal of waste, including storage.

The Water Law Act of 2017 changes the water resources management system, replacing the existing authorities competent in matters of water man-



**Fig. 1.** Regions for water management in Poland  
*Source:* own study based on *Wody Polskie...* (2019)

agement with one entity, which is to be the Polish Water Management. This entity is to implement a catchment policy for water management at each level of the catchment, water region and river basin (Ćwiek et al. 2017, Rakoczy 2018). The organizational structure of Polish waters consists of: National Water Management Board – Regional Water Management Boards (RWM) – Catchment Boards – Water Supervision with 11 regions for water management (Fig. 1). In accordance to Article 397(1) the Polish Waters are the competent authorities for water law permission. The director of the regional water management board of Polish Waters is competent to issue this permit in the following cases: the construction of flood protection buildings, water transfers, introducing into the surface water substances that inhibit the development of algae, the reclamation of surface waters or groundwater, the extraction of surface water from stone, gravel, sand and other materials, as well as for cutting plants from the water or shore, introducing into the sewage system industrial sewage containing substances that are particularly harmful to the environment and making water devices in artificial water reservoirs located in inland flowing waters. However, in the other cases not mentioned, the water permit is issued by the director of the management of the Polish Waters catchment.

## **DIRECTIVE SOLUTION IMPLEMENTATION VS. FRAME OF WATER PROTECTION IN POLAND**

The changes in the evaluation of water law in the range of water-law permission were caused by primarily increased concern for water resource protection in terms of both quantity and quality in European Union countries postulated in the Water Framework Directive 2000/60/WE. It should be noted, however, that the implementation of the provisions of the WFD has caused many difficulties in EU member states, especially in the monitoring system and financial measures (Boscheck 2006, Maciejewski and Walczykiewicz 2006, Chon et al. 2010, Bouleau and Pont 2015, Kondouri et al. 2016, Vlachopoulou et al. 2017). These solutions were adopted and implemented into

the Polish legislation, particular in analysed Water Law Acts of 2001 and 2017. Changes in these acts were also associated with the implementation of not only WFD provisions but related directives regarding municipal wastewater treatment (Directive 91/271/EEG, OJ L 135, 30.5.1991, p. 40–52), agricultural pollution (Directive 91/676/EEG, OJ L 375, 31.12.1991, p. 1–8) and particularly harmful substances (Directive 2006/11/WE, OJ L 64, 4.3.2006, p. 52–59). The objective of the Directive 91/271/EEG was to protect the environment from the adverse effects of the sewage discharges mentioned above. In this range the Member States were obliged to ensure that all agglomerations are provided with collecting systems for urban wastewater at the latest by 31 December 2000 for those with a population equivalent of more than 15000 (p.e.), and at the latest by 31 December 2005 for those with between 2000 and 15000 (Article 3). For full sewage treatment the most important are the biological methods leading to the removal of excessive amounts of nutrients nitrogen and phosphorus from wastewater contributing to the process of eutrophication of surface waters. Municipal sewage are the main resource of the phosphorus derived from washing used for social purposes (Szymańska and Zębek 2014). According to the Directive this stage of sewage treatment was called as secondary treatment of urban wastewater by a process generally involving biological treatment with a secondary settlement or other process in which the requirements established in Table 1 of Annex I are respected. Under the Article 4 the Member States are required to ensure that urban wastewater entering collecting systems shall before discharge be subject to secondary treatment or an equivalent treatment to the latest by 31 December 2000 for all discharges from agglomerations of more than 15000 p.e., and to the latest by 31 December 2005 between 10000 and 15000 p.e. In Poland in accordance to the provisions of Article 5 in conjunction with point 3 of Annex I.B to Directive 91/271, the currently valid norm in the range of minimal equivalent number of population covered with the wastewater treatment amounts to over 10,000. The effect of introducing these regulations was a significant increase in the share of the

**Table 1.** Share of the population connected to at least secondary urban wastewater treatment in 2007–2017 [%] in European countries

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Belgium	68.7	71.0	72.8	75.0	77.2	74.9	76.4	78.2	80.5	81.9	83.0
Bulgaria	39.6	41.3	42.7	45.1	53.7	53.9	54.6	54.8	60.7	61.8	63.2
Czechia	73.0	75.4	75.7	76.9	78.0	78.0	79.8	79.8	80.7	81.2	82.3
Denmark	–	–	89.4	88.0	88.4	88.4	90.1	91.0	90.8	91.5	91.8
Germany	91.9	–	–	95.6	95.5	95.4	95.4	95.6	95.8	96.0	–
Estonia	83.5	84.5	84.5	83.3	86.1	86.2	87.1	88.0	87.6	87.8	87.9
Ireland	59.0	–	71.0	–	63.0	58.8	59.4	60.0	60.6	61.2	61.2
Greece	85.0	–	87.4	87.4	88.2	92.0	92.9	92.9	93.4	93.4	–
Spain	–	88.0	–	93.0	–	94.8	–	92.9	–	–	–
France	–	–	–	77.7	79.8	80.1	80.0	79.0	80.0	80.0	80.0
Croatia	22.0	–	–	–	36.9	36.9	36.9	36.9	36.9	36.9	36.9
Italy	–	57.5	83.0	–	–	57.6	–	–	59.6	–	–
Cyprus	–	–	–	–	–	–	–	–	–	–	–
Latvia	66.7	56.9	63.2	60.3	71.5	81.4	83.4	85.1	90.3	91.5	95.0
Lithuania	–	–	–	–	–	63.1	64.3	69.4	72.3	73.5	73.8
Luxembourg	–	–	–	91.3	90.9	96.1	96.3	96.6	96.6	96.9	97.0
Hungary	49.8	50.0	52.1	69.5	70.9	72.8	72.7	73.5	76.5	78.1	79.2
Malta	8.4	14.8	15.2	6.6	92.3	91.9	91.8	91.6	–	14.5	14.9
Netherlands	–	99.3	–	99.3	99.4	99.5	99.4	99.4	99.4	99.5	99.5
Austria	–	92.6	–	93.9	–	94.5	–	95.0	–	99.8	–
<b>Poland</b>	<b>61.8</b>	<b>62.9</b>	<b>64.1</b>	<b>64.5</b>	<b>65.5</b>	<b>68.5</b>	<b>70.2</b>	<b>71.4</b>	<b>72.6</b>	<b>73.4</b>	<b>73.5</b>
Portugal	51.0	52.0	55.8	–	–	–	–	–	–	–	84.6
Romania	20.4	18.2	20.7	22.7	31.7	35.3	36.1	38.2	39.7	43.8	46.5
Slovenia	48.8	51.1	52.9	51.6	54.4	53.7	55.2	55.6	57.4	63.3	67.4
Slovakia	–	–	–	–	–	–	–	–	–	63.6	65.0
Finland	–	–	–	83.0	83.0	83.0	83.0	85.0	–	–	–
Sweden	94.0	94.0	94.0	94.0	94.0	95.0	95.0	95.0	95.0	95.0	95.0
United Kingdom	–	96.9	97.0	99.5	–	–	–	100.0	–	–	–
Iceland	–	2.0	–	1.0	–	–	–	–	–	–	–
Norway	66.0	68.0	66.2	65.8	67.8	68.9	68.8	68.9	71.8	68.4	68.6
Switzerland	–	–	–	98.0	–	–	98.0	–	–	–	–
Albania	–	–	–	–	–	–	–	9.9	8.0	7.0	7.3
Serbia	6.9	7.5	8.9	8.6	8.9	9.0	9.4	10.0	10.8	12.5	12.6
Turkey	31.1	31.4	35.2	37.6	–	42.0	42.7	43.2	55.4	56.3	–
Bosnia and Herzegovina	10.0	10.7	10.7	10.9	11.1	11.4	11.7	11.8	11.8	29.6	29.6
Kosovo (')	–	–	–	–	0.6	0.6	0.6	0.6	0.6	0.6	0.6

Source: own study based on Eurostat (2019)



population connected to at least secondary urban wastewater treatment in 2007–2017 in EU (Tab. 1 ). The data show an increase in these values in the all European countries. The highest proportion of population subject to biological treatment was found in Sweden and Germany (95%) and the lowest in Serbia and Malta (12–14%), while Poland had at the average level of 73% similar to Lithuania and Norway.

The next Directive 91/676/EEC concerns the protection of waters against pollution caused by nitrates from agricultural sources. This Directive has the objective of reducing water pollution caused or induced by nitrates from agricultural source and preventing further such pollution. It is worth mentioning that nitrogen is a very important nutrient inflow from area sources, contributing to the phenomenon of surface water eutrophication. The Member States are obliged to limit these pollutions by introduction the suitable measures especially in the range of programmes and monitoring. However, the Directive 2006/11/EC concerns dangerous substances discharged into the aquatic environment. According to Article 3 Member States shall take the appropriate steps to eliminate pollution of the waters by the dangerous substances in the families and groups of substances in List I of Annex I (e.g. heavy metals, biocides) and to reduce pollution of the said waters by the dangerous substances in the families and groups of substances in List II of Annex I (e.g. nutrients). In this way, special protection was given to water reservoirs threatened by the inflow both nutrients and the most harmful substances not only for aquatic ecosystems but also for humans.

## CONCLUSIONS

Changes in the legal provisions on water law in Poland were mainly caused by the implementation the Water Framework Directive provisions and related directives including wastewater treatments, agricultural nitrogen pollutions and hazardous substances aspects. It is also shown that despite the difficulties in implementing the WFD, Poland similarly to other UE countries is striving to provide the suitable and

effective measures to order water management to meet the requirements to achieve good surface water status. However, the implementation of the directives contributed to special protection of water bodies threatened by the inflow not only nutrients but also the most harmful substances for aquatic ecosystems and consequently other ecosystems and peoples. The effect of introducing these regulations was a significant increase in the share of the population connected to at least secondary urban wastewater treatment in 2007–2017 in EU at mean value between 60–70% included in Poland. This should be clearly reflected in the appropriate state of surface water quality, especially rivers.

Moreover, the water permits system used in Poland is very helpful tool in the management and protection of waters. The implementation of directive solution in the Water Law Act of 2001 and 2017 contributed to a significant increase in the scope of activities requiring water-law permission. Thus, water-law permission concerns both the protection of water resources in terms of quantity and quality. This is for two reasons: firstly, the amount of water drawn in above 5 m<sup>3</sup> per day was specified, which also applies to irrigation of fields in agriculture. Secondly, the same values apply to the discharge of wastewater into waters and into the ground or the use of sewage for agricultural fertilization. In addition, the scope of activity was expanded to include reclamation of water reservoirs, introduction of particularly harmful substances into waters, protection of flood risk areas and in particular the use of waters for economic and service purposes. There was also a change in the authorities competent to issue water-law permits from public administration (staroste, voivode, voivodship marshal) to the bodies included in the Polish Waters, which can be considered as centralized water management. All this indicates a more restrictive approach of the legislator to the protection of the most valuable resource in the environment, which should contribute to the improvement or at least not deterioration of water quality, which is the main environmental objective of water law.

When considering the validity of the introduction of these restrictive legal regulations in the context of water resources usage, it should be taken into account that not only the water resources are the most important environmental good for human, but also these resources are used for economic purposes in accordance with the principle of sustainable development. By introducing very stringent requirements in terms of water consumption and protection, it is possible to inhibit economic development. On the other hand, too liberal legislation may result in a deficit of these resources in terms of both quantity and quality, and under these circumstances it will not be possible to fuel economic development. Therefore, an appropriate balance should be found between the rigidity of these regulations and exploiting the water resources for the economic development. Nevertheless, it is in the common interest to continue to strive for their rigorous dimension, and even consider whether to extend the scope of activities requiring a water permit instead of the requirement to comply with water management, e.g. for the construction of water facilities (platform) or the use of waste water for agricultural use.

However, it is difficult to assess the validity of the centralization of managing water resources because the system has been in place only for two years. The key metric of this analysis in the future should be the quality of surface and groundwater. It seems that in this system water management and protection should be better controlled. Nevertheless, the public administration performing tasks in the field of the environment needs to understand the peaks in water demand and protect these resources accordingly, taking into account the population and economic entities using water. In addition, based on the state of water quality they could introduce protective measures, e.g. water restoration. Therefore, the above argument suggests an analysis of the effectiveness of the system after a few years of its operation, and only based on proposals the possible changes in legislation can be introduced.

## REFERENCES

- Antolak, M., Małkowska, N. (2019). Waloryzacja krajobrazu i kreacja przestrzeni publicznej na przykładzie kąpieliska miejskiego w Mrągowie (Landscape valuation and design process of public space – a case study of the public beach in Mrągowo). *Acta Sci. Pol. Administratio Locorum* 18(1), 7–18.
- Barszczyńska, M., Kubacka, D. (2008). Ramowa dyrektywa wodna. Znaczące oddziaływania antropogeniczne na wody rzek Polski (The EU Water Framework Directive. Significant anthropogenic impacts on Polish river waters). *Chrońmy Przyrodę Ojczystą* 64(5), 28–42.
- Boscheck, R. (2006). The EU Water Framework Directive. Meeting the global call for regulatory guidance? *Intereconomics Review of European Economic Policy* 41, doi: <https://doi.org/10.1007/s10272-006-0196-1>.
- Bouleau, G., Pont, D. (2015). Did you say reference conditions? Ecological and socioeconomic perspectives on the European Water Framework Directive. *Environmental Science and Policy* 47, 32–41, doi: <https://doi.org/10.1016/j.envsci.2014.10.012>.
- Chon, H.S., Ohandja, D.G., Voulvoulis, N. (2010). Implementation of EU Water Framework Directive. Source assessment of metallic substances at catchment levels. *Journal of Environmental Monitoring* 12, 36–47, doi: <https://doi.org/10.1039/B907851>.
- Ciechanowicz-McLean, J. (2014). The impact of the Water Framework Directive on the ecological security of the Baltic Sea. *Gdańskie Studia Prawnicze* 32, 85–97.
- Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment. *OJ L* 135, 30.5.1991, p. 40–52.
- Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources. *OJ L* 375, 31.12.1991, p. 1–8.
- Ćwiek, P., Cybulska, A., Osuch-Chacińska, Piętoska, E., Stachowska, M., Wyszogrodzki, M. (2017). Nowe prawo wodne. Omówienie. Pytania i odpowiedzi. Tekst ustawy (New Water Law. Discussion. Questions and answers. Text of the act). Warszawa, Wolters Kluwer.
- Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy. *OJ L* 327, 22.12.2000, p. 1–73.

- Directive 2006/11/EC of the European Parliament and of the Council of 15 February 2006 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community. *OJ L* 64, 4.3.2006, p. 52–59.
- Durkowski, T., Jarnuszewski, G., Wiśniewska, J. (2015). Identyfikacja i ocena oddziaływań antropogenicznych o charakterze obszarowym na zasoby wodne zlewni jeziora Miedwie (Estimation of the influence of farm infrastructure on the pollution of ground water). *Ecological Engineering* 45, 140–149.
- EUROSTAT. Water Statistics. Total freshwater abstraction by public water supply in 2017, [https://ec.europa.eu/eurostat/statistics-explained/index.php/Water\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php/Water_statistics), access: 18.12.2019.
- EUROSTAT. Share of the population connected to at least secondary urban wastewater treatment in 2007–2017 (%) in European countries, [https://ec.europa.eu/eurostat/statistics-explained/index.php/Water\\_statistics#Wastewater\\_treatment\\_and\\_disposal](https://ec.europa.eu/eurostat/statistics-explained/index.php/Water_statistics#Wastewater_treatment_and_disposal), access: 18 December 2019.
- Farmer, A.M. (2012). *Manual of European Environmental Policy*. London, Routledge.
- Gutry-Kałużny, M. (2016). *Prawo wodne. Komentarz, wydanie 2* (Water law. Commentary, edition 2). Warszawa, Wolters Kluwer.
- Korycka, M., Sadurski, A., Kundzewicz Z.W., Pociask-Karteczka J., Skrzypczyk L. (2014). *Zasoby wodne a ich wykorzystanie* (Water resources and their use). *Nauka* 1, 77–98.
- Łuczak, M., Tomaszewska, M. (2017). *Prawo wodne. Pozwolenia wodnoprawne* (Water permits. Comment). *Komentarz*. Warszawa, C.H. Beck.
- Maciejewski, M., Walczykiewicz, T. (2006). Dotychczasowe doświadczenia związane z wdrażaniem ramowej dyrektywy wodnej (Current experiences in implementation of the water framework directive 2000/60/EC in Poland). *Infrastruktura i Ekologia Terenów Wiejskich* 4(1), 63–76.
- Paczuski, R. (1998). Omówienie systemu polskiego prawa wodnego ze szczególnym uwzględnieniem ustawy - Prawo wodne, w: *Ochrona środowiska* (A discussion of the system of Polish water law with particular emphasis on the Water Law Act, in: *Environmental protection*), LexisNexis.
- Rakoczy, B. (2018). *Prawo wodne. Praktyczny przewodnik* (Water law. A practical guide). Warszawa, Wolters Kluwer.
- Szachułowicz, J. (2018). *Nowe prawo wodne* (New water law). Warszawa, Wolters Kluwer.
- Szuwalski, P. (2019). *Prawo wodne. Komentarz do wybranych przepisów* (Water law. Commentary on selected regulations). LEX/el.
- Szymańska, U., Zębek, E. (2014). *Ochrona środowiska naturalnego jako interdyscyplinarna dziedzina wiedzy* (Environmental protection as an interdisciplinary field of knowledge). Wydawnictwo UWM, Olsztyn.
- Voulvoulis et al. 2017 Voulvoulis N., Arpon, K.D., Giakoumi, T. (2017). The EU Water Framework Directive. From great expectations to problems with implementation. *Science of the Total Environment* 575, 358–366.
- Water Law Act of 24 October 1974. *Journal of Laws of 1974 No. 38, item 230 as amended*.
- Water Law Act of 18 July 2001. *Journal of Laws of 2001, item 1229*.
- Water Law Act of 20 July 2017. *Journal of Laws of 2017, item 2268 as amended*.
- Wody Polskie. Regionalne zarządy gospodarki wodnej (Polish Waters, Regional Water Management Boards), <https://www.wody.gov.pl/centrum-operacyjne>, access: 18.12.2019.
- Zębek, E. (2002). Rola zasobów wód czystych w rozwoju gospodarczym (The role of clean water resources in economic development). *Ochrona Środowiska* 1, 38–45.
- Zębek, E. (2014). Seasonal dynamics of phytoplankton with relation to physicochemical water parameters above and below the hydroelectric plant on the Paślęka River (North-East Poland). *Water Resources* 41(5), 583–591, doi: 10.1134/S0097807814050169.
- Zębek, E., Szwejkowska, M., Raczkowski, M. (2016). Pozwolenie wodnoprawne jako instrument regulacyjny-ochronny w użytkowaniu zasobów wodnych w działalności gospodarczej w kontekście sprawiedliwości ekologicznej, w: *Sprawiedliwość ekologiczna w prawie i praktyce* (Water Law Permit as a regulatory and protection instrument in the use of water resources in business activities in the context of ecological justice, in: *Ecological justice in law and practice*). Ed. T., Bojar Fijałkowski. Fundacja Rozwoju Uniwersytetu Gdańskiego, Gdańsk, pp. 355–363.
- Zębek, E. (2017). Międzynarodowe i krajowe podstawy prawne i bioindykatory (glony) oceny stanu jakości

wód powierzchniowych, w: *Odpowiedzialność za środowisko w ujęciu normatywnym [International and national legal basis and bioindicators (algae) of surface water quality assessment, in: Responsibility for the environment in normative terms]*. Eds. E., Zębek, M., Hejbudzki. Olsztyn, Wydawnictwo Katedry Prawa Międzynarodowego Publicznego Wydziału Prawa UWM, pp. 119–138.

Zębek, E. (2018). Legal protection of waters in the context of human rights. *Themis Polska Nova* 1(13), 14–24.

Zębek, E., Napiórkowska-Krzebietke, A. (2019). Rozwój przepisów prawnych w zakresie bioindykacji środowiskowej a stan jakości wód jeziorowych (Development of legal regulations in the field of environmental bioindication and lake water quality). *Studia Prawnoustrojowe* 43, 375–393, doi: 10.31648/sp.4616.