White Paper of Polish Rivers

Lessons learned from the Oder disaster

Why do we need the White Paper of Polish Rivers?

This study does not claim to fully assess the water management system in Poland nor to propose its comprehensive reform. Against the backdrop of the Oder disaster, we demonstrate what has failed in Poland's river management and monitoring system, and what needs to be changed – both legally and practically. It remains to be hoped that the White Paper will be a stimulus for an informed public debate about rivers, and a step towards a new perception of water in Poland – as a "heritage which must be protected and defended."[1]

The White Paper was jointly developed by the following NGOs: Fundacja ClientEarth Prawnicy dla Ziemi, Fundacja Greenmind, Fundacja Frank Bold, Ogólnopolskie Towarzystwo Ochrony Ptaków (Polish Society for the Protection of Birds) and WWF Poland. We are lawyers, scientists, naturalists, and conservation practitioners who care about the welfare of Polish rivers.

The White Book of Rivers is under the auspices of Koalicja Ratujmy Rzeki (Save the Rivers Coalition) and Koalicja Czas Na Odrę ("Time for the Oder" Coalition)**.**

The Oder – a disaster that was (not) bound to happen

The surge of information about the disaster in the Oder River, which swept through the media in August 2022, made millions of Poles realize that clean water is not given to us "once and for all," and revealed in stark detail the weaknesses of Poland's river protection system.

What happened? Saline water discharged into the Oder River and its tributaries under conditions of hydrological drought and low water flows[2] resulted in a drastic increase in the salinity of the entire river from Upper Silesia down to Szczecin[3]. Saline, sun-heated water, rich in with nitrogen and phosphorus – i.e., nutrients for single-celled organisms – and almost stagnant at the barrages in the channelized Oder River, enabled a massive bloom of brackish algae *Prymnesium parvum* (golden alga). This species is described as a habitat opportunist[4], e.g. due to its wide temperature tolerance (from 2 to more than 30°C); it easily adapts to different environmental conditions and quickly colonizes new aquatic ecosystems. Golden alga is a marine and brackish water species. In Polish inland waters, which are naturally freshwaters, it is possible for this species to appear (e.g., if brought in by birds or navigation), but normally it would have no chance to survive and bloom. Meanwhile, the man-made

[1] Recital of the Water Framework Directive.

[2] Water flow, which is the volume of water that flows through a cross-section of a river bed per unit time – most often expressed in m^3/s.

[3] https://ios.edu.pl/wp-content/uploads/2022/10/Wstepny-raport-zespolu-ds.-sytuacji-na-rzece-Odrze.pdf

[4] https://doi.org/10.1079/cabicompendium.121720, Roelke, 2016.

conditions in the Oder River in the summer of 2022 (high salinity, high nutrient content) were optimal for its growth and bloom.

Under stress (e.g., a change in temperature or chemical parameters of the water, a sudden change in flow rate[5]), golden algae emit into the water prymnesin, which is highly toxic to many aquatic organisms, damaging the gills and having a lethal effect on gill-breathing animals (fish, molouscs, early stages of amphibians). It was prymnesin that was the direct cause of the mass death of fish[6] and other gill-breathing animals (molouscs) in the middle section of the Oder River (downstream from the Lipki weir near Oława). The massive decomposition of dead organisms, in turn, caused an oxygen deficit in the lower section of the river, resulting in fish die-offs along an approximately 40-kilometer stretch from Widuchowa to Szczecin.

There is no precise data on the total loss of ichthyofauna. It is estimated that a total of 360 tons of dead fish have been removed from the Oder River in Poland and Germany[7]. The figure does not include the unrecovered fish decaying on the river bottom and banks. According to Instytut Rybactwa Śródlądowego (the Inland Fisheries Institute)[8], the disaster took a toll of 47% of the Oder fish population compared to 2014–2021 figures. Other sources indicate losses of up to 60% of the ichthyofauna in some sections of the border Oder. The preliminary results of research by Zakład Badań Ekologicznych (the Department of Ecological Studies) indicate that along the stretch from Nowa Sól to Szczecin, most of the molouscs died[9].

Taking into account the described facts, scientists have no doubt that the Oder disaster was human-induced[10], as conditions favourable for the bloom of brackish golden algae originated from human activity.

Are we in for another disaster on the Oder or Vistula?

Golden algae spores can remain dormant until suitable conditions reoccur. In its middle course, the Oder River is still highly saline, as evidenced by the electrical conductivity that has been above 1,400 µS/cm since September, often exceeding 2,000[11]. This is way above the norm, which for a large lowland river like the Oder is 850 µS/cm. Nor has the supply of nitrogen and phosphorus from point source discharges or diffuse (agriculture) runoffs decreased. Therefore, in the spring or summer, when the temperature increases – which is a trigger for a

[5] E.g. https://tpwd.texas.gov/landwater/water/environconcerns/hab/ga/bio.phtml

[6] https://www.igb-berlin.de/news/podejrzenie-jest-uzasadnione-w-wodzie-z-odry-wykryto-toksyne-z-glonow-zyjacych-w-wodach

[7] G. Free, W. Van De Bund, B. Gawlik, L. Van Wijk, M. Wood, E. Guagnini, K. Koutelos, A. Annunziato, B. Grizzetti, O. Vigiak, M. Gnecchi, S. Poikane, T. Christiansen, C. Whalley, F. Antognazza, B. Zerger, R. Hoeve and H. Stielstra, *An EU analysis of the ecological disaster in the Oder River of 2022, EUR 31418 EN*, Publications Office of the European Union, Luxembourg, 2023, ISBN 978-92-76-99314-8, doi:10.2760/067386, JRC132271, https://publications.jrc.ec.europa.eu/repository/handle/JRC132271.

[8] https://www.gov.pl/web/odra/wyniki-ogolnopolskiego-monitoringu-ichtiologicznego-2022-najnowsze-dane-o-odrze

[9] Żurek *in litt*.

[10] https://klimat.pan.pl/katastrofa-na-odrze-geneza-terazniejszosc-zalecenia-na-przyszlosc/
http://www.pth.home.pl/pobierz/StanowiskoPTHwsprawieOdry.pdf
https://www.igb-berlin.de/sites/default/files/media-files/download-files/IGB_Policy_Brief_The_future_of_the_River_Oder_web.pdf

[11] The higher the salt content, the higher the current conductivity.

P. parvum[12] bloom – another disaster can occur. In other words, we are dealing with a ticking bomb.

To make matters worse, in a very long stretch of the Oder River (about 300 km downstream from Nowa Sól), most of the mussels – "river filter feeders" that feed on bacteria, phytoplankton, zooplankton and organic matter – have died out. Their absence significantly disrupts the river's ecosystem, such as increasing the bloom risk of blue-green algae whose toxins are dangerous not only to animals but also to humans.

Golden algae found in many locations in the Oder River – due to the fact that these organisms are easily carried over short distances[13], e.g. on birds' feathers – may also threaten the upper Vistula River basin, which receives twice as much saline mine water from Upper Silesia as the Oder[14], which makes it a perfect setting for algae growth.

Polish rivers are in bad shape, and time is running out

The Oder disaster is not an isolated case. National and local media frequently report on the pollution of other rivers. According to the 2020 report of the Chief Inspectorate for Environmental Protection[15], 98.9% of rivers, or more precisely, river surface water bodies, are in a poor condition[16]. In contrast, data for the Oder River basin indicates that 99.7% of river surface water bodies have not reached a good status or a good potential by 2021[17]!

Taking into account the environmental objectives specified in the Water Framework Directive, Poland should achieve at least good status or good potential of its surface waters by 2015, with the final deadline of 2027. We, therefore, have four years to improve the condition of our rivers, and this is not just a demand of environmental groups, but a requirement of EU law.

The ambitious environmental objectives stem from a recognition of the importance of access to good quality water for the quality of life of European Union citizens. This is reflected in recital 1 of the Water Framework Directive: "Water is not a commercial product like any other but, rather, a heritage which must be protected, defended and treated as such." The aforementioned objectives, specified more than 20 years ago, are taking on a new dimension in the context of the climate catastrophe, its effects, and the necessary corrective and

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[12] E.g. B.A. Wagstaff, J. Pratscher, P.P.L. Rivera, E.S. Hems, E. Brooks, M. Rejzek, J.D. Todd, J.C. Murrell, R.A. Field, 2021 *Assessing the Toxicity and Mitigating the Impact of Harmful Prymnesium Blooms in Eutrophic Waters of the Norfolk Broads*, Environmental Science & Technology 2021, 55 (24), 16538-16551, DOI: 10.1021/acs.est.1c04742, https://pubs.acs.org/doi/10.1021/acs.est.1c04742

[13] https://doi.org/10.1079/cabicompendium.121720

[14] M. Matysik, 2018, *Wpływ zrzutów wód kopalnianych na odpływ rzek Górnośląskiego Zagłębia Węglowego*, Prace Naukowe Uniwersytetu Śląskiego, 3651, p. 166.

[15] GIOŚ, 2020, *Syntetyczny raport z klasyfikacji i oceny stanu jednolitych części wód powierzchniowych wykonanej za 2019 rok na podstawie danych z lat 2014-2019*, Fig. 21, p. 29; https://www.gios.gov.pl/images/dokumenty/pms/monitoring_wod/Synteza_ocena_stanu_wod_powierzchniowych_2014-2019r.pdf; s. 29.

[16] A body of river surface is a planning unit in the water management and monitoring systems. It means a section of a larger or medium-sized river, or an entire small river, stream or creek.

[17] https://apgw.gov.pl/static/cms/doc/2021/Odra/Projekt_IIaPGW_OD_ODRA.pdf[18] Based i.a. on *Analiza ekspercka wstępnego raportu rządowego zespołu ds. sytuacji na rzece Odrze*, WWF Poland, 2022.

preventive actions. There is no doubt that as the climate warms and the threat of drought increases, the freshwater supply may become scarcer.

Water in Poland – heritage or commodity?

Water management fell under the authority of the Minister of the Environment for many years. This reduced the risk of economic activities being prioritized over the protection, rational structuring and sustainable use of water resources. However, in 2018, water management was transferred to the Ministry of Marine Economy and Inland Navigation, and, after that ministry was abolished, to the Ministry of Infrastructure.

The current placing of the "water management" administration branch in the Ministry of Infrastructure, and the fact that the authority responsible for water management – the National Water Management Authority Wody Polskie – reports to the Minister of Infrastructure, give rise to many problems. Above all, this determines the approach to rivers as wastewater drains, transportation routes, sources of water for hydropower and coal and gas powerplants cooling systems, rather than as valuable yet sensitive ecosystems requiring protection and special treatment.

The utilitarian and technocratic approach to water resources is also reflected in the current structures of the Sejm: water management falls under the authority of the Marine Economy and Inland Navigation Committee, rather than the Environmental Protection, Natural Resources and Forestry Committee.

The establishment of Wody Polskie was intended to organize the management of water resources in Poland and ensure the achievement of EU environmental objectives, and consequently guarantee good quality water for the Polish people. This was not achieved for several reasons.

River management system – a maze of powers

First of all, Wody Polskie has not only planning and management powers, but also those related to ownership, administration, and investment. This means that, on the one hand, the authority is a policymaker, prepares essential water management planning documents, and issues decisions on the structuring of water resources, while, on the other hand, implements investment projects and maintenance work on rivers. Accordingly, it is a judge in its own case, with no social control whatsoever.

Secondly, the powers related to water quality are ambiguously distributed between the authority responsible for achieving environmental objectives, i.e. Wody Polskie, and the Inspectorate for Environmental Protection, which is in charge of water monitoring and is located in another ministry, the Ministry of Climate and Environment. Other bodies responsible for rivers include the General Director of Environmental Protection and the regional directorates reporting to the same and responsible for implementing the protection objectives of Natura 2000 river areas, as well as the directors of national parks, implementing the objectives of water protection within the boundaries of the parks. All these authorities add up to the picture of "multi-authority" in water management in Poland. This complex river 'governance'

system is complemented by maritime authorities managing river estuaries, and inland navigation authorities.

The Water Law does not help understand how Poland's water management system works either. This voluminous piece of legislation – comprising 412 pages and 574 articles – regulates both key issues for water conservation and management, as well as marginal issues. The fundamental ones include e.g. the definition of water management objectives or the definition of owners and ownership rights. The marginal ones, on the other hand, are such issues as determining the fees for scanning and copying documents, or the rules for charging fees for "passage of canoes operated by elementary and secondary school students and university students through a lock."

Recommendations

Is it possible to materially and sustainably improve the status of rivers without a fundamental shift in the perception of water and profound systemic change? In our opinion – no, it is not. In the midst of the climate catastrophe, and underongoing re-evaluation of the approach to the Earth's resources, the primacy of industrial or inland transportation needs over the effective and long-term protection of water resources can no longer be accepted.

Placing water management under the authority of the Ministry of Climate and Environment as a manifestation of a new way of thinking about rivers

Water management is a key component of efforts to protect biodiversity and combat climate change and its effects. The ecosystem services of rivers to people and society are impossible to substitute. Therefore, protecting rivers and their valleys should be an absolute priority for the state. Hence, the first step leading to an improvement of the status of Poland's rivers should involve transferring the water management powers to the minister in charge of the environment. In the management of rivers, primacy should be given to achieving and sustainably maintaining their good status to meet the needs of continued water supply for drinking, sanitation and food production.

Implementation of this demand requires first and foremost an amendment to the Law on Administration Departments, especially in its sections on the scope of matters covered by the various departments.

Revision of planning documents

It is necessary to revise planning documents other than second revision of river basin management plans (IIaPGW), which should focus on promoting measures that are resilient to the effects of climate change and increase the natural resilience of river ecosystems, i.a. resilience to pollution. The hitherto dominant technical investments concentrated in river beds should be replaced by catchment-wide measures based on natural retention, as well as

projects implemented in river valleys, increasing both their resilience to disruptions and self-purification capabilities.

In particular, plans to build waterways that involve large-scale devastation of river ecosystems should be reviewed.

Clear distribution of water management powers

The fundamental weakness of the water management system in Poland is the irrational distribution of powers among the various authorities. Or, in fact, granting a single authority with powers which, for the sake of efficient water management, should be separated. To solve this problem, it is useful to refer to the classical division of state powers into sovereignty (imperium) and ownership (dominium). The sphere of imperium encompasses the actions that the state takes to take care of the public good – on the basis of powers and obligations under public law, with the ability to impose its will on other entities. The sphere of dominium, on the other hand, is the activities of managing state property.

Under the current system, Wody Polskie combines the role of a state manager and regulator (imperium) with that of the state treasury pursuing its economic interest (dominium). This combination is dangerous and socially damaging, because the state, operating on these two levels, often pursues divergent goals. With regard to water management in Poland, this means assigning Wody Polskie with two opposing, irreconcilable tasks. The authority is expected to protect and manage water resources, while performing ownership supervision on behalf of the state treasury, with the consequent duty to maintain a good status of its assets. The effect of this conjunction is the tendency of Wody Polskie to concentrate its efforts on carrying out maintenance work and planning and implementing various types of hydrotechnical investment projects.

In view of the above, the key to a good status of waters is the concentration of planning, management and monitoring on one hand, with the separation of these powers from administrative or investment functions exercised on behalf of the owner – the state treasury. In practice, such a distribution could follow a formula in which Wody Polskie would retain ownership powers on behalf of the state treasury over surface waters, consequently becoming one of the water users, subject to regulation and control by another entity.

The part of the powers of Wody Polskie which concerns planning, protection and management of water resources should be separated and transferred to other actors. The entity assigned with this task would be responsible for developing river basin management plans, flood risk management plans, and their implementation. In addition, it would issue water law permits and control their implementation by water users, monitoring point source and diffuse pollution discharges and water status. Such an authority would report to the minister in charge of climate and environment. Water management should be subject to social control through the involvement of water users and other stakeholders, such as in the form of river basin councils.

The Environmental Liability Law is no substitute for a crisis management system

The liability mechanism regulated by the Environmental Liability Law is no substitute for an effective and efficient crisis management system. The liability mechanism applies only to specific cases that meet the requirements of the law. Thus, it does not apply to all pollution situations. In addition, the Environmental Liability Law has significant limitations – it prevents quick decision-making in situations where there is no time for years of proceedings to assess the extent of the damage and identify the perpetrators.

Implementation of effective water monitoring[18]

Given the environmental catastrophe in the Oder River in 2022 and its consequences, it is necessary to integrate and improve the surface water monitoring system as soon as possible. It is also necessary to restore, in accordance with EU requirements, the use in the assessment of the ecological status of waters of important physico-chemical parameters that are essential for determining this status and monitoring its changes – including, above all, temperature, total suspended solids, pH and several salinity indicators. The inclusion of these parameters in the assessment will ensure that anthropogenic pressures underlying their changes (mainly mining and industry emissions) – and resulting in the deterioration of the ecological status of waters – will be properly monitored and minimized.

In order to effectively and quickly identify water pollution and its sources, as well as to minimize the risk of an environmental disaster in other rivers, an integrated water monitoring system – overseen by a single entity – should be implemented. This means abolishing the authority of voivodes over the Voivodeship Inspectorates of Environmental Protection and making them report to the Chief Inspectorate for Environmental Protection. This arrangement will make it easier to coordinate efforts in the event of disasters that extend beyond a single voivodeship.

The results of qualitative and quantitative measurements should be transmitted to a public database in real time (in the case of automatic stations) or entered into it immediately. If measurement results that exceed the standards are displayed in the database, it must trigger the process of checking the quality parameters at a given location, and, once confirmed, entering the degree of risk. Such a system could consist of the following components:

1. National level (state hydrological and meteorological service, Inspectorate of Environmental Protection):
    - key automatic water quality monitoring stations (testing at least: pH, electrolytic conductivity, dissolved oxygen content, temperature) integrated with currently existing automatic water gauge stations;
    - employees of state hydrological and meteorological service, Inspectorate of Environmental Protection equipped with portable probes to measure water quality;
    - a publicly available database of qualitative and quantitative measurement results;

[18] Based i.a. on *Analiza ekspercka wstępnego raportu rządowego zespołu ds. sytuacji na rzece Odrze*, WWF Poland, 2022.

- measurement results monitored on a continuous basis – to enable rapid response and forecasting of the spread of pollution.

2. Local level:
   - local flood warning systems, including a monitoring and warning system for residents;
   - automatic water quality measurement stations located on watercourses essential for local communities and not covered at the national level;
   - local government employees equipped with portable probes to measure water quality;
   - full-time and voluntary workers of organizations such as PZW (Polish Fishing Association), MOPR (Mazury Voluntary Rescue Service), WOPR (Water Voluntary Rescue Service), Straż Rybacka (Fisheries Guard), OSP (Volunteer Fire Department) equipped with portable probes to measure water quality.

3. Special level:
   - water gauge stations to protect drinking, industrial and special purpose water intakes;
   - automatic water quality measurement stations located on watercourses upstream from drinking, industrial and special purpose water intakes and downstream from major wastewater discharge points covered by water permits.

Improving the water law permit system

In order to ensure real control over what is discharged into rivers as well as when and in what amount, it is necessary to implement an effective, basin-wide coordinated system for issuing water law permits and integrated permits for wastewater and post-mining water discharges – correlated with information on the current state of rivers, taking into account the environmental objectives specified for water bodies. These measures should be complemented by the introduction of a system of permit inspections and a fast track for revoking water law permits when any violations of their terms and conditions are found.

Analysis and evaluation of the cumulative impact of the issued water law permits on rivers

- Introduce an obligation to include data from the pressure identification and analysis process in the water law survey.
- Introduce regulations specifying how to perform pressure identification and analysis.
- Continuously update the data needed to correctly identify and analyse pressures.
- Introduce mandatory water status testing for the purposes of the water law survey and current sources of pollution in the absence of current data on the water status (current data means data from up to the last 3 years).
- Specify in the regulations what river flow should be referred to when analysing the impact of wastewater on water status.

- Clarify in the regulations the purpose of reviewing water law permits: to verify the cumulative impact of all permits issued for a given surface water body, and increase the frequency of reviewing water law permits every 3 years.

Wastewater discharge conditional on the current river status

- Establish a uniform procedure for determining the conditions of wastewater discharge in water law permits and integrated permits in relation to the hydrological situation and the surface water status (in the Water Law, in the Wastewater Regulation).
- Determine in the Water Law the procedure to be followed when the amount of pollution in a river prevents compliance with the terms and conditions indicated in the water law permit, and the procedure to control the implementation of this measure, as well as sanctions for failure to implement it.
- Specify precise and binding terms and conditions for decision-making bodies with regard to conducting analyses of the impact of wastewater discharges on water status when issuing water law permits and integrated permits.

Inspection of water law permits

- Strengthen the structures of the Inspectorate of Environmental Protection – all water inspection powers should be transferred to the Inspectorate for Environmental Protection; increase the number of qualified environmental inspectors and ensure the adequate quality of their work; introduce scientific methods into inspections performed by the Inspectorate of Environmental Protection, including the purchase of advanced equipment and training.
- Change of the sanction regime. Instead of increased fees – high administrative penalties correlated with the amount of discharged wastewater covered by the entity's water law permit or integrated permit, and the introduction of additional interim measures related to violations of the terms and conditions of water law permits.
- Establish precise regulations specifying how to monitor the impact of a specific project on water status, including the procedure of reviewing water law permits and integrated permits so that they are based on a sound factual analysis.
- Determine the procedure for documenting the review of the water law permit and the analysis of the integrated permit, and impose sanctions if they are not performed or not performed in accordance with the regulations.

Viable water protection in integrated permits

- Require the authority responsible for issuing water law permits to actively participate in integrated permit proceedings by designating this authority as the one which approves of the draft integrated permit, and provides a central database that is accessible to all decision-making bodies.

- Issue a regulation that unambiguously defines what techniques should be used in determining compliance of a wastewater discharge permit with the applicable law – the techniques should be uniform for both integrated permits and water law permits.

Change in the status of mine waters

- Include unpolluted water from the drainage of mining facilities in the definition of "wastewater" to be found in the 2001 Water Law[19].
- Set a limit on the sum of chloride and sulphate concentrations in saline water discharged into rivers in the Wastewater Regulation.
- Make the issuance of a water law permit for the discharge of mine water into rivers conditional on the use of salinity reduction systems at each mine.
- Introduce a requirement in permits to provide for the retention of saline water for a minimum of 2 months when it cannot be discharged due to low river flows.
- Revise the IIaPG so that the planned measures respond to the problem of excessive salinity in the Oder River and its tributaries, as pointed out in the report by the EU Joint Research Center[20]. These measures could, for example, consist in imposing on the mining facilities an obligation to implement systems for desalinating mine water or injecting it deeper into the rock mass within a specified period. These measures may require financial support from the state.
- The fees for the discharge of salts (chlorides and sulphates), which have not been changed for years, need to be amended so that it is more economical for mines to treat mine water discharged into surface water than to discharge untreated water. In addition, all water collected by mining facilities should be subject to fees, including water collected by mine drainage systems – which has been exempt from fees so far. This should coerce mines into implementing mechanisms for the efficient use of water, especially unpolluted water suitable for public supply, agricultural irrigation, etc.

Restoration of the participation of NGOs in proceedings related to the issuance of water law permits

- In view of the aggravating crisis of water resources management in Poland, the possibility of applying Article 31 of the Code of Administrative Procedure to proceedings on the issuance of water law permits should be restored.

Summary

The Oder – a disaster that was (not) bound to happen

[19] According to Article 9 section 14 letter e) of the Water Law of 18 July 2001, wastewater was defined as i.a. "water from drainage of mining facilities, except for water injected into rock mass, if the types and quantities of substances contained in the water injected into a rock mass are the same as the types and quantities of substances contained in the water collected."

[20] https://publications.jrc.ec.europa.eu/repository/handle/JRC132271

The Oder disaster in the summer of 2022, which made millions of Poles realize that clean water is not given to us "once and for all," and revealed in stark detail the weaknesses of Poland's river protection system, was human-induced. Saline water discharges into the Oder River and its tributaries under the conditions of hydrological drought created favourable conditions for the bloom of brackish golden algae and the death of millions of fish and molouscs.

Today, only **1.1% of Polish rivers meet the criteria for good status** specified by the Water Framework Directive. We have just four years to improve the condition of the remaining 98.9%.

In this context, it is worth asking the question: **is water in Poland a valuable resource or a commodity?** The authority in charge of water management – Wody Polskie – reports to the Minister of Infrastructure, which determines the approach to rivers as transportation routes, sources of water for the power industry, or wastewater drains, rather than sources of water for people, and valuable yet sensitive ecosystems.

What is the purpose of the White Paper of Rivers? Using the Oder disaster as an example, we demonstrate a broader problem: what has failed in Poland's river management and monitoring system, and what needs to be changed – both legally and practically. We identify the following main source of problems:

- **Placing water management under the authority of the Ministry of Infrastructure** – makes the state's current priorities in water matters explicitly utilitarian. As a result of the adopted approach, the government's programmes, plans, policies and the numerous hydrotechnical investment projects specified therein do not aim to protect water resources or provide Poles with clean water.
- **Unclear powers and ineffective legal mechanisms in water resource management and water monitoring** – the underlying problem is the fact that two conflicting functions are assigned to a single institution, Wody Polskie: those of planning and management (taking care of waters as a public good), and those of exercising ownership supervision on behalf of the state treasury (taking care of hydrotechnical facilities, maintaining rivers in a good technical condition). This makes Wody Polskie a "judge in its own case." In addition, several other authorities are responsible for monitoring and managing water resources: inspectorates of environmental protection, directorates for environmental protection, national park directors, marine offices and inland navigation authorities.
- **The role played (or not played) by the Inspectorate of Environmental Protection and other environmental authorities in protecting rivers and their valleys** – the case of the Oder River has exposed the problem of the lack of effective monitoring of rivers and the difficulty of coordinating interventions in the event of a disaster that extends beyond the borders of a single voivodeship. Environmental liability proceedings initiated *ex officio* are not an adequate crisis measure in a situation of water environment damage. An attempt to hold those responsible for the disaster accountable faces a number of practical obstacles, such as diffuse liability, difficulties in establishing the occurrence of the damage, and the duration of the proceedings. Furthermore, acting under the Environmental Liability Act, the Regional Directorate for Environmental Protection cannot order selected polluters to limit or stop the discharge of wastewater.

- **No mechanisms for assessing the cumulative impact of wastewater discharge on water status** – each entity planning to discharge wastewater obtains a water law permit, but there are no regulations specifying how to assess the cumulative impacts of multiple wastewater discharges into the same river. As a result, the pressure analyses that form the basis of corrective actions lack aggregate data on discharged pollutants. In addition, the volume of permitted wastewater discharge is not adjusted to the current river status, and there is no effective control of the implementation of the terms and conditions of water law permits**.**
- **Restricting the participation of NGOs** in the water law permit process violates international law which guarantees public control while having an adverse effect on the quality of the decisions issued.
- **Lenient treatment of mine waters** – only some of these waters are wastewater under the Water Law, so not all discharges are subject to fees. Mines also have a higher – and, in practice, an infinite – limit on chloride and sulphate inputs to rivers, and extremely low fees fail to motivate them to treat saline water before discharge.

It will not be possible to improve the status of Poland's rivers without a fundamental change in the perception of water and deep systemic change. In the midst of the climate catastrophe, and under ongoing re-evaluation of the approach to the Earth's resources, the primacy of utilitarian economic goals over the effective and long-term protection of water resources can no longer be accepted.

We demand and recommend:

1. **Sustainable management of water resources should fall under the authority of the minister in charge of the environment.** First, the sphere of "imperium," which includes planning, management, control, and issuance of decisions regarding water, and the sphere of "dominium," that is, the administration of rivers and water facilities as assets of the state treasury, should be separated between two different bodies. Planning, control and management functions should be within the powers of the minister in charge of the environment, as water management is a key element in efforts to protect biodiversity and combat climate change and its effects. The ecosystem services of rivers to people and society are impossible to substitute; therefore, protecting rivers and their valleys should be an absolute priority for the state, and their management should be subject to public control.
2. **Revision of planning documents.** The second revision of the Oder river basin management plan (IIaPGW) and other planning documents such as flood risk management plan 2021-27, Drought Effects Counteracting Plan and the investment projects proposed therein should be reviewed in terms of the rivers' natural resilience to pollution. Measures that increase the resilience of ecosystems to the effects of climate change should be promoted, and those that lead to deterioration of water status and failure to meet the requirements of the Water Framework Directive should be abandoned.

3. **Implementation of financial mechanisms for water conservation.** All water collected by mining facilities should be subject to fees, including water collected by mine drainage systems – which has been exempt from fees so far. The fees for the discharge of saline water should be raised to a level that will make it cost-effective to implement desalination systems before discharge into rivers.

4. **Improving the water law permit system.** Water law permits should provide real control over what is discharged into rivers as well as when and in what amount. Public authorities should analyse and evaluate the cumulative impact of issued permits on the river status, and monitor whether the terms and conditions of issued water law permits are complied with. The discharge of wastewater should be conditional on the river status, and mine water and other saline waters should also be legally classified as wastewater. The system of issuing water law permits should be reformed to ensure public control and viable protection of rivers.

5. **Implementation of effective water monitoring**. The reform of water monitoring should consist in launching automatic and mobile monitoring stations for basic water parameters, which will allow instant response to changes in these parameters. Data from monitoring stations should be transmitted to a nationwide, publicly available database in real time. A unified structure, with the Voivodeship Inspectorates for Environmental Protection reporting to the Chief Inspectorate for Environmental Protection rather than to the voivodes, will significantly accelerate response to supra-voivodeship disasters and improve its quality.

6. **Implement provisions to supplement the Liability Law, allowing for efficient emergency management of disasters whose perpetrator is unknown.** The mechanism of liability regulated by the Liability Law deals with specific cases and has significant limitations. Provisions are needed to enable rapid decision-making and action in an emergency situation, where there is no time for lengthy proceedings to assess the extent of the and identify the perpetrators.