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We are Fridays For Future Poland (in Poland, known as Młodzieżowy Strajk Klimatyczny) activists. Since 2019 we have been working for climate justice. We started by organising mobilisations of Polish youth and local strikes. Since then our work extends from engaging with local governments to advocacy at the European level.



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### Introduction

In May 2023, the Odra<sup>\*</sup> Revitalisation Act (*hereafter referred to as "the Act"*) was proposed by Deputy Vice-Minister Gróbarczyk in response to the environmental disaster in the Odra River in July 2022. Hundreds of thousands of dead fish were found in the river. They died as a result of toxic golden algae bloom caused by salt pollution discharged into the river by mines and other industrial plants. In response, the Polish government wrote the Odra Revitalisation Act.

### This report is the result of a two-week field investigation of selected sites which would be impacted by the Odra Revitalisation Act.

This report is not exhaustive and has several limitations. The authors are activists and have been interested in the issues presented for years, but are not scientific experts. Nevertheless, this report is an effort to shed light on what is happening in the Odra River basin and the government's plans that have been expressed in the Odra Revitalisation Act.

\*Authors chose to use the Polish spelling of the name of the river known in German and English as the Oder in order to highlight its connection to Polish communities living along it.



Coal mine in Ruda Śląska seen from discharge of saline sewage.

Photo by Loren Kamrat, 2023

At the end of August 2023, Andrzej Duda, President of the Republic of Poland, signed the Act. Contrary to the title, the Act does not imply revitalisation but further re-engineering and channelisation of the Odra River. Moreover, the Act fails to address the cause of the environmental disaster.

Under this new Act, Article 2 proposes 51 industrial-focused investments to be built on the Odra and other rivers and lakes in the Odra River basin. A special modus operandi and government funding of 1.2 billion PLN (*circa 260 million Euro*) for these projects is also envisioned. Permitting decisions will be issued faster, and with limited environmental analyses or none at all. The Act itself went through a symbolic public consultation in which only four entities could take part. One of those was KGHM SA, a mining metals company, which carries out some of the largest discharges of saline wastewater into the Odra. In a nutshell, contrary to the title, the Act does not imply revitalisation but further regulation and channelisation of the Odra River.

Furthermore the Act also establishes a new armed group that has the right to use direct coercion as a way to enable the implementation of the Act under the pretext that they will act to "prevent illegal pollution of the river".

The investigations were undertaken as part of the *#WolnaOdra* (*#FreeOdra*) campaign. The goal was to document the current situation of the area and interview local people to gather their opinion on the Act. Ultimately, the field investigation built a better understanding of changes that will come with the implementation of the Act, especially concerning protected sites, e.g. Nature 2000 areas. This report elaborates on the findings based on on-theground observations as well as interviews undertaken with local activists, naturalists, artists, and entrepreneurs. Further analysis was conducted of maps, government documents and other reports of the area.

Nine locations were visited to investigate what is being proposed under the Act, understand the status of the places at risk, and meet with representatives of local communities and businesses. Meeting with the local community was an important step since the government did not undertake a fair public consultation during the legislative process, and their voice was completely ignored.

Site selection was primarily guided by a first estimate of how significant the planned constructions would be for ecosystems and the protection statuses of the sites. The size and projected cost of the investment were also considered.







# Łęgi Nadodrzańskie

#### Article 2, point 6 & 7

The Odra River passes through moraine hills, creating beautiful and rare riparian forests. Between Lubigż and Ścinawa, hardwood, ash and oak riparian forests have been preserved. Before the construction of the Malczyce barrage (opened in 2018), there were also soft, willow-poplar riparian forests present in the area. Now, with Malczyce barrage, the Odra River floods less. While the hardwood riparian forests are better able to withstand longer times without floods, the softwood riparian forests are more vulnerable to such changes and they have already disappeared due to a lack of natural flooding. Nevertheless, a valuable riparian ecosystem is still present which can be preserved if no more barrages are built.

The construction of more dams will further change the flow characteristics of the river, turning the river into a series of reservoirs, making it impossible for the river to sustain the valuable riparian ecosystems. Riparian-ecosystems-specific birds, such as the white-throated flycatcher and the middle-spotted woodpecker, could disappear. Plant populations that have recently recovered, such as cattail and salvinia are also likely to cease to exist in standing water.

Last year's ecological disaster was not noticeable in this area. The region is far enough away, around 200 km downstream from Upper Silesia, for the water to have had time to dilute with the ability to purify itself by the time it reached this location. The water has a swift current and algae bloom was not present in this part of the river last year. However, if barrages are added, events similar to the catastrophe of 2022 are more likely to impact this area. Still water, as opposed to water with a current, enables the development of algae.

#### Flood prevention measures.

During the "flood of the century" in 1997, in the vicinity of the village of Tarchalice, the dikes broke and the village itself suffered significantly. This tragedy occurred due to the Odra River bending quite abruptly there. When the flood wave reached the bend, it collided with the dikes located just above the water's edge, and its momentum caused the protection to give way.

After the flood, WWF and local activists initiated a project called "Domaszków - Tarchalice Project " which led to a government-funded change in the flood prevention infrastructure.

Instead of enclosing the dikes in the same place, the dike line was moved away from the riverbed, thus recreating the river's natural valley . As a result, an area of 600 hectares was created, within which the river can flood without endangering people and their possessions.

The floodplain is currently home to a lush riparian forest, which serves at least two important functions. First, it has become an important area for biodiversity, providing ideal habitat for many species of vegetation and birds typical of floodplains. Secondly, in the event of a sudden surge, the dense vegetation will provide a natural buffer to stem the momentum of the flood wave, reducing the risk of breaking the offset dikes.



This example shows that effective flood protection does not have to drastically interfere with the natural landscape of the river valley, nor does it have to involve river re-engineering, but rather should be based on nature-based solutions. Nature-based solutions not only minimise the negative impact on the environment (and can even serve to improve it), but are also beneficial from an economic point of view, as they do not require costly maintenance and periodic repairs.

The unique local nature and history has become an element of local identity over the years. The Odra River Riparian Association certifies and promotes small businesses and handicraft establishments that are characterised by their localness and connection to the Odra River culture. This heritage can only be supported if the purity and unique characteristics of this part of the river are preserved. The construction of dams contradicts this objective.

People are ashamed to have products from the Odra; producers don't want to admit that they are from the Odra. Instead of helping us to produce locally or rebuild the Odra brand and boast that we are on a clean river, the government proposes a pipe dream that there will be an economic boom because six container ships will pass through. In the same way that an economic boom is created from a highway passing through a community where there is no exit from the highway [to that community]

Andrzej Ruszlewicz, a biologist, naturalist and resident of that area.

For years, the area has also seen a dynamic growth in tourism closely linked to the healthy state of the river. The river's near-natural course provides good conditions for canoeing and rafting. Its unique ecosystems attract nature lovers, avid ornithologists and photographers. This is an economic potential that will be destroyed by the construction of more barriers.

Seeing the increasing popularity of the region, both private entrepreneurs and local governments have already invested in enhancing tourism. For example, the local government is currently building a tourist port in Ścinawa, and recently a canoe marina has been opened in Chobienia. The Act proposes the construction of two weirs in the area.

The artificial barrages will make it difficult for the river to be used recreationally leading to a loss of income from water tourism, especially if the operation of the weirs will be, as is the case so far, dependent only on the needs of cargo shipping.

The Malczyce barrage, operating since 2018, already causes significant problems in the height of the water table. Most of the time, the water level below the barrier is low, making transportation by water impossible. Furthermore, as a result of the disruption to the natural flow, there is bottom erosion directly below the barrier, leading to the deposition of the displaced material downstream. Therefore, to allow the passage of container ships, the operator of the weir generates an artificial wave with an amplitude of up to 2 metres, which threatens smaller vessels moored on the river and organisms in the flood zone. At the same time, the decision to open the sluice does not take into account either the needs and possible objections of local residents, nor the breeding periods of waterbirds.

The biggest value of this region are riparian forests, there are so many endangered species that national parks can be jealous of.

Jarosław Paczkowksi,

president of the Association Kraina Łęgów Odrzańskich (*Land of Odra Riperians*)

Building barrages is justified by planning a return of inland shipping. In the last 20 years there were over 1.5 thousand kilometres of new highways built. Investing in inland shipping wastes the last 20 years of investment with another significant ecological destructive project.

Why are so many highways, so many roads being built, if now you want the trucks to return to the Odra?

Ewa Stypuła, local guide, educator and chair of EduSilesia Foundation. Several decades ago, cargo traffic on the Odra was intense. When asked about it, Lubiąż residents still recall the stench.

The only value for the villagers was when the barge stopped for the night and the crew would come to buy vodka.

Andrzej Ruszlewicz

The Odra is currently suffering from a drought and there is not enough water for the container ships to float down the river. This is observed with the enterprise that repairs container ships in Malczyce; to float them to Szczecin, water is released from reservoirs upstream creating a wave. The container ships require an artificial 2-metre wave to be able to float down the river, as there is not enough water in the regular flow. The current drought on the Odra will not be solved with projects that aim to re-engineer the Odra to allow more ships to sail on it. On the contrary, by building barrages, this causes increased amounts of standing water which evaporates faster.

The measures foreseen by the Act would not only destroy an area which is ecologically highly valuable and naturally serves as flood protection, but would also impact the successful initiatives of locals aiming for a sustainable tourism development.



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## **Drawskie Lake District**

#### Article 2, point 48

The Drawsko Lake District is currently facing low and declining water levels and cyanobacteria blooms. The current agriculture practices are harmful to the local wildlife and environment. Large monocultures of raspberries, blueberries and maize require constant watering drawn from wells. The expanding pig farm, which exports pigs to Denmark, is also depleting significant groundwater resources. Intensive agriculture draws around 10 m3 of water per hectare per day, an amount comparable to a household's consumption in a month.

Agriculture is being done like in the Soviet Union, but we don't want another Aral Sea.

Magdalena Urlich, Czaplinek inhabitant and artist, specialist of the Rewilding Oder Delta foundation

At the same time, the area is home to the Lobelia Lakes, known for their exceptional clarity, clear water and characteristic vegetation. There is also a nature reserve on Lake Prosino for protected birds.

The drought is already directly impacting tourism businesses and ecosystem. Many locals run guesthouses and agrotourism. The proximity to nature, beautiful lakes and rivers, where one can canoe, is very attractive to tourists. Low water levels prevent many activities and the area is already experiencing less tourists.

The Pol'and'Rock festival, which took place in the municipality of Czaplinek in 2022 and 2023, also impacted groundwater levels. Around one hundred thousand people come to the festival each year. Exact figures on water intake by Pol'and'Rock are unknown, but a drastic drop in water levels in the Dobrzyca catchment area, where the festival takes place, has occurred over the past two years.

The construction works that are enshrined in the Act will construct four new barrages, which are just going to further dry out the area.

The problem with the current authorities is that they do not recognise solutions other than dams and concrete.

Artur Furdyna, hydrologist

Work on the rivers should restore their natural flow. These lakes and rivers have been engineered by humans too many times over the centuries. Intense erosion phenomena are inherent to the artificial alteration of the river bed. Rivers 'try' to renaturate themselves. The gravel and sand naturally present on the river bed take energy away from the river, therefore the water is constantly acting on, moving them and creating a turbulent flow. Deprived of this element, they have more energy, leading to the land sliding into the river valley.

The Life Drawa project was awarded the global Fish Passage Award and its aim was to make the Drawa River more passable. It was implemented from 2014 to 2022 by the RDOŚ (Regional Directorate for Environmental Protection). Its aim was to protect and renaturate rivers in the area. Among other things, it involved the removal of the stone dam in Głusk, which was a barrier to migrating fish and construction of several fish ladders. Thanks to this project, juvenile salmon have again been observed in the Drawa. Working with gravel is an example of a more natural and cost-effective approach to addressing water loss. Gravel introduced into the river bed effectively attenuates erosion. This is known as sectional river uplift. In addition, the many layers of gravel provide a habitat for bacteria and other organisms that clean the water.

The construction of dams is not only environmentally damaging in comparison, but also many times more expensive. What's more, they require repairs in the long term, which generates further ongoing costs.

Projected dams not only do not answer the current drought problem of the area, they also have a potential to worsen the state of rivers and lakes.







## Warta River

#### Article 2, point 40

The Warta Landscape Park stretches along the Warta River over an area of 13 428 ha. The Warta River starts in central Poland and flows into the Odra River. It features a naturally flowing river, oxbow lakes, wetlands and beautiful inland dunes called the White Mountains. These were created when the Scandinavian ice sheet receded around 11,000 years ago.

In the 1980s Warta River was dammed to form the Jeziorsko Reservoir, to regulate river flows and irrigate agricultural land. Since then, water level in the lower section of the river has dropped significantly. The river has not formed new oxbow lakes since then. However, it still retains some beauty and biodiversity worth preserving.

The Centre for Nature Education in Ląd runs educational activities for children in the Warta Landscape Park. This includes excursions and green schools where the biology of the Warta Landscape Park is taught and emphasis is also made on the connection between humans and nature. The centre has prepared a 10-kilometre-long nature trail, where education is combined with nature.

The Act proposes the reconstruction of a very long stretch of the Warta riverbed (from km 333,000 to km 406,000), as much as 67 km, which partly runs right through the Warta Landscape Park. However, the document does not specify the exact nature of the works or their purpose. This makes it impossible at this stage to carry out an analysis beyond a general criticism of the practices attempting to restructure the river. It ruins their character, disconnects them from the ecosystem they create and destroys their nature.



© Google Map view of Nadwarciański Park Krajoobrazowy showing the total length of the park.



## Jeziorsko Reservoir

#### **Article 2, point 19 & 20**

The dam and power plant that forms the Jeziorsko Reservoir were built near riparian forests, which caused them to vanish. It was built for water assurance, for a local power plant in Konin and re-engineering water flow of the Warta River. More than one thousand people had to leave their homes and relocate to enable creation of the reservoir. The dam was completed in 1986 and despite having consequences to the natural flow of the river, wetlands and many species of birds have since emerged.

The Pichna River, tributary of the Warta River, which is already heavily regulated in many places, has an overgrowth of tall grasses and vegetation, mainly due to intensive industrial agriculture. Artificial fertilisers run into the groundwater and further into the river, which creates an overgrowth of plants that lead to lack of oxygen, light and stagnant water.

Bronisław Moj, the reservoir manager, commented on the situation for siewie. tv, a local media site. He said that there had been struggles with hydrological drought since 2017. Those resulted in problems with filling the reservoir, fish production, and of course, electricity production.

At the same time the section of the Warta River below Jeziorsko Reservoir is in danger of water level dropping so low, as it would be unable to keep life in the river.

Activities included in the Act would most likely drain valuable breeding grounds for birds in the Nature 2000 area Jeziorsko Reservoir.

Recently, large amounts of water were drained to carry out maintenance works on the dam, financed by the European Union, as a result of 40 years of erosion. Refilling the dam will put further constraints on the water level on the river. Unfortunately, they also have yet to plan fish passes or other mitigation measures for migrating fish. Therefore the migration of fish is currently blocked in the middle section of the third longest river in Poland.

It seems that planned investments in the Act will re-engineer the riverbed of the Warta and Pichna Rivers in an attempt to increase the flow of water. The region currently deals with hydrological drought, therefore further regulating the river Warta will dry the areas in the middle section. The goal of increasing the current in Pichna river could be achieved by reducing the usage of chemical fertilisers. Reengineering the river bed is not only unnecessary, but also harmful.

The Act will cause serious devastation to bird habitats and limit the biodiversity of the Warta river.





### **Prosna River**

### Article 2, point 22

The Prosna River in Kalisz is a canal. But upstream from Kalisz it is a beautiful and dynamic river. Prosna River is a tributary of the Warta River. Observations were possible by canoeing down the river. The section from Grabow to Kalisz stand out in particular, where the river is wild and meandering. It is home to freshwater fish such as burbot and Alburnoides bipunctatus, which are very sensitive to changes in water quality.

The original idea of building a reservoir on the Prosna River was first proposed by the German Nazi government during World War II after they invaded the Kalisz area. Later, the plan for its creation was in the Program dla Odry 2006 (eng. Programme for Odra 2006) project, which was proposed after the 1997 Millennium Flood. The reservoir was never built and the entire Programme for the Odra 2006 was repealed in 2015.

Despite the Programme having been repealed in 2015, the Polish government has been buying land for the construction of this reservoir. Of the 2,000 hectares to be occupied by the reservoir, only 600 remain in the hands of local residents.

Reservoirs such as Szałe and Gołuchów, which exist in the area, do the rivers a disservice. In the summer, water levels down from the reservoirs are extremely low. Furthermore, the rivers are polluted and often have algae blooms.

Experience from the Szałe and Gołuchów reservoirs nearby, with the intensive agriculture in the Prosna valley, exposes a high risk for the Prosna river. Weakened by a new reservoir, it will not be able to cope with pollution.

Not many people care about the area and the river can't defend itself.

Maciej Garbowicz, president of the association Prosna od źródeł (*Prosna from the Source*)

An artificial reservoir on Prosna will endanger biodiversity on the river.

## Kamieniec Ząbkowicki

#### Article 2, point 31

The idea of a reservoir on the Nysa Klodzka River came after a flood in 1997. The flood destroyed the village of Pilce, and the authorities decided not to rebuild it. Instead, the inhabitants were offered resettlement to Kamieniec and compensation. The houses and all the infrastructure of the village were blown up, more than 20 years have passed, and the reservoir has not been built, although it was included in the Programme for the Odra 2006. There is now a gravel extraction plant in the area, surrounded by ,No Trespassing' signs.

The local and central authorities mention two purposes for the reservoir: flood control and energy, with a power station to be built on the dam. These are mutually exclusive purposes. It is not possible for one facility to fulfil both at the same time. To produce electricity a reservoir has to be filled up, on the contrary to stop the flood it needs to have enough space for the additional water.

The residents interviewed did not raise any environmental objections, but expressed surprise at the return of the idea of a new reservoir and a lack of faith that the project would come to fruition at all. On the local news portal zabkowice.express-miejski.pl, several opinions are summed up by the comment They are building this reservoir before every election since 1997, anyone still falling for it?'

Wody Polskie (Waters of Poland) estimates the cost of the project to be PLN 1.170 billion (e.g. EUR 380 million).

In a nutshell, the great comeback of this project presents an economically absurdity of the Act . The reservoir will cost in total as much as the whole budget to the Act, but will not serve any real purpose.





# Poraj Reservoir

#### Article 2, point 10

Investment assumes brutal restructuring of the best-preserved natural upper section of the Warta River along with the destruction of refuges and spawning grounds of several species of fish, e.g. catfish, eels, carp, perch, bream, zander and pike.

As the reservoir in Poraj serves a retention function, mainly to provide water for cooling the machines of the local steelworks in Częstochowa, the authorities are attempting to fill this reservoir to the same level as more than a decade ago. The current plan assumes that this goal will be achieved at the expense of the natural heritage and, in practice, draining the upper river.

Poraj Reservoir, built in 1978, faces heavy industrialisation in its tributaries, which causes significant eutrophication, caused by increased amounts of phosphorus and nitrogen in the water. It leads to excessive algae growth (such as those that led to the Odra River disaster, as well as cyanobacteria that are dangerous to humans) and, consequently, oxygen depletion. This pollution could already lead to an end to water sports and fishing.

Actions that would stop or slow down eutrophication include reducing the speed of the water flow, restoring wetlands, swamps, and naturally occurring small water reservoirs, as well as letting the river meander. Natural areas cope better with human industrial activity by using plants to trap these nutrients than artificial water reservoirs. The planned construction on the Warta River will forsake this from happening and destroy the last valuable natural resources.

There is no reason to re-engineer the Warta River, unless one wants to worsen ongoing eutrophication.

## Conclusion

### Environmental Impact

A common trait of the projects that have been investigated is a vivid negative attitude towards rivers and nature. Not only do the projects fail to address ecological problems faced by Odra River basin and beyond, they will worsen them while at the same time wasting public resources. The 2022 ecological catastrophe was cynically used to push through more construction of dams, artificial reservoirs, and damages to wildlife habitat. Projects will impact much more than just the Odra, but many other places in its basin as well as on the Radomka river (article 2 point 11) and Dzika Orlica river (article 2 point 36) which also concern the Vistula and Elbe catchment areas.

The implementation of the projects will result in the destruction of habitats directly due to construction and indirectly when rivers are deprived of their ability to function normally, e.g. spilling over into meadows and riparian meadows, naturally shaping the riverbed, and self-cleaning.

The damming of rivers, which is the aim of many projects, will lead to the collection of water in reservoirs and drainage of the surrounding area, e.g. groundwater under forests, meadows and fields, which will negatively impact these ecosystems. Faster evaporation of standing water, cutting it off from the lower reaches of the river, the aforementioned drainage and engineering will lead to exacerbating the effects of the droughts Poland is already facing. This will most likely lead to changes in species composition and a decline in many species populations. The Act creates a special modus operandi for these projects, where permitting decisions will be issued faster, and with limited environmental analyses or none at all. This also disables public consultation and expert input.

Not only does the Act lack solution to the pollution of the Odra, it also creates new dangers. At a time of climate crisis, when Poland is facing a drought every year, the Act is anti-adaptive. Its implementation will exacerbate the existing problems associated with rising temperatures and changes in precipitation.

### **Social Impact**

In the context of the climate crisis, the anti-adaptive character of the Act will directly impact communities living along the rivers.

Almost all of the Polish territory struggles with drought every year. It greatly impacted agriculture and it is now also starting to affect households. Many of the projects planned in the Act will worsen the problem and cause further lowering of groundwater. This will have major consequences for the livelihoods of those communities living in those areas.

Moreover, industrialisation, and channelisation of rivers makes them less of a tourist and recreational destination. In the long run, it will affect the job market in the areas. It might add to further reasons for rural-tourban youth migration in search of a better quality of life.

### **Economic Impact**

There is a lack of evidence that inland waterways are economically viable on the Odra. On the contrary, there are plenty of counter arguments to that premise.

Cargo traffic on the Odra is, most of the time, impossible due to too low water levels. Currently, to make such traffic possible, water is collected in a reservoir and drained into the Odra, creating a high wave that enables the ship to float. Adding barriers on the river will not solve this problem, but they will make the situation worse since standing water evaporates faster.

Residents of the riverside towns also reiterate that freight traffic on the river does not bring any benefits to their towns and villages. It neither creates jobs nor makes the place more attractive to residents or tourists. Instead, it increases pollution and undermines tourism.

Implementation of the Act will also have high costs. The initial cost of 1.2 billion PLN (~268 billion EUR) included in the Act and to be paid by the Polish national budget is not sufficient to implement everything that has been defined by the Act. There will be further costs that have not been estimated by the Act where local authorities will have to pay on their own to finalise projects. Moreover, all of the projects will require costly renovations over time.

### RECOMMENDATIONS

The Odra Revitalisation Act is an insult to the Odra and Polish nature as a whole. Its dismissal is essential in order to protect what Odra, Warta, Drawa and other rivers have left of biodiversity.

A rapid stop of pouring industrial effluent is what the Odra needs. After that restoration projects that support a nature-comeback should be implemented.

Many places would benefit from extending existing forms of nature protection and the creation of new ones.

Furthermore, all local restoration projects should be undertaken after an in depth consultation with local inhabitants, local authorities and experts. Their insight is crucial in understanding the needs of certain places.

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#### This report is published with the support of EuroNatur

© Młodzieżowy Strajk Klimatyczny. September 2023. Revitalising the Odra: A concrete lie.

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