Environmental disaster triggers mass fish dieoff in the Oder River bordering Germany and Poland

Martin Nowak 15 August 2022

Since the end of July, tons of dead fish have been floating in the Oder River, which runs between Germany and Poland. This is an environmental disaster of enormous proportions, the cause of which has not yet been clarified and the full extent of which cannot yet be foreseen.

The first reports began to arrive on July 26. Senator Wadim Tyszkiewicz, formerly the mayor of Nowa Sól, which lies on the Polish banks of the Oder, wrote on his Facebook page: "A catastrophe. The fish that didn't die are swimming in agony. ... Pike are swimming amok, snatching oxygen from the surface of the water. The water in the river is murky and the foam smells of chlorine and septic tank. There are thousands of dead fish."

At 866 kilometres, the Oder is the eighth longest river in Central Europe. It begins in the Czech Republic, flows through Sl?skie (Silesia) and becomes the border river between Poland and Germany at Schiedlo, just before Eisenhüttenstadt, before flowing into the Baltic Sea at Stettin.

On Wednesday, the first dead fish also appeared on the German banks in the Oder-Spree district. The city of Frankfurt an der Oder issued a warning that a massive fish die-off had been observed for "unexplained reasons." On Thursday, the toxic flood passed Schwedt. By now, it is expected to enter the Lower Odertal German-Polish nature reserve and from there flow further towards the Baltic Sea via the Stettiner Haff.

In Poland, the anglers' association has organised volunteers to remove the fish carcasses. According to their own statements, they had recovered more than 10 tonnes of dead fish from the Oder within a few days. This Facebook page from one of the volunteers shows the tragic scale of the disaster.

Several tonnes of fish carcasses were also recovered in the German section of the Oder. After reports of mercury contamination of the Oder were received, some volunteers stopped the disposal operation for their own protection. Others, however, continued wearing personal protective gear, as mass decomposition in the river is an ecological hazard in itself, especially if the carcasses contain toxic chemicals.

What remains unknown so far is the impact on the entire river biotope—on plant life, on the micro-organisms in the river and its countless tributaries, as well as on birds and other animals that feed on fish. There are reports from Poland of dead seabirds and beavers.

"It seems that everything that breathes air from the water has died," Johannes Giebermann of the Frankfurt/Oder Landscape Management Office told *Der Spiegel*. "Not only fish on a large scale, but also mussels and snails, for example. We can't even estimate the dimension of it right now."

"At the moment, tons of dead fish are floating in the Oder—and that at an extremely low water level and in great heat," *Spiegel* reports. "One thing is clear: the carcasses have to be removed from the water. Meanwhile, it is still unclear what the exact reason for the mass deaths is."

Without knowing the reason for the die-off, however, it will be difficult to stop it. "Only if we know this can we act properly now," emphasized Giebermann, who used to work for the German Nature and Biodiversity Conservation Union (Nabu).

The public prosecutor's office in Wroc?aw and the Brandenburg State Criminal Investigation Office (LKA) have started investigations into a possible environmental crime. German authorities detected an elevated concentration of mercury in water samples on Thursday, Polish authorities an elevated concentration of the solvent mesitylene (or 1,3,5,-trimethylbenzene) a week earlier. Nevertheless, there is still no clear finding as to what caused the disaster.

According to Germany's Federal Environment Minister Steffi Lemke (Greens), the fish deaths may be due to chemical poisoning. "It does seem that it is chemical substances from industrial production," she said after a meeting with her Polish counterpart Anna Moskwa in Szczecin, Poland, on Sunday. "But we don't know that conclusively."

The Polish government currently claims the disaster was not caused by heavy metals. This was the result of the latest analysis of dead fish by the state veterinary institute, Moskwa wrote on Twitter on Saturday evening. The analysis, however, pointed to elevated salt levels in the water and thus agreed with the findings of the German authorities. Warsaw also expressed the suspicion that the Oder had been poisoned with chemical waste and the Polish police offered a reward of the equivalent of 210,000 euros for anyone providing evidence.

When the reports of countless dead fish piled up, the Voivodeship Inspectorate for Environmental Protection in Wroc?aw ordered water samples on July 28. These invalidated the initial suspicion of deoxidation of the river water. Such a lack of oxygen in the water occurs frequently, especially in hot summer months, as warm water binds oxygen more poorly than cold water. An excess of oxygen was even found, which had to be of unnatural origin. The detailed laboratory results confirmed this suspicion.

At the small town of O?awa, located about 30 kilometres before Wroc?aw, and at the Lipki lock further upstream, mesitylene (1,3,5,-trimethylbenzene) was detected with eighty percent probability. Further downstream, only derivatives, i.e., remnants, of cyclic and aromatic hydrocarbons (such as mesitylene) could be found.

Mesitylene is used as a solvent, among other things, and is highly toxic to aquatic organisms. In humans, inhalation or ingestion may cause drowsiness, headache, cough, faintness, and a sore throat. The substance is irritating to the skin, eyes, and respiratory organs. In addition, the vapours have a narcotic effect in higher concentrations. Because of this, an official warning was issued to avoid contact with the water and not to consume any fish from the region.

Based on the locations of the water samples, the Environmental

Protection Inspectorate concluded that the pollution must have originated upstream in the area of the Opole Voivodeship, which begins after the Lipki lock.

And indeed, the Environmental Protection Inspectorate of the Opole Voivodeship admitted that on July 14 "an incident occurred in the Gliwice canal, where dead fish turned up. Investigations revealed a very high water temperature of 25 degrees Celsius and an excessive concentration of chlorides." Attempting to downplay the situation, the authorities assured: "These were not large quantities of fish, and research has shown that such a quantity of chlorides cannot be the direct cause of the deaths."

The canal, which is over 40 kilometres long, connects the Oder River with the port of the industrial city of Gliwice. However, the mouth of the canal is about 100km from the downstream Lipki lock, and there are no reports of mass dead fish between these two points.

Another case of pollution was reported by *Gazetta Wyborcza* from O?awa itself, the city where the first mesitylene pollution was detected.

The focus is on two paper mills, a new one owned by Jack-Pol and a half-defunct one owned by PPHU Kara?, both of which are located on a sluice canal and, according to the citizens' initiative "Everything for O?awa," discharge their wastewater into the Oder River. The citizens' initiative has detailed proof of the fraud committed by the two companies and has been trying in vain for years to get the authorities to act.

The citizens' initiative wrote: "For several years, state institutions had been unable to locate the culprit releasing the poison and to examine its chemical composition. This shows the helplessness of the system we live in today. We pay taxes, maintain these institutions, and yet this is how it is."

They also clearly stated the reasons: "It's about money. This waste should be disposed of properly. That costs money, of course, so the easiest thing to do is to dump it directly into the river. That's a huge saving for the factory. Over a dozen years or so it could be hundreds or even thousands of tonnes ...!"

Wyborcza also points to this aspect, writing: "The most harmful stage [of papermaking] is bleaching the pulp using chlorine gas or chlorine compounds, which releases dangerous organic halogen impurities into paper mill wastewater. When organic chlorine compounds are exposed to high temperatures, as is the case during bleaching, they often turn into persistent and highly toxic compounds called dioxins."

Downstream, all the way to the German border, countless people have reported that the Oder stinks of chlorine.

At a city council meeting in February, Jack-Pol management dismissed such accusations as "nonsense" and "slander" and called for a little more respect for "a company that has been in this market for 25 years, employs 130 people and pays property taxes to the city."

It is possible there is an interaction, not yet fully explained, between the effects of the drought and the restraints put on the watercourse by countless locks that make the Oder navigable. This could explain why the mass mortality only started now, in midsummer.

It is also still unclear what caused a 30-centimetre-high toxic wave, which, according to German measuring stations, sloshed along the Oder. The last sluice is located at the hydroelectric power plant in Waly, Poland, about 30km after Wroc?aw. Was it opened to wash away the pollution more quickly?

In addition to chemical pollution, the Oder, like all rivers in the region, is currently suffering from extremely low water levels. In Eisenhüttenstadt, the water level is currently 1.61 metres—60 centimetres below the average for August. Numerous sandbanks are impeding navigation and reducing the flow to 53 percent of the long-term comparative value, reports the *Berliner Zeitung*, citing WSA hydrologist Cornelia Lauschke.

Przemys?aw Daca, president of the Polish Water Authority (PGW WP), believes the current disaster is certainly influenced by the drought and low water flows. "All you need is a small factor, some element of sewage, from a septic tank or pollution in small quantities, which until now was not a problem and was diluted in the river, but now has caused an ecological disaster," Daca told the *Wyborzca* newspaper.

Since August 1, Polish water sampling stations have reported no mesitylene pollution, but still record excessive oxygen saturation. After the weekend, the Polish authorities plan to announce the results of autopsies carried out on fish.

Some of those affected by the die-off have react angrily: "You had two weeks to find the culprit! You had two weeks to warn people!" residents in Zielona Góra shouted at Deputy Environment Minister Jacek Ozdoba during a press conference.

From the German side, Poland is often criticised for not reporting incidents on the upper Oder. But the German authorities have also "failed to deal with the problems that have arisen within a reasonable period of time," as the mayor of Frankfurt Oder, René Wilke, stated. He also spoke of "state failure."

The same pattern is found in Poland. Members of the opposition Civic Platform (PO) criticise the failures of the PiS-led central government, which in turn points to the responsibility of the PO-led local governments. It is clear that a cover-up like the one in O?awa is only possible in the long term if state authorities at all levels support or at least tolerate it.

The tragedy highlights the deep-seated nationalism of all the establishment parties and its practical effects. Eighteen years after Poland's accession to the European Union, there is obviously neither functioning cross-border environmental protection, nor an efficient exchange of information between municipalities along the border.

Green politicians from the state of Brandenburg point the finger at Poland, speaking of a "failure to provide information" and call on the federal government in Berlin to intervene. Green politicians from Poland point the finger at the PiS in Warsaw.

In reality, this natural disaster reveals the bankruptcy of the whole capitalist system. One of the main causes is, in all likelihood, the greed for profits of a company that discharges toxic substances into the river and can rely on the subservience of the local authorities because it promises tax revenues and jobs—or greases politicians' palms.

At the same time, the state authorities demonstrate the same criminal indifference that has been seen in the coronavirus pandemic and the climate change catastrophe. To date, neither the German nor the Polish government has initiated central measures against the environmental disaster on the Oder, neither to dispose of the presumably toxic carcasses in a coordinated manner, nor to stop the further contamination of the river. There is not even a joint effort to coordinate the fight against the natural disaster and its consequences.



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