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FLOOD AS PERMACRISIS. RESPONSE-ABILITY, AND THE POLITICS OF WATER

INTRODUCTION

While floods have typically been categorized as “natural disasters,” anthropologists argue that disasters are always socially produced and emerge at the intersection of human settlement, policies, infrastructure, and environmental forces (Albris, Laut, and Raju 2020; Hoffman 2017; O’Keefe, Westgate, and Wisner 1976; Oliver-Smith and Hoffman 2019). With climate change, notions like “natural disasters” and “catastrophes” are becoming increasingly outdated and insufficient, not only for accurately describing reality but also for formulating optimal response strategies.

The ongoing anthropogenic acceleration of certain natural phenomena (including global and local water circulation) demonstrates that contemporary catastrophic events are far more “man-made” than purely environmental (Kelman 2020). This human-induced acceleration, in turn, complicates the notions of both response and responsibility. Moreover, catastrophic occurrences are no longer episodic, isolated, or rare, which shifts the focus toward the concepts of “permacrisis” and “chronicity of crisis” (Vigh 2008) to describe this new normal. Henrik Vigh understands the chronicity of crisis not merely as “the temporal persistence of dysfunction” (Estroff cited in: Vigh 2008, p. 10), but as a context and condition, that is, as an ongoing, long-term process rather than as a moment of rupture or turning point. In this text, I argue that such conditions often go unrecognized, and that, when they are (periodically) perceived, they produce reactions that treat them as isolated events. Yet such crises operate more like chronic autoimmune conditions: latent, uncertain, paradoxically menacing, and ultimately self-destructive. Episodes of deterioration occur like flare-ups—manifesting as hazardous extremes that punctuate periods of relative calm—while the underlying dysfunction persists. Chronicity in this sense can redefine the range of possible perceptions of floods, droughts, and the presence of water itself. Before examining how floods are experienced and responded

to, therefore, it is necessary to understand how their meanings have shifted in this era of chronic environmental instability.

To better address strategies for navigating permacrisis, I adopt the term response-ability rather than resilience. This is not to discard the latter term entirely, though it has been critically examined by anthropologists (Barrios 2016; Kaika 2017; Neocleous 2013; Scheper-Hughes 2008), but to emphasize more relational possibilities of responding and enduring in a world marked by chronic crises, uncertainty, and, at times, the opacity of events. Following Donna Haraway (2016) and Vivienne Bozalek and Michalinos Zembylas (2023), I understand response-ability as the capacity to respond within entangled relations with the more-than-human world; “a relational one that stems from the realization of vulnerability and interdependence” (Moriggi et al. 2020, p. 288) rather than from accountability or kin affection. Indeed, response-ability is, as Donna Haraway puts it, to a certain extent a manifest and ethical project. Yet it also situates the concept within a logic of care that is extended to non-humans (Puig de la Bellacasa 2017) as well as with environmental reciprocity, while also opening possibilities for building future-oriented responses. It also contains within it the necessity to interact with material reality, including extreme situations, in a way where discourse and matter co-create reality—what Karen Barad (2003) refers to as *performativity*.

Therefore, when I speak in this text of response (be it technical or ecological), I do not mean only the reactive aspect of the term—understood as episodic and point-based. On the contrary, I include, whether consciously or unconsciously enacted, responsibility for the long-term, entangled, and performative co-creation of current and future permacritical realities. Within these realities, adaptations and maladaptations are produced, which entail a need to face and accommodate specific consequences—favorable or otherwise. In other words, I understand techno-response-abilities and eco-response-abilities as concepts broader than simple “water management” or “flood responses”: response-abilities refer not merely to reactive interventions, but to modes of engaging with a different sort of chronic problem. Even though popular perception often remains episodic, these forms of response imply a deeper, human and more-than-human attunement to persistent conditions of instability and long-term transformation. They thus reveal the slower, less perceptible processes unfolding within the permacrisis.

This article builds on these perspectives by considering the 2024 floods in Poland not as an isolated event but as an outcome of long-term socio-ecological processes and an extreme manifestation of an ongoing, chronic, and paradoxical condition: permacrisis. Examining the recent floods in Wleń (Lower Silesia, Bóbr River) and Krosno Odrzańskie (Odra River), I argue that they represent a particular type of crisis—one that has been highly technologized, made familiar, and which tends to reproduce previously experienced social responses.

At the same time, the flood sparked narratives and practices, simultaneously embedded in and leading to a construction of forms of response-ability—voiced through discourses of techno- and eco-response-abilities—as well as to more situated

response-abilities, particularly through local practices of readiness and enskillment (after Ingold 2000). In reality, these narratives and practices reveal deeper social divisions that are rooted both in a controlling anthropocentric approach to water and in the ongoing negotiation of who (both human and non-human), will be included or excluded in future resilience strategies. More broadly, the issue of who (human and non-human) will retain or lose access to the very notion of home (oikos) looms here as well.

METHOD AND ETHICAL POSITIONING

This article stems from my observations of the September 2024 flood in two sites: Pilchowice (Wleń) and Krosno Odrzańskie. I focused not on aftermath or loss, but on the moment of the chronic condition of permacrisis arriving as an extreme event. I propose that specific coping strategies, as well as narratives for the future, surface precisely in such intensified moments.

Unable to reach Pilchowice due to the rapid water rise (12–15.09.25), I followed the flood remotely via Hydroportal data, social media, and limited phone calls. Conversely, I spent one week in Krosno Odrzańskie and nearby villages (20–27.09.25), when the pick flood wave arrived, engaging in participant observation and informal conversations. Conducting in-depth interviews were clearly inappropriate and ethically questionable at the time. However, people were generally willing to share their experiences and talk about the unfolding flood.

These locations were not accidental. Since 2022, I have conducted ethnographic research with a student research group and separately with a project research team¹, with both teams collecting approximately 330 interviews combined on human–river relations. Familiarity with local ecologies, infrastructures, and people informed my access and interpretation in this paper.

Aware from the outset that I was working in flood-prone areas, my primary ethical concern was to ensure that my investigation would not endanger myself, fellow researchers, or emergency responders in the event of a flood. I considered it my duty to support the local community to the best of my ability, prioritizing assistance over research. In Krosno, I collaborated with the local association 515 km Odry², offering

¹ I conducted “Experiences of water excess, water deficit and water’s balanced presence. A study in blue anthropology” project number 2020/39/D/HS3/00618 in collaboration with Magdalena Kozhevnikova and Magdalena Siemaszko. The student group in Krosno Odrzańskie was composed of Justyna Dominiak, Hanna Kluzińska, Jagoda Paszta, Weronika Siemińska and Luxuan Wang.

² A grassroots, small non-governmental organization based in Krosno Odrzańskie, founded in 2019 by Magdalena Bobryk. Initially, it focused on cultural activities connected with the Oder River. During the ecological disaster on the river in 2022, the organization shifted its focus toward intervention efforts and raising awareness about the causes of the massive fish die-off and the critical condition of the Oder. Over time, it has evolved to focus on water and river protection, education, and community-based monitoring of the Oder River.

modest, coordinated support and information. Often, the most valuable gesture was simply conversation. This article is thus a situated, retrospective account—based on fieldnotes, bodynotes, and social and traditional mainstream media materials. I believe that the choice of research methods for studying such events as they unfold is, above all, an ethical one.

RETHINKING FLOODS IN A TIME OF PERMACRISIS.
A FEW METHODOLOGICAL POINTS OF DEPARTURE

Floods, droughts as symptoms of the permacrisis and anthropogenic acceleration

The 2024 flood was neither “natural” nor a “disaster” understood as episodic event or an exceptional disturbance, it was rather an extreme *manifestation* of a climate-change-induced chronic process, the other extreme of this phenomenon being ongoing drought. If one looks at the map published by Hydroportal (Instytut Meteorologii i Gospodarki Wodnej n.d) on September 13, 2024, one would see red lines indicating the high-water alarm level of rivers in the Jelenia Góra and Kłodzko valleys, with black lines highlighting the central-northern part of Poland and marking the lowest river levels recorded in measurement history. This image illustrates the climate-change-induced, and thus human-accelerated, water crisis in Poland that is marked by the simultaneous occurrence of both droughts and floods. The latter emerged during an unexpected period, as floods usually occurred in July.

The first reason behind this ongoing phenomenon (which is making these extreme events manifest) is the rise in temperature. The planet is warming at an even faster rate than previously expected, and atmospheric CO₂ concentrations have been continuously increasing since the industrial era (Hansen et al. 2025). While climate irregularity and disturbances still operate according to principles of physics such as thermodynamics—and droughts, floods, typhoons, and wildfires have of course occurred before—they now carry a significant anthropogenic component. Moreover, temperature distribution throughout the year leads to increased evaporation, contributing to hydrological droughts in certain regions (Marosz et al. 2024). The 2024 flood was caused by the Genoa Low “Boris” that, according to the European Centre for Medium-Range Weather Forecasts (ECMWF 2024) and Davide Faranda et al. (2024), carried 20% more moisture than previously recorded. This cyclogenesis, described by Wilhelm van Bebber in 1883 (van Bebber 1883), forms over the Mediterranean, and when stalled by Eastern Europe’s high pressure, causes extreme rain. Though previously rare, such events are occurring more often and, due to rising temperatures and increased evaporation, are now more intense.

The second reason for floods and droughts is a shift in precipitation distribution: the country used to receive an average of 600 mm of precipitation annually, distributed through slow-melting snow and evenly spread rainfall. Climate change

has funneled annual precipitation so it coalesces into sudden massive downpours that interrupt extended droughts (Marosz et al. 2024).

Finally, poor, long-term water management and outdated hydro-policies on local and state levels are adding to the trouble. Many measures intended to ameliorate economic problems have actually taken a heavy toll, including: ongoing drainage; land reclamation on wetlands (80-90% of Polish wetlands have been drained) (Kotowski 2021b); river regulation (straightening, deepening, and shortening channels) that has been carried out in Poland since the nineteenth century (and which intensified in the 1960s); deforestation; and the urbanizing and sealing of cities with concrete infrastructure that prevents water from seeping into the ground. Surface runoff in whole catchment areas has been increased to such an extent that Poland has become a machine for draining water (Karaczun 2020). This policy of water management assumes the fastest possible drainage of water from farmlands and cities to the Baltic Sea. Once aimed at solving “soil hunger” and realizing a modernist vision of “civilization” (Czeczot and Pospiszyl 2021; Łotysz 2022; Blackbourn 2007), the policy adds to climate change disruption, exacerbates droughts, and increases the risk of flooding. In sum, contemporary floods and droughts are extreme manifestations of the same chronic, systemic process—one increasingly accelerated by human actions. Human activity enacts this process through a specific, temporally extended form of techno-response-ability toward water’s abundant, boggy presence from the past, and it is one that is backfiring in the present.

Rethinking Disasters, Catastrophes and Natural Overflow from Rivers

Another idea worth reconsidering is the perception of high water as an unquestionable catastrophe. High water is, in fact, a regular and inherent characteristic of fluvial ecosystems: it is normal for a river to flood. As affirmed by the *Universal Declaration of River Rights*,³ rivers have the right to flow and “perform essential functions,” including flooding, sediment transport, and groundwater recharge—processes vital to their hydromorphology (see footnote number ¹⁹) and ecological health. A flood becomes a “disaster” only when it interferes with human health, property, or interests—mainly because people, their infrastructure, and livelihoods are situated close to the river during flooding events. The social construction of

³ The document was developed by the Earth Law Center and International Rivers and aims to recognize rivers as legal persons entitled to rights (see more on <https://www.rightsofrivers.org>). It does not have any binding legal status in Poland (or elsewhere) and is considered more of a guiding document, known mainly among activists and select experts in water management and architecture. However, it served as one of the inspirations for the civic initiative *Osoba Odra* (Person Oder), which aims to grant legal personality to the Oder River. *Osoba Odra* collected public signatures and submitted the petition on this matter to the Chancellery of the Speaker of the Polish Parliament in April 2025, with the support of Legislative Initiative Committee *Czysta Odra* (Clean Oder). This marks a pioneering effort in Poland to introduce a broader movement promoting the legal personhood of the environment.

floods as “natural disasters” is essentially a framing of riverine processes as problematic, traumatic, fearsome and associated with loss and destruction—though it must be emphasized that the latter experiences are undeniably suffered by people, particularly from the standpoint of human individual experience and economic, political, historical and infrastructural relationships to any given river (Włodarczyk 2021; Scott 2025). Therefore, a “disaster”—derived from the Italian *disastro*, which combines *dis-* (lack) and *astro* (stars), originally meaning “ill-starred” or “misfortune” (OED 2024)—suggests an event shaped by external cosmic forces, which reinforces a perception of randomness and inevitability that is deeply inadequate. Rivers flooded regularly and in very exact, well-known and marked places and rhythms. Floods as disasters are not merely strokes of bad luck; rather, they emerge from complex entanglements between natural forces and human societies (Quarantelli 1998; Bankoff, Frerks, and Hilhorst 2004).

The term *catastrophe* (καταστροφή), on the other hand, is of Greek origin, originally referring to a turning point, upheaval, or dramatic transformation, particularly in ancient Greek tragedy, where it signified the moment of profound, often painful, change. This etymology shifts the focus from episodic misfortune to transformation, suggesting that catastrophe—far from being a singular, random shock—is instead a moment of rupture and reconfiguration, deeply embedded in historical and ecological processes. In this way, in deep time or in mythology, no evolution, change or transformation occurs without catastrophic events; chaos can therefore bring new orders or life forms (Wężowicz-Ziółkowska and Borkowski 2011). This recalls James Scott’s (2025) interpretation of flooding as a destructive force that renews life, thus one of creative power; ironically, humans have settled along rivers for thousands of years precisely because rivers provide the same benefits that they are usually blamed for taking away: prosperity.

Modern catastrophes, however, are formatted differently. In Poland, for example, the word “catastrophe” for flooding has been used only since the early twentieth century (Barcz, Gromala, and Waclawik 2022). As this research shows, people living in the flooding area are aware of risk and are prepared for another high-water event. It seems that the catastrophic articulations of high water—a recurring phenomenon, after all—represent a kind of modernist paradox, one that acknowledges the inevitable arrival of floods while relying on denials of the inherent unruliness of rivers and weather, manifested in the constant attempts to control them. A disaster, in its modern form, might undoubtedly be interpreted as an expression of the state’s response to the upheavals it causes, aiming to maintain the status quo through prevention, rebuilding and restoring the state before the disaster. Such policies responded to the question: How to prevent episodic, rare events? But is this question still valid? With climate change, fluvial rhythms have been disrupted: floods have become less predictable (as in the case of flash floods) and more frequent, intense and toxic rather than fertile. Maybe crisis is a better word.

“If only it had been just a crisis!”

“If only it had been just a crisis!” responds Bruno Latour (2017, p. 8) in his dismissal of the term. Crisis, in his view, falsely reassures with the promise of a return to normality following temporary disruption. Instead, he argues, we are entering an entirely new regime of existence—a mutation—a fundamental shift in our relationship with the world. The climate crisis response requires the abandonment of the nature-culture divide and the recognition of Earth as an active political actor. While Latour emphasizes the epistemological and ontological implications of this shift, Franz Krause and Thomas H. Eriksen (2023) focus on its lived experience, proposing *volatility* as a conceptual tool for understanding life amid accelerating uncertainty and instability. The philosopher Miłosz Markiewicz (2023) demands a rethinking of environmental degradation as an ongoing process that calls for *oikos-logics*. Markiewicz directs his thoughts towards a posthumanist vision of community, which, after abandoning anthropocentrism, becomes both a space of dwelling and a home in itself. Here, *oikos* is understood in an environmental sense, with humans and non-human entities co-creating a kind of phenomenon that is *oikos*. In other words, he argues, “[t]o domesticate the world and to world the home is to understand that the home is the world, and the world is the home” (2023, p. 153). Together, these views reject crisis as a temporary, solvable event and instead see it as a new reality demanding political, economic, ecological, and ontological redefinitions of human-environment relations.

In recent years, scholars have increasingly turned to the concept of polycrisis⁴ to capture the ways in which multiple crises—economic, ecological, geopolitical, technological—unfold simultaneously. David Henig and Daniel M. Knight (2023) argue anthropology should view polycrisis as a dynamic, multi-scalar process rooted in lived experience and systemic interdependence. Yet the term risks oversimplifying complexity, obscuring causality, and ignoring the historical precedents of crisis convergence.

Closely related is the notion of permacrisis, which points to a chronic instability that renders crisis as a permanent condition of contemporary life; the shift from polycrisis to permacrisis implies that situations can now only be managed, not resolved (Turnbull 2022). This shift in perspective is particularly relevant to environmental challenges such as water crises, which highlight chronicity as a main point of analyses and experience (Vigh 2008). In this context, the persistent instability of water systems—whether through floods, droughts, or pollution—exemplifies how environmental challenges are not merely technical problems to be solved but manifestations of deeper structural symptoms of the broader ontological contradictions embedded in modern water management regimes (Linton 2010). Anthropogenically-accelerated

⁴ The term polycrisis was firstly proposed by Edgar Morin (1999) as a number of vital problems with its complexity, ambiguity and uncertainty. Adam Tooze (2022) has popularized the term in economic and political discourses.

permacrisis is not solely the domain of the hard sciences, but cultural, social, local, political, dialectical, and aesthetic in nature as well.

Clarifying what a contemporary flood actually is (an event seemingly indistinguishable from past inundations, but one which actually emanates from a chronic permacritical state), is crucial not only for methodological reasons but also for building response-ability. A tension between flood as episodic event or chronic phenomena determines both what a researcher enquires into and the kinds of questions local communities ask (or, just as importantly, the questions that remain unasked).

THE TRACE OF WATER – THE PARADOX OF CHRONICITY'S EPISODIC PERCEPTION

In its over 800-year history, Wleń has been flooded approximately sixty-two times, with the first recorded mentions dating back to 1220. In the Lower Town of Krosno Odrzańskie, there stands a flood memorial (Fig.1), commemorating significant inundations even from the eighteenth century. Both towns are located in the floodplains of the Bóbr and Oder rivers (Krosno Odrzańskie being affected by both simultaneously) and, as cities with centuries-old histories, they have always faced this phenomenon—either living with it or trying to prevent it.

The residents of both towns are mostly descendants of post-war settlers who arrived in these territories after Poland's western border shifted following World War II (see Ćwiek-Rogalska 2025, 2024; Halicka 2020). In their lifetimes, they have experienced

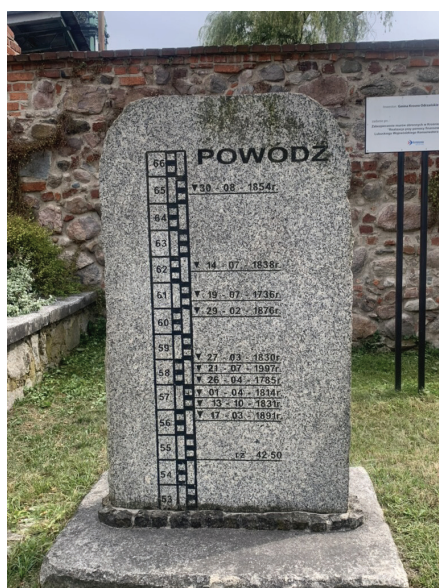


Fig.1 Flood memorial, Krosno Odrzańskie, photo by the author, 2023

between one and four floods that they can remember and know that more will come. They strive to prepare for them, equipping themselves accordingly. The paradox of this situation lies in the simultaneous surprise and suffering caused by high water, which they feel with the full awareness that it will return. Usually, it is articulated in the following sentence “We have nothing against water—we have something against fire, but against water, there are only sandbags” (fireman, Pilchowice 2022).

Nonetheless, the inhabitants of floodplains, as well as state and municipal authorities and emergency services, strive to be prepared. Flooding is a known, experienced, and recurring phenomenon. As such—especially in recent times—relevant regulations, technologies, and strategies have been developed, often based on techno-response-abilities.

One of the technologized traces of virtual, planning-based, and strategically modeled water is the flood hazard map. These maps, based on historical data, model the areas likely to be inundated depending on the amount of incoming water. They take into account existing flood protection infrastructure and terrain elevation. One of the flood management strategies is thus to show where flooding will inevitably occur. This strategy provides crucial planning information, both for spatial development and for crisis management for municipalities, though this information is sometimes disregarded.⁵ The trace of water is simulated in a virtual map—but in reality, it represents someone’s home, city, or village.

These homes and towns also bear the trace of water. When the floodwaters recede, moisture remains in the thick walls—often old ones, as in Wleń and Krosno Odrzańskie, where buildings are over a century old. Residents say that the walls never fully dry and that even after repainting the floodwater line always reappears on the wall. In the context of the so-called “Recovered Territories”⁶—that is, the regularly flooded by highly regulated Oder River basin—contemporary residents often inhabit buildings formerly owned by Germans. They trust in their solid construction and in the wisdom of the German builders who laid drainage pipes in the basements, raised floors above typical flood levels, elevated thresholds, and installed ventilation shafts: the people who “knew how to live with floods.”

But in Osiecznica, situated across from the mouth of the Bóbr River where it joins the Oder, during the flood itself, protests began under the slogan: “The levees called, but remained on paper” (Polish: “Wały wołały lecz w planach zostały”). The local council passed a resolution to launch an initiative to protect the village with a flood embankment. One of the main arguments was the weakening structural integrity of the homes that had survived yet another flood.

⁵ An example could be the issuing of building permits in flood-prone areas.

⁶ The “Recovered Territories” are areas incorporated into Poland through the westward shift of its border at the expense of German territories, as decided at the Yalta Conference in 1945. The name carries a propagandistic connotation, assigned to these lands by the post-war communist authorities. They are also referred to as the “Western Territories,” but the ambiguous and layered concept of “post-Germanness” is also present in reference to this region.

High water always leaves its mark: changed landscapes; worn flood control infrastructures; damp traces on walls that never fully dry; and the modeled water line on a virtual flood map, traces embedded into spatial, virtual (scientific), and human memories. There is a paradox to the mark of high water, somewhat latent but still present: on the one hand, residents of floodplains are aware that the flood will repeat and how it will unfold, and they are prepared for it. On the other hand, they hope “it won’t happen again,” and “they will be safe in their own homes” (translation from one of Facebook posts in Pilchowice).⁷ In short, water’s paradoxical traces lie in their chronic character and their perception as episodic marks.

These events elicit responses at national, technological, scientific, and grassroots levels. Extreme events bring all these scales together at the local level in a visible and powerful way, revealing strengths, weaknesses, and ongoing social and structural challenges. The shock is never experienced solely on an individual level; it is endured socially. It initiates collective practices of social resilience, sparks intense debates about how people are imagining future responses, who they view responsible for it, and how they engage in anticipatory planning. Such debates are multiple and contain “situated contexts and cultural vocabularies” (Cons 2018, p. 270). As with the case of the 2024 flood, these debates, running parallel to the events themselves, reveal a great deal about social relationships and attitudes toward water, rivers, and the broader environment. In following these debates, I have observed few specific trends of how people locally address the processes of techno-response-abilities, eco-response-abilities and situated response-abilities that frame local practices of readiness.

PRIVATE READINESS AND ENSKILLMENT

In the flooded villages of Stary Raduszc, Osiecznica, and Połęcko, bottom-up strategies emerged that were rooted in experience, intimate knowledge of the local landscape, and practical know-how transformed into concrete action. Where water had already reached gardens and streets, the fence surrounding a house in Stary Raduszc was tightly secured with sandbags and further reinforced with plastic sheeting. Water pooled in the nearby meadow, inching closer, yet, inside the property, a determined battle was underway to keep the home dry. Three men operated a pump, diverting water from a garden drain beyond the makeshift embankment of sandbags. They spoke of the likelihood of the garage flooding, but also of the possibility of saving the house—an emergency plan previously tested during the 2010 flood, now being implemented with greater precision. A pump purchased in advance,

⁷ Pilchowice – co słychać, Tauron czy Wody Polskie? dla zwykłych mieszkańców nie ma to znaczenia..., Facebook, March 26, 2025, https://www.facebook.com/permalink.php?story_fbid=pfbid02rYY4Ur942Yks8EMUagXVBj6k64KT-kADBfc953USMZmkdWkLYaUYYgXzUmrUaEV6l&id=100064617643152

night shifts, improvements to the sandbag embankment all pointed to a form of local enskillment, a response rooted in experience, situated knowledge, and self-taught competence.

Similarly, in Osiecznica, a woman stepping into a row-boat with poultry feed proudly declared, “We’re ready here. We know how to manage.” It is a claim of sustained agency amid the uncontrollable. Firefighters on constant duty, boats ferrying residents across flooded streets, municipal announcements, and a village’s leaders acting as crisis managers all painted a picture of collective preparedness. Even the decision by some not to collect sandbags, arguing that “the water will come and go anyway,” spoke to a cultivated relationship with flooding as a cyclical and familiar event.

WHEN HIGH WATER COMES, WE JOKE.

In Stary Raduszc, the atmosphere was a mix of calm, tension, worry, and humor. Once all the sandbags had been placed and the flood wave arrived, people simply moved around, observing, gathering, discussing, and taking photos—whether for memory or insurance purposes—and they joked as they did so. The day before the peak wave arrived, when water had already begun entering the village, we visited a local acquaintance. Her household preparations were complete, and her son launched a drone to assess the situation from above. Everything from the basement had been moved to higher levels, the garden had been tidied, and any remaining vegetables were collected (as, due to contamination, flooded crops could not be consumed after the wave passed). They had not secured the house itself, expecting water only in the basement and part of the yard. Our host walked us through the slowly flooding streets, pointing out where the water would flow. She showed us which fence it would “step over,” which garden it would pass through, where it would enter the street, and how far it would reach. She relied on memory and experience from the floods of 2010 and 1997, as if the river had left a flood map in her mind—etched into the village’s landscape, the peeling walls revealing past floodwater lines and the trace of water. Much discussion took place among neighbors, and the crisis committee emphasized that the flood modeling anticipated a similar inundation to the 2010 flood, rather than the more severe one of 1997. “It will be like in 2024!” predicted a confused, newly arrived woman who had not yet experienced a flood here, which shows how the cyclical character of floods is incorporated as a reference point for developing protection measures and crisis management.

Stary Raduszc lies on an old riverbed that was formed in 1910 when German inhabitants redirected the Bóbr before it flows into the Oder nearby (Halicka 2005). Because of this, the village is bordered to the northwest by an earth embankment protecting it from the Bóbr. The embankment was, however, already heavily saturated that day, as the Bóbr’s flood wave had passed by just a few days earlier. Now the incoming wave from the Oder was piling up, pushing water from both rivers onto the meadows surrounding the village, which had no protective bulwark.

Our guide was undeterred by the ban on walking on the embankment, she wanted to see the situation with her own eyes; a breach on this side could be dangerous for the village. Her husband joined us, stepping into the puddle of river-water forming near their home, joking, “Just testing my rubber boots for leaks.” Humor would prove to be an essential coping strategy—the next day, in that same spot, in my waders I could walk waist-deep through the water. People thus shared their worries and their renovation plans, but they also laughed, made jokes, and exchanged playful remarks.

In Osiecznica, the most heavily flooded village, where over eighty homes were affected, two men took an old pontoon down from the attic and paddled out into the flooded village streets using a wooden plank instead of an oar to assess the water levels and whether their property was at risk. They swayed about unsteadily on the pontoon, and when asked how they were doing, they quipped, “Oh, we’re really floating along!” (This is a play on words, as the Polish word *powódź* means “flood” and the phrase *powodzi nam się* means “to be doing well”). This phrase, in fact, was a common response. Later, they shared their concerns and let themselves be towed toward the shore, as their makeshift paddle was not working very well. These jokes, bits of humor, and quiet ways of normalizing the flooding were widespread and important as they helped relieve the unbearable tension and the heavy, eerie calm. At least, that is how I perceived the atmosphere in the places and situations I found myself in. “Stay dry!” (Polish: *Trzymajcie się sucho!*) we told them as we parted. That, too, made them laugh.

These scenes show what people do during extremes. It is a form of action grounded in situated response-ability: embodied, rooted in experience, and built through practiced capacities to act in relation to the river. These responses are neither heroic nor passive, rather they are attuned to the movement of water in that very moment. They are not necessarily perceived as “permacritical” strategies in themselves; although people’s preparedness for such action takes time, it emerges from their prior flood experiences, their familiarity with the terrain and floodplains, and their understanding of the flood-resistance capacities of their own homes.

People’s long-term thinking revolved more around cleaning up, drying out, and removing the sludge from their basements and did not necessarily include climate change or the reasons they were flooded so unusually in September. The chronicity of today’s crisis blends with the former rhythms and expected recurrence of floods, giving rise to these situated response-abilities, whether based on technical solutions or community strategies of coping with the extreme: neighborly support, humor, observing the water, and documenting the event.

The lived experience of a permacritical flood and a familiar cyclical event does not differ much in how it unfolds, making it difficult to distinguish between floods or to formulate alternative forms of response-ability. This shift remains largely latent and intangible, thus neither fully perceived nor addressed.

THE AMBIVALENCE OF TECHNO-RESPONSE-ABILITIES

Parallel to this grassroots readiness, a discourse of techno-response-ability operates. Prepared, planned and developed over one hundred years now, the flood protection hydro-infrastructures are ambivalent, and life under them is equally so, especially during a flood wave. Their role was both praised and feared: celebrated for its regulatory function, yet distrusted in moments of potential failure. The dam at Pilchowice and its managed water discharge became central actors in both local pride and anxiety.

During the 2024, crisis communication from mayor Artur Zych offers a unique lens into how these tensions unfolded. Initially calm and instructive, the tone of his messages transformed in real time as the situation deteriorated, mirroring the cascading uncertainty. On September 11, IMGW issued Level III flood alerts due to forecasted rainfall exceeding 150 mm. On September 13, the mayor addressed residents with calm caution on official Facebook Wleń municipality channel:⁸

I don't believe flooding is likely in our area [...] but we must be prepared. [...] Please don't take this as a flood announcement. (13.09.2024, 09:20)⁹

By September 14, localized flooding and blocked roads prompted sandbag deployment. Though concern rose, the mayor remained measured:

The situation is under control for now. [...] What happens in the next 48 hours is critical. (14.09.2024, 16:15)¹⁰

By the next morning, the balance tipped. Inflow to the Pilchowice dam exceeded 340 m³/s, almost double its discharge capacity.

An uncontrolled spillover through the 'steps' of the dam is expected. [...] Wleń is safe, levees are ready to hold. We'll deliver sandbags only outside the levee zone. (15.09.2024, 09:26)¹¹

Evacuation logistics followed. The mayor reminded residents to care for animals to reduce firefighter risk. Later that day, his tone turned grave:

⁸ All citations are from official FB Wleń municipality channel <https://www.facebook.com/wlengmina>, the mayor was publishing film rolls or short written posts.

⁹ Gmina Wleń, Sztab kryzysowy związany z prognozami intensywnych opadów deszczu! Facebook, September 13, 2024, video 1:34, <https://www.facebook.com/wlengmina/videos/363937096790910> (accessed 24.11.2025).

¹⁰ Gmina Wleń, Komunikat Burmistrza Miasta i Gminy Wleń z godz. 16.00, dnia 14 września, Facebook, September 14, 2024, video 1:56, <https://www.facebook.com/wlengmina/videos/1237737300685678> (accessed 24.11.2025).

¹¹ Gmina Wleń, Apel Burmistrza Miasta i Gminy Wleń 15.09.2024, Facebook, September 15, 2024, video 2:50, <https://www.facebook.com/wlengmina/videos/851999180368169> (accessed 24.11.2025).

We are probably facing one of the hardest days of our lives. Without mutual aid and cooperation, we may not endure this. (15.09.2024, 13:14)¹²

At 14:50, the dam began to overflow. Within the hour, Wleń was hit by the rising wave. At 19:51, urgency peaked:

ATTENTION! THE SITUATION IS CRITICAL. ALL HANDS NEEDED FOR SANDBAGGING. [...] We're half a meter away from overflow. (15.09.2024, 19:51)¹³

Sirens ordered residents to upper floors. Rumors about the dam's collapse circulated, prompting official reassurances:

The dam is fine. (15.09.2024, 22:51)¹⁴

At 01:53 on September 16, the mayor confirmed the breach:

We've lost the battle against the great water. It will now gradually flood the town. Sadly, we can't stop it here. (16.09.2024, 01:53)¹⁵

Water breached recently constructed levees at a modular flood barrier that was especially vulnerable where it intersected the road. Though most of the wave was redirected outside the city, the market square, the public school, basements, and the municipal boiler station were submerged. The city lost electricity and potable water due to flooded pump stations and transmission hubs.

On the same night, the Pilchowice Dam overflowed its crest for the first time in its history, illustrating the scale of the phenomenon. Such an event was unforeseeable in its design in the early twentieth century and, as a result of climate change, it also reveals the difference between cyclical floods and permacritical conditions. Such an overflow can be extremely dangerous for the structure and may lead to a failure. In fact, an actual failure occurred in Stronie Śląskie, at the dry flood retention reservoir on the Morawka River with a capacity of 1.38 million m³ (International Water

¹² Gmina Wleń, *Możliwe, że przed nami trudne chwile*, Facebook, September 15, 2024, video 0:40, <https://www.facebook.com/wlengmina/videos/8493880437342782> (accessed 24.11.2025).

¹³ Gmina Wleń, *Uwaga! Sytuacja jest krytyczna. Potrzebne wszystkie ręce do workowania. Razem obrońmy nasze miasto*, Facebook, September 15, 2024, video 00: 51, <https://www.facebook.com/wlengmina/videos/1172968103788192> (accessed 24.11.2025).

¹⁴ Gmina Wleń, *Nie słuchajcie plotek. Zapora ma się dobrze! Wały załatane! Jest jeszcze nadzieja! Walczymy!*, Facebook, September 15, 2024, <https://www.facebook.com/wlengmina/posts/pfbid02zffj4GQJiwwVgjbAvVtDMPbDYrJx2thcukSmYZH1ggFps6Hy6KdeG3CD2QvKGLMl> (accessed 24.11.2025).

¹⁵ Gmina Wleń, *Przegraliśmy walkę z wielką wodą*, Facebook, September 16, 2024, <https://www.facebook.com/wlengmina/posts/pfbid02FdE8XUv787hPo5uoerMT2Ap8sZjFKFCCoyiwtaa1nAZas8Jcn8hCxsHL5Ux4frWwl> (accessed 24.11.2025).

Power and Dam Construction Magazine 2023). The breach of the earth embankment aggravated the destruction in Stronie Śląskie and Łądek Zdrój, causing some of the most severe damage during this flood (Konieczny 2024). While Pilchowice Lake holds 50 million m³ of water (Januszewski 1999), the overflow was not serious, and the dam was not threatened, which was later reflected in enthusiastic praise for the dam. “The old lady held up, she made it through,” said Amelia Żygadło, the village head of Pilchowice, in an interview with Polish Radio 24 (Polskie Radio24 2024): “If it weren’t for this reservoir, we wouldn’t be here; the dam held.” Online voices praised the dam as a “defender” and “national hero.” Yet during the flood, fears of collapse triggered rumors that had to be later officially denied. These anxieties resurfaced in March 2025, when a visible crack appeared in the dam’s stone cladding. Though engineers attributed it to joint erosion, not structural failure, public concern was reignited. A major controversy arose regarding the renovation of the aging century-plus old structure. Initially scheduled for 2021–2023, the work was delayed by Tauron (the energy company managing the dam) due to funding issues and they quickly called for state support. Planned renovations included boosting capacity, sluice replacement, and foundation repairs—works that require draining the lake and may release toxic sediments from industrial waste deposited in the 1970s and 1980s. This raised long-standing ecological concerns, particularly from the Bóbr Valley Landscape Park. At the time of writing, the issue had reached the flood envoy and voivode, with the tender announced in August 2025 and plans to drain the lake in spring 2026. Environmental impacts, however, remained absent from public discussion, although the project will require legal environmental approval.

Throughout the crisis, techno-response-able narratives prevailed. Citizens and officials alike demanded more levees, reinforcements, and modernization. These infrastructures embodied promises of safety and control, yet they simultaneously stirred unease. In the chronic conditions of permacrisis, they became symbols of both reassurance and latent threat. They also fueled the spread of rumors and conspiracy theories—including alleged intentional discharges from nonexistent Czech reservoirs; weather manipulation via G5 technologies or chemical spraying; and even claims of deliberate negligence in water management, such as delaying reservoir drainage. Though unsubstantiated, such narratives thrived in a climate of uncertainty and infrastructural ambiguity.

The 2024 flood was managed through a highly technologized framework at national and local levels. For the first time, IMGW’s meteorological forecasts and flood models played a central role, while systems like Hydroportal and ISOK struggled under user load. This revealed how flooding is already embedded in regulatory and technical regimes, shaped by decades of engineering-centered preparation.

Rather than a simple binary of success or failure, flood infrastructure emerged as a space of negotiation between policies, practices, and the unpredictable dynamics of water. These systems evoke both trust and fear: praised when they hold, but deeply distrusted in moments of strain. In the aftermath, techno-response-able solutions dominated public discourse, prompting renewed calls for levees, upgrades,

and expanded hydraulic control. However, in this discourse, the living agents of eco-response-ability—the non-human actors in the ecosystems—were largely overlooked, undervalued, or even blamed and attacked, despite their crucial role in flood mitigation.

SILENCED ECO-RESPONSE-ABILITIES

The 2024 flood wave ended quietly, dispersing into the wetlands of the Ujście Warty National Park, which estimates suggest can absorb up to 250 million m³ of water¹⁶ (exceeding the capacity of Poland's flagship Racibórz Reservoir).¹⁷ Despite this remarkable event, the role of wetlands went largely unnoticed in mainstream narratives, aside from a few voices (e.g. Szymczak 2024) that emphasized scientific statements confirming that restored wetlands are not just buffers against flood and drought, but vital carbon sinks in the fight against CO₂ emissions (Kotowski 2021a, 2021b). Indeed, wetlands effectively shielded the West Pomeranian Voivodeship from the peak of the flood. A similar role was played by the Połupiński and Dębie polders, which together retained over 40 million m³ (Ilona Biedroń prezentacja 30.04.25, Krosno Orzańskie).¹⁸ However, the water did eventually reach villages such as Osiecznica and Stary Raduszec, situated in this natural floodplain of the Oder and Bóbr rivers, despite the physical proximity of the polders.

The hydromorphology¹⁹ of rivers was equally overlooked. When allowed to meander, rivers retain water and slow runoff. But small streams and hill-fed systems remain heavily engineered by being straightened, concreted, and stripped of vegetation. Though presented as erosion-control or safety measures, such interventions often worsen flood risk by accelerating water flow and reducing natural retention (Gościński and Wiekiera 2024; Pawlaczyk 2020). The natural hydromorphological dynamic is systematically abandoned in favor of engineered “safety” that ironically enhances flood risk. Yet this is precisely the path people tend to choose, especially in the aftermath of disruptive events like flash floods. Once internalized at the local

¹⁶ Data is cited after official “Ujście Warty” National Park website, <https://pnuw.gov.pl/aktualnosci/dlaczego-mokradla-sa-wazne-w-czasie-powodzi> (accessed 10.10.2025).

¹⁷ Racibórz Reservoir has the capacity to retain 185 million m³, according to Wody Polskie: <https://www.gov.pl/web/wody-polskie/zbiornik-raciborz-moze-przechwycic-fale-z-powodzi-tysiaclecia#:~:text=Zbiornik%20Racibórz%20Dolny%20to%20największy,przechwycenie%20fali%20z%20Powodzi%20Tysiąclecia> (accessed 10.10.2025).

¹⁸ The meeting description and the map of floodplains are available on the official IMGW website: <https://stopsuszy.imgw.pl/serwis-renaturyzacja-imgw-kluczem-do-budowy-strategii-i-dokumentow-planistycznych-w-gminie-krosno-odrzański/> (accessed 10.10.2025).

¹⁹ Hydromorphology refers to the physical characteristics and dynamics of water bodies—such as rivers, lakes, and coastal areas—including their shape, flow patterns, sediment transport, and interaction with surrounding landforms. It plays a key role in determining ecological health and habitat conditions within aquatic ecosystems, and flood and drought prevention or mitigation.

level, this reactive preference feeds into policy-making, reinforcing systemic vulnerability to permacrisis by prioritizing short-term, and point-concentrated infra-structural fixes.

Another missing ally was the forest. Despite decades of scientific evidence, water-retention forests are rarely acknowledged by public opinion as part of the flood control alliance, even as their humus-rich soils and deep roots absorb and stabilize runoff. Juliusz Twaróg (1984, p. 21) demonstrated that forest soil absorbs 1 dm³ of water in 1–2 minutes, compared to 97 minutes on cultivated fields. Forestry policies prioritize timber over retention, as highlighted by Jędrzej Winiecki (2024) are stripping mountain regions of their natural defense, they impair a biological “sponge” that constitutes a mechanism against extreme rainfalls.

Beavers, too, became scapegoats. When levees weakened, blame was variously placed on national water management institutions, such as Wody Polskie (Polish Waters), or wildlife. In one case, the military was dispatched to scare off beavers with firecrackers. The matter reached the desk of Prime Minister Donald Tusk, who, when choosing between “love for animals and public safety,” sided with the levees, despite the species being legally protected. Meanwhile, conservationists from Nasz Bóbr (Our Beaver) and ecologists like Andrzej Czech (2024) clarified that burrows in levees are more often caused by foxes or rodents and advised mesh reinforcements. The temporary presence of beavers on embankments was likely due to their own habitats being flooding. Their dams, on the other hand, create wetlands that slow water flow and soften flood peaks along smaller tributaries. Thus, beavers were presented as yet another non-human ally in the fight against both drought and flooding—a quiet and misunderstood actor in ecological response-ability. Nonetheless, under normal circumstances, they are treated by inhabitants either as cute creatures to be observed without any particular function, or as pests (depending on the work people do on rivers and meadows and whether beavers interfere with that).

This flood, therefore, revealed more than hydrological pressures—it exposed the politics of visibility. While the ecosystems functioned—their wetlands absorbed, rivers meandered, forests retained, and beavers buffered—their role remained marginalized. Non-human actors were either silenced, removed, or framed as threats. Clear tensions emerged between the discourse in favor of techno-solutions and the advocacy for eco-response-able strategies, often dismissed as *ekooszołomstwo* (“eco-madness”). These tensions play out between two competing framings: one that upholds the illusion of total control over floods—treating them as isolated events to be stopped—and another that sees them as systemic, chronic phenomena requiring caring, relational, and response-able thinking, inclusive of non-human agencies in the co-creation of resilience.

CONCLUSION: RETHINKING THE HOME IN THE TIME OF PERMACRISIS

The 2024 flood in Poland highlighted a persistent pattern: public and institutional foci gravitate toward techno-response-abilities (dams, levees, and IT models), while military coordination dominates both action and imagination. These infrastructures promise protection, offer spectacle, and bolster political legitimacy, and their performance is closely watched and glorified when successful.

Meanwhile, the quieter effectiveness of ecosystems—wetlands, floodplains, and pol-ders—unfolds largely in silence. These systems absorb excess water, delay runoff, and reduce peak flood levels, and their effectiveness extends into periods of drought. In fact, they respond dynamically to the conditions of permacrisis. Yet their contributions are rarely celebrated, often overlooked, and almost never included in decision-making processes as equal actors. Their invisibility is structural, not incidental.

This asymmetry reflects a deeper paradox embedded in the very terms used to frame such debates that becomes apparent when reframed through an *oiko-logical* perspective. Both economy (*oikonomia*) and ecology (*oikologia*) originate from the Greek *oikos*—household, dwelling, place of shared inhabitation. Yet in practice, it is the logic of *oikonomia*—focused on control, growth, and short-term security—that systematically overrides the knowledge-based care of *oikologia*. As Ulrich Beck (1992) noted, modern societies consistently prioritize the production of prosperity over the recognition or even perception of risk. Even policies framed as protective often narrow the definition of what constitutes the “household,” excluding rivers, forests, wetlands, and other non-human co-inhabitants.

Recent hydrological data confirm the limits of such a model. Under intensifying climatic conditions—accelerated evaporation, hardened soils, and compressed periods of rainfall—gray infrastructure alone becomes insufficient. Instead, long-term care through a catchment-based approach—one that considers the interconnectedness, flow, and velocity of all water bodies, along with the inclusion of non-human actors within the *oikos*—offers greater promise in the face of permacritical extremes. Such frameworks suggest that response-ability is no longer an exclusively human task, but a relational practice enacted across species, systems, and scales.

The current moment marks a contest over emerging responses and response-ability, raising critical questions about inclusion and exclusion across human and non-human lines. The proportion in which technical and ecological non-humans are integrated into policy frameworks will define the trajectory of flood and drought mitigation. This dispute is no longer technical, but political and ontological. In other words, Who is part of *oikos* in permacrisis?

Although all three mentioned modes are, in different ways, response-able—stretched over time and demanding spatial processing that entangles various paradoxes (such as the paradox of water’s trace or the ambivalence of hydrotechnical infrastructures)—they each already rely on long-term collaboration with water and more-than-human actors, well before the moment of the extreme event itself. Current tendencies suggest a persistent drift toward technical-responses, yet the ecological actors, often

undervalued, silenced, or erased, already perform essential hydrological functions. Whether these systems are granted recognition and agency within future governance structures remains open. The flood has exposed this imbalance; the climate crisis will continue to test it.

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FLOOD AS PERMACRISIS. RESPONSE-ABILITY, AND THE POLITICS OF WATER

Key words: flood, flood 2024 in Poland, eco-response-ability, techno-response-ability, permacrisis, response-ability

This article analyzes the 2024 flood in Poland as an expression of permacrisis—a chronic, human-accelerated condition rather than a singular natural event. Based on ethnographic fieldwork in Lower Silesia and along the Oder River, it examines how anticipatory planning (Cons 2018) shapes emerging responses and forms of response-ability. These are framed through competing discourses: techno-response-abilities (infrastructure, state control), eco-response-abilities (wetlands, ecosystems), and grass-roots readiness as an embodied practice. While public attention favored spectacular techno-solutions, ecological processes operated quietly, yet effectively. The flood foregrounded fundamental questions of response-ability—who and what will be included in future adaptation strategies, and who or what will be excluded.

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