

MANAGING FLOODS ALONG THE CITARUM RIVER IN INDONESIA: HYDROSOCIAL GEOGRAPHIES AND COMMUNITY POLITICS IN BANDUNG BASIN, WEST JAVA

HAFID SETIADI, NURUL SRI RAHATININGTYAS, NURROKHMAL RIZQIHANDARI,
LARISSA FLEISCHMANN, JULIA OSTERTAG and JONATHAN EVERTS

With 7 figures and 1 table

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Summary: This article examines how hydrological extremes unfold at the local level and interact with socio-spatial inequality, focusing on recurrent flooding in West Java, Indonesia. In doing so, it contributes to a more nuanced understanding of how marginalized communities navigate and reshape unequal hydrosocial relations in urban contexts of the Global South. Drawing on qualitative fieldwork in the *kampung* (urban village) of Andir – a densely populated settlement in the Bandung Basin, often referred to as the ‘bottom of the bowl’ – we analyse how flooding is co-produced through state-led management strategies that prioritize large-scale infrastructural interventions and downstream protection, often at the expense of upstream communities. The aim is to analyse how people in Andir experience and cope with flooding events through social practices and political action. Bringing together literature on hydrosocial geographies and the concept of prefigurative politics, we show how residents respond to these conditions through collective action and community-based adaptation strategies. In particular, we identify three possibilities for prefigurative politics that emerge through grassroots action in Andir: community-led infrastructural interventions (e.g. improving local drainage systems), the creation of participatory discussion spaces such as *ngobrol pintar*, and the promotion of more care-full and relational understandings of the river. We argue that these actions not only address immediate flooding risks but also create spaces of empowerment by fostering collective identities and opening up political possibilities. In this way, they prefigure alternative socio-environmental futures while actively reshaping hydrosocial relations in the present.

Keywords: Community resistance, community-based action, flooding risks, flood control, flood resilience, prefigurative politics, river infrastructure, hydrosocial geographies, socio-hydrology

1 Introduction: Coping with floods as a routine practice in Andir, West Java

For decades, the risk of flooding has haunted residents along the Citarum River and its tributaries during the rainy season. The drumming sound of rain hitting the metal roofs forces everyone in the *kampung* (urban village) of Andir¹⁾ into an anxious state of preparation. They must be prepared to evacuate to their upper floors or search for refuge with a neighbour. In spite of varying intensities and changing inundation patterns, flooding creates difficulties

and hardships for the residents of Andir almost every year. If the floodwaters do not recede for weeks, as in 2010 and 2016, their neighbourhood becomes isolated and their livelihoods disrupted; they can neither go to work to generate income, nor go to school or access public services. After the floods, people face the tiring, repeated task of cleaning up mud and debris and they must invest time and scant financial resources to fix damage. Over the past twenty years, this area has flooded annually for an average of two to eight weeks. Thus, for the residents of Andir, coping with floods has become an annual routine.

Although flooding is a common issue in this part of Java, the most populated island of Indonesia, the residents of Andir are disproportionately affected. This is partly due to the physiography of the area: Andir is commonly called the “bottom of the bowl” which alludes to its location at the lowest part of the Bandung Basin. It is surrounded by high mountains and near the confluence of the Citarum River and its two tributaries, namely the Cisangkuy and the

¹⁾ Although regarded as a ‘village’ in Indonesian terms, Andir is actually now a populous settlement with well over 30,000 inhabitants in the metropolitan area of Bandung, a provincial capital with over 2.5 million people. Since the 1980s, many labour-intensive industries were established around Bandung and Andir, especially textile and food manufacturers, and the in-migration of people was closely coupled with industrial growth. Almost 80 per cent of the working residents in Andir are employed in the informal and industrial sectors (BPS 2023).



Cikapundung. In the past, river overflows often inundated this area and formed tidal swamps with abundant vegetation (KOSASIH 2022). However, due to the pressures of urbanisation and industrialisation, settlements gradually encroached into the natural retention areas of the Citarum and its tributaries. With more than 34,000 inhabitants living in an area of only four-square kilometres, Andir is now densely populated, with the majority of the population living in small houses along narrow alleyways (Fig. 1).

The impacts and risks associated with flooding in Andir are also intrinsically coupled with the socio-economic situation of its residents, who are already in a marginalised and economically disadvantaged position. Andir is a telling example of a lower-class residential area, also known in Indonesia as a *kampung*. In nearby Malaysia and Singapore, “*kampung*” refers to rural villages, while in Indonesia it is used for the densely populated and poor urban neighborhoods (NEWBERRY 2018). MURRAY (1991) and JELLINEK (1991) illustrate how *kampung* are characterised by a form of urban life that is based on the close ties of residence. These social bonds are important for lower-class residents in order to integrate themselves into city life and the urban economy (PUTRI 2023).



Fig. 1: Narrow alleyway in Andir, an urban village or *Kampung*

Drawing on insights from qualitative fieldwork in Andir, this article discusses the practices and efforts of marginalised urban communities in Indonesia for building collective awareness and action in shaping their future amidst the pressure of constantly recurring flooding events. In the following, we will elaborate on how flooding co-produces the marginalised situation of *kampung* communities while simultaneously figuring as a moment of empowerment - politicizing and mobilizing residents to articulate their demands and take a stance towards the government. On the one hand, flooding causes the potential for lost income and financial burdens for people who reside close to the riverbanks and who are already in a deprived situation. Some residents in flood-prone areas have considered leaving their houses after flooding events, yet the economic situation often does not give them a choice. Land price depreciation makes selling houses in flood-prone areas harder (SHARMA 2024). Thus, these inhabitants have limited money to afford new houses and feel ‘stuck’ in Andir (NURDINI et al. 2017, SEEBAUER & WINKLER 2020, SHARMA 2024). Additionally, finding affordable housing in safer areas may not provide them with the same opportunities they previously had (AJIBADE & McBEAN 2014, SHARMA 2024). A strong sense of community and place attachment also makes leaving a difficult decision for many (BUCHORI et al. 2018, NURDINI et al. 2017, SEEBAUER & WINKLER 2020, WANI et al. 2022).

On the other hand, this article will also discuss how flooding can turn into a moment of productive encounter and politicisation for *kampung* communities when it is met by efforts to develop community adaptation strategies and organize in a way that allows community members to voice their political demands to the government. Drawing on the case of *Barudak Baraya Citarum Cisangkuy* (B2C2), a community-based organisation in Andir, we illustrate how the practice of coping with flooding can turn into a productive moment of empowerment for local residents. The adverse effects of flooding can become a space of opportunity for the community to bond together, so as to make their disadvantaged situation visible. It also allows them to organise and implement community-based measures to minimise the recurring risks associated with flooding.

This article builds on studies that have previously outlined how floods, as a particular form of human-water relations, constitute “socio-natural processes by which water and society *make and remake* each other over space and time” (LINTON & BUDDS 2014: 179). The aim is to analyse how people in Andir

experience and cope with flooding events through social practices and political action. When looking at the risks associated with flooding along the Citarum River, we also believe that it is crucial to also consider the wider social, economic and political context in this part of Indonesia. For this purpose, we connect studies on hydrosocial geographies (LINTON & BUDDS 2014, HURST et al. 2022, KARPOUZOGLOU & VIJ 2017, SWYNGEDOUW 1999) with the concept of prefigurative politics (JEFFREY & DYSON 2021, DYSON & JEFFREY 2016, MONTICELLI 2021, YATES 2021), which we conceive as helpful for conceptualising the political potentials of community-based action in the context of flood management.

Empirically, the focus lies on the community responses to recurrent flooding in the *kampung* of Andir in the District of Baleendah, which is located in the regency of Bandung, West Java, Indonesia. In Section 2, we elaborate on a conceptual framework that approaches flooding in urban contexts of the Global South through its unequal hydrosocial relations, while highlighting the potentials to bring about positive change through prefigurative politics. In Section 3, we present the research design of our case study. In Sections 4 to 6, we present findings from our empirical case study in order to explore the unequal geographies of flood management along the Citarum River. We then examine the community's perspectives on the government's flood management along the Citarum river. Finally, we highlight the strategies of the local community in its search to turn the recurring experience of flooding into a moment of empowerment through joint action so as to increase flood resilience in the area (Section 6). Essentially, our research discusses if and how prefigurative politics can empower residents to take action to secure their future, an issue that we will conclude with in the final section.

2 Conceptualising the unequal hydrosocial geographies of flooding

Recent studies employ differing perspectives to understand human-water relations in areas that are increasingly prone to flooding due to planetary changes (DOUGLAS et al. 2008). On the one hand, socio-hydrology – which leans towards hydrology and the natural sciences – centres around the understanding of coupled human-water systems and examines the outcomes of water management and governance processes through statistical modelling and quantitative approaches (DI BALDASSARRE et al. 2019,

ROSS & CHANG 2020). On the other hand, hydrosocial theories – which build on critical social science perspectives, such as political ecology – propose a fundamental re-thinking of space, water, and society. For the purpose of this article, we mainly draw on studies that use the latter, however we do believe that our considerations might have the potential to also inform studies that use the former approach. In the first part of this section, we scrutinise existing studies on hydrosocial relations with a specific focus on how they might inform studies on to explore flood management practices. In the second part, we suggest that the existing literature on hydrosocial geographies might be fruitfully expanded upon by integrating the concept of prefigurative politics.

2.1 Hydrosocial geographies of flooding

Drawing on seminal insights from SWYNGEDOUW (1999; 2004), STRANG (2004) and LINTON (2010), geographers have worked with the concept of the *hydrosocial cycle* to conceive of human-water relations as “socio-natural processes by which water and society *make and remake* each other over space and time” (LINTON & BUDDS 2014: 179). Taking this co-production of water and society a step further, the concept of ‘waterscape(s)’ proposes thinking in terms of hybridity; water and social power are no longer solely linked externally, but also internally as socio-nature hybrids that constitute each other (LINTON & BUDDS 2014, HURST et al. 2022, KARPOUZOGLOU & VIJ 2017, SWYNGEDOUW 1999). The use of hydrosocial theories aims to open up the ontological and epistemological dimension of human-water relationships; by placing water within hydrosocial relations of various kinds, (potential) sites for change are identified (LINTON & BUDDS 2014). Hydrosocial theories point to the fundamental social construction and production of water. They provide crucial instruments for tracing the underlying construction mechanisms of water, space and society by disclosing their entanglement with processes of power and domination.

Building on these insights, a growing body of scholarly work within geography and neighbouring disciplines looks at the sensorial, affective, experimental, and imaginary dimensions of human-water relationships (LINTON & BUDDS 2014, LINTON 2010, NEIMANIS 2017, ORLOVE & CATON 2010, STRANG 2004, KRAUSE & STRANG 2013). As LINTON & BUDDS (2014: 174) argue, such perspectives weave together water's material and discursive dimensions and thus draw attention to “how people's material, sensory

and imaginative interactions with water become encoded in discourse as well as in water itself". STRANG (2004) argues that the socio-cultural meaning of water is imbued with both experience and embodiment, both of which are rooted in specific physical and cultural contexts. Or, as LINTON (2010: 3) states: "Water is what we make of it."

Moreover, water is hard to grasp both empirically and conceptually: it flows through oceans, soils, lakes, streams, and rivers, but also through sewers, treatment plants, pipes, and households. It is highly mobile - traversing and co-constituting "multiple spaces" simultaneously (BEAR & BULL 2011: 2262). This constant spatial mobility of water is also a movement between contrasting and, at times, contradictory material and sensorial conditions - from a "still" to a "roaring flood" - each being imbued with its own set of social, cultural, and political meanings (STRANG 2004: 49).

What follows from this perspective of hydrosocial geographies is that floods are not only natural events, but also socio-cultural phenomena: a co-production of social, technical, and natural elements and processes (WALKER et al. 2011: 2306). In places that are increasingly prone to flooding, such as in Andir, the geographies of flooding are thus immanently unequal (OULAHEEN 2016). Building on this, a number of studies look at the unequal distribution of vulnerability to flooding, while discussing adequate methods of risk assessment (BALICA et al. 2012, NASIRI et al. 2016, REHMAN et al. 2019). Focusing mainly on urban areas in the Global South, these studies illustrate how marginalised urban communities are the most vulnerable to the risks associated with flooding (AMOAK & FRIMPONG BOAMAH 2020; 2015, DOUGLAS et al. 2008, FEW 2003). For instance, exploring the vulnerability of informal settlements to flood hazards in an African city, AMOAK & FRIMPONG BOAMAH (2020: 372) show how flood vulnerability is contingent on the socio-political and ecological context in which it occurs:

"[...] vulnerability to urban flood hazards in Global South cities is rooted in the complex processes and interactions between environmental changes and socio-political processes explained by their local contexts, history of development and international/global influences." (AMOAK & FRIMPONG BOAMAH 2020: 372)

DOUGLAS et al. (2008) also stress the importance of focusing on the marginalised urban communities' own perception of flood vulnerability, risk assessment, and possibilities for joint action.

Thus, in the case of Andir, recurring flooding experiences may illustrate how the global "overlapping crises" (SULTANA 2021) of climate change play out on the local level, where they co-produce and reconfigure the everyday practices of urban life in Indonesia. As SIMONE (2010) argues, in many Southeast Asian cities, the urban poor navigate the hardships of city life through informal social infrastructures—networks of cooperation, improvisation, and mutual support that compensate for the failures of formal systems. Flooding in Andir, we argue, is therefore not merely a disruption but a constitutive feature of everyday urbanism, where residents continually rebuild, reorganize, and renegotiate their spaces of living. This connects with NEWBERRY (2018) who shows how *kampung* life is governed through intimate and domestic forms of care that blur the boundaries between state, family, and community. In flood-prone areas, these neighbourhood networks become the primary institutions of survival, mediating between state neglect and residents' needs. Meanwhile, KUSNO (2018) situates these dynamics within the inequalities produced through "politics of infrastructure," where state-led projects of city development and water governance simultaneously produce marginalising effects for *kampung* residents, while framing their persisting demands in precarious landscapes as both a social problem and a political inconvenience. The recurring flooding events thus intensify uneven geographies of urban citizenship in Indonesia: water management is extricably coupled with questions relating to who is allowed to inhabit risk, whose infrastructures are maintained, and whose lives are rendered improvisational. Flooding, therefore, potentially exposes the contradictions of urban governance in Indonesia, where survival amidst hydrological extremes depends on the everyday practices of *kampung* communities and their ability to navigate its destructive effects.

Building on these specific coping capacities of *kampung* communities, we argue that existing literature on hydrosocial geographies of urban flooding in the Global South risks overemphasizing the vulnerability of marginalized communities, potentially obscuring their agency and adaptive practices. Many studies focus almost exclusively on how flooding co-produces community's vulnerable position, thereby risking a one-sided perspective that produces images of local communities as passive victims. This perspective may inadvertently reinforce their marginalised status while failing to attend to possibilities for empowerment and agency. We therefore believe that studies on hydrosocial geographies must also

consider how recurrent flooding experiences simultaneously serve as a catalyst for political engagement and resistance, allowing local communities to assert agency and actively shape their urban futures amidst the new normal of hydrological extremes.

Adding to existing studies on the geographies of hydrosocial relations, this article thus centers the coping strategies and political opportunities that arise for marginalised urban communities that are disproportionately affected by flooding in West Java, Indonesia. In order to conceptualise the political potentials of community practices amidst the pressure of constantly recurring flooding events, we suggest expanding the literature through the concept of prefigurative politics. As we argue, such a move is enabling in its potential to not only highlight the vulnerability of marginalised communities in the Global South to recurring flooding, but also to acknowledge their capacity for resistance and political agency.

2.2 The prefigurative politics of managing floods

The concept of prefigurative politics goes back to Carl BOGGS' (1977) assessment of the anarchist movement in the early 20th century. He conceptualises prefigurative politics as a logic of political action that resists or confronts state domination through a set of social practices aimed at implementing change on the ground. Since the 2000s, the concept of prefigurative politics has achieved renewed attention from human geographers and other social scientists (JEFFREY & DYSON 2021, DYSON & JEFFREY 2016, MONTICELLI 2021, YATES 2020). For instance, in the context of events related to the *Occupy Movement* around the globe, spaces have become sites of communal, inclusive, and democratic practices – from growing vegetables to providing health care –, practices that might be conceptualised as instances of prefigurative politics (GRAEBER 2013, MONTICELLI 2021, PETRICK 2017).

Drawing on this, we argue that prefigurative politics offer an alternative approach to collaborative social change and political action (CORNISH et al. 2016, RAEKSTAD 2018, TÖRNBERG 2021). If traditional approaches of social change rely on state intervention, then prefigurative politics allows for the formation of collaborative social participation in achieving change (MASON 2014, REINECKE 2018, TÖRNBERG 2021). Prefigurative politics encompass social movement strategies that prioritise participation, equality, transparency, and direct action toward

societal change; everyday communal practices and interactions are seen as a central contribution to the formation of desired futures (CORNISH et al. 2016, JEFFREY & DYSON 2021, YATES 2015; 2020). JEFFREY and DYSON (2021: 643) argue that prefigurative politics primarily centre around the production of 'counter futures' from below, practices enacted by and through marginalised people and minorities towards a vision of change.

When looking at the management of floods in urban contexts of the Global South, we think that it is important to consider how collaborative and community-based politics occur in an unequal power structure that is defined through the domination of government and business interests – rather than focusing solely on the negative impacts of flooding on already marginalized urban communities. These unequal power relations often counteract the development of inclusive policies that focus on recognising social diversity (XU & TAKAHASHI 2021). Yet, there are urban metabolic cracks which point to the failure of existing policies in absorbing the socio-ecological impacts of urbanisation and industrialisation (HEYENEN et al. 2006). We maintain that these metabolic cracks become particularly visible if we look at the impact of recurring floods in the *kampung* of Andir. However, community-based action provides opportunities for alternative future-making by attempting to cope with these cracks and make them visible through prefigurative politics – something we will illustrate in more detail in the following sections.

3 Andir as the 'bottom of the bowl': Case study and research design

Our case study looks at the *kampung* of Andir, an area under the administration of the Baleendah District in the Bandung Regency of West Java, Indonesia (see Fig. 2). Andir is a place that is very vulnerable to flooding due to its topographical location. Like the city of Bandung, it is part of a large alluvial plain covering an area of 2,333 square kilometres surrounded by high mountains (RIFAI et al. 2018, SATRIYO et al. 2025). Formed from an ancient lake, the plain is known as the Bandung Basin (LAUDER et al. 2023, TARIGAN et al. 2016). It lies at an average altitude of 778 metres above sea level and hydrologically, this area is the upstream part of the Citarum River. This river is the largest and most important watercourse in West Java Province (RIYADI et al. 2020, MARSELINA 2022). From its spring on Mount Wayang (2,182 metres above sea level) – one of the

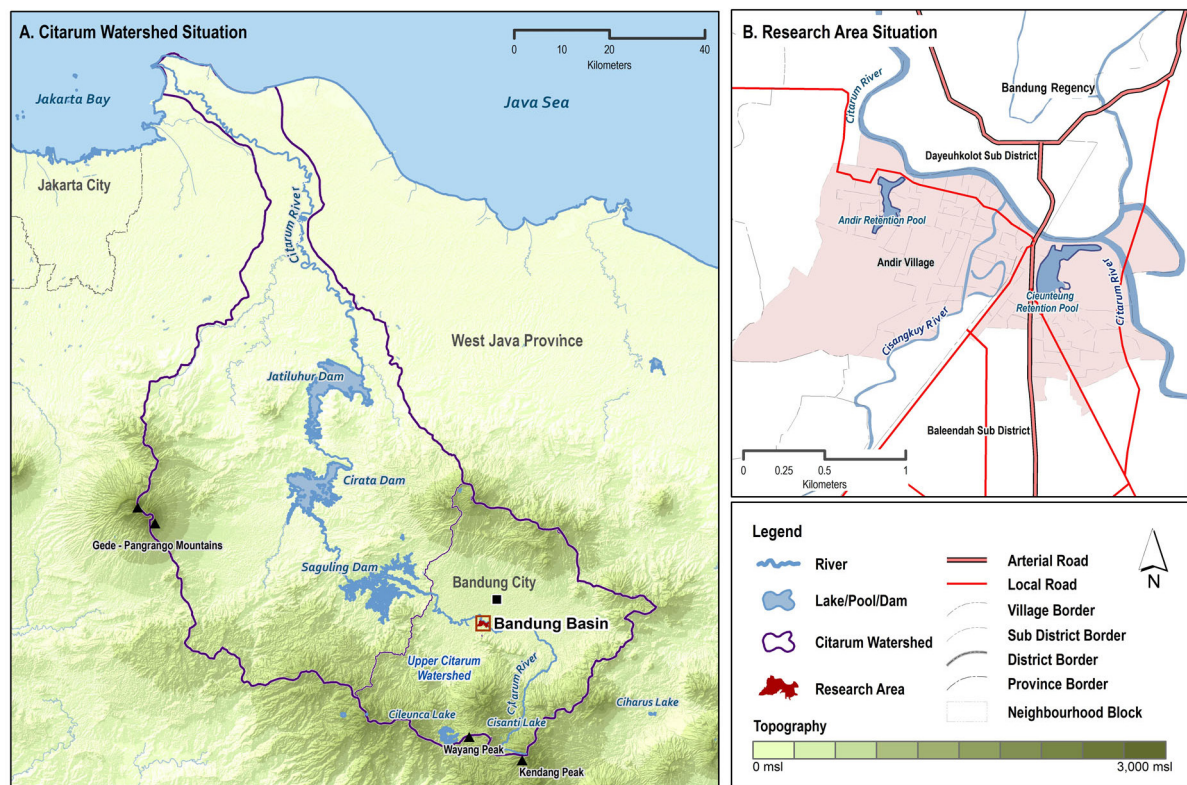


Fig. 2: Study area

volcanic peaks located to the south of the basin – it flows 270 km northward towards the Java Sea. When it enters the Bandung Basin, it meanders and meets its tributaries, which flow centripetally from the surrounding mountains.

Bandung was largely set up as a colonial city in the style of a garden city, mostly to the North of the basin. However, rapid industrialisation and growth of the city after the independence of Indonesia led to urbanisation of the more southern parts of the bowl, which are more prone to disasters, especially flooding. The influx of people, mainly as workers in the factories, led also to the development of more informal settlements that are also more vulnerable to disaster. Of these urban neighbourhoods constantly at risk, Andir occupies the most problematic location.

As the “bottom of the bowl”, *kampung* Andir is located at the lowest part of the Bandung Basin near the confluence of the Citarum and its two tributaries, the Cisangkuy and the Cikapundung. In the past, river overflows that often inundated this area formed tidal swamps (KOSASIH 2022). The local etymology of Andir and several nearby places, such as Bojongmalaka and Rancamayar, is related to natural agricultural waterlogging (KOSASIH 2022, RUSPANDI

& MULYADI 2014). Large rice fields dominated the area until the mid-1970s but continued to shrink to small plots in the 1980s and 1990s alongside the rapid growth of industrial areas and the urban settlements overspilling from Bandung City (BUDIMANSYAH et al. 2018, KOMPAS 2011).

With growing settlements, less space for tidal swamps, and increasing numbers of residents living in the area, flooding has become a recurring issue and more and more people are affected by flooding on a regular basis (cf., Fig. 3 and Fig. 4)

In our fieldwork, we could easily find evidence of the recurring floods in the area, such as the remnants of flood mud around people’s houses and a written note on the wall of a house, recording the historical heights of floods in Andir (Fig. 5). The inundation area has doubled since 2005. During the 2010 floods, up to half of the 7,811 households in Andir had to live amidst flooding for months, while residents had to survive without electricity for weeks (BUDIMANSYAH et al. 2018, ANGGRAINI & KARTONO 1996). Floods with a recorded water level of four meters submerged an area of 2,313 square kilometres, destroyed houses, forced people to flee, damaged important buildings and wrecked people’s livelihoods (BUDIMANSYAH et al. 2018, ANGGRAINI & KARTONO

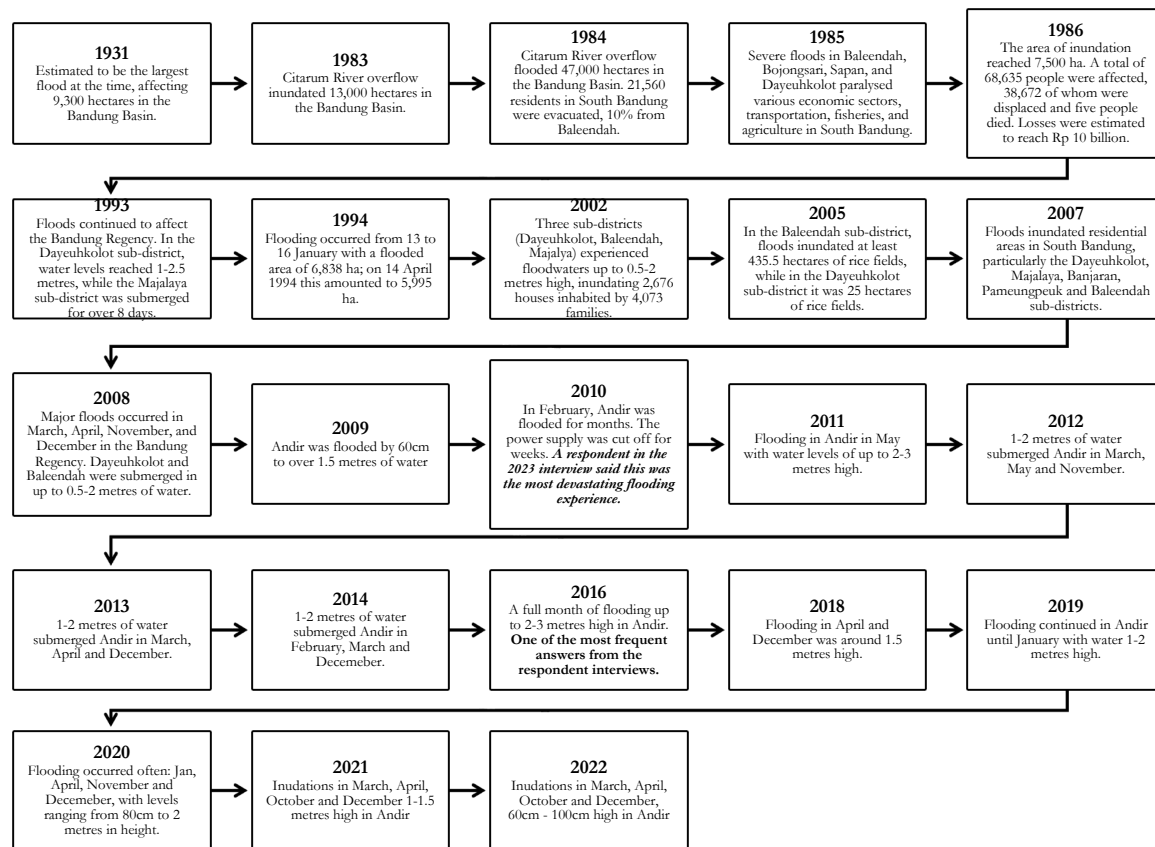


Fig. 3: A timeline of the flooding in the Bandung Basin since 1931. Sources: BUDIMANSYAH et al. (2018), ANGGRAINI & KARTONO (1996)

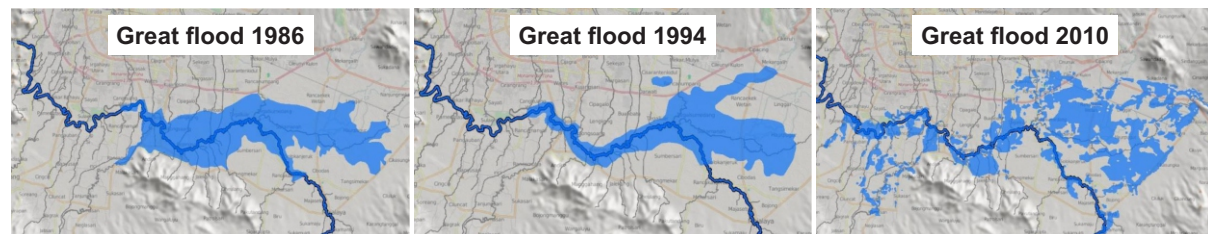


Fig 4: Three major floods in the Bandung Basin. Source: BBWS (2023)

1996). In 2016, this area was again flooded for almost one month with a recorded water level of three metres.

We employed a qualitative methodology for examining the hydrosocial geographies of flooding in this part of Indonesia. Due to its extreme vulnerability to recurrent flooding, Andir became our main case study. The authors have previously conducted research on flood mitigation in the Andir area, building from tacit knowledge of the context in this area (U-INSPIRE INDONESIA 2019).

Data collection involved in-depth interviews with key informants involved in the management or experience of flooding in the area, conducted

between the latter half of 2023 and the first half of 2024. Our research builds on 35 interviews with long-term local residents, which we selected based on the criterion that they live in the flood-prone area and experienced flooding. In order to gain a multi-perspective view, we also conducted expert interviews with government actors including the River Region Development Agency (BBWS Citarum) and the central government's operational unit responsible for the management of water bodies and infrastructure (rivers, irrigation, and dams). Additional insights into regional planning and maintenance were gathered from the Public Works Departments at both the Bandung Regency and West Java Province lev-



Fig. 5: Abandoned house (left) and handwritten record of flood events every year (right) in the *kampung* of Andir

els. Community voices were represented by the local advocacy group, Barudak Baraya Citarum Cisangkuy (B2C2), a key local actor in flood management initiatives. Interviews also targeted influential local figures, such as the heads of neighborhoods (*RT* and *RW*) and the head of the youth organization (*Karangtaruna*) in the flooded areas.

The interviews followed a flexible, semi-structured design based on a thematic guide that oriented, rather than strictly determined, the conversations. This guide was developed to connect the research questions with participants' lived experiences and narratives. Accordingly, the interviews were organized around three broad thematic areas: (I) hydrosocial contexts and inequality, focusing on how participants perceive and experience flood-related vulnerability and marginalization; (II) community action and future alternatives, exploring everyday practices, collective responses, and locally imagined pathways of change; and (III) power relations and institutional interfaces, examining how participants navigate, negotiate, or contest interactions with state actors and formal institutions. This qualitative approach allowed themes to emerge inductively while still engaging key analytical concepts such as lived experience, uneven geographies, and practices of

transformation. Table 1 provides an overview of the guiding themes for the in-depth interviews conducted with different interlocutors.

The fieldwork was conducted over the course of one year and comprised multiple visits to the research site. An ethnographic stay in the home of a resident, which lasted ten days, provided deeper insights into the socio-environmental burdens, local risk perceptions and human-water relations in the area. Given the reduced intensity of flooding during this period, most site visits occurred in dry conditions. However, several visits also coincided with rainfall, allowing for participant observation of community activities in flood management, such as operating local pumping houses and monitoring river water levels.

In addition, participant observations were conducted along river infrastructures (pumping houses, polders, retention ponds, sluice gates) as well as with community activities in environmental management, including communal clean-up (*kerjabakti*), drainage maintenance, waste disposal practices, and local interaction with the river and other water bodies. Conversely, visits to government institutions were specifically aimed at gathering information on recent flood events, flood control planning, maintenance mechanisms

Tab. 1: Overview of guiding themes for qualitative interviews

Interlocutors	Area of Interest	Guiding Themes in Interviews
BBWS Citarum (Central Gov. Agency)	Policy and Infrastructure	Flood management priorities, technical rationale for normalisation and retention projects, and formal engagement mechanisms with civil society.
Bandung Regency Public Works Dept. (Local Gov.)	Local Governance and Implementation	Inter-agency jurisdictional boundaries (e.g. waste), local infrastructure maintenance, and policy responses to urbanisation and relocation protests.
B2C2 (Local Community Organisation)	Collective Action and Advocacy	Organisational motivation, use of tactics like <i>Ngobrol Pintar</i> (<i>Ngopi</i>) for political visibility, critique of government costs, and challenges of co-optation.
RT/RW Chairmen & Karangtaruna Chairman	Local Adaptation and Institutional Roles	Management of chronic flood impacts on livelihoods, implementation of neighbourhood-level adaptation strategies, and local leadership during crises.
Residents of flood prone area and experience with flooding	Perception and Adaptation	Lived experience of unequal flood burden, perceptions of injustice regarding mud/sediment sources, reasons for remaining in flood-prone areas, and changes in human-water relations.

for flood control infrastructure, and the formal mechanisms for involving local communities in flood mitigation efforts.

The interviews with local community members were conducted in the language Bahasa Indonesia, often supplemented by the Sundanese language. Local research assistants facilitated the interpretation and translation of local Sundanese terminology. Interviews with government and institutional bodies were conducted directly by the lead researcher in Bahasa Indonesia. Moreover, we also analysed secondary data from government agencies, scientific articles, and newspapers that reported on flooding in the area.

4 The unequal geographies of flood management along the Citarum River

Various scholars have pointed out how flood control measures can have adverse effects and may increase rather than decrease the long-term risk of flooding in certain areas (SCOLOGIG & DE MARCHI 2009). Studies that build from political ecology thus often emphasize how power inequalities and asymmetrical relations are inscribed into the socio-natural composition of flooding (e.g. WALKER et al. 2011). This is also the case for government strategies in coping with flooding, which can aggravate existing power relations and inequalities. River straightening and drainage projects seeking to reduce the impact of flooding in certain areas, for example, can lead to an increased flood risk in other parts of the river due to reduced space for runoff (JUNGER et al.

2022). In the same context, the construction of river embankments can have unforeseen impacts, which in turn require additional protection to address the increased risk of flooding (HALLEGATTE 2017). Building on works on hydrosocial relations that have stressed how questions of power are inscribed into flood protection measures and related infrastructure, this section elaborates on the unequal geographies of flood management along the Citarum river. Drawing on empirical findings, we also point out how flood protection measures did often not yield the expected outcomes and brought unanticipated effects for the residents on the ground in the *kampung* Andir.

In Indonesia, river management lies in the hands of the central government, represented by the Ministry of Public Works and Housing. The ministry has a technical operational unit at the regional level called the River Basin Development Agency or *Balai Besar Wilayah Sungai* (BBWS) to manage rivers territorially within a watershed boundary. The agency is effectively an extension of the central government. In this system, the central government is represented in the region by the provincial government, whose authority covers the administrative territory. Thus, flood management is achieved by combining a river-based sectoral approach and a regional-based administrative approach.

The central government began focusing on the Citarum River in 1994 through a collaboration with the Japan International Cooperation Agency (JICA). From 1994 to 2007, the agency carried out various structural interventions to prohibit flooding through a so-called “River Normalisation Programme”. Among Indonesian experts, “river normalisation” is

a standard method for handling floods caused by river overflows (MAHMUD et al. 2019, TUNAS & HERMAN 2019, YATSIRIB et al. 2021). The aim is to increase flow speed by straightening the river channel, building concrete embankments, or dredging the riverbed. The claim was that these methods would allow rainwater to be discharged as much and as quickly as possible into the estuary (LECHOWSKA 2017). The “River Normalisation Programme” resulted in the straightening of a 68.8-kilometre stretch of the Citarum. Four years later, the agency continued straightening the remaining 44.3-kilometre. Figure 6 shows changes in the channel pattern of the Cisangkuy River in Andir due to the river straightening, which began in 2002.

Another flood management strategy that was implemented by the government after the 1986 to 2004 floods was the annual dredging of the Citarum

and Cisangkuy riverbeds. The increasing rate of erosion from upstream was seen as a major challenge as it contributed to blocking and narrowing the riverbed. This was accompanied by the accumulation of rubbish and waste from various activities on the riverbanks. The difficulty here is that the issue of waste accumulation in rivers falls under the authority of the regency government, not the national agency or provincial government. However, the agency estimates that more than 20,000 tonnes of waste are thrown into the river per day, and most of it is not managed by the current waste management system at the regency level (TARAHITA & RAKHMAT 2018, ROBYANTI 2020). This is also reflected in international media articles which regularly report on the accumulation of plastic waste in the Citarum River, thus, perpetuating a negative and problematic image of the area (TARAHITA & RAKHMAT 2018, ROBYANTI

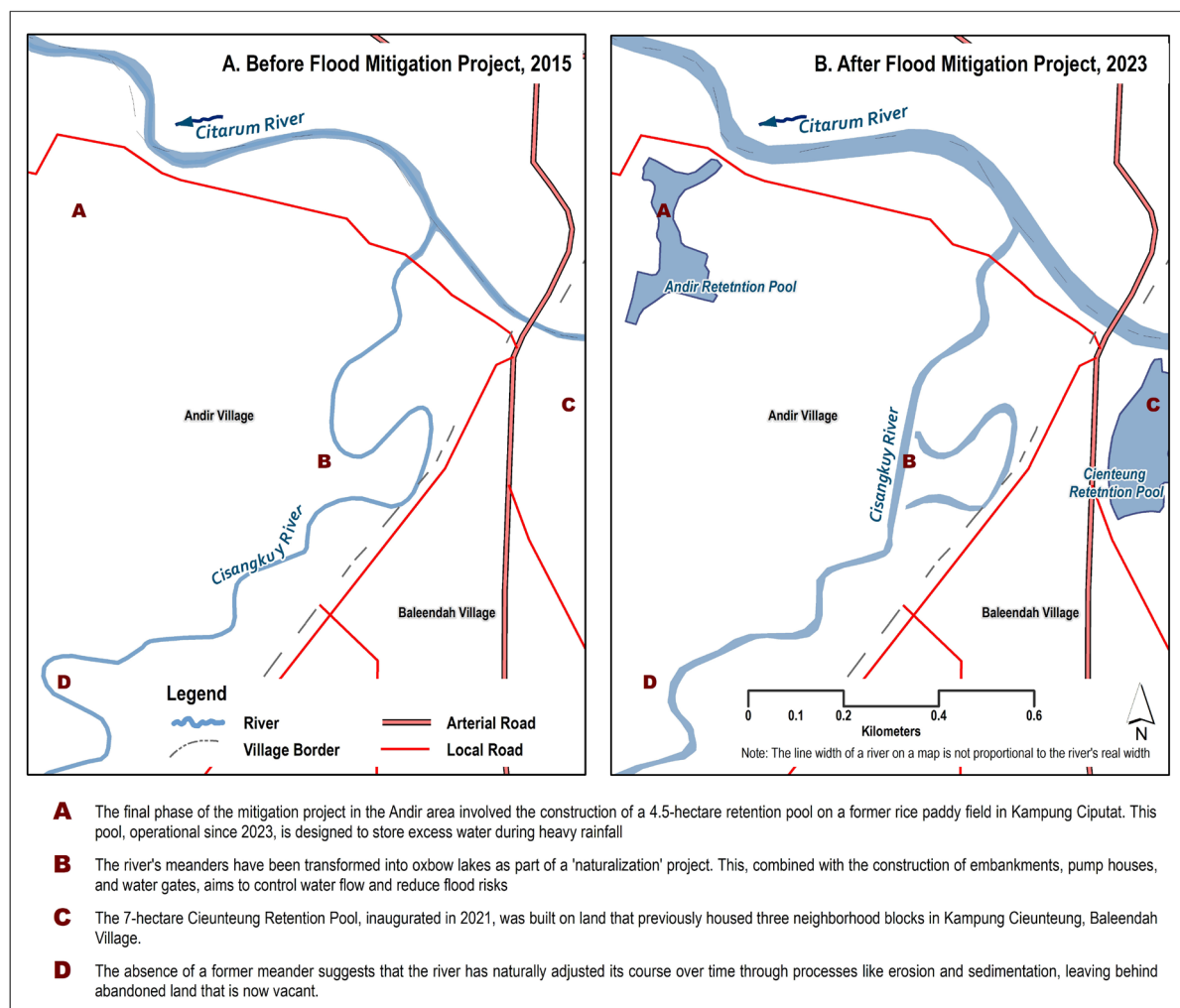


Fig. 6: River straightening near the kampung of Andir. Sources: Data analysis from an interview with BBWS (2024).

2020). Yet, our fieldwork found that Andir residents refused to be labelled as the ones who throw rubbish into the Cisangkuy River. According to them, the main sources of waste are household, trade, and industrial activities outside of the *kampung* of Andir, especially places that are “further upstream”. The residents told us that they prefer to burn rubbish rather than throw it into the river.

Since 2015, the central government has increased its attention to the *Citarum Hulu* (Citarum upstream) in the Bandung Basin, which had turned into a major hotspot associated with flooding risks. This shifting of focus from downstream to upstream can be explained by the government’s increased awareness of the basin as a flood-prone area, coupled with the unequal effects of its initial focus on improving flood resilience in downstream areas.

One of the strategic projects for *Citarum Hulu* was the construction of the Cisangkuy Floodway between 2015 and 2019, the construction of the 230-meter-long Nanjung Tunnel at Curug Jompong. In addition, in order to cope with the Citarum overflows that inundate residential areas in Baleendah, including Andir, the government agency built two retention ponds, namely Cieunteung and Andir Pond. The Cieunteung has been in operation since 2018, the Andir Pond, which started operating in December 2021. It is designed to protect around 5,200 families from annual flooding. However, as we will illustrate in Sections 5 and 6, these ponds have been met with controversial responses by the local community (TRIUSODO 2022).

In 2008, the Indonesian government also launched the *Citarum Integrated Water Resources Management Investment Programme* (ICWRMIP), funded by a loan from the Asian Development Bank (ADB). The programme, designed for 15 years, aims to improve river quality, solve environmental problems, provide quality raw water supplies, and control flooding. However, until the end of 2020, the programme focused mainly on the construction of the 54-km West Flood Canal from Karawang to Bekasi with the aim of improving drinking water quality in the capital city of Jakarta and to control flooding of the Citarum River further downstream (ADB 2022).

Yet, residents of the Bandung Basin, and particularly those in the *kampung* of Andir, have benefitted little from these programmes. On the contrary, we argue that flood management policies implemented by government agencies have co-produced unequal hydrosocial relations along the Citarum River by disproportionately prioritising downstream areas of the Citarum River as well as large-scale infrastruc-

tural interventions. Government strategies continue to center on river normalisation, dredging and the construction of reservoirs, while the needs and views of affected communities remain largely overlooked. Although the central government claims to have reduced flooding along the Citarum River between 1994 and 2007, especially flooding in the downstream areas known as the *Citarum Hilir*, the benefits seem to have accrued primarily to the residents of the national capital of Jakarta and farmers in coastal areas. Meanwhile, upstream communities face challenges due to degraded water quality (MARSELINA et al. 2022) and excessive groundwater exploitation (TIRTOMIHARDJO 2016), which causes the potential for land surface subsidence (GUMILAR et al. 2015, TIRTOMIHARDJO 2016). Against this backdrop, dissatisfaction with flood management among residents in the *kampung* of Andir has grown steadily.

5 Community perspectives on flood management along the Citarum River

Residents in Andir feel disproportionately affected by flooding. This is indicated by statements such as “it rains elsewhere, but we are the ones who get flooded”, which were frequently uttered by residents during our fieldwork. Likewise, when residents talked about ‘mud’, they also refer to the unequally shared burden of flooding. As one of our respondents reflects:

“Where does the mud come from? What I’m sure of is from upstream. In the past, when the forest on Mount Wayang was still dense, the water entered Lake Cisanti. Then it was distributed from the lake to the river... imagine now when the forest is bare. Rainwater will flow everywhere. That’s why there’s a lot of sediment and mud.” (*Informal worker, 43 years old, kampung Andir*).

Mount Wayang and Lake Cisanti are the most iconic places in the upstream area of the Citarum watershed or *Daerah Aliran Sungai* (DAS). Cisanti Lake is a landmark that is also advertised as ‘Kilometre 0’ of the Citarum River. As various studies indicate, the environmental quality of the Citarum Watershed continues to experience degradation. During the 1990–2016 period, secondary forests in this watershed were converted at a very high rate into agricultural land and built-up areas. This was followed by an increase in erosion rates as a further effect of reduced water infiltration and increased surface flow

(YULIANTO et al. 2020). It is estimated that the erosion rate causes sedimentation of 8.2 million tonnes/year (BBWS CITARUM 2023), which blocks the Citarum and Cisangkuy rivers, thereby reducing river capacity (BARUS et al. 2019). The above interview quote illustrates how our respondents in the *kampung* of Andir often regarded mud as a very material metaphor for the injustices related to the unequal burden, they bore of the risks associated with the flooding of the Citarum River. On the other hand, they claimed that those who profited from the causes of environmental degradation were mainly agricultural enterprises and landholders located elsewhere.

During our fieldwork, we were mainly interested in the residents' opinions on the government regulation of flooding along the Citarum River. Their reaction to the river normalisation project indicates that they were rather unsatisfied. For instance, one resident expressed his dissatisfaction with the government when flooding occurred again in 2021:

"We want to see the government working seriously to tackle flooding. Until now, it hasn't been seen." (*Chairman of RW 20 Cienteung, kampung Andir*)

From the residents' perspective, government efforts have not brought any relief from the effects of flooding in their area. These negative effects are exemplified in the deteriorating rental sector, which presented an important source of income for residents who owned property in the *kampung* of Andir. Many textile industries are located along the Dayeuhkolot-Banjaran provincial road, which crosses Baleendah District. Local residents thus provided rented accommodation to factory workers, street vendors, employees and teachers. However, since the early 2000s, this source of income has increasingly faded for Andir residents. Since the 2005 flood, many prospective house renters no longer look at this area due to the risks related to recurring flooding events. Many rental houses are abandoned and derelict, as reflected in the following interview excerpt:

"In the past... there were lots of houses for rent. But over the last 18 years, everything fell apart. The last tenants for my rooms were from 2000 to 2004. But since the flood in 2005 until 2021, there have been no more tenants... there have been quite a lot of losses there" (*Rental house owner, 48 years old, kampung Andir*)

This situation is worsened by the decisions of residents to leave Andir and to move to other areas due to flooding. Most left their homes abandoned

and damaged as they were (cf., Fig. 5). During the flooding of 2005, Bandung Basin also experienced economic loss due to the submergence of rice fields in Baleendah and Dayeuhkolot. This illustrates how residents in Andir, who are already in a relatively deprived situation, are further marginalised through the effect of flooding. They bear the costs of flooding disproportionately, while others who are better off and can afford to move to areas further away from the river, are barely affected by recurring floodings. This shows how unequal power relations are inscribed into processes of flooding, which are socio-material arrangements, rather than simply determined by natural factors.

As was indicated during our fieldwork, local residents even believe that the main cause of the 2010 flood was the river normalisation programme initiated by the central government in the early 2000s. When heavy rain occurs upstream, the increased volume and speed of the river flow in the straight section causes backflow. The drainage channels of local settlements facing the river allow return flow to enter the settlements. Floods with a water level of three to six metres are likely to hit areas as far as 1 km from the Cisangkuy estuary. This condition is also negatively affected by environmental degradation in Andir, as is the transformation of the 700-metre-long natural curve of the river into an oxbow lake (ROHMAT 2016).

But residents of Andir did not remain silent in their marginal status. Rather, they voiced direct criticisms at what they perceived to be inadequate treatment of rivers through the government. In this context, residents told us that they believe that the government has disturbed the balance of the natural river system, as reflected in the following:

"Why do we play with rivers? We should let the nature of the river be as God created it. Meandering rivers have a deep meaning for the balance of nature. Currently, it has become straight like a pipe so that the stream of the Cisangkuy meets perpendicularly to the main Citarum river. The Cisangkuy estuary was also damaged. It blocks the flow of water, which results in flooding. I'm also confused about why the Ministry of Public Works created a channel like this" (*board member of B2C2*).

A similarly critical stance among local residents could be found in relation to the construction of the Cienteung retention pond. Although intended to collect drainage water from surrounding settlements

and accommodate overflow, residents in Andir perceive the pond as offering, if any, only limited relief, benefiting at most a single village:

“Cieunteung (pond) is....to accommodate local puddles only. In fact, the Cigado River.... never overflows. So, what exactly is the purpose of constructing the Cienteung?” (*bord member of BC2C*)

This critical stance towards the effectiveness of the retention pond can also be explained by its adverse effects on the local community. The Cienteung Pond was built in a residential area, which meant that local residents were evicted from their houses and had to resettle to other areas. This approach was met with significant protest by residents as they were deeply critical towards the resettlement plans of the government. Moreover, around half of the affected residents never received official information from the government about the relocation plan (HARLANI 2014), but only through word-of-mouth.

Among those who continue to live in the area, perspectives on whether to stay or leave the kampung remain divided. Many residents express a strong reluctance to relocate, having come to accept and adapt to recurring flooding while relying on social networks for support, as reflected in the following interview excerpts:

“If it doesn’t flood, I’m happy living here, I’m not interested in moving. Even though the neighbours have moved, I’m still here... many people are so despicable, why do you live here, floods and slums... a little flooding can cause a lot of mud” (*Housewife, 34 years old, kampung Andir*).

“Yes, I’m used to being flooded every year, maybe it’s normal. Try to accept it patiently. Just need to move things around. They are all brothers around here, too. If there’s a problem, it’s easy to ask for help...that’s why it’s better to be flooded than to be far from relatives. Besides, we don’t get flooded every day” (*Informal worker, 43 years old, kampung Andir*).

Yet, some residents also told us that they feel ‘stuck’ in Andir due to recurrent flooding and the land prices. Therefore, many Andir residents cannot afford to buy houses in other locations, as indicated by the following statement:

“If I were asked, why would you still be staying here? Because there is no solution

anymore. If we move..... The money from selling a house here, will not be enough to buy one elsewhere. The price difference can be 3-4 times... so we don’t move because of limitations. Who wants to buy a house in a flooded area?” (*Resident elder, 74 years old, kampung Andir*).

In sum, our fieldwork reveals that residents frequently criticize government programmes, which they hold responsible for their continued marginalization and disproportionate exposure to recurrent flooding in the kampung of Andir. While these findings speak to existing scholarship on hydrosocial relations, which highlights the entanglement of socio-natural processes and unequal power structures, we emphasize that local communities do not remain passive in the face of these dynamics. Rather, the perceived negative consequences of state-led measures of flood management, such as the forced evictions during the construction of the retention pond, coupled with the impacts of recurring flooding, have intensified local discontent and spurred collective action.

As we demonstrate in the following section, residents have thus mobilized and developed their own strategies to anticipate and cope with flooding, engaging in community-based initiatives that extend beyond immediate adaptation. We further argue that these politicizing effects of flooding merit greater attention in the literature on the hydrosocial geographies of flooding in the Global South, which has often overemphasized local communities as passive actors within unequal hydrosocial relations. To this end, in the following, we illustrate how the concept of *prefigurative politics* contributes to ongoing discussions on the hydrosocial geographies of flooding.

6 “We will not remain silent”: Community-based action as prefigurative politics

“We will not remain silent!”, was a late B2C2 activist’s firm statement in response to the recurring problem of annual flooding in Andir. He was an elder of Andir, around 70 years old when the fieldwork was carried out. Since moving to the village in 1977, he has witnessed drastic changes in his neighbourhood, as he told us during an interview. Densely packed settlements replaced the bamboo forests that once dominated. The first flood that he experienced occurred in 1979, when, as he told us, the river water was still clear and rich in fish. According to

him, these fish have disappeared since the river was straightened in the early 2000s. Since then, from his perspective, the floods have gotten worse, carrying large amounts of mud. Every year since at least 2010 he evacuated during the rainy season. Just like him, his neighbours also feel anxious, exhausted, and disappointed with this situation.

The major floods in 2005 became an important impetus for local communities to develop strategies of resistance towards government programmes that they perceived to be inadequate or misguided. In 2007, *Abah* Edi and several residents founded an association called *Barudak Baraya Cisangkuy Citarum* (B2C2), located in Cigosol Hamlet, Andir. The main aim of B2C2, as a local community organization, is to advocate for residents' interests in government-implemented flood management policies and programs. To this end, B2C2 organized several demonstrations at the offices of sub-district and provincial officials, highlighting the lack of public trust in the government's handling of flood disasters, including during the construction of the Andir retention pond (LESTARI 2020). On the one hand, the actions of B2C2 illustrate how the community refused to remain in a marginalized and passive position, instead voicing direct criticism of the government and engaging in political action. Through public protests and rallies, community members articulated their discontent with the present conditions while demanding change. On the other hand, we also observed instances in which the organization engaged in prefigurative politics, actively working toward an alternative future and implementing change through practical enactments of alternatives. We will illustrate this through three particular cases.

First, the community initiative engaged in prefigurative politics by promoting a different, more caring understanding of the hydrosocial relations of the river system. This is, for instance, mirrored in the name of the organisation: *Barudak Baraya Cisangkuy Citarum* (B2C2) as well as in its logo. According to the Sundanese tradition, *barudak* means children or the younger generation, while *baraya* means brother. The association's name is thus "Brotherhood of the Children of Cisangkuy and Citarum." The use of the local term meaning children implies an understanding that the two rivers carry the womb of life, and that life was born out of the two in the form of a village. This aligns with the Sundanese people's cosmological view that space is based on ecological river systems (SETIADI et al. 2017). As a source of inspiration for life, rivers cannot be abandoned even though many people think they are "sources

of floods". This awareness is also represented in the B2C2 symbol, which contains three elements: roots, heart, and river (Fig. 7). The roots that touch the river symbolize "life from the river" and a concern for the sustainability of forests in the upstream area, which is threatened. A crooked heart illustrates volatile feelings and motivations. The happiness of living on the riverbanks is mixed with anger and sadness due to the inability to maintain the river. The colourful lines reflect the various "functions" of rivers – as a source of life and a place for waste and rubbish disposal, e.g. for industry and households. The strength of the heart, rooted in preserving rivers, is the main foundation for facing various life obstacles.

We suggest that the symbol of the community organization is revealing with regard to the cosmological understanding of the Citarum river and its hydrosocial relations, one that differs significantly from the government's approach. The latter prioritizes drastic human interventions in river systems through technical measures such as straightening or so-called normalization. In contrast, the community advocates for more care-full relations with the nonhuman entities that constitute river systems, while sustaining the natural balance of ecosystems, and acknowledging the more-than-human relations in which the river is embedded. Thus, the symbol of the community organization B2C2 can already be understood as an instance of prefigurative politics; a subversive act that challenges technical governmental approaches to flooding while actively working towards a different alternative.

Alternative ways of caring about the river and the community also became evident in how B2C2 approached the allocation of resources for flood prevention and mitigation. Our fieldwork revealed a



Fig. 7: B2C2's symbol: heart, roots and river. Sources: B2C2 (2024)

tension between the community and the governor of West Java regarding differing views on the “costs of dealing with floods”. The provincial government frames these costs in terms of development budget allocation based on the national or regional parliamentary process and competing political priorities. With respect to disaster management, budget policies in Indonesia tend to prioritise mitigation programmes (DARTANTO et al. 2017) rather than compensation for disaster-related losses, which are considered difficult to quantify (FAHLEVI et al. 2019). In this context, the Governor of West Java stated that addressing flooding along the Citarum river in South Bandung would require an exceptionally high budget – estimated at 15 trillion rupiah or 25% of the total development budget (CNBC Indonesia). Local communities, however, challenge this framing. From their perspective, labelling such spendings as “expensive” overlooks the cumulative social, economic, and physical losses they have endured over many years of recurrent flooding. As the following statement illustrates, residents instead view the current government spending as insufficient:

“I once argued with the governor...who said handling the Andir flood was too expensive. But, for me, the budget was too small. Imagine flooding for 18 years. In this period, there are only 3 flood-free months each year. How much loss will we have to bear over a long period of time? Let's say that every year there are nine flooded RWs [*i.e. neighbourhoods*] with a total of 700 families in each RW, each family consisting of 3 people....and each person loses 100 thousand rupiah per month on average.” (*board member of BC2C*).

Second, amidst the lack in governmental support, the community also developed different strategies to adapt to and cope with recurring flooding themselves – what we regard as another instance through which the community engaged in prefigurative politics. In Andir, one of the local strategies was to improve the house drainage connection to the Cisangkuy. In 2021, the residents agreed to close the drainage outlet that leads to the river and to divert wastewater into the oxbow lake. As a consequence, if the water line of the Cisangkuy rises during the rainy season, the water can no longer enter the settlement through this channel. Currently, residents have a drain to a communal septic tank for every ten houses. Although this drainage improvement is one of the community's success stories in building

citizen awareness, it also shows the limitations of local capacity:

“We only aspire, but there are no funds. However, handling floods requires a more comprehensive river infrastructure. So, if we want to focus on completing the infrastructure... we don't make enemies with the government...who have the money.” (*board member of BC2C*).

At the same time, we argue that this instance of prefigurative politics reveals the community's critical stance toward the government's focus on large, costly infrastructure projects, such as the construction of retention ponds or river-straightening programs, rather than on addressing their basic local needs in coping with recurring flooding in their neighborhoods. In response to the government's failure to take timely action to improve drainage systems in the affected households, BC2C thus implemented their own approach to improve their resilience towards flooding themselves.

The third moment in which the community engaged in prefigurative politics was to carry out *Ngobrol Pintar* (literally “smart talking”) activities, abbreviated to *Ngopi* (LESTARI 2020). In Indonesian society, *Ngopi* refers to enjoying coffee together in a relaxed and intimate atmosphere while discussing everyday topics. Through this activity, the residents began to develop a sense of community and joint aspiration, actively counteracting their ostensibly marginalised and neglected position in governmental planning process. This led to an empowerment of the local community since it enables the residents to engage in political discussion and voice political claims towards different groups and agencies. Various issues related to flooding, including the development of river infrastructure, became the main topic of discussion. By doing so, the community organization increased its visibility and became gradually more known to the public, the agency staff, and government officials. The heads of the organisation were often invited to seminars and discussions on flood management organised by the agency.

These actions created important political opportunities for the community of Andir to express its aspirations, obtain financial support, and gain access to information – and thus, to better cope with the recurring risks associated with flooding in the area. As a result of their actions, the community representatives were even asked to join the ‘Regional Water Resources Management Coordination Team’ or *Tim Koordinasi Pengelolaan Sumber Daya Air* (TKPSDA), a

structural unit under BBWS Citarum. This led to a strengthening of the community's position with regard to flood management along the Citarum River, while providing benefits for securing the construction of the Andir Pond. This is indicated in the following interview excerpt:

"I had five discussions in the province.... and met with the Water Resources Divisions and Research Divisions in the Ministry....and talked to the Director, Director General, and Minister. Thank God, it only took one year to launch [the Andir Pond], even though the Cieuntueng Pond took 4 years. The funds come from the remaining money of other projects at the Ministry... for land acquisition... it's difficult to use the annual development budget." (*board member of B2C2*).

Yet not all residents view the strengthened position of the community organisation in relation to the flood management of the government as a positive development but as a form of co-optation. Some believe that the community is no longer fighting for the citizens' interests but is now taking sides with the government. Some residents think that certain members were only seeking financial gain for their group, as indicated by the following statement:

"Community associations are useful if they are not looking for profit...but the government has guaranteed for those who take part in BBWS...billions in funding. Every month, they never lack money. Instead, people like us depend on people's gifts, even to pay for a cup of coffee." (*One of the former RW Chairmans, kampung Andir*).

This highlights the potential pitfalls of prefigurative politics, which can easily be co-opted by the government to take over tasks that would otherwise be considered as the responsibility of the state, such as implementing basic infrastructure like drainage systems. On the one hand, by becoming more closely aligned with the government through joint practices and exchange, there is a risk for the community initiative to lose its more subversive potential. On the other hand, it also comes with the possibility of community empowerment, if it allows residents to influence the decision-making processes of government actors. As a consequence of the increasing co-operation between B2C2 and the government, new local groups that remain more openly critical of state approaches to flood management emerged. These groups serve as a forum for public complaints

regarding people's dissatisfaction with the government's performance in flood management.

Meanwhile, the organisation B2C2 has chosen a role as a forum for collaboration between various stakeholders, especially the government, so that local aspirations can be channelled effectively, and positive change can be implemented, as is illustrated by one of our conversations:

"We only rely on local wisdom...technical people, academics, and the central government. But if you don't know the area's characteristics, don't expect to be able to complete it... there must be cooperation between us, the river community, disaster experts, and the community. If there are no activists, then nothing will change." (*board member of B2C2*).

We think that this cooperative stance is enabling in terms of the possibility to implement forms of prefigurative politics. The recurring issue of flooding in Andir and the lack of effective strategies for flood management by the government thus triggered local adaptation strategies seeking to implement alternatives through immediate action on the ground and based on a cooperative and mediating stance. As a result, the river has created a space of empowerment for marginalised local communities or a "counter space", as ASARA & KALLIS (2023) put it. In the case of Andir, this created political opportunities to develop prefigurative politics in flood management along the Citarum River (ASARA & KALLIS 2023, BOGGS 1977, MAECKELBERGH 2011). We believe that this is telling of how the community (re-)framed flood management – not as a 'technological' but as a 'social' and 'political' challenge (NOBERT et al. 2015). This points towards the need to further an understanding of flood management, not only through a technocratic-scientific approach under formal institutions but also as a process of political negotiation and resistance among stakeholders (see also Butsch et al. 2021).

7 Conclusions

This article has examined how the 'new normal' of hydrological extremes unfolds at the local level. It analysed how flooding in the kampung of Andir both reinforces and reconfigures unequal hydrosocial relations in Indonesia. We have approached flooding as a socio-natural process co-produced through the entanglement of environmental dynamics, infrastruc-

tural interventions, and asymmetrical power relations that continue to marginalise urban communities in the Global South. In this context, state-led flood management strategies – particularly large-scale infrastructural projects and downstream-oriented interventions – have contributed to the continued marginalization of upstream communities. Rather than mitigating flood risks, these approaches have often redistributed them, thus reinforcing uneven geographies of exposure and protection in West Java.

At the same time, our findings contribute to literature on hydrosocial geographies by challenging understandings of marginalized communities as passive victims. Residents in Andir actively reconfigure and contest hydrosocial relations through everyday practices and collective action. Flooding thus emerges not only as a condition of vulnerability but also as a catalyst for politicization. Community members mobilize their experiences of recurring floods to articulate claims, develop locally grounded coping strategies, and engage with state actors, thereby actively shaping the socio-environmental conditions in which they live.

By bringing together perspectives on hydrosocial geographies and the concept of prefigurative politics, this paper has demonstrated how communities navigate the risks and burdens associated with flooding through coping practices that can be understood as forms of situated political action. Residents thus enact immediate alternatives in the present through initiatives such as the improvement of local drainage systems, the creation of participatory discussion spaces like *ngobrol pintar*, the contestation of dominant cost narratives in flood management, and the promotion of more care-full and relational understandings of the river. These practices do not simply respond to flooding; they prefigure alternative futures by experimenting with possibilities for alternating human–water relations. At the same time, they reveal the ambivalent dimensions of prefigurative politics: while enabling grassroots action, such practices may also risk substituting for state responsibility, filling governance gaps without addressing the structural causes of flooding, thus exposing community initiatives to processes of statist co-optation.

Taken together, these insights contribute to a more nuanced understanding of hydrosocial geographies in urban contexts of the Global South by foregrounding both the reproduction of unequal power relations and possibilities for politicization and collective action. By mobilizing the framework of prefigurative politics beyond its traditional focus on social movements in the Global North, we

extend its analytical scope to encompass everyday practices of coping and adapting to natural hazards in the Global South.

Future research could build on these findings in several directions. First, there is a need to further examine the conditions under which community-based initiatives can sustain their transformative potential without being co-opted by state or market actors. Second, case studies across diverse urban contexts in the Global South (and North) could help to illuminate how different institutional arrangements and local conditions shape prefigurative practices amid the “overlapping crises” of climate change. Third, greater attention should be paid to the material and more-than-human dimensions of prefigurative politics within hydrosocial relations, particularly to the question of how infrastructures, sediments, living beings and water flows themselves participate in shaping political possibilities. Such perspectives may open up new avenues for rethinking more care-full and sustainable ways of relating to non-human entities in times of planetary change.

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Authors

Hafid Setiadi

<https://orcid.org/0000-0002-7284-5745>

Nurrokhmah Rizqihandari

<https://orcid.org/0000-0001-9042-7566>

Department of Geography

Universitas Indonesia

UI Campus Depok 16424

Jakarta

Nurul Sri Rahatiningtyas

<https://orcid.org/0000-0003-0157-4439>

nurul.sr@ui.ac.id

Department of Geography

Universitas Indonesia

UI Campus Depok 16424

Jakarta

Indonesia

and

Department of Geosciences and Geography

Martin Luther University Halle-Wittenberg

Von-Seckendorff-Platz 4

06120 Halle (Saale)

Germany

Dr. Larissa Fleischmann

<https://orcid.org/0009-0008-8652-3297>

larissa.fleischmann@geo.uni-halle.de

Julia Ostertag

julia.ostertag@geo.uni-halle.de

Prof. Dr. Jonathan Everts

<https://orcid.org/0000-0001-7643-5332>

jonathan.everts@geo.uni-halle.de

Department of Geosciences and Geography

Martin Luther University Halle-Wittenberg

Von-Seckendorff-Platz 4

06120 Halle (Saale)

Germany