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River's End: The violence of indigenous riverine urbanization in the making of Indonesia's new capital

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ABSTRACT

This article analyzes the consequences of the state-led urbanization of riverine indigenous communities in Indonesia. Specifically, we examine how the development of urban water infrastructure in the context of the new capital city construction in East Kalimantan has changed indigenous relations with the river, and how this change further led to reconfigure indigenous people's relationship with their cultural heritage. Engaging with the political ecology of urbanization, indigenous studies, and infrastructural violence scholarship, and based on qualitative fieldwork including semi-structured interviews and participant observation conducted in 2022, 2023, and 2024, we conceptualize the process of change as indigenous riverine urbanization and show how it turns both materially and symbolically violent. Materially, the modernist interventions in water and heritage infrastructure cause the loss of access to and coexistence with the river; and symbolically, they force the indigenous communities to accept new ways of living as a new 'museum'. We argue that such multifaceted violence is produced through a universalized narrative of inclusivity in state-led public infrastructure projects, particularly in water provision and cultural preservation. The infrastructure projects work to sustain existing inequalities while also allowing indigenous communities to undertake a broader cultural recognition strategy. We recommend shifting from inclusion approaches focused on compensation and recognition toward a planning approach that involves indigenous peoples as planners, integrating their knowledge into urban infrastructure planning.

1. Introduction

This article examines how the development of urban water infrastructure becomes violent against riverine indigenous populations in Indonesia. Through the case of Indonesia's capital city relocation, our analysis focuses on the impact of water infrastructure developed to serve the new city's residents on an indigenous Balik community in Sepaku, East Kalimantan. The Balik community is a community long settled along the Sepaku River, and they had developed both material and cultural relations with the River. In our title, we use the term *"River's End"* to describe a condition where indigenous connections to rivers has been severed and transformed over time, and most acutely as the new capital city has recently been built. It is inspired by the work of Tania Li (2014), who refers to *Land's End* as the gradual erosion and transformation of the customary land system into the "highlanders' *land frontier*" in Sulawesi (Li, 2014, p. 2). In contrast to the gradual erosion observed in "*Land's End*," *River's End* captures the rapid and disruptive reconfiguration of indigenous riverine life driven by urban megaprojects.

Indonesia's new capital city (Ibu Kota Negara, or IKN), officially named Nusantara, is a political legacy of the President Joko Widodo's administration in 2014–2024 (Hudalah, 2023). It was framed as a response to Jakarta's climate crisis, particularly flooding and land subsidence. It was also promoted as a strategy for more inclusive development by shifting the country's growth center to the outer islands. Official visions portray Nusantara as a "world-class, smart, and sustainable city," expected to host 2 million residents by 2045. The capital is also branded as a forest city, designed to be in harmony with nature, where green areas are intended to dominate over built-up spaces.

Nusantara spans parts of Penajam Paser Utara and Kutai Kartanegara regencies in East Kalimantan, with its administrative core in the Sepaku subdistrict. The transformation of Sepaku, as it is now positioned as the center of a new capital, rests on a landscape shaped by decades of state-driven development. Since the 1960s, the area has been a hub for

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extractive forest economies, including logging, monoculture plantations for pulp and paper, and, since the 2000s, oil palm expansion and small-scale coal mining. Between 1976 and the end of the 1980s, Sepaku became a site of state-sponsored transmigration, resulting in demographic dominance by Javanese settlers and spontaneous migrants from Kalimantan and Sulawesi. As of 2022, Sepaku was home to approximately 40,000 people across 15 villages (BPS, 2024). The Balik people, the original indigenous inhabitants of Sepaku, are now a demographic minority, estimated at fewer than 1000 individuals across three villages (Yovanda, 2023).

In light of this longstanding extractive forest-based economic history,[1] the transformation of Sepaku into a "forest city" through the capital relocation project appears to be a grand national ambition. It also signals a renewed consolidation of state power over the Sepaku landscape and Kalimantan in general to control over spatial planning through a spectacular showcase of modernity (Al Faruq, 2025). In consolidating the state power, the government promised that all infrastructural construction processes would be inclusive and respect socio-cultural specificity (Tempo, 2024).

However, the very same development might threaten existing socio-environmental relationships, particularly those associated with the river. The Balik people along the Sepaku River have been struggling to meet their basic needs and rebuild their identity as a group with social and historical connections to the river (Naem & Agustiorini, 2022). In Indonesia, urban planning regime has been generally characterized as taking top-down, technocratic, and non-participatory approaches (Firman, 2004). In this context, despite the state's narrative of sustainable and inclusive urbanization, doubts have been expressed over the incompatibility between indigenous knowledge and urban planning, especially in relation to land ownership disputes (Kodir et al., 2021). Scholars have expressed that all forms of state-driven urbanization risk contributing to "*a net depletion of natural capital*" (Teo et al., 2020, p. 9), rendering green and sustainable development narratives less the indigenous people's agenda and more an elite-driven discourse (Agustino et al., 2024). Nusantara risks to repeat this general pattern in Indonesia.

In order to envision how the riverine indigenous communities' experiences could be more fully understood in the context of the new city planning and development, we pay particular attention to water infrastructure for the new capital, which takes over part of the Sepaku River and adjacent Balik settlement areas. Approximately 40 Balik indigenous families reside along the Sepaku River, just 10 km from the planned city center (Fig. 1). The infrastructure has directly severed these families' river access.

Drawing from our field research in Sepaku, we explore how infrastructure becomes violent for the Balik communities, as it causes economic displacement, spatial segregation and urban service denial. In previous scholarship on 'infrastructural violence' (Rodgers & O'Neill, 2012), the infrastructure's exclusionary function was central. In this article, we show that through the narrative of inclusion and future connection to modernity, indigenous people are forced to change their ways of lives. In doing so, we further engage with indigenous studies related to water (Wilson & Inkster, 2018) and the political ecology of urbanization (Kaika, 2005; Swyngedouw, 2004). Through this intersection, we propose to conceptualize violence of indigenous riverine urbanization to clarify how the state exercise material and symbolic power through urbanization, and how indigenous communities also resist through their cultural recognition strategy.

In what follows, we review the literature to frame the violence of indigenous riverine urbanization. We then detail our methodology. Subsequently, we present our findings, examining how infrastructures become violent. We conclude the article by discussing the implications of our findings for future city development in Indonesia.

2. Violence of indigenous riverine urbanization

Political ecologists have studied the implications of urbanization on the nature–society relations by examining "urbanization as a political–ecological process with water as the entry point" (Swyngedouw, 2004, p. 29). They focus on how water capture infrastructures, such as dams and river intakes, reconfigure patterns of entitlement and exclusion regarding access to water (Kaika & Swyngedouw, 2012). For instance, piped water networks that transport water from its sources to urban centers can operate through and produce significant disruptions to rural and indigenous livelihoods (Roquetti et al., 2024), trigger local water conflicts (Chaves & Weiβermel, 2024), and even threaten food security in adjacent agricultural areas (Lopes et al., 2024).

Relatedly, studies on 'the urbanization of water' have shown how water-control infrastructures also reshape security conditions over and beyond water. This is evident in how urban flood control infrastructure often justifies the displacement of informal riverine communities (Batubara et al., 2023; Goh, 2019), who are blamed as river polluters and who are associated with perceptions of disorder (Padawangi et al., 2022). The marginalization of these groups is reinforced by the dominant framing of formal infrastructures, such as piped water networks and river normalization projects, as universal solutions aligned with modern ideals (Graham & Marvin, 2001).

Conceptualizing such a exclusionary mechanism of infrastructure, the concept of infrastructural violence emerged in the past decade to highlight infrastructure's ambivalent properties. Infrastructure can be useful for a group and harmful for others, as it reshapes and reinforces unequal social orders, thereby contributing to the long-term "socio-spatial production of suffering" (Rodgers & O'Neill, 2012, p. 405). In the context of urbanization, a series of studies in this vein show that: in Addis Ababa, urban renewal modernized the city by displacing low-income populations to the periphery (Pedrazzini et al., 2014); in Mumbai, water infrastructures excluded informal settlers while redefining their legal status (Anand, 2017; Björkman, 2014). In Namqom, Argentina, violence was enacted through infrastructural neglect and the exclusion of indigenous Qom communities from water access (Chaney et al., 2024). In Ghana, violence is entangled with the development of modern market infrastructure involving foreign capital, which relocates local traders and results in marginalization, deprivation, and abjection (Adamu et al., 2025). Apostolopoulou and Pizarro (2025) demonstrate how infrastructural violence is embedded in logistical mega-projects which are expected to absorb surrounding lands, potential to displace residents through land purchases or relocation. Meanwhile, Otsuki (2023) highlights the alienation experienced after involuntary resettlement and the disruption of water relations.

Scholars further argue that infrastructure is not only violent when it connects and disconnects people but also when it coerces people with 'symbolic power' held by dominant actors (Bourdieu, 1989; Otsuki, 2024), who can be "ordering people within it" (Schubert, 2008, p. 184; Wacquant, 2022). In this context, violence does not only indicate exclusion but also fixation and assumption of particular subjectivity that can endure external control (Schubert, 2008) and accept the need to align all aspects of life with modernity (Supp-Montgomerie, 2023). Such symbolic violence is perpetuated through discourses and processes of universalization and de-historization, leaving individuals with no choice but to accept and adapt to them (Emirbayer & Johnson, 2008).

Therefore, infrastructural violence is increasingly multifaceted, as infrastructure reorganizes everyday life and defines legal identities, determining who counts as a legitimate citizen of the city (Anand, 2017). As Li (2018) shows in the case of palm oil plantations in Indonesia, violence does not end with land dispossession but continues through the forced adaptation of people into plantation economies

[1] see Gellert (1998), who briefly mentions Sepaku in the context of timber concessions under Indonesia's New Order, and more recently Batubara (2025), for a detailed investigation that connects the historical extractive economy in Sepaku with the recent landscape interventions associated with capital relocation.

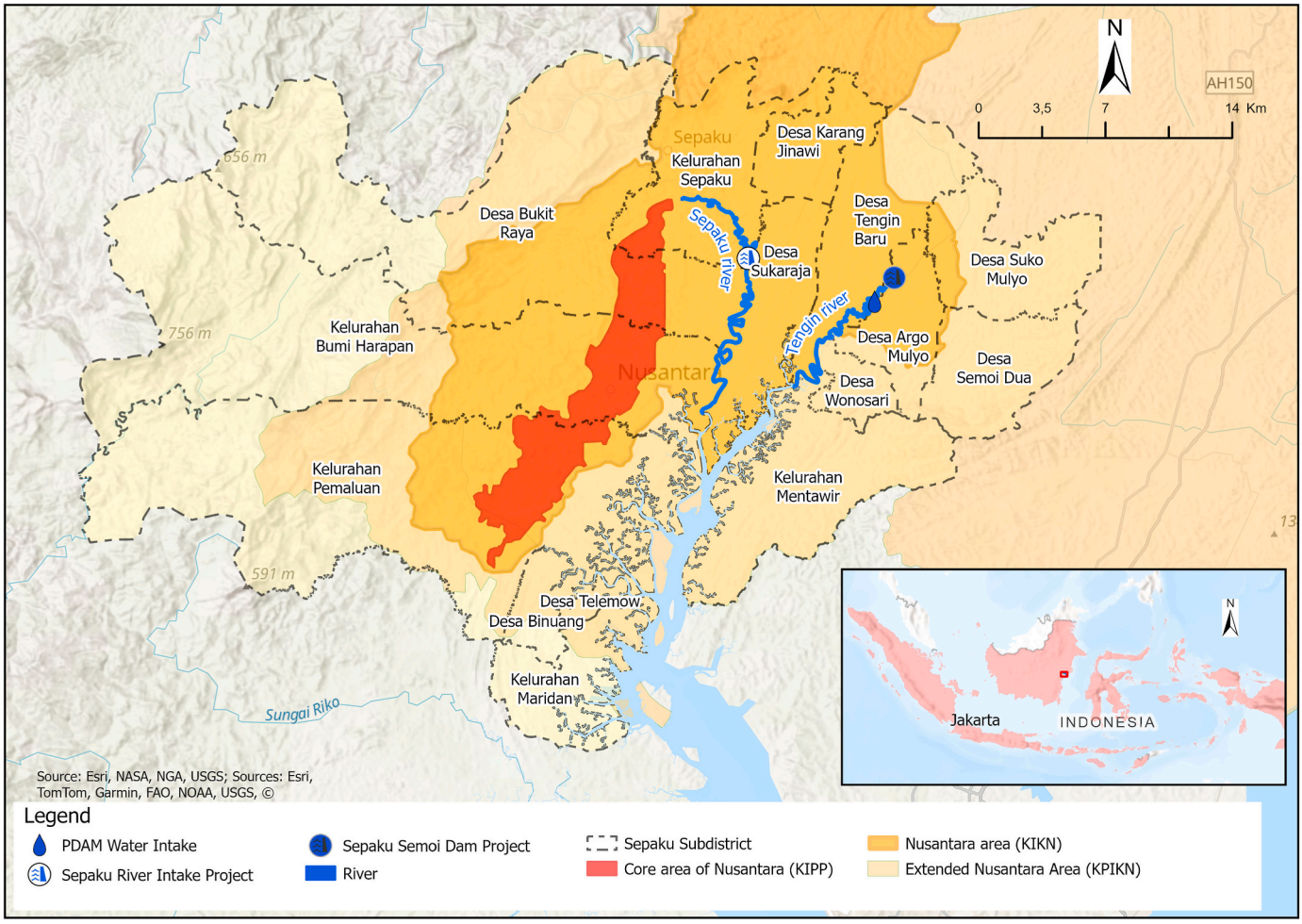

Fig. 1. Map of Villages in Sepaku Sub-District within the delineated Nusantara Capital Region.

shaped by market-state structures that they did not choose. Similarly, Otsuki (2023) demonstrates that after involuntary resettlement, infrastructure may appear as an improvement, but in practice, it disrupts livelihoods due to high costs and technical inaccessibility. This suggests that infrastructural violence can become deeply entrenched long after moments of socio-spatial restructuring have passed, especially as communities begin to navigate what is framed as a new life.

Yet, such understanding of infrastructural violence is little applied to indigenous society, which is increasingly exposed to rapid urbanization. Therefore, we engage with indigenous studies that examine the socio-natural relations between indigenous communities and the environment, such as rivers. It helps recontextualize infrastructural violence, not merely in terms of who receives water services and who does not, but in how infrastructure operates as a selective regime of recognition.

For example, infrastructure often sidelines the complex set of relationships that exists between indigenous peoples and their natural environment, including rivers (Spice, 2018), through social-geographical subjugation and control by powerful organizations (Mann, 2012; Mann, 2012). In this sense, violence is not only material but also ontological (Wilson & Inkster, 2018, p. 2), rooted in deep differences between indigenous worldviews of water and the technocratic logics of state infrastructure. The ontological violence is evident in how indigenous knowledge of rivers is often overlooked and dismissed as being abstract, even though these connections to the river are deeply rooted in everyday life (Acuña & Tironi, 2022). Indigenous studies show that infrastructure works to justify the material violence inflicted on indigenous populations (Supp-Montgomerie, 2023) while boosting indigenous struggles to challenge the way infrastructure ideals are framed in the first place (Pasternak et al., 2023; Stephens, 2015).

In particular, literature on indigenous experiences in South Asia shows that indigenous people are active political subjects: constantly changing and adapting state-based environmental and resource governance (Agrawal, 2005). For example, in India, land alienation since the colonial period has transformed indigenous relationships with land from ownership to contested use, with attachment rooted in intergenerational labor and struggle (Jairath, 2021). This transformation must be understood in its historical context to avoid the misconception that tradition is pure and unchanging (Shah, 2010). As Shah (2010) shows, the romanticization of indigenous people as guardians of nature can generate new forms of violence, particularly when conservation regulations create precarious situations, such as the arrival of wild animals due to reforestation, while communities are forced to live under rules that disregard their actual needs. The figure of the indigenous guardian of nature has become increasingly dominant in the era of green capitalism through carbon projects that standardize indigenous life practices amid socially heterogeneous rural contexts (Astuti & McGregor, 2017). In this context, communities are increasingly vulnerable to problematic neo-traditional narratives (Shah, 2007), where the boundaries between indigenous land claims and green grabbing become blurred, opening space for exclusionary processes within recognition discourses (Astuti & McGregor, 2017).

Building on the scholarship on political ecology of urbanization, infrastructural violence and indigenous studies, we propose to conceptualize the violence of indigenous riverine urbanization. This concept enables us to reframe infrastructural harm as a consequence of both inclusion and recognition, rather than exclusion. It also invites us to

reconsider the possibilities and limits of indigenous agency in reshaping their relations with the river and the state. We explore how this violence works through the promise of better services and cultural legitimacy by following the lived experiences of the Balik riverine community in Sepaku.

3. Methodology

We have followed two urban water infrastructure projects in the development of Indonesia's new capital: the Sepaku River Intake and the Sepaku River Normalization between 2022 and 2024.[2] We focus on the Balik community in Sepaku to explore the violence of riverine indigenous urbanization, as their settlement lies directly along the Sepaku River and is often referred to by other locals as the oldest settlement in the area, which holds a deep attachment to the river. Compared to other indigenous communities in Kalimantan, Balik had received little scholarly and activist attention before Nusantara's construction. After the announcement of the capital relocation, their name began to surface in public discourse, particularly through discussions on customary land claims. Nevertheless, their relations to the river remained neglected as the source of contention despite surfacing grievances.

The first author, an Indonesian social sciences researcher with extensive experience in East Kalimantan, has taken an initiative to contact the Balik indigenous community through long-standing ties with researchers affiliated with a local university who are involved in advocacy and ethnographic work. These connections shaped early understandings of the community and influenced the research design. While this position facilitated trust and access, it also required careful reflection on how prior relationships shaped the research lens and how the community might perceive the first author as an associate of these local researchers.

Building on this foundation, the study draws on interviews with 31 participants, grouped into six categories based on their roles and how they were affected by the water infrastructure projects. To ensure participant anonymity, all interview data were coded according to these categories, with further explanations provided in the appendix.

First, the indigenous community (coded as IC) consisted of 11 participants who lived directly along the affected riverbanks. They were identified through purposive and snowball sampling: three were initially selected due to their visibility in media coverage and recommendations from local researchers. Others were approached based on the spatial progression of infrastructure development, which affected specific households earlier than others (Fig. 2). Four individuals were interviewed repeatedly across 2022, 2023, and 2024 to capture changes in perception over time. All interviews were conducted in Bahasa Indonesia. The extended five-month fieldwork in 2023 enabled the first author to engage in informal conversations and participate in everyday activities. This process also allowed the first author to invite members of the Balik community to jointly observe the river, visually illustrating their relationship and struggles concerning water. This participatory observation helped capture the physical changes caused by the infrastructure projects. Spatial-temporal mapping was used to capture and visualize the transformation of the riverine indigenous territory, tracking changes from the pre-infrastructure phase through to mid-2024. These everyday interactions provided deeper insights into their material and symbolic dependence on the Sepaku River.

The second group consisted of technical workers involved in the construction of water infrastructure (coded as CW). In 2023 and 2024, the first author conducted interviews with two technical staff members of construction company. Both were employees of state-owned enterprises contracted by the Indonesian government to implement the Sepaku River Intake and Normalization projects. The third group consisted of six government officials (coded as GO) at various levels, including three officials from the local River Basin Agency (*Balai Wilayah Sungai*), a subdistrict (*Kecamatan*) official, a village (*Kelurahan*) official, and a representative from the Nusantara Capital Authority. Interviews were conducted between 2022 and 2024, offering insights into official narratives of infrastructure development and its construction processes in Sepaku.

The fourth group involved three participants from other ethnic communities in Sepaku (coded as OE): Paser, Javanese, and Bugis. These interviews helped situate the Balik experience within the broader local demographic context and revealed how different communities navigate infrastructure-led transformation.

The fifth group consisted of five civil society representatives (coded as CS) from organizations based in Samarinda, engaged in indigenous advocacy and environmental justice. These included members of the Mining Advocacy Network (Jaringan Advokasi Tambang), the Indigenous Peoples Alliance of the Archipelago (AMAN), and Friends of the Earth Indonesia (WALHI). Lastly, the research included interviews with four university-affiliated researchers (coded as LR) based in Samarinda. All interviews were transcribed, and the first author maintained field notes throughout the research period. The information gathered from the participants has informed this discussion. Given the small sample size and the fact that the indigenous community itself is relatively small, we have taken measures to ensure anonymity and confidentiality by avoiding long direct quotations in this article. All interview participants are listed in Appendix A, which includes anonymized codes, years of interview, and participant categories, as part of our commitment to methodological transparency.

To complement the interviews, a document analysis was conducted using materials from the Nusantara Capital Authority's official website, including One Map Planning and Policy (Edition 1, 2022) and Regulation No. 8/2024 on Local Wisdom and Environmental Protection. These documents help explain how indigenous communities are represented within the new capital's planning and regulatory framework. Other unpublished documents were obtained from research participants, including the Final Report on the Preparation of the Master Plan and Development Strategy for the National Capital City (2020). In addition to these materials, we were also informed by presentations and outreach documents produced by the Ministry of Public Works concerning water development in Nusantara, including the Water Conditions Profile in IKN, released in 2023 and the Infrastructure Development Profile for the IKN Area, issued in 2022. A complete list of reviewed documents is provided in Appendix B.

All fieldwork activities produced fieldnotes containing the first author's subjective narratives of Balik experiences, drawn from informal interactions and interviews lasting between 40 and 70 min. Our investigations also generated interview transcripts for most participants. This collection of data forms the empirical foundation for analyzing the processes through which violence becomes embedded in infrastructure within Indigenous communities, as elaborated in the following sections.

4. Unfolding violence of indigenous riverine urbanization

4.1. Background: Balik people in the IKN frontier

Sepaku Subdistrict comprises nearly 41,000 people (BPS, 2024) made up of various ethnic groups. This diversity stems from the long history of landscape transformation during the early 1970s when the natural forests that once dominated the region were converted into production forests. This shift was part of a broader development across Kalimantan aimed at timber extraction, industrial plantations, and transmigration or resettlement projects (Peluso, 1992). These changes have significantly reshaped the socio-economic profile of Sepaku. The timber-based economy drove the spontaneous migration of ethnic groups, such as the Banjar and Bugis, to Sepaku. Additionally, the transmigration program, which ran from 1974 to 1993, relocated

[2] Ethical clearance for this study was granted by a review board affiliated with the institutions of the authors (ERB Review Geo-24-0078).

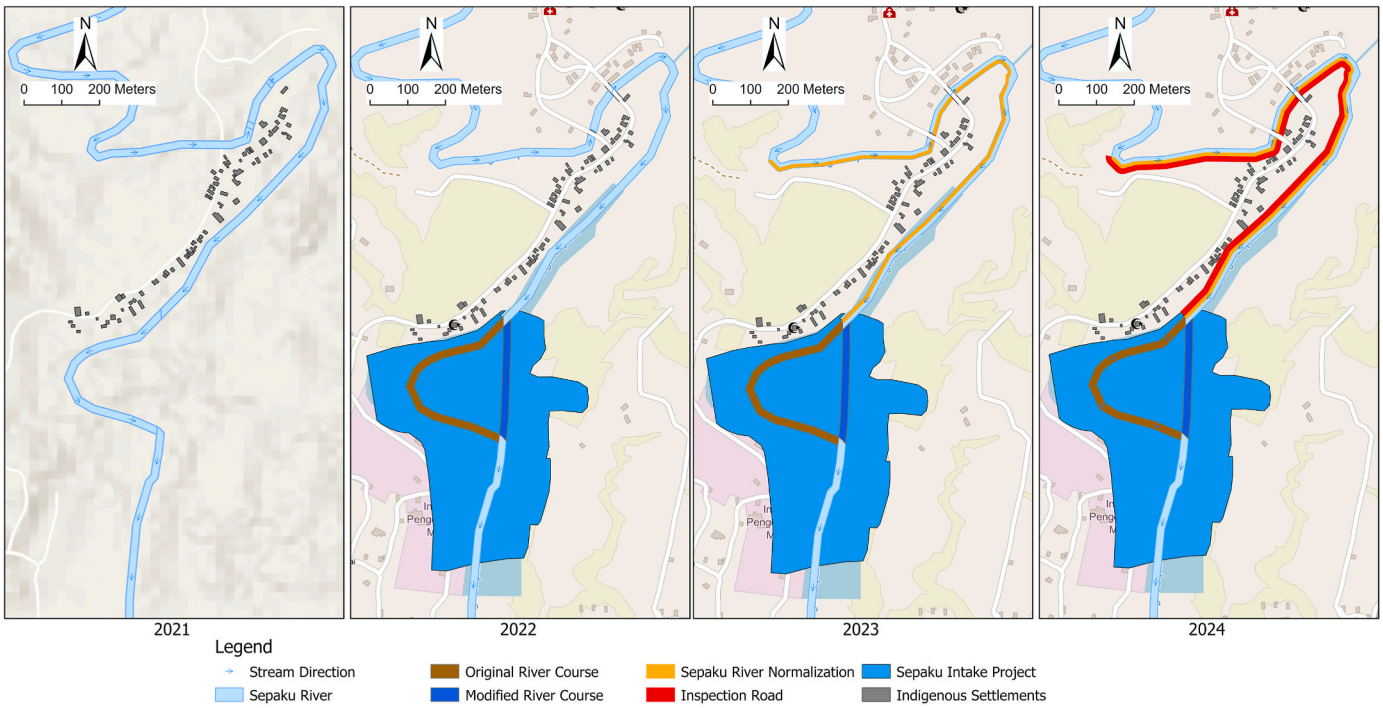

Fig. 2. Spatial-temporal dynamic of the Sepaku riverine settlement.

approximately 18,000 Javanese people to the region, making them the majority ethnic group in Sepaku to this day (Pusdatintras, 2005 as cited in IKN, 2020, p. 71).

These demographic shifts position the indigenous Balik people as a minority group, comprised of approximately 1000 individuals, 200 families, residing in villages such as Bumi Harapan, Pemaluan, Mentawir, and Sepaku. In the latter, about 40 Balik families live along the Sepaku River. This area is locally known as *Kampung Sepaku Lama* (the oldest settlement in Sepaku) and is seen as the region's original settlement for the Balik people. Kampung Sepaku Lama, a socio-spatial description, holds historical significance, reflecting the Balik community as being the descendants of the area's indigenous inhabitants.

In Indonesia, Balik communities receive less attention than other ethnic groups in Kalimantan, such as the Dayak, Banjar and Paser. Over time, the dominance of different ethnic groups and the high rate of inter-ethnic marriages are significant social factors that have impacted the Balik as an indigenous entity. Differing views on the history of the Balik people make it difficult to understand and recognize the profile of the Balik as an indigenous entity. The government often classifies the Balik as being part of the Paser ethnic group. This is reflected in the term "Paser Balik" which is in the master plan for the new capital city (IKN, 2020). However, the Balik see themselves as being quite distinct from the Paser. This distinction is also reflected in the fact that the Balik and Paser everyday languages are not the same.

For the Balik, the river has served as a vital source of livelihood by providing water and food for generations and has historically shaped their identity as indigenous people. This significance is reflected in the river's name, which the Balik trace to their language. "Sepaku" originates from "paku," a term for the ferns that grow along the riverbanks and have long been a staple vegetable in their diet. Consequently, the river's transformation through the damming project fosters a sense that their identity, intimately connected to the river's historical significance, is being progressively eroded and displaced.

The Balik community has long relied on the Sepaku River to meet their daily water needs. Water is traditionally drawn using simple pipe systems that extend from individual homes to the riverbank and pumped into household storage tanks. Since the early 2000s, however, they have experienced a decline in water quality, which they associate with the cumulative effects of monoculture forestry expansion that began in the 1980s. This includes increased sedimentation and suspected chemical contamination from industrial activities, prompting many households to diversify their water sources. Consequently, a hybrid water supply system has emerged, combining traditional and adaptive practices: continued use of river water (often filtered through simple stone-based purification), purchasing water from local vendors who source from springs in neighboring villages, digging shallow wells, and collecting rainwater. These practices reflect environmental adaptation, not a complete disengagement from the river, as they remain materially and culturally tied to it.

Piped regional water infrastructure was introduced to Sepaku in the early 2000s. However, it remains limited in reach, covering only about 30 % of households in 2024. In the Balik settlement, piped services have not been extended, and community members do not seem to aspire to install these systems. Despite growing limitations of the river, the Balik community's settlement pattern along the riverbank has remained intact. It has expanded over the past two decades as new homes have been built for younger generations.

The Balik's attachment to the river is reflected in the traditional practice of floating ritual offerings on the river to introduce newborn babies to nature, thus symbolizing the beginning of a lifelong relational bond between the community and the river. Therefore, the river is also a cultural landscape. Social and spiritual practices are enacted through sacred rituals. This also manifests in the relationship to material objects such as stones in the riverway, which have magical meaning for the indigenous groups. The Balik people believe that a big river stone can connect them with their ancestors. Stones also function as objects of healing. For instance, when modern medical treatment, through a hospital or primary health care unit, does not bring satisfactory health outcomes, the stone becomes an object of healing. The spiritual relationship with the river sculpts indigenous riverine communities' care for and honor of the river. This means that the presence of the river is so much more than simply resource dependency. It is about a reciprocal bond with the natural world by acknowledging the river and natural objects in and around the river as beings who coexist with human

beings.

The relocation of Indonesia's capital to Sepaku has significantly increased attention on the Balik people, particularly following investigative reports from civil society organizations (JATAM Kaltim, 2023; Johansyah et al., 2019). Contestations over indigenous rights have intensified as infrastructure projects encroach on territories claimed by the Balik to be their ancestral land. Tensions escalated after Nusantara city planners decided in 2021 to convert indigenous territories into "spaces of production" (Kaika, 2005, p. 53) to supply water for the new capital. The river, integral to the Balik's daily lives, was being transformed and urbanized through water infrastructure projects, rapidly altering the physical environment and indigenous riverine ways of life.

The infrastructure changes the river through a series of technical interventions, including modifying the river's natural flow and strengthening and widening the banks to ensure the water can reach the capture point and be transferred to the planned central reservoir through a 16 km pipeline network located in the center of IKN. The government had previously stated that the river intervention would be farther from the riverine settlement. But this was not the case and the community was shocked by the interventions.

4.2. Sepaku River Intake project

In 2021, the national government introduced river damming plans as part of a larger infrastructure project to establish the new capital's water system. This project included the construction of a Sepaku River Intake project, a water treatment plant, and a pipeline network to channel water towards a central reservoir in the center of the new capital. Balik people were informed that the damming would not affect the section of the river that served as their primary water source and a significant part of their indigenous territory. The initial location was planned to be approximately 3.6 km upstream to the north of the settlement (Interview with IC-02, August 14, 2024, Sepaku). However, the government eventually relocated the river intake infrastructure to a riverway behind a number of Balik households, sparking strong opposition from the Balik community in Sepaku Lama.

The negotiation process unfolded rapidly, leaving the community with only two options: accept compensation for their land or pursue legal action in court. Ultimately, about ten affected families were forced to relinquish portions of their backyard land as well as their access to the modified river. The affected households were provided with water via a water truck delivered to the settlement once every four days as a substitute for their lost river access. The river project management saw this as a necessary part of Corporate Social Responsibility (CSR) (Interview with CW-02, July 24, 2023, Sepaku). The community members received compensation of 130,000 rupiah per square meter, an amount far lower than the actual value of the land, particularly given the surge in land prices following the announcement of the capital relocation (Interview with IC-03, August 14, 2024, Sepaku). For instance, a transmigrant in Bukit Raya Village received 460,000 rupiah per square meter for land affected by road construction (Interview with GO-05, August 18, 2024, Sepaku).

By late 2022, following the river's modification, the area behind the settlement had been completely cut off from natural water access. A stagnant, non-flowing river was all that remained after the natural curving course of the river had been straightened. This was followed by the construction of a concrete wall separating the settlement from the river intake site. The loss of physical access to the river imposed a significant economic burden on the indigenous community, including reliance on external water supplies and additional costs to meet their water needs. The delay in water truck services often forced indigenous people to purchase water or install additional piping to draw water from places in the river that were still unmodified. Those who opted for this solution had to invest in upgrading their pump capacity and in extending piping to ensure the water could reach their homes.

The construction led to the removal of stones considered sacred by the Balik people, as the modification of the river's course fundamentally disturbed these sites. While not all Balik people practiced rituals involving the stones, their loss was deeply felt by community elders and, more specifically, by indigenous women who were often responsible for various river rituals. The threat became real as ritual practices, and more broadly, the indigenous beliefs and knowledge maintained for so long, was erased by the constructions, forcing the community to adapt to a new reality. The project also led to the forced relocation of around 30 indigenous graves. These were graves that had been there for generations. As a gesture, the government through a state-owned company appointed for the project each grave at 15 million rupiah.

Apart from the ten indigenous homes directly affected by the damming, other Balik communities faced significant disruptions. While flooding had been a recurring phenomenon prior to the project, the intensity and duration of water stagnation due to flooding increased markedly following the river's modification. This shift became particularly evident in 2022, when during heavy rainfall, floods resulted in water not draining for 24 h. For Balik, the river's natural hydrological cycle had been interfered with and this prolonged stagnation was perceived to be a direct consequence of the damming. Whereas previously, the flood would recede within 1 to 2 hours, the unnatural water retention now significantly interferes with their daily life (Interview with IC-04, June 26, 2023, Sepaku). The government dismissed these negative consequences, regarding this flooding as a routine occurrence that could be mitigated through further infrastructure interventions, including water storage solutions and modifications to river flow designed to manage future flood risks (Antara, 2024).

For the government, this infrastructure project was a means through which the new capital city and surrounding communities, including the Balik communities, would gain better access to water through improved piped water services (Interview with GO-04, August 2, 2023, Samarinda). The universal idea of water access was never explicitly included in formal planning documents, yet it was conveyed informally through verbal promises made by government officials to affected communities. This idea did not merely regulate and standardize how water should flow and be accessed, but also imposed material burdens on local people. They were now required to purchase clean water for all household needs, including washing and drinking, whereas previously, a significant portion of it was freely obtained from the river. As one indigenous resident remarked, it was strange to have to pay for something that nature had already provided by nature right behind our house (Interview with IC-02, June 26, 2023, Sepaku).

4.3. Sepaku River normalization project

Another water infrastructure project introduced in the Balik settlement after the river intake project was river normalization. This intervention included widening the river, constructing an inspection road, and building extensive retaining walls along the riverbanks in the indigenous riverine settlement. These walls, resembling long embankments, obstructed the visibility of the river, physically distancing the community from it. The construction aimed to control runoff and ensure water flow toward the intake project's reservoir and supposedly beautify the river bank. However this meant that the impacts experienced by several Balik families due to the river intake project would have further ramifications – impacting on yet another segment of the Balik group in Sepaku Lama. Residents continued to draw water from the river, but they were gradually forced to reduce their reliance on the Sepaku River for their water needs.

From 2022 to 2023, certain sections of the Sepaku River were widened. Turbidity was exacerbated, and this affected many residents who continued to rely on the river for their daily needs. This intervention meant that the Balik people had to purchase water from external sources, despite the fact that the cost had steadily risen since the capital relocation. By 2024, in the name of river normalization, concrete walls were built that restricted indigenous river access. Balik people lost all

physical access to the river and were forced to rely entirely on purchased water for bathing and consumption and at significant cost for indigenous households who had, for so long, depended on having access to the river which was their primary water source.

The normalization project faced delays due to prolonged negotiations over indigenous land acquisition. Initially, the company offered compensation at the same rate as the land acquisition for residents in Balik affected by the intake construction, a rate considered to be undervalued by the indigenous community. After a series of dialogues, the land acquisition proceeded, with an average width of 4–5 m of land released from the riverbanks. This included small portions of the rear sections of some houses. The intention was that the acquired land would be used to construct an inspection road along the banks, which are being normalized, complemented by a beautification plan through the development of parks along the riverbanks directly behind the indigenous settlements.

The Balik people receive 400,000 rupiah per square meter for the land deal, more than three times the amount received by those affected by the intake project. The indigenous Balik viewed the previous compensation process for the intake project (2021–2022) as unfair, and it was perceived as a top-down process, as there had been almost no consultation. They were not well-organized at this phase of the urbanization plan, unlike during their response to the normalization project package (2023–2024), which involved more intensive public discussions, demonstrations, and a broader indigenous alliance (Interview with CS-04, August 22, 2024, Samarinda). This is an indication of how the Balik people's previous experiences with infrastructure projects reshaped their bargaining power in relation to new infrastructure projects. Through the involvement of the broader indigenous association, AMAN, the Balik group was able to reconfigure and to have more bargaining power in the land deal process. However, despite the fact that they now had more agency, they remained fearful of the outcomes, as by mid-2024, they had not yet received the land certificates (*Segel*) that had been submitted for the acquisition process. This left them vulnerable, especially in the event of further land acquisitions for future projects (Interview with IC-06, September 1, 2024, Sepaku).

Some of the compensation has been used to purchase water tanks, each with an approximate capacity of 1200 L. A Balik household of four requires a 1200-L water tank to meet its water needs for four days, costing approximately 85,000 rupiah. The expense is more significant for those without a water tank, as purchasing a tank costs between 1 million and 1.5 million rupiah per unit as of 2024 (Interview with IC-07, September 1, 2024, Sepaku). During the first author's visit to Sepaku Lama in 2024, new water tanks were seen on the terrace of Balik homes, marking a shift from reliance on the river to dependence on purchasing water to fill the tanks. However, losing access to the river has a much greater meaning than the monetary value of compensation.

The water tanks reflect fractured social relations, which are gradually being eroded by the intrusion of infrastructure. This places the indigenous community in a dead-end situation, as accepting the material compensation provided to those affected by development also means accepting a new way of life that is far removed from the traditions they have upheld and maintained across generations. This includes the loss of indigenous knowledge of the river which has been central in their lives, from birth to death, with its flow, water, stones, plants, and biota intricately interwoven with the way of life continuously passed down through the generations.

The lives of Balik indigenous riverine communities, impacted on by various processes of river urbanization and the repercussions of this urbanization, are being (re)shaped by the infrastructure that is being imposed on them, with them being unable to make an impact on the predetermined trajectory of how the city is being made. As one representative of the East Kalimantan branch of AMAN stated during an interview, "*Indigenous communities do not reject the capital city, but what else can we do (…) let the river continue to exist in our memory*" (Interview with CS-04, August 22, 2024, Samarinda). Water infrastructure, in turn, continues to wipe out the socio-natural relationship cultivated over time between indigenous communities and the river, putting in its place a relationship based on commodity. What is being framed as an improvement to water access, comes at the cost of the neglect of cultural and historical realities. The growth of the city 'normalized' a way of life that results in the dehistorization of complex indigenous realities. As such the water infrastructure imposed on indigenous riverscapes, embodies a form of symbolic violence that goes hand in hand with the making of new urban spaces.

However, this situation reveals a complex mix of contradictions. The Balik community mourns the loss of their deep connection with nature, while simultaneously accepting this reality and seeking fair compensation, including new opportunities that arise from the socio-economic transformations associated with the capital relocation project. This is not entirely new. A similar dynamic occurred decades ago when forest extraction economies reshaped the territory they had claimed as customary forest since the 1960s. The difference, however, lies in what remains: earlier landscape transformations still left room for sustaining river-based cultural ties, whereas today's interventions are closing the possibility for such preservation altogether.

These contradictory responses are evident in the generational divide: younger Balik members actively seek employment as construction laborers in the new capital's development, while their elders grieve the cultural loss of the river as a living landscape. Various forms of employment have become available, although often temporary or precarious, including jobs in water infrastructure construction, security, administrative support, and cleaning services. As with previous experiences, claims about the destruction of relational ties are deeply entangled with efforts to secure what they perceive as fair compensation.

5. Deepening symbolic violence: living museum as a recognition strategy?

Since 2023, the Nusantara Authority has been developing a draft regulation on advancing local wisdom in environmental management. However, when this plan was publicly announced, the Balik group objected to the misrecognition of their indigenous identity. This issue is related to the first section of the draft regulation, which explicitly mentions several ethnic groups in the new capital, including Banjar, Dayak, Bugis, and Paser[3] but excludes the Balik group. The absence of the Balik group in the draft has led to negative perceptions, particularly amongst the Balik indigenous community, who feel that the government has failed to recognize their existence (Interview with IC-02, June 8, 2023, Sepaku). However, after the regulation was formalized by the Head of the Authority Regulation No. 8 of 2024 on the Procedures for Recognition, Protection, and Advancement of Local Wisdom in Environmental Protection and Management, the section mentioning specific indigenous groups was no longer included.

Despite concerns raised by civil society organizations, the initial draft highlights the New Capital Authority's recognition of the need for support from all ethnic groups in the city making process, emphasizing the importance of acknowledging local wisdom. However, the dynamics of the Sepaku riverine, that are shaped by the expansion of water infrastructure, challenge this idea of advancing local wisdom. The

[3] Dayak and Banjar are indigenous to Kalimantan island, while Bugis originate from the neighboring island of Sulawesi. In the core area of the new capital, Sepaku Subdistrict, this study refers to Balik as the native indigenous group. Historically, the logging economy in Sepaku since the 1970s has attracted various ethnic groups, including segments of these three. We did not find subdistrict-level current data that specifies livelihoods and demographics by ethnicity. Still, our fieldwork found that some Bugis communities are now engaged in capture fisheries and aquaculture. Some Dayak and Paser are also involved in fisheries, although their livelihoods are more diverse, including farming and small business.

reconfiguration of the river for the new capital city's water system does not consider the reciprocal relationship between indigenous communities and rivers, through which indigenous identity, local knowledge, spiritual connections and collective memory are shaped. On the contrary, from the outset of infrastructure construction, two options were presented to the Balik indigenous people: relocation to new settlements or compensation for their land and buildings (Interview with GO-04, August 2, 2023, Samarinda). This was also emphasized by an official from the Nusantara Authority quoted by Tempo (2024): "*We are undertaking various projects, including flood control. While initial plans involved relocation, design modifications now allow the Paser (Balik) Tribe to stay*."

Aligned with the motivation to preserve the local wisdom that lies at the heart of the capital, in early 2024, as river normalization projects along the Sepaku River progressed near Balik indigenous settlements, the Nusantara Authority introduced a new idea: the establishment of a living museum. The primary goal of this initiative was to demonstrate that future urban growth could coexist whilst preserving local wisdom in villages surrounding the capital's core (Tempo, 2024). This proposal is a reflection of how the Nusantara Authority acknowledges the non-material consequences experienced by the Balik community amidst the rapid changes in their riverine settlement environment. It also addresses broader public concerns about the potential justification of cultural erosion due to urban infrastructure development.

While government has yet to issue an official planning document outlining this proposed museum's development, several reports in the national media have indicated that the living museum initiative aligns with plans to revitalize villages within the new capital city area by transforming them into cultural tourism destinations. The villages are envisioned as living showcases of local wisdom. Drawing inspiration from a cultural tourism village in Bali, the authority aims to develop the living museum into a tourist attraction capable of engaging visitors and promoting indigenous knowledge (Tempo, 2024). The initiative includes sending several indigenous youth and community elders to Bali in 2024 to learn from them how their tourist village and living museum operate (Interview with IC-06, September 1, 2024, Sepaku). This participation also reflects the internal contradictions within the indigenous community. While there is collective mourning over the loss of their river, some of the younger generation are actively involved in state-led preservation efforts designed to generate new income opportunities for indigenous communities as part of the broader development of cultural tourism villages.

At the same time, some raise critical questions, "*What wisdom is there to showcase after the river, our center for culture and rituals, has been lost to the intake*?" (Interview with IC-05, September 1, 2024, Sepaku). Balik people generally argue that the current priority should be to ensure that water produced by the dam infrastructure is distributed and made accessible to their communities at subsidized rates as compensation for their loss of direct access to the Sepaku River. It is only in this way that the economic burden on Balik households, already strained by the rising costs of meeting their water needs, might be reduced. Yet some Balik families accept the idea of a living museum since they argue it is far better than relocating their settlement.

> "*At first, all the houses were supposed to be affected, but in the end, only some were. Though we still do not know what will happen next (…) Making our area a tourist village is much better than relocation because the only thing we have left now is our home. This is what we must protect. The river and stones are already gone*" (Interview with IC, August 14, 2024, Sepaku)

From several conversations with indigenous communities, the idea of a living museum is problematic as it implies that no significant changes have occurred in the socio-natural relationship between indigenous communities and the river, a relationship that was so deeply rooted in their beliefs and culture. Rather, this idea further reproduces the state's simplification of culture, as they use their power to carve out new realities (Scott, 1998). This is a deep form of symbolic violence, as it disassociates relational attachments and remakes the world by rearranging people within it (Schubert, 2008), as if they have no historical roots (Emirbayer & Johnson, 2008). It is here that we see the continuity of infrastructural violence, from the urbanization of water to the creation of cultural infrastructure, that, despite its inclusive intent of preservation, remains part of the same planning regime that reorders life.

In contrast to the symbolic cultural preservation through the museum, indigenous communities are seeking to keep their identity by expanding their resistance movements through national and international indigenous solidarity. For instance, in 2024, an indigenous Balik woman spoke at an international forum for indigenous communities in Thailand, sharing the Balik experience dealing with the new city making process and building global indigenous solidarity. Similarly, other Balik Indigenous representatives participated in the national congresses of indigenous people in Papua and Bandung. Several Balik people also joined solidarity actions in Sulawesi, facilitated by environmental activist networks, forming strong bonds across localities.

Together with AMAN, the Balik community is currently developing a broader recognition strategy to counter the trajectory of urbanization, redefining indigenous authenticity by documenting traditional knowledge, rituals and cultural practices. A Balik dictionary and encyclopedia is being been compiled to prevent the potential extinction of knowledge, rituals and cultural practices amidst rapid city growth. Since early 2024, the community is putting together as much Balik vocabulary as possible to document it through the Balik indigenous language dictionary. For example, one Balik individual interviewed (IC-06) showed the first author a handwritten notebook in which the left side contained Balik words arranged alphabetically, while the right side provided their meanings in Indonesian. New words were regularly added. The community believes this initiative will prevent the extinction of the Balik language and acts as a broader strategy to protect indigenous identities amidst the rapid changes occurring in the new capital.

6. Discussion and conclusion

Drawing from the case of the Balik indigenous community in the early development of water infrastructure for Indonesia's new capital city in East Kalimantan, this study has contributed to scholarly discussions on the political ecology of urbanization and urbanization of water, infrastructural violence and indigenous studies, to unpack how water infrastructure in city production, embedded within the broader political economy, produces violent outcomes. We have shown that water access is not merely a material issue but also an ontological one (Wilson & Inkster, 2018), entangled with history and changing environmental subjectivity of indigenous people (Agrawal, 2005; Jairath, 2021). In this context, the form of violence identified through the reconfiguration of socio-natural relations via the cessation of river access and its symbolic celebration through the proposed museum requires an analytical lens that goes beyond exclusion and displacement. Reframed through this intersection, infrastructural violence helps reveal how infrastructure projects operate as selective regimes of recognition that reconfigure life without direct eviction. Instead, they include indigenous communities within the promise of urban progress (e.g., universal water access and cultural recognition) while simultaneously hollowing out their lived practices and relations with the river. In this way, the study extends current debates on infrastructural violence, often centered on spatial exclusion, service withdrawal, or displacement, by highlighting a form of violence that includes, rather than excludes, people into state and future urban visions, an inclusion that, paradoxically, results in the erasure.

River's End reflects on the consequences of these inclusive narratives in Indonesia's new capital for riverine indigenous communities. By focusing on water infrastructures as an entry point, the analysis in this paper is necessarily limited to the lived experiences of a single indigenous community between 2022 and 2024. This spatial-temporal context

limits the portrayal of the Balik as a riverine community, even though their complexity also lies in their relationships with forest and land, which have become increasingly contested due to the capital relocation. In addition, the study does not encompass the broader context of Sepaku as a rapidly transforming landscape, as the city is still in the making, and thus cannot account for more recent dynamics such as post-construction developments that remain beyond this paper. Yet, within this specific context, we highlight the violence of indigenous riverine urbanization, a consequence of state-led and technocratic urbanization that generates a complex interplay of agency and precariousness (Dipura et al., 2024), deepening the uncertainty surrounding indigenous identities within urban expansion. At the same time, perhaps one positive outcomes, is that it is strengthening indigenous networks and rethinking uneven power relations.

The consequence of such violence is that indigenous riverine communities are forced to accept a new future as urban citizens, reliant on planned piped systems and the purchase of water following the river's closure. This critique is not intended to dismiss the complexity or importance of modern water services, especially the broader ambition to ensure universal access through centralized infrastructure. Instead, it highlights how such expansions must engage more sensitively with the hybrid water practices that have long sustained communities in Sepaku. As a result, new socio-natural relationships are being configured as the affected community aspires for affordable and subsidized water utility prices to meet their future needs. This is ironic considering the planned "ideal infrastructure" which supposedly brings water for all remains incomplete and/or is not yet intended for them. This process of disruption and discontinuity is further deepened by the idea of a living museum to celebrate indigenous culture, but which overlooks the fact that a crucial component of its specificity—the social relationship with the river—has been erased. The idea of a museum replaces the existence of indigeneity through a cultural tourist attraction, but this is yet another example of commodification.

The indigenous riverine experiences reaffirm the power of symbolic domination, which makes it easier for people to accept a new world (Bourdieu, 1989) rather than imagine an alternative one. The state exercises its power through infrastructure by "*setting out the broader parameters of physical, social, and symbolic space in the city*" (Wacquant, 2022, p. 7). Consequently, "acceptance" appears to be an unavoidable choice, akin to a "*dead end*" (Li, 2014, p. 180). It is a result of the ways infrastructure is deployed to "*create the material conditions for efficacy*" (Wacquant, 2022, p. 7). The narrative of better and modern water access through piped connections proposes infrastructure as a universal solution. Through this lens, the plurality of the river is transformed into a resource that can only be accessed and utilized through technical interventions following its damming, widening, and enclosure.

These changes illustrate water urbanization through river modification to support new city development, extending into the urbanization of ways of life (Swyngedouw, 2004). This is a trajectory which, seemingly, cannot be avoided, and it is reluctantly accepted. It is part and parcel of other indigenous urbanization experiences. Through this case, we reaffirm through a grounded illustration how state-led urbanization in Southeast Asia (and across the Global South) reproduces socio-ecological risks, particularly for riverine and indigenous communities. While responses vary, communities simultaneously mourn the loss of their relationship with nature while adapting to it, pursuing compensation, seeking employment, and negotiating to retain their place within the emerging urban order. The option to remain in place is a manifestation of evolving power relations as indigenous groups organize themselves around the expansion of water infrastructure within the city-making process. Initially planned as a fully transformed space for production, this was contested and defended through protests and demonstrations that disrupted the process and affected infrastructure targets. As a result, *Kampung Sepaku Lama* continues to exist, although it is now surrounded by infrastructure that disrupts and reshapes the socio-natural relationship with the river.

The former capital city, Jakarta, a city shaped by the neglect and erosion of socio-natural relations, should stand as a cautionary tale. The dominant paradigm, which positioned humans above nature manifested through groundwater exploitation, dam construction, and relentless urban expansion, has triggered ecological backlash in flooding, land subsidence, and contamination. This should serve as a clear warning. If the development of Nusantara follows the same paradigm, rooted in the logic of human domination over nature, the socio-natural relations currently shaping IKN risk repeating the Jakarta scenario.

Finally, we must acknowledge that the disconnect between urban development and local and indigenous aspirations remains a persistent issue in planning practices that often attributed to top-down and non-participatory processes. However, if inclusive and participatory approaches result only in monetary compensation for a reshaped and enclosed nature (such as the river in this case) then lack of participation is not the core problem (Kaika, 2017). Thus, the deeper challenge lies in ensuring that indigenous communities are positioned as planners from the very beginning, actively shaping how the city is built and how its water infrastructure is designed. Spatial decisions regarding how and where water is captured and controlled must, in part, originate from them. At the same time, the most urgent action based on indigenous aspiration is to ensure that the promised piped water infrastructure is extended to affected communities whose river access has been cut off before further material harm is incurred. A call for a fundamental rethinking of how we see and practice infrastructure planning, one that is open to diverse ideas and knowledge systems, may be needed to prevent harmful consequences. This includes reimagining how humans can plan cities, shifting from top-down control to relational, grounded, and reciprocal approaches, particularly in relation to water, as practiced by indigenous communities. Such a shift may offer the way we balance aspirations, as locals and indigenous should be able to access and sustain long-term benefits from the transformation of their territories.

CRediT authorship contribution statement

Vandy Yoga Swara: Writing – original draft, Conceptualization, Investigation, Writing – review & editing, Methodology. **Kei Otsuki:** Writing – review & editing, Project administration, Supervision, Funding acquisition. **Femke van Noorloos:** Writing – review & editing, Supervision, Project administration. **Michelle Kooy:** Writing – review & editing, Supervision.

Declaration of competing interest

The authors declare that they have no financial or personal interests that could have influenced the reporting or analysis presented in this paper.

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Appendix Supplementary data

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