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Frontier Urbanisation in East Kalimantan: Displacement, Livelihood Shifts, and Contested Development in Indonesia's New Capital

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ABSTRACT

Urbanization in the Global South is increasingly influenced by large-scale infrastructure and frontier development, frequently exacerbating disparities and displacing marginalized populations. This paper situates Indonesia's new capital (IKN) within debates on neoliberal urbanism and resource extraction, examining how long-established resource-based communities in East Kalimantan perceive IKN's urbanisation. Research was conducted in a village within IKN's official delineation, using surveys, interviews with 74 local and government informants, and field observation (Aug 2023-Mar 2025)—thematic analysis, complemented by government and NGO reports, compared planned and actual outcomes. While state and corporate narratives present IKN as a green and inclusive modernisation engine, communities historically reliant on mining, plantations, and agriculture express ambivalence. Indigenous informants emphasise the loss of customary land rights through coercive acquisitions and insufficient compensation, exacerbated by post-IKN land price inflation. Migrant labourers view IKN as an economic opportunity but face low wages and exclusion from skilled positions, reinforcing labour hierarchies. The paper frames IKN as frontier urbanisation reproducing historical patterns of accumulation by dispossession, without addressing structural inequalities. The findings enhance discussions on Global South urbanism, promoting policies that support indigenous sovereignty and ensure equitable distribution of the benefits of urbanization.

1. INTRODUCTION

The urbanization processes in the Global South have historically occurred as uneven and frequently disruptive transitions, marked by extractive economic practices, elite-driven spatial planning, and the marginalization of peripheral groups [1-3]. Unlike organic urban growth driven by industrial agglomeration and internal demographic shifts, many urban expansions are catalyzed by state-led infrastructure projects and capital investments prioritizing territorial integration over local well-being. Across Southeast Asia, urbanization frequently operates as an extension of earlier modes of frontier expansion—where rural hinterlands are absorbed into broader circuits of capital, infrastructure, and governance [4, 5]. These urban transitions are especially challenging in previously resource-dependent regions, where local livelihoods, ecosystems, and cultural landscapes have suffered decades of commodification and ecological stress due to extractive practices. The Indonesian province of East Kalimantan epitomizes this condition, serving as a paradigmatic case of how urbanization—rather than disrupting extraction—can rearticulate it in new forms.

Indonesia's new capital project, officially named Ibu Kota Nusantara (IKN), provides an example in which urbanizing extractive-dependent region is narrated as a progress to modernization. The idea is conceived as a model city for the 21st century—intelligent, sustainable, and resilient [6, 7]. The design adheres to sustainability concepts, including the use of renewable energy, elevated forest-to-building ratios, and the integration of natural with contemporary infrastructure [8]. Government rhetoric frames IKN as a solution to Jakarta's chronic congestion, flooding, and subsidence problems while

simultaneously branding it as a symbol of Indonesia's economic modernization and geopolitical decentralization [9]. Yet beneath the high-level narratives of innovation and environmental consciousness lies a more complex and contentious reality [10]. The area designated for IKN includes landscapes that have been inhabited and managed by indigenous communities, such as the Paser and Balik peoples, for generations [11]. These communities have enduring customary claims to land, frequently unacknowledged in official cadastral maps, and have sustained agroforestry practices, spiritual sites, and riverine livelihoods that are currently threatened with destruction [12].

Due to the effort to rapidly transform the resource-based economy in East Kalimantan, the implications of IKN's development thus extend beyond physical urbanization to encompass complex livelihood transitions, cultural dislocations, and political contestations. For long-standing resource-dependent communities, urbanization is not simply a matter of spatial change, but a profound transformation of social, economic, and ontological relations to land. This research, hence, critically addresses the process of IKN development through the emphasis on multi-level contestation about urban future, highlighting issues and potential national-local discursive misalignment surrounding the IKN development. Drawing on field interviews, participatory observations, and secondary data from planning documents and media coverage, it interrogates the social life of urbanization from the margins. Specifically, it asks: How is urbanization perceived by long-existing resource-based communities in the areas targeted for IKN development?

The rest of this article is structured as follows: following this introduction, Section 2 provides a literature review about the contested discourse of development, particularly in the case of urbanization in the areas dominated by resource-based economy. In Section 3, we describe the contextual and methodological approaches exercised in this article. Further, Section 4 is where we explain the results and their theoretical implication, and lastly, this article ends with concluding remarks.

2. RELATED LITERATURE AND CONCEPTUAL FRAMEWORK

Frontier urbanisation, which is usually fueled by state-led mega-projects, speculative investment, and changes in land governance, is the process of converting rural, peripheral, or ecologically sensitive areas into urban systems [13]. These procedures, which reflect unequal power among state, private, and community actors, are frequently defended in the Global South on the grounds of the "public interest," but they are still contested. The capital of Indonesia was moved to East Kalimantan, which is a prime example of how livelihood change, displacement, and contested development intersect in a frontier environment.

When land is purchased for housing, industrial estates, or infrastructure, it frequently leads to displacement, which frequently results in the loss of homes, means of subsistence, and sociocultural networks [14]. These procedures, which disproportionately harm vulnerable groups, are commonly presented as essential for modernization [15]. In addition to relocation, the consequences encompass social dissatisfaction, exclusion from urban services, and spatial segregation [16]. These trends suggest some similarities for East Kalimantan, reflecting cases like Dodoma, where relocation increased commuting distances and diminished agricultural productivity [17].

Alterations in livelihood within these environments are contradictory. In addition to allowing diversification into non-farm employment and occasionally improving income resilience, urban expansion may undermine agricultural systems [18, 19]. Although competition for land and insecure tenure often increase socio-economic vulnerability, infrastructure projects can stimulate economic opportunities [20, 21]. Climate variability exacerbates resource competition and environmental degradation in fragile contexts [22, 23]. Strong environmental protections and inclusive economic integration are essential for the sustainability of livelihood change in Kalimantan.

The unequal distribution of advantages and the reliance of results on the caliber of governance are reflected in contentious development [24]. Resettlement can both revitalize and undermine socio-cultural systems, while displacement frequently solidifies multifaceted marginalization [16, 25]. Weak governance undermines ethical urban change, marked by discriminatory planning [26], overlapping mandates, and the divide of land between urban and rural regions [27].

Rapid growth concentrates mobility gains among wealthy groups while hastening environmental degradation [28] and infrastructural inequality [29]. Furthermore, urban theory's contextual fit in the Global South is constrained by the predominance of Global North frameworks [30]. These governance, equity, and sustainability issues are made worse in East Kalimantan by the new capital's size and political clout.

According to this study, frontier urbanization is the result of three fundamental factors interacting: speculative land investment, state-led infrastructure projects, and changing land governance regimes are the main drivers. Processes include environmental change, livelihood adjustments, and displacement. Results include environmental gains or losses, economic opportunities or vulnerabilities, and inclusion or exclusion. Whether frontier urbanization results in sustainable and equitable urban futures depends on these factors, which are mediated by social capital, governance structures, cultural resilience, and environmental stewardship.

2.1 From resource extraction to urban expansion: Contested development in East Kalimantan

In Borneo's ecologically sensitive heartland, East Kalimantan has long functioned as a resource frontier [31]. Since the late 20th century, the province has undergone successive waves of natural resource exploitation, beginning with large-scale timber concessions during the Suharto era [32], followed by the boom in coal mining, and more recently, oil palm and cocoa plantation expansion [33, 34]. These extractive cycles have produced significant infrastructural development, yet they have also generated land degradation, biodiversity loss, and the undermining of local food systems [35]. Agricultural land has been increasingly diverted toward industrial crops, contributing to the erosion of subsistence farming and rendering the province a net food importer—an irony for a region endowed with fertile soils and abundant rainfall [34]. Against this backdrop of extractive-led development, the Indonesian Government's recent decision to relocate its national capital—formally announced in 2019—marks a new phase in East Kalimantan's transformation,

introducing urbanization as the next frontier [36].

The new capital development project of Nusantara (IKN) emerges as an "urban resource frontier" [37] reactivates long-standing logics of frontier-making in Indonesia, where land is reclassified and repurposed through state-capital alliances. Similar to how forests were once redefined as timber estates or plantation zones under national development schemes, the current urban planning apparatus constructs East Kalimantan as an "empty" or "underutilized" space awaiting transformation. This discursive erasure of Indigenous presence parallels broader patterns of dispossession seen in other resource frontiers, where legal ambiguities, state-backed land acquisition, and speculative investment converge to marginalize existing communities [38, 39]. The physical reshaping of the landscape through road construction, river normalization, and zoning regulations introduces new forms of spatial enclosure, while also threatening to disrupt local ecologies and socio-cultural networks.

The contradictions embedded in IKN's planning are emblematic of what scholars have termed green neoliberalism—an approach to development that mobilizes environmental sustainability as a legitimating discourse for capital-intensive projects [40, 41]. By designating IKN as a "forest city," planners portray development as ecologically restorative, despite construction operations causing significant land removal, habitat fragmentation, and carbon emissions. For local inhabitants, these inconsistencies result in concrete interruptions to their livelihoods. Agriculturalists encounter diminished land access as plantation areas are converted for urban development, while fishermen report reduced catches attributed to river sedimentation and pollution from dredging activities associated with water management initiatives. The repercussions, presented as unavoidable externalities, reveal underlying systemic tendencies where large-scale growth favors the interests of new residents, investors, and governmental elites at the expense of the rights and practices of established communities. Moreover, the employment prospects offered by IKN have, to date, remained unattainable for several local inhabitants.

Preliminary data indicate that a significant proportion of new jobs in construction, planning, and administration require tertiary qualifications and specialized technical skills. In a province where formal education attainment among Indigenous groups rarely exceeds secondary school, this qualification gap structurally excludes them from participation in the new urban economy located in the core area of IKN (KIKN). Instead, locals are often excluded from the growth of urban economics and involving themselves in informal economy, echoing the exploitative labor hierarchies experienced in the mining and plantation sectors that preceded IKN. Migration from Java and other urban centers intensifies competition for employment, housing, and social services, leading to the spatial marginalization of indigenous populations.

In response to these pressures, local communities actively engage with and respond to change. Indigenous groups within the IKN development zone are asserting their claims via counter-mapping exercises, land marking, legal advocacy, and cultural documentation. These actions contest prevailing narratives of progress and modernity, advocating for alternative futures grounded in traditional governance, environmental stewardship, and historical continuity. Yet, the efficacy of such resistance strategies remains uncertain in the face of overwhelming institutional and financial power. As previous research on agrarian and environmental change in Indonesia has shown, the interplay of local agency and structural constraint often produces hybrid outcomes—partial accommodations, negotiated settlements, and latent tensions that reshape frontier politics in unpredictable ways [38, 42].

3. MATERIAL AND METHODS

3.1 Data acquisition process

This study was specifically conducted in the villages of Sukaraja, Sepaku, Bukit Raya, Bumi Harapan, and Pemaluan (pink area in Figure 1). Administratively, these five villages were formerly part of Sepaku District in North Penajam Paser Regency. Currently, part of them fall within the delineated area of the Nusantara Capital City (Ibu Kota Nusantara, IKN). Based on the Nusantara Capital City master plan, the Nusantara area is divided into two zones (shaded area in Figure 1): the IKN Zone and the IKN Development Zone. The villages in this study represent the IKN Zone, which is the initial priority area for Nusantara's development. Additionally, within the IKN Zone lies the Government Core Area planning zone (yellow area in Figure 1), which will serve as the central government office complex. These conditions make these five villages the most affected areas, experiencing significant growth [37].

Field surveys have been conducted for primary data collection, direct observation, and documentation from August 2023 to March 2025. The methods used included in-depth interviews with local communities and government, and direct field observations [43, 44]. Unstructured in-depth interviews were conducted with 74 informants (see Table 1). These interviews aimed to explore the extent to which the government provides services to communities affected by the development. In addition, data obtained from district, regional, and central government officials, conducted through both sit-down interviews and FGDs, was used for triangulation, allowing comparison between planned development initiatives and what is occurring within communities. Government interviews were conducted with the Nusantara Authority and village representatives located within the IKN area (Table 1). Local community informants comprised indigenous ethnic groups (Balik and Paser tribes), former transmigration communities, and spontaneous migrant communities. Additionally, the interviewed locals included those directly affected by development, such as land acquisition. Local community informants were selected using the snowball sampling technique, where key information and emerging issues were identified based on recommendations from previous informants.

Table 1. List of informants

No.	Organizations	Divisions
1	Nusantara Authority	Planning and agrarian division
2	Village of Sepaku	Head of village
3	Village of Pemaluan	Secretary of village authority
4	Village of Sukaraja	Secretary of village authority
5	Village of Bukit Raya	Head of village
6	Village of Bumi Harapan	Village governance division
7-74	Communities (n: 68)	-

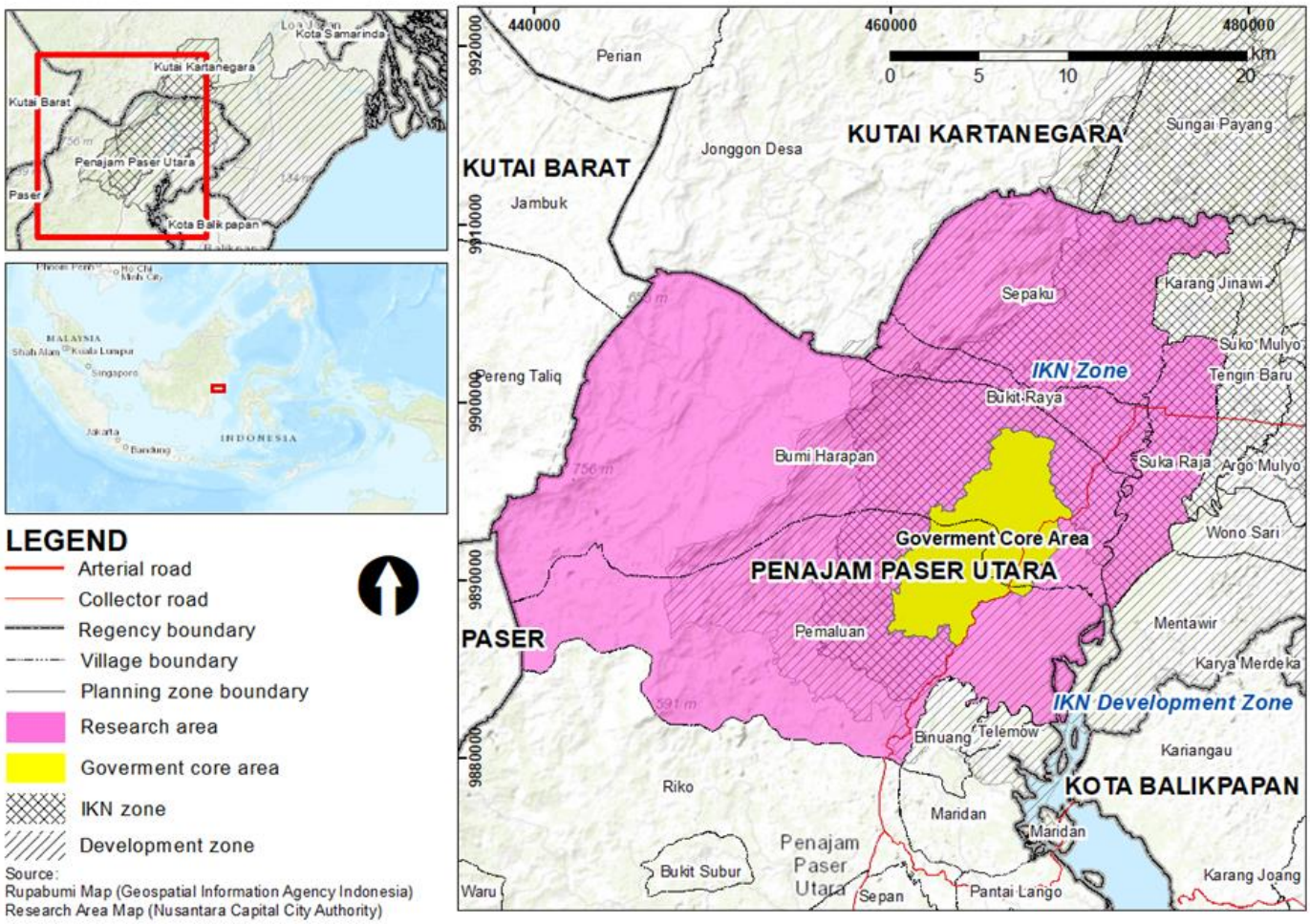

Figure 1. The research areas

Data Collection		Data Processing		Result
Primary data • Unstructured in-depth interview (goverment n = 6; local communities n = 68) • Direct observation	→	Content analysis • Transcribed • Coding • Classified	→	• Thematic categories of informant's statements • Direct quote statements
Secondary data • Regulations (planning document and studies) • Maps		• Content analysis • GIS		• Complementary data • Thematic maps

Figure 2. Data collection and analysis process

Direct observation, secondary data analysis, and review of regulations were conducted to complement the primary data obtained. The secondary data used included maps, while the regulatory materials consisted of planning documents and studies in the IKN area that the government had published. Figure 2 delineates the comprehensive procedure of data collection and analysis, commencing with fieldwork activities to get primary data for the thematic interpretation of qualitative data. Furthermore, secondary data has been integrated to further strengthen the study and offer contextual insight.

3.2 Data analysis

Data processing involves transcription and classification. Informant's statements were grouped into thematic categories [43, 45]. Such thematic categories were developed in a bottom-up fashion, meaning that they were grouped according to the information in the data without any pre-determined categories. Such a process involves circular steps involving an iteration of categories until the authors agree on the validity of coding categories. Accordingly, the coding process involved some of the authors, where the inter-coder reliability was developed by establishing agreement among the coders, hence biases could be minimized [46].

To illustrate the textual context and informants' narratives, direct quotes translated into English and visual documentation were used in the analysis. To supplement the analysis, development plans and technical reports from the government and NGOs were utilized to compare planned versus implemented actions against empirical findings from the field.

4. RESULTS AND DISCUSSION

4.1 East Kalimantan as an energy frontier: Oil, gas, and uneven development

East Kalimantan, Indonesia, exemplifies energy frontiers, where the unyielding pursuit of resource extraction has transformed the region's terrain and society [31, 47]. Since the 1970s, its extensive deposits of oil, gas, and coal have propelled economic expansion, transforming the City of Balikpapan into a vibrant industrial center focused on mining. Nonetheless, this advancement has been markedly inconsistent [48, 49]. Investment and infrastructure have been concentrated on extraction sites, resulting in the underdevelopment of rural areas such as the Paser hinterlands. Meanwhile, urban centers such as Balikpapan and Samarinda have attracted waves of migrant workers, creating stark disparities between booming cities and marginalized indigenous communities who have limited access to urban development's benefits.

The environmental costs of this energy boom are equally stark. Alvernia et al. [50] highlighted that offshore drilling and refinery operations have degraded coastal ecosystems, with local fishers reporting dwindling catches for decades. On land, coal mining has driven uncontrolled urban expansion in Samarinda, leading to silted rivers and frequent landslides [51, 52]. Balikpapan, despite its prosperity, suffers from inflated living costs, making it a city of contrasts—wealthy enclaves for industry elites alongside struggling communities. A report published by Central Bureau of Satistics [53], based on the results of cost of living survey, revealed that Balikpapan is among the most expensive cities to live in, with the average expenses reaching 9.8 million/month. Such an amount is higher than in several cities in Java, a region that is considered the most developed in Indonesia.

The region's reliance on extractive industries also raises questions about its sustainability, particularly related to net zero commitment underpinning the development of the new capital. Despite being planned to be a sustainable urbanism, by emphasizing the concept of net zero and forest city [6, 54], the high dependence of surrounding regions on coal and mining economy sparked concern that the new capital will depend on oil and gas revenues, repeating the same patterns that have long defined East Kalimantan's development. The statement from the head of the Planning and Development Agency (Bappeda) in East Kalimantan expressed this matter:

"It is estimated that in 2030, the coal demand will decrease about 30 percent. This will be a substantial challenge for the East Kalimantan economy. (I think) it is because of the global pressure on the coal market, particularly through net zero discourses. With the target of 2050 where coal will be no longer used, the economic transformation of East Kalimantan is urgently needed, from mining-based economy to agriculture, industrial, and even services" [55].

Such a concern further raises a long-term worry as resources run out or communities push back, the region faces a familiar pattern—rapid growth followed by decline, leaving lasting harm to both the environment and local people. This situation has been experienced by other cases of urbanizing resource frontiers such as Sub-Saharan Africa [56, 57] where the rapid urbanization has led to the increase of climate change risk, urban poverty, and unemployment and the Amazone Basin [58, 59] where deforestation and extractive industries have exacerbated social inequality and ecological degradation. Accordingly, East Kalimantan's story raises concern over the double-edged nature of energy frontiers: engines of economic growth, yet often at the expense of people and ecosystems.

Generally, the classification yielded themes related to urbanization in the Nusantara Capital City area from the perspectives of local communities and the government. More detailly, the information was categorized into: 1) society, 2) place attachment, 3) infrastructure and public space, 4) water resource, 5) expectation, 6) land acquisition, 7) job, 8) river normalization, 9) IKN authority, 10) language and culture, 11) land conflict, 12) transmigration, and 13) identity and history of local tribe, local culture. The frequency of statements provided by informants has been systematically categorized based on the thematic list presented above (see Table 2). This classification facilitates a more precise identification of recurring patterns and themes within the qualitative data.

The qualitative data's thematic patterns indicate a society deeply rooted in an extractive economy that has been historically dominated by mining, oil and gas, and large-scale plantation industries. This society is now confronting the unprecedented pace and scale of urbanization that is brought on by the construction of IKN, the new national capital. The recent wave of construction of infrastructure for IKN, including extensive transportation routes, drainage networks, and urban water utilities, presents the potential of causing new ecological disturbances through changing hydrological flows and increasing competition for resources.

Community members maintain a strong emotional, historical, and cultural connection to their territories, as evidenced by the high frequency of place attachment and references to the identity and history of local tribes and culture. Although the physical landscape has changed as a result of extractive activities, long-standing place-based identities have not always been replaced. On the other hand, the development of capital cities and urban growth have the potential to change these landscapes into intricate urban-regional systems, which would make it harder for traditional attachments to endure.

The conversation is dominated by issues of land conflict and acquisition, which reflect increased tensions over ownership and space. Land disputes in the extractive economy have generally been limited to industrial concession areas. The IKN project, on the other hand, expands the scope of contestation and impacts a greater number of stakeholders, including rural dwellers who live outside of official industrial zones. This points to a continuous transition away from land pressures specific to a sector and toward a broader spatial commodification.

Table 2. List of statements frequency

Classification of Informants' Statements	Frequency of Appearance
Society	11
Place attachment	4
Infrastructure and public space	6
Water resource	5
Expectation	6
Land acquisition	25
Job	6
River normalization	12
IKN authority	2
Language and culture	11
Land conflict	9
Transmigration	6
Identity and history of local tribe, local culture	16

Source: Primary Data, 2025

Discussions about river normalization, along with water resources, are rife with environmental concerns. The extractive industries already bring stress to ecosystems within the region.

An ambivalent attitude toward changes in the economy manifests itself in the themes about expectations and job availability. While locals look forward to possible jobs in administration, services, and construction, they are also concerned that these jobs might only be available temporarily or be closed to local workers, which would replicate the exclusionary dynamics of extractive industries.

Language and culture, public space and infrastructure, and transmigration all indicate that the social fabric is about to change. In addition to diversifying the cultural landscape, the influx of migrants, bureaucrats, and urban professionals may cause identity conflicts, especially in the absence of integration mechanisms. Echoing the traditional top-down governance style of both extractive operations and state-led megaprojects, the comparatively low mention of IKN authority highlights a gap in community–state engagement.

All things considered, the data show a society at a turning point: moving from an extractive economy centered on enclaves to an integrated urban-regional system; from stable local identities to hybridized socio-cultural configurations; and from comparatively uncontested access to natural resources to more intense competition for infrastructure and land. This transition, alongside an economic shift, entails a reconfiguration of identity politics, power relations, and spatial rights, which will ascertain whether local communities engage as active players in the socioeconomic development of East Kalimantan or remain passive recipients.

4.2 IKN as an urban resource frontier and the emerging issues

The development of Indonesia's new capital (IKN) in East Kalimantan exemplifies the characteristics of an urban resource frontier, where land, labor, and natural resources are extracted and commodified to fuel rapid urbanization. A key feature of this process is territorialization by dispossession, where customary lands marked by fruit trees and graves are overwritten by state-formulated spatial plans [38]. This mirrors historical patterns seen in the early presence of oil and gas concessions, where indigenous territories were similarly overlooked for the sake of economic gain. There have been cases in Indonesia where such a dispossession occurred such as the Batang Toru Hydropower Project in North Sumatra [60] and the Merauke Integrated Food and Energy Estate (MIFEE) in Papua [61-63]. In the case of IKN, we argue that the state's spatial planning legitimizes land acquisition, often sidelining local claims in favor of large-scale urban development.

To finance IKN's infrastructure, the government inevitably depends on extractive industries, such as oil and gas [64] and palm oil-related investments like biofuel corridors [65, 66]. Additionally, the new capital's growth demands careful planning to ensure economic development and connectivity [67, 68]. However, these investments may lock the city into East Kalimantan's extractive economy, deepening reliance on non-renewable and mining resources. Additionally, the labor opportunities opened by IKN development are not attractive enough to lure local workers who previously worked in the palm oil and mining industries. It leads to a considerable number of educated-migrant laborers migrating to the areas and potentially creating a hierarchical workforce where local communities are excluded, leaving them with mostly unstable, low-paying construction jobs. Our interviews highlight this issue, with informants describing their difficulties securing formal IKN-related employment.

"In term of jobs, as communities who have been living here for decades, we still feel neglected and not entirely involved (in the whole processes of IKN development. They previously said to prioritize local people, but in reality, nothing. To be able to work in the IKN authority they demand graduates, that feels like 'searching a needle in hays' (which means really difficult to find a graduates within local community members)" (Sepaku Indigenous community member, 2023).

As a consequence of the labor market mismatch, the locals prefer to involve themselves in informal jobs outside government-related construction. As mentioned in the statement above, it is due to their struggle in fulfilling the educational requirements as well as the offered salary does not match their previous income in the mining sector. The following statement is another supportive evidence we obtained during interview:

"It is indeed more beneficial for us (to work on an informal construction project). Although we use more effort, we do not have any work hours, we work as we prefer and more importantly, we earn more money. Here (in the informal job) we can get IDR 400 thousand a day, but if we join them (constructing the IKN) we will just be paid IDR 180 thousand a day" (Transmigrant person, 2025).

Additionally, the paradox of IKN's 'green frontier' narrative is evident in its unsustainable outcomes of its rapid development practices. While conceptualized as a sustainable forest city, its construction relies on coal-powered cement and palm oil-based biofuels, resulting in the lock-in development process to the environmentally damaging systems [64, 65]. Projects like river normalization, framed as flood control, destroy fisheries and disrupt ecosystems, echoing the environmental harm caused by past oil drilling. The normalization of Sepaku and Pemaluan River project, for example, resulted in severe erosion and destruction of local fisheries, which are considerably detrimental to the community's livelihood. Another example is the construction of roadways, which altered the flow of runoff and subsequently caused settlement inundation in several regions, including Riko and Maridan Villages. The subsequent statements corroborate this situation:

"We actually have got used to flood, but previously it was over in one until two hours, but now it can reach three days of inundation ... they managing water for IKN but here, we have to bear the flood ... the IKN authority said they will solve it in a month, but it has been three months since they said so and we are staying still" (flood affected community in Riko Village, 2025).

Lastly, the issue of land commodification was also observed during our fieldwork. Historically, East Kalimantan's forests were carved up for logging and oil palm plantations; now, the "undeveloped" land is repurposed for urban real estate. State-corporate alliances facilitate this through eminent domain and speculative urbanism, with land prices surging from 300 million IDR/hectares to billions, according to our interviews. Indigenous resistance, such as counter-mapping with fruit trees and graves, and legal challenges against land grabs, highlights ongoing contestation. Paser and Balik indigenous communities, for example, reject relocation, asserting their sovereignty over ancestral land, as our informant stated in the following statements.

"There are 30 households who are reluctant to be relocated. The options provided by the IKN authority are not preferrable because we are living in our ancestor's land. If we move, we will break our relation and history with our ancestors. The compensation will not ever be replacing the invaluable cultural bonds if it is broken (Paser Indigenous community member, 2023)".

The mentioned externalities of IKN's development embody the dynamics of an urban resource frontier: dispossession, extractive financing, labor hierarchies, and greenwashing. These dynamics demonstrate how frontier urbanism sustains inequities and environmental deterioration, despite its claims of development and sustainability [64].

4.3 Theoretical implications: IKN and frontier urbanization

The ongoing development of Nusantara, Indonesia (IKN) defies traditional urban theory by demonstrating how cities might arise directly from the dynamics of resource frontiers [36]. Unlike organic urban growth seen in cities like Jakarta, IKN is a product of extractive urbanism, where urbanization is driven by the interests of extractive elites—state actors, developers, and agribusiness—and financed by resource wealth such as coal revenues and palm oil subsidies [65]. This model is justified by frontier myths like "empty land" and "untapped potential," which obscure the dispossession of local communities [69-71]. Similar situations are also observed in other cases of imposed urbanization which are associated with certain parties' ambition in building urban centers, resulting rapid shift from the pre-existing socioeconomical practices. The case in the That Luang Marsh Special Economic Zone (SEZ) in Laos is one of the examples where urbanization triggered the displacement dan land dispossession in rural areas [72, 73].

Notably, IKN represents a new phase in East Kalimantan's development history, shifting from resource extraction (e.g., coal, palm oil, and timber) to urban land commodification, each cycle involves communities' displacement under distinct contexts. IKN shares commonalities with other resource frontier cities, such as Houston (USA) and Aberdeen (UK), in its dependence on extractive industries and the socio-economic disparities it generates.

In the case of Houston, the shift from oil-based industrial expansion to urban function resulted displacement to suburban peripheries and triggered environmental injustice [74-76]. Whereas the case of Aberdeen in the North Sea, Scotland showed a rapid development of urban space has led to economic disparities within the city [77]. The two mentioned cases of the frontier urbanization in Houston and Aberdeen provide lessons learned that resource-driven urban development is correlated with uneven growth, community displacement, environmental and sacrifices long long-term livability which is relevant to the current case of IKN development.

However, despite some commonalities, the case of IKN to some extent is distinct in its state-planned urbanization model, which combines oil/gas legacies with top-down governance, creating unique contradictions—such as promoting "sustainability" while remaining reliant on coal. Unlike Houston's market-driven sprawl and boom-bust cycles or Aberdeen's compact energy hub and post-oil diversification [74-77], IKN risks becoming an elite enclave with stunted growth, further marginalizing rural and resource-dependent populations. The lessons highlighted previously thus need to be contextualized specifically for the case of IKN. Particularly in redistributing power and the inclusion of pre-existed concept of sustainability practiced by the long-existed indigenous population. It is because state-induced projects tend to be exclusionary planning, prioritizing capital accumulation, and not integrating local knowledge into planning [78].

The fast integration of existing populations into IKN's urban economy poses complex issues. The rapid urbanization socially intensifies inequities and cultural displacement, as rural migrants encounter isolation and the erosion of traditional livelihoods. Meanwhile, economically, skill mismatches and saturated low-skilled job markets hinder employment, while resource allocation disparities perpetuate rural poverty. This situation is commonly observed in cases of rapid urbanization, such as Jakarta's Metropolitan expansion in which Betawi indigenous community was displaced [79], and Shenzhen, China where cultural issues emerged following the local-migrant integration [80, 81]. In terms of environmental problems, the unchecked urban expansion degrades ecosystems, undermining sustainability claims and potentially hindering the achievement of "green ambition" as also happened in Hanoi, Vietnam [82] due to the substantial degradation of peri-urban agricultural land following the development of a new urban area and rapid infrastructure.

5. CONCLUSION AND POLICY IMPLICATION

The establishment of Indonesia's new capital, IKN, in East Kalimantan demonstrates an ongoing dependence on extractive industries, as it does not engage indigenous labor and instead indicates a transition towards the commodification of urban territory. This transformation perpetuates the region's trend of community displacement amid changing economic paradigms. The IKN development represents a complex case of frontier urbanization that triggered tensions between state-led urbanization and local socio-ecological systems. While framed as a sustainable 'forest city' that will drive national progress, IKN's implementation has reproduced historical patterns of dispossession, environmental degradation, and unequal development. Indigenous communities like the Paser and Balik face coercive land acquisition that potentially overlook their customary (adat) rights and cultural heritage. While promised economic opportunities largely exclude locals in favor of skilled migrants due to supply-demand mismatch. Whereas the project's environmental contradictions are particularly striking as its 'green' branding contradicts with reliance on coal-powered construction, river normalization projects that damage fisheries, and financing tied to palm oil and fossil fuel revenues. These processes establish IKN as the most recent phase in East Kalimantan's frontier history, shifting from wood and mineral exploitation to urban land commodification while perpetuating exclusionary development patterns.

The crucial inquiry persists: Has the development process of IKN been as inclusive and sustainable as anticipated? The research indicates a significant disparity between rhetoric and reality. While the project's planners emphasize green urbanism and equitable growth, our findings found such concepts are yet to be implemented holistically. The state's top-down approach, coupled with inadequate compensation and cultural disregard, undermines inclusivity, while

environmental harms—such as deforestation and river degradation—contradict sustainability pledges.

Our findings lead us to two general policy implications, particularly in making the development of IKN away from the perpetuating patterns of exclusion and environmental harm. We argue that two critical policy priorities must guide the project forward: First, Indigenous land rights must be legally recognized and protected, ensuring meaningful community consent for all development decisions. Second, local workforce inclusion should be prioritized through targeted hiring programs and skills training to guarantee equitable economic benefits. Without these interventions, IKN potentially become another example of urban development that privileges state and corporate interests over the rights and livelihoods of affected communities. The success of this ambitious project ultimately depends on its ability to transition from an extractive model to one that genuinely incorporates social and environmental justice.

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