



# Urban governance and sustainability barriers in Indonesia: Tracking the forward policy design

Nicolaus Petrus Likuwatan Werang<sup>1\*</sup>, Maria Lusiana Florentin Werang<sup>2</sup>, Rizky Amalia Putri<sup>3</sup>

<sup>1</sup> Postgraduate School, Master of Public Administration Program, Universitas Nasional (UNAS), Jakarta, 12550, Indonesia;

<sup>2</sup> Department of Public Administration, Faculty of Social and Political Science, Universitas Katolik Parahyangan, Bandung, 40141, Indonesia;

<sup>3</sup> Department of Public Administration, Faculty of Social and Political Science, Universitas Jenderal Soedirman, Purwokerto, 53122, Indonesia.

\*Correspondence: nicolauspetrus@gmail.com

Received Date: June 8, 2025

Revised Date: July 17, 2025

Accepted Date: August 31, 2025

## ABSTRACT

**Background:** Indonesia's urban governance and sustainability reveal a significant barrier to the concretization in the field. Interestingly, while the government has invented a bunch of initiatives to assist the goals, their insignificant progress has been consistently revealed. **Methods:** Our study employed a systematic literature review (SLR) to track the issue comprehensively and carefully to estimate the objectivity, accuracy, relevance, linked to the research theme and it was assisted by Publish or Perish (PoP) software to collect, organize, comprehend, and scrutinize the data based on scientific papers pertinent to the research theme. **Findings:** Our findings display the significant barriers (e.g., fragmented governance, weak concretisation systems, and underdeveloped institutional mechanisms that block urban governance and sustainability in Indonesia. To swamp, we offer the forward policy design with three leading actions (i.e., integrated policy framework, capacity building, fiscal and legal reform). **Conclusion:** Based on these, we believe the issues of urban governance and sustainability barriers will get back on track and achieve the goals consistently. **Novelty/Originality of this article:** Our novelty contributes to a comprehensive framework that bridges the concepts of spatial planning, governance structures, and sustainability objectives in Indonesian urban areas in an inclusive, equitable, and resilient context.

**KEYWORDS:** urban governance; sustainability; policy design; Indonesia.

## 1. Introduction

Urban governance and sustainability in the development study process have received significant attention and have been massively explored to recognise the pros and cons of securing the natural environment and ecosystems. Moreover, as a global concept of urban governance the nation or state plays a primary role in urban governance (Abdel-Razek, 2021; Kaiser & Deb, 2025; Lowe et al., 2024). This basis, combined with institutional frameworks, national policies, and political dynamics at the state level, forms the primary foundation for managing cities. For some reason, this purpose serves the rules of the game, goods, and constraints that frame the exhaustive accord-making movement at the urban tier. In addition, it's still linked to the role of governance in managing the complex balance

### Cite This Article:

Werang, N. P. L., Werang, M. L. F., Putri, R. A. (2025). Urban governance and sustainability barriers in Indonesia: Tracking the forward policy design. *Sustainable Urban Development and Environmental Impact Journal*, 2(2), 121-136. <https://doi.org/10.61511/sudeij.v2i2.2025.2052>

**Copyright:** © 2025 by the authors. This article is distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).



(i.e., economic rise, social fairness, and indirect sustainability) in the urban scope (Aigbavboa et al., 2025; Teixeira Dias et al., 2023). Thus, by combinative historical perspectives with contemporary theories, this premise assumes the existence of a comprehensive resource for the preface of governance and its primary act in the urban planning process, notably in sustainable urban transformation (SUT) which is an ways to examine the dynamics that occur and seek alternative policies to be actualised as models for urban governance innovation. Further, to summarise the core of the research theme, notably in the Indonesian focus.

First, the research by Jones, (2017); Salim & Hudalah, (2020), conveyed that Indonesia faces barriers in urban governance and sustainability (e.g., outdated urban plans, a lack of coordination among local governments, insufficient capacity building, and limited involvement of private and nonprofit sectors), which inhibit effective concretisation of the new urban agenda (NUA).

Second, Sundah et al. (2024) also stressing urban governance and sustainability in Indonesia faces the same barriers (e.g., resource restraint, diverse cultural contexts, and varying institutional capacities), which preclude the scalability and adaptability of innovative solutions for effective local governance and sustainable development progress. Third, Sumaryana et al. (2024) reveals that key barriers to urban governance and sustainability in Indonesia (e.g., defective governance, incomplete transparency-coordination, obsolete goods reserve, or out of line) of goods management practices with enlargement goals lead to disorganization and underutilisation of supplies, crimping sustainable growth.

Fourth, Rincón et al. (2021) remarked that the significant barriers to sustainability in Indonesia's urban governance include messy standardisation in sustainability-related practices. These barriers complicate municipalities' efforts to set clear sustainability targets and expand effective urban planning strategies. Conversely, an insufficient awareness of sustainability issues slows down effective governance and sustainable development.

Fifth, some critical urban governance and sustainability barriers in Indonesia are identified, including inadequate climate action responses, social injustice, environmental degradation, and insufficient institutional approaches. The relative scrutiny displays these barriers that obstruct effective adjustment for climate shift-urban elasticity in Bandung and Makassar (Abdillah et al., 2025; Indraprahasta et al., 2025).

Based on the previous research above, several essential issues of urban governance and sustainability barriers in Indonesia must be reviewed to gain a proactive comprehension and redesign the collective policy design to overcome them proportionally. This context leaves inconsistencies that need scrutiny, so we organised a systematic literature review (SLR) to span the rift in previous studies.

In line with that, this research offers the RQ: How can this problem be solved from a policy perspective? It also provides necessary instruments for future directions, as a novelty that encourages policymakers to actively pay attention. Later, this research contributes to global urban governance and sustainability theory or concepts in the current issue to inform about what dynamics still happen and need to be optimised consistently with a policy perspective based on a scope of public administration discourses.

In short, this research is split into several parts: Section I provides the study background, gap, rq, and novelty. Section II presents the research methods to display the analysis applied based on the context and relevance of the study. Section III demonstrates the results and discusses the academic debates on research issues. Section IV covers the conclusions and implications of the results comprehensively.

## 2. Methods

To begin with, this research employed the systematic literature review (SLR) methodology to comprehend and rigorously scrutinise the credibility and relevance pertinent to "Urban Governance and Sustainability Barriers in Indonesia: Tracking the Forward Policy Design." Furthermore, this research strictly selects each reference referred

to through fifteen recognised national and international journals through a Google Scholar, Scopus, and WoS search based on academic credibility and relevance to the research topic. Therefore, this research applies a carefully prepared literature review, analysis, and results to ensure data collection accuracy and consistency, leading to a clear and detailed research context (Creswell & Báez, 2020; Visic, 2022).

Nevertheless, this research is assisted by the Publish or Perish (PoP) software. This application helps manage references and track scientific literature based on its validity and relevance. It can facilitate efficient reference management, minimise errors, and elucidate searching for studies relevant to the research theme. The process begins with establishing clear criteria for referring to journals, including citation standards and their influence on urban governance and sustainability barriers in Indonesia. Then, a focused keyword search was conducted on urban governance and sustainability barriers to identify studies with connotations that lead to.

Next, the results of this search were refined and validated, resulting in fifteen journals most relevant to the research focus. Thus, this research yields an in-depth scrutiny of the elements and methodologies that implicate the accuracy of Indonesia's urban governance and sustainability barriers. These results are synthesised and reviewed comprehensively to recommend a forward policy design.

### 3. Results and Discussion

#### 3.1 Result

Nationally, urban governance and sustainability have become an essential concern for policymakers in Indonesia. The heavy dynamics (i.e., rapid urbanisation, spatial complexity, and environmental and social obstacles) demand a more adaptive and sustainable governance approach. Therefore, we attempt to present a more extensive inquiry of the primary barriers in urban governance-sustainability in Indonesia, as follows:

Table 1. Results of analysis on urban governance and sustainability barriers in Indonesia

Author & Year	Title	Methods	Journal	Result
(Zain et al., 2022)	Revisiting the Green City Concept in the Tropical and Global South Cities Context: The Case of Indonesia	Exploratory Study	Frontiers in Environmental Science	The results indicate that Indonesia's green city program primarily focuses on developing green open spaces but fails to elevate the urban environment and sustainability.
(Riggs et al., 2021)	Governing the landscape: potential and challenges of integrated approaches to landscape sustainability in Indonesia	Questionnaires and Literature	Landscape Ecology	Their findings reveal that aligning landscape-level actions with national and regional policies remains a significant barrier, as coherent governance across scales often lacks comprehensiveness.
(Wiryasa & Dwijendra, 2021)	Socio-physical transformation towards sustainable urban morphology through land readjustment in Indonesia	Qualitative Exploratory	Civil Engineering and Architecture	Surprisingly, their findings reveal that escalating land demand in urban areas leads to higher land value, clashing land use, speculation, slums, and illegal land use due to flawed urban management.
(Malik et al., 2021)	Urban Resilience Strategy in The	Qualitative Exploratory	Journal of Government	Makassar City is progressively vulnerable

	Climate Change Governance in Makassar City, Indonesia		and Civil Society	to climate change due to its biophysical environment and socio-economic conditions, which massively affect resilience.
(Edelman & Gunawan, 2020)	Managing the urban environment of Jakarta, Indonesia	Qualitative Exploratory	Current Urban Studies	They stress that Jakarta city faces serious environmental obstacles (e.g., flooding, land subsidence, pollution, and inadequate waste management), mainly due to rapid urbanization, population growth, and weak environmental governance.
(Trifita & Amaliyah, 2020)	Ruang Publik dan Kota Berkelanjutan: Strategi Pemerintah Kota Surabaya Mencapai Sustainable Development Goals (SDGs)	Qualitative Descriptive	Global and Policy Journal of International Relations	The result indicates that limited availability and accessibility of inclusive, quality public spaces in urban areas pose a barrier to sustainable urban development.
(Wikantiyoso et al., 2021)	Sustainable Urban spatial resilience in improving the quality of livable Green Open Space (GOS). Case study: An implementation of Green City Development Program (GCDP) in Malang City Center Development Area, Indonesia	Qualitative Exploratory	IOP Conference Series: Earth and Environmental Science	The result indicates a lack of resilience or sustainability for urban (GOS) systems, particularly in the face of urban shift, disaster risks, spatial disintegration, poor spatial structure, bounded accessibility, and inadequate integration into the metropolitan network.
(Hapsari et al., 2022)	Challenges and Chances of Sustainable Construction in Indonesia: Policy Insights	Descriptive Policy Analysis	IOP Conference Series: Earth and Environmental Science	The findings reveal a gap between policy formulation and adequate actualisation of sustainable construction in Indonesia. Although national policies assisting sustainable building exist and are backed by relevant ministries, their execution faces significant obstacles (e.g., a lack of skilled human resources, weak stakeholder collaboration, and regional disparities in capacity and infrastructure).
(Pardede et al., 2023)	Perspectives of sustainable development vs. law enforcement on damage, pollution	Normative Juridical	Journal of Water and Climate Change	The summons exposes that the government's morality on the environmental board has been unable to swamp the

	and environmental conservation management in Indonesia			rivalry that often arises between ecological preservation and economic reopening goals.
(Sulistiowati et al., 2023)	The Combination of City Branding and Ecocity: A Critical Review of Opportunities and Challenges in Indonesia	Literature Review	Jurnal Bina Praja	The citation reveals that branding narratives and on-the-ground sustainability actions are obstacles, notably because of narrow financial and human resources, and powerless enforcement of sustainable policies.
(Sulistyaningsih et al., 2023)	Smart City Policy: Strategy and Implementation to Realize Smart Urban Governance in Indonesia	Qualitative Descriptive	Journal of Governance and Public Policy	They stress that fragmentation is compounded by institutional and human resource limitations, uneven technological integration, and a lack of cohesive policy assistance, which collectively block the advancement of innovative urban governance.
(Dahlan et al., 2023)	Review of Urban Greening Policy in Indonesia: A Case Study in Jakarta Province	Qualitative Descriptive	International Journal on Livable Space	They stress that the lack of a coordinated, dynamic, and systems-based approach to policymaking and execution has failed to meet the quantity and quality standards of green open space in the field.
(Nasikhin et al., 2022)	Sustainable development goals and environmentally sound infrastructure development in Indonesia	Normative Juridical	Asian Journal of Legal Studies	The findings reflect weak enforcement of environmental laws, insufficient planning and supervision, and limited collaboration among key stakeholders: the government, businesses, and civil society.
(Werdiningtyas, 2021)	Unpacking The Act No 1 of 2011: Does Indonesia in the right pathways towards sustainable housing development?	Qualitative Descriptive	IOP Conference Series: Earth and Environmental Science	The warrant shows that finite governance capacity, as reflected, lacks the flexibility and coordination to train the multi-actor, multi-resource dynamics inherent in sustainable urban development.
(Harahap et al., 2023)	Relations between Architecture, Urban Planning, Environmental Engineering, and Sociology in Sustainable Urban Design in Indonesia (Literature Study)	Literature Review	Jurnal Geosains West Science	The study finds that poor collaboration between disciplines and insufficient resources and funding block the concretisation of sustainable urban projects.

### 3.2 Discussion

Our findings confirm that Indonesia's urban governance and sustainability barriers present a complex landscape of challenges that need some advancement, notably for forward policy design. First, we analyse a key scientific finding, which is consistently stressed across multiple studies, and is the narrow focus of Indonesia's urban governance and sustainability initiatives. Further comments by Zain et al. (2022) reveal that Indonesia's green city programs focus mainly on escalating green open space, but often without connecting broader sustainability and resilience frameworks. This myopic approach fails to address underlying issues (i.e., environmental degradation, urban inequality, and climate vulnerability). Many green city initiatives in Indonesia are shaped by quantitative targets, such as achieving a specific percentage of urban green space. Even though such metrics are useful, they often lead to superficial solutions. Urban greening is treated as an end rather than part of a comprehensive response to urban sustainability. As a result, critical environmental issues like air and water pollution, ecosystem degradation, and land misuse continue to worsen in many areas, with green spaces doing little to address these systemic problems. This connection reveals that social inequality is another concern. Green development projects are often concentrated in more affluent areas, while poorer communities are left behind. Urban greening projects have sometimes displaced low-income residents under the banner of "beautification" or urban renewal. These projects risk reinforcing existing social divides without inclusive planning and community engagement. Moreover, climate resilience is frequently absent from green city planning. Indonesia faces increasing risks from floods, heat waves, and rising sea levels, yet green space strategies rarely align with broader climate adaptation efforts. For example, parks are created without considering their potential role in stormwater management or urban cooling. In short, while green spaces are important, they cannot serve as the sole strategy for urban sustainability. A more integrated, inclusive, and climate-conscious approach is needed, one that sees green space not as a decorative feature, but as part of a wider system of sustainable urban development.

Similar observations by Wikantiyoso et al. (2021) and Dahlan et al. (2021) reveal that even where green open space exists, it often lacks strategic spatial integration and resilience in the face of urban expansion and environmental threats. So, from this, we find the pattern of the barriers that need optimisation for the fundamental phase to run the initiative programme. Furthermore, a second core finding across the studies concerns the weak integration between policy, governance, and spatial planning as evidence for the observation. Riggs et al. (2021) underline a critical issue in aligning national and regional policies to effectively govern landscapes and urban environments. In Addition, they emphasise that without robust multi-scalar governance, the promise of landscape-level sustainability remains elusive. Next, this governance gap is echoed in Sulistyaningsih et al. (2023) and Werdiningtyas (2021), who point to fragmented concretisation, inadequate policy coherence, and insufficient institutional capacity as significant barriers to inventing innovative and sustainable cities. Equivalently, for the specific context as evidence in local government. Malik et al. (2021) find that Makassar City remains increasingly exposed to climate risks due to biophysical vulnerabilities and poor socio-economic resilience, further reflecting the limitations of local governance systems in adapting to climate change. Admittedly, we conclude that the initiative in local government has revealed inconsistencies in protecting the environmental scope and commitment by government responsibility.

Notwithstanding, our findings focus on socio-economic pressures, speculative land markets, and subverted urban planning practices to examine the issues pertinent to our observation. For instance, Wiryasa & Dwijendra (2021) also state this basis, demonstrating how increased land demand and poor urban management contribute to slums, land use mismatches, and illegal developments, an outcome of inadequate planning coordination and regulatory enforcement. It aligns with Edelman & Gunawan (2020), who cite unregulated urbanisation and rapid population growth as the main contributors to Jakarta's environmental crisis, including severe flooding and pollution. Thus, we suggest the key

message here is the need to address speculative land and unregulated markets, lift planning coordination and enforcement, and collectively and proactively reduce socio-economic pressures. Moreover, another symbolic theme is the paucity of capacity to convey sustainable development goals (SDGs) into localised, effective urban programs, which we observed in the observation. Trifita & Amaliyah (2020) point to the absence of inclusive public spaces in Surabaya, undermining the SDG agenda on sustainable urban communities.

The problem is not solely about the physical presence of public areas but how they are planned, governed, and used. Urban development projects often prioritize aesthetic improvements or commercial functions over inclusivity and accessibility. It reflects a deeper issue: the lack of institutional mechanisms, policy coherence, and participatory processes needed to align urban development with the principles of the SDGs. In summary, the case of Surabaya highlights a broader national barrier in transforming global sustainability goals into grounded, inclusive urban actions. Without strengthening local governance capacity and embedding inclusive planning into urban policy, the SDG agenda risks remaining symbolic rather than transformative in the Indonesian urban context.

The current discourse on sustainable urban development reveals an increasing awareness of the disjunction between policy aspirations and their translation into tangible practices. Although governments across the globe have articulated ambitious sustainability agendas, their real-world implementation often lags, constrained by technical, institutional, and socio-political barriers. As highlighted by Hapsari & Putri (2022), the core of this disconnect lies in the uneven distribution of expertise, fragmented collaboration between agencies, and the persistent disparities in infrastructural capacities across regions. These findings indicate that sustainability, while rhetorically embraced, frequently remains a conceptual ambition rather than a functional reality. The distance between planning documents and physical outcomes demonstrates that environmental intentions alone do not guarantee effective transformation; instead, they must be supported by coherent governance systems, trained human capital, and integrative institutional structures. The presence of sustainability frameworks without the operational tools to execute them generates what can be termed “policy inertia,” where commitments exist on paper but rarely materialize in action. This inertia becomes even more evident when examining the structural limitations of legal and ethical frameworks guiding urban development. Nasikhin et al. (2022) emphasize that existing environmental laws, though established to manage ecological pressures, often lack adaptability to dynamic urban conditions. Legal provisions tend to be static, focusing on compliance rather than innovation, and are frequently undermined by insufficient enforcement mechanisms. Sustainability regulations are often drafted as aspirational guidelines rather than binding obligations, leaving ample room for interpretation and inconsistency.

Similarly, Pardede et al. (2023) draw attention to the ethical dimensions of sustainability, noting that economic imperatives frequently sideline ecological values. The moral foundations of environmental stewardship are overshadowed by market-driven interests, resulting in a tension between developmental ambitions and conservation principles. This imbalance is symptomatic of a more profound institutional weakness: environmental responsibility is still an adjunct to economic planning, not an intrinsic component of urban governance. The consequence is a cycle of partial compliance, where policies are symbolically endorsed but seldom enforced with the rigor necessary to achieve substantive outcomes. These observations reveal a recurring pattern of a structural gap between intention and execution.

The pattern manifests through three interlinked mechanisms: insufficient expertise, fragmented coordination, and fragile enforcement. Limited professional knowledge about sustainable design and construction means that even when policies are introduced, practitioners may lack the technical literacy to implement them effectively. For example, construction managers and architects might know sustainability requirements but struggle to apply advanced technologies or materials due to cost constraints or inadequate training. This skill gap leads to superficial compliance, where “green” projects meet only the minimal legal criteria rather than embodying genuine sustainability. Fragmentation further

exacerbates the problem. Urban sustainability depends on synchronized efforts across government departments, private developers, and civil society. Yet, institutional silos prevent these actors from working collaboratively. Urban planning departments, environmental agencies, and infrastructure authorities frequently operate under different mandates, resulting in overlapping responsibilities and inconsistent decision-making. Without a central coordinating mechanism, sustainability becomes a dispersed responsibility, everyone's concern in theory, but no one's accountability in practice. The weakness of enforcement compounds these challenges. Even well-designed regulations fail if they are not backed by consistent monitoring and penalties for non-compliance.

Many cities lack robust environmental audit systems or mechanisms to evaluate whether projects deliver on their sustainability promises. The absence of clear accountability frameworks allows violations to go unnoticed or unpunished. This institutional fragility stems partly from political factors: enforcing sustainability often requires confronting powerful economic interests, which many local governments hesitate to do. Consequently, sustainability laws remain underutilized tools, celebrated rhetorically but ignored operationally. Another important layer of this analysis involves the barriers to multidisciplinary integration in urban sustainability practices. The complexity of urban systems demands collaboration among architects, engineers, economists, sociologists, and ecologists. However, professional and disciplinary boundaries hinder this integration. Traditional urban development models are dominated by technical and economic rationalities, emphasizing cost-efficiency and productivity over environmental and social resilience. While planners might propose climate-adaptive infrastructures, engineers may focus narrowly on structural performance, and policymakers might prioritize rapid urban expansion to meet demographic pressures. These competing priorities lead to compartmentalized solutions that fail to address the systemic nature of sustainability. The absence of multidisciplinary synthesis also limits innovation. Many sustainable technologies, such as circular waste management systems, low-energy building designs, or green transport networks, require cross-sectoral coordination and shared expertise. When knowledge remains isolated within specific disciplines, opportunities for synergistic progress are lost. This fragmentation pattern, skill deficiency, and weak institutional support reveal a profound governance challenge. Sustainable urbanization cannot be achieved through technical fixes alone; it requires an adaptive governance system capable of learning, collaboration, and enforcement.

A closer look at how these issues interrelate helps to illuminate a broader systemic pattern. First, the expertise gap acts as a foundation-level constraint. Without professional competence in sustainable design, even the most progressive policies fail to translate into practice. Second, fragmentation among agencies and sectors prevents the consolidation of efforts. When environmental, economic, and social dimensions are pursued separately, trade-offs undermine overall sustainability. Third, the lack of strong legal accountability mechanisms creates an enabling environment for negligence or superficial compliance. This three-tiered dysfunction, knowledge, coordination, and accountability, forms the backbone of the implementation gap observed across different contexts. Addressing these intertwined problems requires a shift from conventional policy approaches toward more integrative and adaptive frameworks. Building technical expertise should be prioritized through systematic capacity-building initiatives. Universities and professional associations could incorporate sustainability as a central component of engineering, architecture, and urban planning curricula. Continuous professional development programs, supported by government incentives, can ensure practitioners remain updated on evolving sustainability standards and technologies. However, capacity building alone is insufficient without institutional mechanisms that encourage collaboration. Inter-agency coordination platforms could serve as hubs for information exchange and policy alignment. For instance, a city-level sustainability council could include representatives from multiple departments, such as urban planning, environment, housing, and transportation, as well as private developers and community organizations. Such collaborative spaces enable shared decision-making and minimize duplication of efforts. Legal and institutional reform is equally critical. Rather

than treating sustainability as a voluntary or aspirational goal, governments must embed it within binding regulatory frameworks. Environmental impact assessments should be expanded to include life-cycle evaluations of materials, carbon footprints, and long-term social impacts.

Moreover, enforcement agencies should be empowered with adequate resources and authority to monitor compliance effectively. Transparent reporting systems and digital monitoring tools can enhance accountability by making sustainability performance publicly accessible. Public participation also plays an essential role in reinforcing enforcement. When informed and engaged, communities can act as watchdogs, demanding adherence to sustainability standards and ensuring that urban projects serve collective rather than private interests. Equally important is the need to reframe the ethical foundations of sustainability. Beyond legal compliance, sustainability requires cultivating a shared moral responsibility for environmental stewardship. Ethical awareness must permeate all levels of governance and professional practice. It involves recognizing that sustainability is not merely a technical issue but a moral commitment to future generations. Embedding this ethos within institutional culture can shift sustainability from a bureaucratic obligation to a deeply held societal value. Ethical education, public awareness campaigns, and participatory governance models can nurture this cultural transformation. Another emerging strategy involves adopting systems-thinking approaches to urban sustainability. Rather than addressing issues in isolation, systems thinking encourages the examination of interdependencies among environmental, social, and economic factors. For example, policies promoting green transportation are more effective when integrated with housing, land use, and financial planning. Similarly, waste management initiatives gain traction when aligned with public health and community livelihood strategies.

This holistic view transforms sustainability from a series of isolated projects into an ongoing, dynamic process of adaptation and learning. The urgency of this transformation cannot be overstated. Cities are now the epicenters of both environmental degradation and potential innovation. Rapid urbanization continues to strain energy systems, water resources, and ecological habitats while amplifying socio-economic inequalities. Without immediate institutional reforms, the gap between sustainability rhetoric and actual outcomes will continue to widen, undermining global commitments to climate resilience and equitable development. The recurring pattern identified across the literature, policy-practice disconnect, weak enforcement, fragmented expertise, and disciplinary isolation, underscores the need for a systemic shift in how sustainability is conceived and operationalized. In summary, sustainable urban development faces an entrenched pattern of challenges perpetuating the distance between intention and implementation. Expertise limitations hinder technical execution; institutional fragmentation diffuses accountability; weak legal mechanisms allow non-compliance; and disciplinary silos obstruct holistic innovation. These factors are mutually reinforcing, creating a feedback loop that sustains inefficiency.

Breaking this cycle demands an integrative framework where governance, capacity building, ethics, and multidisciplinary collaboration operate in the path. Through such a coordinated approach, sustainability can transcend its status as a policy ideal and become an embedded practice guiding the future of urban life. The path forward lies in drafting more ambitious policies and ensuring that systems, people, and institutions are equipped and aligned to transform those policies into lived realities. From this, we summarise that the core message is tightening institutional expertise and governance structure with clear functions and duties. Then, it must consistently promote the inclusive initiative by aligning the sustainable goals effectively and adequately.

Nevertheless, Harahap et al. (2023) conveyed that poor collaboration between architecture, engineering, urban planning, and social sciences severely hampers the development of holistic and sustainable urban designs. It is reinforced by Sulistiowati et al. (2023), who identify a significant disconnect between city branding narratives (e.g., ecocity visions) and their actual realisation, due to budgetary constraints, human resource limitations, and poor enforcement of sustainable policies. Scientifically, we admit these

findings illustrate a shared recognition that sustainability in urban Indonesia is not only a technical or spatial issue, but one rooted deeply in governance structures, policy coordination, and institutional capacity. The recurring problems (e.g., fragmented governance, limited stakeholder collaboration, and poor enforcement mechanisms) suggest that current urban sustainability efforts are heavily constrained by structural and institutional inertia. This results in seemingly coherent policies in a context of government ambiguity that fail to be actualised, and result in outcomes that are neither measurable nor equitable. Moreover, the literature identifies a significant barrier in integrating multidisciplinary approaches into urban sustainability efforts. Urban issues are inherently complex, involving interrelated environmental, social, economic, and political dimensions. However, governance structures tend to operate in silos, with limited cross-sectoral dialogue or knowledge-sharing. It inhibits holistic planning and results in fragmented solutions that fail to address the root causes of urban problems. These findings reveal a central message: there is a pressing need to strengthen institutional expertise and governance structures by clearly defining roles, responsibilities, and channels for collaboration.

Furthermore, sustainable urban development must be pursued through inclusive, participatory processes that align policy implementation with the Sustainable Development Goals (SDGs). Only through integrated governance, accountability, and inclusivity can Indonesian urban sustainability initiatives become effective, equitable, and resilient in the long term. According to the analysis, we provide the framework for forward policy design as follows:

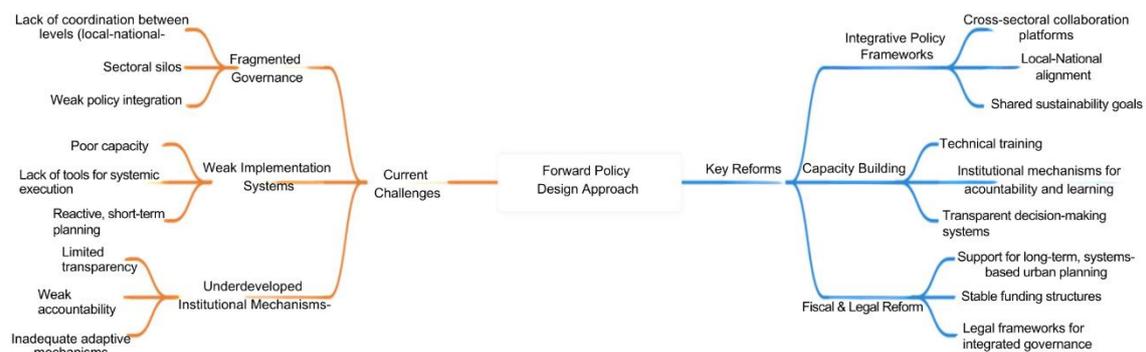


Fig. 1. Forward policy design approach

The implications of recent findings on urban governance in Indonesia are of paramount importance, particularly as the country faces the dual challenges of rapid urbanisation and environmental vulnerability. These challenges underscore the urgent necessity of moving beyond fragmented and reactive planning approaches toward a more cohesive and forward-looking urban governance framework. A key starting point in this transformation lies in developing and implementing integrative policy frameworks that transcend conventional administrative boundaries. Currently, many Indonesian cities and regions operate in silos, with local development plans often disconnected from broader provincial or national strategies. This misalignment results in inefficiencies and diminishes the potential impact of urban interventions.

Therefore, it is imperative to foster planning mechanisms that harmonise local aspirations with national development agendas, particularly those aligned with the Sustainable Development Goals (SDGs), climate action commitments, and disaster risk reduction strategies. Creating dynamic, cross-sectoral collaboration platforms is one of the most promising ways to support such integration. These platforms would unite diverse stakeholders, including urban planners, ecological agencies, government departments, civil society organisations, and the private sector, in a coordinated effort to design and implement policies and projects that reflect a shared sustainability vision. Urban issues are inherently complex and interconnected, cutting across social, economic, environmental, and

spatial domains. Hence, collaborative governance is not a luxury but a necessity. When these actors work in isolation, the risk of policy contradiction, resource misallocation, and project failure increases substantially.

On the other hand, when there is mutual understanding, transparent communication, and shared accountability among stakeholders, the probability of meaningful, long-lasting outcomes rises significantly. Structural changes are required at the institutional and operational levels to enable this collaboration. Many government agencies and institutions still operate under outdated models that do not reward interdepartmental cooperation or citizen participation. These models must be replaced with more flexible and adaptive institutional mechanisms promoting openness, responsiveness, and innovation. Transparency and accountability must be embedded into governance structures through digital platforms, performance audits, and regular public reporting. Furthermore, adaptive governance must be institutionalised so that policies and projects can evolve in response to changing socio-environmental conditions. Indonesia's urban environments are highly dynamic, and governance systems must be equally agile to effectively respond to natural disasters, migration patterns, public health crises, and economic shocks. In this context, capacity building becomes a top priority. Urban governance cannot progress if those responsible for implementing change lack the necessary skills, tools, and knowledge. Civil servants and community leaders must significantly expand technical training programs.

These programs should cover integrated urban planning, sustainable infrastructure development, environmental management, digital governance tools, participatory planning methods, and monitoring and evaluation techniques. Moreover, training should be ongoing and tailored to different administrative levels and functional roles, rather than one-off or generic. Building human capital across all levels of governance, from village officials to national policymakers, will create a robust foundation for transformative change. Beyond human capacity, comprehensive fiscal and legal reforms must match institutional reform. A key limitation in current urban governance practice is the overreliance on centralised funding streams and the lack of autonomy at the local level. Local governments need greater fiscal independence to support systems-based approaches, considering the long-term interplay between infrastructure, ecology, and social development. It includes access to innovative financing mechanisms such as municipal bonds, green financing instruments, and public-private partnership models tailored to the Indonesian context. Legal reforms are equally important. Zoning laws, environmental regulations, and building codes must be updated to reflect current sustainability standards and close loopholes allowing for environmentally or socially harmful development practices. Henceforth, urban governance must be expanded beyond city centres to include peri-urban and rural-urban interface zones. Many of the environmental and social pressures experienced in cities originate or are felt most acutely in these transitional spaces, which often lack adequate policy attention. Integrated planning must therefore be spatially inclusive, ensuring that governance systems account for the interdependence of urban cores and their surrounding regions. It also requires strengthening the capacity of regional development planning boards and encouraging inter-municipal cooperation on issues such as transportation, watershed management, and waste disposal. Importantly, urban governance reform must be socially inclusive. Development strategies that do not take into account the voices and needs of marginalised groups such as informal settlers, women, youth, persons with disabilities, and Indigenous communities risk exacerbating inequality and social fragmentation.

Participatory governance mechanisms, such as citizen councils, urban observatories, and digital feedback tools, must be institutionalised rather than treated as ad hoc consultative exercises. True inclusivity goes beyond token representation; marginalized communities must be empowered to co-create policy, monitor implementation, and hold authorities accountable. It is also essential to embed ecological thinking into all aspects of urban governance. As climate change intensifies, cities must reduce their environmental footprint and enhance their resilience to climate-related risks such as flooding, heatwaves, and water scarcity. It calls for a paradigm shift toward nature-based solutions in urban planning, such as green infrastructure, sustainable drainage systems, and urban forests, and

stricter environmental impact assessments for all major projects. Ecological planning must be seen not as a separate domain but as a core component of infrastructure development and service delivery.

In conclusion, advancing urban governance in Indonesia requires a multi-faceted approach that combines integrative policy design, cross-sectoral collaboration, institutional capacity building, and strategic fiscal and legal reforms. The complexities of modern urban challenges cannot be addressed through piecemeal efforts or outdated governance models. Instead, there is a need for a transformative vision that aligns local action with national and global goals, ensures inclusivity and ecological sustainability, and equips institutions and individuals with the tools they need to adapt and lead. While the path forward is undoubtedly challenging, the potential rewards of more liveable, equitable, and resilient cities are too significant to ignore. The time to act is now, and the foundations must be laid through deliberate, coordinated, and sustained policy innovation.

#### 4. Conclusions

We are firmly convinced that the core impediments to Indonesia's urban governance and sustainability efforts do not stem from a lack of ambition or initiatives. On the contrary, numerous programs have been introduced in recent years. However, these efforts are frequently hindered by fragmented governance structures, weak policy integration, and significant institutional limitations. While the landscape is rich with projects and plans, many of these initiatives remain narrowly defined and disconnected from broader urban resilience, spatial coherence, and social equity agendas. The result is a patchwork of well-meaning but isolated interventions that fail to address the root causes of urban vulnerability or deliver long-term impact. The barriers to effective governance are multidimensional. Socio-economic disparities, speculative land use practices, and the absence of coordinated, long-term spatial planning undermine inclusive development. Urban expansion often occurs without adequate regard for environmental constraints, infrastructure needs, or vulnerable populations. These patterns are not random; they result from systemic weaknesses in how policies are designed, implemented, and monitored across multiple governance layers.

Scientific findings reveal two particularly critical limitations. First, urban programs tend to be expanded without establishing clear priorities or embedding them within comprehensive resilience and spatial planning frameworks. This myopic approach exposes urban areas to environmental degradation, infrastructure stress, and social fragmentation. Second, there is persistent misalignment between national directives and regional implementation. Policy incoherence, institutional fragmentation, and overlapping mandates among governmental bodies weaken the ability to deliver coordinated, effective responses to urban challenges. These structural issues are compounded by inadequate stakeholder collaboration and limited multidisciplinary integration. There remains a disconnect between urban planning professionals, environmental scientists, policy-makers, and community-based organisations. As a result, urban development often lacks the holistic perspective required to meet the complex demands of contemporary Indonesian cities.

The implication is clear: unless Indonesia undertakes serious, sustained efforts to strengthen its governance systems and build institutional capacity at all levels, sustainable and inclusive urban development goals will remain largely aspirational. Our findings point to the need for a forward-thinking governance model that integrates spatial planning, socio-environmental policy, and institutional reform. Only through such integrated, systems-based approaches can Indonesia achieve urban governance that is truly inclusive, equitable, and resilient.

#### Acknowledgement

All authors greatly thank the Universitas Nasional (UNAS), Jakarta, Indonesia; and the Department of Public Administration at Universitas Katolik Parahyangan, Bandung, West

Java, Indonesia; and Universitas Jenderal Soedirman, Purwokerto, Central Java, Indonesia, for their critical input and comments.

### Author Contribution

NPLW contributed to the study's conceptualisation by suggesting the research design, methodology, and theoretical framework of the forward policy design approach based on the research theme. MLFW helped in the literature review, data set, scrutiny and contributed to interpreting the data using Publish or Perish (PoP). RAP contributed to the study of the findings, chiefly focusing on the research's effect. All authors have reviewed or ratified the final manuscript.

### Funding

No external financing was earned for this research.

### Ethical Review Board Statement

Ethical inspection and license were not suitable in this research.

### Informed Consent Statement

The nature of the research did not necessitate informed consent.

### Data Availability Statement

Not inaccessible.

### Conflicts of Interest

No competing interests were disclosed by the authors.

### Open Access

©2025. The author(s). This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. The images or other third-party material in this article are included in the article's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this license, visit: <http://creativecommons.org/licenses/by/4.0/>

### References

- Abdel-Razek, S. A. (2021). Governance and SDGs in smart cities context. In *Smart Cities and the un SDGs* (pp. 61–70). Elsevier. <https://doi.org/10.1016/B978-0-323-85151-0.00005-1>
- Abdillah, A., Widianingsih, I., Buchari, R. A., & Nurasa, H. (2025). Adapting to climate change and multi-risk governance: toward sustainable adaptation and enhancing urban resilience—Indonesia. *Discover Applied Sciences*, 7(1), 81. <https://doi.org/10.1007/s42452-025-06491-7>
- Aigbavboa, C. O., Cobbina, J. E., Ametepey, S. O., & Thwala, W. D. (2025). Concepts and Theories of Governance and Urban Governance. In *Urban Alchemy: A Governance and Planning Framework for Sustainable Urban Transformation in Developing Economies* (pp. 21–35). Emerald Publishing Limited. <https://doi.org/10.1108/978-1-83549-746-320251003>
- Dahlan, M. Z., Faisal, B., Chaeriyah, S., Hutriani, I. W., & Amelia, M. (2023). Review of Urban Greening Policy in Indonesia: A Case Study in Jakarta Province. *International Journal on Livable Space*, 6(1), 21–28. <https://doi.org/10.25105/livas.v6i1.10678>

- Edelman, D. J., & Gunawan, D. S. (2020). Managing the Urban Environment of Jakarta, Indonesia. *Current Urban Studies*, 08(01), 57–106. <https://doi.org/10.4236/cus.2020.81003>
- Hapsari, M. A., Putri, W. H., & Sarju. (2022). Challenges and Chances of Sustainable Construction in Indonesia: Policy Insights. *IOP Conference Series: Earth and Environmental Science*, 1111(1), 12085. <https://doi.org/10.1088/1755-1315/1111/1/012085>
- Harahap, M. A. K., Supriandi, Tanipu, F., & Manuhutu, A. (2023). Relations between Architecture, Urban Planning, Environmental Engineering, and Sociology in Sustainable Urban Design in Indonesia (Literature Study). *Jurnal Geosains West Science*, 1(02), 77–88. <https://doi.org/10.58812/jgws.v1i02.395>
- Indraprahasta, G. S., Amir, S., Nastiti, A., & Ufaira, R. (2025). Governing climate mitigation in a megacity: Tapping opportunities in the multi-level governance system? *Journal of Urban Affairs*, 47(6), 2240–2261. <https://doi.org/10.1080/07352166.2023.2274554>
- Jones, P. (2017). Formalizing the Informal: Understanding the Position of Informal Settlements and Slums in Sustainable Urbanization Policies and Strategies in Bandung, Indonesia. *Sustainability*, 9(8), 1436. <https://doi.org/10.3390/su9081436>
- Kaiser, Z. R. M. A., & Deb, A. (2025). Sustainable smart city and Sustainable Development Goals (SDGs): A review. *Regional Sustainability*, 6(1), 100193. <https://doi.org/10.1016/j.regsus.2025.100193>
- Lowe, M., Bell, S., Briggs, J., McMillan, E., Morley, M., Grenfell, M., Sweeting, D., Whitten, A., & Jordan, N. (2024). A research-based, practice-relevant urban resilience framework for local government. *Local Environment*, 29(7), 886–901. <https://doi.org/10.1080/13549839.2024.2318571>
- Malik, I., Prianto, A. L., Abdillah, A., Rusnaedy, Z., & Amalia, A. A. (2021). Urban Resilience Strategy in The Climate Change Governance in Makassar City, Indonesia. *Journal of Government and Civil Society*, 5(1), 31. <https://doi.org/10.31000/jgcs.v5i1.3884>
- Nasikhin, R., Akib, M., & Triono, A. (2022). Sustainable development goals and environmentally sound infrastructure development in Indonesia. *Asian Journal of Legal Studies*, 1(1), 7–13. <https://doi.org/10.53402/ajls.v1i1.68>
- Pardede, M., Situmorang, M., Aristeus, S., Rumadan, I., Lumban Toruan, H. D., Diogenes, Djamilus, & Nugrahani, E. L. P. (2023). Perspectives of sustainable development vs. law enforcement on damage, pollution and environmental conservation management in Indonesia. *Journal of Water and Climate Change*, 14(10), 3770–3790. <https://doi.org/10.2166/wcc.2023.417>
- Riggs, R. A., Achdiawan, R., Adiwinata, A., Boedhihartono, A. K., Kastanya, A., Langston, J. D., Priyadi, H., Ruiz-Pérez, M., Sayer, J., & Tjiu, A. (2021). Governing the landscape: potential and challenges of integrated approaches to landscape sustainability in Indonesia. *Landscape Ecology*, 36(8), 2409–2426. <https://doi.org/10.1007/s10980-021-01255-1>
- Rincón, C. A. R., Santos, J., Volker, L., & Rouwenhorst, R. (2021). Identifying Institutional Barriers and Enablers for Sustainable Urban Planning from a Municipal Perspective. *Sustainability*, 13(20), 11231. <https://doi.org/10.3390/su132011231>
- Salim, W., & Hudalah, D. (2020). *Urban Governance Challenges and Reforms in Indonesia: Towards a New Urban Agenda* (pp. 163–181). [https://doi.org/10.1007/978-981-13-6709-0\\_6](https://doi.org/10.1007/978-981-13-6709-0_6)
- Sulistiowati, R., Yulianto, Y., Meiliyana, M., Atika, D. B., & Saputra, D. A. (2023). The Combination of City Branding and Ecocity: A Critical Review of Opportunities and Challenges in Indonesia. *Jurnal Bina Praja*, 15(1), 43–57. <https://doi.org/10.21787/jbp.15.2023.43-57>
- Sumaryana, A., Komara, S. R., & Pancasilawan, R. (2024). Rethinking Local Government Asset Management in Indonesia: Governance, Planning, and Policy Evaluation. *Journal of Contemporary Governance and Public Policy*, 5(2), 217–232. <https://doi.org/10.46507/jcgpp.v5i2.643>
- Sundah, D. I. E., Hidayat, W., Muhdiarta, U., Yanuarisa, Y., & Anangkota, M. (2024).

- Innovative Solutions for Sustainable Local Governance: Best Practices and Impact in Indonesian Regions. *VISIONER : Jurnal Pemerintahan Daerah Di Indonesia*, 16(1), 46–59. <https://doi.org/10.54783/jv.v16i1.1042>
- Teixeira Dias, F., de Aguiar Dutra, A. R., Vieira Cubas, A. L., Ferreira Henckmaier, M. F., Courval, M., & de Andrade Guerra, J. B. S. O. (2023). Sustainable development with environmental, social and governance: Strategies for urban sustainability. *Sustainable Development*, 31(1), 528–539. <https://doi.org/10.1002/sd.2407>
- Trifita, A., & Amaliyah, R. (2020). Ruang Publik dan Kota Berkelanjutan: Strategi Pemerintah Kota Surabaya Mencapai Sustainable Development Goals (SDGs). *Global and Policy Journal of International Relations*, 8(02). <https://doi.org/10.33005/jgp.v8i02.2413>
- Visic, M. (2022). Connecting puzzle pieces: Systematic literature review method in the social sciences. *Sociologija*, 64(4), 543–562. <https://doi.org/10.2298/SOC2204543V>
- Werdiningtyas, R. (2021). Unpacking The Act No 1 of 2011: Does Indonesia in the right pathways towards sustainable housing development? *IOP Conference Series: Earth and Environmental Science*, 780(1), 12005. <https://doi.org/10.1088/1755-1315/780/1/012005>
- Wikantiyoso, R., Suhartono, T., Triyosoputri, E., & Sulaksono, A. G. (2021). Sustainable Urban spatial resilience in improving the quality of livable Green Open Space (GOS). Case study: An implementation of Green City Development Program (GCDP) in Malang City Center Development Area, Indonesia. *IOP Conference Series: Earth and Environmental Science*, 780(1), 12025. <https://doi.org/10.1088/1755-1315/780/1/012025>
- Wiryasa, N. M. A., & Dwijendra, N. K. A. (2021). Socio-Physical Transformation towards Sustainable Urban Morphology through Land Readjustment in Indonesia. *Civil Engineering and Architecture*, 9(3), 874–882. <https://doi.org/10.13189/cea.2021.090329>
- Zain, A. F. M., Pribadi, D. O., & Indraprahasta, G. S. (2022). the Green City Concept in the Tropical and Global South Cities Context: The Case of Indonesia. *Frontiers in Environmental Science*, 10. <https://doi.org/10.3389/fenvs.2022.787204>

### Biographies of Authors

**Nicolaus Petrus Likuwatan Werang**, is a young researcher and member of the Indonesian Scientist Association of Public Administration (AsIAN) in Jakarta, Indonesia. His research interests include public administration topics (e.g., public financial management, e-government, rural, and governance frameworks broadly).

- Email: [nicolauspetrus@gmail.com](mailto:nicolauspetrus@gmail.com)
- ORCID: 0009-0001-5344-8429
- Web of Science ResearcherID: MFI-6392-2025
- Scopus Author ID: N/A
- Homepage: N/A

**Maria Lusiana Florentin Werang**, is a student at the Department of Public Administration, Faculty of Social and Political Science, Universitas Katolik Parahyangan, Bandung, Indonesia. Her research areas include public administration topics (e.g., public accountability, public financial management, e-government, rural, and governance frameworks).

- Email: [marialusianafw@gmail.com](mailto:marialusianafw@gmail.com)
- ORCID: 0009-0006-9369-3708
- Web of Science ResearcherID: NGR-4459-2025
- Scopus Author ID: N/A
- Homepage: N/A

**Rizky Amalia Putri**, is a lecturer at the Department of Public Administration, Faculty of Social and Political Science, Universitas Jenderal Soedirman, Purwokerto, Indonesia. Her research interests include public administration topics (e.g., public policy analysis and regulatory governance).

- Email: [rizkyamaliaputri125@gmail.com](mailto:rizkyamaliaputri125@gmail.com)
- ORCID: 0009-0006-7396-6449
- Web of Science ResearcherID: N/A
- Scopus Author ID: N/A
- Homepage: N/A