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Designing an Urban Green Village Model as a Catalyst for Achieving the Sustainable Development Goals (SDGs) in the Social and Economic Sectors

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ABSTRACT

This research was conducted to demonstrate that efforts to realize self-sufficient villages in densely populated urban areas can be achieved through the green urban village model. Urban villages are densely populated residential areas that function to support industrial zones. Environmental conservation movements within urban village areas serve as fundamental social capital in strengthening community resilience in the face of social, economic, and environmental changes, particularly in mitigating disaster risks such as flooding, which frequently occurs in urban areas. These objectives can only be realized through the authoritative role of government in the realm of public policy, especially through the formulation and implementation of necessary policy interventions. This study employs a descriptive-analytical method by reviewing the literature and applying a case study approach as well as comparative analysis relevant to the research topic. The findings confirm that community-based greening policies at the neighborhood level are capable of building environmental and social resilience while simultaneously reducing economic dependency in urban areas. By strengthening self-reliance capacity, such initiatives contribute to narrowing urban socio-economic disparities and supporting the achievement of the Sustainable Development Goals (SDGs).

KATA KUNCI

Green Urban Village; Self Sufficient Community; Social and Economic Ressilience

I. INTRODUCTION

Urbanization is an inseparable part of the development process in many developing countries, including Indonesia. This phenomenon often leads to the emergence of "urban villages," or residential areas that arise from unplanned development within or around the urban core. While these settlements play a crucial role in providing affordable housing and possess strong social capital, they are frequently characterized by irregular spatial layouts, inadequate infrastructure, and high population density. Consequently, these areas face significant structural challenges, ranging from environmental degradation to high vulnerability to disaster risks, particularly flooding.

The existence of urban villages presents an ambivalent impact on city governance. On one hand, they function as essential socio-economic buffers for low-income groups; on the other, they require strategic intervention to ensure sustainability and resilience. To address these challenges, the concept of the Green Urban Village has emerged as a transformative model. This approach moves beyond mere aesthetic improvements, emphasizing the integration of environmental sustainability principles with community engagement and local economic strengthening. By fostering a healthier environment, this model aims to reduce social vulnerability and living costs, thereby creating a foundation for community self-reliance.

However, realizing self-sufficient villages in densely populated urban areas requires more than just community participation; it demands the authoritative role of government through effective public policy. Current literature confirms that community-based greening policies can build environmental and social resilience while reducing economic dependency. Yet, there is a need to further explore how these initiatives directly contribute to global development targets.

This research aims to demonstrate that the Green Urban Village model serves as a catalyst for achieving the Sustainable Development Goals (SDGs), particularly in the social and economic sectors. Unlike previous studies that often focus on social or humanities perspectives, this paper introduces a novel contribution by using the 2030 SDGs as the primary analytical benchmark for community resilience and economic self-sufficiency. Through a descriptive-analytical method and a case study of Glintung Go Green (3G) Village in Malang, this study analyzes how local wisdom, combined with adaptive government policies, can transform a flood-prone settlement into a resilient, inclusive, and competitive urban model.

II. METHODOLOGY

This study employs a descriptive-analytical method aimed at systematically describing and analyzing the phenomenon of urban village self-reliance within the framework of public policy. The research approach includes a conceptual approach, which examines the concepts of self-reliant urban villages and green urban villages based on relevant theories and regulations, as well as a case approach to understand the empirical implementation of policies within specific contexts. Data analysis is conducted through a literature review by examining books, academic journals, and related policy documents. The research variables consist of self-reliant urban villages as the dependent variable and public policies based on the green urban village concept as the independent variable.

III. RESULTS AND DISCUSSION

A. Green Urban Village Model for Urban Village Settlements

Urban villages are residential areas that tend to emerge as a result of unplanned development. They originate from settlement phenomena that arise as an inseparable part of the urbanization process in many cities in developing countries, including Indonesia. In the context of spatial planning and urban studies, urban villages are characterized as forms of settlement located within or around the urban core, yet possessing social, physical, and economic characteristics that differ significantly from formally planned settlements. These characteristics include narrow residential roads caused by housing structures built on extremely limited land, irregular spatial layouts, inadequate infrastructure, and limited public spaces and urban facilities [1]. Beyond their physical attributes, urban villages are also known for strong social capital among residents, informal economic characteristics such as micro-enterprises and intra-local trade, and intensive patterns of social interaction [2].

The existence of urban villages has an ambivalent impact on cities as a whole. On the one hand, they provide significant socio-economic benefits; on the other hand, they generate structural challenges in urban governance. Numerous academic studies indicate that urban villages play a crucial role in providing affordable housing for low-income groups and new migrants who are unable to access the formal housing market. These informal settlements function as socio-economic buffers by offering housing close to economic activity centers and employment opportunities that are otherwise limited, costly, or located far from industrial zones where urban employment is concentrated [3]. From an environmental perspective, urban villages possess ecological potential through the development of community-based green spaces, water infiltration systems, and environmental practices that support urban resilience to disasters, particularly flooding and environmental degradation. When capacity-building programs, community participation, and village governance are implemented sustainably, urban villages have the potential to transform into resilient, inclusive, and competitive settlements [4].

Green Urban Villages represent an urban settlement development concept that emphasizes the integration of environmental sustainability principles, community engagement, and the strengthening of local economic capacity. Theoretically, this concept is rooted in the development of green urbanism and sustainable community schools of thought, in which urban planning does not focus solely on physical spatial arrangements but also on the ecological and social functions of residential spaces. In the Indonesian context, green urban villages reflect community adaptation to rapid urbanization challenges such as limited green open space, dense settlement pressures, and socio-economic risks. Fundamentally, the green urban village approach promotes healthier environmental conditions that directly reduce social vulnerability and living costs, thereby forming an initial foundation for community self-reliance [5].

The green urban village movement can stimulate village self-reliance through several interrelated mechanisms. First, urban green spaces provide ecosystem services such as water absorption and disaster risk reduction, thereby enhancing area resilience against the high frequency of urban disasters. Second, community-based management mechanisms—through mutual cooperation (*gotong royong*), local rules, and social capital—facilitate the collective maintenance of shared resources such as waste banks, biopores, infiltration wells, and small-scale electricity systems, minimizing institutional transaction costs and fostering community independence [6]. Case-based evidence such as *Glintung Go Green* demonstrates that greening programs combined with educational tourism strategies and micro-enterprise development generate local income sources that strengthen community economic foundations and reinvestment capacity. Moreover, green village programs often function as spaces for education and research, both formally and informally. Notably, *Glintung Go Green* has become an official partner of the central government in supporting the implementation of Agrarian Reform programs [7]. Based on several previous studies, this research introduces a novel contribution by linking the analysis to the 2030 Sustainable Development Goals (SDGs) in the urban context, particularly focusing on economic aspects and community resilience. Unlike previous social and humanities studies, the Sustainable Development Goals (SDGs) serve as the primary analytical benchmark in this research.

B. Case Study: Glintung Go Green Village, Malang

Glintung Go Green (3G) Village in Malang City is frequently cited as a leading example of successful urban settlement transformation through a community-based sustainability approach. Historically, the village faced issues of slum conditions, flooding, and socio-economic vulnerability, which were later addressed through a greening movement initiated by local residents in 2012. Glintung Go Green can be understood as an ideal form of urban village transformation because it demonstrates integrated structural and cultural changes encompassing environmental, social, and economic dimensions, as documented in various academic studies. The transformation of Glintung originated from classic urban village problems—high population density, flooding, environmental degradation, and social vulnerability—which were subsequently addressed through community-based greening as the primary development strategy. Numerous studies report that the implementation of green infrastructure such as biopores, infiltration wells, vertical gardening, and community-based waste management has successfully enhanced environmental carrying capacity and flood resilience while simultaneously improving residents' quality of life.

Economically, Glintung has demonstrated the ability to convert environmental agendas into livelihood sources through educational tourism, urban farming, and environmentally based micro-enterprises. Local economic studies indicate that these activities generate tangible economic benefits and increase community self-reliance. The integration of environmental, social, and economic aspects positions Glintung Go Green not merely as a thematic village or aesthetic project, but as a sustainable, adaptive, and replicable model of urban village transformation, as emphasized in various journals on spatial planning, sustainable development, and urban village studies [8].

Glintung Go Green exemplifies an urban village transformation oriented toward sustainability and community resilience in facing major urban threats, particularly recurrent disasters such as flooding and environmental degradation. This transformation extends beyond physical environmental improvements to include the strengthening of social and economic capacities, enabling communities to adapt to urban changes and risks. Through greening, water management, and disaster risk reduction, the village is positioned as a key actor in building overall urban resilience. Program transformasi di Kampung Glintung bersifat genuine karena dirancang dan dijalankan oleh masyarakat kampung itu sendiri. The transformation program in Glintung is considered genuine because it was designed and implemented by the village community itself. This community-based approach ensures that the process remains inclusive and adaptive, particularly amid shifts in informal economic activities within residential environments, fostering openness to innovation without imposing excessive burdens on residents [9]. Furthermore, Glintung has successfully established partnerships with external stakeholders based on long-term benefit principles. The utilization of corporate social responsibility (CSR) funds—for instance, to finance land certification for residents—illustrates a collaborative strategy oriented toward asset strengthening and legal certainty. The combination of sustainability orientation, community initiative, and strategic partnerships positions Glintung Go Green as a socially, economically, and environmentally sustainable model of urban village transformation.

C. Public Policy to Promote Self-Reliant Communities through the Green Urban Village Development Model

Glintung Go Green Village in Malang City exemplifies how community-based local initiatives can transform dense settlements into greener, disaster-resilient, and economically productive environments through household-level greening practices, community-based flood management, and consistent collective organization. Case studies and academic analyses of Glintung indicate that its success is not merely the result

of technocratic intervention, but rather a product of the combination of: (1) social norms developed through community consensus, (2) the utilization of social capital such as mutual cooperation and local leadership, and (3) adaptive support from local government policies [10].

First, the development and strengthening of social capital must be an explicit policy objective. Programs that focus solely on infrastructure provision without fostering collective norms tend to fail in the long term. Therefore, policies should encourage the establishment of community agreements regarding household greening obligations, waste management, and the maintenance of water infiltration infrastructure, integrated into neighborhood forums (*RT/RW*) and youth organizations (*karang taruna*). Capacity-building interventions should prioritize local change agents to ensure initiatives remain community-rooted rather than dependent on external technocrats. Second, conditional green administrative mechanisms can accelerate the adoption of environmentally friendly practices. One practice implemented in Glintung involved linking certain administrative services or civic recognition to compliance with greening obligations. Action research and branding experiences in Glintung demonstrate that administrative incentives integrated with participatory mechanisms increase household compliance. Third, local governments must provide standardized technical packages, including simple infiltration well designs, affordable and low-maintenance vertical garden models, organic waste management guidelines, and village-scale flood mitigation modules [11].

Financing governance for green village development should be designed as a hybrid and multi-layered system by integrating public funding, private-sector contributions through corporate social responsibility (CSR) programs, and financial and non-financial participation from local communities. Reliance on a single funding source—particularly government budgets—has proven vulnerable to political dynamics and shifting priorities, potentially undermining program sustainability. Therefore, the implementation of co-financing schemes that combine provincial, district, and municipal government support, CSR allocations, and community-based mutual contributions enhances fiscal resilience and strengthens community ownership of the program [12]. Such public policies are expected to induce other urban villages to initiate green urban village movements, thereby achieving broader urban village self-reliance. In the case of Glintung Go Green itself, research by Lilik Lindawati and Asti Istiqomah (2018) reports that the village generated economic activities exceeding IDR 600 million in 2018, with approximately 40 percent derived directly from residents' economic activities.

IV. CONCLUSION

Based on the foregoing discussion, it can be concluded that Glintung Go Green represents a green urban village model that demonstrates the successful transformation of a densely populated settlement into a sustainable and self-reliant environment through a community-based approach. This initiative proves that village greening functions not merely as an environmental aesthetic effort, but also as a disaster mitigation strategy—particularly in addressing flood risks—as well as a means of strengthening the social and economic resilience of the community. The success of Glintung Go Green is inseparable from the synergy between active community participation, strong local leadership, and adaptive public policy support from the local government. This model underscores the importance of the state's role in establishing a regulatory framework, incentive mechanisms, and technical facilitation that encourage village self-reliance. Accordingly, Glintung Go Green can serve as both a conceptual and practical reference for the formulation of sustainable urban development policies, while also contributing to the reduction of urban socio-economic disparities and the achievement of the Sustainable Development Goals (SDGs). Future research should expand the discussion on independent villages by positioning community-based initiatives such as Glintung Go Green as living laboratories for achieving the Sustainable Development Goals (SDGs) at the neighborhood level. Further studies may explore the long-term sustainability of community-driven environmental programs, particularly their capacity to strengthen local economic resilience, institutional governance, and social inclusion. Comparative research between urban villages adopting similar green initiatives could also provide deeper insights into best practices and scalability. In addition, integrating measurable SDGs indicators as primary evaluation tools would enhance the empirical assessment of independent village models and their contribution to inclusive and sustainable urban development.

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