

STRATEGIES FOR PROVIDING VERTICAL HOUSING FOR LOW-INCOME COMMUNITIES: AN EVALUATION OF THE HOUSING BACKLOG IN BANDUNG

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Abstract

Land scarcity and the high economic value of land in the city of Bandung have led to a housing shortage for low-income communities (MBR). This is evident in the backlog of housing demand totaling 145,592 units, which has resulted in an increasing number of slums due to informal land occupation in the city center. This study aims to evaluate existing strategic documents for public housing development and to design appropriate policy strategies to address the obstacles in both formal and informal housing programs, thereby fulfilling the basic right to adequate housing. The methodology employed is a mixed-methods approach, combining descriptive-quantitative methods to calculate estimated spatial needs and descriptive-qualitative analysis to assess the implementation of spatial planning policies. By combining empirical spatial data and anthropometric parameters for minimum human space requirements (9 m²/person), mathematical calculations indicate that meeting horizontal housing needs requires a change in urban land use covering 1,272.93 hectares. These findings underscore the importance of a shift in perspective so that policies focus on the provision of high-density apartment complexes. Empirical evaluations indicate that existing new supply has reached only 1,728 units due to private developers' non-compliance with MBR quota mandates and the presence of local sociocultural resistance. Therefore, this study recommends formulating a master plan for housing governance through the updating of a regulatory multidimensional database to create mutually beneficial multisectoral solutions.

Keywords: *Housing Backlog, High-Rise Housing, Low-Income Communities (MBR), Policy Evaluation.*

1. Introduction

The Bandung City Government is striving to provide decent housing through various programs; however, the needs of many low-income communities (MBR) remain unmet because private-sector development generally targets the middle- and upper-income markets. This situation has led to the emergence of urban slums, as low-income residents are forced to occupy strategic locations in the city center to be close to their workplaces (Debby, Veramitha F Sulistia, 2022). As a solution, the Bandung City Government has initiated the planning of People's Apartments at 13 strategic locations under the "Building Without Eviction" concept through the Urban Area Revitalization Program to meet the need for affordable apartment housing by involving the private sector and the community (Betty, 2023).

As of 2018, the provision of housing for low-income communities (MBR) in the city of Bandung through the state budget (APBN) and the local budget (APBD) had reached 1,728 units, spread across several areas such as Cingised, Rancacili, Sadangserang, and a planned development in Tamansari (Diskominfo Kota Bandung, 2026). Nevertheless, these structural interventions are deemed not yet optimally effective in eliminating the housing backlog due to the fluctuating demographic dynamics each year, thereby highlighting the urgency of updating a representative database. On the other hand, the implementation of the People's Apartment program under the "build without evicting" paradigm faces complex sociocultural obstacles and requires a lengthy timeline, given that the majority of potential sites are located on government-owned land that has been densely and informally occupied by residents (Handini, 2019). Although the Bandung City Government, together with the City Council, has initiated the establishment of a Regional Owned Enterprise (BUMD) as an instrument for managing infrastructure and providing alternative housing

solutions, significant empirical achievements have yet to materialize (Revayanti & Widiya, 2026). Consequently, there is a need to formulate new regulatory and measurable intervention strategies and mechanisms capable of generating mutually beneficial solutions (Dendil, 2017).

Optimizing national housing governance is achieved through the development of analytical tools based on spatial and empirical data that mapping and evaluating disparities in the fulfillment of decent housing needs in Indonesia (Andini Rully & Dwi, 2023). Through comprehensive geographic visualization, this system integrates indicators of housing backlog and housing quality to precisely identify priority areas for intervention (World Bank, 2021). Strategically, the implementation of this platform reconstructs the planning mechanisms for subsidy programs, such as the Housing Financing Liquidity Facility (FLPP) and home rehabilitation, while enhancing transparency, accountability, and the validity of multisectoral data for stakeholders (Nisrina F et al., 12 C.E.; Ramli, 2022). Housing Backlog Percentage in West Java Province, with a total of 17,728,093 households, has a housing ownership backlog of 15.87% and a public open space (RTH) backlog of 38.73%, resulting in a total housing backlog of 54.60%. The housing backlog (the number of units lacking in the supply of livable housing) in the City of Bandung stands at 145,592 units (Prasetyo, 2022). The high rates of housing shortages and under-occupancy in the capital of West Java are caused by the high cost of land in urban areas and the rapid pace of urbanization (Prasetyo, D., 2020). By applying standard anthropometric parameters for minimum spatial requirements of 9 m² per capita (equivalent to a plot size of 36 m² per housing unit), the fulfillment of these cumulative needs mathematically translates to a land capacity constraint of 1,272.93 hectares in urban areas, which methodologically underscores the urgency of a policy shift toward the deployment of high-density vertical housing models (Rahmawati, 2025).

Efforts to accelerate the reduction of the housing backlog for low-income communities (MBR) in Bandung have stalled on multiple fronts due to a lack of up-to-date housing data and structural barriers to the utilization of vertical space (Jaya, 2004). The realization of new existing vertical housing provision, which has only reached 1,728 units, is considered insufficient to offset the escalating housing deficit amid the limited carrying capacity of urban horizontal land. This phenomenon is exacerbated by the failure to implement the mandates of Law No. 20 of 2011 on Apartment Buildings and Bandung City Regulation No. 6 of 2014, which require commercial developers to allocate a minimum quota of 20% for low-income communities (Rohmah et al., 2021). This non-compliance by the private sector has been identified, from an economic-spatial perspective, as stemming from the high capitalization value of urban land (land value) that is disproportionate to regulations limiting building intensity coefficients, thereby creating a financial disincentive for developers to provide business-viable compensation land within the administrative area of the City of Bandung (Badan Pusat Statistik Kota Bandung., 2026).

The fulfillment of the constitutional right to adequate housing, as mandated by Article 28H, Paragraph (1) of the 1945 Constitution, requires structural transformation in the governance of formal and informal housing for low-income communities (MBR) in the city of Bandung (Santi, 2019). Although policy reforms regarding housing provision and financing schemes have been initiated, the effectiveness of their implementation remains fragmented due to the high heterogeneity of the community's characteristics, needs, and spatial preferences (Huda, N., Ernawati, S., Munandar, A., Nurharyadin, M., & Fajrianti, 2025). Therefore, the academic and practical urgency focuses on the need for a comprehensive review (lessons learned) of existing vertical housing development strategy documents, which have long been stagnant in implementation. In order to address this impasse, it is necessary to formulate a plan that integrates the valid updating of the housing backlog database with an applicable vertical housing procurement strategy, thereby producing a measurable tactical policy framework for the short, medium, and long term for the Bandung City Government (Handini, 2019).

2. Method

The research methodology used in this study to assess the housing backlog for low-income communities (MBR) in Bandung City employs a combined approach of quantitative (used to calculate the deficit) and qualitative (used to analyze purchasing power and land mapping) methods. Given that Bandung faces the challenges of severe land scarcity and rising property prices, this assessment requires targeted analytical tools so that policy interventions, such as the construction of low-cost rental apartments (rusunawa), can achieve the desired targets (Ruf, Amar, Ma'ruf Muhammad & Azizul, 2025). In this study, data collection was conducted using a combination of primary and secondary data to ensure a comprehensive analysis. Primary data was collected directly in the field to capture the actual conditions,

perceptions, and purchasing ability of the target society through interviews, the distribution of questionnaires to residents, and physical observations of housing conditions (Creswell, 2015). Meanwhile, secondary data was used to strengthen the analysis through government policy documents, housing backlog statistics from the Central Statistics Agency (BPS), spatial zoning, and regulations related to housing financing subsidies for low-income households (MBR) issued by the relevant authorities (Morissan, 2019). The analysis method used is the backlog calculation method, which follows the standards set by the Ministry of Public Works and Public Housing to measure the backlog from two main perspectives:

a) Demand Assessment (DCA)

To calculate the housing ownership gap using the Demand Assessment (DCA) approach for the City of Bandung, the housing ownership backlog is calculated using the following formula:

$$\text{OwnershipBacklog} = \text{TotalHouseholds} - \text{Homeowners}$$

Variable Descriptions:

OwnershipBacklog : Number of households in the ownership backlog.

TotalHouseholds : Total number of households.

Homeowners : Number of households living in their own homes.

b) Housing Adequacy Perspective (Physical Qualitative):

Counting the number of families living in substandard housing (RTLH) or in overcrowded conditions.

3. Results and Discussion

Low-Income Communities (MBR)

The Ministry of Public Housing and Urban Development (Kemenpera) has classified low-income households (MBR) into three target groups, as stipulated in Ministry Regulation No. 5/Permen/M/2007 dated February 9, 2007, regarding Housing and Settlement Provision supported by housing subsidies through subsidized housing loans (KPRS) and micro-subsidized housing loans (KPRS Mikro). In Chapter II of the regulation, "Target Groups and Housing Subsidy Options," section 2, paragraph (1), it is stated that the target group of low-income communities is as follows:

No.	Target Group	Income Limit (IDR/Month)
1	I	1.700.000 < Income < 2.500.000
2	II	1.000.000 < Income < 1.700.000
3	III	Income < 1.000.000

Based on Ministry of Public Housing Regulation No. 5/Permen/M/2007, the Ministry of Public Housing defines the criteria for low-income households (MBR) based on household income, categorized into target groups I through III. The income in question refers to income derived from basic salary or basic monthly income. Meanwhile, based on Permenpera No. 27 of 2012 and Permenpera No. 28 of 2012, it is stated that MBR refers to people with incomes of up to Rp. 3,500,000 and up to Rp. 5,500,000.

Potential and Challenges of Urban Settlements in Bandung

Based on an analysis of several development planning documents for the City of Bandung, several strategic opportunities and issues related to housing at the regional level in the City of Bandung have been identified, including the following:

a. High demand for housing versus limited available land

Bandung's high appeal has led to relatively high population growth (among both residents and commuters). This population growth naturally requires the provision of land for housing and residential areas. Current housing stock does not yet meet this demand, while housing development in Bandung will become increasingly constrained due to limited available land.

b. Low level of fulfillment of the need for livable housing

The population growth in Bandung has not yet been matched by the provision of livable housing. Additionally, low-income levels and purchasing power prevent many residents from owning decent and healthy homes. This is evident from the large number of residents still living in substandard or unhealthy housing, and not a few living in slum settlements.

c. High demand for housing despite limited available land

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- d. Low level of fulfillment of the need for livable housing
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- e. Deterioration of the quality of the housing and settlement environment
- f. Emergence of urban slums
- g. Inadequacy of the housing financing system and housing market
- h. Uncontrolled settlement development in protected areas and disaster-prone areas
- i. The lack of integration between housing and settlement area development and the construction of housing and settlement infrastructure, facilities, and utilities
- j. An imbalance between the provision of urban infrastructure and utilities and the dynamics of urban activities, resulting in suboptimal service levels.
- k. The development of new activity centers based on the Spatial Plan (Gedebage, improved accessibility) is a strategic issue in the development of settlements and urban infrastructure in the City of Bandung.

Analysis of Housing Demand Data for the City of Bandung (Backlog)

The housing situation in Bandung currently faces serious challenges due to uncontrolled urban land-use conversion and the phenomenon of mixed-use development along major thoroughfares such as Ir. H. Djuanda streets, where residential areas have been transformed into regional-scale commercial zones (Dwiana & Amrifo, 2020). This is exacerbated by the failure of both the government and the private sector to adequately meet housing needs, leading to the formation of isolated and unorganized housing enclaves. Empirically, the accumulation of land supply constraints and demographic growth directly contribute to the escalation of the housing deficit (backlog), both at the macro-national and micro-regional levels. The dynamics of the national housing deficit, based on the housing concepts outlined in Presidential Regulation No. 2 of 2015, indicate a gap of 7.6 million units in 2014, with a projected reduction to 5 million units by 2019 through government interventions (Maruf et al., 2025). However, in the case of Bandung City, backlog estimates show significant disparities across studies; sectoral data from 2010 recorded a housing deficit of 69,102 units, while the analysis by the West Java Provincial Metropolitan Development Management (WJPMMDM) in 2012 calculated a much larger actual backlog of 145,592 housing units. Assuming a minimum space requirement based on physical adequacy standards of 9 m² per capita equivalent to a land area of 36 m² per housing unit meeting the total housing deficit in the city of Bandung would require the conversion and availability of 1,272.93 hectares of usable space (Nisrina F et al., 12 C.E.). These conditions indicate that the housing challenge in Bandung is not merely a matter of increasing the quantity of housing supply but also ensuring that housing provision aligns with the socioeconomic characteristics of different household groups. The substantial backlog, coupled with limited land availability, highlights the need for a more integrated housing strategy that combines horizontal and vertical housing development, government assistance programs, and private sector participation. In this context, affordable and sustainable housing policies should prioritize efficient land utilization while improving accessibility for low- and middle-income households. Furthermore, strengthening spatial planning regulations and encouraging transit-oriented and high-density residential development are essential to optimize scarce urban land resources while preventing further uncontrolled land-use conversion. Effective collaboration among central and local governments, private developers, and communities is also necessary to accelerate housing delivery and improve the overall quality of urban settlements. Therefore, housing planning should adopt a differentiated approach based on household affordability, enabling the government to allocate appropriate interventions, optimize housing provision, reduce the housing backlog, and promote more inclusive, resilient, and sustainable urban development in Bandung.

Table 1 Comparison of the Backlog in Bandung City from Various Sources

Backlog Source Matrix		
Study of Employment Compilation of Housing and Settlement Data for the City of Bandung (SPPIP, 2010)	Study on the Compilation of Housing and Settlement Data for the City of Bandung, 2010,	Results of the Analysis by the West Java Provincial Metropolitan Development Management (WJPMMDM), 2010
2005: 33,971 housing units,	2010, 69,102 housing units	2012, 145,592 housing units
2006: 34,871 housing units		
2007: 37,095 housing units		
2008: 21,172 housing units		

Source: *Penyusunan Perencanaan Grand Desain Penyediaan Dan Pendataan Perumahan Kota Bandung (Apartemen Rakyat Untuk Masyarakat Berpenghasilan Rendah) 2019.*

Housing in the city of Bandung is spread across 30 subdistricts with diverse characteristics. In general, the fundamental issue is the growth of dense and slum-like settlements, particularly in the city center and areas with high economic activity. Some housing developments are well-structured and align with urban development guidelines, but there are still housing developments built in areas that are not suitable for their intended use. Data from 30 subdistricts and 151 urban villages indicate that as of 2024, there are 558,746 residential units in Bandung City, with 603,740 households and 63,384 households receiving Non-Cash Food Assistance (BPNT), which is classified as one category of Low-Income Households (MBR) in the city of Bandung numbered 63,384 households.

Table 2 Data on the Number of Residential Homes, Households, and BPNT Recipients in Bandung City

No	Subdistrict	Number of Residential Units	Number of Households	Number of BPNT Recipients (Households)
I	SWK Bojonegara			
1	Sukasari Subdistrict	20.291	20.278	921
2	Sukajadi Subdistrict	27.232	23.528	2.448
3	Cicendo Subdistrict	19.913	26.341	12.373
4	Andir Subdistrict	23.346	23.588	2.73
II	SWK Cibeunying			
5	Cidadap Subdistrict	12.44	2.217	1.053
6	Coblong Subdistrict	24.881	33.633	2.116
7	Bandung Wetan Subdistrict	7.102	7.243	459
8	Sumur Bandung Subdistrict	9.101	10.61	412
9	Cibeunying Kaler Subdistrict	21.767	19.326	933
10	Cibeunying Kidul Subdistrict	23.571	8.592	1.933
III	SWK Karees			
11	Kiaracandong Subdistrict	17.793	13.396	2.63
12	Batununggal Subdistrict	30.269	43.526	2.298
13	Lengkong Subdistrict	26.908	16.163	1.119
14	Regol Subdistrict	20.851	22.8	2.057
IV	SWK Tegalega			
15	Astana Anyar Subdistrict	11.32	19.707	1.316
16	Bojongloa Kaler Subdistrict	30.629	29.117	5.639
17	Babakan Ciparay Subdistrict	22.853	25.994	1.925
18	Bojongloa Kidul Subdistrict	18.812	26.666	3.468
19	West Bandung Subdistrict	35.076	36.86	4.094
V	SWK Aramanik			
20	Antapani Subdistrict	11.076	18.686	909
21	Arcamanik Subdistrict	23.617	19.098	1.546
22	Mandalajati Subdistrict	19.641	21.484	1.533
VI	SWK Ujungberung			
23	Ujungberung Subdistrict	18.1	21.113	2.679
24	Cibiru Subdistrict	15.583	17.622	1.711
25	Panyileukan Subdistrict	9.055	10.622	448
26	Cinambo Subdistrict	5.348	6.556	410
VII	SWK Kordon			
27	Buah Batu Subdistrict	16.293	26.829	1.34
28	Bandung Kidul Subdistrict	11.617	16.186	1.143
VIII	SWK Gedebage			
29	Rancasari Subdistrict	16.87	25.54	1.123
30	Gedebage Subdistrict	7.391	10.419	618
	Bandung City	558.746	603.740	63.384

Source: *Secondary Survey, 2025*



Figure 1 Housing Identification Map of SWK Bojonegara

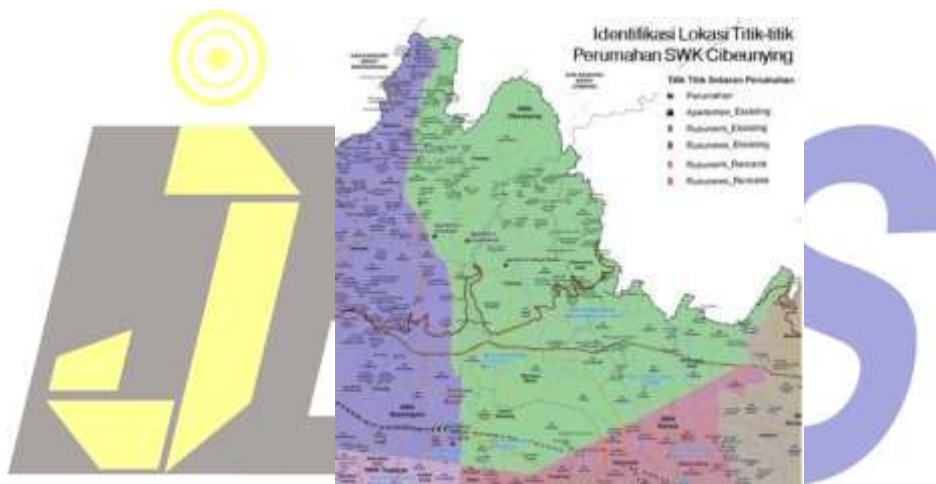


Figure 2 Housing Identification Map of SWK Cibeunying



Figure 3 Housing Identification Map of SWK Karees



Figure 4 Housing Identification Map of SWK Tegalega

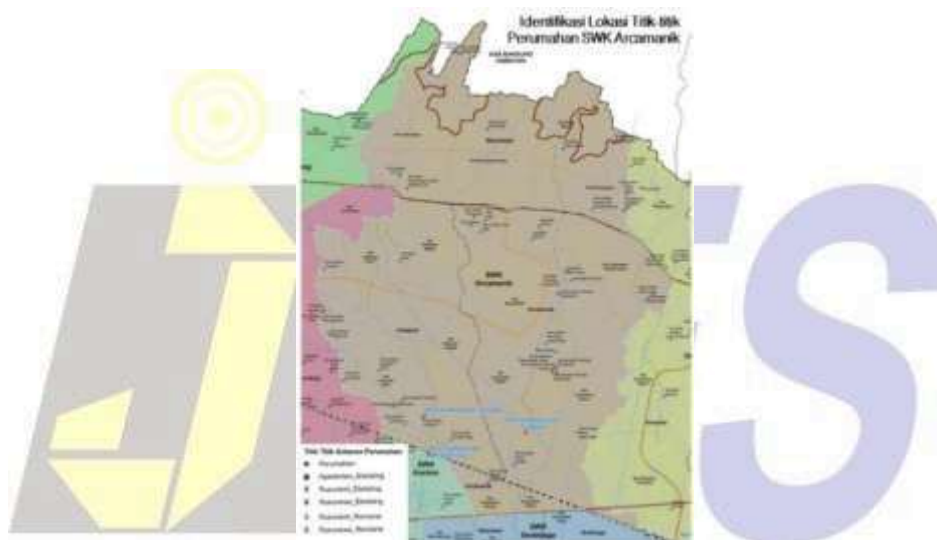


Figure 5 Housing Identification Map of SWK Arcamanik



Figure 6 Housing Identification Map of SWK Ujungberung



Figure 7 Housing Identification Map of SWK Kordon



Figure 8 Housing Identification Map of SWK Gedebage

Housing Demand Backlog in Bandung

The growing population across all subdistricts in the city of Bandung has led to an increased demand for housing. The number of homes actually built in the city of Bandung each year does not keep pace with population growth. This is evident from the housing backlog, which continued to rise between 2005 and 2008. Given the number of households in the city of Bandung, the need for new housing is equal to the growth in the number of households, which is also continuing to rise.

Table 3 Population Growth and Projections for the City of Bandung Through 2045

Year	Population (People)	Number of Households (HH)	Number of Households Receiving BPNT/MBR (HH)
2022	2.462.000	615.500	-
2023	2.452.900	642.095	-
2024	2.591.763	647.941	63.384
2025	2.614.830	653.707	62.742
2030	2.707.096	676.774	64.209
2035	2.822.430	705.607	65.676
2040	2.937.763	734.441	67.143
2045	3.053.097	763.274	68.610

Source: Profiles of Subdistricts and Neighborhoods in the City of Bandung and Analysis Results for 2025

The housing backlog is an indicator of the quantitative and qualitative gap between the total number of households in need of adequate housing and the available stock of owner-occupied housing in a given area. In 2024, the population of Bandung City is approximately 2.6 million, with about 647,941 households. It can be concluded that Bandung City's housing need is approximately 650,000 units (assuming each household consists of 4 people), while the existing housing stock is 558,746 units. Thus, the housing backlog for Bandung City can be determined using the following calculation:

$$\begin{aligned}
 \text{Backlog} &= \text{Number of Homes Needed} - \text{Number of Existing Homes} \\
 &= 647.941 - 558.746 \\
 &= 89.195 \text{ unit}
 \end{aligned}$$

The result: The housing backlog in 2024 stands at 89,195 units.

The projection of new housing demand is calculated based on housing demand resulting from population growth, plus the housing backlog from the most recent data (2024). This yields a projection of new housing demand through 2045, as shown in the table below;

Table 4 Total Demand for New Housing Construction Through 2045

Projection Year	New Housing Demand Through the Projection Year (Units)	Housing Backlog in 2024 (units)	Total New Housing Demand (units)
2024	5.846	89.195	95.041
2025	11.612	89.195	100.807
2030	34.679	89.195	123.874
2035	63.512	89.195	152.707
2040	92.346	89.195	181.541
2045	121.179	89.195	210.374

Source: 2025 Analysis Results

According to data from the Central Statistics Agency (BPS) of Bandung City, only 60.83% of households in Bandung City live in homes they own. When converted to the total population of Bandung City in 2024, which is 2,591,763 people, the estimated number of residents living independently in owner-occupied homes is approximately 1,576,569 people, or about 394,142 households. Meanwhile, substandard housing (RTLH) in Bandung accounts for 10.28% of the total existing housing stock, or approximately 57,439 units.

a) Demand Assessment (DCA) (Quantitative)

Based on the calculation standards used by the Ministry of Public Works, the housing backlog (those without homes) can be calculated as follows:

$$\begin{aligned}
 \text{Ownership Backlog} &= \text{Total Households} - \text{Homeowners} \\
 &= 647.941 - 394.142 \\
 &= 253.799 \text{ KK}
 \end{aligned}$$

The result: There are still 209,598 households in Bandung that need their own homes.

b) Feasibility Backlog (Qualitative)

Calculating the shortage of truly livable homes. RTLH units are excluded from the total number of homes because they are considered to fall short of housing standards.

$$\begin{aligned}
 \text{Feasibility Backlog} &= \text{RT}_{\text{total}} - (\text{RME}_{\text{existing}} - \text{RTLH}) \\
 &= 647.941 - (558.746 - 57.439) \\
 &= 647.941 - 501.307 \\
 &= 146.634 \text{ unit}
 \end{aligned}$$

The result: The city of Bandung still has a shortage of 146,614 units of livable housing to accommodate all existing households.

c) Annual Demand Projections (Annual Target)

Calculate the number of affordable housing units that the government or developers must build each year to eliminate the housing backlog within a period of (t) 5 years, taking into account the population growth rate (r = 0.89%).

$$\begin{aligned}\text{Annual Target} &= \frac{\text{Bawal} + (\text{RT total} \times r \times t)}{t} \\ &= \frac{146.634 + (647.941 \times 0,0089 \times 5)}{5}\end{aligned}$$

$$\begin{aligned}\text{Growth in the number of new households over the past 5 years} &= 647.941 \times 0,0089 \times 5 \\ &= 28.833 \text{ New household}\end{aligned}$$

$$\text{Annual Target} = \frac{146.634 + 28.833}{5} = 35.093 \text{ unit}$$

Conclusion: The city of Bandung must provide or build 35,093 units of decent housing per year over the next five years to eliminate the housing backlog.

Analysis of Housing Needs Based on Segmentation

Based on the analysis conducted in the previous stage, the total housing demand in Bandung City for the next 20 years is estimated to reach 294,916 units per year, which is projected to be distributed across areas suitable for residential development. Based on the analysis results, it was identified that the segmentation of the population in terms of housing fulfillment in the City of Bandung, based on income level, can be grouped into 2 (two) categories, namely:

- 1) Households that can afford housing, and
- 2) Households that cannot afford housing (MBR)

Schematically, the pattern of meeting these housing needs can be structured as shown in the following figure.

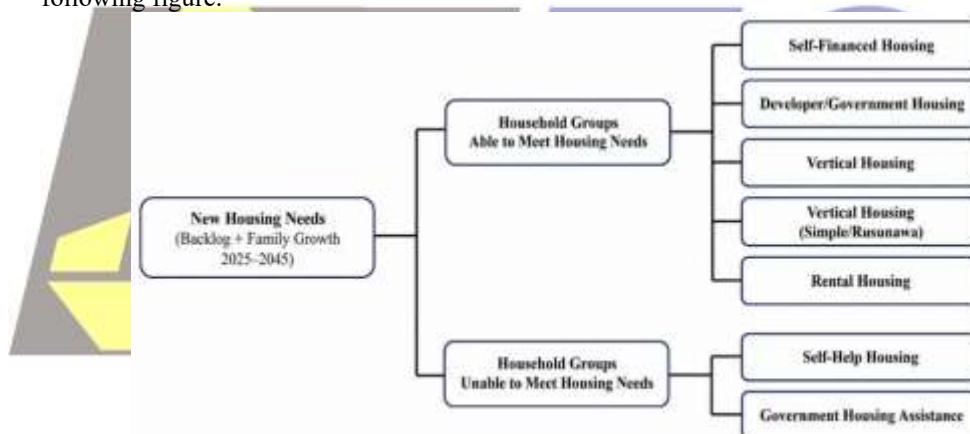


Figure 9 Structuring Housing Development Supply Patterns Based on the Segmentation of Affluent and Low-Income Household Groups

The chart shows that the housing needs of families who can afford to do so can be met through self-construction, housing development by private developers or the government, and the construction of vertical housing. Meanwhile, for families unable to meet their housing needs, housing can be provided through subsidized vertical housing (such as low-cost apartments or public housing), rental housing, self-built housing, and assistance with home construction. This classification reflects the principle that housing provision should be tailored to the financial capacity and socioeconomic conditions of households rather than relying on a one-size-fits-all approach. In rapidly urbanizing cities such as Bandung, where land availability is increasingly constrained and housing demand continues to rise, differentiated housing strategies are essential to improve accessibility, optimize land use, and reduce the housing backlog. Moreover, integrating public policies with private sector participation can expand housing supply while ensuring that low-income households receive adequate support through targeted subsidies and housing assistance programs. Such an approach not only addresses quantitative housing shortages but also promotes equitable access to adequate, affordable, and sustainable housing for all segments of society.

Distribution of Vertical Housing in Bandung

Vertical housing in Bandung consists of apartments and public housing (Apartemen Rakyat). The distribution of this housing is not yet even, and much more needs to be built to meet the housing needs of Bandung.

Table 5 Distribution of Apartment Locations That Have Received Building Permits in Bandung

No	Apartemen	Address	Total		Type
			Tower	Unit	
1	Setiabudhi	Jl. Setiabudhi	1		Studio , 1 KT, 2 KT, 3 KT
2	Ciumbuleuit 1	Jl. Ciumbuleuit	1		Studio 227 , 1 KT, 2 KT 149, 3 KT 38, 4KT 87
3	Ciumbuleuit 2	Jl. Ciumbuleuit	1	289	T23 Studio , T36 1 KT, T40 2 KT, T64 3 KT
4	Ciumbuleuit 3	Jl. Ciumbuleuit	1		Studio , 1 KT, 2 KT, 3 KT
5	Parahyangan Residence	Jl. Ciumbuleuit	2	1552	Studio , 1 KT, 2 KT, 3 KT
6	Baverly	Jl. Sangkuriang	1	322	
7	Dago Suite	Jl. Sangkuriang	1	400	1KT,2KT,3KT
8	La Grande	Jl. Merdeka	2	360	Condotel 200 unit
9	Sudirman	Jl. Jenderal Sudirman	4	800	1KT 40M2 – 3KT 122M2
10	Gateway Cicadas	Jl. Ahmad Yani	1	1800	
11	Emerald	Jl. Sanggar Hurip	1		
12	Newton	Jl. Buah Batu	2	1751	Studio 1751, T50 67
13	Suite Metro	Jl. Soekarno Hatta	1	1200	T23,T36
14	Tmnsari Panoramic	Jl. Soekarno Hatta	1	1716	
15	Jardin	Jl. Cihampelas	1	2444	
16	Swarna Bumi	Gang Sekolah-Kircon	1	-	
17	Panghegar	Jl. Merdeka	1	450	High End Tipe
18	The Maj**	Jl. Ir. H. Juanda	2	233	Studio, 1KT, 2KT -
19	Gateway Pasteur	Jl. Gunung Batu	2	800	
20	M. Square	Jl. Cibaduyut	1	740	Studio, 1KT,2KT,3KT
21	Landmark	Jl. Industri/Bima	4		Studio,1KT,2KT,3KT,4KT
22	Citylight	Jl. Pasirluyu	1		
23	Golden Line	Jl. Ahmad Yani	1		
24	Tera	Jl. Tera	1	193	Studio, 1KT,2 KT
25	Bellazona	Jl. Cigadung	1	379	26 unit T35; 27 unit T44;28 unit T77; ... unit T102&120
26	Grand Asia Afrika Residence	Jl. Karapitan (Simpang Lima)	4	2248	
27	Dago Boutique	Jl. Dago	1	400	
28	Clove Garden	Jl. Dago	2	181	
29	Grand Dago	Jl. Dago	2	3000	
30	Marbella	Jl. Dago	1	180	
31	Sahid Cleveland Condotel	Jl. Setiabudi	1	268	
32	Soetta Sky Park	Gedebage	2	-	
33	The Kalyana	Metro	2	302	
34	The Majesty	Suriasumantri	1	79	T48 2KT, T96 3KT
35	Degreen Pasteur	Pasteur	1	395	
36	Pinewood	Pasteur	2	980	
37	Green Kosambi	Jl. A. Yani	1	500	
38	Hegarmanah Residence	Hegarmanah	1	260	
39	D'pavilliojoen	Re Martadinata	1	115	1KT;2 KT; Mewah 155 m²
40	Royal Permata/Paradise	Gerlong Hilir	1		T21, T 31,
41	Newton The Hybrid Park	Trs Buahbatu	2	700	
42	Bandung Technoplex Liv	Cibaduyut	2	1800	T24,T40,T50
43	Buahbatu Park	Trs Buahbatu 10425 M²	5	900	T24, T36
44	Sentraland Antapani-Perumnas	Antapani	2	1274	Studio,1KT,2KT
45	Cisitu				
46	Dago Golf				

*) 48 titik apartemen dengan total 36.000 unit. Sedangkan yang baru terserap pasar baru 15.000 unit Source by Bisnis Properti.com,

**) (peninjauan IMB)

Source: Bandung City Department of Housing, Residential Areas, Land, and Parks (DPKP3)

Efforts to build these public apartment complexes are being made so that the public can obtain housing either through rental (*Rusunawa*) or ownership (*Rusunami*). The Ministry of Public Housing and the Ministry of Public Works' Directorate General of Public Works play a role in providing *Rusunawa*, including providing adequate housing in the city of Bandung. The rental public housing construction projects that have been implemented in the city of Bandung include a total of 8 (eight) Twin Blocks (TB) built between 2005 and 2012, located in the following areas:

1. Cingised, Cisaranten Kulon Arcamanik Subdistrict;
2. Sadang Serang I, Sadang Serang Coblong Subdistrict;
3. Rancacili I, Derwati. Rancasari Subdistrict.

In addition to these three areas, the Bandung City Government has conducted feasibility studies for other apartment complexes from 2009 through 2016 and up to the present, including:

1. Paldam
2. Nyengseret
3. Arjuna
4. Bagusrangin
5. Kiaracondong
6. Simpang Dago
7. Abra
8. Jatayu Molek
9. Dago

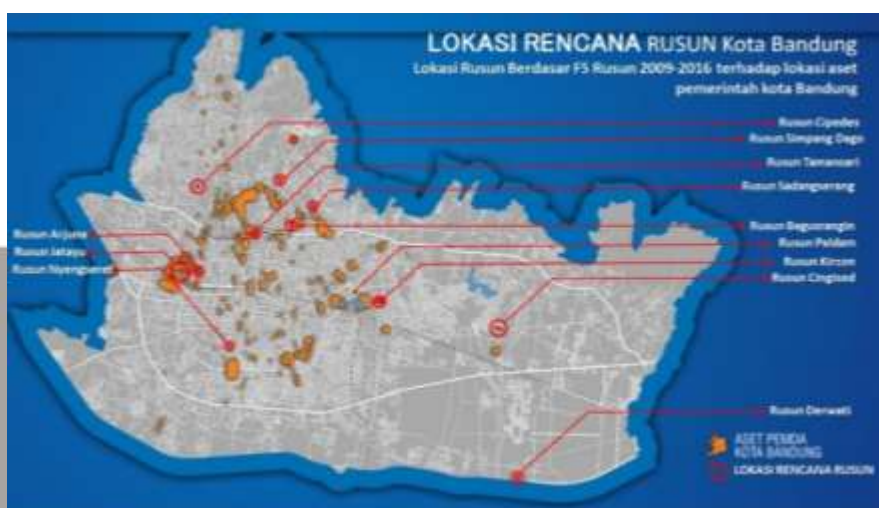


Figure 10 Location of Public Housing in Bandung

Plans to build apartment complexes are aimed at meeting the housing needs of low-income communities (MBR). Thus, Law No. 20 of 2011 on Apartment Complexes is expected to support the implementation of the program to build 1,000 low-cost apartment towers across Indonesia. The Ministry of Public Housing believes that the construction of apartment complexes can be one solution to the community's housing needs. Moreover, land prices in various regions continue to rise every year. Public housing (vertical housing) is the most crucial policy instrument in reducing the housing backlog in densely populated urban areas. Through the efficient use of vertical space, the vertical model is able to overcome the limitations of horizontal land capacity and high land value capitalization.

Table 6 Summary of the Potential for Meeting Housing Unit Demand from Public Housing Locations with a Backlog (In General)

Unit Demand Fulfillment	Housing Backlog for 2024 (Units)	Difference (Unit)
Unit MBR	5.818	
Unit MBR+	2.363	
Unit Komersil	6.439	
	14.620	

Source: Secondary Survey, 2025

Table 1 Location for Apartment Building Planning

No	Location	Land Area (m ²)	Current Conditions	Development Guidelines	Basic Infrastructure	Unit Designation	Total	Type	Development Plan
1.	Padlam	11.336	Perumahan TNI	Permakiran Kepadatan Sedang	PLN, PDAM, Jalan Arteri Sekunder, Lokal Primer	Unit MBR	300	bay tipe 24	Kerjasama Pemukiman
						Unit MBR+	275	bay tipe 24	
						Unit	433	bay tipe 24	
						Komersial	1008		
2.	Nyengseret	15.205	Mixed Use, perumahan formal	Permakiran Kepadatan Sedang	PLN, PDAM, Jalan Kolektor &	Unit MBR	640	tipe 24	Kerjasama Pemukiman
						Unit MBR +	485	tipe 30	
							1125		
3.	Sadang Serang	10.556	Mixed Use, Perumahan Padat, perdagangan jasa, dll	Permakiran Kepadatan Sedang	PLN, PDAM, Jalan, Kolektor sekunder & Lokal	Unit MBR	132	tipe 24	Kerjasama Pemukiman dan APBD
						Unit MBR +	99	tipe 24	
						Unit	552	tipe 24	
						Komersial	783		
4.	Derwati	32.851	Perumahan Formal & Lahan terbuka	Permakiran Kepadatan rendah	PLN, PDAM/Sumur dalam, Jalan Lokal Primer	Unit MBR	350	Tipe 24	Kerjasama Pemukiman
						Unit MBR +	576	Tipe 30	
						Unit	2160	Tipe 40	
						Komersial	3086		
5.	Cingusud	7.061	Perumahan Formal & Lahan terbuka	Permakiran kepadatan rendah	PLN, PDAM/Sumur	Unit MBR	51	tipe 24	APBD
						Unit MBR +	155	tipe 24	
							206		
6.	Atjuna	8.203	mixed Use (Industri, perdagangan, hunian padat/kumuh)	Permakiran kepadatan sedang - tinggi	PLN, PDAM, Jalan, Kolektor sekunder & Lokal	Unit MBR	82	tipe 27	APBD
						Unit MBR	60	tipe 36	
						Unit MBR	33	tipe 42	
						Unit MBR+	82	tipe 27	
						Unit MBR+	60	tipe 36	
						Unit MBR+	33	tipe 42	
7.	Bangusrangin	27.808	mixed Use Perkantoran, perdagangan jasa, hunian padat sedang	Permakiran Kepadatan Sedang	PLN, PDAM, Jalan, Kolektor sekunder & Lokal		144	tipe 27	Kerjasama Pemukiman
						Unit MBR	96	tipe 32	
						Unit MBR	96	tipe 36	
						Unit MBR	48	tipe 42	
						Unit Komersial	192	tipe 27	
						Unit	192	tipe 36	
						Komersial	96	tipe 42	
						Unit	144	tipe 48	
						Komersial	1008		
						Unit MBR	730	tipe 24	
8.	Karascondong	28.928	mixed Use perdagangan jasa, hunian padat/kumuh sedang)	Permakiran Kepadatan Sedang	PLN, PDAM, Jalan, Kolektor sekunder & Lokal	Unit MBR+	500	tipe 24	Kerjasama Pemukiman
						Unit Komersil	1050	tipe 24	
							2280		
9.	Simpang Dago	43.808	mixed Use Perkantoran,		PLN, PDAM, Jalan Arteri	Unit MBR	120		Kerjasama Pemukiman
						Unit MBR+	98		
							218		
10.	Rancacili	35.000	Perumahan kepadatan Rendah, lahan terbuka		PLN, PDAM/Sumur dalam, Jalan Lokal Primer	Unit eksisting	307		APBD
						Unit sedang dibangun	107		
						Unit akan dibangun (2016)	278		
							692		
11.	Abrn	9.865	mixed Use perdagangan jasa, hunian padat		PLN, PDAM, Jalan, Kolektor sekunder & Lokal	Unit MBR	288	tipe 24	APBN / APBD
						Unit	44	tipe 36	
						Komersial	332		
12.	Jatayu Molek	62.296	mixed Use (Industri, perdagangan,		PLN, PDAM, Jalan, Kolektor sekunder & Lokal	Unit MBR	2.816	tipe 24	Kerjasama Pemukiman
						Unit	1.576	tipe 36	
						Komersial	4.392		

Source: Secondary Survey, 2025

Analysis of Spatial Efficiency: Vertical vs. Horizontal

Efficiency analysis is used to measure, evaluate, and optimize the use of space (land or area) in order to achieve maximum productivity or capacity while using the minimum possible spatial resources. To see how high-rise housing drastically reduces land requirements in meeting the backlog of 89,195 units, the following mathematical calculation can be performed:

- Horizontal Scenario (Detached Houses):

Using a minimum lot size standard of 36 m² per housing unit, the total net land area required is:

$$89,195 \text{ unit} \times 36 \text{ m}^2 = 3,211,020 \text{ m}^2 (\pm 321,1 \text{ hectare})$$

After accounting for infrastructure, roads, and public facilities (+40%), the total gross land area amounts to 449.54 hectares.

- Vertical Scenario (20-Story Apartment Block):

If a 20-story apartment building is constructed (assuming each floor accommodates 60 residential units, meaning one block accommodates 1,200 units), the total number of building blocks required to address the housing backlog is:

$$\frac{89,195 \text{ unit}}{1200 \text{ unit/block}} = 74\text{-building complex}$$

If the design of a single building block and its open spaces requires a site area of 3,000 m² (0.3 hectares), then the total gross land requirement is:

$$74 \text{ blocks} \times 0.3 \text{ hectares} = 22 \text{ hectares}$$

A vertical development scenario can save up to 95% of urban land compared to a horizontal single-family home scenario while meeting the same housing backlog.

Challenges frequently encountered in the implementation of land acquisition for public housing projects aimed at addressing the housing backlog often lead to stagnation due to several structural factors, including:

- a. Financial & Private Sector Non-Compliance

Commercial developers are often reluctant to comply with the affordable housing mandate (allocating a minimum quota of 20% for low-income households in accordance with Law No. 20/2011) due to the high cost of land investment, which is not commensurate with the sale price or rent of subsidized public housing.

- b. Sociocultural Barriers

Resistance from the local informal community, which rejects the transition from a horizontal to a vertical lifestyle (related to land ownership, environmental maintenance costs/elevator upkeep, and social adaptation).

- c. Validity of Multi-Sector Data

The lack of real-time updates to the housing backlog database based on GIS spatial data, resulting in the locations of new public housing developments sometimes missing the mark or failing to align with the mobility preferences of low-income residents.

Public Housing Apartment Provision Program

The policy on the development of public housing was initiated as a strategic response to the phenomenon of exponential urbanization, limited land availability, and the urgent need to redevelop urban slum areas through the effective and efficient optimization of vertical housing for low-income communities (MBR). The implementation of this policy is not merely oriented toward physical-structural and commercial dimensions alone, but emphasizes integrated residential environmental

management to create communicative, safe, and conducive domestic spaces. Operationally, the provision of this social infrastructure applies a synergistic tripartite partnership model between the government, the private sector, and the community through the Public-Private Partnership (PPP) scheme, in accordance with Presidential Regulation No. 38 of 2015. This scheme includes quality standardization across all phases of the project cycle, encompassing construction, operational management, and periodic maintenance. In addition, the blueprint for the construction of these affordable apartments also integrates aspects of functional spatial planning for low-income groups, supporting commercial zoning, design flexibility, and housing development control instruments to ensure the sustainability of the resulting housing quality.

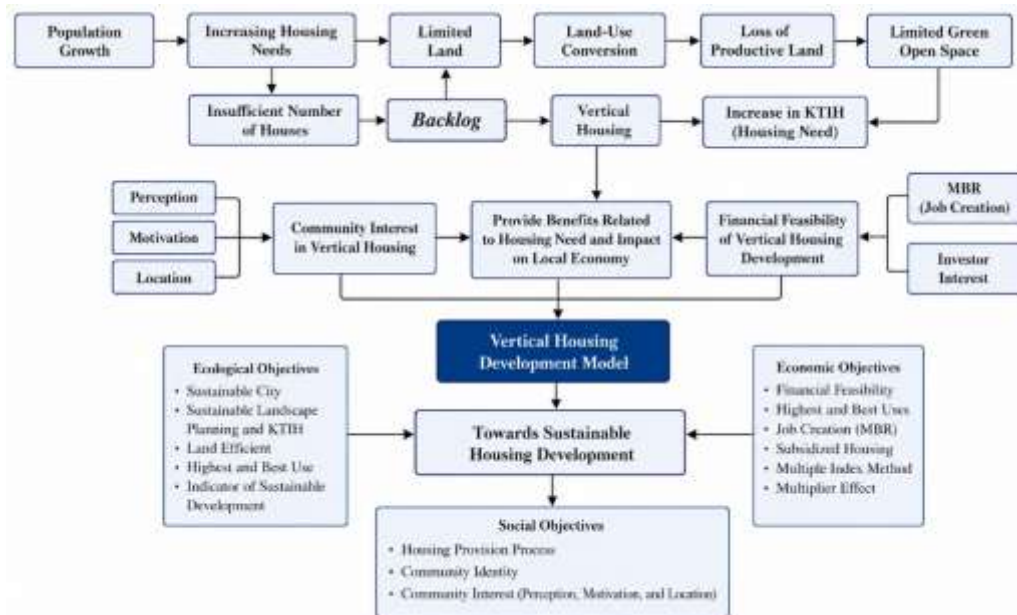


Figure 11 Framework for Vertical Housing Development Toward Sustainable Housing Development

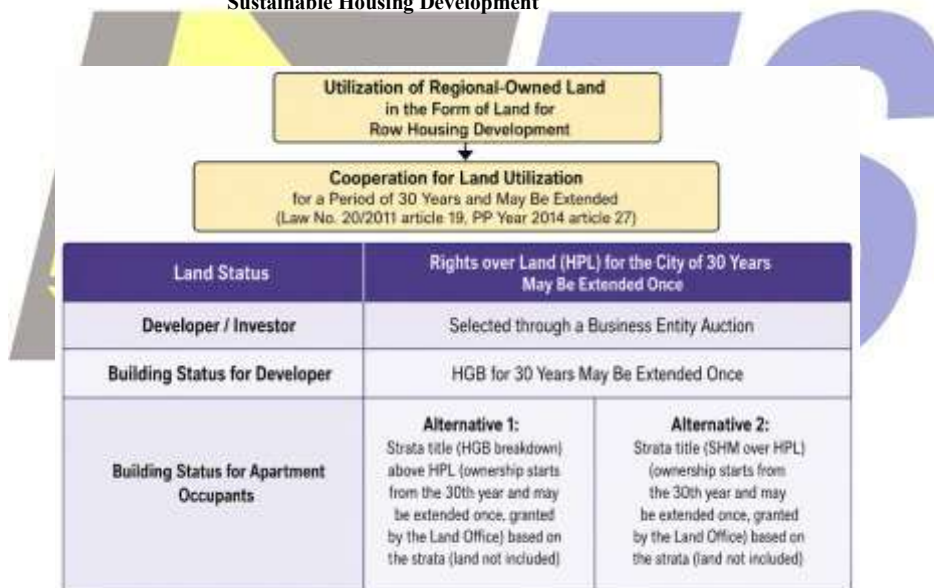


Figure 12 Affordable Housing/Apartment Development Program

Housing development policies based on the concept of balanced housing require integrated responsibility between the central and local governments in site selection and the issuance of permits to ensure the availability of housing for low-income communities (MBR). To address land constraints in urban areas, the obligation to build self-help/affordable housing may be converted into public apartment complexes, either on the same or different plots, with a minimum compensation of an additional 20 percent of units. Institutionally, this regulation allows commercial housing developers to operate independently or form collective partnerships, such as consortia or operational cooperation (KSO), to facilitate the fulfillment of MBR housing quotas in areas designated by regent or mayor regulations based on the Detailed Spatial Plan (RDTR).

As an incentive and to optimize vertical space in metropolitan or major cities, the government allows a Building Floor Area Ratio (BFAR) of up to 6.0 or higher, as well as an adjustment to the Building Footprint Ratio (BFR) ranging from 40 to 60 percent, depending on the zoning typology of the site. Developers are required to provide adequate infrastructure, facilities, and public utilities on the site of the high-rise residential tower, with a minimum shared land area of 3,000 to 5,000 square meters. On the other hand, the provision of strategic land is supported through the optimization of State or Regional Assets (BMN/D) based on Government Regulation No. 27 of 2014 and Ministry of Home Affairs Regulation No. 19 of 2016, which establish a scheme for leasing regional-owned land with a standard term of 5 years, but which can be flexibly extended for the long term in the interest of social infrastructure and the operational sustainability of vertical housing.

4. Conclusion

- The housing backlog in Bandung, calculated based on data regarding housing demand and the number of existing homes, stands at 89,195 units. The difference between the number of housing units in the public housing complex and the backlog (in general) is 74,575 units, with 14,620 units already allocated to meet the needs of MBR, MBR+, and commercial units. Planning for MBR public housing to address the backlog requires approximately 22 hectares of land for the construction of 74 blocks, assuming each block accommodates 1,200 units.
- The potential land for public housing development in Bandung City located on regional assets consists of 9 sites spread across 6 neighborhoods, namely: Merdeka Neighborhood, Babakansari Neighborhood, Tamansari Neighborhood, Cicadas Neighborhood, Lebak Gede Neighborhood, and Pelindung Hewan Neighborhood. Meanwhile, the potential for developing public apartments on land outside of local government assets is spread across 4 neighborhoods, namely: Garuda, Mengger, Pakemitan, Sekejati, and Rancamumpang. Furthermore, a more in-depth study is required to assess the potential of the land whether it is local government-owned or not for the development of these public apartments or public housing complexes.
- The scheme for providing public housing requires synergy or cooperation among competent stakeholders with expertise in their respective fields and the private sector as developers responsible for housing construction.
- The municipal government's obligation to construct public housing is stipulated in the Location Permit and Building Approval (PBG) for commercial housing complexes, as well as the obligation to designate sites for the construction of public housing specifically for low-income residents in its spatial plan.

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