

#### Universitas Muhammadiyah Malang, East Java, Indonesia

# Journal of Community Service and Empowerment

p-ISSN 2442-3750, e-ISSN 2537-6204 // Vol. 5 No. 2 August 2024, pp. 272-281



# City growth and its impact on residential problems: A case study in the city of Jakarta

Puji Arifin a,1,\*, Didin Muhafidin a,2 Ramadhan Pancasilawan a,3

°Faculty of Social and Political Sciences, Padjadjaran University, JL. Bukit Dago Utara no. 25 Bandung, West Java 40135, Indonesia ¹puji21003@mail.unpad.ac.id; ²didin.muhafidin@mail.unpad.ac.id; ³ramadhan.pancasilawan@unpad.ac.id

#### \*Corresponding author

ARTICLE INFO	ABSTRACT
Article history Received: 2023-12-16 Revised: 2024-01-20 Accepted: 2024-05-06 Published: 2024-05-20  Keywords City growth Housing backlog Jakarta Slums	This study aims to examine housing and settlement problems, especially in the Jakarta area as a result of population growth which has caused a very large population by identifying the number of housing needs and housing deficits. This study takes the object of the city of Jakarta as a case study and focuses on the housing sector which includes 2731 residential neighborhoods (RW) where the city occupies an area of 664.01 km2. Studies show the cause of the problem is caused by relatively stable city growth with a growth rate of around 1% over the past 20 years, which is reflected in the number of families, which amount to 3,627,111 families, with a housing density of 5462 families/km2, living in 2,242,163 housing units. The findings show that another cause is the spread of slum settlements in the city, which total 445 RWs, which means 16.30% of the total RWs. The results of the research show that so far, the problem has not been resolved.
<b>Kata Kunci</b> Backlog perumahan Jakarta Permukiman kumuh Pertumbuhan kota	Pertumbuhan kota dan dampaknya terhadap permasalahan pemukiman: Studi kasus di kota Jakarta. Penelitian ini bertujuan mengkaji permasalahan perumahan dan permukiman khususnya di wilayah Jakarta sebagai akibat dari pertumbuhan penduduk yang menyebabkan populasi yang sangat besar dengan mengidentifikasi jumlah kebutuhan rumah dan defisit perumahan. Studi ini mengambil objek Kota Jakarta sebagai studi kasus dan berfokus pada sektor perumahan yang mencakup 2731 lingkungan perumahan (RW) dimana kota ini menempati area seluas 664.01 km2. Studi menunjukkan penyebab masalah disebabkan oleh pertumbuhan perkotaan yang relatif stabil dengan tingkat pertumbuhan di kisaran 1% selama 20 tahun terakhir, yang tercermin dari jumlah keluarga, yang berjumlah 3,627,111 keluarga, dengan kepadatan perumahan 5462 keluarga/km2, tinggal di 2,242,163-unit rumah. Temuan menunjukkan bahwa penyebab lain adalah tersebarnya permukiman kumuh di kota yang berjumlah 445 RW yang berarti 16,30% dari total RW. Hasil penelitian menunjukkan bahwa selama ini permasalahan belum terselesaikan.
	Copyright © 2024, Arifin et a  This is an open access article under the CC–BY-SA license  This is an open access article under the CC–BY-SA license

#### INTRODUCTION

Home is one of the basic/basic human needs. The house is an integral part of the settlement. The house also functions as a place to live and is used to shelter from climate distcityces and other living creatures. A house is a residential building that must meet the criteria for comfort, safety and health in order to support its occupants so they can work productively and can be used as a healthy and safe place to live for their occupants (Chamid, 2016). A city is a spatial layout on the surface (land) with defined administrative boundaries where there is a concentration (concentration) of population within it along with various economic, social and political activities. A city is a residential layout with a large population on limited city land which is generally non-agrarian in nature (Muta'ali, 2016)

How to cite: Arifin, P., Muhafidin, D., & Pancasilawan, R. (2024). City growth and its impact on residential problems: A case study in the city of Jakarta. Journal of Community Service and Empowerment, 5(2), 272-281. https://doi.org/10.22219/jcse.v5i2.31075

One of the main functions of the city is the residential function so that city development cannot be separated from the form of residential geography which is characterized by high flexibility in movement and expansion because the residential function grows in response to city growth in addition to the development of other city functions such as industrial, commercial and administrative city space (Mutar et al. 2022). The housing problem in Jakarta City, as with other large cities, is related to demographic aspects of natural growth, in-migration, economic, social and administrative



factors, as well as weaknesses in planning and political aspects, resulting in the emergence of a clear housing deficit in the city that does not meet the needs of the city with adequate housing units on the one hand, and the inability of a large part of the population with limited income to buy houses on the other hand, and this gives a negative indication of the efficiency of housing units with land in city areas (Muta'ali, 2016).

City growth refers to the process of growth and decline of economic agglomerations. The pattern of concentration of economic activity, and its evolution, has proven to be an important determinant, and in some cases a result of cityization, city structure, organization of economic activity, and national economic growth. The size distribution of cities is the result of cityization patterns that result in city growth and city creation. The evolution of city size distribution is in turn closely linked to national economic growth (Ioannides, 2012). The development of cities and the high flow of cityization are the main factors. The development of the city makes it the center of every important event that attracts rural residents to come (cityization). Cityization causes rapid population growth. The high number of residents has an impact on the increasing need for housing faced with limited land in city areas (Mutar et al. 2022).

In addition, income levels are not directly proportional to the increase and the high price of land in city areas makes decent housing unaffordable. This has triggered the emergence of informal areas. Informal areas are a phenomenon that emerges and is accompanied by rapid city growth in cities. This is due to the high demand for housing while the supply is low. The term 'informal estate' refers to residential areas within a community where residents build their own dwellings. This can be observed when there is a shortage of formal housing at income-appropriate prices. prices that are commensurate with income. This generally leads to the phenomenon of squalor (Alkhalidy, 2022).

Slums have an adverse impact on several aspects, namely the environment, human and socio-economic which are interrelated. From the environmental aspect, slums will have an impact on reducing the quality of the environment into disaster-prone areas such as floods and fires. This is due to the high density of buildings and the absence of green open space as a water catchment area. This decline in environmental quality will greatly affect the health aspects of the community, especially vulnerability to environmentally-based diseases. People living in slums are generally more concerned about economic movement than health, although there will still be socio-economic disparities. This situation forces the population to be vulnerable to the risk of crime (city crime) both regarding personal issues due to lack of privacy and public issues such as evictions. This of course will have a major impact on the psychology of the population, especially children (Muta'ali, 2016).

The existence of slums is also closely related to poverty. For poor people who have low incomes, they cannot afford the cost of maintaining a habitable settlement environment. If this continues to happen, slums will continue to grow. Many negative impacts that can occur as a result of slums include fire, flooding and infectious diseases. In essence, the polemic that occurs regarding slums is the low quality of the environment. In essence, this area overrides the concept of sustainability (Simanjuntak & Amal, 2017). In simple terms, the housing and settlement problem is that the number of available dwellings does not match the needs and the number of people who will occupy them. The main problems in housing and settlement are population, spatial planning and regional development, housing and settlement development planning that is still not optimal, land and infrastructure, financing, technology, institutions, community participation and legislation (DPRKP Provinsi DKI Jakarta, 2023).

An Italian study shows that uncoordinated city and regional planning has had negative effects in the past in Italy, with city development overriding sustainability (Martellozzo et al. 2018). Sustainable cities are a concept built on the belief that human life in the world must continue. We always strive to make life of a better quality in accordance with the values we believe in. A decent and quality life is expected not only for the current generation, but also for future generations (Sodiq et al., 2019).

There has been a lot of research on slums and especially on housing around the world, but most of it has focused on the subject area of health. While research on housing problems and the statistical reality of housing itself has not been done very often so it is still possible to find novelty or development of similar research that has been done before. The importance of this research lies in revealing the real cause of the housing problem through the selection of Jakarta city as a case study and the stakeholders of city planning policies to address this problem in the future. Therefore, this study aims to identify the factors that contribute to population growth in the city of Jakarta. Also, this study tries to look at the reality of settlements and housing deficits that occur as a result of the causal factors based on the statistical data obtained as well as the housing problems that still occur in the city of Jakarta. Finally, it proposes scientific solutions to address the housing problem.

The structure of the research is divided into three parts, as the first part discusses the factors of population growth in Jakarta City. The second section discusses the reality of settlements, which includes demographic and housing characteristics, and the third topic focuses on housing issues in Jakarta City. The high rate of cityization has made Jakarta experience a decrease in carrying capacity. Therefore, Indonesia and especially Jakarta have agreed to the sustainable cities and communities' program which is one of the goals of the Sustainable Development Goals (SDGs) SDGs in addition to achieving sustainable cities and communities, also cover various social and economic development issues.

Indonesia through the Central Government has made efforts since 1976 to relieve population pressure on DKI Jakarta as the National Capital through Presidential Instruction No. 13 of 1976 concerning the Development of the Jabodetabek Region. This regulation aims to harmonize the development planning of the Jakarta, Bogor, Tangerang and Bekasi areas,

hereinafter referred to as Jabotabek, with the aim of fostering population settlement patterns and a more equitable distribution of employment opportunities. This policy encourages city development with an invasion pattern (new city development) and creates large-scale housing and settlements in areas adjacent to Jakarta. However, this invasion pattern policy leaves problems that are unique to the outskirts of Jakarta, including traffic congestion and the unpreparedness of the region to prepare settlement facilities and infrastructure.

#### **METHOD**

#### Jakarta City Case Study

Jakarta is the capital city of Indonesia, located on the north coast of the island of Java, which is the most populous island in Indonesia, located between 6º and 7º south latitude and 106º and 108º east longitude. It includes a city located within the main design boundary of 661.5 km2, consisting of five cities and 1 archipelago region (regency) inhabited by more than 10 million people, according to the 2020 population census and already reaching more than 11 million in 2022. The administrative areas of DKI Province are South Jakarta administrative city (blue color), East Jakarta administrative city (green color), Central Jakarta administrative city (red color), West Jakarta administrative city (yellow color), North Jakarta administrative city (purple color) and Thousand Islands administrative district. The region with the largest area is East Jakarta City with an area of 188.03 km2. While the area with the narrowest area is the Thousand Islands Regency of 8.7 km2 (BPS, Jakarta in figures 2010). For the number of districts in the city of Jakarta as many as six cities or regencies. subdistrict area is divided into 44 sub-districts, and Ward into 267 Ward. The time limit includes a study of the reality of city population growth in Jakarta City for the period 1961-2022 (Figure 1).

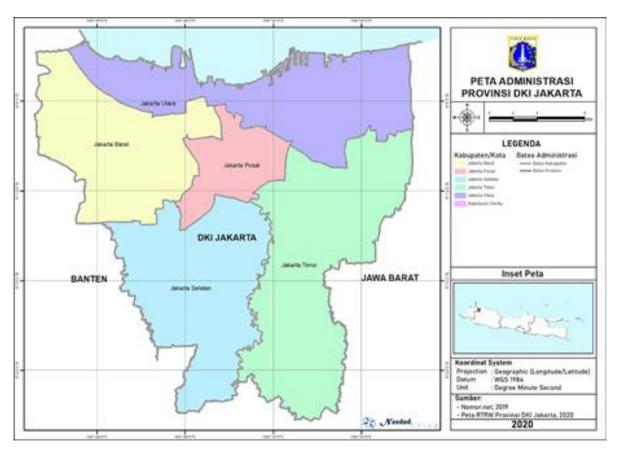


Figure 1. Base Map of Jakarta City

This research examines city population growth in Jakarta City with the aim of assessing its impact on the high number of residents and families faced with limited housing. The research used qualitative methods with a descriptive approach and analytical and statistical approaches in line with the research objectives, based on data on the population census, number of housing units, and base maps of Jakarta City. The study used statistical methods to extract the annual growth rate of the population and its density, which determines the city's need for housing units. The study was conducted in the city of Jakarta from July to December 2022. The statistical data collected was sourced from data from the Central Bureau of Statistics and the Department of Public Housing and Settlement Areas (DPRKP) of DKI Jakarta Province, which was processed and restated by the researcher.

#### City Growth Factors in City Spatial Planning

Indicators include demographic, migration, economic, political and planning factors. There is a close relationship between population growth and planning and development, as population is the main starting point in planning (Glaeser et al., 2006). Development goals in its various dimensions lead to sustainable population growth and more pressure on city land use (As-Salh, M.M., 2020).

#### Total Population of Jakarta For the Period 1961-2022

Population means the number of people counted in a certain area and at a certain time. Population studies provide the data on which city studies are based, as well as being a basic indicator of the needs of the city's population for all services. City expansion is directly proportional to population growth (Belal & Shcherbina, 2018). From the data analysis in Figure 2, it can be seen that the population growth rate is always positive, which means that the population of Jakarta continues to increase.

### **RESULTS AND DISCUSSION**

When compared to the national annual growth rate during the census period (1961-1990), the population of Jakarta reached 2,973,052 people in 1961 and increased to 8,222,515 people in 1990, an absolute increase of more than 250% and an average growth rate of over 4% until 1980 and 2.4% in the period 1980-1990 which is higher than the national growth rate of only around 2% (Figure 2). The causes of this increase were an increase in the number of births and cityization to the city, as the city is a factor that attracts people from rural areas to seek a better life in the city center.

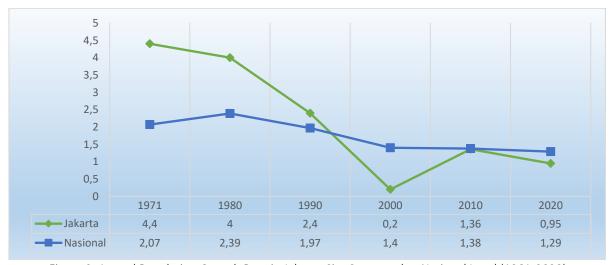


Figure 2. Annual Population Growth Rate in Jakarta City Compared to National Level (1961-2020)

During the census period (1961-1971), the recorded increase in the city's population reached 4,576,009 people in 1971, an increase of 1,602,957 people compared to 1961 with an annual growth rate of 4.4%), which was higher than the national growth rate of 2.07%. During the period (1971-1980), the total population of the city reached 6,503,449 people, and the population increased by 1,927,440 people, with an annual growth rate of 4.0%, still higher when compared to the population growth at the national level of 2.39%. During the period (1980-1990), the city's population reached 8,222,515 people, with an increase of 1,719,066 people, and an annual growth rate of 2.4%, lower than the period (1971-1980) and the period (1961-1971).

The national annual growth rate was 1.97%. During the period 1990 to 2000 there was a decline in the population growth rate. During this period, Jakarta's population growth rate was the lowest, at only 0.20% (Figure 3). Much lower than the national growth rate of 1.40%. This is due to the main factor, namely the massive housing development in the capital's buffer areas such as Bekasi, Depok, Bogor and Tangerang, both carried out by the government through the national housing project and private property companies (Eryudhawan et al., 2010). In addition, the economic and business development in Jakarta during this period was also very rapid, causing the need for business locations in Jakarta. The combination of these two factors encouraged residents in the city center to sell their properties and move to the buffer zones (Soedirdja & (Indonesia), 1997). Starting from this period, the population growth rate was reduced and began to be controlled at around 1% although in quantity there was still an increase of 1,218,344 in the period 2000 to 2010 and by 954,301 in the period 2010 to the last census in 2020. Whereas in 2022, the total population of Jakarta has reached 11,249,585 people. The continuous increase in population in the study area will certainly put great pressure on housing units and reduce their functional efficiency, as well as a housing deficit and the emergence of slums.

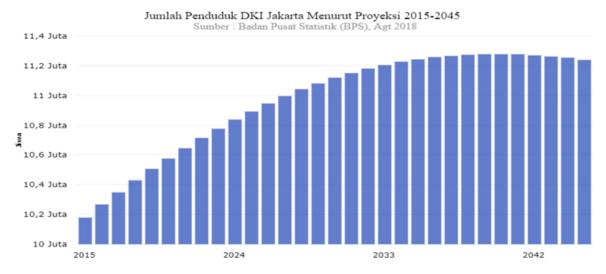


Figure 3 Projected Population of Jakarta 2015-2045 Source: Central Bureau of Statistics in 2018

#### **Population Migration**

Migration indicates the danger of a growing housing deficit in city areas, including Jakarta. Migration, according to the UN definition, is the movement of people from one geographical area to another geographical area where their place of residence moves, even for a limited period of time. After Indonesia's independence in 1945, Jakarta as the capital had the status of the center of government and business center, making the city a magnet for migrants from regions throughout Indonesia. In 1945, the population of Jakarta was estimated at around 600,000 and tripled to 1,733,600 five years later in 1950 and currently (2022) stands at 11,249,585. Despite many policies taken to suppress population growth, Jakarta is still the main destination for migrants in search of a better life. In 1970 when it was felt that the population increase was so rapid, Governor Ali Sadikin issued extreme policies for migrants including closing Jakarta from migrants (only migrants who have a place to live and work), only DKI Jakarta KTP owners can live in Jakarta to prohibiting the issuance of KTPs for migrants who do not have a place to live. Subsequent governors also issued many policies to suppress population growth. However, these policies did not deter rural migrants from coming to Jakarta. The economic and development gap between city and rural areas is still a major factor related to population migration in Indonesia in general and in Jakarta in particular. In 2018, the Central Bureau of Statistics predicted that the population of Jakarta would continue to grow, reaching 11.24 million people by 2045 (Figure 3). However, based on the latest data in 2021, the population of Jakarta has already exceeded the predicted figure, which means that the increase in the population of Jakarta is much faster than projected.

#### **Economic Factors**

Economically productive, administrative and service factors are important in attracting residents and stabilizing them in cities. Jakarta is the capital city for 270 million Indonesians. It is also the center of government as well as the center of business. Almost all high government institutions and most large companies are concentrated in Jakarta. This factor makes it a center of attraction for residents due to the availability of various jobs in industry, government and the service sector and even the informal sector. One of the most important economic factors that attracts people to Jakarta is that it provides many jobs in various fields.

#### **Political and Planning Factors**

Politics plays the biggest role in increasing or decreasing the number of housing units in cities, giving a clear indication of the reality of housing in these cities and the widening gap between reality and housing needs in these cities. Public housing development began to be taken seriously by establishing the National Housing Policy Agency (BKPN) in 1972. In Repelita I, the development of self-help and food self-sufficiency was the main priority, while public housing was still not prioritized because it was still in the preparation stage. At this stage, the government formed the Indonesian Real Estate Company (REI) in 1972 which functioned as a land provider and the party responsible for housing development. REI was also equipped with a Housing Counseling Center and Housing Research Institute that conducted research related to providing public housing (Budi, 2018).

The provision of public housing was further focused on in Repelita II, which discussed that public housing must keep pace with population growth, especially in city areas; be carried out with government assistance and community self-help; pay attention to city planning; and use a housing credit system to be more effective. To carry out development projects, the government conducted tender projects and open invitations to private investors (Budi, 2018). In financial matters, the government together with state-owned enterprises formed Perum Perumnas on July 18, 1974, which then

collaborated with state-owned banks to facilitate Home Ownership Loans (KPR) with subsidized interest rates. The target percentage of public housing is 80% low-income families, 15% middle-income families, and 5% high-income families. Although the target of public housing has been regulated, the government still prioritizes civil servants, military personnel, and private employees on fixed incomes. The initial development of public housing was focused in Jabodetabek, which is an city, economic support, and densely populated area. By 1979, 73,914 housing units had been built, and many public housing estates were established in Depok, Jakarta, Bekasi. The number of public housing developments further increased, from 233,770 units in 1984 to 300,280 units in 1994. Development projects stalled in 1998 due to the economic crisis and political instability.

After the regime change, public housing procurement continued, but not as massively as during the New Order. The program only received major attention when President Susilo Bambang Yudhoyono launched the One Thousand Tower Simple Flats (Rusuna) Program for the community which ran from 2007-2011. The targets of the program were people with a maximum income of Rp 5.5 million per month. During the implementation of the program, there was a mechanism that was considered "revolutionary", namely eliminating subsidies for the provision of public housing. Instead, mortgage papers were sold in the capital market and could be sold to investors in the global financial market. The mechanism is expected to mobilize funds for banks and the public housing industry. Thus, the state only plays a role in supporting a conducive investment climate, as well as providing public access to housing from credit loans from investments in the financial market (Kusno, 2012). To provide access for the community, there is a Housing Financing Liquidity Facility (FLPP) that addresses demand issues through lowering loan interest rates, thereby increasing housing supply. In reality, developers raise the rates of Rusuna according to market prices. In addition, developers also shifted the target market from MBR to the middle class (Kusno, 2012). The provision of public housing for the poor is increasingly deadlocked because Indonesia is experiencing economic instability and project development funds have become stagnant (Colombijn, 2011).

# Residential Reality in Jakarta City Population Density of Jakarta in 2022

Table 1 and Figure 4 show that the population density reaches 17,006 people/km2 for the entire city of Jakarta by region, but there is a gap in population density for each region. The region with the highest density is Central Jakarta with a density of 23,249 people/km2. The reason for this high density is the small area it occupies compared to its population. The second place is occupied by West Jakarta, with a density of 20,717 people/km2.

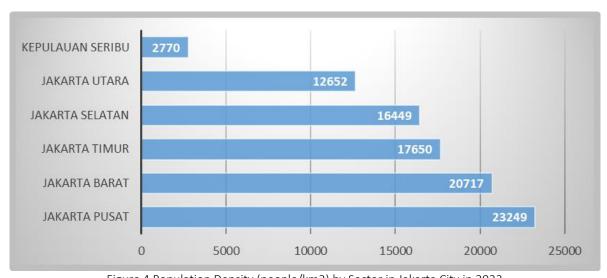


Figure 4 Population Density (people/km2) by Sector in Jakarta City in 2022

This density is due to its high population compared to other sectors, while East Jakarta is ranked third in terms of density. The density level is 17,650 people per km2. Then South Jakarta and North Jakarta rank fourth and fifth with a density of 16,449 and 12,652 people per km2, respectively. As for the Thousand Islands region, the population density is only 2,770 people per km2 (Figure 5). This very high population density of Jakarta contributes to the increasing pressure on housing units in the occupancy rate.

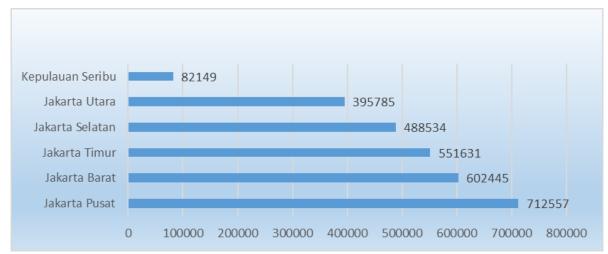


Figure 5. Population Density (family/km2) by Sector in Jakarta City in 2022

Table 1. Jakarta City Area, Population, Family, Housing and Density for 2021

Region	Number	Population	%	Number Of	Number of	Area (km2)	%	Density
	of RW			Families	Dwellings			(population
								/km2)
North	449	1.865.647	15,58	613.327	386.249	139,99	21,08	13.327
South	576	2.384.183	21,20	762.228	461.357	154,32	23,24	15.454
East	707	3.274.716	29,11	1.032.021	623.475	182,70	27,52	17.924
West	586	2.589.589	23,02	819.866	560.090	124,44	18,74	20.810
Center	389	1.105.731	9,83	391.143	205.642	52,38	7,89	21.110
Thousand	24	29.719	0,26	8.528	5.350	10,18	1,53	2919
Islands								
Total	2731	11.249.585	100	3.627.111	2.242.163	664,01	100	16.942 (avg)

Central Jakarta ranked first, with the highest housing density at 712,557 families/km2. This is due to the small area occupied by this region compared to other regions, while West Jakarta ranks second in terms of housing density at 602,445 families/km2. East, South and North Jakarta come next with densities of 551,361, 488,534 and 395,785 families/km2 respectively.

Meanwhile, the Thousand Islands region has the lowest density among other regions with 82,149 families/km2. This is due to the relatively small number of residents balanced with the lowest area.

#### Size of Housing Unit

The total number of housing units in Jakarta City is 2,242,163 (Table 1). The number varies in each region. East Jakarta ranks first in the number of housing units, reaching 623,475 housing units or 27.7% of the total housing units in the study area. West Jakarta ranks second in terms of the number of housing units, totaling 560,090 housing units at 25.0%, with a density of 6588 housing units/km2, and third is South Jakarta, which includes 461,357 housing units, representing 20.6% of the total housing units (Table 2).

Table 2. Number of Families and Density (family/km2) by Sector in Jakarta City for the Year 2022

Region	Number of RW	Population	%	Number of Families	Number of Dwellings	Area (km2)
North	1.865.647	613.327	16,9	386.249	139,99	4381
South	2.384.183	762.228	21	461.357	154,32	4939
East	3.274.716	1.032.021	28,4	560.090	182,70	5649
West	2.589.589	819.866	22,6	623.475	124,44	6588
Center	1.105.731	391.143	10,8	205.642	52,38	7647
Thousand	29.719	8.528	0,3	5.350	10,18	838
Islands						
Total	11.249.585	3.627.111	100	2.242.163	664,01	5642

In fourth place is North Jakarta with 386,249 units or around 17.2%. Then Central Jakarta and Kepulauan Seribu occupy the fifth and sixth positions with 205,642 and 5350 residential units respectively or around 9.2% and 0.3%. Central Jakarta has the highest residential density with 7647 dwellings/km2. Although the number of houses is not the highest, the small area makes the density very high. While Kepulauan Seribu due to the small amount of land occupied and the lowest number of dwellings makes its residential density of 818 units/km2 the lowest among all regions. Table 3 shows that the occupancy rate of housing units is 5 persons/housing unit for the whole of Jakarta, and this figure varies at the sector level. Compared to other regions, East Jakarta ranks first with an occupancy rate of 5.8 persons per housing unit. Kepulauan Seribu ranked second with 5.5 people per housing unit despite having the smallest population. Central Jakarta and South Jakarta rank third and fourth respectively with 5.3 and 5.1 people per unit. North Jakarta ranks fifth with an occupancy rate of 4.8 people per unit. West Jakarta, which ranks second in terms of population, ranks last with an occupancy rate of 4.1 persons per unit, due to the large number of houses which is the highest among all regions.

#### Housing Problems in The City of Jakarta

There is demographic pressure in Indonesian cities in general and Jakarta City in particular due to a shortage of housing units, leading to a high demand for housing as a result of population growth, migration, and the aforementioned economic and political factors. A housing deficit is defined as an increase in population (number of families) with a shortfall in the balance of housing to cover the increased number of families.

Table 3 shows a clear housing deficit of 43,323 housing units at a deficit rate of -37.51% for the whole of Jakarta, and this deficit varies at the city sector level. The eastern sector ranks second in terms of housing deficit, with 13,977 housing units at a rate of (-38.3%), and the northern sector ranks third in terms of housing deficit, with 10,422 housing units at a rate of (-31.1%). This is due to the small number of families and population.

Table 3. Number of Housing Units, Number of Families and Housing Deficit in Jakarta by Region in 2022
---

Region	Population	Number Of Families	Number Of Dwellings	Occupancy Rate (People/House)	Housing Deficit (*)	Percentage Of Deficit (**)
North	1.865.647	613.327	386.249	4,8	- 227.078	- 37
South	2.384.183	762.228	461.357	5,1	- 300.871	- 39,4
East	3.274.716	1.032.021	560.090	5,8	- 471.931	- 45,7
West	2.589.589	819.866	623.475	4,1	- 196.391	- 23,9
Center	1.105.731	391.143	205.642	5,3	- 185.501	- 47,4
Thousand	29.719	8.528	5.350	5,5	- 3178	- 59,4
Islands Total	11.249.585	3.627.111	2.242.163	5	- 1.384.950	- 38,1

(\*) Housing deficit = number of housing units - number of families

(\*\*) Proportion of housing deficit = housing deficit ÷ number of families x 100

#### Slums

Figure 6 shows that according to data from the DKI Jakarta Provincial Government, the number of slums in Jakarta is around 445 RW out of the total number of RW. This means that there are about 16.30% of areas in Jakarta that are classified as slum areas with varying levels of slums from very light, light, medium and heavy. The data is shown in Figure 6.

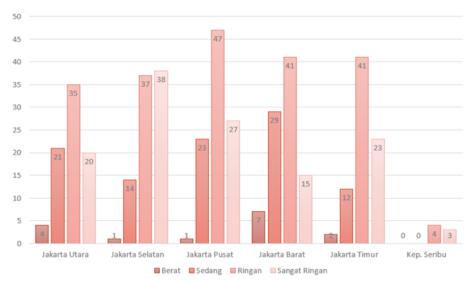


Figure 6. Slum Housing in Jakarta City in 2021

From the data and matters mentioned above, it is clear that the city's housing sector, especially in the area of construction of housing units, is not keeping pace with the increase in population and the number of families (Figure 7).

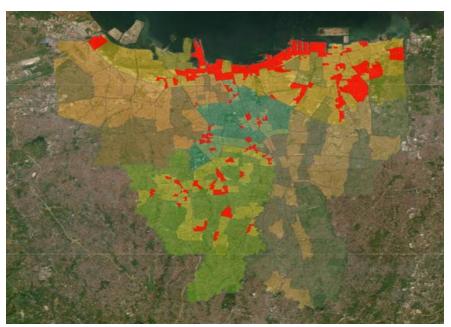


Figure 7. Slum Upgrading Target in 2022

#### Family Size and Housing Density

Family size is one of the important indicators in city studies. The larger the family or the multiplicity of families in a housing unit, the more it contributes to increasing pressure on services in general and on the efficiency of housing functions in particular. Table 1 and Figure 5 show a housing density of 5462 families/km2 for the whole of Jakarta, but there are differences in housing density for each region. In 2022, the government targets the arrangement of 90 slum RWs spread across Jakarta with the Community Action Plan (CAP) and Collaborative Implementation Program (CIP) programs, which are slum arrangement programs by inviting community involvement in arranging their respective environments. The slum structuring targets of the DKI Jakarta provincial government are illustrated in Figure 7. The red areas are RW/areas that are targeted for structuring. The arrangement targets are spread throughout DKI Jakarta, the majority of which are in North Jakarta, Central Jakarta and South Jakarta.

#### CONCLUSION

City housing problems are closely related to the overall economic and political situation. Rapid and uncontrolled city growth in Jakarta City is the main cause of the housing crisis and deficit, as well as the emergence of slums. Data shows that Jakarta is growing rapidly as a result of natural population growth, as the population increased from 2,973,052 in 1961 to 10,562,088 in 2020 and 11,249,585 in 2021. Such a huge population is the main cause of the high housing deficit in Jakarta and major Indonesian cities in general. Although there are various ways. While the government has made various housing policies, it has not been able to keep up with the rate of population growth and new households, especially in city areas. Moreover, the price of land in city areas is increasingly expensive and unaffordable, especially for the lower middle class. This fact makes it very difficult for low-income people to have decent housing, which in turn can lead to new problems, namely the emergence of slums and inadequate settlements. As a suggestion to deal with these problems, the government needs to organize massive vertical housing in each area that is included in the slum category. These vertical housing estates are built according to livable standards and are intended for local residents with a cheap and affordable rental system (at least as a unit maintenance fee).

#### **ACKNOWLEDGMENTS**

The author would like to thank the supervisors, the Department of Public Housing and Settlement Areas (DPRKP) of DKI Jakarta Province and all related parties who have assisted researchers in completing this paper.

## **REFERENCES**

Ahmad, S., Choi, M. J., & Ko, J. (2013). Quantitative and qualitative demand for slum and non-slum housing in Delhi: Empirical evidences from household data. *Habitat International*, *38*, 90-99.

Ahmadian, E., Sodagar, B., Mills, G., Byrd, H., Bingham, C., & Zolotas, A. (2019). Sustainable cities: The relationships between city built forms and density indicators. *Cities*, *95*, 102382.

- Alkhalidy, Qasim Mutar Abad., & Al-Kaabi, M. M. S. (2022). City Growth and Its Impact on the Housing Problem: The City of Al-Amarah as a Model. *Planning*, 17(3), 833-840.
- Badan Pusat Statistik (BPS) Republik Indonesia. https://www.bps.go.id/
- Belal, A., Shcherbina, E. (2018). Smart-tehnology in city planning of post-war cities. IOP Conference Series: Materials Science ang Engineering, 365(2):022043. https://doi.org/10.1088/1757-899X/365/2/022043
- Bensouda, O., Benkirane, I. M., Becue, V., & Cenci, J. (2024). Adaptive housing mechanisms within resettlement sites: a case study of Ouled M'Barek resettlement program, Kenitra, Morocco. *City, Planning and Transport Research*, *12*(1), 2304595.
- Bibri, S. E., & Krogstie, J. (2017). Smart sustainable cities of the future: An extensive interdisciplinary literature review. *Sustainable cities and society*, *31*, 183-212.
- Brueckner, J. K., & Lall, S. V. (2015). Cities in developing countries: fueled by rural—city migration, lacking in tenure security, and short of affordable housing. *Handbook of regional and city economics*, *5*, 1399-1455.
- Buckley, R. M., Kallergis, A., & Wainer, L. (2016). The emergence of large-scale housing programs: Beyond a public finance perspective. *Habitat International*, *54*, 199-209.
- Budi, A. S. (2018). *Perumahan Rakyat: Usaha Pemerintah menyediakan perumahan untuk rakyat 1950-1977* (Doctoral dissertation, Universitas Negeri Jakarta.
- Colombijn, F. (2011). Public housing in post-colonial Indonesia: The revolution of rising expectations. *Bijdragen tot de taal-, land-en volkenkunde/Journal of the Humanities and Social Sciences of Southeast Asia, 167*(4), 437-458.
- D'Auria, A.; Tregua, M.; Vallejo-Martos, M.C. (2018). Modern Conceptions of Cities as Smart and Sustainable and Their Commonalities. *Sustainability*, *10*, 2642. https://doi.org/10.3390/su10082642
- Eryudhawan B. Passchier C. & Sumintardja D. (2010). *Kilas balik perumahan rakyat 1900-2000* (Cet. 1). Kementrian Perumahan Rakyat dan Pusat Dokumentasi Arsitektur.
- Gaisie, E., Kim, H. M., & Han, S. S. (2019). Accra towards a city-region: Devolution, spatial development and city challenges. *Cities*, *95*, 102398.
- Glaeser, E. L., Gyourko, J., & Saks, R. E. (2006). City growth and housing supply. *Journal of economic geography*, *6*(1), 71-89. https://doi.org/10.1093/jeg/lbi003
- Goodfellow, T. (2017). Seeing Political Settlements through the City: A Framework for Comparative Analysis of City Transformation. *Development and Change*, 49(1), 199-222. https://doi.org/10.1111/dech.12361.
- Hamdani, H. (2020). Pelaksanaan kebijakan kota tanpa kumuh (kotaku) oleh Dinas Pekerjaan Umum Perumahan Rakyat Dan Kawasan Permukiman Kota Pekanbaru Berdasarkan Peraturan Daerah Kota Pekanbaru Nomor 13 tahun 2016 tentang pencegahan dan peningkatan kualitas terhadap perumahan kumuh dan permukiman kumuh di kecamatan rumbai pesisir (Doctoral Dissertation, Universitas Islam Negeri Sultan Syarif Kasim RIAU).
- Helble, M., Ok Lee, K., & Gia Arbo, M. A. (2021). How (Un) affordable is housing in developing Asia? *International Journal of City Sciences*, 25(sup1), 80-110.
- Kusno, A. (2012). Housing the Margin: Perumahan Rakyat and the Future City Form of Jakarta. *Indonesia*, (94), 23-56. https://doi.org/10.5728/indonesia.94.0023
- Kuswartojo, T. (2006). Asas Kota Berkelanjutan Dan Penerapannya Di Indonesia. *Jurnal Teknologi Lingkungan BPPT,* 7(1), 1–6.
- Malau, W. (2013). Dampak cityisasi terhadap pemukiman kumuh (slum area) di daerah perkotaan. *JUPIIS: Jurnal Pendidikan Ilmu-Ilmu Sosial*, *5*(02), 39-47.
- Martellozzo, F., Amato, F., Murgante, B., & Clarke, K. (2018). Modelling the impact of city growth on agriculture and natural land in Italy to 2030. *Applied Geography*, *91*, 156-167. https://doi.org/10.1016/j.apgeog.2017.12.004
- Muta'ali. f(2016). *Perkembangan Program Penanganan Permukiman Kumuh di Indonesia dari Masa ke Masa* (Siti (ed.); Cet. 1, Vol. 15, Issue 2). Gadjah Mada University Press.
- Noverina, M. (2017). Fenomena cityisasi dan kebijakan penyediaan perumahan dan permukiman di perkotaan Indonesia. *Masyarakat Indonesia*, *36*(2), 103-124.
- Pemerintah Daerah Khusus Ibukota (DKI) Jakarta. https://data.jakarta.go.id/. Dinas Perumahan Rakyat dan Kawasan Permukiman (DPRKP) Provinsi DKI Jakarta.
- Sabitha, F. A. (2022). Analisis pengaruh tingkat cityisasi terhadap ketersediaan lahan permukiman perumahan di Kota Surabaya. *Jurnal Lembaga Ketahanan Nasional Republik Indonesia, 10*(1), 19-26.