

## Fulfillment Of Housing Infrastructure, Facilities And Utilities In Serdang Bedagai Regency

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### ABSTRACT

Housing is a collection of houses in a housing area that are built in an organized manner complete with infrastructure, facilities and public utilities. As part of the organizational area, housing is one of the basic needs of society which is closely related to economic, socio-cultural, development and industrialization activities. Various housing problems that arise are characterized by the existence of slum organization areas in urban or rural areas, apart from population density which results in cramped and unhealthy environments, the large number of housing damaged due to natural disasters, the poor condition of building materials and limited infrastructure, public facilities and utilities. other. increase the number of uninhabitable houses. Fulfilling housing infrastructure, facilities and public utilities is one of the obligations of the Regional Government and housing developers as legal entities administering housing to prevent the increase in slum areas. Apart from creating livable houses, the aim of this research is to reveal the availability of housing infrastructure, facilities and public utilities referring to Serdang Bedagai Regency Regional Regulation Number 9 of 2021 concerning the Handover of Housing and Settlement Infrastructure, Facilities and Utilities. The research methodology used is qualitative and quantitative methods. Qualitatively, data was collected through interviewing related parties, such as local government, housing developers, local communities and direct observation. Quantitatively, data will be collected from the list of housing registered with the Licensing Service, the results of field surveys using questionnaires. The results obtained are the availability and obligation to deliver infrastructure, facilities and utilities in residential areas. Regarding standards for the provision of housing infrastructure, facilities and public utilities, the majority of housing does not yet meet the balanced housing category but is in accordance with the Regulation of the Minister of Public Works and Public Housing of the Republic of Indonesia Number 20/PRT/M/2019 concerning Ease and Assistance of Home Ownership for Low-Income People, apart from that, the quality of infrastructure, facilities and utilities are partly not maintained so they cannot be used optimally.

**Keyword :** Housing, Infrastructure, Facilities, Utilities, Slums, Livable



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## I. INTRODUCTION

### Background

At this time, the need for housing in Serdang Bedagai Regency is increasing in line with the rapid population growth. Housing and settlements are interrelated, if population growth increases, it will increase the need for housing (Abdi Sugiarto et al., 2023). Therefore, the Serdang Bedagai Regency Government needs to provide livable housing for its population which increases by almost 1% every year (*Serdang Bedagai Regency in 2024 Figures*). According to Abdi Sugiarto, the lack of infrastructure, facilities and utilities will have an impact on the provision of less adequate or inadequate housing for the majority of the population, creating inequality in access to basic facilities and overall quality of life (Abdi Sugiarto et al., 2024).

Government Regulation of the Republic of Indonesia Number 12 of 2021 concerning Amendments to Government Regulation Number 14 of 2016 concerning the Implementation of Housing and Residential Areas has regulated the planning, development, utilization and control of housing which includes houses along with public infrastructure, facilities, and utilities to create livable houses in order to create a livable house in order to realize a healthy, safe, harmonious, orderly, planned, integrated house, and sustainable. At the regional level, the Serdang Bedagai Regency Government has issued Regional Regulation Number 9 of 2021 concerning the Handover of Housing and Settlement Infrastructure, Facilities and Utilities which is

a derivative regulation of the Regulation of the Minister of Home Affairs Number 9 of 2009 concerning Guidelines for the Handover of Housing and Settlement Infrastructure, Facilities, and Utilities in the Region as an effort to ensure compliance with infrastructure, facilities, and utilities that are decent for homeowners. In this case, it is important to understand in detail the provisions contained in the regional regulations to ensure the smooth process of providing Infrastructure, Facilities, and Utilities (PSU) for housing in Serdang Bedagai Regency.

In an effort to meet their living needs, humans will be forced to move (mobilize) from one land use to another (Cut Nuraini et al., 2024). This is the reason why it is important to fulfill facilities and utilities in housing development to improve the quality of life of the community and create a safe, comfortable and livable environment. With the existence of Serdang Bedagai Regency Regional Regulation Number 9 of 2021, it is hoped that it will ensure legal certainty for homeowners and housing developers in housing implementation activities. This will also help in accelerating the housing development process in accordance with the standards that have been set, so that it is expected to prevent the increase in slum areas, improve community welfare and urban infrastructure development in Serdang Bedagai Regency.

### **Problem Formulation**

1. There is a lack of further elaboration related to the implementation of housing in improving the quality of life of the community and creating a comfortable environment.
2. The importance of an explanation of the criteria for fulfilling housing infrastructure, facilities and utilities.
3. An analysis of how the implementation of Regional Regulation Number 9 of 2021 can provide legal certainty for homeowners and housing developers as housing development actors.
4. The need to map the entire housing to the obligation to fulfill housing infrastructure, facilities and utilities.
5. Discussion of the challenges that may be faced in the process of housing development and control in accordance with the standards that have been set.

### **Purpose**

The purpose of fulfilling residential PSUs by developers and the Serdang Bedagai Regency Government is to ensure healthy, safe, harmonious, orderly, planned, integrated, and sustainable homes. Sustainable is related to the maintenance and management of PSUs in housing that provides legal certainty in utilizing social or public facilities for both residents who own housing, the government and developers through efforts to hand over infrastructure, facilities and utilities to the Regional Government.

Evaluation of Serdang Bedagai Regency Regional Regulation Number 9 of 2021 concerning the Handover of Housing and Settlement Infrastructure, Facilities and Utilities needs to be carried out to identify the extent of the Serdang Bedagai Regency Government's achievements in the management of housing PSUs starting from housing inventory, handover to the implementation of maintenance of housing infrastructure, facilities, and utilities.

From the results of this research, it is hoped that innovative steps can be found in increasing public awareness of the importance of adequate infrastructure, as well as improvements in regulations and coordination between related agencies. Innovative steps such as housing mapping and *door-to-door socialization* to housing developers also aim to maximize the importance of fulfilling housing infrastructure, facilities and utilities in Serdang Bedagai Regency.

## **II. RESEARCH METHODS**

The research methods that will be used in this study are qualitative and quantitative methods. Qualitatively, data will be collected through in-depth interviews with various related parties, such as local governments, housing developers, and local communities. In addition, direct observation will also be carried out to get a clearer picture of the condition of housing development in Serdang Bedagai Regency. Quantitatively, data will be collected from the list of housing registered at the One-Stop Integrated Investment and Licensing Service Office, the results of field surveys using questionnaires, in addition to measuring the volume of housing infrastructure, facilities and utilities in Serdang Bedagai Regency. Data analysis will be carried out using a descriptive approach, where data will be presented in detail and detail

to identify challenges, potential positive impacts, and suggestions that can be taken to improve the effectiveness of housing development programs. ArcGIS software is also used as a data analysis tool for geographic mapping of housing that has and has not met the completeness of housing infrastructure, facilities and utilities.

The problems faced in fulfilling facilities and utilities in Serdang Bedagai Regency are very complex, although there are efforts made by the local government and the community, there are still many obstacles that hinder the achievement of optimal fulfillment. Several factors such as budget limitations, lack of public awareness of the importance of adequate infrastructure, as well as regulatory and coordination problems between related agencies are the main challenges that need to be overcome.

### III. RESULTS AND DISCUSSION

#### Housing Implementation as part of Settlements

Based on Government Regulation of the Republic of Indonesia Number 12 of 2021 concerning Amendments to Government Regulation Number 14 of 2016 concerning the Implementation of Housing and Residential Areas, settlements are part of a residential environment consisting of more than one housing unit that has infrastructure, facilities, public utilities, and supports other functional activities in urban areas or rural areas. Meanwhile, housing is a collection of houses as part of settlements, both urban and rural, which are equipped with infrastructure, facilities, and public utilities as a result of efforts to fulfill livable houses. The implementation of Housing and Residential Areas is planning, development, utilization, and control activities including institutional development, funding and financing systems, as well as coordinated and integrated community roles.

According to Dr. Urip Santoso in a book entitled Housing Law, the party who builds housing is called the organizer of housing development. The implementation of housing development can be in the form of an Indonesian citizen or a foreigner domiciled in Indonesia, a Legal Entity of State-Owned Enterprises, Regional-Owned Enterprises, and even Government Agencies.

The implementation of housing can improve the quality of life of the community and create a comfortable environment through planning, development, utilization and control in accordance with general provisions and technical standards. In this case, the focus is on planning public housing infrastructure, facilities, and utilities where the general provisions in question at least meet the housing capacity needs, ease of management and use of local resources, mitigation of disaster risk and safety levels, and connection with existing urban networks. Meanwhile, technical standards include infrastructure standards, facility standards, and general utility standards.

#### Residential Infrastructure, Facilities and Utilities (PSU)

Housing developers and settlements in the form of non-stacked housing. PSUs are provided in the form of land and buildings for infrastructure and utilities, and ready-to-build land for facilities stated in writing in the master plan/*site plan*. According to the Regulation of the Minister of Home Affairs Number 9 of 2009, the classification of PSUs includes:

a. Infrastructure, including:

1. road network;
2. network of wastewater sewers;
3. rainwater sewer network (drainage); and
4. garbage dumps.

b. Facilities, among others:

1. means of business/expenses;
2. public and government service facilities;
3. educational facilities;
4. health facilities;
5. worship facilities;
6. recreational and sports facilities;
7. special parking facilities for flats;
8. funeral facilities;

## 9. landscaping facilities and green open spaces

## c. Utilities, including:

1. power grid;
2. telephone network;
3. gas network;
4. clean water network;
5. firefighter;
6. public street lighting facilities and;
7. Transportation network networks (including bus stops, sub-terminals, and/or pedestrian bridges)

However, referring to Government Regulation of the Republic of Indonesia Number 12 of 2021 concerning Amendments to Government Regulation Number 14 of 2016 concerning the Implementation of Housing and Residential Areas, each organizer can ensure the availability of standard infrastructure, facilities and public utilities in the form of road networks, rainwater drains or drainage, drinking water supply, wastewater sewers or sanitation, garbage disposal, green open space and the availability of electricity grid. In addition, technical standards for infrastructure, facilities, and public utilities can follow SNI 03-6981-2004 concerning procedures for planning simple unstructured housing environments in urban areas and SNI 03-1733-2004 concerning procedures for planning residential environments in urban areas.

### **Implementation of Serdang Bedagai Regency Regional Regulation Number 9 of 2021 concerning the Handover of Housing and Settlement Infrastructure, Facilities, and Utilities in Serdang Bedagai Regency.**

The implementation of Regional Regulation of Serdang Bedagai Regency Number 9 of 2021 concerning the Handover of Infrastructure, Facilities, and Utilities of Housing and Settlements in Serdang Bedagai Regency refers to the Regulation of the Minister of Home Affairs Number 9 of 2009 concerning Guidelines for the Handover of Infrastructure, Facilities, and Utilities of Housing and Settlements in the Regions. If a deeper investigation is carried out, the problems related to this PSU have also been regulated in the Regulation of the Minister of Home Affairs Number 1 of 1987 concerning the Handover of Environmental Infrastructure, Public Utilities and Housing Social Facilities to the Regional Government, that Housing Development Companies are obliged to hand over all or part of the environmental infrastructure, public utilities and social facilities in the form of land or without buildings to the Regional Government.

In Serdang Bedagai Regency, the implementation of Regional Regulation Number 9 of 2021 is quite good, although it has not been maximized, this can be seen through the achievement of housing handover from developers to the Government Serdang Bedagai Regency.

Table 3.1 Housing List

<b>It</b>	<b>Housing</b>	<b>Location</b>	<b>Information</b>
1	Graha Sergai Indah	Sei Rampah	Handover
2	Graha Sergai Indah II	Sei Rampah	Handover
3	Graha Sergai Indah III	Sei Rampah	Handover
4	Villa Sentosa	Sei Rampah	Handover
5	Serdang Indah	Perbaungan	Handover
6	Karang Tengah Asri	Serbajadi	Handover
7	Karang Tengah Asri II	Serbajadi	Handover
8	Pearl of Beautiful Fundraising	Syahbandar Cliff	Handover
9	Resident Fundraiser	Sei Bamban	Handover
10	Horas II	Sei Bamban	Handover
11	Horas Business Centre	Sei Bamban	Handover
12	Paradise Park Indah	Sei Rampah	Handover
13	Permata Dolok Masihul	Dolok Masihul	Handover
14	Jasmine Raya	Perbaungan	Handover
15	Villa Mutiara Indah	Syahbandar Cliff	Handover

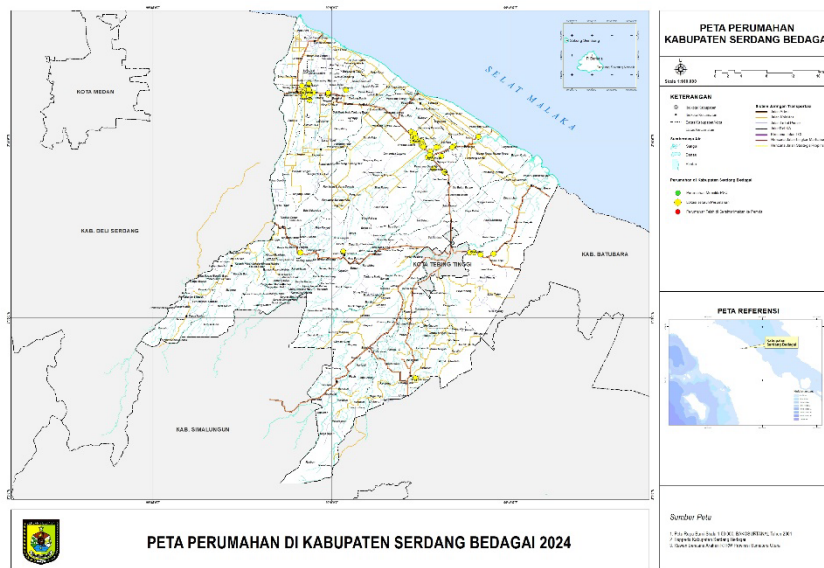
16	Griya Nusantara Indah	Sei Rampah	Handover
17	Gardena Paradise	Sei Rampah	Not Yet Handover
18	Taman Rampah Indah	Sei Rampah	Handover
19	Firdaus Garden Sei Rampah	Sei Rampah	Not Yet Handover
20	Griya Melati Indah	Perbaungan	Not Yet Handover
21	Karya Perdana Residence	Perbaungan	Not Yet Handover
22	Sunrise Garden	Perbaungan	Not Yet Handover
23	Galuh Resident City	Perbaungan	Not Yet Handover
24	Griya Karya Asri	Perbaungan	Not Yet Handover
25	Graha Mekar Sari	Perbaungan	Not Yet Handover
26	Griya Cambodia	Perbaungan	Not Yet Handover
27	Graha Sergai IV	Sei Rampah	Not Yet Handover
28	Zivanna Beautiful Castle	Perbaungan	Not Yet Handover
29	Zahra Madani Permai	Perbaungan	Not Yet Handover
30	Fortuna Residence	Perbaungan	Not Yet Handover
31	Grand Tangkis	Perbaungan	Not Yet Handover
32	Global Asri	Sei Rampah	Not Yet Handover
33	Charm of Work 2	Sei Rampah	Not Yet Handover
34	Firdaus Residence	Sei Rampah	Not Yet Handover
35	Tourist Flower Garden	Sei Rampah	Not Yet Handover
36	Graha Firdaus	Sei Rampah	Not Yet Handover
37	Salsabila Sei Rejo	Sei Rampah	Not Yet Handover
38	Griya Mayano Asri	Sei Rampah	Not Yet Handover
39	Bedagai Resident	Sei Rampah	Not Yet Handover
40	Puri Asri Sei Rampah	Sei Rampah	Not Yet Handover
41	Aldeneo Residence	Sei Rampah	Not Yet Handover
42	Flower Garden 2	Sei Rampah	Handover
43	Pematang Tinggi Residence	Sei Rampah	Not Yet Handover
44	Kuala Indah Resident	Noni Bay	Not Yet Handover
45	Grand Permata Residence	Syahbandar Cliff Source: Author, 2024	Not Yet Handover
46	Vetty Residence	Syahbandar Cliff	Not Yet Handover
47	Griya Dolok Merawan	Dolok Merawan	Not Yet Handover

Currently, there are 47 housing units built in Serdang Bedagai Regency, but only 18 have cooperatively completed their PSU handover obligations to the Regional Government, while the rest are housing that is under construction, housing that has been abandoned by developers, refusal and delay in handing over PSUs by developers which results in PSUs not being maintained, and there are even some PSUs that have not been built. In the long term, housing that has been abandoned by developers before handing over their PSUs to the Regional Government will have the potential to become housing in uninhabitable residential areas.

### **Housing mapping to the obligation to fulfill infrastructure, facilities and utilities.**

There needs to be a clear mapping of the fulfillment of infrastructure, facilities, and utilities in each housing to prevent the occurrence of uninhabitable housing. This is important so that each developer is responsible for providing the facilities needed by the residents, as well as ensuring that the handover of PSUs is carried out properly and on time. Thus, a comfortable and safe residential environment can be created for all its citizens.

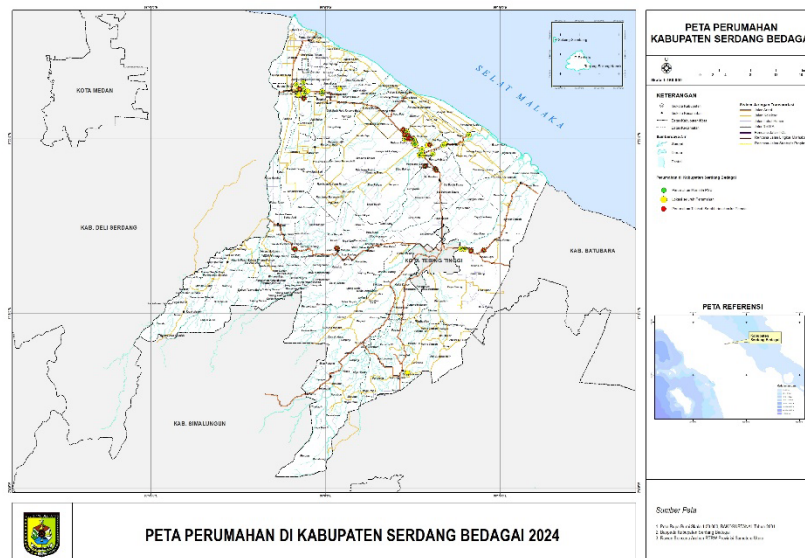
Figure 3.1 Distribution map of all housing.



Source : Author, 2024

From the map image above, it can be found that most of the housing that was built is in the center of offices, urban settlements, and trade and services, namely in Perbaungan and Sei Rampah Districts. There are 22 housing units in Sei Rampah District, 13 housing units in Perbaungan District, 2 housing units in Serbajadi District, 4 housing units in Tebing Syahbandar District, 1 housing unit in Dolok Masihul District, 1 housing unit in Teluk Mengkudu District and 1 housing unit in Dolok Merawan District.

Figure 3.2 Comparison Map of Housing with PSU equipment.



Source : Author, 2024

With this mapping, it is also hoped that it can help the government in supervising and controlling housing development and developers in providing information about their housing. If possible, this mapping can be a reference for the creation of an electronic application for Infrastructure, Facilities and Utilities (e-PSU) based on the Geographic Information System (GIS) which is expected to be accessible online by the public (Andi Patriadi et al., 2023).

In addition, with clear mapping, it will make it easier to determine the obligations that must be fulfilled by developers, such as the construction of roads, clean water channels, electricity, and other public facilities.

In connection with the implementation of the mapping, the physical volume of Infrastructure, Facilities and Utilities is also measured which is fully displayed in the following table;

Table 3.2 Details of the physical volume of residential PSUs that have been handed over.

It	Housing	Location	LPJ U (unit)	Road Area (m <sup>2</sup> )			Total Road Area (m <sup>2</sup> )	Drainage (cm)		Road Length (m)	Drainage Length (m)	Drainage Area (m <sup>2</sup> )	PS U Area (m <sup>2</sup> )
				Soil/Sirtu	Cast Concrete	Paving Block		Wide	Tall				
1	Graha Sergai Indah	Sei Rampa h	13		2601	963	3564	50	60	595,5	870	435	3999
2	Graha Sergai Indah II	Sei Rampa h	6			585,2	585,2	55	60	106,4	212,8	117,04	702,24
3	Graha Sergai Indah III	Sei Rampa h	3			584	584	55	60	146	275	151,25	735,25
4	Villa Sentosa	Sei Rampa h	9		668,8	444,4	1113	70	60	287,1	463,1	324,17	1437,4
5	Serdang Indah	Perba ungan	25		1723	1361,5	3084	60	60	881,3	1.599,70	959,82	4044,4
6	Karang Tengah Asri	Serbaj adi	8		1350		1350	60	80	300	600	360	1710
7	Karang Tengah Asri II	Serbaj adi	9		2700		0	60	80		945	567	567
8	Pearl of Beautiful Fundraising	Syahb andar Cliff	3		1640		1640	55	55	410	820	451	2091
9	Resident Fundraiser	Sei Bamba n	1		370		370	40	40	74	148	59,2	429,2
10	Horas II	Sei Bamba n	6			720	720	30	70	180	360	108	828
11	Horas Business Centre	Sei Bamba n	4		630	488	1118	60	50	151	207	124,2	1242,2
12	Paradise Park Indah	Sei Rampa h	4			975,1	975,1	50	55	199	145	72,5	1047,6
13	Permata Dolok Masihul	Dolok Masihul	9			1218,6	1218	60	60	338,5	677	406,2	1624,8
14	Jasmine Raya	Perba ungan	14		360		360	50	30	90	180	90	450



15	Villa Mutiara Indah	Syahbandar Cliff	6			3040	3040	55	55	760	1520	836	3876
16	Griya Indah Nusantara	Sei Rampah	3		839,3			75	45	760	218	163,5	1002,8
17	Flower Garden 2	Sei Rampah	17		963,6		963,6	55	30	55	481,8	264,99	1228,5
18	Taman Rampah Indah	Sei Rampah	14		6948		6948	50	30	30	2316	1158	8106

Source : Author, 2024

Table 3.3 Physical Volume of Residential PSUs That Have Been Handed Over

It	Housing	Location	LPJU (unit)	Road Type		Road Area (m <sup>2</sup> )	Drainage Area (m <sup>2</sup> )	PSU Area (m <sup>2</sup> )
				Cast Concrete	Paving Block			
1	Graha Sergai Indah	Sei Rampah	13	√	√	3564	435	3999
2	Graha Sergai Indah II	Sei Rampah	6		√	585,2	117,04	702,24
3	Graha Sergai Indah III	Sei Rampah	3		√	584	151,25	735,25
4	Villa Sentosa	Sei Rampah	9	√	√	1113	324,17	1437,4
5	Serdang Indah	Perbaungan	25	√	√	3084	959,82	4044,4
6	Karang Tengah Asri	Serbajadi	8	√		1350	360	1710
7	Karang Tengah Asri II	Serbajadi	9	√		0	567	567
8	Pearl of Beautiful Fundraising	Syahbandar Cliff	3	√		1640	451	2091
9	Resident Fundraiser	Sei Bamban	1	√		370	59,2	429,2
10	Horas II	Sei Bamban	6		√	720	108	828
11	Horas Business Centre	Sei Bamban	4	√	√	1118	124,2	1242,2
12	Paradise Park Indah	Sei Rampah	4		√	975,1	72,5	1047,6
13	Permata Dolok Masihul	Dolok Masihul	9		√	1218	406,2	1624,8
14	Jasmine Raya	Perbaungan	14	√		360	90	450
15	Villa Mutiara Indah	Syahbandar Cliff	6		√	3040	836	3876
16	Griya Indah Nusantara	Sei Rampah	3	√		839,3	163,5	1002,8
17	Flower Garden 2	Sei Rampah	17	√		963,6	264,99	1228,5
18	Taman Rampah Indah	Sei Rampah	14	√		6948	1158	8106

Source : Author, 2024

Referring to Government Regulation of the Republic of Indonesia Number 12 of 2021 concerning Amendments to Government Regulation Number 14 of 2016 concerning the Implementation of Housing and Residential Areas, there are 18 housing in Serdang Bedagai Regency that have carried out their PSU handover obligations, namely housing that already has PSU completeness in the form of Availability of standard infrastructure, facilities and public utilities in the form of road networks, rainwater drains or drainage, supply of drinking water, wastewater or sanitation drains, garbage dumps, and the availability of electricity networks.

So far, 18 housing units that have carried out the responsibility of handing over PSUs have completed the construction of roads with a total area of 27,946 m<sup>2</sup>, drainage with a total area of 6,876 m<sup>2</sup> and 115 units of residential lighting street lights.



Most of the residential wastewater disposal in Serdang Bedagai Regency is still in the form of an Individual Septic Tank System, not yet like the Communal Septic Tank System or the Shared/Centralized Treatment System.

The management of infrastructure, facilities and utilities in housing that has been handed over by the developer to the local government has begun to be implemented by the Serdang Bedagai Regency Government by maintaining the Griya Indah Nusantara Housing road in Sei Rampah District, Serdang Bedagai Regency. Maintenance is carried out by building a paving block road along 89 meters out of a total length of 109 meters. Thus, the width of the road The housing that has been provided and maintained is 685 m<sup>2</sup>.

Figure 3.3 PSU Maintenance Work



Source : Author, 2024

Figure 3.4 Completion of Work  
PSU Maintenance



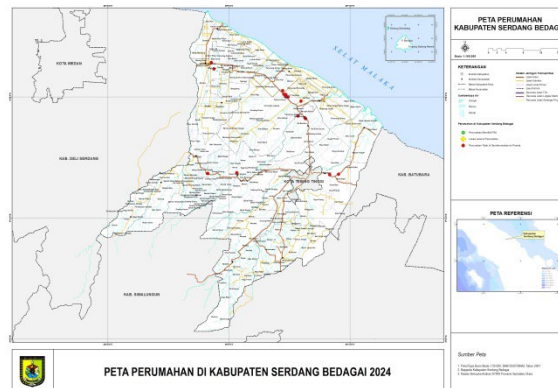
Source : Author, 2024

### **Challenges of housing development and control.**

In practice in the field, there are several obstacles in housing control and development. Housing developments built by developers independently often promise infrastructure, facilities and utilities that do not meet specifications when promoting to consumers. This can result in the continuous control of infrastructure, facilities and utilities being hampered. Developers who experienced bankruptcy also resulted in the abandonment and abandonment of housing. In addition, the weak recording of assets during

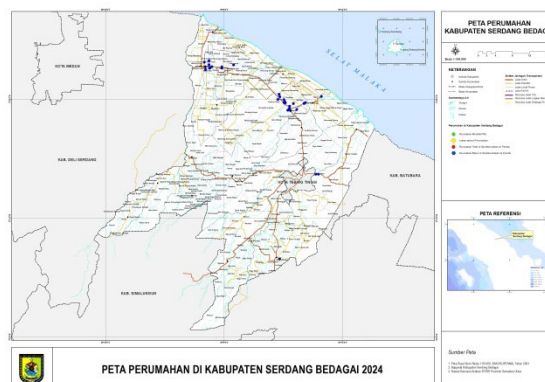
the process of handing over PSUs from developers to the Regional Government and the role and function of the regional apparatus in charge of PSU affairs which are still not optimal resulted in delays in the maintenance process after the handover.

Figure 3.3 Residential PSU Point Map  
It's Complete



Source : Author, 2024

Figure 3.4 Map of Residential PSU Points  
Incomplete



Source : Author, 2024

The condition of the fulfillment of housing infrastructure, facilities and utilities can be known from direct observation that produces housing data that has been provided, has not been provided, has been handed over and has not yet handed over its housing infrastructure, facilities and utilities. Of the 47 housing units, there are 36 housing units whose PSUs are categorized as complete, 11 housing units whose PSUs are categorized as incomplete, 18 housing PSUs that have been handed over, and 9 housing PSUs that have not been handed over.

Most of the fulfillment of residential infrastructure, facilities and utilities (PSU) in Serdang Bedagai Regency is still provided by housing developers. However, the sustainability of management, including the maintenance of Infrastructure, Facilities and Utilities (PSU) which is an obligation of local governments, has not reached the maximum point. One of the challenges for local governments in carrying out their obligations is budgeting planning. In practice, the policy of reallocating and *refocusing* the Regional Revenue and Expenditure Budget (APBD) after the Covid-19 pandemic is still felt until 2024, affecting the role of local governments in implementing the management of housing infrastructure, facilities and utilities (PSU) maintenance.

#### IV. CONCLUSIONS AND SUGGESTIONS

## Conclusion

The conclusions obtained from the results of the study are as follows:

1. Referring to Government Regulation of the Republic of Indonesia Number 12 of 2021, Regional Regulation of Serdang Bedagai Regency Number 9 of 2021, Regulation of the Minister of Home Affairs Number 9 of 2009, every housing must meet;
  - a. Infrastructure, including:
    1. road network;
    2. network of wastewater sewers;
    3. rainwater sewer network (drainage); and
    4. garbage dumps.
  - b. Facilities, among others:
    1. means of business/expenses;
    2. public and government service facilities;
    3. educational facilities;
    4. health facilities;
    5. worship facilities;
    6. recreational and sports facilities;
    7. special parking facilities for flats;
    8. funeral facilities;
    9. landscaping facilities and green open spaces
  - c. Utilities, including:
    1. power grid;
    2. telephone network;
    3. gas network;
    4. clean water network;
    5. firefighter;
    6. public street lighting facilities and;
    7. transportation network networks (including bus stops, sub-terminals, and/or pedestrian bridges).
2. However, Referring to the Regulation of the Minister of Public Works and Public Housing of the Republic of Indonesia Number 20/PRT/M/2019, the infrastructure, facilities, and public utilities of subsidized mortgage housing at least include;
  - a. pipeline clean water distribution network from regional drinking water companies or other clean water sources;
  - b. home power grid;
  - c. environmental roads;
  - d. environmental channels/drainage;
  - e. household wastewater/dirty water drains; and
  - f. individual waste containers and temporary waste disposal sites.
3. From the results of the field survey, it was found that out of 47 housing there are 36 housing with complete category PSUs built by developers, 11 housing whose PSUs are categorized as incomplete, 18 housing PSUs that have been handed over, and 29 housing PSUs that have not been handed over. The 18 housing that has been handed over will be continued in maintenance budgeting by the Serdang Bedagai Regency Government through the appropriate Cost Budget Plan with technical standards and rules in force.
4. The provision of residential PSUs is still fulfilled by most housing developers. 16 housing fulfills the responsibility of building PSUs independently. 2 housing receives assistance for the construction of PSUs, cast concrete roads and drainage from the Ministry of Public Works and Public Housing of the Republic of Indonesia. 1 housing has been maintained by the Serdang Bedagai Regency Government.

## Suggestion

The mapping in this study is expected to be a reference for the creation of an electronic application for Infrastructure, Facilities and Utilities (e-PSU) based on the Geographic Information System (GIS) which is expected to be accessible online by the public.

It is hoped that there will be better coordination between Regional Apparatus Organizations, housing developers, and the community. In matters of housing rules and standards in the region, there are several points that are not explained in detail for PSUs for housing in urban areas with subsidy mortgage housing PSUs, so it is necessary to update Regional Regulations or Regent Regulations.

## BIBLIOGRAPHY

### Book

- Arief Sabaruddin. (2023). *Housing Ecosystem*. (Jakarta). PT. Canisius.
- Central Statistics Agency of Serdang Bedagai Regency. (2024). *Serdang Bedagai Regency in Figures 2024*. Serdang Bedagai Regency.
- Housing and Settlement Areas Office of Serdang Bedagai Regency. (2024). *Report on the Development Plan for Housing and Settlement Areas (RP3KP) of Serdang Bedagai Regency*. Serdang Bedagai Regency Government.
- Dr. Abdi Sugiarto, S.Sos., M.Si., Dr. Ir. Muhammad Yamin M.Si., Dr. Muhammad Ade Kurnia Harahap, M.T., Akhmad Riduan, S.Sos., M.AP. (2024). *Regional Development Planning*. (Karawang). CV Saba Jaya Publisher
- Dr. Urip Santoso. (2014). First Edition. *Housing Law*. (Jakarta). Gold
- Lucy Yosita, Yan Nurcahya, Deasy Hartanti M. (2019). *Housing Planning and Design Strategies in the Contemporary Era*. (Sleman). Deepublish

### Journal

- Andi Patriadi, Retno Trimurtiningrum, Muhammad Fauzi Mazaruddin, Dini Nur Maulina Santi. (2023). *Assistance in Mapping Public Infrastructure, Facilities and Utilities (PSU) for GIS-Based Housing in Magetan Regency*. University August 17, 1945. Surabaya
- Bintang M Purba, Abdi Sugiarto, Cut Nuraini, Rahmad Dian, Harry Kurniawan. (2024). *A Study on Space Utilization of Transportation Systems in the Batang Kuis Urban Area*. (Medan). Darma Agung Journal.
- Nur Azizah Rangkuti, Cut Nuraini, Feby Millanie, Abdi Sugiarto. (2023). *Governance Strategy for Handling Slums in Tebing Tinggi City*. Panca Budi Development University (UNPAB).

### Regulation

- Decree of the Minister of Public Works and Public Housing Number 587/KPTS/M/2019 concerning Regional Zones, the Amount of Income Limits, Limits on the Minimum Balance of Applicant's Savings, Limits on the Price of Landed Houses and Flats, Limits on the Cost of Building Independent Houses, Limits on Land Area and Floor Area of Houses, Limits on Savings-Based Housing Financing Assistance Funds, and Indices in the Implementation of Savings-Based Housing Financing Assistance.
- Regulation of the Minister of Home Affairs Number 1 of 1987 concerning the Handover of Environmental Infrastructure, Public Utilities and Housing Social Facilities to Regional Governments.
- Regulation of the Minister of Home Affairs Number 9 of 2009 concerning Guidelines for the Delivery of Infrastructure, Facilities, and Utilities of Housing and Settlements in the Regions.
- Regional Regulation of Serdang Bedagai Regency Number 9 of 2021 concerning the Handover of Residential Infrastructure, Facilities and Utilities in Serdang Bedagai Regency.
- Regional Regulation of Serdang Bedagai Regency Number 1 of 2021 concerning Amendments to Regional Regulation of Serdang Bedagai Regency Number 12 of 2013 concerning the Spatial Plan of Serdang Bedagai Regency for 2013-2033.
- Government Regulation of the Republic of Indonesia Number 12 of 2021 concerning Amendments to Government Regulation Number 14 of 2016 concerning the Implementation of Housing and Residential Areas.

Regulation of the Minister of Public Works and Public Housing of the Republic of Indonesia Number 7 of 2022 concerning the Implementation of Housing Development Assistance and the Provision of Special Housing.

Regional Regulation of Serdang Bedagai Regency Number 12 of 2013 concerning the Spatial Plan of Serdang Bedagai Regency for 2013-2033.

Regulation of the Minister of Public Works and Public Housing of the Republic of Indonesia Number 11/PRT/M/2018 concerning the Building Expert Team, Technical Assessor, and Building Inspector.

Regulation of the Minister of Public Works and Public Housing of the Republic of Indonesia Number 20/PRT/M/2019 concerning Ease and Assistance of Home Ownership for Low-Income Communities.

SNI 03-6981-2004 concerning Procedures for Planning the Environment of Simple Housing Not Arranged in Urban Areas.

SNI 03-1733-2004 concerning Procedures for Planning Residential Environments in Urban Areas.

Law of the Republic of Indonesia Number 38 of 2004 concerning Roads.

Law of the Republic of Indonesia Number 1 of 2011 concerning Housing and Residential Areas.

Law of the Republic of Indonesia Number 11 of 2020 concerning Job Creation.