

## STUDY ON THE USE OF SPACE FOR THE RESIDENTIAL LAND SYSTEM IN THE SPATIAL PLAN OF THE AREA OF BATANG KUIS DISTRICT, DELI SERDANG REGENCY

Dimas Setiawan<sup>1</sup> Wahyu Hidayat<sup>2</sup>


<sup>1</sup>Postgraduate Student of Master of Urban Regional Planning

<sup>2</sup>Lecturer, Master of Urban & Regional Planning, Universitas Pembangunan Panca Budi, Medan, North Sumatra

### ABSTRACT

The form of space utilization as residential land is a form of expression of human activities that use space as a place to live. This study aims to determine the level of suitability of space use and to determine the use of space for the residential land system in the Regional Spatial Plan (RTRW) in the Batang Kuis sub-district area. The method used in this study is a qualitative method with a descriptive approach. Data collection techniques are in the form of observation, interviews and documentation. The results of the study show that the level of suitability of space utilization in general is quite good, with around 90% of the area having complied with the stipulated provisions. The Regional Spatial Plan (RTRW) policy has been an effective guide for developers in planning the development of residential areas. The use of space for the residential land system in the Regional Spatial Plan in the Batang Kuis District area shows the importance of the Regional Spatial Plan policy in directing the development of the area in a planned and sustainable manner. Of the total area of 40.34 km<sup>2</sup>, most of the land, which is 38.14 km<sup>2</sup>, has been appropriately used as a residential area. However, there are still 2.20 km<sup>2</sup> of land that is converted without its designation, often in the form of productive land such as rice fields and fields.

**Keywords:** Space Utilization, Land, Regional Spatial Plan, Batang Kuis District

 This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

#### **Corresponding Author:**

Dimas Setiawan  
Postgraduate Student Of Master Of Regional And Urban Planning  
Universitas Pembangunan Panca Budi  
Jl. Jend. Gatot Subroto 20122. Kota Medan, Indonesia.  
Email : [wahyuhidayat@dosen.pancabudi.ac.id](mailto:wahyuhidayat@dosen.pancabudi.ac.id)

#### **Article history:**

Received Feb 13, 2025  
Revised Feb 20, 2025  
Accepted Feb 27, 2025

### I. INTRODUCTION

Indonesia is one of the countries with the fourth largest population in the world, with such a large population, of course, sustainable development and decent settlements are needed for survival (Sugiarto & Kustiah Ramadania, 2024). Residential areas as part of the living environment outside protected areas, both in the form of urban and rural areas, which function as residential environments or residential environments and places of activities that support livelihoods and livelihoods, in accordance with Law No. 1/2011 on Housing and Settlement Areas. In a residential environment, there are several units of houses, infrastructure, facilities, and utilities, which are components of residential areas (Hidayat & Milanie, 2024). The number of people in Indonesia is always increasing from year to year, this will go hand in hand with the intensity of activities and the level of human needs that are increasingly diverse and increasing to meet their respective living needs. High and uncontrolled population growth will reduce the carrying capacity of the environment. In addition, high population growth will also cause changes in land use in an area (Nurfikasari & Yuliani, 2022). Land is a strategic natural resource for development. The need for land is driven by the increasing population, while the availability of land and land area are fixed. Thus, resulting in the relocation of land use from an activity that does not provide benefits to more profitable activities. Residential land is land that is used or planned to establish residences and supporting facilities for people who live in the area (Nasution et al., 2023). Changes in the region that are growing and developing force the government in each country to take an action to organize the space to be more directed. Therefore, the spatial planning policy in each area in gadang-gadang is a solution, through spatial planning, to anticipate all forms of development. Spatial planning also has benefits to realize the integration and harmony of sustainable development (Perkasa et al., 2022).

Population development and all its activities require land use that must be allocated in the space utilization plan. Space utilization plans must be made so that land use becomes efficient, economical, and balanced. Spatial planning is the result of the process of spatial planning, space utilization, and space

utilization control (Madaul & Ibal, 2023). The government through Government Regulation No. 21 of 2021 regulates space utilization activities, so that every business in Indonesia is obliged to adjust. This regulation contains the suitability of space utilization activities for business activities, the suitability of space utilization activities for non-business activities and the suitability of space utilization activities for national strategic activities (Susanti, 2021).

Efforts to implement wise spatial planning are the key in the implementation of spatial planning so as not to damage the environment, in the context of state control on the basis of natural resources. According to Ridwan, this is inherent in the state's obligation to protect, preserve and restore the environment as a whole (Eddy, 2015). Spatial planning is an attitude and behavior towards space in realizing the integrated use of natural and artificial resources by paying attention to human resources. Space is not only for the benefit of welfare but also related to the potential utilization and potential risks of the space itself. The function of space needs to be protected as a prevention and countermeasure of negative impacts on the environment (Nessa et al., 2021). If a residential area has a dense population, of course, it will not only have an impact on the residential area, but the impact can be comprehensive and long-term (Hastri et al., 2022).

Community land is used as a settlement consisting of residents' houses, places of worship, jambur (gathering places), educational facilities, health centers, and village head offices (Hidayat & Milanie, 2024). The final product in spatial planning is spatial planning including RTRW (Regional Spatial Plan), RDTR (Detailed Spatial Plan), etc. The RTRW will be divided into several parts of the city area (BWK). RTRW is a final product at the district or city level with a precision scale of 1:100,000 to 1:50,000. The RTRW has a period of 20 years which will be reviewed by the implementation team every 5 years in a row. Regency/City RTRWs are prepared to meet the needs for development in an area based on an estimate of development directions in a region, by paying attention to aspects of integration, sustainability and sustainability between regions (Nurfikasari & Yuliani, 2022).

The role of humans as a beneficiary of land will determine the condition of their own territory because if humans continue to change land use to built land, it will affect the change in surface characteristics. These changes can result in a decrease in the ecological function of the land, such as the loss of water intake, increased flood risk, and a decrease in overall environmental quality (Muhammad Alif Haidar & Astri Mutia Ekasari, 2023). Batang Kuis District, Deli Serdang Regency is a village with agricultural land, namely large rice fields. Agricultural land, namely rice fields, is land for cultivation, where most of the people of Tumpatan Nibung Village make a living as farmers. The purpose of growing crops on agricultural land, to be able to meet their personal needs and the needs of the community. One of the transitions in the function of agricultural land is the development of housing and hotels. This land transfer has both positive and negative impacts. The positive impact of the renewal of road facilities that makes it easier and saves travel time, wider roads and avoids congestion. The negative impact caused by this agricultural land transition is that the productive land used to grow rice is decreasing and the work as a farmer is decreasing day by day. The decrease in the amount of agricultural production has resulted in a decrease in the availability of sustainable food and this causes anxiety for the community (Nasution et al., 2023).

Based on the observations that have been made, the researcher found that the space utilization for the residential land system in Batang Kuis District is not fully in accordance with the provisions of the RTRW. The main problem lies in the development of settlements outside the planned zone, causing spatial irregularities and interfering with overall regional planning.

In addition, the conversion of productive land into residential areas continues to occur, which has the potential to reduce the carrying capacity of the environment and disrupt the ecological balance. This condition shows that there are challenges in the supervision and implementation of the Regional Spatial Plan (RTRW), especially in integrating development needs with the sustainability of regional spatial planning. Based on research conducted by Keristian (2023), it shows that the condition of changing the use of residential land in Sungai Bambu Village may occur due to the high need for business activities that support economic activities around the area. The use of space is not in accordance with the Spatial Plan and zoning regulations, both those equipped with permits and those who do not have permits, then control measures will be taken.

Research conducted by Zefri & Ma'mun, (2022) shows that in existing conditions there is land use that is not suitable for water catchment areas, such as settlements and seasonal agriculture. The local government's efforts to turn all research sites into forest areas will be faced with obstacles in freeing existing settlements, converting rice fields into forests and potential developments that need to be anticipated. Inconsistent use of space will hinder the region from carrying out its programs. Considering that the need for space is increasingly urgent and accompanied by increasing population growth, there is

a change in land use. In terms of land limitations, land use must be planned, rational, optimal, responsible and in accordance with its availability. At this time, many developments are not in accordance with existing policies and do not pay attention to environmental aspects (Titan Kesuma Endasmoro & Lely Syiddatul Akliyah, 2023). Therefore, it is necessary to conduct an analysis of the suitability of space utilization. This study aims to determine the level of suitability of space use and to determine the use of space for the residential land system in the Regional Spatial Plan (RTRW) in the Batang Kuis sub-district area.

## II. RESEARCH OBJECTIVES

The objectives of this research are as follows:

- A. To find out the level of suitability for space utilization.
- B. To find out the spatial utilization of the residential land system in the RTRW in Batang Kuis.
- C. Protect productive land and conservation areas from the threat of functional experts who are not in accordance with the RTRW plan

## III. RESEARCH BENEFITS

The benefits of this research are as follows:

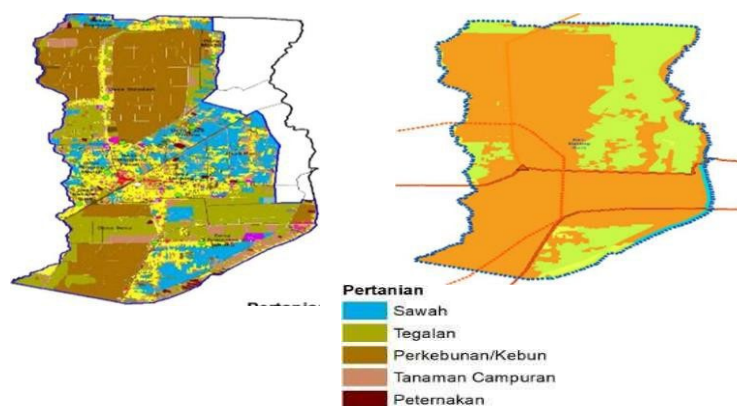
- A. Increasing Land Efficiency, with proper planning, land can be used optimally for residential, commercial, and industrial activities.
- B. Reducing Environmental Damage: Sustainable use of space can reduce negative impacts on the environment such as erosion, pollution and habitat destruction.
- C. Improving the Quality of Life, by providing adequate public facilities, such as parks, schools, and health centers, will ensure an increase in the quality of life.

## IV. LITERATURE REVIEW

### A. Definition of Land Use

Land use is an effort to plan the use or utilization of a land in a certain area which is included in it, namely specifically classifying existing activities, such as settlement activities, trade activities, industry and others. The development of a city or region that carries out continuous development from population growth will increase the need for land. The increase in the need for land is either used for infrastructure and settlements, industry, trade, etc. The increase in the need for land has caused many phenomena of land use change. One of the consequences of land use change in this case is the change in land use that occurs around Tanjung Sari village, the land that has been changed in terms of use is land that was previously still agricultural land into built land (converted into trade, services and settlements). Regional planning provides a different perspective in maintaining the level of land use efficiency towards a fairly high increase in the number of population, such as in urban areas or areas that will develop.

**Figure 1. Existing Urban Land Use of Batang Kuis District on the Pattern Plan**



Residential Land Systems and space utilization in urban environments will inevitably affect each other. All components will grow together. The use of a larger space will affect the number of activities in

it. The increasing need for land needs to be regulated in regional planning in order to create an adequate spatial balance. Land allocation must be followed by balanced needs so that nature preservation continues to be maintained with a pattern of meeting human needs.

#### B. Scope of Planning Area of Batang Kuis District.

The planning of the Batang Kuis area is one of the efforts to improve the quality of life of the community and optimize land use. Here is some information about the planning of the Batang Kuis area. Planning can determine a goal in choosing the strategic steps needed to achieve a goal. Planning in the inseparable field of economics functions as a decision-making process to achieve the goals to be achieved. More than just regional planning as a technical tool, in the process of making decisions in an integrative and participatory manner in sustainable development strategies. Based on Law of the Republic of Indonesia Number 26 of 2007 concerning Spatial Planning, that an area is a space of geographical unity along with all elements related to its boundaries and systems are determined based on administrative and/or functional aspects. Regional planning is usually related to people's lives such as job opportunities, welfare, security, education, and other economic problems. According to the regulation of the Regent of Deli Serdang Number 16 of 2023 concerning the Detailed Spatial Plan of the Batang Kuis Urban Area, Article 3 The scope of the WP of the Batang Kuis urban area is based on the administrative aspect of an area of 3,603.10 (three thousand six hundred three point one zero) hectares, along with the air space above it and the space in the earth.

#### Boundaries of Batang Kuis Urban Area Planning:

- a. To the north it is bordered by Pantai Labu sub-district
- b. To the south it is bordered by Beringin sub-district
- c. To the east it is bordered by Tanjung Morawa sub-district
- d. To the west it is bordered by Percut Sei Tuan sub-district

The Batang Kuis Urban Area Planning Area covers 11 (eleven) villages, consisting of:

- a. Bakaran Batu Village covers an area of 57.46 (fifty-seven point four six) hectares;
- b. New Village covers an area of 272.28 hectares (two hundred and seventy-two point two eight);
- c. Batang Kuis Pekan Village covers an area of 77.26 (seventy-seven point two six) hectares;
- d. Bintang Meriah Village covers an area of 146.21 (one hundred and forty-six point two-one) hectares;
- e. Mosque Village covering an area of 74.99 (seventy-four point ninety-nine) hectares;
- f. Paya Gambar Village covers an area of 194.59 (one hundred and ninety-four point five nine)
- g. Sena Village covers an area of 651.04 hectares (six hundred and fifty-one point zero four);
- h. Sidodadi Village covers an area of 1,055.75 (one thousand fifty-five point seven five) hectares;
- i. Desa Sugiharjo seluas 122,65 (seratus dua puluh dua koma enam lima) hektare;
- j. Tanjung Sari Village covers an area of 309.33 hectares (three hundred and nine point three three); and
- k. Tumpatan Nibung Village covers an area of 641.54 hectares (six hundred and forty-one point five four).

Regional planning provides a different perspective in maintaining the level of land use efficiency towards a fairly high increase in the number of population, such as in urban areas or areas that will develop.

#### Regional Planning Objectives:

1. Improving the quality of life of the community by providing a comfortable, safe, and balanced space.
2. Optimizing land use for economic, social, and cultural activities.
3. Protecting and preserving the environment and natural resources

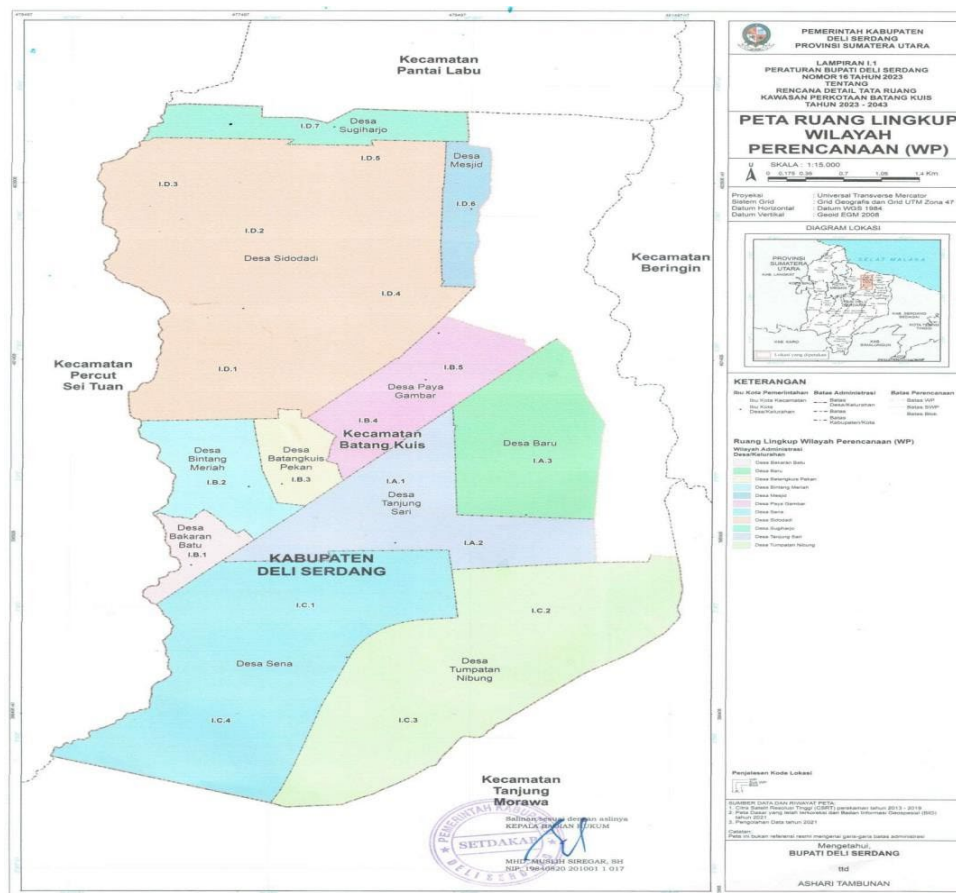
#### Regional Planning Strategy:

1. Developing the potential of the region by improving accessibility, infrastructure, and public facilities.
2. Improve community safety and security by regulating land use for potentially risky activities.
3. Preserving the cultural and historical heritage of Batang Kuis District.

Regional Planning Activities

1. Development Planning Deliberation (Musrenbang) of Deli Serdang Regency in 2024 in Batang Kuis District.
2. Preparation of the Medium-Term Development Plan (RPJM) of Batang Kuis District.
3. Development of infrastructure and public facilities in Batang Kuis District

Figure 2. Map of the Scope of the Planning Area (WP) of Batang Kuis District



Source : Deli Serdang Regent Regulation Number 16 of 2023 (Detailed Spatial Plan for Batang Kuis Urban Area 2023 – 2043)

### C. Land Use Terms

Land use provisions are rules that regulate how land can be used for various activities, such as settlements, agriculture, industry, and others. This provision aims to optimize land use, protect the environment, and improve the quality of life of the community.

Land use provisions usually include several aspects, such as:

1. Types of permitted land use
2. Minimum required land area
3. Distance between buildings
4. Building height
5. Environmental requirements
6. Security and safety requirements

Land use provisions can be in the form of:

1. Regional regulations (perda)
2. Government Regulation (Perpres)
3. Decree of the regent/mayor
4. Agreement between the landowner and the government

The objectives of the land use provisions are:

1. Optimizing land use
2. Protecting the environment
3. Improving the quality of life of the community
4. Reducing land use conflicts
5. Increase the efficiency and effectiveness of land use.

The provisions for land use activities in Batang Kuis, Deli Serdang, North Sumatra, are regulated in the Regional Regulation (Perda) of Deli Serdang Regency Number 4 of 2014 concerning the Regional Spatial Plan (RTRW) of Deli Serdang Regency.

#### **Here are some provisions for land use activities in Batang Kuis:**

Land Use Activities:

1. Settlements: Land use for settlements must meet the provisions on minimum land area, distance between buildings, and building height.
2. Commercial: Land use for commercial activities such as shops, restaurants, and hotels must meet the requirements for minimum land area, distance between buildings, and building height.
3. Industry: Land use for industrial activities must meet the provisions on minimum land area, distance between buildings, and building height, and must meet environmental standards.
4. Agriculture: Land use for agricultural activities must meet the provisions on minimum land area, crop types, and good agricultural techniques.
5. Conservation: Land use for conservation activities must meet the provisions on minimum land area, vegetation type, and good conservation techniques.

#### **General Provisions**

1. Permit: Every land use activity must have a permit from the Deli Serdang district government.
2. Planning: Every land use activity must have a careful planning and in accordance with the RTRW of Deli Serdang Regency.
3. Supervision: Any land use activities must be supervised by the Deli Serdang district government to ensure that the activities are in accordance with applicable regulations.

#### **Penalty.**

1. Administrative Sanctions: Any violation of land use terms may be subject to administrative sanctions, such as warnings, suspension of activities, or revocation of permits.
2. Criminal Sanctions: Any violation of land use provisions that causes environmental damage or endangers public safety may be subject to criminal sanctions, such as fines or imprisonment.

The provisions for the intensity of space utilization are contained in Article 41 of the Deli Serdang Regent Regulation Number 16 of 2023 concerning the Detailed Spatial Plan of the Batang Kuis Urban Area for 2023-2043:

1. The provisions on the intensity of space utilization, as referred to in Article 39 paragraph (4) letter b contain provisions regarding the amount of development that is allowed, including:
  - a. Maximum KDB;
  - b. Maximum KLB;
  - c. KDH minimum;
  - d. Maximum KTB; and
  - e. The minimum.
2. The Minimum Plot Area as intended in paragraph (1) letter e, includes:
  - a. high-density housing sub-zone with an area of 60 m<sup>2</sup>;
  - b. medium-density housing sub-zone with an area of 72 m<sup>2</sup>;
  - c. 96 m<sup>2</sup> low-density residential sub-zone.
3. The provisions on the intensity of space utilization as referred to in paragraph (1) are presented in the Table of Provisions for the Intensity of Space Utilization in Table 1 below which is an integral part of this regent regulation.

**Table 1. Intensity of Space Utilization in Urban Areas of Batang Kuis.**

**TABEL INTENSITAS PEMANFAATAN RUANG KAWASAN PERKOTAAN BATANG KUIS**

Zona	Intensitas Pemanfaatan Ruang	Kategori Ruang																															
		MA	PA	RTS.2	RTS.3	RTS.4	RTS.5	RTS.6	RTS.7	RTS.8	CB	BJ	P-1	P-2	P-3	IK.2	W	R-2	R-3	R-4	RPT.1	RPT.2	RPT.3	RTM	C-2	R-1	R-2	R-3	RT	PL-6	TR	IDK	
KDB Maksimum	Arteri	-	20%	15%	20%	30%	40%	50%	30%	30%	30%	-	10%	20%	20%	20%	60%	80%	70%	60%	60%	70%	80%	30%	30%	70%	70%	70%	80%	70%	60%	60%	60%
	Kolektor	-	20%	15%	20%	30%	40%	50%	30%	30%	30%	-	10%	20%	20%	20%	60%	80%	70%	60%	60%	70%	80%	30%	30%	70%	70%	70%	80%	70%	60%	60%	60%
	Lokal	-	20%	15%	20%	30%	40%	50%	30%	30%	30%	-	10%	20%	20%	20%	60%	80%	70%	60%	60%	70%	80%	30%	30%	70%	70%	70%	80%	70%	60%	60%	60%
KLB Maksimum	Lingkungan	-	20%	15%	20%	30%	40%	50%	30%	30%	30%	-	10%	20%	20%	20%	60%	80%	70%	60%	60%	70%	80%	30%	30%	70%	70%	70%	80%	70%	60%	60%	60%
	Arteri	-	0,2	0,15	0,2	0,3	0,4	0,5	0,3	0,3	0,3	-	0,1	0,2	0,2	0,2	1,14	2,4	2	1,2	1,2	2	2,4	0,3	4	4	3	1,8	3	1,5	1,2	2,4	
	Kolektor	-	0,2	0,15	0,2	0,3	0,4	0,5	0,3	0,3	0,3	-	0,1	0,2	0,2	0,2	1,14	2,4	2	1,2	1,2	2	2,4	0,3	4	4	3	1,8	3	1,5	1,2	2,4	
KDH Minimum	Lingkungan	-	0,2	0,15	0,2	0,3	0,4	0,5	0,3	0,3	0,3	-	0,1	0,2	0,2	0,2	1,14	2,4	2	1,2	1,2	2	2,4	0,3	4	4	3	1,8	3	1,5	1,2	2,4	
	Arteri	-	80%	85%	80%	70%	60%	50%	70%	70%	70%	-	90%	80%	80%	10%	30%	20%	30%	40%	40%	30%	20%	20%	25%	30%	25%	20%	25%	40%	40%	40%	
	Kolektor	-	80%	85%	80%	70%	60%	50%	70%	70%	70%	-	90%	80%	80%	10%	30%	20%	30%	40%	40%	30%	20%	20%	25%	30%	25%	20%	25%	40%	40%	40%	
KTB Maksimum	Lingkungan	-	80%	85%	80%	70%	60%	50%	70%	70%	70%	-	90%	80%	80%	10%	30%	20%	30%	40%	40%	30%	20%	20%	25%	30%	25%	20%	25%	40%	40%	40%	
	Arteri	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80%	70%	60%	60%	70%	80%	-	75%	70%	75%	80%	75%	60%	60%	60%	60%	
Kolektor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80%	70%	60%	60%	70%	80%	-	75%	70%	75%	80%	75%	60%	60%	60%	60%	

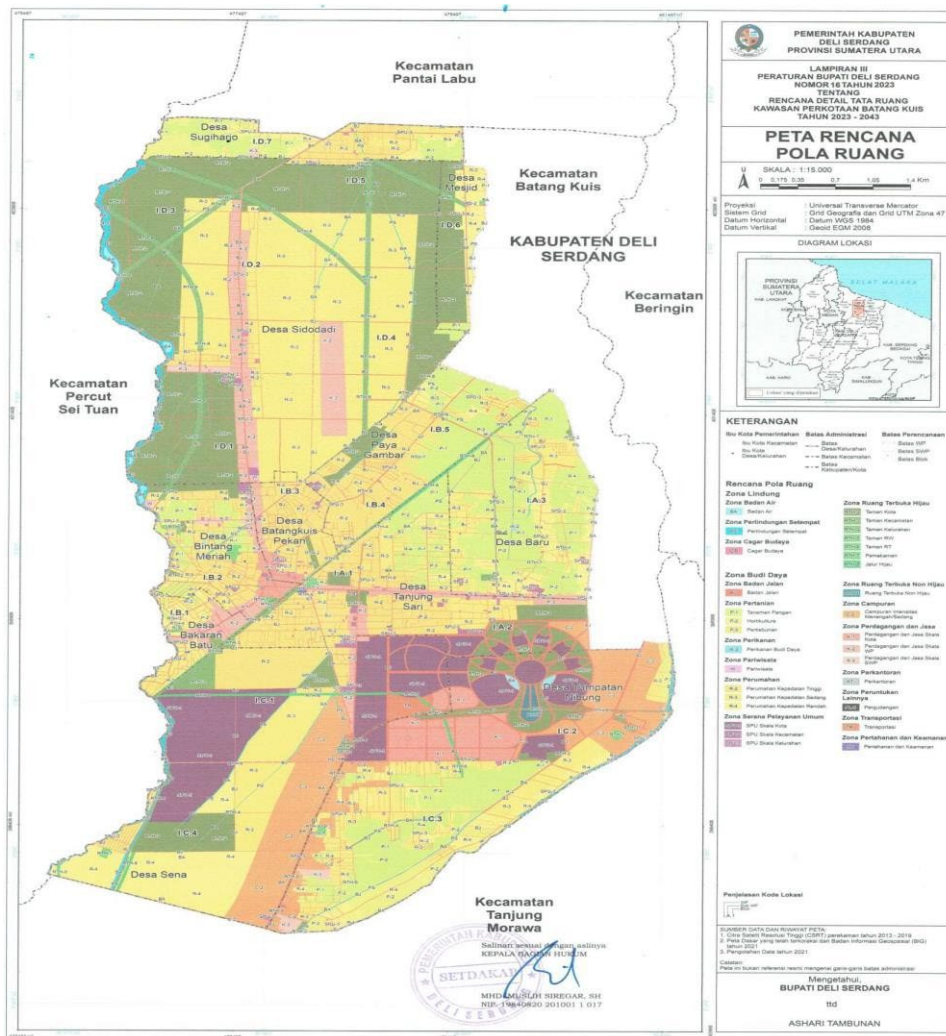
Zona	Intensitas Pemanfaatan Ruang	Kategori Ruang																													
		MA	PA	RTS.2	RTS.3	RTS.4	RTS.5	RTS.6	RTS.7	RTS.8	CB	BJ	P-1	P-2	P-3	IK.2	W	R-2	R-3	R-4	RPT.1	RPT.2	RPT.3	RTM	C-2	R-1	R-2	R-3	RT	PL-6	TR
Luar Kawasan Minimum (m <sup>2</sup> )	Lokal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80%	70%	60%	60%	70%	80%	-	72%	70%	75%	80%	75%	60%	60%	60%
	Lingkungan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80%	70%	60%	60%	70%	80%	-	72%	70%	75%	80%	75%	60%	60%

(Source: Deli Serdang Regent Regulation Number 16 of 2023 concerning Detailed Spatial Plan for the Batang Kuis Urban Area for 2023-2043)

D. Space Pattern Plan

The pattern spatial plan is part of the city's regional spatial plan (RTRW) which contains the distribution of space allocations for protection and cultivation functions. The spatial pattern plan provides an overview of the spatial utilization of the city area for the next 20 years According to Presidential Regulation No. 60 of 2022, the spatial pattern is the distribution of space allocations in a water, land and jurisdictional area which includes the allocation of space for protection functions and the allocation of space for cultivation functions. Space is defined as a container that includes land space, sea space, and air space, including space inside the earth as a unitary territory, where humans and other creatures live, carry out activities, and maintain their survival. The following is an example of a spatial pattern map in Batang Kuis District, Deli Serdang Regency.

Figure 3. Map of the Spatial Pattern Plan of Batang Kuis District, Deli Serdang Regency



Source : Deli Serdang Regent Regulation Number 16 of 202 (Detailed Spatial Plan for the Batang Kuis Urban Area 2023 – 2043

From the spatial pattern map above, we can see the spatial pattern plan in the upcoming 2023-2043 Batang Kuis sub-district area. As well as zones, there are several zones, namely protection zones, cultural zones, green open space zones, non-green open space zones, agricultural zones, housing zones, office zones, transportation zones, defense and security zones, public service facilities zones and others.



## V. RESEARCH METHODS

### A. Type of Research

This study uses a qualitative type of research. Qualitative research is a research method based on the philosophy of positivism, used to research on certain populations or samples, data collection using research instruments, and qualitative or statistical data analysis with the aim of testing predetermined hypotheses (Sugiyono, 2021). The type of research approach is descriptive. Descriptive research is research that seeks to tell the solution of existing problems based on data. Descriptive research is a form of research aimed at describing or describing existing phenomena, both natural and man-made phenomena (Moleong, 2019).

The type of data used in this study is qualitative data. Qualitative data is obtained from oral or written words observed by researchers, and objects observed in detail so that the meaning implied in the document or object can be captured. Data sources are the subjects from which the data in a study can be obtained. The data sources in this study are primary data and secondary data (Arikunto, 2019). Primary data in this study were obtained through interviews given to informants in this study. The informants in this study are 2 people, namely the Sub-district Head and the Secretary of the Sub-district at the Regional Government Agency of Batang Kuis District. Secondary data in the study aims to support the results of primary data. Secondary data in this study was obtained through documentation.

### B. Data Collection Techniques

Data collection techniques according to Arikunto (2019) are methods that can be used by researchers to collect data, where the method shows something abstract, cannot be realized in an object that is visible, but can be shown its use. Data collection in this study is in the form of observation, interviews and documentation. Observation or observation can be interpreted as systematic observation and recording of symptoms that appear in the object of research. An interview is a conversation with a certain intention carried out by two parties, namely the *interviewer* who asks the question and the interviewer to provide answers to the questions given. Documentation studies are complementary to the use of observation and interview techniques in qualitative research, even the credibility of qualitative research results will be higher if they involve or use documentation studies in his qualitative research method. Documentation is carried out to collect data in the form of recording the results of direct interviews, documents from agencies related to research problems (Sugiyono, 2021). Interviews in this study were conducted with local government resource persons. The informants in this study are 2 people, namely the Sub-district Head and the Secretary of the Sub-district at the Regional Government Agency of Batang Kuis District

The researcher uses descriptive analysis to analyze data through data reduction, data presentation and conclusions. Data reduction for the process of selection, simplification, and classification, which takes place continuously, is a step in the process of data processing and analysis. Presentation of data for action and verification to fully explain patterns and configurations and draw conclusions (Sugiyono, 2021).

### C. Previous Research

Previous research is intended to be used as a reference or comparison for researchers in searching for things related to the subject to be researched. Here are the relevant studies for researchers.

1. Sodikin and Mujio, (2022), with the research title "Analysis of Land Use Harmony with RTRW Spatial Patterns in Indramayu Regency, West Java Province", shows that there are 15 types of land use in Indramayu Regency. The largest land use in Indramayu Regency is rice fields with an area of 131,631 (62.9%) of the total land area of Indramayu Regency). The majority of land in Indramayu Regency is still in harmony with the planned spatial pattern of 70.31%, transitional land is 6.70%, and non-aligned is 22.98%. The land that is not in harmony is found in many protected forests and rice fields. Most of the protected forest areas in Indramayu Regency have been turned into pond areas, and rice fields have become residential land, both village settlements and urban settlements.
2. Wijaya et al., (2020), with the research title "Changes in Land Use Due to the Determination of the Regional Spatial Plan (RTRW) of Jembrana Regency in 2012 in the Coastal Village Area, Jembrana

Regency-Bali", showed that the change in the use of rice fields into settlements and other buildings has an area of about 236.48 ha. Change of dry land use to use residential land and other buildings have an area of 794.16 ha. Villages that have experienced land use changes include Melaya, Candikusuma, Tuwed, Banyubiru, Baluk, Penyaringan, Delod Berawah, and Perancak. Based on the results of digitization and the results of researchers' observations, the suitability of land use changes that occurred mostly occurred in buildings, accommodations, tourism and fishery activities.

3. Rachman et al., (2020), with the research title "Analysis of the Influence of Land Use on Road Performance in Gorontalo City", shows that Gorontalo City still has a lot of congestion due to side obstacles affected by land use, especially in areas of education, worship, goods and services, so it is necessary to add traffic signs, construction of road crossing bridges and sidewalk widening.
4. Anggraeni et al., (2020), with the research title "The relationship between land use and movement volume on Jalan Margonda Raya, Depo City", shows that there is a strong relationship between land use and the volume of movement that occurs in the corridor of Jalan Margonda Raya. This strong relationship shows the characteristic that the wider the land use in the research area, the more diverse the activities that occur in the land use, causing a high volume of movement.

## VI. RESULTS AND DISCUSSION

### A. Level of Suitability for Space Utilization

The level of suitability of space utilization is a measure of how well the use of space is in accordance with the spatial plan that has been set. Here are some of the appropriate levels of space utilization. Urban problems arise due to unclear urban spatial planning, as well as inconsistencies in environmental management in implementing development planning that must pay attention to green open space in urban areas. In relation to development and environmental issues, in every development implementation, a spatial planning for urban areas is needed. The urban spatial planning in question is a form of physical urban planning that aims to realize the direction of urban growth (Nurliah & Tajuddin, 2021). Spatial planning is an attitude and behavior towards space in realizing the integrated use of natural and artificial resources by paying attention to human resources. Space is not only for the benefit of welfare but also related to the potential utilization and potential risks of the space itself (Nessa et al., 2021). Spatial conformity is very important for licensing before carrying out development and activities/businesses. Activities that are not in accordance with the spatial planning must be rejected.

Space utilization control which includes zoning regulations, licensing, intensive, disincentive, and sanction arrangements aims to control the use of space in order to achieve the goal of space utilization that is in accordance with existing regulations and has been determined by the central, provincial and district/city governments. The use of space is carried out in stages, namely through the preparation of development implementation activity programs related to the use of space. These activities are carried out by the government and the community, either independently or forming a collaboration between the government and the community in accordance with the spatial plan that has been determined. The following is a map of Batang Kuis District, which includes administrative boundaries, zoning for space utilization, and areas that have been planned according to the RTRW policy.

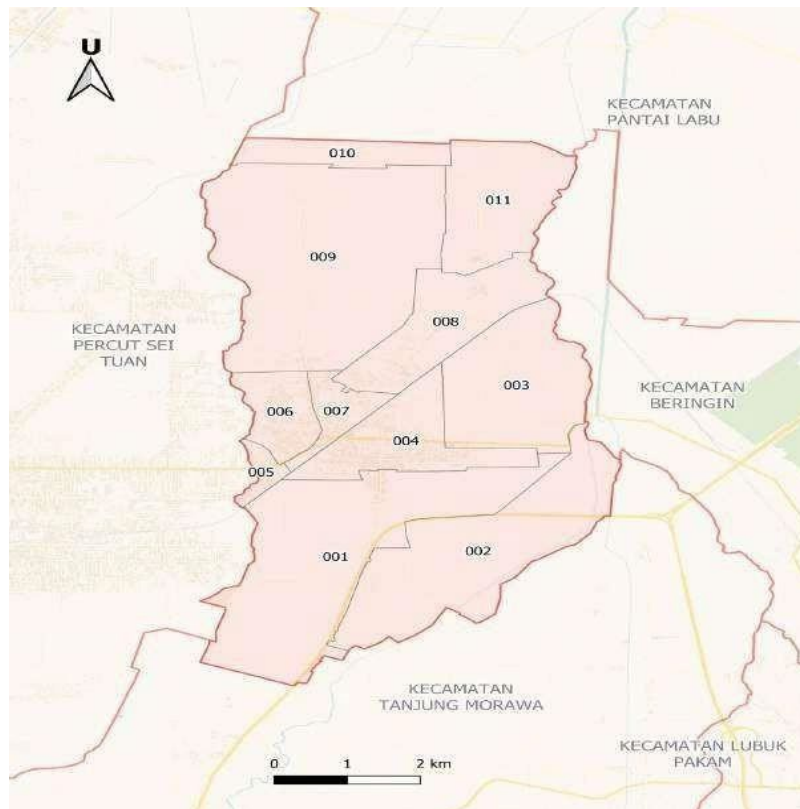
#### Factors Affecting the Level of Conformity

1. Conformity with spatial plan: How well the space is used in accordance with the spatial plan that has been set.
2. Environmental quality: How good is the quality of the environment around the use of space.
3. Comfort and safety: How well is the comfort and safety of the community around the use of space.
4. Infrastructure availability: How well the availability of supporting infrastructure around space utilization.

#### Impact of Low Conformance

1. Environmental damage: Inappropriate use of space can cause environmental damage.
2. Social conflict: Inappropriate use of space can cause social conflicts between communities.
3. Lost opportunities: Inappropriate use of space can lead to lost economic and social opportunities.
4. Higher costs: Inappropriate use of space can lead to higher costs for repairs and maintenance.

Figure 4. Map of Batang Kuis District



Source : Deli Serdang Regency Statistical Agency

01 :Army	07 : Batang Kuis Pekan
02 : Tumpatan Nibung	08 : Swamp Pictures
03 :New	09 : Sidodadi
04 : Tanjung Sari	10 : Sugiharjo
05 : Burning Stone	11 : Mosque
06 : Bintang Meriah	

The purpose of spatial planning is to implement the use of environmentally friendly space, the implementation of space utilization arrangements for protected areas and cultivation areas, and the achievement of quality space utilization (Sinaga, 2020). This is as per the results of the interview submitted regarding the level of compliance with RTRW in Batang Kuis District.

*"The level of compliance with RTRW in Batang Kuis District is quite diverse. Most large property developers already comply with the provisions because they are aware of the importance of legality to avoid problems later on. However, for land use by individual communities, there are still several violations, such as development in non-residential zones or land conversion without permits",* (informant: PK as the Regional Government).

Land use encompasses all kinds of human activities on a land which is a classification of irrigated agriculture, grassland forests, settlements and so on. This is done to meet the increasingly diverse needs of human life. Land is one of the most crucial aspects at this time, because the need for land will increase every year (Nurfikasari & Yuliani, 2022). The following is a breakdown of the area and the percentage of contribution of each village to the total area of Batang Kuis District. This data provides an overview of the distribution of area in each village, which is important to understand space utilization and spatial planning at the village level in the context of the RTRW of Batang Kuis District.

**Table 2. Percentage of Batang Kuis District Area in 2024**

Village	Area (km <sup>2</sup> )	Percentage of District Area
Army	10,50	22,86
Tumpatan Nibung	3,70	8,06
New	4,32	9,41
Tanjung Sari	7,34	15,98
Burn Stone	0,45	0,98
Meriah Star	0,65	1,42
Batang Kuis Pekan	0,75	1,63
Paya Gambar	3,01	6,55
Sidodadi	10,95	23,84
Sugiharjo	1,59	3,46
Masjid	2,67	5,81
<b>Batang Kuis</b>		<b>100,00</b>

Source : Batang Kuis District Government Office, Deli Serdang Regency

Based on the table above, it shows the area of each village in Batang Kuis District along with its percentage of contribution to the overall area of the sub-district. Sidodadi Village has the largest area, which is 10.95 km<sup>2</sup>, which covers about 23.84% of the total area of Batang Kuis District. Followed by Sena Village with an area of 10.50 km<sup>2</sup> or 22.86% of the sub-district area. Tanjung Sari and Baru villages also have a significant contribution, with an area of 7.34 km<sup>2</sup> (15.98%) and 4.32 km<sup>2</sup> (9.41%), respectively. Meanwhile, villages such as Bakaran Batu, Bintang Meriah, and Batang Kuis Pekan have smaller areas, less than 2 km<sup>2</sup> each, with a relatively low percentage of contribution to the overall sub-district area. The use of space in this area has been adjusted to the provisions in the RTRW, so as to ensure that the land use in each village is on a path in accordance with the spatial plan that has been set. Poor spatial planning will cause the emergence of gaps between regions, regional inequality and other regional problems. This will have an impact on other aspects such as economic, social, and cultural, so it is necessary to control space to avoid complex risks that will occur in various aspects (Wahyudi et al., 2023). To support the effective implementation of the RTRW policy, the local government routinely carries out various monitoring and evaluation steps related to the use of space in Batang Kuis District. This is as shown in the following interview.

*"We evaluate the level of suitability of space utilization in Batang Kuis District with the RTRW policy through direct monitoring and analysis of zoning maps. Based on our assessment, about 90% of the space utilization has been in accordance with the RTRW. However, there are some areas that still deviate, especially related to the conversion of agricultural land into residential areas without permits. We continue to tighten supervision and sanction those who do not comply with the regulations to ensure that the implementation of the RTRW runs well", (informant: PT as a regional government).*

More specifically, spatial planning can be interpreted as an effort to realize a planned spatial planning, by paying attention to the state of the natural environment, the artificial environment, the social environment, interaction between environments, the stages and management of development, as well as the development of existing and available institutional capabilities and human resources, by always basing on the unity of the national territory and aimed at the great prosperity of the people. Space needs to be arranged in order to maintain environmental balance and provide comfortable support for humans and other living things in carrying out activities and maintaining their survival optimally (Sinaga, 2020).

Based on the above, it can be analyzed that the level of suitability of space utilization in Batang Kuis District with the RTRW policy in general is quite good, with around 90% of the area having complied with the stipulated provisions. This compliance is especially evident in large property developers who tend to understand the importance of complying with regulations to avoid problems in the future. This shows that the RTRW policy has become an effective guide for developers in planning the development of residential

areas. However, the main challenge is still found in the use of land by individual communities. Several cases of violations occurred, such as development in non-residential zones and the conversion of agricultural land into residential areas without permits. This condition indicates that there are limitations in the socialization of the rules RTRW and the lack of public awareness of the importance of complying with spatial regulations. It also reflects the need for a more persuasive approach to improving individual community compliance. In addition, supervision carried out through direct monitoring and analysis of zoning maps has helped identify irregularities that occur. The local government continues to tighten supervision and apply sanctions for violations to keep the implementation of the RTRW running as planned.

B. Space Utilization for the Residential Land System in the Batang Kuis District area, Batang Kuis District has an area of 40.34 km<sup>2</sup>. Its territory is located at an altitude of 4–30 meters above sea level. Batang Kuis District has a tropical climate. The area of Batang Kuis District borders Pantai Labu District to the north. To the east, Batang Kuis District borders Beringin District. The area of Batang Kuis District borders Tanjung Morawa District. Meanwhile, to the west, Batang Kuis District borders Percut Sei Tuan District. The development of space use in various locations has a tendency not to be based on zoning, or at least the need for existing use arrangements. The rapid development of an area is accompanied by increasing human needs (clothing, food, and board). The high human need clearly causes problems related to places *for living* or the need for land used as settlements (Nessa et al., 2021). The development of settlements is currently so rapid in line with the development of the existing population (Rusman et al., 2023). The following table is presented showing the area and the number of residents in each village in Batang Kuis District. This table provides an overview of the population distribution and the area in each village, which can help in analyzing population dynamics and space utilization planning in Batang Kuis district.

**Table 3. Village Area and Population of Batang Kuis in 2024**

Village	Village Area (km <sup>2</sup> )	Population
Tanjung Sari	7,34	12.596
Batang Kuis Pekan	0,75	5.779
Seine	6,40	7.079
New	4,32	6.047
Tumpatan Nibung	3,70	6.898
Paya Gambar	3,03	3.138
Meriah Star	0,65	6.073
Mosque	2,67	1.292
Sidodadi	9,50	3.822
Sugiharjo	1,53	4.644
Burn Stone	0,45	2.757

*Source : Deli Serdang Regency Statistical Agency*

Based on the table above, it shows the area of the village and the number of residents in each village in Batang Kuis District. Tanjung Sari Village has the largest area, which is 7.34 km<sup>2</sup>, with a population of 12,596 people, making it the village with the largest population. On the other hand, the village of Batang Kuis Pekan has a smaller area, only 0.75 km<sup>2</sup>, but with a significant population, namely 5,779 people. Sena and Tumpatan Nibung villages have an area of 6.40 km<sup>2</sup> and 3.70 km<sup>2</sup> respectively, with a population of around 7,079 people and 6,898 people. Meanwhile, villages such as Bakaran Batu and Bintang Meriah have smaller areas, 0.45 km<sup>2</sup> and 0.65 km<sup>2</sup>, but still have a sufficient population, 2,757 people and 6,073 people, respectively. The population of these villages is mixed, with the village of Mesjid having the lowest population at 1,292 inhabitants, while the village of Sidodadi, although it has the second largest area after Tanjung Sari, at 9.50 km<sup>2</sup>, has a population of 3,822 inhabitants. This data provides an overview of the density of the population and population distribution in each village in Batang Kuis District. Utilization and control of space use. Spatial planning generally involves a series of processes that involve planning,

operating, and monitoring the implementation or use of interconnected facilities. Spatial Planning is needed in an area so that regional growth is synergistic with future spatial pattern plans. The city will grow with the increase in population and followed by the fulfillment of survival needs (Wahyudi et al., 2023). Batang Kuis District has a spatial planning policy designed to create a balance between the development of residential areas and environmental conservation. This policy is based on zoning maps that regulate land use in a planned manner. This is as revealed in the following interview.

*"The RTRW policy in Batang Kuis District is regulated to ensure a balance between the needs of settlements and environmental sustainability. Residential areas have been determined in the zoning map which is the main guideline in development licensing. In addition, there are regulations related to building density, building height, and supporting facilities such as green open spaces. All of these policies aim to prevent spatial planning conflicts, such as land conversion that is not in accordance with the plan", (Informant: PK as a Regional Government).*

The Regional Spatial Plan (RTRW) plays an important role in supporting the development of residential areas in Batang Kuis District. Through structured arrangements, RTRW ensures that settlement development is carried out in a planned manner and in line with sustainability principles. This is reinforced by the results of the following interviews with resource persons.

*"The role of RTRW is very significant in ensuring that the development of settlements in Batang Kuis District is carried out in a planned and sustainable manner. RTRW helps identify zones that are suitable for settlements so as not to damage productive land or conservation areas. In addition, RTRW is also a reference in granting development permits, thus preventing land use conflicts". (Informant: PT as a Regional Government).*

A residential area is an area that functions as a residential environment or activity that supports life fairies and creates social interactions. In addition, settlements also function as a means of fostering a family. In determining the location of settlements, there must be special criteria, including that the residential area must be in accordance with the direction of space utilization and land carrying capacity to support environmental sustainability. Residential areas must also have supporting infrastructure such as roads and public transportation. Physical facilities and public utilities such as markets, offices, as well as trade and services must also be available in residential areas (Nurfikasari & Yuliani, 2022).

**Table 4. Utilization of Residential Land Space in Batang Kuis District**

<b>Space Utilization Settlement</b>	<b>Land Area (km<sup>2</sup>)</b>
Land that Made Residential areas	38,14
Unsuitable land is used as residential land	2,20
<b>Total Area</b>	<b>40,34</b>

*Source: Batang Kuis District Government Office*

The table above explains the allocation of residential space utilization in Batang Kuis District. Of the total land area of 40.34 km<sup>2</sup>, about 38.14 km<sup>2</sup> is used in accordance with the designation as a residential area. This figure shows that the majority of land use has referred to the Regional Spatial Plan (RTRW) policy. However, there are still 2.20 km<sup>2</sup> of land that is not in accordance with its designation for settlements. This condition indicates a violation of spatial planning provisions, such as land use that should be maintained for agricultural functions or green areas. Land used as a residential area covers various needs, such as the construction of residential houses, public facilities, and social facilities. Public facilities include roads, schools, places of worship, and markets, which function to support people's lives. Meanwhile, land that is not suitable for use for settlements is often productive land such as rice fields or fields that have been converted without official permits, thus potentially damaging the balance of the ecosystem and reducing land capacity to support food security. The development of an area is highly dependent on the characteristics that exist in the area. Broadly speaking, these characteristics are a manifestation of the

potential and constraints of the area concerned. This condition is formed through a long geological process with a comprehensive mapping of the potential and constraints of an area and the use of natural resources contained in it (Cikalana et al., 2024).

*"The problem that often arises is the uncontrolled conversion of land, especially from agricultural land to settlements without going through the correct procedures. In addition, pressures from population growth and development demands often make it difficult to fully implement RTRW rules. We also face challenges from parties who have great economic interests and sometimes try to ignore the rules for personal gain",* (Informant: PT as a Regional Government).

Based on the explanation above, it can be analyzed that the Regional Spatial Plan (RTRW) policy in Batang Kuis District has an important role in directing the use of space for settlement needs in a planned and sustainable manner. Through the zoning map that has been determined, this policy is the main guideline in determining areas that are suitable for the development of residential areas. In addition, regulations related to the density and height of buildings, as well as the existence of green open spaces, strengthen efforts to create environmentally friendly and well-integrated residential areas. One of the main contributions of RTRW is to protect productive land and conservation areas from the threat of unplanned conversion of functions. Identifying appropriate zones for settlements not only ensures construction is carried out in the right places, but also prevents wider environmental damage. With the reference of the RTRW, the granting of development permits is carried out selectively to avoid potential spatial planning conflicts due to uncoordinated land use. However, the implementation of RTRW in Batang Kuis District faces a number of significant challenges.

One of the problems that often occurs is the transfer of land use from agriculture to residential areas which is carried out without official permits. This condition is exacerbated by the pressure of population growth which drives the increasing demand for residential land. In some cases, the economic interests of certain parties also affect the implementation of policies, where RTRW rules are sometimes ignored for personal gain. To overcome these obstacles, stricter supervision and the implementation of strict sanctions for violators of the rules are urgently needed. In addition, education to the public about the importance of complying with RTRW must also be improved. Collaborative efforts between local governments, developers, and communities are key to maintaining a balance between the needs of settlement development and environmental conservation. Thus, the space utilization system in Batang Kuis District can continue to support planned and sustainable regional growth.

Based on the explanation above, it can be concluded that the use of space for the residential land system in Batang Kuis District shows the importance of the Regional Spatial Plan (RTRW) policy in directing the planned and sustainable development of the area has been appropriately utilized as a residential area. However, there is still land that is converted without being in accordance with its designation, often in the form of productive land such as rice fields and fields. This shows that there are challenges in the implementation of spatial planning policies, including population growth pressures and economic interests that can interfere with environmental sustainability.

## VII. CONCLUSION

### A. Conclusion

Based on the discussion above, it can be concluded that:

- The level of suitability of space utilization is generally quite good, with around 90% of the area having complied with the stipulated provisions. This shows that the RTRW policy has become an effective guide for developers in planning the development of residential areas. This condition indicates that there are limitations in the socialization of RTRW rules and a lack of public awareness of the importance of complying with spatial planning regulations
- The use of space for the residential land system in the RTRW in the Batang Kuis District area shows the importance of the Regional Spatial Plan (RTRW) policy in directing the development of the area in a planned and sustainable manner. Of the total area of 40.34 km<sup>2</sup>, most of the land, which is 38.14 km<sup>2</sup>, has been appropriately used as a residential area. However, there are still 2.20 km<sup>2</sup> of land that is converted without its designation, often in the form of productive land such as rice

fields and fields. This shows that there are challenges in the implementation of spatial planning policies, including population growth pressures and economic interests that can interfere with environmental sustainability.

#### B. Suggestion

Based on the results of the conclusions that have been explained above, the researcher provides several suggestions, namely:

- The government needs to strengthen the monitoring mechanism for RTRW violations. This includes periodic monitoring, strict sanctions against inappropriate land conversion, and evaluation of existing policies to be more responsive to challenges in the field.
- Policies are needed that further facilitate the provision of land for settlements that are in accordance with their designation. The government can identify and allocate suitable lands for the development of new settlement areas, thereby reducing the conversion of productive land. This program can be accompanied by adequate infrastructure development.

## BIBLIOGRAPHY

- Anggraeni, O., Astuti, W., & Mukaromah, H. (2020). Hubungan pemanfaatan lahan dengan volume pergerakan di Jalan Margonda Raya, Kota Depok. *Jurnal Pembangunan Wilayah Dan Perencanaan Partisipatif*, 15(1), 16–29. <https://doi.org/10.20961/region.v15i1.23186>
- Arikunto. (2019). *Prosedur Penelitian*. Jakarta: Riena Cipta.
- Cikalana, A., Usman, D. N., & Fouzi, N. (2024). Pendekatan Satuan Genetika Kewilayahan untuk Valuasi Potensi dan Kendala Pemanfaatan Sumber Daya Alam dalam Perspektif Tata Ruang Pengembangan Wilayah Kecamatan Leles Kabupaten Garut Provinsi Jawa Barat Evaluation of Territorial Genetic Unit for Evaluatio. *Prosiding Teknik Pertambangan*, 601–607.
- Eddy, T. (2015). *Kajian Hidup Lingkungan Strategis Dalam Perencanaan Wilayah dan Tata Ruang*. Fakultas Teknik Pembangunan Panca Budi.
- Hastri, E. D., Rachman, A. M. I., & Shafarinda, R. (2022). Sanksi Hukum Dalam Pengendalian Pemanfaatan Ruang Daerah Permukiman Melalui Perizinan Sesuai Dengan Rencana Tata Ruang Wilayah Perkotaan. *Jurnal Jendela Hukum*, 9(1), 64–80. <https://doi.org/10.24929/fh.v9i1.1959>
- Hidayat, W., & Milanie, F. (2024). Community Action Plan (CAP) Dalam Penataan Kawasan Kumuh Desa Laut Dendang Kecamatan Percut Sei Tuan. *Jurnal Sains Dan Teknologi*, 21(01), 1–9.
- Id.wikipedia.org. (2024). *Batang Kuis, Deli Serdang*. Id.Wikipedia.Org. [https://id.wikipedia.org/wiki/Batang\\_Kuis,\\_Deli\\_Serdang](https://id.wikipedia.org/wiki/Batang_Kuis,_Deli_Serdang)
- Keristian, H. (2023). Kajian Pengendalian Pemanfaatan Ruang Terhadap Alih Fungsi Perumahan (Studi Kasus Sungai Bambu, Jakarta Utara). *Jurnal Kajian Wilayah Dan Kota*, 2(2), 101–112.
- Madaul, R. A., & Ibal, L. (2023). Kajian Peninjauan Kembali Rencana Tata Ruang Wilayah Kabupaten Sorong Tahun 2012 - 2032. *Jurnal Ilmiah Ecosystem*, 23(3), 658–672. <https://doi.org/10.35965/eco.v23i3.3907>
- Moleong, L. (2019). *Metode Penelitian Kualitatif*. Bandung: PT. Remaja Rosdakarya.
- Muhammad Alif Haidar, & Astri Mutia Ekasari. (2023). Prediksi Volume Genangan Berdasarkan Rencana Penggunaan Lahan RTRW Kota Sukabumi Tahun 2022-2042. *Bandung Conference Series: Urban & Regional Planning*, 3(2), 523–530. <https://doi.org/10.29313/bcsurp.v3i2.8639>
- Nahdatunnisa. (2019). Perubahan Pemanfaatan Lahan Di Kawasan S ekitar Pasar S entral Kota Bulukumba. *Jurnal Malige Arsitektur*, 1(1).
- Nasution, I., Rafinda, M. S., Dharma, S., & Riyadh, M. I. (2023). Perlindungan Hukum terhadap Lahan Pertanian dari Pengalihan Fungsi Lahan Berdampak pada Sektor Sosial Ekonomi Masyarakat Desa Tumpatan Nibung Kecamatan Batang Kuis Kabupaten Deli Serdang. *Universitas Islam Sumatera Utara*, 7(1), 1664–



1669.

- Nessa, S. M., Tewal, S. T. R., & Nugroho, C. (2021). Kesesuaian Lahan Permukiman Terhadap Rencana Tata Ruang Wilayah Berbasis SIG Di Kabupaten Kepulauan Sangihe. *GEOGRAPHIA : Jurnal Pendidikan Dan Penelitian Geografi*, 2(2), 124–130. <https://doi.org/10.53682/gjppg.v2i2.1401>
- Nurfikasari, M. F., & Yuliani, E. (2022). Studi Literatur : Analisis Kesesuaian Lahan Terhadap Lokasi Permukiman. *Jurnal Kajian Ruang*, 1(1), 78. <https://doi.org/10.30659/jkr.v1i1.19981>
- Nurliah, N., & Tajuddin, M. S. (2021). Analisis Tata Kelola Ruang Terbuka Hijau Terhadap Pembangunan Kota Di Kabupaten Majene. *MITZAL (Demokrasi, Komunikasi Dan Budaya) : Jurnal Ilmu Pemerintahan Dan Ilmu Komunikasi*, 5(1). <https://doi.org/10.35329/mitzal.v5i1.1852>
- Perkasa, D., Istiqomah, D. A., & Aisyah, N. (2022). Kesesuaian Penggunaan Lahan terhadap Rencana Tata Ruang Wilayah di Kecamatan Syamtalira Aron Kabupaten Aceh Utara. *Widya Bhumi*, 2(2), 152–165. <https://doi.org/10.31292/wb.v2i2.27>
- Rachman, A. P., Rompis, S. Y. R., & Timboeleng, J. A. (2020). Analisis Pengaruh Tata Guna Lahan Terhadap Kinerja Jalan di Kota Gorontalo. *Jurnal Ilmiah Media Engineering*, 10(1), 69–82. <https://ejournal.unsrat.ac.id/index.php/jime/article/view/29445>
- Rusman, R. S., Syafri, S., & Ridwan, R. (2023). Evaluasi Lokasi Tempat Pemrosesan Akhir (TPA) Antang Perubahan Pemanfaatan Ruang Disekitarnya. *Urban and Regional Studies Journal*, 5(2), 87–91. <https://doi.org/10.35965/ursj.v5i2.2690>
- Sinaga, E. J. (2020). Penataan Ruang dan Peran Masyarakat dalam Pembangunan Wilayah. *Pandecta: Jurnal Peneliti Ilmu Hukum*, 15(2), 242–260. <http://journal.unnes.ac.id/nju/index.php/pandecta%0APenataan>
- Sodikin dan Mujio, S. R. P. S. (2022). Analisis Keselarasan Penggunaan Lahan Dengan Pola Ruang RTRW Di Kabupaten Indramayu Provinsi Jawa Barat. *Jurnal Ilmu Lingkungan*, 16(2), 179–189. <https://doi.org/10.31258/jil.16.2.p.179-189>
- Sugiarto, A., & Kustiah Ramadania, R. (2024). Manajemen Lahan Bantaran Sungai Deli Untuk Pembangunan Kota Yang Berkelanjutan Berdasar Peraturan Daerah (RTRW/RDTR) (Studi Kasus: Bantaran Sungai Deli, Kecamatan Medan Maimun). *Jurnal Ekonomi & Ekonomi Syariah*, 7(1), 618–626. <https://doi.org/10.36778/jesya.v7i1.1378>
- Sugiyono. (2021a). *Metode Penelitian Kuantitatif, Kualitatif, Kuantitatif dan R&D*. Bandung: Alfabeta.
- Susanti, A. D. (2021). Kajian Izin Lokasi Dan Kesesuaian Kegiatan Pemanfaatan Ruang Di Daratan Bagi Perizinan Berusaha. *Jurnal Riset Ekonomi Dan Bisnis*, 14(3), 179. <https://doi.org/10.26623/jreb.v14i3.4408>
- Titan Kesuma Endasmoro, & Lely Syiddatul Akliyah. (2023). Analisis Kesesuaian Pemanfaatan Ruang di Kecamatan Cianjur. *Jurnal Riset Perencanaan Wilayah Dan Kota*, 39–46. <https://doi.org/10.29313/jrpwk.v3i1.1948>
- Wahyudi, I., Mustofa, U., Astha, D. P., & Sitaresmi, D. T. (2023). Kesesuaian Pemanfaatan Ruang Terhadap Pola Ruang Pada Kecamatan Samboja Kabupaten Kutai Kartanegara. *COMPACT: Spatial Development Journal*, 2(2), 94–99. <https://doi.org/10.35718/compact.v2i2.914>
- Wijaya, I. M. A., Sukamara, I. N., & Kurniawan, W. D. W. (2020). Perubahan Penggunaan Lahan Akibat Penetapan Rencana Tata Ruang Wilayah (RTRW) Kabupaten Jembrana Tahun 2012 Di Wilayah Desa Pesisir , Kabupaten Jembrana-Bali. *Pranatacara Bhumandala: Jurnal Riset Planologi*, 1(2), 119–132. [https://doi.org/10.32795/pranatacara\\_bhumandala.v1i2.1136](https://doi.org/10.32795/pranatacara_bhumandala.v1i2.1136)
- Zefri, & Ma'mun, H. (2022). Optimalisasi Penerapan Rencana Tata Ruang Wilayah Dalam Penanganan Pemanfaatan Ruang Kawasan Resapan Air (Studi Kasus: Kawasan Resapan Air Kabupaten Ciamis). *Jurnal Darma Agung*, 30(2), 229–242. <https://doi.org/10.46930/ojsuda.v30i2.1668>