



SYNCHRONIZATION OF THE REVISION OF THE RTRW OF TEBING TINGGI CITY WITH THE REVISION OF THE RTRW OF NORTH SUMATRA PROVINCE CASE STUDY: SPACE PATTERN PLAN

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Abstract

Spatial planning is arranged in a tiered hierarchy with spatial planning and regulation arranged through different levels, starting from the national level to the regional level. Each level has its own role and authority in preparing spatial plans which must be in harmony with the level above it. This hierarchy ensures that every spatial plan at the lower level must refer to and be in harmony with the spatial plan at the upper level, so as to create harmony and integration in the planning and use of space throughout Indonesia. The basic problems and conflicts in space utilization are the existence of significant challenges due to overlapping policies, regulations and geospatial information. The research is in Tebing Tinggi City, where in 2023 the Tebing Tinggi City Government and the North Sumatra Provincial Government will have revised the RTRW, so that a spatial study of the synchronization of the Provincial RTRW and City RTRW is needed. This research aims to provide an overview of the evaluation of the discrepancies in the revised spatial pattern plan of Tebing Tinggi City with the Revised RTRW of North Sumatra Province and to provide steps to resolve the discrepancies that occur which are useful as material for discussion and evaluation of the Revised RTRW of Tebing Tinggi City at the North Sumatra Province level. The research method uses a descriptive-qualitative approach with spatial exploration. Spatial analysis uses the ArcGIS 10.8 application to overlay which produces a comparison scheme. The matching scheme is then grouped into categories and typologies of "No Problem" and "Indication of Problem" suitability. Then the typology of conformity in "Problem Indications" becomes a priority follow-up to synchronize spatial pattern plans on non-conformity contents. The research results show that there are 3 (three) discrepancies in the typology of "Problem Indications", namely discrepancies in regional boundaries, discrepancies in protected rice fields (LSD), and inconsistencies in defense and security areas with a total area of 51.17 hectares (1.30%). The follow-up to resolving discrepancies as a synchronization effort is in the form of improvements to the Tebing Tinggi City RTRW Revision document in accordance with the latest regulatory data which has also been adopted by the North Sumatra Province RTRW Revision.

Keywords: *Synchronization, Revision of Provincial RTRW, Revision of City RTRW*

1. INTRODUCTION

The implications of Law Number 11 of 2020 concerning Job Creation for the implementation of spatial planning include changes to the nomenclature of space utilization permits to suit the suitability of space utilization activities. In the process of preparing and determining the RTRW (Regional Spatial Plan) and RDTR (Detailed Spatial Plan) as well as the substance approval process, consideration must be given to resolving discrepancies between the spatial pattern of the spatial plan and forest areas, permits and/or land rights (Hayati and Sulastris, 2022). One of the main problems in spatial use is overlapping policies, regulations and geospatial information, which is caused by discrepancies in spatial planning, forest areas, permits and land rights. Based on Article 24 paragraph (2) of Government Regulation Number 43 of 2021 concerning Settlement of Inconsistencies in Spatial Planning, Forest Areas, Permits, and/or Land Rights, as well as Article 4 paragraph (9) of Regulation of the Coordinating Minister for Economic Affairs Number 1 of 2021 concerning Procedures The preparation, updating and determination of the Indicative Map of Overlapping Space Utilization has been stipulated in the Decree of the Coordinating Minister for Economic Affairs Number 223 of 2021. This decision determines the Indicative Map of Overlapping Space Utilization (PITTI) which includes inconsistencies in regional boundaries, spatial planning and forest areas in North Sumatra Province, and contains study results and nonconformity maps.

SYNCHRONIZATION OF THE REVISION OF THE RTRW OF TEBING TINGGI CITY WITH THE REVISION OF THE RTRW OF NORTH SUMATRA PROVINCE CASE STUDY: SPATIAL PATTERN PLAN*Harry Kurniawan1, Abdiyanto2, Abdi Sugiarto2*

Geographical studies function as a guide in conducting research, answering questions about the integration of facts in the context of geographic paradigms, such as spatial contexts. In answering the basic postulates of the theory and carrying out careful tests, each concept can be used as a basis for building a theory (Effendi, 1991). Policies regarding regional boundary conflicts in Indonesia have become crucial and have been regulated in several laws, such as Law Number 22 of 1999, which was later revised into Law Number 32 of 2004, and Law Number 23 of 2014 concerning Local government. However, until now, regional boundary conflicts or disputes in Indonesia have not been resolved. Currently, the Ministry of Home Affairs (Kemendagri) plays a role as the leading sector in resolving regional boundary conflicts with its role as a provider of regulations through determinations carried out by the Ministry of Home Affairs. Nevertheless, resolving regional boundary conflicts remains a complex challenge and requires cooperation from various related parties to achieve a solution that satisfies all parties involved.

Border spatial pattern plans can be synchronized to one database to develop spatial plans that include harmonious spatial patterns. This will be the basis for further policies, especially regarding the use and control of spatial planning (Astuti and Mahendra, 2015). Thematic maps from the Thematic Geospatial Information dataset produced by walidata can be integrated into one map. In preparing Regency/City RTRW maps, this dataset is shared via the National Geospatial Information Network (JIGN) to resolve spatial use conflicts (Nurwadjedi et al. 2019). Any discrepancy that occurs in differences in spatial land allocation on the LSD map with LP2B land designation in districts/cities can be synchronized in regional spatial plans and detailed spatial plans. Technical Instructions Number 5/Juknis-HK.02/VI/2022 dated 14 June 2022 regulates the resolution of discrepancies in protected rice fields with spatial plans and other permits, allowing the transfer of land to other cultivation areas. The stages include submitting a recommendation request to the Head of the Regency/City Land Office, reporting it to the Minister of ATR/BPN through the Head of the Regional Office and the relevant director general, as well as follow-up synchronization with the regional spatial plan and its details. (Hayuningtyas and Nursadi, 2024).

The implementation of control over the conversion of agricultural land to non-agricultural land by the government through statutory regulations has not provided a sense of justice for the community. Regulations that are not clear and firm give rise to multiple interpretations. Even though the government continues to issue regulations, the lack of socialization means that people do not understand these regulations, so that the regulations are only effective on paper (Rahmanto, 2022). Disputes over overlapping land rights often occur, with legal consequences in the form of uncertainty regarding land registration which is detrimental to the certificate owner and constitutes a land administration error (Febriana and Darmoko, 2022). Contents of the Provincial RTRW The Provincial RTRW contains objectives, policies and strategies for spatial planning, spatial structure plans, spatial pattern plans; provincial strategic areas, directions for space utilization, and directions for controlling space utilization in provincial areas. In formulating the contents of the Provincial RTRW, it must refer to the contents of the National RTRW and its detailed plans (island/archipelagic RTR, KSN RTR, KAW RZ, and KSNT RZ), and pay attention to the bordering Provincial RTRW, including considering aspirations and harmonizing Regency/City RTRW within the territory of the province. concerned.

The contents of the City's RTRW include objectives, policies and spatial planning strategies; space structure plan; space pattern plan; determination of strategic city areas; directions for space utilization; and directions for controlling space utilization in the City area. In formulating the content of the City RTRW, it must refer to the content of the spatial planning plan above, such as: National RTRW and its detailed plans (island RTR and national strategic area RTR), Provincial RTRW and its detailed plan (provincial strategic area RTR) as well as paying attention to the RTRW of bordering districts/cities. Changes to the RTRW in districts/cities have the potential to create new problems because of the interest in improving the investment climate which is being attempted to be accommodated in the changes to the RTRW. This interest is sometimes misused and has an impact on overlapping planning. In the process of revising the RTRW for North Sumatra Province as well as discussing, facilitating and evaluating Regency/City Spatial Planning (RTR), many problems were found due to overlap caused by differences in map scale, RTR content and RTR database. This problem is based on the Regulation of the Minister of Agrarian Affairs and Spatial Planning/Head of the National Land Agency Number 11 of 2021 concerning Guidelines for Preparation, Review, Revision and Issuance of Substance Approval of Regional Spatial Planning, as well as Ministerial



Regulation Number 14 of 2021 concerning Guidelines for Preparing a Database and Presentation Regional Spatial Planning Map.

A comparative scheme of spatial pattern plans from each revised RTRW document (provincial and district/city) can provide an accurate view of overlapping spatial uses and provide a strong basis for decision making, facilitating investment, and ensuring compliance with applicable regulations. As well as supporting government efforts to achieve harmony between space utilization policies.

2. METHOD

The research is located in the administrative area of Tebing Tinggi City with an area of $\pm 3,916.97$ hectares consisting of 5 sub-districts. A map of the research area is presented in Figure 1.



Figure 1. Map of Research Area

The data used is secondary data in the form of spatial data, namely:

1. Tebing Tinggi City RTRW revision for 2023, obtained from the Tebing Tinggi City Public Works and Spatial Planning Department.
2. The 2023 RTRW revision for North Sumatra Province was obtained from the North Sumatra Province Public Works and Spatial Planning Service.

The research flow is presented in Figure 2. The research was carried out using a descriptive-qualitative method with spatial exploration. Spatial analysis uses the ArcGIS 10.8 application to overlay which produces a comparison scheme, suitability categories, suitability typology, and synchronization follow-up.

2.1 Matching Scheme

The comparison scheme is carried out by comparing the Provincial RTRW spatial pattern plans with the City RTRW for all overlapping spatial patterns with a spatial overlay. This comparison is used as initial information as input for the subsequent analysis. Examples of spatial pattern comparison schemes: "Residential Areas"; "Residential Area", where "Residential Area" is the Provincial RTRW spatial pattern and "Residential Area" is the City RTRW spatial pattern.

2.2 Suitability Category

The comparison scheme is then grouped into suitability categories which are divided into 6 groups, namely:

SYNCHRONIZATION OF THE REVISION OF THE RTRW OF TEBING TINGGI CITY WITH THE REVISION OF THE RTRW OF NORTH SUMATRA PROVINCE CASE STUDY: SPATIAL PATTERN PLAN

Harry Kurniawan1, Abdiyanto2, Abdi Sugiarto2

1. Appropriate, namely for similar matching schemes. Example: “Agricultural Area” ; “Food Crop Area”.
2. In accordance with the RTRWP Zoning Direction Indications (IAZ), namely for matching schemes that are not similar, but do not conflict with licensing regulations. Where City RTRW spatial pattern plans in this category can be accommodated as activities that are conditionally permitted in the rules for controlling Provincial RTRW spatial pattern plans in the Indication of Zoning Directions (IAZ). The emergence of this category is due to differences in the mandated planning scale, where the Provincial RTRW cannot allocate more detailed spatial patterns compared to the City RTRW. Example: “Residential Area” ; "Public Facilities and Social Facilities Areas", where "Public Facilities and Social Facilities Areas" will be included in the activities permitted under the terms of the Provincial RTRW "Residential Areas" spatial pattern in the Zoning Direction Indication regulations.
3. Technical Scale Planning, namely for the comparison scheme for the City RTRW "Road Body" and "Water Body" spatial patterns which are not allocated in the Provincial RTRW spatial pattern. Example: “Residential Area” ; "Water body".
4. Differences in Regional Boundaries, namely for comparison schemes that do not comply with the definitive regional boundaries which refer to Permendagri Number 128 of 2022 concerning Regional Boundaries of Serdang Bedagai Regency and Tebing Tinggi City, North Sumatra Province. The 2023 RTRW Revision for North Sumatra Province already refers to spatial references in the regulation in question. Example: ""; "Office area".
5. Differences in Protected Rice Fields (LSD), namely for comparison schemes that are not in accordance with Minutes of LSD Clarification in Tebing Tinggi City (regional head's agreement with the ATR Ministry) dated 20 June 2022, stated that "The Tebing Tinggi City Government is committed to integrating land designated as Indicative LSD into the Revised Regional Spatial Plan or Detailed Spatial Plan as part of from the Food Crop Area or Food Crop Sub Zone." The 2023 RTRW Revision for North Sumatra Province already refers to spatial references in the regulation in question. Example: “Agricultural Area” ; “Trade and Services Area”.
6. Differences in Defense and Security (Hankam) Areas, namely for comparison schemes that do not comply with the Land Rights (HAT) parcel boundaries from the North Sumatra Province BPN Regional Office in 2022. The 2023 Revision of the RTRW for North Sumatra Province already refers to spatial references in the regulation in question. . Example: “Defense and Security Area” ; “Trade and Services Area”.

2.3 Conformity Typology

The six suitability categories that have been carried out are then regrouped into a suitability typology which is divided into 2 groups, namely:

1. No Problem, namely for the suitability category in the "suitable", "according to provincial IAZ" and "technical planning scale" groups. The typology in this group is a synchronized typology, so it does not require follow-up synchronization.
2. Indication of Problems, namely for the suitability category in the groups "differences in regional boundaries", "differences in LSD", and "differences in Defense and Security areas". The typology in this group is a typology that is not yet synchronized and requires follow-up synchronization.

2.4 Sync Follow-up

Follow-up synchronization takes the form of improvements and adjustments that need to be agreed upon by both parties between the Tebing Tinggi City Government and the North Sumatra Provincial Government. Where, These improvements were carried out on the revised RTRW content of North Sumatra Province or carried out on the revised RTRW content of Tebing Tinggi City. This synchronization was followed up during the provincial evaluation and the process of legalizing spatial planning legal products in the two regions.

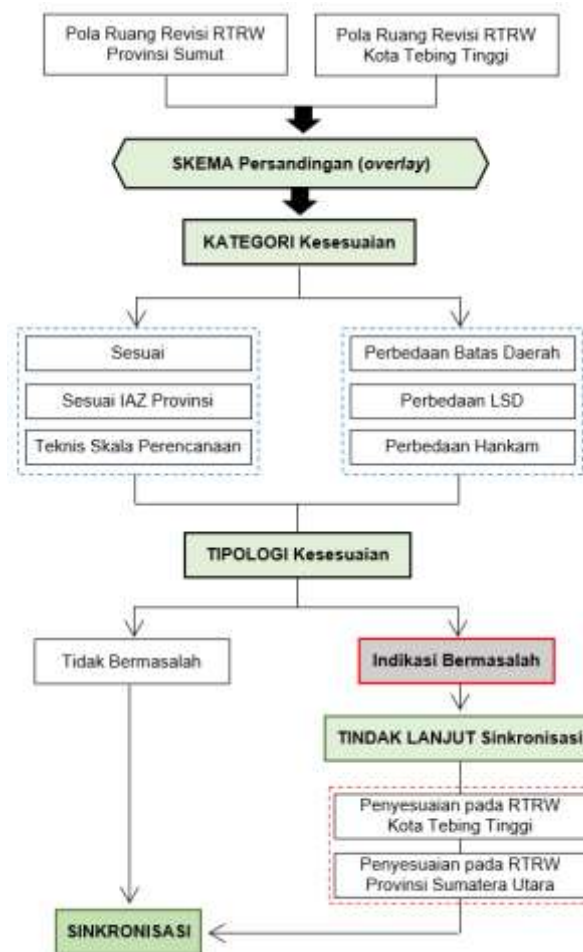


Figure 2. Research Flow

4. DISCUSSION RESULT

4.1 North Sumatra Province RTRW Revised Spatial Pattern Plan for 2023 in Tebing Tinggi City

The RTRW spatial pattern plan for North Sumatra Province is described in a unified administrative area, the whole of which is divided/allocated into a spatial pattern plan. The regional boundaries used refer to Minister of Home Affairs Regulation Number 128 of 2022 concerning the Regional Boundaries of Serdang Bedagai Regency and Tebing Tinggi City, North Sumatra Province. So it is recommended that the Revised RTRW for Tebing Tinggi City use the same reference. The spatial classification of spatial pattern plans for the Revised RTRW of North Sumatra Province in 2023 refers to the Regulation of the Minister of Agrarian Affairs and Spatial Planning/Head of the National Land Agency Number 14 of 2021 concerning Guidelines for Preparing a Database and Presenting Maps of Provincial, Regency and City Spatial Plans and Maps Detailed Regency/City Spatial Plan.

The revised spatial pattern plan for the RTRW of North Sumatra Province in Tebing Tinggi City is allocated entirely to cultivation areas with 3 spatial pattern classifications, namely agricultural areas at 5.97%, defense and security areas at 0.25%, and residential areas at 93.78%. Residential areas are dominant in the center of Tebing Tinggi City, while agricultural areas are spread across the hinterland (periphery) to the west of Tebing Tinggi City. The agricultural areas located in the RTRW of North Sumatra Province are the latest Indicative Protected Rice Land (LSD) data for 2022 sourced from the Ministry of ATR/Head of BPN. So the agricultural land in question is an area for food crops (rice fields) which must be accommodated in the Regency/City RTRW in North Sumatra Province. The defense and security area in the RTRW of North Sumatra Province is the area of Battalion B of the North Sumatra Police Mobile Brigade

SYNCHRONIZATION OF THE REVISION OF THE RTRW OF TEBING TINGGI CITY WITH THE REVISION OF THE RTRW OF NORTH SUMATRA PROVINCE CASE STUDY: SPATIAL PATTERN PLAN

Harry Kurniawan¹, Abdiyanto², Abdi Sugiarto²

Unit and is allocated based on parcel boundaries in the area of Land Rights (HAT) sourced from the BPN Regional Office of North Sumatra Province in 2022. So the revised RTRW of Tebing Tinggi City is recommended to use the same reference. The distribution of the area of the 2023 Revised RTRW spatial pattern plan for North Sumatra Province is presented in **Table 1** and the spatial pattern plan map is presented in Figure 3.

Table 1 Distribution of the Revised RTRW Spatial Pattern Plan for North Sumatra Province in Tebing Tinggi City

No	Region	Space Pattern Plan	Area (Ha)	%
1	Cultivation Area	Agricultural Area	233.87	5.97%
2		Residential Area	3,673.35	93.78%
3		Defense and Security Area	9.75	0.25%
Sub Total Cultivation Areas			3,916.97	100.00%
Total			3,916.97	100.00%



Figure 3. Plan Map Revised Spatial Pattern for RTRW of North Sumatra Province in Tebing Tinggi City

4.2 Tebing Tinggi City's Revised Spatial Pattern Plan for 2023

The spatial classification of spatial pattern plans for the 2023 Revised RTRW of Tebing Tinggi City refers to the Regulation of the Minister of Agrarian Affairs and Spatial Planning/Head of the National Land Agency Number 14 of 2021 concerning Guidelines for Preparing a Database and Presenting Maps of Provincial, Regency and City Spatial Plans and Maps Detailed Regency/City Spatial Plan. The spatial pattern plan in the 2023 Revised RTRW of Tebing Tinggi City consists of 22 spatial pattern classifications with a proportion of protected areas of 8.94% and a proportion of cultivation areas of 82.12%. The largest spatial pattern classification is dominated by residential areas at 49.48% and trade and service areas at 15.56%. The distribution of the area of the 2023 Revised RTRW Tebing Tinggi City spatial pattern plan is presented in **Table 2** dan The spatial pattern plan map is presented in Figure 4.



Table 2 Distribution of the Revised RTRW Spatial Pattern Plan for Tebing Tinggi City

No	Region	Space Pattern Plan	Area (Ha)	%
1	Protected area	Water body	60.75	1.40%
2		Local Protected Areas	141.91	3.28%
3		City Jungle	18.61	0.43%
4		City Park	19.65	0.45%
5		District Park	37.78	0.87%
6		Village Park	2.47	0.06%
7		Burial	64.72	1.50%
8		Green Line	40.65	0.94%
Sub Total Protected Areas			386.53	8.94%
9	Cultivation Area	The road	23.87	0.55%
10		Food Crop Area	233.52	5.40%
11		Aquaculture Area	1.94	0.04%
12		Electric Power Generation Area	5.32	0.12%
13		Industrial Designation Area	99.63	2.30%
14		Residential Area	2,139.75	49.48%
15		Public Facilities and Social Facilities Area	98.43	2.28%
16		Non-Green Open Space	1.17	0.03%
17		Urban Infrastructure Area	7.79	0.18%
18		Mixed Area	228.57	5.29%
19		Trade and Services Area	672.83	15.56%
20		Office area	20.24	0.47%
21		Transportation Area	6.23	0.14%
22		Defense and Security Area	12.46	0.29%
Sub Total Cultivation Areas			3,551.78	82.12%
Total			4,324.84	100.00%

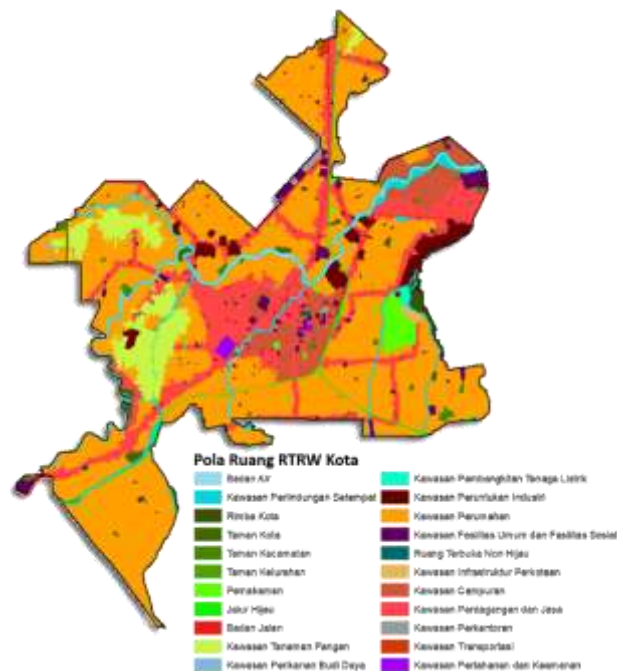


Figure 4. Map of the Revised Spatial Pattern Plan for Tebing Tinggi City RTRW

SYNCHRONIZATION OF THE REVISION OF THE RTRW OF TEBING TINGGI CITY WITH THE REVISION OF THE RTRW OF NORTH SUMATRA PROVINCE CASE STUDY: SPATIAL PATTERN PLAN

Harry Kurniawan1, Abdiyanto2, Abdi Sugiarto2

4.3 Matching Scheme and Suitability Categories

The match (overlap) between the 2023 Revised RTRW spatial pattern plan for North Sumatra Province with the 2023 Revised RTRW spatial pattern plan for Tebing Tinggi City resulted in 53 comparison schemes. The broadest comparison scheme is in “Residential Areas; Residential Area” of 54.08% The conformity category is distributed in the "suitable" category at 59.86%, the "according to Provincial IAZ" category at 36.87%, the "planning scale technical" category at 1.97%, the "regional boundary differences" category at 0.54%, the category "differences in LSD data" was 0.75%, and the category "differences in defense and security area data" was 0.01%. From this conformity category, it can be seen that there are still discrepancies that occur in the "regional boundary differences" category, the "LSD data differences" category, and the "defense and security area data differences" category. Apart from that, the category "according to the Provincial IAZ" is included in the Draft Regional Regulation for the Revised RTRW of North Sumatra Province in the Indication of Zoning Directions (IAZ) article to accommodate the spatial pattern of the Revised RTRW of Tebing Tinggi City in this category as an activity that is permitted with conditions. The comparison schematic map is presented in **Figure 5**, Conformity category map is presented in **Figure 6**, and the distribution of areas of suitability categories for the spatial pattern planning matching scheme is presented in **Table 3**.

Table 3 Categories of Suitability to the Spatial Pattern Plan Matching Scheme

No	Suitability Category	Area (Ha)
	Matching Scheme (RTRWP; City RTRWK)	
a	In accordance	2,357.40
1	Residential Areas; Residential Area	2,129.78
2	Defense and Security Area; Defense and Security Area	9.35
3	Agricultural Area; Food Crop Area	218.27
b	Compliant with IAZ RTRWP	1,452.04
4	Residential Areas; Green Line	40.38
5	Residential Areas; Mixed Area	226.09
6	Residential Area; Public Facilities and Social Facilities Area	97.59
7	Residential Areas; Urban Infrastructure Area	7.79
8	Residential Areas; Electric Power Generation Area	5.32
9	Residential Areas; Trade and Services Area	661.49
10	Residential Areas; Aquaculture Area	1.94
11	Residential Areas; Office area	20.24
12	Residential Areas; Local Protected Areas	139.52
13	Residential Areas; Defense and Security Area	3.10
14	Residential Area; Industrial Designation Area	97.87
15	Residential Areas; Transportation Area	6.20
16	Residential Areas; Burial	64.69
17	Residential Areas; City Jungle	18.61
18	Residential Areas; Non-Green Open Space	1.17
19	Residential Areas; District Park	37.74
20	Residential Areas; Village Park	2.47
21	Residential Areas; City Park	19.65
22	Defense and Security Area; Public Facilities and Social Facilities Area	0.19
c	Technical Scale Planning	77.73
23	Residential Areas; Water body	53.87
24	Residential Areas; The road	23.86
25	Defense and Security Area; The road	0.00
d	Differences in Regional Boundaries	21.42



No	Suitability Category	Area (Ha)
	Matching Scheme (RTRWP; City RTRWK)	
26	; Water body	6.88
27	; The road	0.01
28	; Green Line	0.11
29	; Mixed Area	2.49
30	; Public Facilities and Social Facilities Area	0.65
31	; Trade and Services Area	10.19
32	; Office area	0.01
33	; Local Protected Areas	0.51
34	; Defense and Security Area	0.01
35	; Residential Area	0.15
36	; Industrial Designation Area	0.11
37	; Food Crop Area	0.18
38	; Transportation Area	0.03
39	; Burial	0.02
40	; City Jungle	0.00
41	; District Park	0.04
42	Residential Areas;	0.04
e	LSD Data Differences	29.55
43	Residential Areas; Food Crop Area	13.95
44	Agricultural Area; Green Line	0.16
45	Agricultural Area; Public Facilities and Social Facilities Area	0.00
46	Agricultural Area; Trade and Services Area	0.95
47	Agricultural Area; Aquaculture Area	0.00
48	Agricultural Area; Local Protected Areas	1.88
49	Agricultural Area; Residential Area	9.83
50	Agricultural Area; Industrial Designation Area	1.65
51	Agricultural Area; Food Crop Area	1.11
f	Differences between Defense and Security Areas	0.21
52	Defense and Security Area; Trade and Services Area	0.21
Total (Ha)		3,938.35

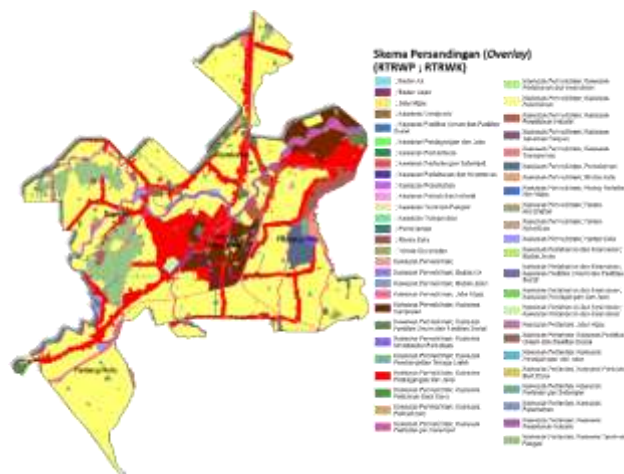


Figure 5. Schematic Map Comparing the Revised RTRW Spatial Pattern Plan for North Sumatra Province with the Revised RTRW Tebing Tinggi City

SYNCHRONIZATION OF THE REVISION OF THE RTRW OF TEBING TINGGI CITY WITH THE REVISION OF THE RTRW OF NORTH SUMATRA PROVINCE CASE STUDY: SPATIAL PATTERN PLAN

Harry Kurniawan¹, Abdiyanto², Abdi Sugiarto²

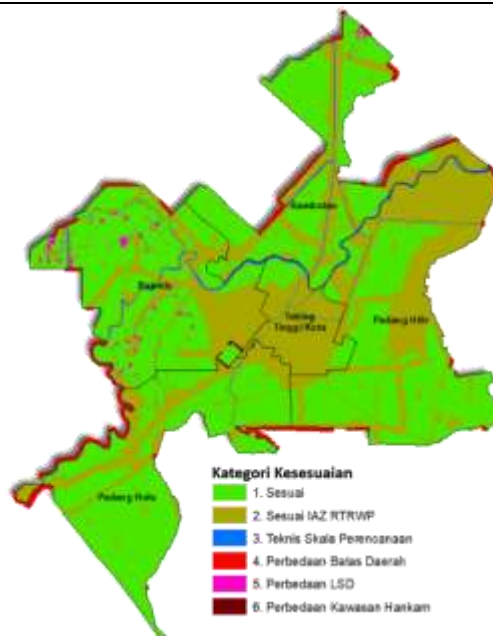


Figure 6. Category Map Conformity of the Revised RTRW Space Pattern Plan for North Sumatra Province with the Revised RTRW of Tebing Tinggi City

4.4 Conformity Typology

The "no problem" typology in Tebing Tinggi City has the largest proportion, namely 98.70%. Meanwhile, the typology "indication of problems" has a proportion of 1.30%. So it can be concluded that in general the majority of the spatial pattern content of the Revised RTRW for Tebing Tinggi City is in sync with the spatial pattern content of the RTRW of North Sumatra Province. The suitability typology map is presented in Figure 7 and the extent of the suitability typology is presented in Table 4.

Table 4 Typology of Suitability for Space Plan Suitability Categories

No	Conformity Typology	Area (Ha)	%
A	No problem	3,887.18	98.70%
1	In accordance	2,357.40	59.86%
2	Compliant with IAZ RTRWP	1,452.04	36.87%
3	Technical Scale Planning	77.73	1.97%
B	Problem Indication	51.17	1.30%
4	Differences in Regional Boundaries	21.42	0.54%
5	LSD Data Differences	29.55	0.75%
6	Differences between Defense and Security Areas	0.21	0.01%
Total (Ha)		3,938.35	100.00%



Figure 7. Typology map of suitability of spatial pattern plans Revision of RTRW for North Sumatra Province with Revision of RTRW for Tebing Tinggi City

4.5 Sync Follow-up

Follow-up synchronization was carried out to complete the matching (overlapping) scheme for the "problem indication" typology. The area of nonconformity indicated as problematic is 51.17 hectares (1.30%). The synchronization follow-up is described as follows:

4.5.1 Synchronization of Regional Boundary Differences

Based on Minister of Home Affairs Regulation Number 128 of 2022 concerning Regional Boundaries of Serdang Bedagai Regency and Tebing Tinggi City, North Sumatra Province (Figure 8), it is known that Tebing Tinggi City as a whole borders Serdang Bedagai Regency with 1 (one) segment forming a complete polygon. Based on this polygon, it is known that the area of Tebing Tinggi City is 3,916.97 hectares, which the 2023 Revised RTRW of North Sumatra Province has used.

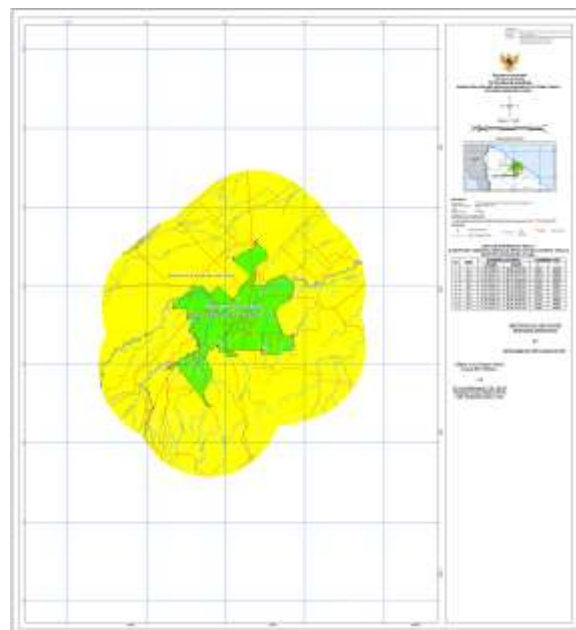


Figure 8. Tebing Tinggi City Regional Boundary Map in Minister of Home Affairs Regulation Number 128 of 2022

SYNCHRONIZATION OF THE REVISION OF THE RTRW OF TEBING TINGGI CITY WITH THE REVISION OF THE RTRW OF NORTH SUMATRA PROVINCE CASE STUDY: SPATIAL PATTERN PLAN

Harry Kurniawan¹, Abdiyanto², Abdi Sugiarto²

Meanwhile, the administrative area depicted in the Revised RTRW spatial plan for Tebing Tinggi City is 3,938.31 hectares. This indicates that there are differences in regional boundaries between the Revised RTRW for Tebing Tinggi City with data from the 2022 Minister of Home Affairs Regulation and the Revised RTRW for North Sumatra Province. The differences in the administrative areas of these areas are +21.34 hectares in Rambutan District, Ba Jenis District, Padang Hulu District, and Padang Hilir District. Presented in Figure 9 and Table 5. The recommended follow-up synchronization regarding this regional boundary mismatch is the improvement of regional boundaries in the Revised RTRW of Tebing Tinggi City which adapts to the definitive regional boundary data (Permendagri No. 128 of 2022).

Table 5 Differences in the Area of Regional Boundaries in the Revised RTRW of Tebing Tinggi City

No.	Regional Boundary Area Data	Area (Ha)
1	Tebing Tinggi City RTRW Revision in 2023	3,938.31
2	Revision of North Sumatra Province's RTRW in 2023	3,916.97
3	Minister of Home Affairs Regulation Number 128 of 2022	3,916.97



Figure 9. Follow-up Map of Synchronization of Regional Boundary Differences

4.5.2 Synchronization of Differences in Protected Rice Fields (LSD)

Based on the Minutes of LSD Clarification in Tebing Tinggi City (regional head's agreement with the ATR Ministry) dated 20 June 2022, it was stated that "The Tebing Tinggi City Government is committed to integrating land designated as Indicative LSD into the Revised Regional Spatial Plan or Detailed Spatial Plan as part of the Food Crop Area or Food Crop Sub Zone." The minutes of the agreement are presented at **Figure 10**.



Figure 10. Minutes of Clarification and Agreement on the Use of Indicative LSD Data in the Tebing Tinggi City RTRW

The difference between the spatial pattern plan for the Tebing Tinggi City RTRW food crop area and the Indicative LSD Data is 29.55 hectares (0.75%). Differences occur in agricultural areas in the Revised RTRW of North Sumatra Province (Indicative LSD) which are allocated as green belts, public facilities and social facilities areas, trade and service areas, aquaculture areas, local protection areas, residential areas, and internal industrial use areas. Tebing Tinggi City RTRW Revision. On the other hand, there are residential areas in the Revised RTRW of North Sumatra Province which are allocated as food crop areas in the Revised RTRW of Tebing Tinggi City. The distortion of these differences can be seen in **Table 3**, the total area of food crops in each data is presented in **Table 6**, and follow-up LSD difference synchronization maps are presented in **Figure 11**. The recommended follow-up to the synchronization process regarding the non-conformity of protected rice fields is to improve the spatial pattern plan for crop areas in the Revised RTRW of Tebing Tinggi City which adapts to the data of the indicative protected rice fields minutes (2022 agreement).

Table 6 Wide Difference Food Crop Areas in the Revised RTRW of Tebing Tinggi City

No.	Regional Boundary Area Data	Area (Ha)
1	Tebing Tinggi City RTRW Revision in 2023	233.52
2	Revision of Provincial RTRW. North Sumatra in 2023	233.87
3	Minutes of the 2022 Indicative LSD Agreement	233.87

SYNCHRONIZATION OF THE REVISION OF THE RTRW OF TEBING TINGGI CITY WITH THE REVISION OF THE RTRW OF NORTH SUMATRA PROVINCE CASE STUDY: SPATIAL PATTERN PLAN

Harry Kurniawan¹, Abdiyanto², Abdi Sugiarto²



Figure 11. Synchronization Follow-up Map of Differences in Protected Rice Fields

4.5.3 Synchronization of Differences in Defense and Security Areas (Hankam)

The difference in Defense and Security Area Data is 0.21 hectares or 0.01% in Tebing Tinggi City, where there are defense and security areas allocated as trade and service areas in the Revised RTRW of Tebing Tinggi City. The recommended follow-up synchronization regarding the non-conformity of defense and security areas is to improve the spatial pattern plan for defense and security areas in the Revised RTRW for Tebing Tinggi City which adapts to the spatial data on land rights in 2022.

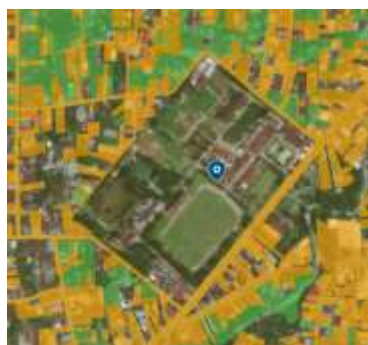


Figure 12. Map of Land Rights in the Defense and Security Area in Tebing Tinggi City

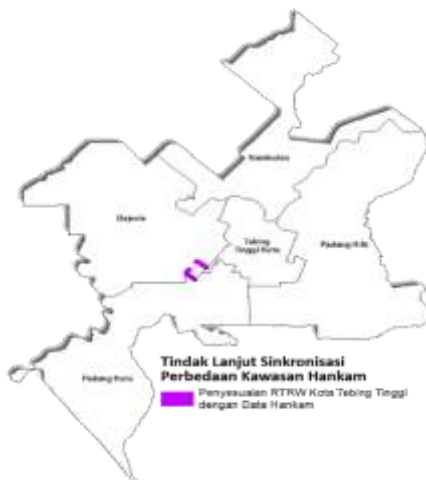


Figure 13. Follow-up Map of Synchronization of Differences in Defense and Security Areas



Overall recommended synchronization follow-up is presented in Table 7.

Table 7 Sync Follow-up

Typology	Category	Synchronization	Area (Ha)
No problem	In accordance	It's Sync	2,357.40
	Compliant with IAZ RTRWP	It's Sync	1,452.04
	Technical Scale Planning	It's Sync	77.73
Problem Indication	Differences in Regional Administrative Boundaries	Adjustment of Tebingtinggi City's RTRW with data from the Minister of Home Affairs	21.42
	LSD Data Differences	Tebingtinggi City RTRW Adjustment with Indicative LSD Data	29.55
	Differences between Defense and Security Areas	Tebingtinggi City RTRW Adjustment with Defense and Security Data	0.21
Total (Ha)			3,938.35

5. CLOSING

5.1 Conclusion

The results of the research concluded several things, namely:

1. The geospatial data overlay technique analyzes the spatial relationships between various spatial elements, this is very helpful in revealing empirical spatial facts and providing better decision making in spatial planning.
2. The comparison (overlay) between the 2023 Revised RTRW spatial pattern plan for North Sumatra Province with the 2023 Revised RTRW spatial pattern plan for Tebing Tinggi City resulted in 53 comparison schemes with a dominance of the suitability category in the "suitable" group of 59.86% and in the "according to IAZ" group. Province" amounted to 36.87%.
3. The comparison scheme in the category "according to the Provincial IAZ" can be included in the Draft Regional Regulation for the Revised RTRW of North Sumatra Province to accommodate the spatial pattern of the Revised RTRW for Tebing Tinggi City in this category as an activity that is permitted under the terms of the Zoning Direction Indication.
4. The "no problem" typology has the largest proportion (98.70%). Meanwhile, the typology "indication of problems" has a proportion of 1.30%. So it can be said that most of the spatial pattern content of the Tebing Tinggi City Revised RTRW is in sync with the spatial pattern content of the North Sumatra Province RTRW.
5. Synchronization follow-up on "problem indications" that must be completed has an area of 51.17 hectares (1.30%). The entire follow-up was completed on the contents of the revised RTRW of Tebing Tinggi City which adapts to the latest regulations/data guardians on regional boundaries, protected rice fields, and defense and security areas.
6. Efforts to synchronize district/city spatial planning with provincial spatial planning to create harmony and integration in space planning and use, as well as resolving basic problems and overlapping conflicts in space use.

5.2 Suggestion

Suggestions from the research results are as follows:

1. This research still considers the synchronization of the content of spatial pattern plans only, so in further research the synchronization of the content of spatial structure plans and the synchronization of the

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Harry Kurniawan¹, Abdiyanto², Abdi Sugiarto²

- content of special provisions in Tebing Tinggi City can be analyzed.
2. This research can also be a consideration for other districts/cities to pay attention to the latest mayoral data on regional boundaries, protected rice fields, and defense and security areas in the process of preparing the Revision of Regency/City RTRW.
 3. It would be best if the agreement on resolving overlapping spatial pattern plans could be stated in the Minutes of Synchronization as evidence in the Substance Approval process for central spatial plans.

REFERENCES

- Astuti, KD, and Mahendra, BI (2015). Synchronization of Spatial Pattern Plans in the Border Areas of Semarang City and Semarang Regency. *CoUSD Proceedings, September 8, 2015* (80-88). <http://ejournal2.undip.ac.id/index.php/jpk/pages/view/Conferences>
- Effendi, TN. 1991. Geography Theories: Thoughts towards Development. *Geography Forum*: No. 09, Year V. <https://doi.org/10.23917/forgeo.v5i2.4677>
- Febriana, MT, and Darmoko, M. (2022). Legal Steps Against Overlapping Disputes Over Land Certificate Rights (Case Study Decision Number 181/B/2020/PT.TUN.SBY). *Judiciary Journal*, 11(1): 102-117. <https://ejournal.fh.ubhara.ac.id/index.php/judiciary/article/view/125>
- Hayati, M. and Sulastri (2022). Authority for Environmental-Based Spatial Management After the Implementation of the Job Creation Law. *Wasaka Law*, 10(1): 64-77. <https://ojs.stihsa-bjm.ac.id/index.php/wasaka/article/view/64>
- Hayuningtyas, FR and Nursadi, H. (2024). Synchronization of LSD Maps with Regional Spatial Plans. *Syntax Literate*, 9(1): 274-285. <http://dx.doi.org/10.36418/syntax-literate.v9i1>
- Nurwadjedi., Rosalina, L., and Wibisono, Y. (2019). Building a Map for Spatial Planning. *National Geomatics Seminar*, February 2019, (3):157-166. <http://dx.doi.org/10.24895/SNG.2018.3-0.946>
- Rahmanto, AL, Muharman, D., and Angraini, NS (2022). Controlling the Conversion of Agricultural Land into Non-Agricultural Land Based on Law Number 41 of 2009. *Journal of Islamic Law and Social Institutions*, 4(2): 545-554. <https://doi.org/10.37680/almanhaj.v4i2.1908>