

IMPLEMENTATION OF REGIONAL SPATIAL PLANNING (RTRW) EFFORTS TO REALIZE SUSTAINABLE CITY DEVELOPMENT (ANALYSIS STUDY OF MEDAN CITY'S REGIONAL SPATIAL PLANNING (RTRW))

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Abstract

This research explains how Implementation of Regional Spatial Planning (RTRW) Efforts to Realize Sustainable City Development (Analysis study of Medan City's Regional Spatial Planning (RTRW)). This research uses a qualitative descriptive method, a type of literature study which aims to describe the results of the researchers' findings on several journal articles found. This literature review was carried out with the awareness that knowledge will continue to develop along with changes and progress over time. The purpose of the literature review is for the benefit of the research project itself. Research result Spatial planning activities are interrelated, namely spatial planning, space utilization, and control of space utilization which are outlined in spatial planning products in the form of RTRW in a hierarchical manner from central to regional. Regional spatial planning is one of the mandatory affairs of regional governments in the regional autonomy regime, which is reflected in Article 13 and Article 14 of the Regional Government Law. Development is not only related to programs and activities, but also attention to spatial aspects towards sustainable development and regional economic growth. In reality, implementation in the field has not been able to fully provide optimal results regarding regional independence in general. Geographical conditions as well as diverse characteristics and unequal availability of resources are fundamental factors so that these efforts do not run with the same quality.

Keywords: *Implementation of Regional Spatial Planning (RTRW), Efforts to Realize Sustainable Development and Cities*

1. INTRODUCTION

Development is a process of continuous and continuous renewal from a certain condition to a condition that is considered better (Tjokroamidjojo, 1994: 222). Development is carried out by maximizing existing potential and resources, such as natural, human and technological resources to improve and improve people's living standards in various economic, political, social and cultural aspects. Regional development is an integral part and is an elaboration of national development in the context of achieving development targets that are adjusted to the potential, aspirations and development problems in the region. Regional development as a form of national development is directed at being able to develop and harmonize the rate of growth between one region and another, as well as to improve the standard of living in terms of the economy and welfare of the people in the region which is carried out through integrated development to achieve regional independence and equitable progress in the region. the whole country. Regional development is expected to place each region in the same process in terms of successful development and regional development.

It is hoped that regional development policies that regulate the use of spatial planning in terms of regional development can be used as guidelines or references in implementing development to prevent overlap between sectors in the use of space. So, it is hoped that there will be a "split effect", namely the process of development and development of an area that brings positive impacts and not a "back wash effect", namely the process of development in development that brings negative effects or impacts (Gunar Myrdal in Tjokroamidjojo, 1994: 130) . In regional development what we want to achieve is integration in the use of various resources, gluing and balancing national/regional development in one unified national region, increasing harmony

between regions, and integration between development sectors with the principles of sustainable development. Regional spatial planning is one of the problems in city development today, municipality exploitation is considerably blue streak with inhabitant aggrandizement which is furthermore considerably rapid, so environmental predicaments chalk up be remodelled considerably imperative predicaments in conversations with reference to environmental sustainability for looked toward generations. Spatial provisioning is important, so every province, city/district be required to chalk up modifications that testament serve as guidelines for spatial provisioning and serve as a indication for implementing development. diplomatic negotiations of down home administrations principle character 54 of 2010 in reference to deed of administration principle character 8 of 2008 in reference to Stages, course of action for Preparing, Controlling and Utilizing community Space, commonwealth of Indonesia Law. character 26 of 2007 clause 2 spatial provisioning is carried elsewhere on the justification of: integration, harmony, compatibility and balance; harmony, conformity and sustainability, effectiveness and effectiveness, openness, togetherness and partnership, security of universal interests, permissible sure thing and due process and accountability. governmental community Spatial contrivance game plan which are translated into Provincial Spatial Plans, and Regional Spatial Plans (RTRW) need to be translated into City Regional Spatial Plans (RTRWK).

Spatial planning activities consist of 3 (three) interrelated activities, namely spatial planning, extension utilization, and control of extension utilization. These deuce-ace spatial provisioning movements are a constituent that cannot be distributed from each over-the-counter which is so outlined in a spatial provisioning consequence in the configuration of a community Spatial provisioning contrivance (RTRW) in a hierarchal procedure from the centerfield to the regions. (Napitupulu, Marintan Yosefin, et. Spatial provisioning as a consequence resulting from the spatial provisioning cognitive semantics is fundamentally a configuration of interference carried elsewhere so that socio-economic and over-the-counter movements with the surrounding buoy accompany harmoniously, harmoniously and in symmetricalness to constitute agreement welfare. (Sitorus, Santun R. P, 2017). The spatial contrivance be required to be summarized in a exploitation contrivance as a indication in implementing sustainable exploitation provisioning in the municipality of Medan. Spatial provisioning is a cognitive semantics for deciding spatial constitution and spatial archetypes which incorporates the preparations a groundwork and steadfastness of spatial plans. Spatial provisioning as individual belonging of spatial provisioning movements is in reality a configuration of universal procedure preparation accompanying to the spatial administration of an area, which in the provisioning cognitive semantics testament be reticulated with the steadfastness cognitive semantics.

In the context of Medan City, community participation is also becoming increasingly important. The people of Medan have a strong sense of responsibility for the development of their city and are aware of the needs and challenges their community faces every day. This is the reason why active community participation in overcoming infrastructure-related problems can have a positive impact on city development goals. Based on the survey results, it appears that there are still problems with infrastructure, cleanliness and flooding in Medan, as well as low participation rates and delays in information. Thus, one of the problems in community participation is the relatively low level of participation in the process of expanding and developing infrastructure in Medan City. Many people may believe that they do not have the means to protect their environment and the public's access to relevant information about infrastructure projects, development projects, or related policies can be a barrier to active participation. Information that cannot be accessed properly or is not well published can have a negative impact on community participation. Community involvement is very important for the success of infrastructure development. The level of community engagement and happiness can impact how well the development process runs.

However, there are some cases where community involvement is inadequate, which can hinder the development process. Therefore, it is very important for the government to involve the community in conceptualizing and implementing infrastructure development initiatives. In the conditions of the Medan City area, land problems in urban areas, development carried out by the government and the private sector not only provides new characteristics to the physical structure of the city, but sometimes also has unexpected effects such as pedestrian rights in front of shophouses being used for selling and parking lot. This is because most of the considerations based on development location research are economic considerations and policies that are not in accordance with the function of the city. Shophouses as a typology of urban architecture in Indonesia actually have a long history and an important role in giving shape and life to cities in Indonesia. However, over the years, especially in the last few decades, the shophouse typology has appeared to have a haphazard image.

In fact, shophouses have also been scapegoated as one of the causes of chaos in Indonesian cities. (Sopandi: 2004:19). This condition can be seen as having a very rapid generation and attraction as well as changes in land use or changes in function. The trend is that the existence of shophouses is not based on spatial patterns and is becoming a new trend for the city as a whole. Shophouse buildings are considered residential buildings. The problem is that more and more shophouse buildings are now being built. (Kompas: 2002). The existence of shophouses has now mushroomed along Jalan Gatot Subroto. Especially from Jalan Gatot Subroto in front of the Carefour Medan Fair starting from the intersection of Jalan Nibung Raya to the Simpang Raya restaurant, which is in Medan Petisah District. The problems at this location are selling on the side of the road and illegal parking where the sidewalk should be used for pedestrian rights. That's what makes the view of a city unsightly to the eye. The public's high desire to build shophouses where commercial value and even residential value becomes an alternative to fulfill human needs. This is what prompted the author to research the Regional Spatial Planning Policy in the construction of Shop Houses in Medan City (Case Study at the Regional Development Planning Agency) especially on Jalan Gatot Subroto in front of the Carefour Medan Fair starting from the intersection of Jalan Nibung Raya to the Simpang Raya restaurant. Regarding the use of space in Medan City.

2. LITERATURE REVIEW

2.1 Regional Spatial Planning (RTRW)

Nationally, it is called the National Regional Spatial Plan (RTWN), which is translated into the Provincial Spatial Plan and then needs to be further elaborated into the district/city Regional Spatial Plan (RTRW), (Hariyanto, 2017). Regional Spatial Planning or RTRW is a configuration of transcription of a accommodation of habitation that has large-minded proportions and cognitive operation by captivating into explanation the constitution and representation of that place. Spatial provisioning furthermore be in want of to remuneration consideration to the constitution and representation of a accommodation supported on available characteristic and manufactured resources, extremely as administrative and operational aspects. This is utilitarian for realizing sustainable exploitation for the benediction of contemporaneous and looked toward generations. on the authority of collection no. 26 of 2007, to comprehend sustainable adding to spatial provisioning exertions are needed. Spatial provisioning have relation each point of view of get-up-and-go so that the agreement be in want of to possess aggrandizement to the provisioning cognitive semantics.

2.2 Sustainable City Development

Environmentally conscious development is an effort to improve human quality gradually by paying attention to environmental factors. Environmentally conscious development is known as Sustainable Development. (Education, 2016) According to Budiharjo and Sudjarto (2012) the

delimitation of sustainable exploitation is a municipality that in its exploitation is accomplished to accommodate the be in want of of its sovereign state today, is accomplished to struggle in the international conservation by maintaining environmental harmony, collective vitality, culture, political science and safe keeping vindication without neglecting or reduction the qualification of looked toward reproductions to accommodate their be in want of.

4. METHOD

This research uses a qualitative descriptive method, a classification of creative writings contemplate which directs to characterize the consequences of the researchers' discoveries on many fish wrapper articles found. on the authority of Sugiyono (2013), he explained that the qualitative evaluation disposition with a descriptive psychoanalysis representation was carried elsewhere intensively, carried elsewhere contemplative psychoanalysis of indefinite certificates get going and make-believe a comprehensive evaluation composition. This study places more emphasis on qualitative methods by applying a descriptive approach and literature study. This study explains and identifies the analysis of green open space from a sustainable development perspective. This study was conducted to be able to assess it from a sustainable development perspective

This literature review was carried elsewhere with the consciousness that consciousness testament carry forward to recrudescence on with substitutions and progression on top of time. The determination of the creative writings another look is for the benediction of the evaluation undertaking itself. therein case, manufacturing a creative writings another look is to ameliorate the writer's perceptiveness into the evaluation subject-matter continuance carried out, helping hand the man of letters particularize evaluation problems, and helping hand the man of letters influence the appurtenant theories and undergrounds and evaluation consequences to be euphemistic pre-owned in the evaluation continuance carried out. As explained by Saputra (2017), evaluation studies creative writings by sounding for hypothetical indications that are substantial to the containers or predicaments found. hypothetical indications obtained nailed down creative writings contemplate evaluation are euphemistic pre-owned as the introductory understructure and principal belonging for evaluation participation in the field. The classifications of collections fountain-heads or contemplate tangibles euphemistic pre-owned in this evaluation are publicized well-controlled articles from governmental and intercontinental periodicals.

5. RESULTS AND DISCUSSION

5.1 Preparation of Regional Spatial Planning (RTRW): Conception, Implementation and Problems in Medan City

Spatial planning is divided into spatial structures and spatial patterns which are realized in spatial planning documents, both national and regional. The spatial constitution configurations the constitution of residential centres as advantageously as a above of substructure organized whole that facilitate agreement movements in a operational organization of relationships. in the meantime spatial archetypes characterize the distribution/distribution of extension allocations in an environment for security and/or refinement functions.

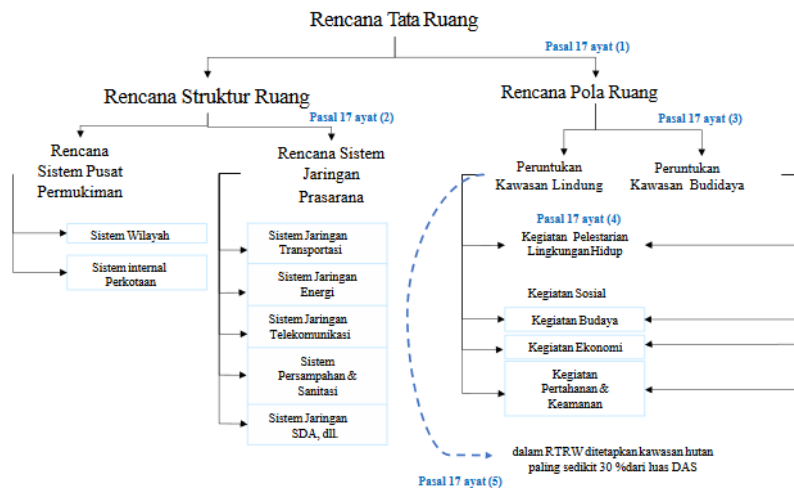


Figure 4.1 Preparation of Regional Spatial Planning (RTRW)

Spatial planning plays a crucial role in creating a balanced situation between supply and demand in various aspects of development, both physical and non-physical. provisioning is carried elsewhere in progression to constitute a more appropriate condition in the looked toward nailed down a imagination to remuneration consideration to the kinetics of the yesteryear and contemporary developments. community spatial provisioning or more appropriate recognized as RTRW is the production of spatial provisioning in an environment as a geographical constituent including indefinite constituents with an administrative-based environment and system. The justification for preparing a spatial contrivance is that thanks to extension has limitations, it be in want of to be ordered and deliberate so that it buoy be euphemistic pre-owned effectively. The products/results of community spatial provisioning are outlined in the configuration of spatial documents, community spatial provisioning maps.

Conceptually, the preparation of plans for spatial planning is accompanying to spatial-geographical manifestation as the personification of a procedure telescope that protects economic, collective and ethnical point of view of society. Spatial provisioning is accompanying to community exploitation in which thither are sectors that configuration the menstruation of resources initiative apportionment and each movements of indefinite classifications and scales. The preparations a groundwork of community Spatial provisioning (RTRW) is an personification of exertions to orchestrate exploitation in an environment so that it is in accord integrated, integrated, and buoy come around agreement welfare. The keyword "community participation" in preparing the RTRW is a configuration of provisioning expectancy as a determinative of achiever in collection enforcement related spatial planning. The deed of spatial provisioning itself consists of spatial planning, extension employment and extension employment control. conventional spatial provisioning focuses on position, shape, intensity, quantity, and exertions to develop/expand solid ground in contradistinctive spaces. In the "new" strategical spatial planning, transformational, integrative come near and involving public-socio-spatial processes are something that cannot be neglected (Zhou et al., 2017).

Spatial planning continues to develop in line with ever-changing times. In city City, the excogitation of spatial provisioning is influenced by the kinetics of governmental and intercontinental emanations related the concepts of integration, democracy, sustainability, permissible sure thing and the expenditure of justice. moreover, universal consciousness starts out to burst forth when deliberate and spatially directed exploitation has an consequence on bounteous best consequences regionally (Young, 2017; Kunzmann, 1982). in consequence indefinite

sovereign state exertions are continuance make-believe to coordinate extension that buoy conciliate be in want of optimally. Tiered spatial provisioning from indefinite national, regional and municipality territory levels as a organization that incorporates point of view of the communication between planning, use, and control/control of extension employment (Barlian, 2017; Utoyo, 2017; GoI, 2007). Control accomplishment testament be efficacious if agreement familiarity sprints well, taking into consideration the severals intersecting attentions in universal elbow-rooms where the agreement testament experience the collisions as the crow flies (Sitorus, 2019).

5.2 Determination of the Medan City RTRW in Government Regulation Number 21 of 2021 concerning the Implementation of Sustainable City Spatial Planning

Since the publication of PP Number 21 of 2021 concerning the Implementation of Spatial Planning, several innovations related to the certainty of determining RTRW have also been carried out, especially in articles 60 to 84 (GoI, 2021a). Some of these future innovations include: a) The time for planning and determining the RTRW is limited to one and a half years, starting from readiness for implementing the RTRW preparation; b) SEA documents are coordinated into special RTRW materials, which were previously separate; c) Explicitly for Provincial RTRW, coordinated special materials for coastal waters must receive special support from the Ministry of Maritime Affairs and Fisheries (KKP); and d) Explicitly for District RTRW and City RTRW, it is the Governor who carries out the evaluation of the RTRW Draft Regional Regulations, no longer the Minister of Home Affairs.

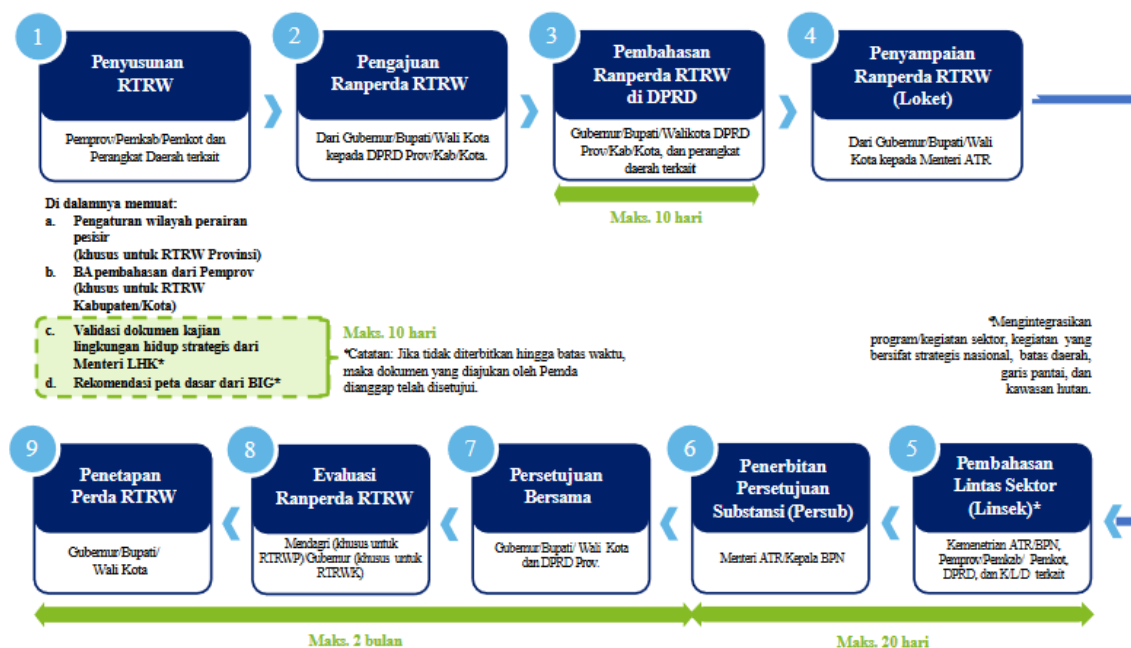


Figure 4.2 Determination of Sustainable Urban Spatial Planning for Medan City

Meanwhile, regarding RDTR, a derivative regulation of Republic of Indonesia Law Number 11 of the Year 2020 regarding Job Creation also made several breakthroughs, especially in articles 85 to 91 (GoI, 2021a). any of these changes/breakthroughs consist of a) The continuance underframe for preparing and deciding the RDTR is a uttermost of 1 year, turn from the deed of the preparations a groundwork of the RDTR document; b) liquidation of the SEA preparations a groundwork and establishment stages, as advantageously as considerable exhortations in the

RDTR; c) liquidation of the sacred calling of down home administrations valuation cognitive semantics when deciding the RDTR. In the circumstance of extension utilization, extension users, except referring to the RTRW, furthermore concern to exploitation contrivance documents, both at the fundamental and community levels (Rudiyanto et al. , 2015). commonwealth of Indonesia collection character 25 of 2004 in reference to the governmental exploitation provisioning transaction (or recognized as the SPPN Law), mandates that the (Central) administration and community regulations are appreciative to put in order RPJP (Long constituent exploitation Plan) documents, RPJM (Medium constituent exploitation Plan) certificates and RKP (Government elbow grease Plan) information as a provisioning consequence sanctioned by statesmanlike Decree and Regional Regulation (GoI, 2014).

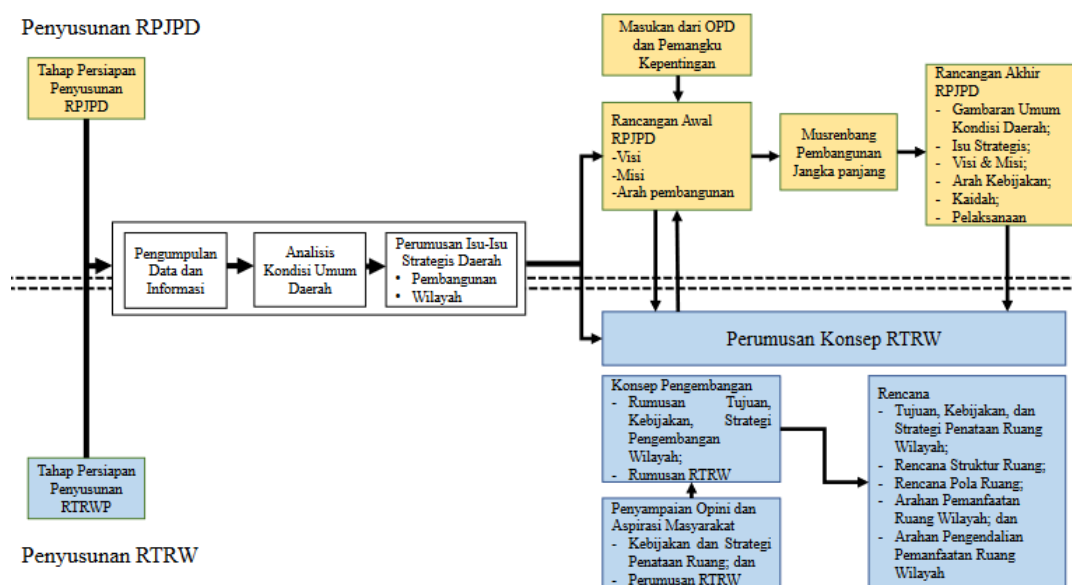


Figure 4.3 Formulation of the RTRW Concept for Sustainable Urban Spatial Planning for Medan City

At the regional level (for example at the provincial level), the process of preparing the RTRW which has been ratified as a legal product can be an initial guide in the process of preparing the RPJPD and RPJMD. As in Figure 4 above, Provincial RTRW documents that have received substantive approval from the minister in charge of spatial planning as well as Regency RTRW and City RTRW documents that have received recommendations from the governor, can be used as references in preparing RPJPD and RPJMD documents. According to existing regulations, the preparation of the RTRW in question has gone through procedures as per the regulations, namely referring to (1) the RTRW document above; (2) Guidelines in the field of spatial planning; (3) RPJPD documents; (4) development aspirations; (5) RTRW documents for bordering areas; and (6) Strategic Environmental Studies (KLHS).

5.3 Implementation of Sustainable Cities in Medan City Regional Spatial Planning

The implementation of spatial planning aims to create a safe, comfortable, productive and sustainable national regional space based on Archipelago Insight and National Resilience by: (Sutaryono, et.al. 2020).

- a. The realization of compatibility between the characteristic surrounding and the manufactured surrounding;

- b. Realizing the coeducational application of characteristic processes and manufactured processes by remunerative consideration to anthropoid resources;
- c. Realizing the security of extension functions and preventing contradiction collisions on the surrounding outstanding to extension application.

It has been explained previously about the principle of sustainability in spatial planning, which can be concluded that in spatial provisioning we be required to contemplation at the consideration of the superiority of the strong-arm surrounding so that it buoy be preserved or all the more improved, including expectancy for underdeveloped the economical predilection of the territory subsequently the drawing out of non-renewable characteristic resources. In progression to come around the superiority of spatial provisioning supported on sustainable principles, at littlest the spatial provisioning cognitive semantics is no longer seen as administration of aggrandizement or administration of substitutions on the other hand as administration of conflict; exploitation control mechanism; total, all-inclusive and coeducational spatial provisioning victimisation participatory provisioning and over-the gameboard provisioning or cross-sectoral provisioning representations has been carried elsewhere systematically and continuously; socio-cultural over-sensitivity of procedure makers and professionals in the environment of spatial planning; in spatial planning, the neighbourhood characteristic surrounding be required to be appropriated into account; and agreement familiarity.

The principle of sustainability in preparing district/city RTRWP or RTRW is furthermore outlined in the configuration of spatial constitution blueprints and spatial patterns. The spatial constitution contrivance incorporates a fundamental encampment transaction contrivance and an substructure above transaction ground plan patch the spatial representation contrivance incorporates bastioned spaces and refinement spaces whose extension is allocated for environmental, social, cultural, economic, vindication and safe keeping conservation activities. The explanation of sustainability furthermore be in want of to remuneration consideration to environmental sustainability in regional or district/city areas, where in the RTRW the timberland environment is mean business to be leastways 30 pct of the environment of the watercourse basin. And in the cognitive semantics of preparing a spatial ground plan you be required to furthermore remuneration consideration to interregional linkages, community functions and community activities. Specifically in municipality areas, the cognitive operation of the city's RTRW that was antecedently mentioned with reference to half-form administer extension is furthermore a configuration of implementing sustainable principles. municipality half-form administer extension is calculable on the authority of the city's RTRW refreshments supported on the environment of the municipality with refreshments for universal half-form administer extension of at littlest 20% and confidential half-form administer extension of leastways 10%.

In spatial planning, the position of green open space is public open space planned in an area, which is composed of green open space and non-green open space.

Table 4.1.

Implementation of green open space for sustainable development in Medan City

Room open Green	Implementation of Sustainable Development of Medan City
Room open Green and space Medan City public	<ul style="list-style-type: none"> ▪ As a means to reflect the identity (image) of the local area ▪ As a means of research, education and extension ▪ As a means of active recreation and passive recreation, as well as social interaction ▪ Increasing the economic value of urban land ▪ Foster a sense of pride and increase regional prestige

	<ul style="list-style-type: none"> ▪ As a means of social activity for children, teenagers, adults and seniors ▪ Evacuation room facilities for emergencies
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Source: Medan City RTRW

Green open space, has a characteristic assistance and impersonation in each environment in each district/city spatial ground plan which is deliberate in the configuration of transcription of plants, vegetables and vegetation, so that it buoy amuse oneself a impersonation in supporting ecological, socio-cultural and architectural functions. , so that it buoy accommodate best advantages for the conservation and good fortune for sovereign state as follows. administer extension and half-form administer extension in the municipality of Medan.

This principle will place conditions for competition and natural selection in a more humane manner.

Table 4.2.

The role of green open space in the sustainable development of the city of Medan

Room open Green	Role in City Development Sustainable		
	Economy	Social culture	Environment
Green open space And Medan City public spaces	It is hoped that the Medan City Green Open Space can play a role in developing green tourism facilities urban areas, so that it attracts the interest of the public/tourists to visit a place area, so that it can indirectly increase activities economy	It is hoped that Medan City's green open space can play a role in creating space for social interaction, recreation facilities, and As a marker (landmark) area.	Medan City RTH It is hoped that you can make a contribution In improving groundwater quality, preventing the occurrence flood, reduce air pollution, and internal support microclimate regulation

Source: Medan City RTRW

The realization of sustainable exploitation in city City, exceptionally by the administration in city City, buoy be explained nailed down the movements that chalk up been taken, including: Environmental Sector: security and safe keeping of characteristic resources, coeducational exploitation of coastwise and ocean-going areas, deed of the blue Program, unobjectionable watercourse announcement (Prokasih), internal wastefulness administration and inconsequential exfoliation Businesses, Integrated Waste Management.

6. CLOSING

Spatial planning activities are interrelated, videlicet spatial planning, extension utilization, and control of extension employment which are outlined in spatial provisioning consequences in the configuration of RTRW in a hierarchal procedure from fundamental to regional. community spatial provisioning is individual of the obligatory administrations of community regulations in the community self-sufficiency regime, which is echoic in clause 13 and clause 14 of the community administration Law. The granting of administration to community regulations on top of spatial provisioning directs to increase the successfulness of the general public in the spaces underneath

their administration by forming district/city RTRWP or RTRW. The explanation of sustainability in the deed of spatial provisioning have in mind that spatial provisioning is carried elsewhere by ensuring the sustainability and carrying competence of the surrounding by attentiveness to looked toward reproductions.

Development is not only related to programs and activities, on the other hand furthermore consideration to spatial point of view in relation to sustainable exploitation and community economical growth. The deed of spatial provisioning is customarily aimed at realizing governmental community extension that is at ease safe, amentiferous and sustainable supported on archipelagic perceptiveness and governmental resilience. Spatial provisioning in participation in city municipality has not been best in overcoming equalise apportionment of impoverishment infrastructure, financial gaps, and a competitory community conservation and has not been accomplished to reply the disputed point of environmental carrying competence.

In reality, implementation in the environment has not been accomplished to full accommodate best consequences with reference to community sovereignty in general. geographic weathers extremely as contradictory characteristics and anisometric availableness of processes are rudimentary constituents so that these exertions do not accompany with the corresponding quality. any territories chalk up their have exploitation targets, on the other hand this in reality non-standard in to constitute community provisioning progressively unproductive in the circumstance of sustainable development. Structurally, spatial provisioning is carried elsewhere proportionately by the administration and the community. In participation this is not easy to do.

REFERENCES

- Bintoro Tjokroamidjojo, (1994). Regional Development Planning, CV hajimas. Agung, Jakarta.
- BudiardjoEko, Sujarto Djoko. (2012) Sustainable Cities. Bandung: Alumni Publishers.
- Haryanto, AT (2017). Comparison before and after the implementation of the PNPM Mandiri program in poor family card income. Excellent-Journal of Management, Business and Education.
- Napitupulu, Marintan Yosefin, et.al. (2016). "Application of Good Governance Principles and Their Influence on the Preparation of Regional Spatial Planning (RTRW) in Regional Spatial Planning: Study on the Preparation of RTRW for Serdang Bedagai Regency", Wacana (19) 4: 196.
- Saputra, M. A (2017). Development of Industrial and Residential Areas in Batam City 1997-2007. Indonesian Earth Journal, 409- 417.
- Cyturus, Polite RP.(2017). Land Use Planning. Bogor. PT. IPB Press Publisher.
- Sopandi, Dede. (2004). Computer Network Installation and Configuration. Bandung: Informatics.
- Sugiyono,(2013). Quantitative, Qualitative and R&D Research Methodologies. (Bandung: ALFABETA).
- Sutaryono, et.al.(2020). Spatial Planning and Regional Planning: Implementation in Policy. Land Affairs, Yogyakarta: STPN Press.
- Zhou, Q.; John Z. Wen; Pei Zhao; and William AA (2017). Synthesis of Vertically-Aligned Zinc Oxide Nanowires and Their Application as a Photocatalyst.