Strategy for Dealing with Slums in the City of Mataram by Implementing Infrastructure Development

Em Zamroni^{1,2}, Ngudiyono^{2*}, Buan Anshari²

¹Office of Housing and Settlements of West Nusa Tenggara Province, Indonesia ²Master Program of Civil Engineering, Faculty of Engineering, University of Mataram, Indonesia ^{*}Corresponding author: ngudiyono@unram.ac.id

Abstract— Slums can be found not only in rural areas but also in cities, including Mataram City. There are several standards for defining slums, including physical elements, building conditions, drinking water supply, road, environmental, drainage conditions, waste water management, and solid waste management conditions. In addition to assessing physical factors, the analysis also evaluates social and economic factors. The objective of this study is to identify the most effective concepts and determine the optimal strategy to reduce slums in these areas. Quantitative and qualitative research methodologies are employed. This study uses the SWOT (Strengths, Weaknesses, Opportunities, and Threats) in combination with the AHP (Analytical Hierarchy Process) analysis method in order to determine which alternative strategies are most appropriate or dominant according to a priority scale. Based on the analysis carried out, it can be concluded that the slum conditions in the dataram City tend more toward Strength and Threat. For this reason, the most appropriate SWOT strategy for dealing with slums in the Mataram City is to use force to eliminate threats. By maximizing existing strengths with a strategy of improving the wastewater management system according to technical standards so that it does not become a source of environmental pollution, tightening regulations regarding the place and time of waste disposal, and encouraging people to become entrepreneurs with the skills they have to improve a decent standard of living, especially for people with low incomes, threats must be avoided.

Keywords— Slum, infrastructure, SWOT analysis, Analytical Hierarchy Process (AHP).

I. INTRODUCTION

Urban slums have always been a significant problem. It appears that ongoing efforts to resolve the issue of slum settlements in urban areas have never adequately addressed one of the primary problems, which is a conundrum. In the socio-cultural order of society, communities residing in slum areas are typically poor or low-income, which is frequently the cause of a decline in discipline and order in various social structures. The Kotaku Program (city without slums) is one of the government's initiatives to address slum communities. The Kotaku Program is a Central Government program implemented nationally by the Directorate General of Human Settlement, Ministry of Public Works and Public Housing (PUPR), in an effort to quickly address slums in urban areas and support the "100-0-100" program, consisting of 100 percent access to water and proper drinking, zero percent slum areas, and 100 percent access to proper sanitation [1]. This program implements an integrated system and a combination of diverse resources and funding sources, namely from the central government, provincial governments, district and city governments, and other stakeholders, both in planning and implementation, with local governments serving as the primary actors (leaders).

The city of Mataram, as one of the cities in Indonesia, is also susceptible to the slum problem. As the provincial capital of West Nusa Tenggara, Mataram's residential population is growing swiftly. This results in a number of issues, such as decreased green open space (RTH), limited land, sanitation, waste management, waste water, and the availability of pure water. Slum settlements, particularly those in the city of Mataram, are caused by the high flow of urbanization, which not only originates from regencies on the island of Lombok but also from the island of Sumbawa and is dominated by lowincome people, the attractiveness of the city, and the growth of the informal sector to absorb labor. On the other hand, limited knowledge and skills result in the inability to negotiate low wages, so structural poverty issues cannot be avoided. The result is the illicit occupation of land as settlements without the provision of utilities and low minimum urban service standards, which inevitably leads to the development of slums.

According to the decree of the mayor of Mataram No: 1096/VII/2020 of 2020 regarding the determination of the location of the slum area of Mataram City for the period of 2020-2024, the City of Mataram has twenty slum villages located in six subdistricts [2]. Physical and nonphysical factors contribute to the existence of a variety of issues in the colonies. So that the City of Mataram does not meet the criteria for physical and non-physical communities, a planned, systematic, and sustainable settlement area development strategy must be considered and developed creatively. This study is anticipated to result in high-quality, effective, and efficient planning that can serve as a guide for the implementation of the Kotaku (city without slums) program in Mataram.

The objective of this study is to identify the most effective concepts and determine the optimal strategy to reduce slums in these areas. Quantitative and qualitative research methodologies are employed. This study uses the SWOT (Strengths, Weaknesses, Opportunities, and Threats) method in combination with the AHP (Analytical Hierarchy Process)



in order to determine which alternative strategies are most appropriate or dominant according to a priority scale.

II. BASIC THEORY

A. Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis Method

The SWOT analysis method is a strategic planning method used to evaluate Strengths, Weaknesses, Opportunities and Threats in an aspect. The SWOT analysis guides to identify the positives and negatives in the existing aspects. This analysis is descriptive in nature and sometimes very subjective, because it could be that two people who analyze a certain aspect of the condition will perceive the four sections differently. The SWOT analysis method is usually considered the most basic analytical method, which is useful for looking at a problem from 4 (four) different sides. The results of the analysis are usually directions/recommendations to maintain strengths and increase the advantages of existing opportunities, while reducing deficiencies and avoiding threats. If used correctly, SWOT analysis will help us to see the sides that have been forgotten or not seen so far. So, SWOT analysis is an analysis of the strengths and weaknesses of a particular aspect in the internal environment as well as the opportunities and threats in the external environment. This involves determining the objectives of the strategy taken and identifying good and beneficial internal and external factors to achieve these goals.

The SWOT strategy is knowing one's own strengths and weaknesses which are internal factors, to seize opportunities and anticipate threats that will arise which are external factors [3]. SWOT is a tool that can be used for qualitative analysis. SWOT is used to systematically identify and analyze various factors that are often used to formulate government strategies in managing their regions. This analysis is grounded in logic in order to maximize strengths and opportunities while concurrently minimizing weaknesses and potential threats.

The SWOT (Strength–Weakness–Opportunity–Threat) analysis is basically a strategy analysis model by synthesizing internal aspects in the form of strengths and weaknesses and external aspects in the form of opportunities and challenges in the form of a matrix [4]. This analysis is used to determine the potential and constraints of regional development. The SWOT analysis compares internal and external factors and divides them into quadrants, each quadrant contains the following strategies, as in Fig. 1 below:



Fig. 1. SWOT Analysis Diagram

- Quadrant I : Is a very favorable situation, has opportunities and strengths so that they can take advantage of the opportunities that exist. In this situation, it is necessary to support a policy of rapid growth.
- Quadrant II : Although facing various threats but has internal strength. The strategy that must be implemented is to use long-term opportunities by way of a diversification strategy.
- Quadrant III : Has a considerable opportunity, but also faces several obstacles. The focus of this strategy is to minimize weaknesses so that they can seize better opportunities.
- Quadrant IV : Is a very unfavorable situation, facing various threats with existing weaknesses.

Furthermore, the tool used to develop strategic factors is the SWOT matrix. This matrix can clearly describe the interaction between internal factors and external factors. An interaction where the opportunities and threats (external) faced can be adjusted to the strengths and weaknesses (internal) possessed.

The SWOT matrix qualitative approach displays eight boxes, the top two are boxes for internal factors (strengths and weaknesses), while the two boxes on the left are external factors (opportunities and threats) [5]. The other four boxes are boxes of strategic issues that arise as a result of meeting points between internal and external factors. Furthermore, four alternative strategies will be made as presented in TABLE I below:

TABLE I. Interaction of SwOT Matrix Factors					
INTERNAL	Strengths (S) Determine the factor of internal strengths	Weaknesses (W) Determine the factor of internal weaknesses			
	Strategi SO	Strategi WO			
Opportunities (0)	Comparative Advantages	(Divestment/Investment)			
Determine the factor of	Create strategies that use	Create strategies that			
external opportunities	strengths to take	minimize weaknesses to			
external opportunities	advantage of opportunities	take advantage of			
		opportunities			
	Strategi ST	Strategi WT			
Threaths (T)	(Mobilization)	(Damage Control)			
Determine the factor of	Create strategies that use	Create strategies that			
external threats	strangths to overcome of	minimize weaknesses to			

TABLE I. Interaction of SWOT Matrix Factors

From TABLE I above it can be seen how the SWOT Matrix can be explained as follows:

threats

SO Strategy : Comparative Advantages

It is a confluence of two elements, namely strength and opportunity so as to provide the possibility for an existing variable to be able to deal with slum problems more quickly. This strategy is made based on the way of thinking, namely by utilizing all strengths to seize and make the most of opportunities.

overcome of threats

ST Strategy : Mobilization

It is the interaction between strengths and threats. Here efforts must be made to mobilize resources which are the strengths of these variables to minimize threats from outside, and then even turn these threats into opportunities. The strategy used is to use the power they have to overcome threats.

- WO Strategy: Divestment or Investment Is the interaction between the weaknesses of a variable and opportunities from outside. The opportunities that are available are very convincing but cannot be exploited because the existing strength is not enough to overcome them. The choice of decisions taken is to let go of existing opportunities or force to use these opportunities. This strategy is implemented based on the utilization of existing opportunities to minimize weaknesses.
- WT Strategy: Damage Control
 - It is the weakest condition of all existing conditions, because it is a meeting between the weaknesses of a variable and external threats. The wrong strategy will not have much impact on the slum problem handling program or it could even be worse than the previous condition. The strategy that must be taken is Damage Control (controlling the negative impact) so that it doesn't get worse than expected. This strategy is based on defensive activities and changes to minimize weaknesses and avoid threats.

B. Analytical Hierarchy Process (AHP) Analysis Method

The Analytical Hierarchy Process (AHP) is a method for solving a complex unstructured condition into several hierarchically arranged components, by giving subjective values about the relative importance of each variable, and determining which variable has the highest priority so that it can affect the results in that condition [6].

The AHP is a multi-criteria decision-making technique that can help find a decision by outlining complex problems into a hierarchical structure [7]. In order to determine the relative relevance of the factor variables at each level of the hierarchy, AHP conducts pairwise comparisons. It may also evaluate the alternatives at the lowest level of the hierarchy sequentially in order to arrive at the optimum choice.

The AHP method is based on three principles, namely the structure of the model; comparative assessment of criteria and/or alternatives; priority alternative. In many studies, AHP has been widely used in solving decision-making problems. The most important thing in AHP is having a functional hierarchy with the main input being human opinion. With a hierarchy, a complex and unstructured problem is broken down into groups and arranged into a hierarchical form.

C. SWOT-AHP Analysis Method

AHP is one of the most widely used multi-criteria analysis methods and has been used successfully in conjunction with SWOT analysis. AHP requires decision makers to make comparisons of factors and assign a numerical rating representing each decision. This decision reflects the decision maker's perception of the relative importance of the factors. Setting a numeric value allows quantitative analysis for verbal comparisons. This process is a technique that uses eigenvalues that give relative priority values to each factor, and allows the most preferred or emphasized factors to be displayed [8]. When AHP is used to compare factors resulting from a SWOT analysis, researchers/practitioners can identify and quantitatively prioritize the most significant strengths, weaknesses, opportunities and threats related to the action plan.

The systematic stages of using the AHP-SWOT method are divided into the SWOT stage and the AHP stage [9]. At the stage of the SWOT analysis method, do:

- 1. Collect and analyze data obtained directly from the field related to the problems under study including an overview of the object of research, environmental management, infrastructure, services and resources owned and other supporting data;
- 2. Analyze data by comparing internal factors (strengths and weaknesses) with external factors (opportunities and threats) by utilizing the model used as a strategy formulation, namely the SWOT matrix which consists of the IFAS matrix and the EFAS matrix;
- 3. Identify variables that can be used for settlement management using SWOT analysis;
- 4. Make discussions and conclusions.

After identifying internal and external factors with the SWOT method. Next, it is necessary to identify the priorities of various alternatives that can be used to deal with slum areas using the AHP (Analytical Hierarchy Process) method. The steps taken are:

- 1. Formation of a hierarchy or alternative of each internal and external factor that allows it to be used in dealing with problems;
- 2. Criteria weighting, where the weighting is done based on the policy of the decision maker by assessing the level of importance of one variable over other variables;
- 3. Calculation of weight criteria and alternative calculations;
- 4. Determination of priority handling.

III. RESEARCH METHOD

Research is a process of scientific inquiry through collecting, processing, analyzing and concluding data based on certain approaches, methods and techniques to answer a problem. In other words, the research method is basically a scientific way to obtain data with specific purposes and uses. Based on this, the scientific method, data, purpose, and usability are the 4 (four) keywords that require attention. The scientific method means that research activities are based on scientific characteristics, namely rational, empirical, and systematic.

In this study using a descriptive method that is relevant to the development of residential areas in the city of Mataram. Descriptive method is a research method used to describe conditions that occur in the present or are ongoing, aiming to describe problems that occur as they should at the time the research is conducted. Some experts say that the descriptive method is the same as a normative survey. With this



Volume 7, Issue 7, pp. 41-48, 2023.

descriptive method evaluation and comparisons are also carried out on things that have been done by other people to deal with similar situations or problems. The results can be used in planning and making decisions in the future. Descriptive research methods in collecting data can be done using interview techniques and field observations [10].

Qualitative methods are used to answer questions about "what (what)", "how (how)", or "why (why)" for a problem, while quantitative methods are used to answer questions "how many (how many, how much)" [11].

Qualitative research methods are interpreted as research that aims to understand the phenomena experienced by research subjects [12]. It is more appropriate to use it to examine matters relating to research on behavior, attitudes, motivation, perceptions and actions of the subject. Qualitative research methods also include the methodology used for research procedures that produce descriptive data. Descriptive data is data written using words in detail. In other words, this type of research cannot use quantitative methods. If quantitative research methods focus more on numbers, then qualitative research methods focus more on exploring the perceptions or experiences of the participants themselves, so that they are subjective.

Qualitative research methods make more effort in investigating the problem. From these problems will be the basis that will be used by researchers in collecting data. Then the researcher determines the variables using an analysis in accordance with the procedures of the applicable statistics. The purpose of a researcher using qualitative methods when conducting research is to understand how a community or individuals accept certain issues. Researchers must also understand and understand and have adequate knowledge regarding the problems to be studied. If the researcher does not understand what will be studied, then the research does not qualify as qualitative research.

One type of qualitative research method that is often used is case study research. Case study is one type of research that focuses on examining the background, interactions and conditions of certain communities. This form of case study is actually more suitable for researching an event, activity, or program in a particular group of individuals. The advantage of this case study research is that it can examine objects in the form of groups, as long as these groups have the same goal. Data collection techniques in case studies can use observation techniques, documentary studies, or use interview techniques.

The characteristics of the qualitative research method in outline are as follows:

1) Hypothesis

Hypothesis is a temporary answer. The hypothesis is a characteristic that must exist in a study.

- 2) Object of Research Object of research is taken from a natural setting, meaning that it is not manipulative or not made up
 3) Instrument of Research
- In qualitative research, the researcher is the main instrument in an effort to collect research data.
- 4) Research Methods

Qualitative research methods focus more on writing descriptive words than using numbers, so qualitative research focuses more on exploring the perceptions or experiences of the participants themselves, so that it is subjective.

The data analyzed in this study are primary data and secondary data. Primary data is data that directly provides data to data collectors [13]. The data obtained is based on the results of observations and the results of interviews conducted with respondents, namely the heads of families who occupy the area and related agencies. The data obtained was collected by the researchers themselves directly from the first source through observation to the location of the research object being carried out. At the research location, the researcher directly conducts research, observes, and records all processes related to research so that it becomes data that can be used when solving problems. Researchers use the results of interviews obtained from informants or related parties regarding the research topic as primary data.

The purpose of this primary data collection is to find out whether the handling of slum problems carried out by the Mataram city government, especially in the 20 (twenty) existing slum urban villages, has been effective or not. Direct observation at the research location to obtain primary data was carried out through several methods, among others:

- a) Observations are made directly by visiting the research location to obtain basic information about the problems encountered in the field;
- b) Documentation is carried out to obtain an overview in the form of photos of significant conditions at the research location related to existing slum problems;
- c) Interviews were conducted directly with respondents at the research location. Questionnaire and interview formats were made according to research needs. The information needed from the interview is in the form of:
 - 1) Physical data
 - General information, such as the number of heads of households, number of family members, address, and household status (Low Income Society or not);
 - Regularity of building occupancy;
 - The occupancy of the building;
 - Residential sanitation management;
 - Home waste management
 - 2) Non-physical data
 - Source of family financial income;
 - Service of social facilities and economic facilities;
 - Aspects of building and land ownership

Primary data was obtained through direct observation to research locations such as population data, data on the number of houses, data on environmental road conditions, clean water and so on. While secondary data was obtained in various media such as magazines, newspapers, books, journals and other documentation related to research on slum areas in 20 (twenty) slum villages in the city of Mataram, such as:

- a) Regional Regulation of Mataram City No. 5 of 2019 [14];
- b) Decree of the Mayor of Mataram No. 1096/VII/2020 of 2020 [2];



- c) Urban Slum Prevention and Quality Improvement Plan (RP2KPKP) Review of 2020 [15];
- c) Information from the Central Statistics Agency (BPS) of Mataram City in the form of data and conditions of the local population [16];
- d) Existing data of the location area which is the object of this research.

The initial step is to use the SWOT analysis method, where in this step the existing factor variables will be identified to determine Strengths and Weaknesses which are internal factors, to seize Opportunities and anticipate Threats that will arise which are external factors. Identification of internal and external factors is done by studying documents, interviews, and conducting a preliminary survey at the research location. Internal factors and external factors in handling slum areas are considered to influence positively or negatively in planning and implementing slum handling programs. This stage is very important because the results of this identification will be the basis for subsequent analysis activities.

In the next step, after identifying internal and external factors with the SWOT method, these factor variables are analyzed using the AHP (Analytical Hierarchy Process) method to determine and determine which variable has the highest priority from various alternatives that can be used in handling slum areas in the city of Mataram.

The stages of the research flow carried out are presented in the research flowchart (Fig. 2)



Fig. 2. Research Flow Chart

http://ijses.com/ All rights reserved The research was conducted in the Mataram City area based on the Decree of the Mayor of Mataram Number: 1096/VII/2020 about Determination of the Location of Slum Areas with a slum area of 112.60 Ha (3.337%) spread across 20 (twenty) slum villages in the city Mataram.

Administrative boundaries and profiles of the Mataram city slum areas are shown in Fig. 3, and Fig. 4 below [15]:



Fig. 3. Administrative Boundaries of Mataram City

Based on Fig. 3 above, administratively the City of Mataram is divided into 6 (six) sub-districts and 50 (fifty) villages, with the administrative area of each sub-district: Ampenan 946 Ha (15%), Sekarbela 1,032 Ha (17%), Mataram 1,076 Ha (17%), Selaparang 1,077 Ha (18%), Cakranegara 967 Ha (16%), and Sandubaya 1,032 Ha (17%)



Fig. 4. Slum Delineation Map of Mataram City

Based on Fig. 4 above, it can be seen that the slum delineation of the city of Mataram is dominated by the light slum category (yellow) which is spread in almost all subdistricts in the city of Mataram, as well as several areas that fall into the medium slum category (orange).



IV. RESULT AND DISCUSSION

TAI	BLE II. Internal Factor Matrix (IFAS) dan Extern	al Factor	Matrix	(EFAS)
No.	Internal Factor	Weight	Score	Value
	Strengths			
1	Construction of a Wastewater Sewerage	0,40	4,00	1,60
	Channel (SPAL) and a Communal Wastewater			
	Treatment Plant (IPAL)			
2	There is a Regional TPA between Mataram	0,40	5,00	2,00
	City and West Lombok Regency which is			
	managed by the province			
3	Formation of a waste management group in the	0,20	5,00	1,00
	village			
	Total Strengths Value	1,00	14,00	4,60
	Weaknesses			
1	Low public awareness and understanding of	0,50	4,00	2,00
	wastewater management systems that comply			
	with technical standards			
2	Not yet optimal partnership between the	0,20	3,00	0,60
	community, government and the private sector			
	in the waste sector			
3	There is still a lack of garbage collection	0,30	5,00	1,50
	facilities (garbage motorbikes)			
	Total Weaknesses Value	1,00	12,00	4,10
	Score Difference (Strengths – Weaknesse	es)		0,50
No.	External Factor	Weight	Score	Value
	Opportunities			
1	APBN budget for waste sub-sector through	0,25	3,00	0,75
	BPPW NTB (TPST, TPS3R and TPA)			
2	NTB Province Zero Waste Program by	0,45	5,00	2,25
	encouraging waste sorting and recycling			
	starting from the source			
3	Collaboration between the village and the	0,30	3,00	0,90
	private sector regarding Corporate Social			
	Responsibility (CSR) to the community			
	Total Opportunities Value	1,00	11,00	3,90
	Threats			
1	The increase in the population of the city of	0,25	5,00	1,25
	Mataram causes an increase in the volume of			
	landfills			
2	The increase in population that is not balanced	0,55	5,00	2,75
	with adequate housing and settlement facilities			
	and infrastructure causes the wastewater			
	management system to increasingly not comply			
	with technical standards			
3	The spirit of self-help and community	0,20	5,00	1,00
	aconaration bagan to wana			
	cooperation began to walle			
	Total Threats Value	1,00	15,00	5,00

Opportunity



Fig. 5. SWOT Analysis Quadrant

Fig. 5 above shows that the results of the SWOT Internal Factor Matrix (IFAS) and External Factor (EFAS) analysis are

more towards quadrant II, namely the interaction between Strength (Strength) and Threat (Threat) [4]. This condition is a situation that requires a strategy to use force to overcome threats in order to deal with the slum problem in the city of Mataram. Here efforts must be made to mobilize resources which are the strengths possessed to minimize external threats, even then turn these threats into opportunities. Based on the SWOT analysis, the right strategy was obtained, including improving the waste water management system according to technical standards so that it does not become a source of environmental pollution, providing understanding to the public so that they do not throw garbage anywhere, and improving the quality of human resources and low community income through skills training (S1, T2, T3, S1, S3).

After identifying internal factors and external factors with the SWOT method, a strategy will be obtained that can be used to deal with the problem of slum areas in the city of Mataram [5].

TABLE III. SWOT Factor Strateg	3
--------------------------------	---

	SO Strategy				
1	Maximizing the APBN budget through BPPW and BP2P for handling				
	slum areas				
2	Support the NTB Province Zero Waste program by encouraging waste				
	sorting and recycling starting from the source				
3	Increasing collaboration between the village and the private sector				
	regarding Corporate Social Responsibility (CSR) to the community				
	ST Strategy				
1	Provide understanding to the public not to throw garbage anywhere				
2	Build waste water facilities and infrastructure according to technical				
	standards so that it is balanced with an increase in population				
3	Encouraging the spirit of self-help and community cooperation				
WO Strategy					
1	Providing socialization related to the community's understanding of the				
	waste water management system according to technical standards				
2	Encouraging the optimization of partnerships in the waste sector and				
	increasing public awareness in waste management				
3	Organize waste collection facilities (garbage motorbikes)				
WT Strategy					
1	Tighten regulations regarding the place and time of waste disposal				
2	Controlling the rate of population growth and tightening regulations				
	related to the population system in the city of Mataram, especially for				
	immigrants from outside the area				
3	Increase understanding and self-help spirit of the community about the				
	importance of waste water management to keep the environment healthy				

In TABLE IV below, the priority level results are obtained based on the AHP calculation from the results of the SWOT processing that has been carried out [6]. The Strengths factor indicates that the factor that is a top priority to be maintained and developed is the existence of a regional TPA between the City of Mataram and West Lombok Regency which is managed by the province (S2), then there is the construction of a sewerage canal (SPAL) and a communal wastewater treatment plant (IPAL) (S1), and formation of a waste management group in the village (S3). Optimizing the function of the Regional TPA between Mataram City and West Lombok Regency which is managed by the province. Building a SPAL and a communal IPAL especially for densely populated settlements, is also important to prevent environmental pollution of settlements. Then form a waste



management group to facilitate waste management starting from the village scope.

SWOT Factor		Variable Factor	Weight	Rank
	1.	Construction of a Wastewater		
		Sewerage Channel (SPAL) and a	1.60	2
		Communal Wastewater Treatment	1,60	2
		Plant (IPAL)		
Strongthe	2.	There is a Regional TPA between	2,00	
Strengths		Mataram City and West Lombok		1
		Regency which is managed by the		1
		province		
	3.	Formation of a waste management	1,00	
		group in the village		3
	1.	Low public awareness and		
		understanding of wastewater	• • • •	1
		management systems that comply	2,00	1
		with technical standards		
***	2.	Not yet optimal partnership between		
Weaknesses		the community, government and the	0,60	3
		private sector in the waste sector	- ,	
	3.	There is still a lack of garbage		
		collection facilities (garbage	1,50	2
		motorbikes)		
	1.	There is a APBN budget for the		
		solid waste sub-sector through	0,75	2
		BPPW NTB (TPST, TPS3R and		3
		TPA)		
	2.	NTB Province Zero Waste Program		
Opportunities		by encouraging waste sorting and	2,25	1
		recycling starting from the source		
	3.	Collaboration between the village		
		and the private sector regarding	0,90	2
		Corporate Social Responsibility		2
		(CSR) to the community		
	1.	The increase in the population of the		
		city of Mataram causes an increase in	1,25	2
		the volume of landfills		
	2.	The increase in population that is		
		not balanced with adequate housing		
		and settlement facilities and		
Threats		infrastructure causes the waste	2,75	1
		water management system to		
		increasingly not comply with		
		technical standards		
	3.	The spirit of self-help and	1,00	
		community cooperation began to		3
		wane		

Source: Analysis Research, 2023

On the Weaknesses factor, it shows that the factors that are the main priority to be improved are low public awareness and understanding of wastewater management systems that comply with technical standards (W1), then there is still a lack of garbage collection facilities (garbage motorbikes) (W3). Not yet optimal partnership between the community, government and the private sector in the waste sector (W2). Public awareness and understanding of the wastewater management system according to technical standards is the main factor so that people do not dispose of their household wastewater anywhere because it can become a source of environmental pollution. Garbage collection facilities are also needed so that it is easier for the community to transport their household waste to the TPS. Optimization of partnerships between communities, government and the private sector in the waste sector needs to be improved so that all sectors work together in waste management issues.

The Opportunities factor indicates that the factor that is the top priority for development is the NTB Province Zero Waste Program by encouraging waste sorting and recycling starting from the source (O2), then there are collaboration between the village and the private sector regarding Corporate Social Responsibility (CSR) to the community (O3). Then there is also the APBN budget for the solid waste sub-sector through BPPW NTB (TPST, TPS3R and TPA) (O1). The NTB Province Zero Waste Program is very helpful in increasing public understanding, especially regarding waste selection and recycling so that people can distinguish and sort organic waste, inorganic waste and residual waste. Then cooperation with the private sector through CSR also needs to be encouraged so that the community and the private sector also take part so that the handling of waste problems can be resolved quickly. Then from the funding side, the budget for the solid waste sub-sector also needs to be supported not only by the local government but also by the central government through BPPW.

In the Threats factor, it shows that the factor that is the main priority to watch out for is The increase in population that is not balanced with adequate housing and settlement facilities and infrastructure causes the waste water management system to increasingly not comply with technical standards (T2), then the increase in the population of the city of Mataram cause an increase in the volume of landfills (T1). Then the spirit of self-help and community coorporation begun to wane (T3). Controlling the rate of population growth and tightening regulations related to the population system in the city of Mataram must be increased so that the permanent population can be balanced with a waste water management system that complies with technical standards, as well as to prevent the increasing volume of household waste. In addition, the spirit of self-help and mutual cooperation in the community must also be maintained so that the community can work hand in hand in handling slum problems.

V. CONCLUSION

Based on the analysis and discussion carried out, it can be concluded that the slum conditions that occurred in the city of Mataram are more towards Strength and Threat (ST). For this reason, the right SWOT strategy in dealing with slum areas in the city of Mataram is to use force to overcome threats. Threats are the main thing that must be avoided by maximizing existing strengths by starting to provide understanding to the community not to litter, then build wastewater facilities and infrastructure according to technical standards so that it is balanced with the increase in the population of the city of Mataram, as well as encouraging the spirit of self-help and the spirit of community cooperation to protect the environment from slum problems together.

ACKNOWLEDGMENT

Thanks to the help of all parties during the preparation of this paper, the writing of this paper can be completed easily. Thank you to everyone who helped with the writing of this



paper, especially the supervising lecturers, who were quite active in offering guidance and suggestions.

REFERENCES

- Anonymous, "Regulation of the Minister of Public Works and Public Housing of the Republic of Indonesia No. 14 of 2018 about Prevention and Improving the Quality of Slum Housing and Slums," Jakarta: 2018
- [2] Anonymous, "Decree of the Mayor of Mataram No. 1096/VII/2020 about Determination of the Location of Slum Residential Areas of the City of Mataram for 2020-2024," Mataram: 2020
- [3] R. J. Kodoati, "Introduction to Infrastructure Management," in *Pustaka Pelajar*, Yogyakarta: 2005.
- [4] Rangkuti, Freddy, "Techniques for Dissecting Business Cases SWOT Analysis How to Calculate Weight, Rating, and OCAL," in *PT. Gramedia Pustaka Utama*, Jakarta: 2013.
- [5] Kearns, Kevin P. (1992) From Comparative Advantage to Damage Control. Clarifying Strategic Issues Using SWOT Analysis. Jossey Bass: Non Profit Management and Leadership, Vol 3, No. 1, Fall 1992.
- [6] T. L. Saaty. "Decision Making with The Analytic Hierarchy Process," Int. J. Service Sciences, vol. 1, No. 1, 2008.
- [7] A. Gorener, "Application of Combined SWOT and AHP: A Case Study for a Manufacturing Firm," *Proceedia - Soc. Behav. Sci.*, vol. 58, pp. 1525–1534, 2012.
- [8] S. W. Margles, M. Masozera, L. Rugyerinyange, and B. A. Kaplin, "Participatory planning: Using SWOT-AHP analysis in buffer zone

management planning," J. Sustain. For., vol. 29, no. 6, pp. 613-637, 2010.

- [9] R. D. C. Evan Filbert, Akhmad Nidhomuz Zaman, Ade Rahman Prabowo, and Finka Nabila, "Study of Business Development Strategies in the 'Scout Shop' Convection Industry in Cibubur," *Semin. dan Konf. Nas. IDEC*, pp. 7–8, 2018.
- [10] M. Nazir, "Metode Penelitian," in *Ghalia Indonesia*, Cetakan ke-9, Bogor: 2014
- [11] K. McCusker and S. Gunaydin, "Research Using Qualitative, Quantitative or Mixed Methods and Choice Based on the Research," Perfusion, 30, 537-542, 2015.
- [12] Moleong and J. Lexy, "Qualitative Research Methodology," in PT. Remaja Rosdakarya, Edisi Revisi, Bandung: 2007.
- [13] Hikmawati and Fenti, "Research Method," in *Gaja Grafindo*, Depok: 2017.
- [14] Anonymous, "Regional Regulation of Mataram City No. 5 of 2019 about Amendment to Regional Regulation No. 12 of 2011 about the Regional Spatial Plan of Mataram City (RTRW) for 2011-2031," Mataram: 2019.
- [15] Anonymous, "Urban Slums Prevention and Quality Improvement Plan (RP2KPKP) for the City of Mataram, Review of 2020," Mataram: 2020.
- [16] Anonymous, "Data and Conditions of The Local Population," Central Statistics Agency (BPS) City of Mataram, Mataram: 2023.