

Achieving Open Defecation Free using External and Internal Factor Analysis

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Abstract—Proper sanitation will ensure the community is in a healthy environment and reduce most infectious diseases' transmission. Open defecation has a considerable effect on public health. Sanitation coverage data from the Ministry of Health in 2018 shows that open defecation is still high, including in the city of Bandung. The government has launched an open defecation-free (ODF) program since 2014. This study aims to analyse the situation of an urban village in Bandung City in achieving ODF. This research is qualitative through Focus Group Discussion, in-depth interviews, and observations with informants, including stakeholders, cadres, environmental organizations, and health workers. Based on the calculation, it is found that the position of this village is in quadrant two of the Cartesian diagram. This village needs to make efforts to take advantage of external opportunities and overcome internal weaknesses.

Keywords—situation analysis, open defecation, open defecation free

I. INTRODUCTION

Through Health Law no. 36 of 2009, the government of the Republic of Indonesia states that environmental health is held to realize a healthy environmental quality. A healthy environment includes sanitation facilities and drinking water facilities that meet the requirements in settlements and public places [1].

Health Law No. 36 of 2009 is in line with Blum's theory which states that environmental factors and behavioural factors are the most critical determinants of human health. Proper sanitation will ensure the community is in a healthy environment and reduce most of the transmission of infectious diseases [2].

Open defecation has a considerable effect on public health. Contamination of human waste and poor hygiene behaviour is still the highest cause of death in children, lack of nutrition, and stunting [3].

Based on data on sanitation coverage from the Ministry of Health in 2018, only 28 cities and one province managed to get the ODF (Open Defecation Free) predicate in Indonesia. It

shows that the behaviour of open defecation is still high, including in the city of Bandung [4].

To earned open defecation free, good environmental health management is needed. This study aims to analyse the situation of a village in Bandung City in achieving ODF.

II. METHODS

This research is qualitative research conducted in a village in the city of Bandung. Data collection was carried out through Focus Group Discussion with 16 cadres, in-depth interviews with 6 informants. They include stakeholders, cadres, environmental organizations, and health workers (Head of the village, representatives of Non-Governmental Organizations, and representatives of cadres), and field observations in the village to construct communal septic tanks.

The cadres who participated in the Focus Group Discussion were chosen by the head of the village and active cadres in the village. Informants in in-depth interviews were:

- Representatives from the government (head of the village)
- Representatives of Non-Governmental Organization, and
- Beneficiaries in the village (cadres).

Both FGDs and in-depth interviews were focused on obtaining data on the strengths, weaknesses, opportunities, and threats that occurred in the village in achieving ODF. The observations in this study are participatory observations, where the researcher places himself as the object being studied. Data from the FGD and in-depth interviews were recorded before being made into a transcript ad verbatim. The transcripts were then processed by grouping several informant statements based on the themes that emerged. The themes that appear are coded to facilitate data processing.

The data was taken in May-August 2021. The data taken include the strengths, weaknesses, opportunities, and threats that occur in the village in achieving the ODF predicate and then a strategic factor analysis is carried out.

III. RESULTS

Geographically, this village is in the center of Bandung city. This area is a densely populated area with minimal land. The distance between the houses is very close, so that the residents' houses are built in terraces. This village is crossed by a river, which was used to dispose of human waste.

IV. OPPORTUNITIES

In achieving ODF, this village has many opportunities in the form of assistance from the central government through the Ministry For Public Works and Human Settlements and the Citarum Harum program. In addition, the Bandung city government provides the Regional Development and Empowerment Innovation Program (PIPPK), which can be allocated for ODF. Furthermore, the private sector, such as the University, also contributed to the achievement of ODF.

V. THREATS

There are not many threats that can complicate the achievement of ODF in this village. The threats raised by residents in installing communal septic tanks include unfavourable weather, which will cause floods and septic tanks to be broken. Another threat is in the form of hoax news about septic tanks that can discourage residents from installing communal septic tanks.

VI. STRENGTH

The strength of this village in achieving ODF is derived from many things. According to the researcher's observations, this village is led by a very competent person passionate about attaining ODF. The incumbent village head is also proactive in seeking cooperation and opportunities to accelerate ODF status.

Residents who already know the function and knowledge of communal septic tanks are highly enthusiastic about installing them in their areas. The high enthusiasm of citizens makes Human Resources in the manufacture of communal septic tanks always available.

VII. WEAKNESS

This village has many weaknesses in achieving ODF. Cadres, non-governmental groups, and the Village Head believe that funding is the main obstacle in achieving ODF status.

This village is a densely populated village with a river that runs in the middle. Limited land makes it difficult for residents to build septic tanks, so they drain their waste into waterways.

Even the installation of communal septic tanks requires a good strategy. First, the contours of the village's land are uneven, so the pipe installation process must be engineered to prevent sediment occurrence. The last obstacle is the refusal to install a septic tank, especially from residents who do not know

the dangers of open defecation and the function of a communal septic tank.

VIII. DISCUSSION

After obtaining data on the opportunities, threats, strengths, and weaknesses of the village, an analysis of external and internal factors that influence the village in achieving ODF can be analysed.

External and Internal Factor Analysis is an analysis of an organization's internal and external environment that can be used to formulate organizational strategy. The steps taken include formulating opportunities and threats in external factors and formulating strengths and weaknesses in internal factors (See table 1 and 2).

Each external and internal factor is given a weight, where the total weight of each factor is 100. Each external and internal factor is also rated 1 to 5 based on the organization's response to these factors. The weights and ratings are multiplied, then added up.

TABLE I. EXTERNAL FACTOR ANALYSIS

External Factor	Weight	Rating	Weighted Score	Comment
Opportunities				
Central Government Assistance	30	4	120	Ministry For Public Works and Human Settlements, Citarum Harum Program.
City Government Assistance	30	4	120	Allocation of funds from PIPPK.
Private Sector Assistance	20	3	60	CSR.
Threats				
Unfavourable weather	10	2	-20	Rainy season complicates septic tank installation.
Hoax news	10	1	-10	Can be overcome with education.
Total	100		270	

TABLE II. INTERNAL FACTOR ANALYSIS

Internal Factor	Weight	Rating	Weighted Score	Comment
Strengths				
Village head	25	4	100	Very competent, enthusiast, and proactive in achieving ODF
Resident's enthusiasm	5	2	40	
Human resources	5	2	20	The community wants to help installation of septic tank.
Weaknesses				
Fund	30	4	-120	Can be overcome with assistance and budget allocation. This finding is consistent with Rathomi's study [5].
Narrow land	20	4	-80	Can be overcome by installing a communal septic tank on the riverbank. This finding is consistent with Sugiharto's study [6].
Uneven ground contour	5	1	-5	Can be overcome by proper plumbing.
Resident's refusal	10	1	-10	Can be overcome with education. This finding is consistent with Rathomi's study [5].
Total	100		-55	

IX. SWOT POSITIONING

The results of the External and Internal Factors analysis were entered into a Cartesian diagram. Organizational strategy will depend on the location of the Cartesian diagram. Quadrant 1 (Strengths-Opportunities) is an ideal condition, where a strategy is needed to use strengths to get opportunities. Quadrant 2 (Weaknesses-Opportunities) is a condition where the organization must take advantage of opportunities to overcome weaknesses. Quadrant 3 (Weaknesses-Threats) is a condition where the organization must be defensive, minimize weaknesses and avoid threats. Quadrant 4 (Strengths-Threats) is a condition where the organization must use its strengths to overcome threats.

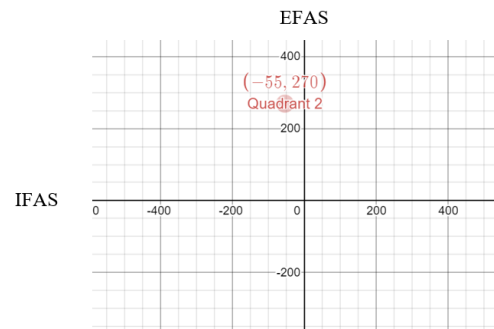


Fig. 1. Cartesian diagram on the SWOT analysis of ODF.

Based on the results of this study (figure 1), it was found that this village is in quadrant 2. The strategy that needs to be taken in quadrant 2 is to take advantage of opportunities to overcome weaknesses. An example of this strategy is to find parties who are willing to fund the installation of communal septic tanks on riverbanks.

X. CONCLUSION

The SWOT analysis to analyse the management of environment to achieved ODF is very useful to ensure the program delivered good results.

CONFLICT OF INTEREST

The authors declare no conflict of interest

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