

ANALYSIS OF BASIC SANITATION IN KUDUS REGENCY

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Abstract. The United Nations together with all countries of the world in 2015 has set a sustainable development agenda consisting of 17 goals. One of the objectives is related to the fulfillment of proper basic sanitation for the community in 2030. In Indonesia, the coverage of basic sanitation for the community will only reach 80%, while in Central Java in 2022 access to basic sanitation will only cover 83% of households. This study's goal was to evaluate Kudus Regency's fundamental sanitary infrastructure in Kudus Regency which consists of 4 indicators, namely access to clean water, latrines, waste management, and sewerage systems. This type of research is a quantitative descriptive study, with a cross-sectional design. The number of samples studied amounted to 30 households. The instrument used is in the form of an observation sheet that refers to the regulations of the Minister of Health. The results showed that 86.7% of households had access to properly clean water, 93.3% of households had unhealthy latrines, 86.7% of households did not have a waste management system, and 93.3% of households did not have a waste management system. wastewater treatment. The government needs to make strategic policies and programs to address basic sanitation problems in Kudus Regency.

Keywords: Basic Sanitation

INTRODUCTION

2015 saw the adoption of the 2030 Agenda for Sustainable Development Goals (SDGs) by the United Nations. 17 goals represent this agenda. The SDGs propose to change our world. They serve as a call to action to save the environment and make sure that everyone has access to health, justice, and prosperity. Everyone must be included. Public health has three objectives: ending hunger, promoting health and well-being, and ensuring clean water and sanitary facilities (WHO, 2017).

One of the SDGs calls for the availability, sustainability of water, and the management of sanitation. More than 733 million people are now living in nations that experience severe water stress. And more than 3 billion people lack access to drinking water that is properly maintained. The lack of access to sanitation around the world has been made severe by the COVID-19 pandemic and climate change (United Nations, 2019).

In Indonesia, 90% of people can access safely managed drinking water, but the distribution is not evenly distributed. More than 50% of provinces in Indonesia lack access to safely managed drinking water. However, the fact is that Indonesian people use more bottled drinking water than water from wells and springs for daily consumption. This problem shows that access to eligible drinking water in Indonesia is still low. While on access to sanitation, the percentage of households that have access to proper sanitation is 80%. Access to sanitation is also evenly distributed in all provinces in Indonesia (Kemenkes RI, 2022).

Central Java is one of a province in Indonesia with access to proper drinking water is high. Based on the 2022 Ministry of Health Report, 93% of people in Central Java can access proper drinking water. While on sanitation access, 83% of households in Central Java have access to proper sanitation (Kemenkes RI, 2022). But, Central Java Province is not included in the top 10 provinces in Indonesia with access to proper sanitation. There is a gap between urban and rural communities in access to proper sanitation in Central Java. In urban communities, easier to get access to proper sanitation than in rural communities.

A household is said to have access to proper sanitation if it has its sanitation facilities, uses a gooseneck toilet, has a waste treatment facility, and has a septic tank. There are still many rural communities in Central Java that lack access to these criteria for proper sanitation. The percentage of livable houses in Central Java is also decreasing, from 67,9% in 2020, to

66,4% in 2021 (Badan Pusat Statistik Provinsi Jawa Tengah, 2021).

Based on 2022 the health profile of Central Java, 79% of households in the Kudus Regency don't have access to proper drinking water. Even though Kudus Regency is an industrial area, there are still big problems with basic sanitation, especially with access to clean water for the public. Low access to proper drinking water has an impact on public health and can increase the risk of communicable diseases, such as diarrhea, cholera, dysentery, typhoid fever, and hepatitis A (Badan Pusat Statistik Provinsi Jawa Tengah, 2021).

According to Kurniawati, Arini, Awwalini, and Pramesti's study on the connection between toddlers' diarrhea cases and basic sanitation, regularly cleaning the home, washing hands with soap, and boiling water before drinking are some ways to lessen the spread of diarrheal disease. (Kurniawati, Arini, Awwalina, & Pramesti, 2021). Other research shows that the aforementioned sanitary hygiene is practiced to lessen or get rid of bacterial contamination in drinking water (Veza Azteria, 2023).

In previous studies, research was conducted on the content of coliform bacteria in beverages in Kudus Regency. Based on this research, it is known that 83% of drinks (es dawet) in the Kudus Regency have coliform bacteria (Caesar & Rohmah, 2021). Therefore, researchers conducted further research on basic sanitation conditions in Kudus Regency, with 4 indicators clean water supply, latrine, waste management, and sewerage system.

METHODS

This study uses a survey method and is a sort of descriptive research. This study's research method is cross-sectional in design. The study's variables were all measured simultaneously at the same time.

The sample in this study was 30 households from 3 sub-districts in Kudus Regency, Jati District, Kaliwungu District, and Dawe District. These 3 districts are expected to represent in general the description of the research variables studied.

The instrument used is an observation sheet that refers to law number 4 of 1992 about housing and settlements. The indicators used include access to clean water, provision of latrines, household waste management, and sewerage system. Data analysis was performed on each research indicator using a frequency distribution to find out the description of each research variable.

RESULTS AND DISCUSSION

Kudus is a district in Central Java with a geographical area of 425 km². This district consists of nine sub-districts, starting from the Dawe sub-district in the north to the Undaan sub-district in the north. Based on the health profile of Central Java for 2022, sanitation conditions in this district are classified as proper (Badan Pusat Statistik Provinsi Jawa Tengah, 2021). But in fact, cases of waterborne disease are still high, such as typhoid fever and diarrhea. These diseases can be used as indicators of poor environmental sanitation management in an area.

In general, basic sanitation consists of four indicators, namely access to clean water, provision of latrines, waste management, and sewerage system. Each household must fulfill each of these indicators to be classified as a healthy home. If there is one indicator that does not meet the requirements, then the home is not classified as a healthy home or the basic sanitation facilities do not meet the requirements.

In Kudus Regency, 30 households from 3 different sub-districts participated in this study. The following information is based on findings from a study done on household sanitary facilities in Kudus Regency:

Table 1. Distribution of Basic Sanitation in Kudus Regency

Variable	Frequency	Percentage (%)
Clean Water Supply		
Eligible	26	86,7
Not Eligible	4	13,3
Latrine		
Healthy	28	93,3
Unhealthy	2	6,7
Waste Management		
Proper	4	13,3
Improper	26	86,7
Sewerage System		
Eligible	2	6,7
Not Eligible	98	93,3

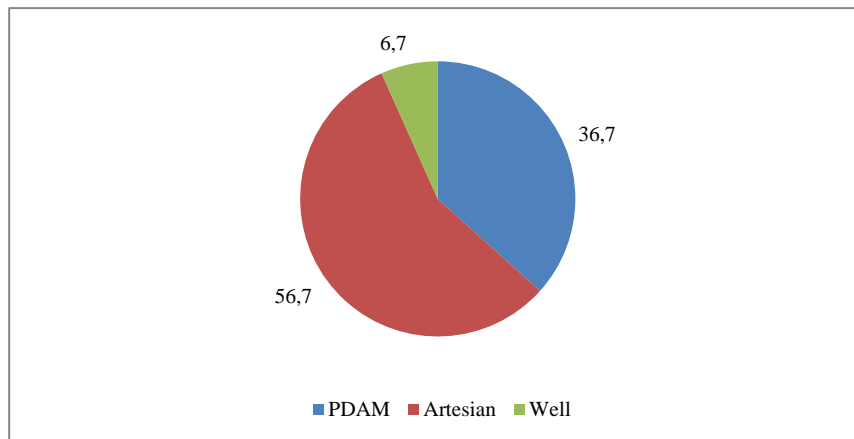
Based on Table 1, it is generally recognized that the households in the study sample complied with the minimum standards for sanitary conditions set by the Ministry of Health. It is known that 86.7% of homes meet the requirements for the clean water supply indicator, while only 13.3% do not.

The provision of clean water is the most important indicator of basic sanitation. The parameters that are required to achieve this indicator are also complete, such as physical, chemical, biological, and radiological parameters. In addition to these parameters, the provision of clean water must also meet three criteria, namely quantity, quality, and sustainability. These parameters and criteria must be met in every household.

The provision of clean water is also related to the incidence of diseases that are transmitted through water, such as diarrhea. In a study conducted by Mafazah (2013), it was found that there was a relationship between the availability of clean water and the incidence of diarrhea in toddlers at the Purwoharjo Health Center, Pemalang. In this study, it was found that from 63 respondents who did not eligible for clean water facilities, 36 children under five had a history of diarrhea, and only 27 respondents did not have a history of diarrhea (Mafazah, 2013).

On Barrang Lompo Island, different research by Birawida (2020) discovered that 104 of the 122 respondents who had access to clean water facilities that did not fulfill the standards had diarrhea. In Makassar City's Barrang Lompo Island, this study found a substantial correlation between the availability of clean water and the prevalence of diarrhea (Birawida, Selomo, Natsir, Rahmawati, & Rachmat, 2020).

This study also identified the source of clean water for each household as the research sample. Based on Graph 1, it is known that 56.7% of the respondents sourced clean water from artesian wells, 36.7% came from PDAM, and only 6.7% came from wells. The results of this study are in line with research conducted by Caesar and Prasetyo in 2018 concerning the Quality of Clean Water in Cranggang, Kudus. Based on this research, it is known that 53.3% of the house's source of clean water comes from artesian wells, 16.7% comes from wells, and only 3% comes from springs (David Laksamana Caesar, 2017).



Grafik 1. Distribution of Clean Water Sources in Kudus Regency

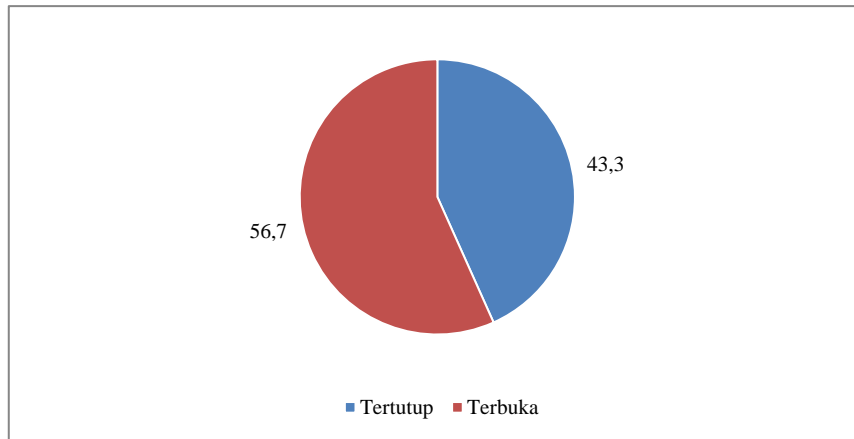
The second indicator of basic sanitation is the provision of household latrines. Based on the research, it was found that 93.3% of the sample had latrines that met the requirements, and only 6.7% did not meet the requirements. The Ministry of Health requires that every household must have a latrine and a septic tank to collect their excrement. In addition, the distance between the septic tank and clean water sources is at least 10 meters, because if it is less than this value it will increase the risk of transmission of pathogenic bacteria to clean water sources.

These results are also by research conducted by Ningrum in Kaliwates Jember District. In this study, it was found that 100% of the respondents had latrines and septic tanks. The latrines are also equipped with soap as a means of washing hands (Ningrum, n.d.).

The handling of waste is the third indicator. Waste is defined as the solid products of human everyday activities or natural processes in law number 18 of 2008 handling the management of waste. The results of this study show that 86.7% of households do not manage their waste properly, and only 13.3% fulfill the requirements (HAM, 2008).

These results are the same as research conducted by Amelia in 2017 in Medan City, North Sumatra. In this study, it was found that 77% of houses did not have a waste management system that met the requirements, and only 33% had a waste management system that was managed properly. (Amelia, 2018) Another study conducted by Nugraheni in 2012 in North Semarang District, Semarang City, showed that 61.8% of households did not manage their waste properly, and only 38.2% managed waste (Nugraheni, 2012).

Waste management at home is said to be good if it meets several criteria, namely the amount, material, and closed or open trash cans. This study shows the distribution of trash bins used in each household. The results showed that 56.7% of the trash cans were open, and 43.3% were closed. These results are shown in Graph 2 below.



Grafik 2. Distribution of Waste Conditions

Distribution of Trash Conditions The final indicator measured in this study is the household waste management system. Liquid waste generated from bathing and washing activities should be properly processed so that it does not pollute the environment. In addition, waste treatment also aims to prevent the growth and development of disease vectors such as mosquitoes and rats.

Based on the research results shown in Table 1, it is known that 93.3% of households do not have a good household wastewater management system, and only 6.7% have a good wastewater management system.

These results are the same as the research conducted by Celesta in Payaman Village, Bojonegoro Regency. In this study, it was found that 79% of households did not have a wastewater treatment system, and only 21% had a wastewater treatment system. Wastewater in Payaman Village creates odors and reduces environmental aesthetics. Most of the waste is dumped in the yard or around the home environment, without being processed first (Celesta & Fitriyah, 2019).

Another research conducted by Kurniawati, Arini, Awwalina, and Pramesti in 2020 in Leran Village, Bojonegoro Regency resulted in 46% of houses not having a wastewater treatment system, and 54% of houses having a wastewater treatment system. From the results of cross-tabulation, it is known that of 34 houses that do not have a wastewater treatment system, 47.1% have a history of diarrhea (Kurniawati et al., 2021).

CONCLUSION

Based on the research analysis it is known that in general the condition of basic sanitation in Kudus Regency is improper. This is shown by the four basic sanitation indicators, namely access to clean water, latrines, waste management, and sewerage systems, which do not meet the requirements set by the Ministry of Health. The indicators with the lowest percentage of achievements are latrines, waste management, and sewerage systems. The Kudus Regency government can utilize the findings of this study as guidance when developing programs and policies that improve the standard of community basic sanitation facilities.

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