Monitoring the Achievement of Environmental Sanitation Indicators at Pulau Kijang Health Center, Indragiri Hilir Regency

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Abstract

Environmental sanitation is critical for public health as it affects the spread of diseases such as diarrhea, dengue, and respiratory infections. Poor sanitation arises from issues like inadequate access to clean water, insufficient waste disposal systems, and low public awareness. In Indragiri Hilir Regency, despite health programs, issues such as unsafe drinking water, inadequate latrines, and challenges in implementing Community-Based Total Sanitation (STBM) persist. This highlights problems in program execution, including limited resources and community involvement. The community service project was conducted in partnership with Pulau Kijang Health Center. It involved field data collection, interviews, and document review to assess sanitation progress. The monitoring focused on key indicators such as access to safe drinking water, healthy latrines, and waste management. The project concluded with training health staff and local cadres on sanitation evaluation based on data analysis. Initial assessments revealed that previous monitoring efforts were ineffective due to outdated data and a lack of integration. The approach included training for health workers and local cadres on community-based sanitation monitoring, developing a simple digital data recording system, and conducting public education campaigns. The introduction of the digital system improved data organization, and public education campaigns increased community involvement in reporting sanitation issues. Public participation rose significantly, leading to more accurate sanitation data and better monitoring techniques. The program successfully addressed issues such as outdated data and limited human resources through a comprehensive approach. The introduction of digital data systems and community education improved the quality and accessibility of sanitation data. This led to greater community participation and enhanced the capacity of health personnel. The project demonstrates the value of a collaborative, data-driven approach for sustainable improvements in public health and sanitation.

1. Introduction

Environmental sanitation remains a critical issue in public health, as it directly influences the spread of infectious diseases such as diarrhea, dengue fever, and respiratory infections. Poor sanitation is often caused by limited access to clean water, inadequate waste

disposal systems, and low public awareness about hygiene practices. Improper waste management and the tendency of communities to litter exacerbate the situation.

Despite various environmental health programs implemented by the Health Office of Indragiri Hilir Regency—including planning, monitoring, and evaluation—the expected outcomes have not been achieved. Data indicates that key indicators, such as access to safe drinking water, healthy latrines (Stop Open Defecation), and the implementation of Community-Based Total Sanitation (STBM), remain below target levels. These results point to challenges in program implementation, including limited resources, insufficient community engagement, and technical constraints.
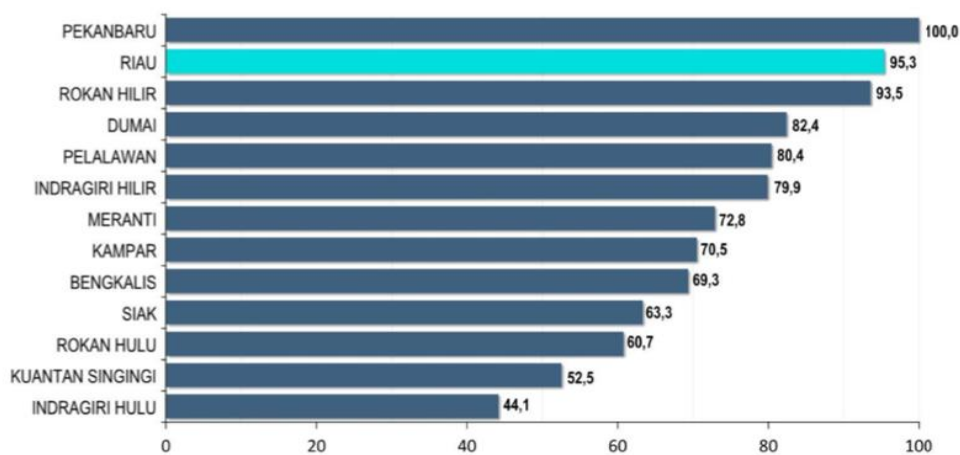

Figure 1. Indicator of Drinking Water Quality Success

The novelty of this analysis lies in its emphasis on the need for comprehensive evaluation of existing programs and the importance of systematic data monitoring to identify barriers early. It also highlights the necessity of a multi-sectoral approach involving government, private sectors, and communities to ensure sustainable improvements in sanitation. Without strategic revisions and increased public education, achieving optimal sanitation standards will remain a challenge. Therefore, strengthening stakeholder collaboration and refining intervention strategies are crucial for creating cleaner, healthier living environments.

2. Methods of Implementation

This community service activity was conducted through coordination with Pulau Kijang Health Center, field data collection, interviews, and document review of sanitation achievements. The monitoring focused on key indicators such as access to safe drinking water, healthy latrines, and waste management. Data were analyzed descriptively and discussed with stakeholders to formulate solutions. The activity concluded with a brief training for health staff and community cadres on data-based sanitation evaluation.

3. Results and Discussion

The community service initiative on monitoring and evaluation of environmental sanitation programs at the Pulau Kijang Health Center began with an initial assessment revealing that existing monitoring and evaluation efforts were not yet based on an integrated information system. This community service activity, which focused on the process of monitoring and evaluating environmental sanitation, produced several important findings and recommendations.

3.1 Initial Condition of Monitoring and Evaluation

The monitoring and evaluation process had previously been conducted but remained suboptimal. The data used was often outdated and did not comprehensively cover sanitation aspects. Challenges included limited human resources in both quantity and capacity, as well as low public awareness regarding the importance of sanitation-related reporting.

3.2 Approach Taken

The service activities utilized a comprehensive approach, including training health center staff and local cadres on community-based sanitation monitoring, the development of a simple digital data recording system to facilitate information management, and public education campaigns to raise awareness about environmental sanitation and the importance of community involvement in reporting.

3.2.1 Training for Health Workers and Environmental Cadres

The program began by training health staff and local cadres to strengthen their ability to conduct community-based sanitation monitoring. The training covered data collection techniques, sanitation indicators, and data analysis to support effective follow-up planning. It also included identifying key sanitation issues such as access to clean water, domestic waste management, and hygiene behaviors, enabling these individuals to act as facilitators in their communities.

The study conducted by Mitra and colleagues discusses the training of community health volunteers (cadres) in the working area of Rumbai Public Health Center, Pekanbaru, aimed at improving their knowledge on early detection and prevention of stunting through the Community-Based Total Sanitation (STBM) approach. The training covered topics such as the identification of open defecation practices and waste management (Mitra, 2023).

3.2.2. Digital Data Recording System

A user-friendly digital system was introduced to improve data management efficiency. Despite limited technological backgrounds, health workers and cadres were trained to use the system to ensure faster, more accurate, and better-organized data. This system recorded indicators like household access to proper sanitation, toilet use, and waste management practices, providing a comprehensive overview of the sanitation status in the health center's service area.

The study conducted by Sugiharto involved the development and evaluation of a mobile application designed to assist community health volunteers in reporting dengue fever cases. The application proved to enhance the efficiency and accuracy of reporting compared to previous manual methods (Sugiharto, 2023).

3.2.3 Community Education and Awareness Campaigns

Community education was conducted through group discussions, outreach at religious facilities, and distribution of posters and pamphlets. The goal was to improve public understanding of the impact of sanitation on community health and encourage

active participation in reporting environmental conditions. The campaign fostered a shared responsibility among residents for maintaining a clean and healthy environment.

The study conducted by Jamin highlights the importance of community education in raising awareness about proper sanitation practices as a means to address global warming. The activities were carried out through training and outreach programs targeting youth groups in Krucil District, Probolinggo Regency, utilizing methods such as lectures, group discussions, and question-and-answer sessions (Jamin, 2024).

3.2.4 Synergy for Sustainability

The program's success relied not only on the academic team but also on the collaboration between the health center, village government, and the local community. This synergy ensured that interventions aligned with local needs and characteristics. Village government support played a crucial role in resource mobilization and policy formulation to enhance sanitation efforts.

The study conducted by Astuti highlights the importance of collaboration between health centers, village governments, and civil society organizations in the success of environmental health interventions. Health education and programs implemented in an integrated manner, involving multiple stakeholders, can enhance the reach of the initiatives and ensure the long-term sustainability of the program (Astuti, 2024).

3.3 Key Findings

Public participation significantly increased following awareness campaigns, improving the accuracy of sanitation data. Health workers also demonstrated improved understanding of sanitation monitoring and data analysis techniques after training. The implementation of a digital recording system marked a step toward a sustainable, data-based monitoring process, though continued assistance is required to ensure its long-term use.

The study conducted by Ahyanti demonstrates that outreach campaigns and community empowerment significantly increased public participation in the Community-Based Total Sanitation (STBM) program, which in turn contributed to improved sanitation data accuracy and positive changes in environmental health behavior (Ahyanti et al., 2023).

3.4   Short-Term Positive Impacts

The program successfully produced more complete and structured sanitation data for Pulau Kijang. Data collection involved field observations, interviews, and coordination with local stakeholders, resulting in detailed information on sanitation facilities, hygiene behaviors, and implementation challenges. This data serves as a foundation for more targeted interventions, such as the Community-Based Total Sanitation (STBM) program, and supports effective decision-making.

Comprehensive sanitation data is essential for formulating effective and sustainable policies. Accurate data allows for the identification of environmental issues, such as water access and waste management practices, enabling the health center to tailor its programs to community needs. Moreover, structured data improves monitoring and evaluation processes, enhancing policy responsiveness and impact. Good sanitation data not only enhances environmental management but also integrates various health center programs more effectively and efficiently. It enables the prioritization of interventions, better resource allocation, and alignment of STBM initiatives with other health services, including disease prevention and maternal-child health programs. This integrated approach ensures mutually reinforcing outcomes, improved cost-effectiveness, and better public health services for the Pulau Kijang community.

4.   Conclusion

The implementation of community service focused on monitoring and evaluating environmental sanitation at Pulau Kijang Health Center has successfully addressed several critical challenges, including outdated data usage, limited human resource capacity, and low public awareness. Through a comprehensive approach involving training, the development of a digital data system, and community education, the program has enhanced both the quality and accessibility of sanitation data. Increased community participation and improved capacity among health personnel mark a significant step toward sustainable sanitation management. Furthermore, the integration of structured data supports more accurate policy planning and more effective health interventions. These outcomes demonstrate that

collaborative, data-driven, and community-based approaches are essential for advancing public health and achieving long-term improvements in environmental sanitation.

5. Acknowledgements

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