

Evaluation of Road Infrastructure Maintenance In Cikole District By The Public Works and Spatial Planning (PUTR) Departement of Sukabumi City

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ABSTRACT

Road infrastructure is a vital component in supporting socio-economic activities of the community and improving regional connectivity. Quality road maintenance is the key to ensuring smooth transportation flow and preventing more severe damage in the future. This study aims to evaluate the implementation of road infrastructure maintenance carried out by the Public Works and Spatial Planning (PUTR) Department of Sukabumi City in Cikole District. The study used a qualitative descriptive approach with data collection through in-depth interviews, field observations, and analysis of policy documents and maintenance implementation reports. The results of the study indicate that the implementation of road maintenance still faces several obstacles, including limited budget allocation, technical constraints in the field, and the influence of extreme weather factors that accelerate the rate of road damage. In addition, there are still challenges in the aspects of integrated planning and field supervision. Nevertheless, the PUTR Department has generally attempted to implement maintenance programs according to technical procedure standards. In conclusion, improvements are needed in strategic planning, budget optimization, and cross-sector synergy to improve the effectiveness and sustainability of road maintenance in Cikole District.

Keywords: Road Infrastructure, Maintenance, Evaluation, Sukabumi City

1. INTRODUCTION

Road infrastructure is a vital component in supporting the smooth running of social, economic and community mobility activities. The existence of adequate roads is not only a means of connecting regions, but is also an important indicator in improving the quality of public services and regional competitiveness. According to Manueke (2019) In general, infrastructure includes public facilities provided by the central and regional governments as public services (as a result of market mechanisms not working) to support and encourage economic and social activities in a community (Dwiyanto, 2021).

Cikole District as one of the strategic areas in Sukabumi City has a fairly high density of economic, social and government activities. Intense vehicle traffic, both private and public, puts significant pressure on road conditions. Road maintenance is a government program that aims to improve and maintain road conditions so that they remain good, so that they can be used optimally to support community activities (Retno, 2022). Therefore, the implementation of the road maintenance program in Cikole District needs to be evaluated systematically to ensure the effectiveness, efficiency, and accuracy of the program being implemented (Agil dkk, 2021).

The Public Works and Spatial Planning Agency (PUTR) of Sukabumi City is a regional technical agency that has the authority to plan, implement and supervise the construction and maintenance of road infrastructure. In accordance with Sukabumi City Regional Regulation No. 3 of 2016 concerning the Formation and Structure of Regional Apparatus, the Public Works and Public Housing Agency is responsible for ensuring the quality of road infrastructure that is safe, comfortable, and sustainable for the community.

Evaluation of road infrastructure maintenance is important to assess the extent to which the implemented program has achieved the goals and objectives that have been set. This evaluation covers aspects of activity planning, budget realization, quality of work, community participation, and its impact on public services. With a comprehensive evaluation, it is hoped that the obstacles faced can be identified and policy recommendations formulated that can improve road maintenance performance in the future (Hardiansyah,2023).

This study aims to evaluate road infrastructure maintenance activities carried out by the Sukabumi City Public Works and Housing Agency in the Cikole District. Specifically, this study will analyze: (1) planning road maintenance programs, (2) technical implementation of activities in the field, (3) effectiveness of budget management, and (4) inhibiting and supporting factors in road maintenance. This research is expected to contribute to improving road maintenance governance to be more effective and responsive to community needs.

2. METHODS

This study uses a qualitative descriptive approach with the aim of obtaining an in-depth picture of the implementation of road infrastructure maintenance in Cikole District by the Public Works and Spatial Planning (PUTR) Department of Sukabumi City. The qualitative approach was chosen because it allows researchers to explore in detail the phenomena that occur in the field, as well as understand the dynamics and factors that influence the success and obstacles in the road maintenance process (Abdussamad.2021).

Research informants were selected purposively, namely those who were assessed as having knowledge and direct involvement in the implementation of road infrastructure maintenance. Informants consisted of: Technical officials from the Public Works and Spatial Planning (PUTR) Department of Sukabumi City, Road maintenance field officers, Sub-district officials, Local community leaders, Road users (general public).

Data collection techniques were carried out using the following techniques: In-depth interviews: Interviews were conducted directly with key informants to gather information related to planning, implementation, constraints and results of road maintenance. Field observation: Direct observation of the physical condition of the road, the maintenance process, and maintenance activities in the field to identify the level of damage, the maintenance methods used, and the effectiveness of their implementation. Document study: Analysis of official documents such as the annual work plan of the PUTR Service, road maintenance implementation reports, financial reports, and policies related to infrastructure management.

The data analysis technique used was qualitative analysis using the following steps: Data reduction: Sorting and simplifying data from interviews, observations, and documents to focus on relevant aspects. Data presentation: The reduced data is presented in narrative form, tables, or diagrams to facilitate drawing conclusion. Drawing conclusions: Interpreting and drawing conclusions based on data that has been analyzed systematically.

3. RESULTS AND DISCUSSIONS

Planning Road Maintenance Program

Based on the results of interviews with the PUTR Service of Sukabumi City, planning for road maintenance programs in Cikole District is carried out at the beginning of each budget year by taking into account the level of road damage, public service priorities, and budget availability. The planning process has referred to data from road condition surveys carried out by the technical team, however in several cases, differences were found between the initial survey results and actual conditions in the field during implementation. This shows that maintenance planning is not fully adaptive to the dynamics of road damage which is influenced by external factors such as extreme weather.

According to the results of observations, several road sections that had been planned for repair experienced more serious damage before the maintenance process was carried out, due to high rainfall and heavy vehicle loads that exceeded the road capacity. This finding is in line with Arifin's (2021) research, which states that the gap between initial planning data and actual conditions in the field often hinders the effectiveness of road maintenance implementation.

Table 1 Distribution of Road Management

Source: Law 38 of 2004 Concerning Roads

Road Status	Road Organizer	Road Implementation
National Road	Central Government	Minister of Public Work
Provincial Road	Provincial government	Provincial Public Works Office
District Road	District government	Public Works Department of the Regency
City Road	City government	City Public Works Department
Village Road	District government	Public Works Department of the Regency

Implementation of Road

The implementation of road maintenance in Cikole District generally follows the Standard Operating Procedures (SOP) established by the PUTR Service. The methods used include routine maintenance (patching, drainage cleaning, minor repairs), periodic maintenance (overlays, patching large potholes), and rehabilitation of heavily damaged road sections. However, in practice, implementation often encounters technical obstacles, such as delays in material procurement, heavy equipment damage, and limited field labor (Indiahono, 2018).

Field observations show that some maintenance work is carried out partially due to limited operational funds. Several sections of road that have potholes at several points have only been partially patched (spot patching), which in the medium term has the potential to cause new damage in the surrounding area. This finding is consistent with Hidayat's (2023) research which shows that budget efficiency is often a dilemma between the need for total handling and the available budget capacity.

Maintenance Constraints and Challenges

Based on the results of interviews and document studies, several main obstacles in maintaining road infrastructure in Cikole District include:

1) Budget Limitations: The annual maintenance budget available is not sufficient to optimally handle all road damage. The allocation of funds is mostly absorbed on priority roads or protocol roads. 2) Extreme Weather Factors: High rainfall intensity accelerates the road damage process, especially on roads with poor drainage systems. Several sections of road have experienced repeated damage due to waterlogging and erosion. 3) Cross-Sector Coordination: Lack of synergy between the PUTR Service and related agencies, such as the Transportation Service, Bappeda, and private parties who use roads for heavy transportation operations, often results in an imbalance in the road load. 4) Limitations of Field Supervision: Supervision activities are still periodic in nature, so they cannot quickly detect sudden damage in the field.

Improvement Efforts That Have Been Made

Despite facing various obstacles, the Sukabumi City PUTR Service has made several improvement efforts, including:

Road Information System Development: Compilation of a GIS-based road condition database to facilitate maintenance decision-making. Human Resources Capacity Building: Technical training for field maintenance personnel related to road repair techniques and the use of more effective maintenance technology. Dynamic Priority Scale Development: Periodic evaluation to adjust maintenance priorities based on current damage conditions.

Analysis Based on Evaluation Theory

If seen based on William N Dunn's (1999) evaluation theory, The results of the road maintenance evaluation in Cikole District can be summarized as follows: Maintenance needs are urgent due to high traffic volumes and extreme weather. Available budget,

equipment, and human resources remain limited. Implementation is proceeding according to standard operating procedures (SOPs), but technical and administrative challenges are often encountered. Maintenance has been able to repair most road sections, but it has not been fully effective in maintaining long- term road conditions (Widanti dkk,2022).

4. CONCLUSION

Based on the results of the research that has been conducted, it can be concluded that the implementation of road infrastructure maintenance by the Public Works and Spatial Planning (PUTR) Department of Sukabumi City in Cikole District has been carried out in accordance with existing technical procedure standards, but still faces various significant obstacles. The main problems faced include limited budget allocation, technical obstacles in the field, the impact of extreme weather, and less than optimal cross-sector coordination.

Road maintenance program planning is based on road condition survey data, but in its implementation there is still a discrepancy between the plan and the reality of road damage conditions which are developing more quickly due to external factors. These obstacles impact the effectiveness of the maintenance program, so that there are still road sections that experience repeated damage in a relatively short time. However, gradual improvement efforts have been made by the PUTR Service, including developing a road condition database based on information technology, increasing human resource capacity, and preparing a more dynamic maintenance priority scale.

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