

Evaluation of Flood Management Policies in East Barito Regency Central Kalimantan

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DOI : <https://doi.org/10.61796/ijblps.v3i2.454>



Sections Info

Article history:

Submitted: January 02, 2026

Final Revised: January 20, 2026

Accepted: February 05, 2026

Published: February 28, 2026

Keywords:

Policy evaluation
Flood management
Local disaster
Public policy
East Barito

ABSTRACT

Objective: This research aims to evaluate the flood management policy in East Barito Regency by assessing the alignment between policy objectives, on-the-ground implementation, and the results achieved. **Method:** The research uses a descriptive qualitative approach with data collection methods including in-depth interviews, observation, and document study. Data analysis was conducted using a policy evaluation framework that included aspects of effectiveness, efficiency, adequacy, equity, responsiveness, and timeliness. **Results:** Flooding is one of the hydrometeorological disasters that repeatedly occurs in East Barito Regency, Central Kalimantan, and causes significant social, economic, and environmental impacts. Local governments have implemented various flood management policies thru structural and non-structural programs, but the effectiveness of these policies is still debated. The research results indicate that flood management policies have been implemented according to the regulatory framework, but they are not yet optimal in sustainably reducing flood risks and impacts. The main obstacles include limited cross-sectoral coordination, the dominance of structural approaches, weak spatial planning control, and minimal community participation. **Novelty:** This research recommends strengthening flood management policies based on disaster risk reduction and multi-stakeholder collaboration.

INTRODUCTION

Flooding is one of the most complex and recurring public policy issues in Indonesia, particularly in areas with large river hydrological characteristics and lowlands, such as Central Kalimantan [1], [2]. The phenomenon of flooding can no longer be understood solely as a natural event, but rather as the result of the interaction between natural factors, climate change, environmental degradation, and development policies that are less sensitive to the carrying capacity of the region [3], [4]. In the context of public policy, flooding has become an important indicator of the weak integration of spatial planning, environmental management, and disaster risk reduction policies [5].

East Barito Regency is one of the areas in Central Kalimantan that periodically experiences flooding with significant social and economic impacts. The floods that occurred not only disrupted residential and transportation activities but also impacted the agricultural, educational, health, and public service sectors [6]. This condition indicates that the floods have developed into a multidimensional problem requiring cross-sectoral and cross-governmental policy responses [7].

Within the framework of regional autonomy, district governments have strategic authority in flood management, both thru infrastructure development policies and non-structural policies such as disaster management and community preparedness [8], [9].

The East Barito Regency Government has implemented various flood management policies, including the construction of flood control infrastructure, river normalization, drainage improvement, and the declaration of a state of emergency during flood events. However, despite the implementation of the policy, floods still occur repeatedly with relatively the same patterns and impacts year after year.

From a public policy perspective, the existence of programs and budgets does not automatically guaranty the achievement of policy goals [10]. Effective policies should be able to reduce risks, minimize impacts, and enhance community adaptive capacity to disasters [4]. When floods continue to recur, this indicates a gap between policy goals, policy design, and implementation in the field [11].

One of the main issues in flood management policies in the region is the dominance of a structural approach that focuses on physical development [3]. This approach is often short-term and poorly integrated with spatial planning and environmental management policies [1]. Additionally, weak cross-sectoral coordination and minimal public participation in policy formulation lead to flood management policies that tend to be sectoral and top-down [12].

Based on these conditions, evaluating the flood management policies in East Barito Regency becomes important to assess the extent to which the implemented policies have been able to achieve the expected goals and to identify factors hindering policy effectiveness. Policy evaluation serves not only as a tool for performance assessment but also as an instrument for policy learning for local governments, enabling the creation of more adaptive and sustainable policies [5], [13].

Literature Review

Public policy evaluation is a crucial stage in the policy cycle because it provides feedback on policy performance and serves as the basis for future policy improvement [5], [7]. Dunn defines policy evaluation as an analytical activity aimed at assessing the value and impact of public policy using specific evaluative criteria [5]. Policy evaluation focuses on fundamental questions regarding the extent to which policies achieve their stated goals and the impact they have on society.

Commonly used policy evaluation criteria include effectiveness, efficiency, adequacy, equity, responsiveness, and appropriateness [5]. Effectiveness measures a policy's ability to achieve its goals, efficiency assesses the ratio of outcomes to resources, while adequacy evaluates the extent to which a policy adequately addresses the problem. Equity relates to the distribution of policy benefits, responsiveness assesses the policy's alignment with community needs, and appropriateness measures the policy's relevance to the problem context [10].

In the context of disaster management policy, policy evaluation has a more complex dimension because it deals with uncertainty, high risk, and cross-sectoral impacts [1]. Law Number 24 of 2007 stipulates that disaster management includes pre-disaster, emergency response, and post-disaster stages that must be implemented in an integrated manner [8]. This framework places disaster risk reduction as an integral part of national and regional development policies [4].

The literature on flood management policy shows that structural approaches still dominate local government policies [3], [14], [15]. Levee construction, river normalization, and drainage systems are considered key solutions, but are often not balanced by non-structural policies such as spatial planning control and public education [1]. As a result, flood management policies tend to be reactive and unable to sustainably reduce flood risk [2].

Non-structural approaches emphasize the importance of spatial planning management, watershed protection, early warning systems, and community capacity building [4]. This approach aligns with the disaster risk reduction paradigm, which places communities as key actors in public policy [12]. Several studies show that participatory and community-based flood management policies tend to be more adaptive and sustainable [1]. Selain itu, aspek koordinasi dan tata kelola (governance) menjadi faktor penentu keberhasilan kebijakan penanganan banjir [7]. Keterlibatan banyak aktor dengan kewenangan yang berbeda sering kali menimbulkan fragmentasi kebijakan dan tumpang tindih program [11]. Oleh karena itu, evaluasi kebijakan penanganan banjir perlu dilakukan secara komprehensif dengan mempertimbangkan dimensi kebijakan, kelembagaan, dan sosial secara simultan [13].

RESEARCH METHOD

This research uses a qualitative approach with a descriptive-evaluative design to analyze flood management policies in East Barito Regency, Central Kalimantan. A qualitative approach was chosen because it allows researchers to deeply understand the policy process, implementation dynamics, and the perceptions of the actors involved in flood management [4], [5].

The research location was determined in East Barito Regency, focusing on areas historically affected by floods. The research informants were selected purposively, including local government officials handling disaster management, public works, and development planning, district and village officials, and flood-affected community members. The selection of informants was based on their direct involvement and understanding of the policy being evaluated [10].

Data collection was conducted thru in-depth interviews, field observations, and a study of documentation related to laws and regulations, regional planning documents, and flood management reports [6], [8], [9]. Data validity is maintained thru source and method triangulation. Data analysis was conducted interactively thru the stages of data reduction, data presentation, and drawing conclusions, as outlined in the qualitative public policy research methodology [5], [13].

RESULTS AND DISCUSSION

The research findings indicate that flood management policies in East Barito Regency have a relatively clear regulatory and planning framework, derived from both national disaster management policies and local policies. Local governments have implemented various flood management programs, including the construction of flood

control infrastructure, river normalization, drainage improvement, and the implementation of emergency response and social assistance during floods [6], [8]. From a policy compliance perspective, these findings indicate that local governments have carried out their policy mandates in accordance with the applicable formal regulations.

However, when analyzed using public policy evaluation criteria, the implementation of the flood management policy has not fully produced the expected outcomes. From an effectiveness perspective, flood management policies have not been able to significantly reduce the frequency or impact of floods in vulnerable areas. Flooding still occurs repeatedly from year to year with a relatively similar pattern of inundation. This condition indicates a gap between policy goals to reduce flood risk and the actual outcomes experienced by the community [1], [5].

From a policy effectiveness perspective, the dominance of the structural approach is a major factor limiting policy achievements. Physical infrastructure development does have a short-term impact, such as reducing flooding at certain points, but it doesn't address the root causes of flooding, which are related to watershed degradation, land use changes, and weak spatial planning control [2], [3]. Without integrating spatial planning and environmental policies, flood control infrastructure tends to be reactive and at risk of losing effectiveness in the long run.

From an efficiency perspective, the research found that local budget constraints and dependence on funding from the central government led to flood management policies being implemented partially and in stages. Infrastructure development is often not supported by adequate maintenance, leading to suboptimal policy benefits. From a policy evaluation perspective, this condition reflects low efficiency in resource utilization because the output produced is not yet proportional to the costs and efforts expended [5], [10].

The adequacy aspect of the policy also shows significant weaknesses. Flood management policies have not fully addressed the vulnerability of communities to flooding, especially in residential areas located near rivers. Although emergency aid and response were relatively quick, long-term mitigation efforts remain limited. This indicates that existing policies are not sufficient to address the complexity of the flood problem as both a structural and social issue [1], [4].

From an equity perspective, the benefits of flood management policies have not been felt equally across all affected areas. Some areas are prioritized for treatment due to technical and political considerations, while other regions continue to experience recurring floods without long-term solutions. This inequality shows that flood management policies still face issues of equitable distribution of policy benefits, as stated in the public policy evaluation literature [5], [7].

The aspect of policy responsiveness is relatively more evident in the emergency response phase compared to the pre-disaster phase. Local governments are quite responsive in providing emergency assistance and handling during floods, but less responsive in accommodating the aspirations and local knowledge of the community in

formulating flood mitigation policies [12]. The minimal participation of the community leads to policies that tend to be top-down and less adaptable to local conditions [1].

From a policy accuracy perspective, the research found that the policy instruments used were not fully aligned with the characteristics of the flooding problem in East Barito Regency. Flood management is still treated as a technical-infrastructure issue, even the disaster policy literature emphasizes the importance of an integrated disaster risk reduction approach that is integrated with regional development and environmental protection [2], [4]. The inaccuracy of this approach contributed to the overall low achievement of the policy.

Additionally, institutional factors and cross-sectoral coordination are major obstacles to policy implementation. Flood management involves many local government organizations with different authorities, but the coordination mechanism is not yet operating optimally. Fragmentation of authority and overlapping programs cause policies to be implemented sectorally and lack synergy [7], [11]. From a governance perspective, this condition weakens policy capacity to produce sustainable impact.

Overall, the results and discussion indicate that flood management policies in East Barito Regency are still oriented toward short-term responses and have not fully adopted the disaster risk reduction paradigm. This evaluation strengthens the argument that the success of flood management policies is not solely determined by the presence of programs and infrastructure, but by cross-sectoral policy integration, strengthening environmental governance, and active community participation [1], [4], [13].

CONCLUSION

Fundamental Finding : Based on the policy evaluation results, it can be concluded that the flood management policy in East Barito Regency has been implemented within a clear regulatory and planning framework and is capable of responding during the disaster emergency phase. The local government has demonstrated its commitment to addressing floods thru various programs and activities, particularly those focused on developing flood control infrastructure and providing post-disaster assistance. From an administrative compliance perspective, the policy has been implemented in accordance with the applicable authority and procedures. However, these flood management policies have not been effective in sustainably reducing the frequency and impact of floods, as flooding continues to occur repeatedly with relatively similar patterns and levels of damage, indicating a gap between policy goals and actual achievements on the ground. Flood management policies tend to be short-term responses and have not fully addressed the root causes of flooding, which are structural, environmental, and regional governance issues. **Implication :** Thus, flood management policies in East Barito Regency still face fundamental challenges in achieving the goal of sustainable disaster risk reduction, and policies have not fully transformed from a reactive approach to a preventive and adaptive approach that places disaster risk reduction as an integral part of regional development. **Limitation :** The evaluation also showed that flood management policies have not been optimally integrated with spatial planning,

environmental management, and regional development policies, while weak cross-sectoral coordination and minimal public participation in policy formulation and implementation lead to policies being implemented sectorally and being less adaptable to local conditions, and limitations in institutional capacity and resources also affect the long-term effectiveness of the policy. **Future Research :** Based on these conclusions, the local government needs to reorient its flood management policies toward a more comprehensive and sustainable disaster risk reduction approach by strengthening non-structural policies such as spatial planning control, river basin protection, and ecosystem-based environmental management, strengthening cross-sectoral coordination thru integrated planning and budgeting mechanisms, increasing community participation throughout all stages of flood management policy, and developing a sustainable system for monitoring and evaluating flood management policies so that they become more adaptable to environmental dynamics, climate change, and community needs in the future.

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