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EVALUATION OF REGIONAL GOVERNMENT POLICY ON SPATIAL PLANNING IN THE TUKAD BADUNG RIVER SETBACK AREA, DENPASAR CITY

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Abstrak

The riparian zone of the Tukad Badung River has experienced significant degradation due to the massive pressures of urbanization in Denpasar City. Approximately 64.8% of the river's total length of 15.39 kilometers has undergone land-use conversion. A total of 419 buildings have been identified within the riverbank area, of which 354 units (84.5%) are considered non-compliant with the regulations governing protected riparian zones. This condition contradicts Denpasar City Regional Regulation Number 8 of 2021 concerning the Regional Spatial Plan (RTRW) 2021–2041, which designates riverbanks as protected areas. This study aims to evaluate the implementation of local government policies regarding spatial planning management in the Tukad Badung River riparian zone. The research employed a descriptive qualitative approach, with data collected through field observations, in-depth interviews with six key informants, and document analysis. Data were analyzed using William N. Dunn's (2003) public policy evaluation model, which encompasses six criteria: effectiveness, efficiency, adequacy, equity, responsiveness, and appropriateness. The findings reveal that policy implementation has not yet been optimal. Only 16 buildings (3.3%) fully comply with the established regulations; inter-agency coordination remains weak; only 14 officers are responsible for monitoring the 15.39-kilometer river corridor; regulatory enforcement is

inconsistent; and community participation remains limited. The study recommends strengthening cross-sector coordination, intensifying public awareness and socialization programs, empowering riverbank communities, developing equitable relocation programs, and enforcing regulations in a firmer and more consistent manner.

Keywords: Policy Evaluation, Spatial Planning, River Buffer Zone

A. INTRODUCTION

Spatial planning is a fundamental aspect of sustainable development as mandated by Law Number 26 of 2007 concerning Spatial Planning. In Denpasar City, rapid urbanization has placed significant pressure on riverbank areas, particularly along the Tukad Badung River, one of the main rivers that flows through the heart of the city. Denpasar City Regional Regulation Number 8 of 2021 concerning the Regional Spatial Plan (RTRW) 2021–2041 explicitly designates riverbank areas as protected zones (Local Protection Zones), with a minimum setback distance of three meters from the river embankment. However, conditions in the field reveal a substantial gap between policy provisions and their actual implementation.

According to the 2025 inventory data of the Denpasar City Public Works and Spatial Planning Agency (PUPR), of the total Tukad Badung River riparian area of 10.57 hectares, 419 buildings were identified within the protected riverbank zone, occupying a total area of 6,031.16 square meters. Of these, 354 buildings (84.5%) were found to be non-compliant with existing regulations. This situation is further exacerbated by the use of riverbank areas for dense residential settlements (65%), which has contributed to the deterioration of river water quality, with Biological Oxygen Demand (BOD) levels reaching 8.5 mg/L, exceeding the Class II water quality standard of 6 mg/L. Furthermore, the increased occupation of the riverbank area has heightened flood risks. The major flood event that occurred on September 10, 2025, which resulted in fatalities, serves as clear evidence of the urgency of evaluating the effectiveness of this policy.

This study aims to comprehensively evaluate the implementation of local government policies concerning spatial planning in the Tukad Badung River riparian zone, identify the obstacles encountered during implementation, and formulate recommendations for policy

improvement. Drawing upon William N. Dunn's (2003) public policy evaluation framework, the assessment is conducted through six dimensions: effectiveness, efficiency, adequacy, equity, responsiveness, and appropriateness.

B. LITERATURE REVIEW

Indicator	Field Findings	Assessment
Effectiveness	354 out of 419 buildings (84.5%) were non-compliant; only 16 units (3.3%) fully complied with the regulations	Not yet effective. Historical complexities, particularly buildings holding permits issued before 2021, constitute the primary obstacle. However, progress has been observed following the September 2025 flood, with more than 50 new violation cases successfully addressed.
Efficiency	Annual budget of IDR 200–300 million; utilization of satellite imagery and field patrols; data distribution extended to village-level authorities	Relatively efficient at the inventory and monitoring stage. However, the budget allocated for on-site enforcement remains insufficient compared to the scale of the 354 non-compliant buildings requiring intervention.
Adequacy	Fourteen officers responsible for monitoring 15.39 km of river corridor; no relocation program available	Highly inadequate. An increase of approximately 30–40% in personnel is required. The absence of social assistance and relocation programs represents a critical policy gap.
Equity	Small businesses were subjected to enforcement measures more rapidly, while long-term residents were left without alternative housing programs	Inequitable. The distribution of policy burdens is uneven, with vulnerable groups bearing a disproportionate share of the impact. Transitional support programs are needed for long-term residents affected by the policy.
Responsiveness	Responsive to technical and physical issues;	Partial responsiveness. Engagement through traditional community leaders and banjar

	however, slow in addressing housing security and relocation concerns	institutions has proven effective. The warning mechanism (SP-1, SP-2, and SP-3) is well-structured. Nevertheless, substantive responsiveness to residents' housing needs remains considerably slow.
Appropriateness	94.9% of the riparian zone has maintained its designated function; the September 2025 flood demonstrated the urgency of the policy	The policy direction is appropriate from both ecological and regulatory perspectives. Cultural-based approaches have proven effective. However, the policy should be complemented by comprehensive socio-economic programs for the 354 affected residents.

C. METHOD

a. Research Findings

This study employed a descriptive qualitative approach. According to Sugiyono (2019), this method is grounded in the philosophy of post-positivism and is used to examine phenomena in their natural settings, where the researcher serves as the primary research instrument and data are collected through triangulation techniques. This approach was selected because the study seeks to comprehensively evaluate policy implementation by understanding the perspectives of various stakeholders involved in the process.

Data were collected through three techniques: (1) direct field observations conducted within the Tukad Badung River riparian zone; (2) semi-structured in-depth interviews with six key informants selected through purposive sampling; and (3) documentation review of Denpasar City Regional Regulation Number 8 of 2021 concerning the Regional Spatial Plan (RTRW) and the 2025 Report on the Inventory of Violations in the Tukad Badung River Riparian Area prepared by the Denpasar City Public Works and Spatial Planning Agency (PUPR).

The research informants consisted of the Head of the Spatial Planning Division of the Denpasar City Public Works and Spatial Planning Agency (PUPR), the Head of the Guidance and Supervision Section of the Municipal Police Service (Satpol PP), a personnel staff member

from Dauh Puri Kauh Village, the Secretary of Pemecutan Kelod Village, a street vendor operating within the riverbank area, and a resident living in the riparian zone).

Data analysis followed the interactive model developed by Miles and Huberman (1994), which consists of three stages: data condensation, data display, and conclusion drawing. The evaluation was conducted based on the six criteria of William N. Dunn's (2003) public policy evaluation model, namely effectiveness, efficiency, adequacy, equity, responsiveness, and appropriateness

Research conducted by Usnan and Jaya Thamsi (2022) examined the implementation of river border policies within the Regional Spatial Plan (RTRW) of North Luwu Regency. This study shares a similar focus on RTRW policies and riverbank management; however, it differs in terms of research location and analytical approach.

Aisha Mustikaradinta (2025) evaluated the implementation of RTRW policies in regulating the Batanghari River border area in Jambi City. The study identified several implementation challenges, including limited personnel resources and weak inter-agency coordination. Similarities with the present study lie in the qualitative research method and the focus on RTRW policy evaluation, while differences are found in the evaluation indicators and regional characteristics.

Devianti (2019) evaluated the river border policy along the Kapuas River and its impact on riverside settlements in Southeast Pontianak District using a descriptive quantitative approach. This study highlighted the conflict between river border regulations and existing residential settlements. These three previous studies provide both theoretical and methodological foundations for evaluating the riverbank management policy of the Tukad Badung River in Denpasar City.

This research offers several novel contributions that substantially distinguish it from previous studies. First, in terms of the policy instrument, this study specifically evaluates Denpasar City Regional Regulation Number 8 of 2021 concerning the Denpasar City Spatial Plan (RTRW) 2021–2041, which is the most recent spatial planning regulation and has not yet been academically evaluated since its enactment. Therefore, this research represents the first scientific assessment of its implementation effectiveness.

Second, regarding the research locus, the Tukad Badung River possesses unique characteristics as a river that flows through the heart of Bali Province's capital city. It faces complex urbanization pressures, is influenced by the socio-cultural dimensions of Balinese society, and serves dual functions as both an irrigation channel and an urban drainage system. These characteristics distinguish it from the locations examined in previous studies.

Third, from the perspective of the evaluation framework, this study comprehensively applies William N. Dunn's (2003) public policy evaluation model, encompassing six evaluation criteria: effectiveness, efficiency, adequacy, equity, responsiveness, and appropriateness. These criteria are applied across all dimensions of policy implementation, including planning, execution, and law enforcement. As a result, the study provides a more comprehensive evaluation than previous research while generating concrete and actionable policy recommendations that can be directly implemented by the Denpasar City Government.

b. Discussion

The evaluation of the effectiveness dimension reveals that the spatial planning policy for the Tukad Badung River riparian zone has not yet been fully successful in reducing violations. As stated by the Head of the Spatial Planning Division of the Denpasar City Public Works and Spatial Planning Agency (Interview, March 4, 2026), the majority of non-compliant buildings were constructed long before the establishment of Denpasar City in 1992 and possess legally valid building permits (IMB), making them difficult to regulate under the current regulatory framework. This finding is consistent with the study of Agustin and Pratama (2022), which found that the effectiveness of urban spatial planning policies is often constrained by the complexity of land ownership and weak enforcement mechanisms for existing structures. Dunn (2003) argues that policy effectiveness should not be assessed merely by the existence of regulations, but by the extent to which those regulations produce tangible changes in real-world conditions.

From the perspective of efficiency, the successful inventory of 419 buildings across 623 land parcels using a limited budget through a combination of satellite imagery and routine patrols demonstrates relatively effective utilization of technology. However, the budget allocated for physical enforcement remains disproportionate to the scale of the problem. The dimension of

adequacy represents the most fundamental challenge. The ratio of only 14 enforcement officers responsible for monitoring 15.39 kilometers of river corridor is clearly inadequate. The Head of the Guidance and Supervision Section of the Municipal Police Service (Satpol PP) (Interview, March 10, 2026) emphasized the need for an increase in personnel of at least 30–40 percent. More critically, the absence of a relocation program means that the policy functions primarily as a prohibitive instrument without providing alternative solutions for affected residents.

The equity dimension reveals significant disparities in implementation. Although the principle of non-discrimination is formally recognized, testimonies from local vendors and riverbank residents (Interviews, March 24, 2026) indicate that small businesses are subjected to enforcement measures more rapidly than larger commercial establishments. Dunn (2003) emphasizes that equity is not merely a matter of applying uniform rules on paper, but rather ensuring that the benefits and burdens of policy are distributed proportionally across all segments of society. Government responsiveness remains partial. Authorities have been responsive to technical and physical issues through development planning forums (Musrenbang) and engagement with traditional community leaders (banjar leaders), yet they have been considerably slower in addressing substantive concerns such as housing security and relocation arrangements.

In terms of appropriateness, the policy direction can be considered appropriate. Inventory data indicate that 94.9% of the riparian zone area (10.03 hectares) has retained its designated function, while the major flood event of September 2025 empirically demonstrated the urgency and relevance of riverbank protection regulations. Approaches involving traditional leaders and banjar representatives have proven effective as trust-based persuasion mechanisms rooted in Balinese cultural values. However, the Secretary of Pemecutan Kelod Village (Interview, March 20, 2026) emphasized that an appropriate policy must also be accompanied by appropriate implementation. It is insufficient to rely solely on prohibitions and enforcement measures without providing supporting programs, alternative housing options, and economic empowerment initiatives for affected residents.

D. EXPLANATION

Based on the evaluation conducted using William N. Dunn's (2003) policy evaluation model, the local government policy concerning spatial planning in the Tukad Badung River riparian zone of Denpasar City is considered appropriate in terms of its ecological objectives and regulatory framework. However, its implementation has not yet been fully optimized. In summary: (1) the policy has not been effective, as 84.5% of buildings remain non-compliant with the regulations; (2) efficiency has been relatively satisfactory during the inventory stage but remains weak in terms of field enforcement; (3) resource adequacy is far from sufficient, with only 14 enforcement officers and no relocation program available; (4) equity has not been substantively achieved because the burden of enforcement is distributed unevenly among affected groups; (5) responsiveness remains partial, as the government primarily addresses technical issues rather than underlying structural concerns; and (6) the policy direction is appropriate, but it needs to be complemented by comprehensive socio-economic support programs.

This study recommends: (1) the formulation of a Mayor Regulation establishing a gradual and equitable mechanism for managing and enforcing compliance among older buildings holding legally valid building permits (IMB); (2) increasing the number of field personnel by at least 30–40% and expanding the budget allocated for physical enforcement activities; (3) developing structured relocation and social assistance programs for the 354 affected residents; (4) ensuring the consistent application of sanctions to all violators without exception; and (5) institutionalizing the involvement of traditional community leaders as part of a standardized and sustainable policy dissemination and public outreach procedure.

E. CONCLUSION

Based on the evaluation conducted using William N. Dunn's public policy evaluation model, the spatial planning policy for the Tukad Badung River riparian zone in Denpasar City has an appropriate direction from ecological and regulatory perspectives; however, its implementation has not yet been fully optimized. This condition is reflected in the high number of buildings that remain non-compliant with existing regulations, limited human resources and budget for monitoring and enforcement, the absence of relocation and social assistance programs

for affected communities, and the unequal implementation of the policy among different community groups. Although the government has undertaken efforts through inventory activities, monitoring, public outreach, and the involvement of community and traditional leaders, its response to the socio-economic issues faced by affected communities remains inadequate. Therefore, stronger cross-sectoral coordination, an increase in personnel and monitoring budgets, the formulation of mechanisms for managing older legally permitted buildings, the development of equitable relocation and social assistance programs, consistent enforcement of sanctions without exception, and the institutionalization of the role of traditional and community leaders in the socialization and monitoring of riparian zones are necessary to ensure that the objectives of riverbank protection and spatial planning can be achieved effectively, equitably, and sustainably.

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