






Collaborative governance model in the implementation of performance-based village fund allocation in Kalibandung Village, Kubu Raya Regency

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ABSTRACT

The Ecology-based District Budget Transfer Policy (TAKE) is an ecological fiscal innovation developed to link financial transfers between government levels and environmental performance at the village level. This study aims to analyze the implementation of TAKE policies in Kalibandung Village, Kubu Raya Regency, and examine the dynamics of collaboration between actors to support performance-based environmental governance. Using a descriptive qualitative approach, this study explores the views and practices of various actors, including regional apparatus organizations (OPDs), village forest management institutions (LPHD), non-governmental organizations (NGOs), and local communities. The analysis is carried out through thematic interpretations that place the Collaborative Governance Framework and Institutional Analysis and Development as the main theoretical lenses. The results of the study show that the implementation of TAKE is influenced by four collaborative dimensions: unequal initial conditions in terms of capacity and access to information; institutional design that is still top-down without deliberative space; strong facilitative leadership at the village level but not yet sustainable at the district level; and collaborative processes that take place partially and have not been institutionalized. These findings confirm that the success of ecological fiscal policies at the local level is not solely determined by the calculation of incentives and technical indicators but by the quality of social interactions, trust, and institutional design that enable collaboration and shared learning. This study contributes to strengthening the theory of Collaborative Governance in the context of village ecological fiscal policy and provides a direction for policy reform towards participatory and sustainable environmental governance.

Keywords: Collaborative governance, ecological fiscal transfer, environmental governance, village institutions

1. INTRODUCTION

The Ecology-Based Performance Incentive (IKE) policy is a form of implementation of the Ecology-Based Budget Transfer (EFT), which is a fiscal instrument designed to encourage sustainable development that is environmentally friendly and supports Indonesia's national target of reducing emissions by 29% by 2030 (Dewanti, 2021; Laksana & Gustav, 2022). Through this policy, the progress of economic growth, population growth, and infrastructure that often degrade the environment can be overcome (Anto et al., 2024; Chen et al., 2025; Rahman et al., 2024). As with current conditions, the high vulnerability to climate change, such as most of Africa, Latin America, and Asia, including Indonesia, has experienced an average temperature increase of 0.5°C - 1.0°C in the last 30 years (Anirwan, 2023).

This is exacerbated by the problem of forest fires; this condition is clearly seen in Kalimantan, which is often the epicenter of forest and land fires (Karhutla). Forest and land fires in Kalimantan are getting worse due to El Niño 2023, with an area of 994,300 hectares, much larger than the 198,600 hectares in 2022 (Hasan, 2024). In West Kalimantan itself, forest and land fires often occur every year and are the highest among other provinces (Aguntar et al., 2023; Awaluddin et al., 2024; Bafadal & Hestiantini, 2023; Dicelebica et al., 2022). It is even said that there is an economic and political charge for the occurrence of ecology in West Kalimantan, both from the lack of awareness, centralistic management, and economic costs and land conversion (Dicelebica et al., 2022; Elyta & Rahman, 2019).

One of the areas in West Kalimantan with a relatively high incidence of forest fires is Kubu Raya Regency, which recorded 1,735 hotspots from 2012 to 2022, with an average of 173 hotspots per year (Dicelebica et al., 2022). Among the most notable points, Kubu Raya Regency is located in Sungai Raya District (Aguntar et al., 2023; Dicelebica et al., 2022), and one of them is in Kalibandung Village (Government of Kubu Raya Regency, 2023). It is recorded that this village experienced a severe fire in 2018, with around 200 hectares of peat forest burned and loggers targeted, leading to the police confiscating 1,000 logs and threatening the primates living there (Munandar, 2020). This condition damages ecosystems and reduces biodiversity, exacerbates climate change that impacts health and socio-economic conditions, and increases the risk of hydrological disasters (Abdillah et al., 2025; Aguntar et al., 2023; Dicelebica et al., 2022; Prianto & Abdillah, 2023).

Recognizing this situation, the Indonesian government issued various policies, one of which was based on the 2018 regulation through PMK No. 216/2018 and PMK No. 07/2021 (Saputri et al., 2025). This policy is an instrument known as the Ecological Fiscal Transfer (EFT), which can be implemented to reduce the ecological burden caused by forest and land fires. Environmental vulnerability and public health risks can be minimized. At the same time, it serves as compensation for the impact of greenflation (Sukomardojo et al., 2024) and coordinate the contradictions between ecological protection and economic development (Liu et al., 2024).

The Kubu Raya Regency Government has implemented this policy since 2021 and continues to improve it through an ecology-based performance incentive policy by reformulating the village fund allocation (ADD) through a regent regulation that regulates the performance allocation mechanism. This policy encourages villages to compete for access to this funding through performance assessments conducted at the regency level (Firdaus et al., 2025). According to The Asia Foundation (2019), budget allocation from the provincial to district level is known as TAPE, while transfers from districts to villages are known as TAKE (ecology-based district budget transfers), which is the focus of this study. Budget allocation for ecology-based performance incentive policies can be used for general purposes, such as the implementation of government tasks, and for specific purposes, such as village development (Zainal et al., 2024). In this case, Kubu Raya adopted the addition of performance allocation to the ADD scheme. Thus, EFT acts as a vertical intergovernmental fiscal mechanism (central-regional), while TAKE is a horizontal mechanism under the regency that adopts EFT principles in the context of village governance.

This policy also serves as fiscal compensation for the rising economic costs resulting from environmental policies, known as greenflation (Sukomardojo et al., 2024). In addition, TAKE also serves as a coordinating instrument to harmonize potential contradictions between ecological protection and

local economic development (Liu et al., 2024). With performance-based incentives, it is hoped that each village will be encouraged to preserve its natural resources while strengthening the sustainable governance.

The implementation of this policy has encouraged Kalibandung Village to become one of the villages actively developing environmental management through the establishment of a Village Forest Management Institution (LPHD) with the support of a Non-Governmental Organization (NGO) (Munandar, 2021). In 2021, Kalibandung Village was listed as a beneficiary of the IKE program for successfully meeting the environmental performance indicators set by the district government (Anto et al., 2024). This program provides compensation for villages' efforts to protect forests and reduce hotspots, so that economic losses due to land restrictions can be considered an ecological investment (Liu et al., 2024; Rajaraman & Gupta, 2022; Ring, 2008).

However, in 2022, Kalibandung Village was no longer listed as an incentive recipient. Of the 118 villages in Kubu Raya, only 20 passed based on the new indicators, with an average incentive allocation of IDR 488.42 million (Perbup No. 94, 2021). This phenomenon is interesting because it shows a shift in the collaborative dynamics between actors in policy implementation. It is not merely a technical failure but rather a change in the starting conditions, weaknesses in institutional design, and limited facilitative leadership in the collaboration process.

Based on this, the Collaborative Governance Framework approach (Ansell & Gash, 2008) is used to explain how actors such as district governments, village governments, LPHDs, and NGOs interact in designing and implementing ecology-based performance incentive policies. This framework emphasizes four main dimensions: starting conditions, institutional design, facilitative leadership, and collaborative processes, which are relevant for assessing the effectiveness of collaboration between actors in the implementation of TAKE in Kalibandung Village. In addition, the Institutional Analysis and Development (IAD) framework (Ostrom, 2011) used to strengthen the analysis of rules-in-use and the arena of interaction between actors that influence policy success. Thus, this study focuses on the extent to which the TAKE policy has been successfully implemented in Kalibandung Village and how institutional structures and collaborative dynamics between actors determine the sustainability of ecological performance incentives at the local level.

2. METHOD

This study uses a descriptive qualitative approach and was conducted in Kalibandung Village, Sungai Raya Subdistrict, Kubu Raya Regency in 2024-2025. This approach was chosen to gain an in-depth understanding of the dynamics of TAKE or Ecological Fiscal Transfer (EFT) policy implementation through the theoretical framework of Ansell and Gash (2008), which covers the aspects of initial conditions, institutional design, and facilitative leadership in the collaboration process. The research data were obtained from primary sources through in-depth interviews with 18 informants. These included village heads and officials (two people), LPHD administrators (three people), NGOs (six people), community leaders (two people), and Kubu Raya Regency officials from the Community and Village Empowerment Office, the Regional Development Planning Agency, and the Environment Office (five people). Secondary data were obtained from regulatory documents, local government reports, NGO publications, online media news, and academic literature related to ecological fiscal policy in general and, in particular, ecology-based performance incentives in Kalibandung Village.

Data were collected through semi-structured interviews, participatory observation, and documentation studies, and then analyzed using Miles and Huberman's (1994) interactive analysis model, which includes data reduction, data presentation, and conclusion drawing. Data validity was ensured through the triangulation of sources and methods, as well as member checks with informants. The analytical framework of this study focused on the implementation of the TAKE policy in Kalibandung Village, with the aim of revealing the factors that supported or hindered the village from regaining its ecology-based performance incentives after not being listed as a recipient in 2022.

3. RESULT AND DISCUSSION

3.1 Starting Conditions: Foundation of Trust, Capacity, and Access to Information

In the context of the Collaborative Governance Framework (Ansell & Gash, 2008), the starting conditions for collaboration include the level of trust, history of cooperation, and equality of resources among actors. These three aspects form the foundation that determines the direction of collaboration in the Ecology-based District Budget Transfer (TAKE) policy in Kalibandung Village. The results of the study show that the implementation of TAKE began with moderate levels of trust, where the relationship between the district government, the village, and NGOs was a transactional one. The village understood TAKE as additional funding and not as part of an ecological performance-based fiscal transfer scheme. The following table assesses the TAKE policy in Kubu Raya District.

Table 1. TAKE Assessment in Kubu Raya District

No.	Main Categories	Sub-Indicators
1	Ecological-Based Natural Resources Management and Climate Change Mitigation (45%)	Social Forestry Business Governance based on KUPS (20%)
		Number of Village Innovations in Natural Resources Management outside the PS permit (20%)
		Budget Allocation to the Environment (20%)
		Waste Bank and Innovative Waste Management (20%)
		Critical Land and Hotspot Points (20%)
		Critical Land Area (10%)
		Hotspot Drop (10%)
2	Management of Village-Owned Enterprises (10%)	Village Tourism Integrated with BUMDes (50%)
		Amount of BUMDes Contribution to PADes in 2020 (50%)
3	Gender-Responsive Development (15%)	Budgeting Support for Women's Empowerment, Child Protection, and Family (100%)
4	Village Financial Governance (30%)	Timely Preparation of APBDes (50%)
		Timely Submission of LPJ (25%)
		Fastest in Village Fund Distribution (15%)
		Availability of Village Asset Reports (10%)

Source: Kubu Raya Regent Regulation Number 94 of 2021

Table 1 details the performance targets that villages must achieve to access funding from this policy. This study aims to show the extent to which Kalibandung Village has achieved these targets, particularly by the implementing actors. The interview results also show that technical understanding and information transparency are still limited at the implementation level. The district government, as the policy designer, has better data and analytical capacity because it works closely with KPH and NGOs. However, access to evaluation data, such as hotspot maps, village reports, or indicator assessments, is not openly shared with villages. This creates an imbalance in resources and information that has the potential to affect perceptions of fairness in collaboration. Villages that feel they are not involved in the verification process tend to view this policy as technocratic rather than collaborative. In theoretical terms, this kind of trust deficit is a common challenge in newly emerging collaborations (Ansell & Gash, 2008), where relationships between actors are not yet based on stable cooperation. Nevertheless, the history of cooperation between the LPHD and local NGOs in social forestry programs has become the initial social capital that reduces conflicts of interest and opens up space for cross-actor communication. The following are the results of the researchers' identification of human resources with knowledge of social forestry management.

Table 2. Role and Stakeholder Involvement in Management Social Forestry in Kalibandung Village

Yes	Stakeholder Name	Roles and Involvement	Funding Sources
<i>Non-Governmental Organization (NGO)</i>			
1	JARI Indonesia West Borneo	Assistance and strengthening of social forestry management groups and institutions through the Village Forest Management Institution (LPHD) and Social Forestry Business Group (KUPS)	Support The Asia Foundation
2	Natural Capital Foundation	Rehabilitation of forests and land within social forestry areas in social forestry areas	Support from WWF US
<i>Private</i>			
3	PT Graha Agro Nusantara (GAN) II (Oil palm plantation company)	Marking of the boundaries of village forest permit areas in social forestry areas	PT GAN
4	PT Hakikat Arwana Sukses (HAS) (Plantation, forestry, other construction fisheries companies)	Planting and assistance in the management of liberica coffee plantations in social forestry areas	PT HAS

Source: Processed from research results, 2025

Table 2 shows that the village government already has parties to strengthen human resources. However, the results of this study show that cooperation is only in support of social forestry programs. Village problems need to be accommodated, such as critical land improvement, forest and land fire prevention, and budget support in villages for environmental assessments that are performance assessments of TAKE policies. The imbalance of resources is very disruptive to the collaboration process; therefore, a greater level of understanding is needed to empower stakeholders to the maximum. The ability of human resources is needed in the development of social forestry, but it does not mean that collaboration cannot be conducted. The problem of resource imbalance can be overcome if stakeholders represent the interests of their groups. This is in line with what English (2000) said, that many stakeholders are not able to be representative of stakeholders in general in the collaboration process.

3.2 Institutional Design: Institutional Mechanisms and Deliberative Space Constraints

Institutional design is the second dimension that determines the extent to which formal structures and rules support the collaboration. Based on the results of document analysis, the TAKE policy is regulated through the Kubu Raya Regent Regulation (Perbup) No. 101 of 2020 and Perbup No. 94 of 2021, which regulate performance indicators and incentive allocation formulas. The allocation of village performance is the domain of this village performance incentive policy (TAKE), as in article 5, determining indicators with the weight of the percentage fulfilled by Kalibandung village, namely the utilization and protection of ecology-based natural resources (50%), the management of village-owned enterprises (BUM) (25%), and village financial governance (25%).

Each indicator has criteria as specified in Article 5 points 2, 3, and 4. The achievement of the Kalibandung Village's ecology-based performance incentive (TAKE) can be included in the Village Fund Allocation (ADD) determined by the Kubu Raya Regency government. This results in an increase in the ADD that is used in the implementation of government tasks and is specifically for village development (Zainal et al., 2024) or to accelerate local development and empower communities to improve rural welfare, providing flexibility and authority for villages to independently manage local affairs, especially in the implementation of development and empowerment programs at the grassroots level (Ardiputra et al., 2025). Through this program, the Kalibandung village government received an incentive of Rp. 8,406,000 in 2021 from the 3% performance allocation ceiling set by the Kubu Raya government through Regent Regulation No. 101 of 2020.

Table 3. Kalibandung Village Performance Indicator Table in TAKE in 2022

No.	Main Categories	Sub-Indicators	Value	Ratio	Weight
1	Ecological-Based Natural Resources Management and Climate Change Mitigation (45%)	Social Forestry Business Governance based on KUPS (20%)	-	0,0000	0,00%
		Number of Village Innovations in Natural Resources Management outside the PS permit (20%)	-	0,0000	0,00%
		Budget Allocation to the Environment (20%)	-	0,0000	0,00%
		Waste Bank and Innovative Waste Management (20%)	-	0,0000	0,00%
		Critical Land and Hotspot Points (20%)	4.555	0,0024	0,01%
		Critical Land Area (10%)	1	0,0115	0,05%
		Hotspot Drop (10%)	-	0,0000	0,00%
Subtotal					0,03%
2	Management of Village-Owned Enterprises (10%)	Village Tourism Integrated with BUMDes (50%)	-	0,0000	0,00%
		Amount of BUMDes Contribution to PADes in 2020 (50%)	-	0,0000	0,00%
Subtotal					0,00%
3	Gender-Responsive Development (15%)	Budgeting Support for Women's Empowerment, Child Protection, and Family (100%)	23.170.000	0,0241	0,36%
Subtotal					0,36%
4	Village Financial Governance (30%)	Timely Preparation of APBDes (50%)	-	0,0000	0,00%
		Timely Submission of LPJ (25%)	1	0,0147	0,11%
		Fastest in Village Fund Distribution (15%)	-	0,0000	0,00%
		Availability of Village Asset Reports (10%)	-	0,0000	0,00%
Subtotal					0,11%
Total Weight Performance Indicator					0,50%
Village Ranking					57
Performance Indicator Budget per Village					0
Source: Village Performance Calculation Matrix on TAKE					

Table 3 shows the achievements of Kalibandung Village's performance indicators in the 2022 Ecology-based Performance Incentive (TAKE) program based on Perbup Kubu Raya Number 94 of 2021. Of the four main categories—ecological-based natural resource management (45%), BUMDes management (10%), gender-responsive development (15%), and village financial governance (30%), Kalibandung Village only recorded achievements in gender-responsive development (0.36%) and village financial governance (0.11%), with a total performance weight of 0.50% with a ranking of 57. This result shows a decrease compared to the previous year, although the Kubu Raya Regent Regulation Number 94 of 2021 at that time provided a greater incentive opportunity of 7% if the indicators could be optimally met each existing criterion.

The performance allocation in the Kubu Raya Regent Regulation Number 68 of 2023 is calculated by paying attention to four main indicators, namely: ecology-based natural resource protection (50%), management of village-owned enterprises (BUM) (25%), and village financial governance (25%). Each indicator has subcriteria that are calculated using certain ratios and weights between villages in the district. For example, ecological indicators include the number of social forestry business groups, natural resource management innovations, environmental budget allocation, waste management, as well as critical land area and the reduction of hotspot points. The total performance weighted value is then used to determine the village performance allocation of 7% of the total ADD, which is multiplied by the total weight of the performance allocation of each village after deducting fixed income and village apparatus allowances. This allocation is given to the villages with the highest performance indicators.

However, the document does not regulate participatory mechanisms in determining indicators or verifying results. The assessment team consists of elements of DMPDes, the Environment Agency, and FMUs, while the village plays the role of only a reporter. In interviews, district officials cited limited time and budget resources as reasons for not involving all villages. These findings confirm that institutional design is still top-down and administrative, and has not provided an adequate deliberative arena. According to the framework of Institutional Analysis and Development (IAD) (Ostrom, 2011). An ideal arena of interaction should allow each actor—especially a village—to negotiate rules, validate data, and provide feedback on indicators deemed inappropriate to the local context.

In addition, the absence of a formal *feedback loop* mechanism hinders the *policy learning* process, where the results of the implementation should be used to improve the following year's policy. The absence of this mechanism explains why Kalibandung Village failed to obtain incentives in 2022 without knowing the specific reasons. Thus, one-way institutional design is one of the main factors that limit the formation of true collaboration in the implementation of TAKE.

3.3 Facilitative Leadership: Facilitative Leadership and Local Dynamics

The third dimension, *facilitative leadership*, plays an important role in bridging the gap in resources and trust between actors. In the implementation of TAKE, this role is played by many village heads and local NGOs who have social credibility and the ability to connect various interests. The following Figure 1 is an identification of the parties' support in human resource development collaboration in Kalibandung Village.

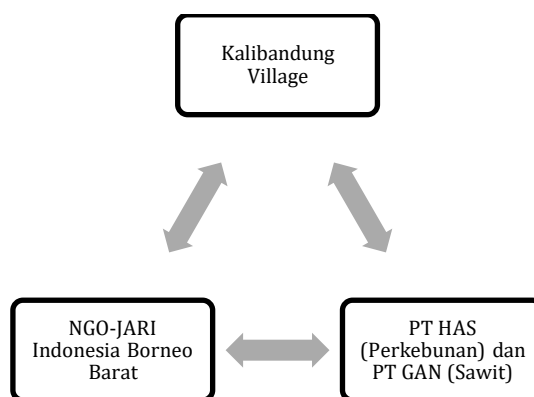


Figure 1. Identification of Collaboration Between Chords in Kalibandung Village

Source: Processed Researcher, 2025

The involvement of actors in the collaboration seen in the image above is enough as a modality to strengthen the direction of village development. However, as explained in Table 2 above, the focus of collaboration is only on the development of social forestry programs and does not touch other components of the performance allocation that have been set by the Kubu Raya Regency Government.

The results of the study also show that meetings between actors are generally informative, for example, socialization of the results of assessment, reporting, or administrative coordination without any reflective space to discuss data gaps or field challenges. In the context of Collaborative Governance, such practices show the existence of adaptive social capital, although it has not been institutionalized. The collaborative process can be strengthened through three steps: (1) establishing periodic communication forums between actors; (2) providing shared data access; and (3) making the verification results an open evaluation material between villages. Thus, although formal collaboration has not yet been fully established, emerging adaptive practices at the local level are becoming an important potential to strengthen the sustainability of TAKE policies going forward.

Another thing, the Head of Kalibandung Village actively plays the role of a mediator, organizes LPHD, and facilitates communication with the community and NGOs, and the private sector. For

example, fire control and forest rehabilitation training activities are carried out through collaboration between LPHD and NGOs, supported by the district government. This shows that local leadership serves as a glue factor for collaboration, especially in building communication and trust at the grassroots level.

In contrast, at the district level, leadership is more administrative. DMPDes officials focus on regulatory compliance and fund distribution, not on facilitating communication between actors. In Collaborative Governance theory, this situation is called the leadership gap, where the collaborative process loses a facilitative figure at the policy level, while at the implementation level, individual initiatives appear. To strengthen policy effectiveness, facilitative leadership needs to be institutionalized through multi-stakeholder forums that allow for regular interactions, role sharing, and shared decision-making. Without institutional support, good leadership at the village level will be difficult to continue when there is a change of village head or a change in program priorities.

4. CONCLUSION

Based on the results of research and analysis using the framework of the Collaborative Governance Framework and Institutional Analysis and Development (IAD), it can be concluded that the implementation of the Ecological Performance Incentive policy or District Budget Transfer is based on Ecology (TAKE) in Kalibandung Village is influenced by social, institutional, and leadership dynamics that interact with each other in four main dimensions of collaboration.

First, the starting conditions show that there is a gap in technical capacity, access to information, and inequality of resources between the district and village governments. This affects the level of trust and ownership of policies, as well as forming collaborative relationships that are transactional, not participatory. Second, institutional design in the TAKE policy is still top-down. The performance assessment and data verification mechanism has not provided deliberative space for villages to participate in determining indicators or responding to evaluation results. The absence of a formal feedback loop hinders the policy *learning* process and reduces the chances of improving indicators in the following year. Third, facilitative leadership is growing strongly at the local level. Village heads and NGOs play a central role as mediators between government structures and local communities. However, the facilitative role at the district level is still limited to the administrative aspect, so collaboration relies on individual initiatives, rather than a sustainable institutional system. Fourth, the collaborative process takes place episodically and has not been institutionalized. Meetings between actors are more informative than deliberative, while cross-actor communication has not yet become a forum for *joint learning*. However, adaptive practices have emerged at the village level, such as inter-village peer learning, that show the potential to strengthen collaboration in the future.

From these four dimensions, it can be concluded that the effectiveness of TAKE policies is not only determined by allocation formulas or technical indicators, but also by the quality of social relations and institutional capacity between the actors involved. A collaborative approach based on trust, inclusive leadership, and deliberative participation is key to the success of ecological fiscal policies at the local level. Theoretically, this study expands the application of Collaborative Governance theory in the context of ecological fiscal transfer at the village level, emphasizing the importance of bridging leadership and co-design mechanisms in environmentally oriented fiscal policy governance. Practically, the results of this study provide recommendations for the Kubu Raya Regency Government to establish a cross-actor collaborative forum, increase data transparency, and institute a policy feedback mechanism to ensure the sustainability of ecological performance incentives at the village level.

Ethical Approval

Ethical approval was not required for this study

Informed Consent Statement

Not Applicable

Authors' Contributions

F contributed to the conceptualization, research design, and overall supervision of the study, as well as the drafting and final revision of the manuscript. HP contributed to data collection, validation, and analysis related to institutional and governance aspects. KZ contributed to the literature review, framework formulation, and synthesis of findings. HPS assisted in conducting field interviews, data organization, and preparation of visual materials. APW contributed to the interpretation of results, manuscript editing, and technical refinement of the final document.

Disclosure statement

No potential conflict of interest was reported by the authors.

Data Availability Statement

The data presented in this study are available on request from the corresponding author due to privacy reasons

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