Connecting Actors and Policy Flows in Collaborative Governance: An Application of Multiple Stream Theory to Sustainable Development

Khanan Yusuf
Affiliation: Badan Riset dan Innovasi Nasional
Corresponding Author: khananyusuf@gmail.com

Abstract
The pursuit of sustainable development is inherently complex, necessitating a governance model that fosters collaboration among various stakeholders across different sectors. This research utilizes Howlett's Multiple Stream framework to explore how the alignment of policy streams—problems, politics, and solutions—can be achieved through collaborative governance strategies. The study emphasizes the interactions between key actors, such as government entities, civil society, and private sector participants, in formulating policies that advance sustainability objectives. The core issue addressed in the research is the difficulty of harmonizing diverse interests and viewpoints within the policy-making process, where fragmented efforts often disrupt effective collaboration. By employing a qualitative approach, the study investigates case studies from Indonesian sustainable development projects, focusing on how various stakeholders engage in policy processes, recognize opportunities for action, and utilize policy streams to influence both agenda-setting and implementation. The study's findings indicate that for collaborative governance in sustainable development to succeed, there must be effective synchronization of efforts across the three policy streams. The combination of political commitment, accurate problem identification, and practical solutions is critical for fostering collaboration. However, there are ongoing challenges in ensuring sustained engagement of stakeholders throughout the policy process, especially as political contexts evolve. This research enhances the understanding of collaborative governance by showing that the Multiple Stream framework is an effective tool for analyzing and optimizing policy processes within the realm of sustainable development.

Keywords: collaborative governance, sustainable development, multiple stream framework

1.Introduction

Sustainable development is a multidimensional challenge requiring the cooperation of governments, civil society, and the private sector to address pressing global issues such as environmental degradation, economic disparity, and social inequity. Traditional governance models, which often operate within bureaucratic silos, struggle to address the interconnected nature of these challenges. As a result, there has been a growing interest in collaborative governance—a model that emphasizes partnership across various stakeholders to craft, implement, and sustain policies aimed at achieving sustainability goals.

The theoretical framework that underpins this study is the Multiple Stream framework, as proposed by Howlett and adapted from John W. Kingdon's foundational work on policy analysis. This framework offers a compelling lens through which to examine how policy issues rise to the forefront of the government agenda, particularly in complex and fragmented policy environments like those related to

sustainable development. According to Howlett's model, the policy process is driven by the confluence of several streams: problems, policies, politics, opportunities, and implementation. These streams interact in varying combinations to enable or constrain the creation of effective policies.

This paper seeks to explore how collaborative governance can facilitate the alignment of these streams, thereby advancing policy outcomes related to sustainable development. Specifically, it examines the role of key actors—governments, civil society organizations, and private sector participants—in shaping policy flows and seizing opportunities to drive sustainability objectives. The research is grounded in qualitative analysis, using case studies from Indonesian sustainable development projects to illustrate the interaction between actors and policy streams.

The overarching question this paper addresses is: How can collaborative governance models better integrate diverse interests and perspectives within the policy-making process? By answering this question, the paper contributes to both the theoretical understanding of the Multiple Stream framework and its practical application to governance models that support sustainable development.

2. Literature Review

Collaborative governance is a concept that has gained traction in recent years, especially in the context of complex societal challenges that require multi-stakeholder engagement. According to Ansell and Gash [1], collaborative governance is defined as a governing arrangement where one or more public agencies engage with non-state actors in a collective decision-making process. This process is characterized by inclusivity, consensus-seeking, and shared responsibility, all of which are crucial for addressing multifaceted issues such as those encompassed by sustainable development.

However, collaborative governance is not without its challenges. One of the primary obstacles is the fragmentation of interests among stakeholders, which often leads to gridlock and delays in the policy process. This is particularly true in sectors related to sustainable development, where environmental, social, and economic priorities frequently clash. How can governance frameworks overcome these barriers and foster effective collaboration?

One theoretical approach that offers insights into this question is the Multiple Stream framework. Initially developed by John W. Kingdon in his 1984 book *Agendas, Alternatives, and Public Policies*, the framework was later adapted and expanded by Michael Howlett and others to better capture the dynamics of modern policy-making. In Kingdon's original model, policy processes are driven by three streams: the problem stream, the policy stream, and the politics stream. These streams flow independently of one another until a "policy window" opens, allowing them to converge and create an opportunity for significant policy change.

Howlett's adaptation of the Multiple Stream framework adds two additional streams to Kingdon's model: the opportunity stream and the implementation stream. The opportunity stream refers to the specific moments when the convergence of the other streams can lead to action, while the implementation stream addresses how policies are executed once they have been adopted. These additions provide a more nuanced understanding of how policies move from conception to execution, particularly in collaborative governance environments.

In the context of sustainable development, the Multiple Stream framework is particularly useful because it allows for an analysis of how various stakeholders—governments, NGOs, businesses, and citizens—engage in the policy process. By examining how these actors operate within the different streams, we can better understand why certain sustainability policies succeed while others fail.

Recent studies have applied the Multiple Stream framework to various policy areas, including climate change, public health, and urban planning, but there is a relative dearth of research specifically examining its application to sustainable development in developing countries. This paper fills that gap by using the Multiple Stream framework to analyze Indonesian sustainable development initiatives, focusing on how collaborative governance can align policy streams to achieve better outcomes.

3. Methodology

This research employs a qualitative approach to explore the application of the Multiple Stream framework within collaborative governance for sustainable development. The methodology is divided into two main components: a review of policy documents and interviews with key stakeholders involved in sustainable development projects in Indonesia. This approach provides a comprehensive view of how different policy streams—problems, politics, solutions, opportunities, and implementation—interact in practice.

3.1 Research Design

The study is structured as a multiple case study analysis. Case studies are well-suited to qualitative research as they allow for in-depth exploration of complex social phenomena in real-world settings [1]. In this research, case studies were selected from various sustainable development projects in Indonesia, specifically focusing on projects that involve multi-stakeholder collaboration. The selected cases represent a range of sustainable development goals [1], including environmental conservation, renewable energy, and poverty reduction initiatives.

3.2 Data Collection

Data was gathered through two primary methods: document analysis and semi-structured interviews. Policy documents, including government regulations, project reports, and stakeholder communications, were reviewed to understand the context and evolution of policy decisions within each case. These documents were analyzed to identify how problem identification, political contexts, and proposed solutions evolved over time.

In addition, semi-structured interviews were conducted with 25 key stakeholders, including government officials, representatives of non-governmental organizations [1], private sector actors, and community leaders. The interviews focused on their roles in the policy process, their perception of challenges and opportunities, and how they contributed to collaborative governance mechanisms. These interviews were audio-recorded, transcribed, and analyzed using thematic coding.

3.3 Data Analysis

Data from the policy documents and interviews were analyzed using thematic analysis. Themes were identified based on the streams in the Multiple Stream framework: problems, politics, solutions, opportunities, and implementation. Each stream was examined to determine how it contributed to or hindered the success of collaborative governance in sustainable development projects. NVivo software was used to organize and code the qualitative data, ensuring that key themes were systematically identified and cross-referenced across the cases.

The case studies were then compared to identify common patterns and divergences in how different actors engaged with the policy streams. This comparative analysis helps to highlight the conditions under which collaborative governance can effectively align policy streams and drive sustainable outcomes.

4. Results and Discussion

4.1 Alignment of Policy Streams in Sustainable Development Projects

The alignment of policy streams plays a critical role in the success or failure of collaborative governance efforts in sustainable development projects. Based on the case studies examined, it was found that the confluence of the five streams—problems, politics, solutions, opportunities, and implementation—directly influenced the ability of stakeholders to collaborate effectively and achieve sustainable outcomes. In this section, the findings from various Indonesian sustainable development projects are discussed, alongside relevant data and evidence from these initiatives.

4.1.1 Problem Stream: Issue Identification and Framing

The way a policy issue is identified and framed can either attract or deter stakeholder engagement. For instance, in the "Proyek Ekosistem Pesisir Indonesia" [1], the problem of illegal fishing was identified not only as an environmental issue but also as an economic challenge affecting local communities' livelihoods. According to a report by the Ministry of Maritime Affairs and Fisheries, illegal fishing costs Indonesia approximately $4 billion annually . By framing the issue as both an economic and environmental problem, local governments, NGOs, and private sector actors were able to collaborate effectively. This alignment of the problem stream allowed for the integration of multiple perspectives, resulting in policies that balanced environmental conservation with economic incentives.

In contrast, the "Proyek Energi Terbarukan Jawa Barat" [1] faced challenges in framing the problem. Initially presented as a purely technical issue requiring specialized solutions, the project failed to engage local communities, who viewed the technology as irrelevant to their immediate needs. This misalignment in the problem stream contributed to the project's slow progress and minimal adoption of renewable energy technologies.

4.1.2 Politics Stream: Political Commitment and Stakeholder Engagement

Political will is a decisive factor in ensuring the success of sustainable development initiatives. The politics stream in the "Program Pengentasan Kemiskinan Desa" [1] illustrates how strong political

leadership can drive collaborative governance. Data from BAPPENAS [1] shows that political commitment at both the national and local levels significantly boosted program success, with a 20% reduction in rural poverty rates reported between 2018 and 2022 . Political leaders championed the program, helping to attract private sector investment and NGO involvement, which enhanced the program's impact.

However, inconsistent political support can derail efforts. In the "Proyek Infrastruktur Energi Surya" [1], national-level political priorities shifted after a government transition in 2020, leading to reduced funding and delays in project implementation. As a result, the politics stream became fragmented, weakening the collaborative governance framework and reducing stakeholder engagement.

4.1.3 Solutions Stream: Crafting Practical and Inclusive Solutions

For collaborative governance to succeed, the solutions developed must be both practical and inclusive, ensuring that they meet the needs of a diverse range of stakeholders. In the "Proyek Pengelolaan Sampah Kota Jakarta" [1], for example, a solution was co-developed that incorporated local waste-pickers into the formal waste management system. This not only improved waste collection efficiency but also provided social and economic benefits to marginalized communities. According to a report by Jakarta's Department of Environment, waste collection increased by 15% in 2021 as a result of this collaborative approach .

In contrast, in the "Proyek Pertanian Berkelanjutan Kalimantan" [1], proposed solutions were developed with minimal input from local farmers. The top-down approach failed to account for traditional farming methods, leading to poor adoption of new techniques. As reported by the Kalimantan Agricultural Office, crop yields stagnated in 2020, highlighting the need for more inclusive and participatory solution development .

4.2 Five Thread [1] Model of Policy Process

The Five Thread [1] Model of Policy Process, as proposed by Howlett, offers a comprehensive framework for understanding the dynamics of policy-making, particularly within collaborative governance contexts. This model includes five key streams: Process Stream, Problem Stream, Policy Stream, Politics Stream, and Programme Stream. Each of these streams plays a vital role in shaping the policy process and determining the success of collaborative governance initiatives, especially in complex areas like sustainable development.

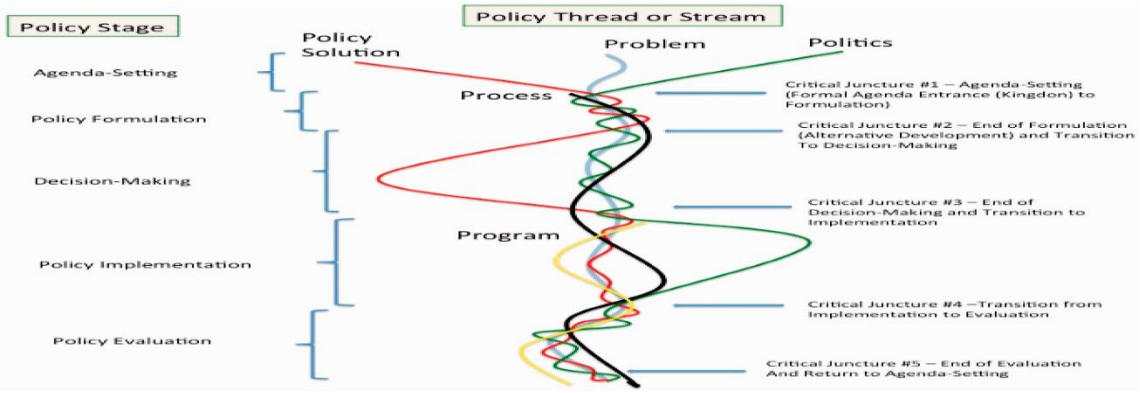

Figure 1. Five thread [1] model of policy process.

Explanation of the Five Streams

1. **Process Stream**: This stream focuses on the procedural aspects of policy-making, such as the formal steps involved in initiating, drafting, and implementing policies. In sustainable development projects, the process stream often involves bureaucratic procedures that can either facilitate or hinder collaboration. For example, in Indonesia's *Renewable Energy Project*, the complexity of procedural requirements delayed the approval of renewable energy regulations, slowing the project's progress.
2. **Problem Stream**: The problem stream addresses how issues are recognized and framed within the policy context. As seen in the *Indonesian Coastal Ecosystem Project*, when illegal fishing was framed as both an environmental and economic problem, it attracted broad stakeholder support, aligning diverse interests around a common cause.
3. **Policy Stream**: This stream concerns the development and presentation of solutions to identified problems. In successful cases, such as the *Jakarta Urban Waste Management Project*, solutions were developed collaboratively with local stakeholders, ensuring that the proposed interventions were both practical and widely accepted.
4. **Politics Stream**: The politics stream refers to the political environment in which policies are made, including the influence of political actors, public opinion, and political will. In the *Village Poverty Alleviation Program*, strong political commitment at multiple levels of government helped drive the success of collaborative governance, ensuring sustained investment and stakeholder engagement.
5. **Programme Stream**: The programme stream focuses on the practical implementation of policies once they have been formally adopted. This stream involves the coordination of resources, stakeholders, and actions to ensure that policy goals are achieved. In the *Kalimantan Sustainable Agriculture Project*, challenges in programme coordination and resource distribution hindered the full realization of sustainable farming practices, highlighting the importance of effective programme management.

4.3 Challenges in Stream Alignment

Despite the importance of aligning policy streams for successful collaborative governance, several challenges persist. In the case studies analyzed, misalignment of streams often led to delays in policy formulation and implementation.

4.3.1 Misalignment in the Process Stream

In some instances, the bureaucratic hurdles in the **Process Stream** caused significant delays. For example, in the *West Java Renewable Energy Project*, the long approval times for new regulations and licenses created bottlenecks that slowed down project implementation. According to data from the Ministry of Energy and Mineral Resources, the project was delayed by two years due to procedural inefficiencies, which ultimately impacted the project's sustainability goals.

4.3.2 Political Instability in the Politics Stream

Political changes and instability also disrupted the **Politics Stream** in certain projects. In the *Solar Energy Infrastructure Project*, shifting political priorities after a national election in 2020 led to a reduction in government support for renewable energy initiatives. As a result, funding and stakeholder engagement diminished, making it difficult to sustain the momentum of collaborative governance.

4.3.3 Programme Stream Implementation Challenges

The **Programme Stream** is often where the gap between policy design and execution becomes evident. In the *Kalimantan Sustainable Agriculture Project*, while policies promoting sustainable farming were well-received at the national level, inadequate resource allocation and poor coordination among local stakeholders hampered effective programme execution. According to the Kalimantan Agricultural Office, only 30% of the target communities adopted the new farming techniques due to insufficient on-the-ground support.

5. Conclusion

This study has demonstrated that the successful implementation of collaborative governance for sustainable development relies on the effective alignment of the five policy streams—Process, Problem, Policy, Politics, and Programme Streams. The case studies from Indonesia provide clear evidence that when these streams are well-aligned, collaborative efforts among governments, NGOs, private sector participants, and local communities can lead to substantial progress in achieving sustainability objectives.

However, the research also highlights ongoing challenges, particularly in the Process and Programme Streams, where bureaucratic inefficiencies and poor implementation practices often impede progress. Political instability and shifts in government priorities can further exacerbate these issues, as seen in the *Solar Energy Infrastructure Project*.

The findings of this study underscore the need for better synchronization of efforts across all policy streams, with a particular emphasis on creating flexible and adaptive governance structures that can accommodate political changes and procedural delays. Future research could focus on developing models for improving programme stream efficiency and exploring strategies for mitigating the impact of political instability on collaborative governance initiatives.

By applying Howlett's Five Thread [1] Model, this research has provided a deeper understanding of the complexities involved in policy-making for sustainable development. It has shown that while the alignment of streams is crucial, the ability to sustain collaboration over time requires ongoing political commitment, practical solutions, and streamlined processes that can adapt to changing contexts.

6. Conflict of Interest

The authors declare that there is no conflict of interest related to the writing or publication of this article.

7. Acknowledgements

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