

**EXPLORING LAWMAKERS' PERSPECTIVES IN IMPLEMENTING ENVIRONMENTAL  
CONSERVATION EFFORTS IN ASUNCION:  
A PHENOMENOLOGICAL STUDY**

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**ABSTRACT**

This study examined the condition of environmental conservation efforts in Asuncion, focusing on the lived experiences, coping mechanisms, and insights of lawmakers involved in these initiatives. Employing a phenomenological approach, the study aimed to uncover the underlying forces shaping environmental governance in the municipality. Through in-depth interviews and focus group discussion, major findings reveal the diverse challenges faced by lawmakers, including experiencing disappointments due to unresponsive community, limited participation from the community, and encountering budget constraints in effective implementation of environmental conservation efforts. Despite these challenges, coping mechanisms such as handing down key responsibilities to barangays, being strict in giving sanctions, and strengthening stakeholders' engagement emerge as effective strategies. These findings underscore the need for holistic, context-specific approaches to environmental governance. Furthermore, the study highlighted the importance of patience in conducting comprehensive environmental conservation (CEC) activities, the need for stricter implementation of CEC activities, use of equipment for better CEC implementation, digitalization and social media as tools for CEC efforts, and implementing innovation strengthens CEC initiatives in achieving sustainable environmental conservation outcomes. Conclusively, this study contributes constructive interpretations and recommendations for policymakers, practitioners, and researchers seeking to enhance environmental conservation efforts in the Municipality of Asuncion and similar contexts.

**Keywords:** lawmakers, implementation, comprehensive environmental conservation efforts

## INTRODUCTION

Environmental conservation remains a global priority, especially in developing countries where natural resources face threats from urbanization and industrial growth. Lawmakers often face the difficult task of balancing economic development with ecological protection. Kraft (2021) and Meadowcroft (2005) explain that this tension continues to complicate environmental policymaking, as competing political and economic interests dilute environmental priorities. Ardoin et al. (2020) also emphasize how stakeholder pressures affect the effectiveness of conservation efforts.

In countries like Zimbabwe, Mavhura and Mushure (2019) found that limited resources severely hinder policy enforcement—a situation mirrored in the Philippines, where local governments are tasked with national mandates but often lack adequate funding (Leach et al., 2005). Gregorio et al. (2020) further note that low public awareness and weak community participation undermine environmental initiatives, making education and local engagement crucial.

Ostrom's Social-Ecological Systems Theory (2007) highlights the importance of collaborative and adaptive governance in addressing these challenges. Gunningham and Sinclair (2019) support this by advocating for regulatory pluralism, combining legal, market-based, and voluntary tools for more effective conservation. Similarly, Brosius et al. (1998) promote community-based resource management, where local involvement increases sustainability.

Given these dynamics, this study explores the lived experiences, coping mechanisms, and insights of lawmakers in Asuncion, Davao del Norte. With increasing environmental degradation and local governance challenges, understanding these experiences is vital for informing effective and context-specific conservation strategies. While previous studies have examined economic pressures (Ardoin et al., 2020), resource limitations (Mavhura & Mushure, 2019), and public engagement (Gregorio et al., 2020), they fall short in exploring the specific realities of lawmakers in small Philippine municipalities. This phenomenological study aims to fill that gap by offering a localized understanding that can inform practical and inclusive environmental governance.

The purpose of the study was to explore the experiences, coping mechanisms, and insights of lawmakers in Asuncion regarding the implementation of environmental conservation efforts. Specifically, the study aims to:

1. To determine the experiences of lawmakers in the implementation of the comprehensive environmental conservation efforts in Asuncion.
2. To know the coping mechanisms of lawmakers in the implementation of the comprehensive environmental conservation efforts in Asuncion.
3. To determine insights of lawmakers in the implementation of the comprehensive environmental conservation efforts in Asuncion.

This study contributes to the Sustainable Development Goals (SDGs) by addressing key challenges faced by lawmakers in implementing environmental conservation efforts, particularly SDG 13 pertaining to climate action, SDG 15 pertaining to life on land, and SDG 17 pertaining to partnerships for the goals. It highlights the balance between economic growth and environmental preservation, the need for effective resource allocation, and the importance of public engagement in fostering sustainable practices. By providing insights into the experiences and coping mechanisms of lawmakers, the research informs policy formulation, strengthens local governance, and enhances collaboration among stakeholders. Ultimately, it supports the global agenda for sustainability by

offering practical strategies to address environmental and governance challenges at the community level.

## Key Literature

Key literature highlights the challenges and strategies involved in the implementation of comprehensive environmental conservation (CEC) efforts. Kraft (2021) discussed the interplay between environmental policies and regulations, noting the tension between economic development and environmental protection, while emphasizing the need for regulatory pluralism to address diverse environmental challenges (Gunningham & Sinclair, 2019). Smith and Jacques (2022) explored sustainable economic growth models, integrating green innovations into regulatory frameworks. The importance of public awareness and community engagement in conservation efforts was also underscored, with studies showing how education and outreach foster environmental stewardship and support for sustainable practices (Ardoin et al., 2020). Furthermore, Leal Filho et al. (2019) highlighted the alignment of conservation initiatives with the Sustainable Development Goals (SDGs) to promote integrated environmental, social, and economic outcomes.

In terms of solid waste management, Das et al. (2019) outlined sustainable practices that minimize waste generation and promote recycling, while Nanda and Berruti (2021) emphasized innovative waste treatment technologies. Community-based conservation efforts were highlighted by Davis and Goldman (2019), who stressed the role of trust, tenure security, and cultural considerations in ensuring project success. Bustamante et al. (2019) emphasized ecological restoration and agroforestry systems as critical adaptation and mitigation strategies to address climate change, enhancing resilience while safeguarding biodiversity.

The overall objective of this study is to explore the experiences, coping mechanisms, and insights of lawmakers in Asuncion regarding the implementation of CEC efforts. This study is significant, as it addresses gaps in literature by providing localized insights into governance challenges, offering practical recommendations for policy enhancement, and contributing to the broader discourse on sustainable environmental practices aligned with the SDGs.

This study was anchored on Social-Ecological Systems (SES) Theory of Ostrom (2007), Community-Based Natural Resource Management (CBNRM) Theory of Brosius (1998), and Environmental Justice Theory by Bullard (1998). These theories collectively provide a comprehensive lens to understand how environmental governance, community engagement, and equity shape lawmakers' perspectives in implementing conservation efforts in Asuncion.

## METHODOLOGY

This study employed qualitative research, utilizing phenomenological approach. It aimed to investigate further into the subjective experiences, perspectives, and meanings individuals attribute to phenomena. It prioritized understanding the "why" and "how" behind human behavior, thoughts, and emotions, employing methods such as interviews, observations, and content analysis to generate rich, context-specific data (Hollstein, 2011). In context, phenomenological approach is suitable in this inquiry, as it delves into the essence of experiences of the participants relating to the phenomenon of implementing environmental conservation efforts.

The study was conducted in the Municipality of Asuncion, specifically the Municipal Environment and Natural Resources Office (MENRO), at Cambanogoy, Asuncion, Davao del Norte. The research participants in this study consisted of 14 lawmakers actively involved in the implementation of environmental conservation efforts in Asuncion. Using the purposive sampling method to ensure rich, relevant, and authentic experiences pertinent to the phenomenon in question in this inquiry, the criteria included the following: (1) they must be members of the Sangguniang Bayan Environmental Committee and MENRO Officers in Asuncion; (2) they must have served in their respective positions for not less than 3 years; and (3) they must have showed the willingness to participate voluntarily in the study. Sangguniang Bayan Environmental Committee members and MENRO Officers were selected as key stakeholders due to their roles in policymaking, enforcement, and coordination of environmental initiatives.

In gathering data, the researchers observed several key steps to gather the data needed for the study.

**Crafting and Validation of the Interview Guide Questions.** The researchers created an interview guide comprising open-ended questions to explore lawmakers' experiences in implementing environmental conservation efforts in Asuncion. This interview guide underwent approval and validation from the research adviser and panelists, ensuring that the questions were relevant, comprehensive, and aligned with the study's objectives.

**Submitting and Revising the Interview Guide Questions for Validation.** After revising the interview guide questions, it was handed over to the research adviser for further validation. Once all corrections were made, the questions were used for data collection.

**Seeking Permission to Conduct the Study.** The researchers asked permission from the heads of the participants to conduct the study.

**Collection of Data.** The participants were informed about the study, and they gave their consent to participate, knowing full well the details and possible consequences of their participation as well as their rights to withdraw and privacy. Such steps were paramount in maintaining high ethical standards while interacting with the participants as part of this inquiry. Moreover, it was conducted personally by the researchers using in-depth interviews with each of the participants.

**Thematic Analysis of the Gathered Data.** When the interview was done, the researchers checked, transcribed, and coded the gathered data. Afterward, researchers tapped the help of the data analyst in qualitative research to analyze the gathered data.

The qualitative data were analyzed using an iterative thematic analysis approach. This involved open coding of interview transcripts and focus group discussions, followed by categorization and the identification of emergent themes. To strengthen the analysis, we employed triangulation by comparing data across different sources and utilized qualitative analysis software (e.g., NVivo) to enhance reliability. This alternate method not only deepened the interpretation of the findings but also ensured that our analysis was systematically anchored in the theoretical frameworks guiding this study.

## RESULTS

This presents the results of the study being gathered by the researchers. The interpretation of the results is grounded in the Social-Ecological Systems (SES) Theory (Ostrom, 2007), Community-Based Natural Resource Management (CBNRM) Theory (Brosius et al., 1998), and Environmental Justice Theory (Bullard, 1998). This theoretical foundation provides a lens through which the experiences, coping mechanisms, and insights of lawmakers can be understood in terms of the interplay between local governance, community engagement, and ecological sustainability. By

anchoring the analysis in these frameworks, the emergent themes not only reflect the practical challenges faced in the field but also resonate with broader theoretical debates in environmental policy and management. The results are presented below:

**Table 1**  
*Experiences of Lawmakers in the Implementation of the Comprehensive Environmental Conservation Efforts in Asuncion*

Emerging Themes	Supporting Statements
<p><b>Achieving Successful Environmental Conservation and Preservation</b></p>	<ul style="list-style-type: none"> <li>• “The achievements are the successful tree planting activities, maintaining the cleanliness of the community, and the preservation of our forest especially at Barangay Buan which has stood the same as it was.” (IDI-01)</li> <li>• “I consider the PROJECT PALCATA as the achievement of our officials.” (IDI-03)</li> <li>• “The LGU of Asuncion has many projects in conservation of environment which is the NGP and ENGP project (National Greener Program and Enhanced National Greener Program) from 2017, 2018 and 2023.” (IDI-04)</li> <li>• “The forests of Asuncion which houses various trees, until now, have remained the same and it consists of palcata, dao, mahogany, and many more.” (IDI07)</li> <li>• “It was once hailed that the forest we have in Barangay Binancian is a “virgin forest” because it remains untouched” (FGD-07)</li> </ul>
<p><b>Feeling Satisfied with the Environmental Conservation Efforts</b></p>	<ul style="list-style-type: none"> <li>• “What I feel about the implementation of the CEC efforts in our community is joy because we can see that there is much support from our local government in our project. It is because this is for the people and for everyone’s well-being.” (IDI-02)</li> <li>• “I can say that Asuncion is a good implementer in protecting our natural resources” (IDI-05)</li> <li>• “In implementing these CEC efforts, we can say that there is positive effect on this. We have preserved our natural resources” (IDI-06)</li> <li>• “I feel that the implementation of the environmental efforts in Asuncion is both a subject for enthusiasm and empowerment for the sake of our nature.” (IDI-07)</li> <li>• “I can say that it is satisfactory because the effect is evident, and it resulted positive feedback from the people.” (FGD-05)</li> </ul>
<p><b>Experiencing Disappointments due to Unresponsive Community</b></p>	<ul style="list-style-type: none"> <li>• “It feels disappointing that we continue to campaign about proper waste segregation, yet many are still reluctant in doing such.” (IDI-01)</li> <li>• “Sometimes, it is disappointing, and sometimes it is just okay because some of the implementations are on and off” (IDI-03)</li> <li>• “I feel sad because most of the beneficiaries or people are taking the project for granted, and they lack appreciation of it.” (IDI-04)</li> <li>• “It is sad that there are still people who refuse to follow policies.” (FGD02)</li> </ul>

<b>Limited Participation from the Community</b>	<ul style="list-style-type: none"> <li>• “I get disappointed at times when people just disregard our designed programs and activities. I even lose interest in my job sometimes, but it is the reality.” (IDI-06)</li> <li>• “There are times that I get disappointed regarding the participation of the people in our programs.” (FGD-04)</li> <li>• “The lack of budget also decreases our motivation.” (FGD-06)</li> </ul>
	<ul style="list-style-type: none"> <li>• “I noticed that people are just participative at first, and only a few people can last long. We cannot gather people that much.” (IDI-01)</li> <li>• “There are hearsays from the community that all we do is just fabricated, that sometimes, some people are just good at first, and there is few sustainability.” (IDI-02)</li> <li>• “It is challenging on the part that we need to do house visitations if we want to make them be informed about our programs.” IDI (IDI-07)</li> <li>• “Only a few would participate in our activities, and many would refuse to care about making steps to address improper waste disposal.” (FGD02)</li> <li>• “The challenging part of our job is bringing the community together.” (FGD-04)</li> <li>• “We cannot just force people to participate.” (FGD-05)</li> <li>• “Some of our seminars have limited participants.” (FGD-06)</li> </ul>
	<ul style="list-style-type: none"> <li>• “As part of MENRO personnel, it is hard for us because of the limited support of higher rank and the budget of the office.” (IDI-03)</li> <li>• “While participating in CEC activities, one of the challenges is the lack of budget, whereas there is limitation in implementing our activities.” (IDI-06)</li> <li>• “I can say that a challenge this office faces is the lack of budget in various activities of the MENRO. Though it exists, but it is not enough.” (FGD-01)</li> <li>• “One of our difficulties here is budget limitation. No matter how feasible our plans are, there is only so much we can do with a limited budget.” (FGD-02)</li> <li>• “Let us consider that Asuncion is not a city. Being a first-class municipality does not mean we have that much budget allocation. We have other priorities as well.” (FGD-04)</li> </ul>

Table 1 results showcased the experiences of lawmakers in Asuncion as they implement environmental conservation efforts, highlighting their successes, challenges, and satisfaction derived from these initiatives. Key accomplishments include tree-planting programs, forest preservation, and long-term projects like the National Greening Program, all bolstered by community participation and local government support. However, challenges such as limited community engagement, budget constraints, and unresponsive attitudes underscore the complexity of fostering environmental stewardship. Despite setbacks, stakeholders express pride and fulfillment, driven by visible impacts and recognition of their efforts, emphasizing the need for sustainable funding, targeted communication, and collaborative approaches to enhance participation and achieve long-term conservation goals.

**Table 2**

*Coping Mechanisms of Lawmakers in the Implementation of the Comprehensive Environmental Conservation Efforts in Asuncion*

<b>Emerging Themes</b>	<b>Supporting Statements</b>
<b>Handing Down Key Responsibilities to Barangays</b>	<ul style="list-style-type: none"> <li>• “We hand it down to the barangays, since they can handle such problems better if it ever persists, and we will just supervise them.” (IDI-04)</li> <li>• “We conduct seminars to each barangay representative. Then, they pass the information down to their respective barangays.” (IDI-02)</li> <li>• “In each of our barangays, we advise them to impose fines that compels for the people to not throw their garbage anywhere.” (IDI-05)</li> </ul>
<b>Being Strict in Giving Sanctions</b>	<ul style="list-style-type: none"> <li>• “For us, we just impose strict implementations and collect fines according to the existing ordinances.” (IDI-01)</li> <li>• “Discipline is what is lacking among some of the people in Asuncion, and I think it is about time to impose it to them” (IDI-02)</li> <li>• “Here in the Philippines, we tolerate the wrongdoings of other people. That is why most of us lack discipline. That is also why we impose higher fines, and that is one effective enforcement” (FGD-01)</li> <li>• “We may be strict but not that strict enough. They are just good at first, but refuse to care about it afterwards” (FGD-03)</li> <li>• “We need to be a little tight over our constituents in the future” (FGD-06)</li> </ul>
<b>Strengthening Stakeholders’ Engagement</b>	<ul style="list-style-type: none"> <li>• “We encourage our stakeholders to support our programs that are effective in protecting the environment. We are proud to say that our forests in Barangay Buan are preserved as it is, with no traces of illegal logging activities.” (IDI-02)</li> <li>• “An effective way to engage the people is to hear their insights and accept any criticisms in order to improve our CEC efforts.” (FGD-01)</li> <li>• “First, we coordinate with NGOs, then schools, then the barangay captains and functionaries, and then cooperatives.” (FGD-03)</li> <li>• “The purok meetings are effective ways of engaging the people, since they share their negative and positive experiences regarding the environment, such as burning of single-use plastics and cellophanes.” (FGD-05)</li> <li>• “We invite different sectors such as DepEd, private businesses, and even PNP and BFP; we invite them to our different environmental programs here in Asuncion.” (IDI-06)</li> </ul>

Table 2 are the results highlighting the adaptive strategies lawmakers in Asuncion employ to address challenges in implementing environmental conservation efforts, focusing on delegation, enforcement, and engagement. Lawmakers empower barangays with responsibilities like waste management and community involvement, fostering grassroots accountability and ownership. They enforce strict sanctions to ensure compliance with environmental regulations, creating a deterrent effect and a culture of responsibility. Strengthening stakeholder engagement emerges as another vital mechanism, promoting collaboration among government, NGOs, communities, and private

entities through inclusive dialogues and capacity-building initiatives. These strategies reflect a holistic approach to overcoming challenges and advancing sustainable environmental governance.

Table 3 shows the insights of lawmakers in Asuncion which highlight the crucial role of patience, strict implementation, technology, digitalization, and innovation in the effective execution of Comprehensive Environmental Conservation (CEC) efforts. Patience fosters trust and long-term community engagement, allowing lawmakers to address diverse concerns and promote sustainable behavior change. Strict enforcement ensures compliance and efficiency, streamlining resources and accountability in conservation activities. The use of modern equipment and technology enhances

**Table 3**

*Insights of Lawmakers in the Implementation of the Comprehensive Environmental Conservation Efforts in Asuncion*

<b>Emerging Themes</b>	<b>Supporting Statements</b>
<p><b>Patience in Conducting Comprehensive Environmental Conservation Activities is Essential for Better Community Engagement</b></p>	<ul style="list-style-type: none"> <li>• “We have realized that not all people are obedient and would conform with strict implementations. Here at MENRO, we will just try our best to continue the good reputation that Asuncion has established in terms of eco-friendliness.” (IDI-03)</li> <li>• “The lesson that we have learned is that we need utmost patience and temperance in their different attitudes, as we deal with them whenever we conduct our CEC activities.” (IDI-06)</li> <li>• “We cannot deny that there are still people who refuse to follow policies, and we have to stretch our level of patience as we try educate them to help them grasp the reality and eventually follow our strict policies” (IDI-07)</li> <li>• “It is part of our job to have patience and deal with people who cannot follow these policies” (FGD-01)</li> <li>• “I agree that we need to understand the people who cannot comply...” (FGD-03)</li> </ul>
<p><b>The Need for Stricter Implementation of Comprehensive Environmental Conservation Activities Helps to Achieve Efficiency</b></p>	<ul style="list-style-type: none"> <li>• “I often realize that we need a much stricter implementation. Many get away with it, because some of their neighbors tolerate their wrongdoings.” (IDI-06)</li> <li>• “We need a much better way of enforcement here. It should be stricter because if other local governments can, I too, believe, that Asuncion can.” (IDI-07)</li> <li>• “The barangays should be more strict, more observant, and more vigilant, because it is our environment that we are talking about.” (FGD-02)</li> <li>• “We will tell it to the barangays about their implementation...they should have been strict from the start.” (FGD-04)</li> <li>• “We will advise the barangays as well that they might want to increase their fines, since some people can afford to pay thousands of pesos these days” (FGD-06)</li> </ul>

<p><b>The Use of Equipment for Better Comprehensive Environmental Conservation Implementation</b></p>	<ul style="list-style-type: none"> <li>• “Ploughing machines like ploughing tractors make a huge difference to our work here, not only in the agriculture department. I hope that the LGU, in the future, could acquire more of these kinds of equipment needed for us to save time doing manual wok, and we do not have to borrow from the agriculture department.” (IDI-03)</li> <li>• “If only we had more equipment, we could have achieved so much right now.” (IDI-05)</li> <li>• “I do hope that we could have our own projector so that we can use it in our seminars” (IDI-06)</li> <li>• “Since we acquired our water quality test instruments, we have made significant steps in assessing the water quality of Madgao River.” (FGD-01)</li> <li>• “I agree that we need these new technologies, since we are in the modern times.” (FGD-02)</li> <li>• “The LGU is taking steps to acquire more of these machineries and equipment. We do understand how crucial it is for the MENRO, and we are doing what is best for everyone.” (FGD-04)</li> </ul>
<p><b>Digitalization and Social Media as Tools for CEC efforts</b></p>	<ul style="list-style-type: none"> <li>• “We have our social media page. We post there our activities and programs here in Asuncion for the people to know what to do. It is also effective in spreading information about ordinances made by the LGU or from respective barangays.” (IDI-01)</li> <li>• “Technology, whether we accept it or not, is what we live in right now. It can help us perform our work faster.” (IDI-02)</li> <li>• “An example of this is the usage of phones where we could use certain apps where we can promote these CEC programs in our community.” (IDI-03)</li> <li>• “Technology can be leveraged in supporting environmental conservation goals in Asuncion in various ways like data collection and monitoring.” (FGD-01)</li> <li>• “We can use our smartphones for documentations and share it on the internet.” (FGD-05)</li> <li>• “I do agree that we need to increase our digitalization here so that we keep up with the modern times” (FGD-07)</li> </ul>
<p><b>Implementing Innovation Strengthens Comprehensive Environmental Conservation Initiatives</b></p>	<ul style="list-style-type: none"> <li>• “We could do tree growing instead of tree planting so that we thoroughly monitor the growth of these trees and not let them die in the process, because most of them get washed away during floods.” (IDI-02)</li> <li>• “We need to have a strict implementation of RA 9003, which imposes the adoption of ‘zero single-use plastics’ and the rehabilitation of forest and forestry lands by DENR Forestry Management Bureau.” (IDI-04)</li> <li>• “We could have a contest for the cleanest and greenest barangay every month, so they will become motivated in enforcing our CEC initiatives.” (IDI-05)</li> <li>• “For me, the innovative approaches that can be adopted is to foster eco-entrepreneurship and support green innovation to develop</li> </ul>

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sustainable solutions to environmental challenges. just like what we did at Magbaad Eco Park as well as the Madgao Eco Park” (IDI-06)

- “I consider it an innovation when we create a much more engaging activity to get the people’s attention. Even a simple fun run as a fundraising activity, pageants, and many other things would capture their attention, because it is for their entertainment and that is where we promote our programs and activities.” (FGD-07)
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precision, data collection, and decision-making, while digitalization and social media amplify awareness, stakeholder engagement, and collective action through transparent communication. Innovation drives creativity and adaptability, with eco-friendly technologies, green initiatives, and collaborative platforms enabling transformative solutions to environmental challenges. Together, these elements create a cohesive and dynamic approach to achieving sustainable conservation outcomes in Asuncion.

## DISCUSSION

The findings show that lawmakers in Asuncion experience both achievements and challenges in implementing environmental conservation efforts. Successes such as tree planting and forest preservation echo Bustamante et al. (2019), who highlight reforestation as a cost-effective conservation strategy. These efforts reflect community-based natural resource management (Brosius et al., 1998), where grassroots involvement fosters ownership and sustainability. Lawmakers also expressed satisfaction from visible impacts and public support, aligning with Ardoin et al. (2020) and Pretty (2003), who emphasize that positive community feedback sustains long-term engagement in environmental programs. However, setbacks such as unresponsive communities and limited participation mirror concerns raised by Zikargae et al. (2022), who argue that public apathy can weaken environmental initiatives. Gregorio et al. (2020) and Wehn and Almomani (2019) also highlight that participation gaps are often due to trust issues, insufficient awareness, or lack of relevance to local needs.

Financial constraints emerged as another major barrier, consistent with Mavhura and Mushure (2019) and Han (2021), who stress that insufficient budgets limit the implementation of local environmental programs. To cope, lawmakers delegate tasks to barangays, strengthening localized accountability—an approach supported by Kamil et al. (2020) and Debrah et al. (2021). Strict enforcement of policies was also emphasized, echoing the recommendations of Kraft (2021) and Smith and Jacques (2022) on regulatory discipline. Stakeholder collaboration through partnerships with NGOs, schools, and agencies reflects Gunningham and Sinclair’s (2019) model of regulatory pluralism, promoting inclusive governance.

Lawmakers also noted that patience is essential when dealing with varying community responses, which aligns with Ostrom’s (2007) emphasis on adaptive governance. They identified the need for stricter implementation to ensure efficiency, as supported by Das et al. (2019). Equipment and digital tools were cited as crucial to monitoring and outreach—echoing Heidari et al. (2019) and Nanda and Berruti (2021), who recommend modern technology to enhance environmental governance. Finally, the push for innovation—such as eco-tourism, competitions, and creative campaigns—mirrors the suggestions of Raj et al. (2020) on the role of green innovation in transforming local sustainability outcomes.

These understandings confirm that local governments need a combination of regulatory enforcement, community empowerment, strategic partnerships, and innovation to navigate the complexities of environmental governance effectively.

## Implications for Practice

Policymakers should develop innovative community outreach programs to address low participation rates and invest in capacity-building initiatives for local government units. Moreover, leveraging digital tools for data collection and monitoring can enhance the efficiency of conservation activities, while clear guidelines and stricter enforcement measures are essential for promoting accountability. By integrating these strategies, stakeholders can foster a more resilient and sustainable model of environmental governance that is responsive to both local and global challenges.

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