

Original Article

From Policy to Governance Practice: An Implementation Assessment of the Local Climate Change Action Plan (LCCAP) in Misamis Oriental, Philippines

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Abstract. This study addresses the limited empirical evidence on the implementation of Local Climate Change Action Plans (LCCAPs) at the municipal level in the Philippines. While LCCAPs are mandated nationwide, few studies systematically examine the institutional and governance factors that influence their effective execution. This study explores how local governments translate climate initiatives into action by assessing the implementation of LCCAPs in nine municipalities of Misamis Oriental, Philippines. Anchored in Policy Implementation Theory, it examines how institutional support, personnel attributes, financial resources, and community participation shape climate resilience at the local level. Using a mixed-methods design, the study gathered data from 72 LCCAP Technical Working Group members and conducted Focus Group Discussions. Spearman's Rho revealed strong positive relationships among all variables, with community engagement showing the highest association with successful implementation ($\rho = 0.91$), followed by institutional robustness ($\rho = 0.88$), personnel attributes ($\rho = 0.77$), and funding support ($\rho = 0.68$). Findings highlight that visionary local leadership and active citizen engagement drive progress in implementation. However, sustaining technical capacity and establishing a dedicated LCCAP office remain key challenges. Strengthening institutional coordination, climate financing mechanisms, and participatory governance can accelerate climate-resilient development in Philippine municipalities.

Keywords: *Climate action; Local climate governance; Resilience; Sustainable development.*

Climate change continues to pose profound environmental, economic, and social risks worldwide. Recent assessments underscore that global warming has intensified extreme weather events, disrupted food and water systems, and increased vulnerabilities to livelihoods, particularly in developing countries with limited adaptive capacity (IPCC, 2022). Rising temperatures, erratic precipitation patterns, sea level rise, and climate-induced disasters disproportionately affect vulnerable communities, further widening existing inequalities. These trends reinforce the growing consensus that climate governance requires coordinated, multi-level institutional responses grounded in local realities.

The Philippines remains among the most climate-vulnerable countries globally, consistently ranking high in disaster risk indices (World Risk Report, 2025). The increasing frequency and intensity of typhoons, flooding, coastal erosion, droughts, and agricultural disruption illustrate the country's exposure to climate hazards. Geographic location, socio-economic constraints, and uneven development amplify these risks. In response, the Philippine government institutionalized climate governance through Republic Act No. 9729, the Climate Change Act of 2009, which mandates integrating climate change adaptation and mitigation into national and local development planning. Under this framework, Local Government Units (LGUs) are required to formulate and implement Local Climate Change Action Plans (LCCAPs), translating national policy directives into localized programs, projects, and activities (DILG, 2014; LGA, 2017).

Recent literature highlights mixed progress in local climate governance across Philippine LGUs. While some municipalities demonstrate innovation and leadership in mainstreaming climate action, others continue to face structural and operational constraints, including weak institutional coordination, limited technical capacity, funding inadequacies, and low stakeholder participation (Pulhin et al., 2021). Emerging studies further suggest that policy compliance in plan formulation does not necessarily translate into effective implementation, particularly at the municipal level, where institutional and fiscal capacities vary significantly. Despite the availability of national guidelines, there remains limited empirical evidence systematically examining how institutional robustness, human resource attributes, funding support, and community engagement collectively influence the extent of LCCAP implementation.

This study addresses this gap by providing an empirical assessment of the extent of LCCAP implementation among LGUs in Misamis Oriental. Specifically, it analyzes four key determinants: (1) robustness of institutional support, (2) attributes of LCCAP personnel, (3) level of funding support, and (4) level of community engagement. By examining how these variables relate to implementation outcomes, the study contributes to a deeper understanding of the enabling and constraining conditions shaping local climate governance. The findings aim to inform evidence-based improvements in climate planning, resource allocation, and institutional strengthening, not only within the province of Misamis Oriental but also in similarly situated localities confronting climate vulnerability.

Methodology

This study employed a Sequential Explanatory Mixed-Methods Design, wherein the quantitative phase was conducted first, followed by a qualitative phase to explain and enrich the statistical findings. This design was deemed appropriate because the study primarily aimed to determine the relationships among key variables affecting the extent of LCCAP implementation and subsequently explore the contextual factors, operational dynamics, and lived experiences that may explain the quantitative results. The integration of quantitative and qualitative approaches allowed the study to combine measurable statistical analysis with in-depth insights, thereby providing a more comprehensive understanding of LCCAP implementation in Misamis Oriental.

The quantitative component generated objective, measurable data on the extent of LCCAP implementation, the robustness of institutional support, the level of funding support, the level of community engagement, and the attributes of LCCAP personnel. The qualitative component, on the other hand, provided a deeper understanding of the implementation processes, institutional concerns, and practical challenges experienced by personnel involved in implementing the plan. Focus Group Discussions (FGDs) were used as the primary qualitative tool to gather these insights.

The study began with the quantitative phase, administered via a structured survey questionnaire. The instrument underwent content validation by experts in public administration and climate governance to ensure clarity, relevance, and alignment with the study variables. A pilot test was conducted prior to the actual survey to assess reliability, and internal consistency was measured using Cronbach's alpha. The result was 0.98, indicating that the instrument has an exceptionally high level of internal consistency. After the quantitative data were collected, they were consolidated and analyzed statistically. The qualitative phase followed, during which FGDs were conducted to explain further and contextualize the statistical findings. The integration of results from both phases strengthened the overall assessment of LCCAP implementation in the study area.

The study was conducted in the First District of the Province of Misamis Oriental, which comprises ten (10) municipalities and one (1) component city. However, the research was limited to nine (9) municipalities. The

Municipality of Salay was excluded because the researcher currently holds a position in the municipal government, to avoid potential conflicts of interest and uphold research integrity and objectivity. The City of Gingoog was likewise excluded due to its distinct administrative structure and fiscal capacity, which differ significantly from those of municipalities. Limiting the study to municipalities ensured comparability of governance and institutional conditions.

The study used purposive sampling, specifically expert sampling, to select respondents directly involved in the formulation and implementation of the LCCAP. The respondents consisted of key members of the LCCAP Technical Working Group, including Municipal Planning and Development Coordinators, Municipal Health Officers, Municipal Engineers, Municipal Agriculturists, Municipal Social Welfare and Development Officers, Municipal Budget Officers, Municipal Disaster Risk Reduction and Management Officers, and Municipal Environment and Natural Resources Officers. Eight (8) respondents were selected per municipality, resulting in a total of seventy-two (72) respondents across the nine municipalities.

Data collection was conducted from September 08, 2025, to September 26, 2025. During the survey phase, respondents were individually oriented regarding the background and purpose of the study, and informed consent was secured prior to participation. The questionnaire was then administered, and respondents were given sufficient time to complete it. Proper documentation procedures were observed to ensure accuracy and accountability of the collected data. After completing the survey, selected respondents participated in FGDs to provide qualitative insights that supported and elaborated on the quantitative findings.

Results and Discussion

The study covered nine (9) municipalities in the First District of Misamis Oriental. These municipalities are *Balingasag, Lagonglong, Binuangan, Sugbongcogon, Kinoguitan, Balingoan, Talisayan, Medina, and Magsaysay*. All of the municipalities share the same geographical features, with each having both inland and coastal communities and urban and rural areas. Each municipality has unique socio-demographic profiles and economic characteristics. They also differ in institutional systems and physical infrastructure. However, they share a common vulnerability to climate change, including rising water levels, increased rainfall, landslides, and impacts on agriculture and its communities.

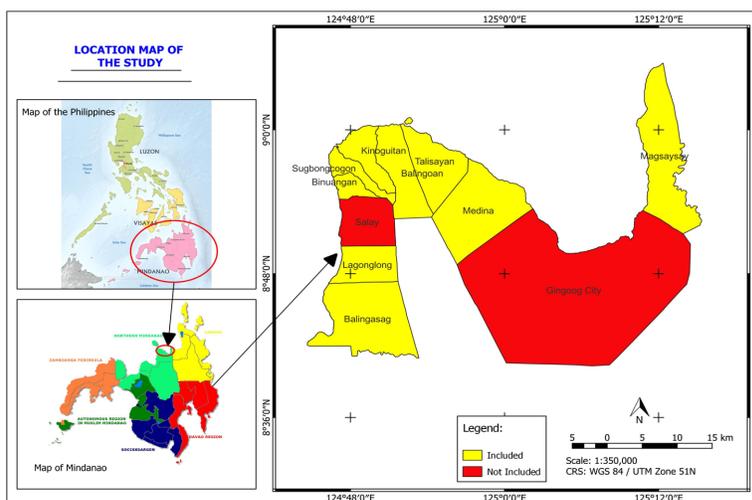


Figure 1. Location Map of the Study

Based on the 2024 Philippine Statistics Authority census of population, the total combined population of the nine municipalities is 249,634, with an average municipal population of around 28,000. This represents 25.26% of the province's total population. In terms of income classification, one (1) municipality is categorized as first-class, two (2) as second-class, one (1) as third-class, three (3) as fourth-class, and two (2) as fifth-class municipalities. This is based on the Department Order No. 074 - 2024 released by the Department of Finance (DOF). These income classifications of the municipalities indicate the level of the National Tax Allotment (NTA) and its local income for the past three years. This also reveals the financial resources and the capacities of the local governments to

implement the LCCAP.

Relationship of the Robustness of the Institutional Support and the Extent of LCCAP Implementation

Figure 2 below shows a scatter plot depicting the relationship between the Robustness of the Institutional Support and the Extent of the LCCAP Implementation in the first district of Misamis Oriental. The study calculated a Spearman's Rank Correlation Coefficient (R_s) value of 0.88. It also has a p -value of 0.005, indicating statistical significance at the 99.50% level. The result suggests that the robustness of institutional support and the extent of LCCAP implementation are strongly positively associated. This also suggests that the municipalities with strong institutional support implement the LCCAP more successfully.

Moreover, the strength of the association ($R_s = 0.88$) indicates that the institutional support, which includes clear policies, support of the LCEs, an existing dedicated office for the LCCAP, inter-office cooperation and monitoring and evaluation mechanisms, is influential in determining the success of the LCCAP implementation (Rogers et al., 2023). With the coefficient of determination $R^2 = 0.71$, the result also suggests that the level of robustness of institutional support explains 71% of the variation in implementation outcomes.

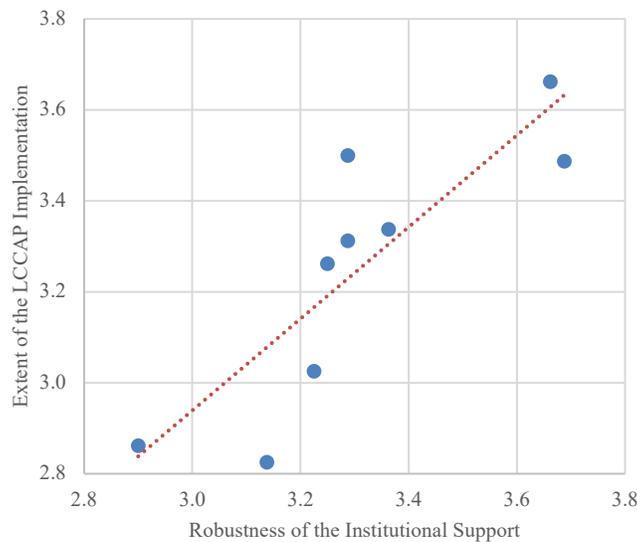


Figure 2. Scatterplot Showing the Association Between the Robustness of the Institutional Support and the Extent of the LCCAP Implementation

Beyond statistical significance, the magnitude of the association highlights the central role of institutional mechanisms – such as leadership commitment, policy clarity, inter-office coordination, and monitoring systems – in shaping implementation outcomes (Alonso-Morales et al., 2025). Insights from the FGDs support this quantitative finding. Participants emphasized that consistent mayoral support, functional technical working groups, and integration of LCCAP priorities into planning documents such as the CLUP and CDP facilitated smoother implementation. These qualitative accounts deepen the interpretation by demonstrating how institutional support translates into operational effectiveness.

Relationship of the Robustness of the Institutional Support and the Attributes of the LCCAP Personnel

Figure 3 illustrates the scatterplot between the robustness of institutional support and the attributes of LCCAP personnel. The results showed that the computed Spearman's Rank Correlation Coefficient (R_s) was 0.88, with a p -value of 0.005. This indicates statistical significance at the 99.50% level.

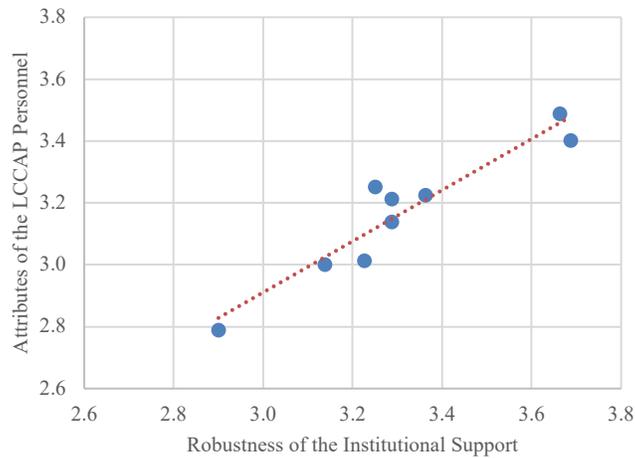


Figure 3. Scatterplot Showing the Association Between the Robustness of the Institutional Support and the Attributes of the LCCAP Personnel

The result demonstrates a positive relationship between the two variables, meaning that municipalities with high institutional support robustness tend to have high levels of LCCAP personnel attributes. The institutional support includes the level of LCE leadership, clear policies, established offices, interdepartmental engagements and the existence of monitoring and evaluation systems. With a strength of association of $R_s = 0.88$, it provides that with proper institutional support, personnel are more equipped to implement climate-related programs and projects (Mensah et al., 2025). On the other hand, the coefficient of determination, $R^2 = 0.90$, indicates that 90.00% of the variation in the attributes of LCCAP personnel's responses can be explained by the robustness of institutional support.

Rather than treating institutional support and personnel capacity as isolated factors, the findings suggest a reinforcing dynamic. Institutional mechanisms create an enabling environment for professional development, while technically capable personnel strengthen institutional performance (Cid et al., 2024). FGD participants confirmed that training opportunities, inter-agency collaboration, and leadership encouragement contributed to skill enhancement and confidence among TWG members. This interplay reflects a systemic relationship in which institutions shape human capacity and human capacity sustains institutional effectiveness.

Relationship of the Robustness of Institutional Support and the Level of Funding Support

Figure 4 displays the scatterplot of the relationship between the Robustness of the Institutional Support and the Level of Funding Support. Based on the statistical analysis, the computed Spearman's Rank Correlation Coefficient (R_s) was 0.85. The computed p -value is 0.01, which is statistically significant at the 99.00% level. These results indicate a strong positive relationship between the robustness of institutional support and the level of funding support. It also suggests that municipalities with strong institutional support provide more funding for implementing their LCCAPs.

It manifests that the robustness of the institutional support, which includes LCE leadership, designated office, interdepartmental linkages, clear policies and established monitoring and evaluation systems, assists in shaping the level of financial readiness and allocation support of the local government. Moreover, the municipalities' strength in their institutional mechanisms helps in securing financial resources for the implementation of climate-related programs (Aylett, 2015). The results also revealed that the coefficient of determination, $R^2 = 0.92$, indicates that the robustness of institutional support can explain 92.00% of the variation in funding support. This further underscores the link between institutional strength and the local government's financial capacity.

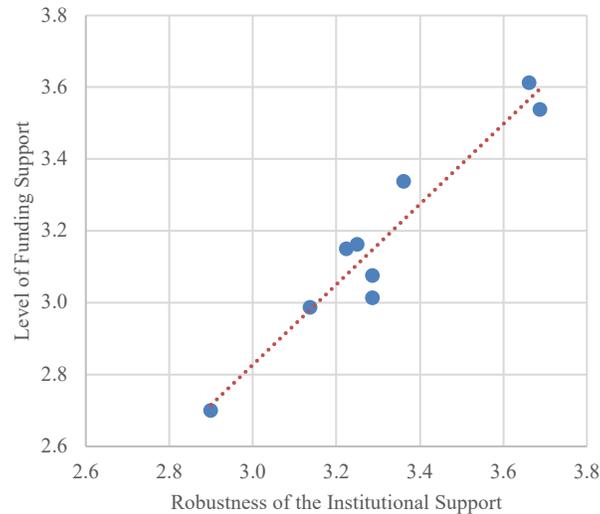


Figure 4. Scatterplot Showing the Association Between the Robustness of the Institutional Support and the Level of Funding Support

Furthermore, municipalities with stronger institutional arrangements were more likely to allocate and mobilize financial resources for climate initiatives. The results suggest that institutional strength contributes to improved fiscal prioritization and resource mobilization. FGDs revealed that municipalities with clearer mandates and coordinated planning were more successful in integrating climate programs into their Annual Investment Plans and in accessing external funds. This implies that funding is not solely a matter of availability but also of institutional capacity to justify, plan, and manage allocations effectively.

Relationship of the Robustness of the Institutional Support and the Level of Community Engagement

Figure 5 shows a scatter plot of institutional support robustness and community engagement level. Based on the statistical run, the computed Spearman’s Rank Correlation Coefficient is $R_s = 0.76$ with a p -value of 0.05.

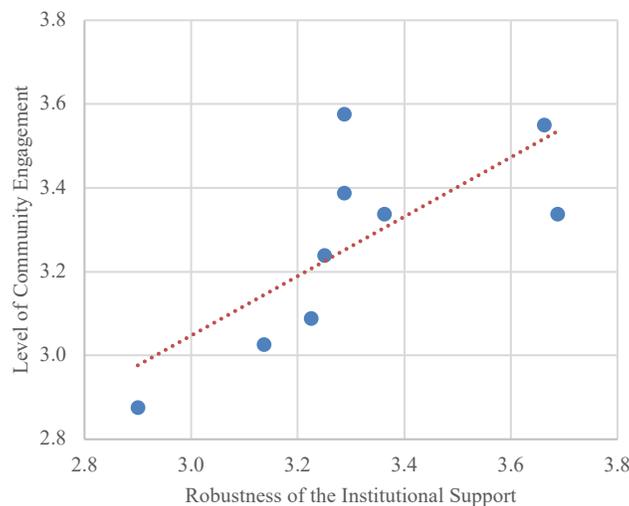


Figure 5. Scatterplot Showing the Association Between the Robustness of the Institutional Support and the Level of Community Engagement

At the 95.00% confidence level, the association between two variables is statistically significant. These results suggest that the greater the robustness of institutional support for municipalities, the greater the stakeholders' engagement in implementing the LCCAP.

Moreover, the association indicates that the robustness of institutional support fosters a conducive environment for private and public citizens to meaningfully participate in implementing local climate initiatives. Conversely, weak institutional support leads to limited citizen involvement, as accountability, trust, and confidence are minimized (Siddiqui et al., 2025). The results also demonstrate that 54.00% of the variation in municipalities' responses on the level of community engagement can be explained by the strength of institutional support, with an R^2 of 0.54. In contrast, the remaining variance can be explained by other influential factors.

Furthermore, the strong positive association indicates that when the public sees their local institutions as effective and transparent, they become more willing to participate in trainings, workshops, and public consultations, support community programs, and be part of the implementers involved in strengthening local climate resilience (Kang, 2023). Strong institutions shape the implementation of the LCCAP, strengthened through public community involvement. Strong institutional support also encourages citizens to become aware, participatory, and active in pursuing sustainable local climate governance. In this part, the citizens, as beneficiaries of local climate initiatives, become active partners with institutions in promoting and implementing adaptation and mitigation measures in the communities. FGD findings illustrate that transparency, regular consultations, and collaborative planning mechanisms increased public trust and participation. Where institutional support was perceived as weak or unclear, engagement was correspondingly limited. The findings suggest that institutional credibility functions as a catalyst for civic participation in local climate governance.

Relationship of the Attributes of the LCCAP Personnel and the Extent of the LCCAP Implementation

Figure 6 shows the relationship between the attributes of the LCCAP personnel and the extent of the LCCAP implementation. Based on the statistical analysis, the computed Spearman's Rank Correlation Coefficient (R_s) is 0.77 with a p -value of 0.05. At the 95.00% confidence level, this implies that the results showed a statistically significant relationship. This strong positive correlation indicates that institutions with more technically-skilled, well-trained, and well-equipped personnel are more successful in implementing the LCCAP.

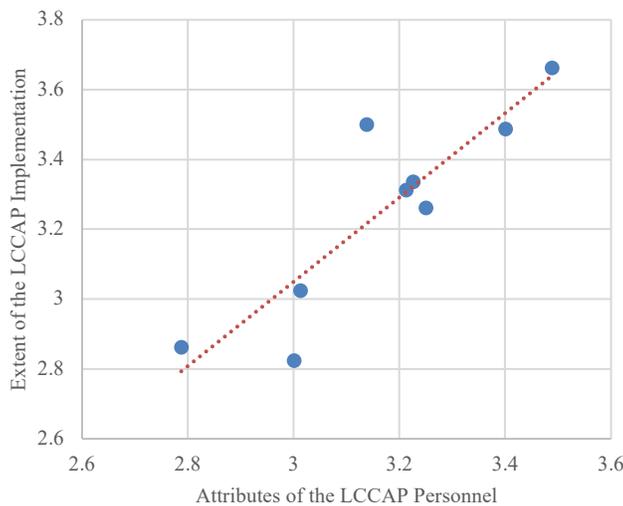


Figure 6. Scatterplot Showing the Association Between the Attributes of the LCCAP Personnel and the Extent of the LCCAP Implementation

The results also showed an R^2 of 0.78, indicating that LCCAP personnel attributes can explain 78.00% of the variance in LCCAP implementation. This interpretation emphasizes the key role of technical personnel in translating institutional commitments into practical climate initiatives (Rogers et al., 2023). Moreover, personnel with technical capabilities and knowledge help maintain the implementation of climate-related programs, follow climate guidelines, and enhance stakeholder engagement. On the other hand, the limited expertise of the implementing personnel can negatively affect the implementation even if the institutions have strong leadership support and adequate climate financing.

In general, the results depict an association in which the success of policy implementation depends on the very individuals mandated to implement it (Capano et al., 2024). In terms of the LCCAP implementation, the technical

capacity and knowledge of the personnel bridge the gap between local climate policy and the success of its implementation. Highly skilled and dedicated LCCAP implementers operate not only as facilitators but also as innovators who ensure local climate initiatives are responsive to the real needs of the communities, grounded in data, and inclusive of community participation (Rogers et al., 2023). FGD participants emphasized that training, experience in environmental planning, and technical familiarity with climate guidelines were critical in translating plans into actionable programs. The findings suggest that personnel capacity serves as a bridge between policy intention and operational execution.

Relationship of the Level of Funding Support and the Extent of the LCCAP Implementation

Figure 7 shows the association between funding level and the extent of LCCAP implementation. Based on the statistical calculations, the generated value of Spearman’s Rank Correlation Coefficient (R_s) is 0.68. The p -value is 0.10. This indicates that, at the 90.00% confidence level, the variables are moderately positively related. The results of the study indicate that higher funding supports the successful implementation of the LCCAP, but it has less influence than the other variables. The analyses also computed an R^2 of 0.57, indicating that 57.00% of the variation in implementation levels can be explained by funding support. At this level, it highlights the current conditions local governments are experiencing. Even if additional financial funding is needed for program implementation, higher funding levels do not directly affect successful implementation. The positive effect of funding support is determined by how institutions manage their fiscal systems responsibly through proper allocation, prioritization, and alignment with their objectives. Moreover, municipalities that include funding for their climate-related programs every year and assign measurable outputs are more successful in implementing the LCCAP than those that provide only financial resources without clear directions (Etongo et al., 2022).

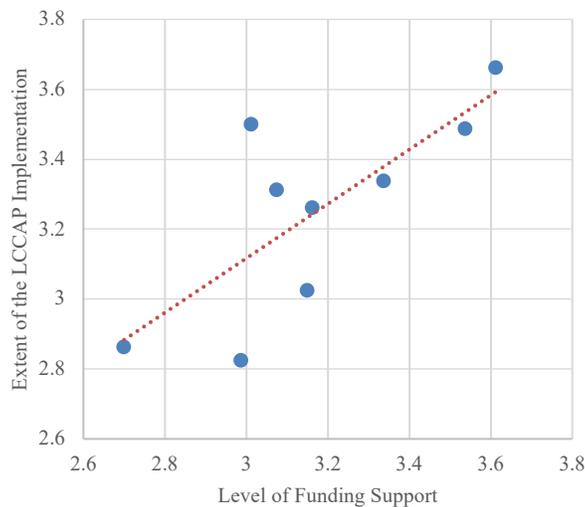


Figure 7. Scatterplot Showing the Association Between the Level of Funding Support and the Extent of the LCCAP Implementation

In addition, the moderate association between the variables suggests that other factors contribute to the policy's successful implementation. These factors may range from personnel attributes to stakeholder involvement. In implementing the LCCAP, the level of funding support serves as an enabler rather than the sole determinant of success.

To add to the interpretation, municipalities that can consolidate high levels of support for funding, institutions, and personnel attributes are more productive in achieving concrete outputs for local climate resilience (Diedrich, 2024). These collaborations of variables highlight the importance of well-managed financial support by local governments, as well as other influential factors. Qualitative insights clarify this pattern. Participants noted that although funding is necessary, effective planning, institutional coordination, and stakeholder support often determine whether allocated funds result in tangible outputs. Thus, funding functions as an enabling condition rather than a sole determinant of implementation success.

Relationship of the Level of Community Engagement and the Extent of the LCCAP Implementation

Figure 8 illustrates the relationship between community engagement and the extent of LCCAP implementation. The statistical analysis generated a Spearman's Rank Correlation Coefficient (R_s) of 0.91 with a p -value of 0.005. This means that, at a 99.00% confidence level, the variables are strongly positively related. It follows that the stakeholders' engagement is a key factor in the successful implementation of climate-related initiatives.

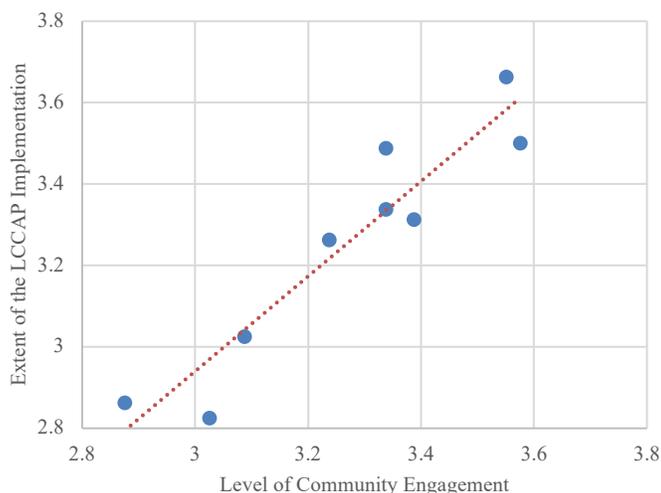


Figure 8. Scatterplot Showing the Association Between the Level of Community Engagement and the Extent of the LCCAP Implementation

The results also showed a high R^2 of 0.89, indicating that community engagement levels can explain 89.00% of the variation in implementation levels. This further indicates that institutions can achieve greater success in implementing the LCCAPs when community members are involved. The involvement of the public and private groups enhances the institutions' transparency and integrity. It also advances the communities' ownership and shared responsibility in the implementation of climate-related programs. This helps convert climate initiatives from being led by institutions into collective actions for climate resilience. The analyses of the results confirm that stakeholder participation is one of the pillars of establishing responsive climate governance. The strong linkages and cooperation between institutions and their communities advance the development of policies that consider the current and existing conditions of the communities and their needs (Maeda et al., 2025).

In addition, the involvement of marginalized groups, such as women, fisherfolk, farmers, persons with disabilities, and children, raises the levels of sustainability, equity, and inclusivity in local climate actions. Additionally, institutions that have initiated community involvement in planning workshops, training, plan formulation, plan implementation, and monitoring and evaluation have achieved higher success in implementing programs, projects, and activities outlined in the LCCAP. FGDs strongly reinforced this finding. Participants cited regular community involvement in tree planting, coastal cleanups, consultations, and awareness campaigns as essential to sustaining climate initiatives. The findings suggest that climate governance becomes more effective when it shifts from institution-driven initiatives to shared community ownership.

In conclusion, community engagement and the extent of LCCAP implementation are strongly related. This relationship focused on community participation and the policy's implementation outputs. It further shows that local climate resilience cannot be achieved by only improving institutional support. It requires collective action in which stakeholders become partners in developing the institutions to achieve sustainable climate governance (Rölfer et al., 2024).

Results of the Focus Group Discussions

The study conducted Focused Group Discussions (FGDs) with members of the LCCAP Technical Working Groups (TWGs) in each involved municipality in the First District of Misamis Oriental. The objective of the FGD is to gain a deeper understanding and knowledge of the statistical results of this study. Based on the discussions above, the variables of the study, namely the extent of LCCAP implementation, robustness of institutional support, attributes

of LCCAP personnel, level of funding support, and level of community engagement, were assessed for their relationships using Spearman's Rho correlation analysis. The results of the relationships can be further explained by knowledge of the participants involved in implementing the LCCAP.

Based on the gathered data, numerous participants verified that their own municipalities have strong institutional support, capable LCCAP personnel, and active stakeholder engagement, which greatly advanced the success of LCCAP implementation. On the other hand, some respondents reported that funding limitations and unclear office mandates and responsibilities were their main concerns in implementing the LCCAP. Funding for the LCCAP is not required by law. However, most LGUs are allocating funding from their 5% Local Disaster Risk Reduction and Management Fund (LDRRMF) and the 20% Local Development Fund (LDF). In terms of office mandates, the respondents relayed that there is no definite office that was tasked to lead the implementation of the LCCAP and monitor its achievement. Sometimes, these were lodged with the Municipal Planning and Development Office (MPDO), the Municipal Environment and Natural Resources Office (MENRO), and the Municipal Disaster Risk Reduction and Management Office (MDRRMO). Other LGUs said that the LCCAP implementation is more of a collaboration between offices, with the Mayor's Office or another related office as the lead.

The majority of the concerns that emerged from the FGDs focused on cooperation, the strength of its institutions, the commitment of leaders, and public information and education services. These concerns reflect the statistical results on the extent of LCCAP implementation, demonstrating the need for additional factors to achieve greater results. Institutional support was emphasized as one of the most influential variables. Many respondents have shared that their LGU leadership supports the climate-related initiatives. Respondents have also noted that the technical working groups are functional and that their members regularly hold meetings and collaborate to improve their implementation systems. Moreover, the majority of LGUs have stated that the programs, projects, and activities indicated in the LCCAP were adopted in their Comprehensive Land Use Plan (CLUP), Comprehensive Development Plan (CDP), and Annual Investment Program (AIP).

Regarding the attributes of the LCCAP personnel, the respondents reported that their TWG members are well-equipped with the knowledge and skills to implement the LCCAP. These TWG members have also gained experience in environmental planning and have participated in numerous professional educational initiatives to improve LCCAP implementation. These practices confirm that the success of the LCCAP depends on the capacities of the implementing actors. Regarding funding levels, respondents reported that their institutions have allocated funding for climate projects and that these funds are included in their Annual Investment Programs (AIP). Respondents also shared that their institutions have accessed the external funds provided by the Department of the Interior and Local Government (DILG) and the Department of Environment and Natural Resources (DENR). In implementing small-scale climate projects, local governments are allocating their own funds. Based on the results of the statistical analyses, the level of funding support is moderately related to the extent of LCCAP implementation, as local governments can seek ways to fund their priority climate projects.

In terms of community engagement, this variable appears to have the strongest enabling capacity for the success of the LCCAP implementation. The respondents reported regular community participation, especially in tree planting, coastal cleanups, and information and education campaigns. Active CSOs have also implemented environmental programs, and CSOs are now more aware of climate issues. These insights confirm a strong relationship between stakeholder engagement and the extent of LCCAP implementation. Regarding the extent of LCCAP implementation, the respondents shared that their periodic review of LCCAP progress through the Municipal Development Council (MDC) helped improve their actions while monitoring and evaluation systems are being developed and improved. These ideas highlight the importance of monitoring gains from implementing the LCCAP. The results of the FGDs reflect the strong statistical significance among the variables. For the success of the LCCAP implementation, it is worth noting the need to enhance the robustness of institutional support, the attributes of LCCAP personnel, the level of funding, and the level of community engagement to achieve local climate resilience.

Conclusion

This study examined the relationships among institutional robustness, personnel attributes, funding support, community engagement, and the extent of LCCAP implementation in the First District of Misamis Oriental. The findings demonstrate that LCCAP implementation is shaped by an interconnected system of enabling factors

rather than a single determinant. Among the variables examined, community engagement emerged as the strongest predictor of implementation success, followed by institutional support. Personnel capacity and funding support also showed meaningful associations, though with comparatively moderate influence.

The integration of quantitative findings with qualitative insights strengthens the conclusion that effective local climate governance depends on both structural capacity and participatory mechanisms. While institutional systems and financial resources create enabling conditions, sustained implementation is reinforced when stakeholders actively participate in planning, execution, and monitoring processes. The qualitative findings further revealed areas for refinement, particularly in clarifying mandates, designating focal leadership, and expanding technical training opportunities.

From a theoretical perspective, the study underscores the continuing relevance of Policy Implementation Theory in local climate governance. The findings affirm that successful policy execution requires alignment among institutional mechanisms, resource availability, implementer capacity, and citizen engagement. By empirically demonstrating how these variables interact in a local climate setting, the study contributes to the growing body of literature on decentralized climate governance in developing contexts.

Theoretical and Empirical Contributions

This research contributes to the literature in three significant ways. First, it provides empirical evidence on the relational dynamics of institutional, human, fiscal, and participatory factors in LCCAP implementation at the municipal level. Second, it demonstrates the value of integrating rank-based statistical analysis with qualitative validation in assessing policy implementation. Third, it extends Policy Implementation Theory into the domain of local climate governance in the Philippine context, offering localized insights that may inform comparative studies in other developing regions.

Policy and Governance Implications

For practice, the findings reinforce the need to institutionalize dedicated climate governance mechanisms, clarify leadership mandates, and integrate LCCAP priorities into mainstream planning instruments such as the CLUP, CDP, and AIP. Establishing designated focal offices or personnel can enhance accountability and monitoring efficiency. For policy, national agencies such as the DILG, CCC, and DENR may consider strengthening technical assistance frameworks, expanding access to climate financing mechanisms, and incentivizing municipalities that demonstrate strong participatory governance. Institutionalizing structured monitoring, evaluation, and learning (MEL) systems will further enhance sustainability and transparency.

Capacity Building and Institutional Learning Implications

The results highlight the importance of continuous professional development for local implementers. Partnerships with academic institutions, research centers, and national agencies can strengthen technical competencies in climate risk assessment, proposal development, and monitoring systems. Institutional recognition programs may also sustain motivation and professional engagement among implementers.

Future Research Agenda

While the findings demonstrate strong enabling conditions in the First District of Misamis Oriental, future studies may expand the scope to include comparative analyses across different income classifications, urban-rural contexts, or provincial settings. Longitudinal research may further assess how institutional and participatory factors evolve. Additionally, exploring causal mechanisms through advanced modeling techniques could deepen understanding of policy implementation pathways in climate governance.

Overall, the study affirms that local climate resilience is not achieved solely through financial allocation or policy compliance. Rather, it emerges from the synergistic interaction of institutional robustness, capable implementers, reliable financing, and empowered communities. A whole-of-government and whole-of-community approach remains central to advancing sustainable climate governance. Strengthening these interconnected pillars will enable local governments to transition from policy formulation to sustained and measurable climate resilience outcomes.

Contributions of Authors

The author solely conceptualized the study, led the data gathering, performed data analysis, and wrote the manuscript.

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Conflict of Interests

The author declares no conflict of interest.

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