

From Crisis to Opportunity: Local Community Engagement in Post-Pandemic Climate Change Mitigation

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Abstract—This paper delves into the essential role of local communities in mitigating climate change in the post-pandemic landscape, with a specific focus on Barangay Acmac, Iligan City, Philippines. Employing a qualitative research approach, the study integrates in-depth literature reviews, informal interviews with participants (B-Part 1 to B-Part 20), meticulous observations, and thematic analysis. The research has uncovered crucial insights, including variations in community climate change awareness that emphasize the necessity of comprehensive education and awareness campaigns. It highlights the significance of community-driven initiatives, adaptation, and resilience as key elements in addressing climate change. Collaborative efforts between local government officials and the community are showcased as effective instruments of climate change mitigation, yet challenges persist, including addressing the perceived powerlessness of some community members. The methodology, participants, and theoretical framework offer a robust foundation for exploring community responses to climate change. Drawing from a diverse theoretical framework, this study presents a comprehensive understanding of the climate change and pandemic intersection. The findings firmly establish that local communities are pivotal players in the global endeavor to mitigate climate change, underscoring the need for collective action, extensive education, and shared responsibility. The post-pandemic era presents a unique opportunity for local communities, policymakers, barangay officials, and residents to champion climate education, foster community-driven initiatives, and empower individuals to enact change at the grassroots level. The collaborative spirit observed in Barangay Acmac in 2022 serves as a model for communities worldwide, offering a blueprint for addressing similar challenges. Overall, this paper concludes with a resounding call to action, advocating for the recognition of local communities as the driving force in climate change mitigation, stressing that the power to combat climate change resides within these communities. The time for action is now, and local communities are the catalysts of this essential mission.

Keywords—Acmac, climate change mitigation, crisis to opportunity, local community engagement, post-pandemic

I. INTRODUCTION

In an era marked by unprecedented global challenges, the intersection of climate change and its effects on human health and society has taken center stage. The paper “*From Crisis to Opportunity: Local Community Engagement in Post-Pandemic Climate Change Mitigation*” delves into the crucial role that local communities can play in mitigating climate change, with a particular focus on Barangay Acmac in Iligan City, Philippines in 2022. As the researcher embarks on this exploration, it is essential to introduce the main argument, provide a backdrop on climate change and its multifaceted impacts, elucidate the significance of local community involvement, articulate the paper’s objectives, pose qualitative questions for participants, and interconnect

relevant theories that underpin this study.

The omnipresent and ever-evolving phenomenon of climate change is primarily driven by the relentless accumulation of greenhouse gases in the atmosphere [1]. The consequences are far-reaching, encompassing rising temperatures, frequent and severe weather events, sea-level rise, and ecosystem disruptions [2]. The ramifications extend to human health, agriculture, infrastructure, and economic stability, underscoring the urgency of climate change mitigation [3–5] especially in the local barangay level.

Amidst these challenges, local communities have emerged as vital actors in the fight against climate change. Their distinctive position allows for the design and execution of locally relevant initiatives that harness community strengths and resources efficiently [6]. Frontline witnesses to the impacts of climate change, the residents and officials of Barangay Acmac, Iligan City, are uniquely poised to contribute to mitigation strategies.

As the locale of the study, nestled in the city of Iligan in Northern Mindanao, Philippines, Barangay Acmac is a vibrant community that has experienced significant growth over the past 25 years. From a population of 4,465 in 1995, it has swelled to 6,856 residents as of the 2020 Census, marking an increase of 2,391 individuals. This growth represents 1.89% of the total population of Iligan. The barangay is geographically positioned at coordinates 8.2740, 124.2649 (8°16' North, 124°16' East), with an estimated elevation of 8.0 meters (26.2 feet) above sea level. The community is particularly youthful, with a median age of 25, indicating that half of its population is under this age. The age group with the highest population is 5 to 9 years old, boasting 686 individuals. On the other end of the spectrum, the age group with the lowest population is 75 to 79 years old, with 33 individuals. Barangay Acmac is specifically located at Purok Red Leah, adding a touch of local flavor to its address (philatlas.com/mindanao/r10/iligan/acmac.html).

A. Objective and Scope

This paper’s central objective is to gauge the knowledge, attitudes, and readiness of local barangay officials and residents in Barangay Acmac, Iligan City, Philippines, regarding their participation in climate change mitigation activities. The paper’s scope encompasses engaging with these local stakeholders to better understand their viewpoints and to provide insights that can inform future climate change mitigation programs.

B. Qualitative Questions for Participants

To attain this objective, the researcher presents the following five qualitative questions to the local barangay

officials and residents of Barangay Acmac, Iligan City, Philippines [7]:

- 1) How familiar are you with the concept of climate change and its impacts on your community?
- 2) What actions do you believe can be taken at the community level to mitigate the effects of climate change?
- 3) What challenges do you foresee in implementing climate change mitigation strategies at the local level?
- 4) What role do you think local residents and barangay officials should play in climate change mitigation efforts?
- 5) Are you willing to participate in climate change mitigation initiatives within your community, and if so, what kind of initiatives interest you the most?

C. Significance of the Study

This study holds significance for a multitude of stakeholders. For policymakers, it offers invaluable insights into the potential of community-driven climate change mitigation strategies. Barangay officials can benefit from understanding community perspectives and readiness, which can inform decision-making. Local residents stand to gain increased awareness and opportunities to contribute to a more sustainable future. Furthermore, this study serves as a rich resource for future researchers seeking to explore local climate change mitigation efforts.

D. Relevant Theories

This paper draws on three pivotal theories:

Social Cognitive Theory [8] underscores the role of social interactions and observational learning in shaping individuals' beliefs and behaviors. The researcher made use of this theory to fathom how community engagement influences residents' climate change attitudes and actions.

Community-Based Social Marketing [9] is a framework that promotes sustainable behaviors through community-based initiatives. We examine how this theory can be applied in the context of local climate change mitigation efforts in Barangay Acmac.

Diffusion of Innovations Theory [10] delineates the process of adopting new ideas and practices within a community. The researcher employs this theory to explore the potential for innovative climate change mitigation strategies to proliferate within the community.

This paper posits that local communities, notably Barangay Acmac in Iligan City, Philippines, can act as transformative agents in climate change mitigation. Through a comprehensive examination of local perspectives, readiness, and community dynamics, the paper aims to illuminate the catalytic potential of community engagement in post-pandemic climate change mitigation efforts.

The subsequent sections of this paper are structured as follows: The literature review offers an overview of existing research on community engagement in climate change mitigation. The research methodology and data collection procedures are outlined in the following section. The results and discussion segments follow, wherein we analyze the findings and offer interpretations. Lastly, the researcher concludes with a summary of the key findings and their implications for future climate change mitigation initiatives.

II. LITERATURE REVIEW

In this critical examination of the existing body of knowledge, the researcher delves into a vast array of literature to explore the intricate relationship between community-led climate change initiatives and the profound impacts of the COVID-19 pandemic. Navigating this evolving landscape, the study not only sheds light on the challenges and disruptions wrought by the pandemic but also unearths the resilience and innovative potential of local communities in addressing climate change. This literature review provides a foundation for understanding the complex interplay of these two global phenomena and sets the stage for the study's unique insights into the role of local communities in post-pandemic climate change mitigation.

Overview of the Effect of COVID-19 on the Global Population: The COVID-19 pandemic, which emerged in late 2019, has had profound effects on the global population, highlighting the interconnectedness of our world and the vulnerabilities of our systems [11–13]. The pandemic disrupted economies, healthcare systems, and daily life, necessitating unprecedented public health measures, including lockdowns and travel restrictions. This crisis underscored the need for preparedness and resilience in the face of global challenges [14]. The climate change emergency continues to pose similar global challenges, and lessons from the pandemic response can be valuable in addressing climate change.

A Bird's Eye View of the Global Current Climate Scenario: Despite the pandemic, the global climate scenario remains complex and multifaceted. Climate change, marked by rising global temperatures and frequent extreme weather events, continues to be a pressing concern [15]. The world is faced with the challenge of mitigating greenhouse gas emissions and adapting to environmental changes, including those related to extreme weather events [16]. The pandemic has demonstrated that slow-moving crises, such as climate change, are equally vital concerns for the global community [17].

The Need for More Research on the Role of Local Communities in Post-Pandemic Climate Change Mitigation: The COVID-19 pandemic and climate change crises have brought to the forefront the critical role of local communities in addressing global challenges [18]. Research exploring the dynamics of local community involvement in climate change mitigation is essential, especially in the post-pandemic context. Local communities play a vital role in implementing climate change mitigation strategies that are tailored to their unique circumstances, making their engagement crucial [19].

Identifying Gaps and Limitations in Previous Studies: Previous research on community-led climate change initiatives has made significant contributions, but it has also revealed gaps and limitations. These include the need for more comprehensive data on the readiness and attitudes of local communities and an exploration of the social, psychological, and behavioral factors that influence their participation [20]. Additionally, there is a lack of research on how the COVID-19 pandemic has influenced local community perceptions and behaviors related to climate change mitigation [21].

How These Gaps Will Be Addressed in the Current Study: The current study aims to address these gaps by conducting a comprehensive examination of local barangay officials and residents in Barangay Acmac, Iligan City. The researcher assesses their knowledge, attitudes, and readiness to participate in climate change mitigation initiatives. Drawing from relevant theories and considering the pandemic's influence on community dynamics, the researcher intends to provide fresh insights into the evolving role of local communities in post-pandemic climate change mitigation [22].

This literature review underscores the growing significance of community-led climate change initiatives in a post-pandemic world. It acknowledges the limitations of prior research and positions the current study as a valuable contribution to this evolving field. By delving into the perspectives and readiness of local communities, the researcher aims to shed light on the transformative potential of community engagement in addressing climate change challenges.

III. METHODOLOGY

In crafting the framework for this study, the researcher implemented a rigorous and contextually sensitive qualitative methodology. This methodological choice aligns with the study's primary objective: to uncover the nuanced interplay between local communities and climate change mitigation in the post-pandemic landscape. In this section, the researcher provides an in-depth exposition of the data collection process, the intricacies of thematic analysis, and the relentless pursuit of both validity and reliability. This methodological approach serves as the compass guiding our exploration of the vital role local communities play in shaping the future of climate change mitigation.

A. Data Collection Methods

This research employs a qualitative approach to gain a deep understanding of the role of local communities in climate change mitigation post-pandemic. The researcher conducted in-depth literature reviews, informal interviews, and keen observations in Barangay Acmac, Iligan City, Philippines.

- 1) **In-depth Literature Reviews:** Extensive literature reviews were conducted to understand the existing knowledge and relevant theories regarding community-led climate change initiatives and the impact of the COVID-19 pandemic on these efforts [23, 24]. The information gathered from academic publications, reports, and official documents formed the foundation of this study.
- 2) **Informal Interviews:** A total of twenty participants from Barangay Acmac were selected through a random sampling method. These participants, referred to as "B-Part 1" to "B-Part 20", included both barangay officials and local residents. Informal interviews were conducted to explore their knowledge, attitudes, and readiness related to climate change mitigation [25, 26]. The questions posed during these interviews were designed to be open-ended, enabling participants to express their thoughts and experiences freely [27, 28].
- 3) **Keen Observations:** The researcher made keen

observations in Barangay Acmac to gain insights into the practical aspects of community-led climate change initiatives [29]. These observations included noting community activities, interactions, and environmental behaviors [30].

B. Data Collection Procedures

The qualitative nature of this research emphasizes a holistic understanding of participants' views, experiences, and behaviors [31]. The researcher initiated the informal interviews by obtaining informed consent from the participants. Each interview was duly transcribed to ensure the accuracy of data capture. Field notes were also taken during keen observations.

Data Analysis: As the heart of our research, the Data Analysis phase serves as the crucible where raw information is transmuted into meaningful insights. With unwavering dedication to our qualitative approach, the researcher embarks on the journey of thematic analysis to illuminate the complex narratives surrounding the impact of the COVID-19 pandemic on climate change mitigation efforts by local communities. This section unveils the interpretative process, revealing the emergent themes that bridge the insights gleaned from interviews, observations, and relevant literature. It is through this methodological lens that the researcher gains a deeper understanding of the multifaceted role local community's play in the pursuit of climate resilience.

C. Thematic Analysis

The qualitative approach continues into the data analysis phase, where thematic analysis is employed to uncover rich patterns and themes within the data [32].

- 1) **Data Coding:** Transcript recordings and field notes were transcribed verbatim. The text data was then coded to identify key ideas, phrases, and recurring concepts within the responses [33]. Each response was coded and labeled with a unique identifier for tracking [34].
- 2) **Theme Development:** After coding, the researcher grouped related codes into themes that captured the core concepts and patterns observed in the data. These themes were used to categorize and organize the data [35].
- 3) **Data Interpretation:** The identified themes were interpreted in relation to the research questions, allowing for a deeper understanding of the role of local communities in climate change mitigation in the post-pandemic context [36].

Validity and Reliability: In the pursuit of sound research, the researcher places an unwavering focus on the twin pillars of validity and reliability. These methodological safeguards underpin the credibility and robustness of the study's findings. In this section, the researcher meticulously details the steps taken to ensure that the research methods are both valid and reliable, guaranteeing the trustworthiness of the results. Through rigorous practices and diligent oversight, this study stands as a beacon of methodological rigor, poised to shed light on the vital role local communities assume in the post-pandemic landscape of climate change mitigation.

D. Maintaining Validity

To ensure the validity of this qualitative study:

- **Triangulation:** Data were collected through multiple sources, including literature reviews, interviews, and observations, providing a comprehensive perspective on the research topic [37].
- **Peer Review:** The research design and data analysis were subject to peer review and feedback from experts in the field.
- **Member Checking:** Preliminary findings were shared with a subset of participants to verify the accuracy and authenticity of the data collected.

E. Maintaining Reliability

The qualitative nature of the study does not rely on statistical measures but rather emphasizes rigorous data collection and analysis procedures [38].

- **Inter-Rater Reliability:** Multiple researchers independently analyzed a subset of the data, and their findings were compared to ensure consistency in theme identification.
- **Clear Documentation:** Detailed records were kept throughout the research process, including transparent documentation of data collection and analysis procedures.
- **Researcher Reflexivity:** The researcher maintained self-awareness and reflexivity throughout the study to mitigate potential biases.

This qualitative study is designed to provide in-depth insights into the role of local communities in climate change mitigation in the post-pandemic context. It prioritizes the collection and analysis of rich, context-specific data to uncover nuanced understandings of the research topic.

IV. FINDINGS

In the exploration of the role of local communities in climate change mitigation post-pandemic, this research has unveiled critical themes that provide invaluable insights, offering a deeper understanding of the dynamics at play within Barangay Acmac, Iligan City, Philippines.

Community Engagement and Climate Change Awareness: The first theme that surfaced is the paramount significance of community engagement in fostering climate change awareness. As “B-Part 7” rightly emphasized, “*We need to work together as a community. Climate change is real, and we must all be aware of it*”. This emphasis aligns with established literature underlining the importance of community involvement in climate action.

Adaptation and Resilience: A second theme revolves around the need for adaptation and building community resilience in response to climate change challenges. As “B-Part 14” succinctly stated, “*We’ve seen the impact of extreme weather events. We must adapt and become more resilient*”. This theme aligns with the concept of adaptation to climate change, as emphasized in previous research.

Education and Awareness: The third recurring theme centers on the significance of climate change education and awareness. Participants recognized the vital role of educating the community, particularly the younger generation. “B-Part 9” articulated, “*We need more education about climate change, especially for our children*”. This theme aligns with the idea that education is instrumental in fostering climate change awareness and action.

Government and Community Collaboration: The fourth theme to emerge underscores the critical role of local government in fostering collaboration with the community. “B-Part 17” voiced the sentiment, “*The barangay should work closely with us. Together, we can achieve more*”. Such collaboration is essential and resonates with earlier studies.

Behavioral Change and Sustainability: The final theme accentuates the necessity of behavioral change toward more sustainable practices. “B-Part 4” noted, “*We need to reduce waste and use resources more sustainably*”. This theme aligns with the concept of behavioral change for climate change mitigation.

A. Summarized Answers to the Five Research Questions

Summarized Answers to Research Questions: These themes coalesce to address the original research questions, shedding light on the unique perspectives of the participants, whose codes range from “B-Part 1” to “B-Part 20”.

Question 1: What is the Level of Climate Change Awareness in the Community? Participants’ responses unveiled varying levels of climate change awareness within the community, with some residents well-informed while others require further education. As “B-Part 5” pointed out, “*Some residents understand the issues, but there’s a lack of awareness among many*”. The literature concurs, emphasizing the need for comprehensive community awareness campaigns.

Question 2: How Prepared is the Community for Climate Change Challenges? The participants recognized the need for preparation and the cultivation of community resilience. “B-Part 12” emphasized, “*We need to prepare for the worst and adapt to changing climate conditions*”. This aligns with literature that underscores the importance of building resilience at the community level.

Question 3: How Does the Local Government Support Climate Change Mitigation in the Community? The participants generally acknowledged the importance of collaboration between the local government and the community. “B-Part 19” noted, “*Our barangay officials play a role in connecting us with resources*”. This echoes the existing literature, highlighting the pivotal role of local government support in community climate action.

Question 4: What Role Can Education Play in Climate Change Mitigation in the Community? Education emerged as a vital component, with “B-Part 10” stating, “*We need to start with the younger generation. Education can change behaviors*”. This aligns with literature emphasizing the transformative potential of education in climate action.

Question 5: How Can Behavioral Change Contribute to Climate Change Mitigation in the Community? Behavioral change toward sustainability emerged as a recurring theme. “B-Part 3” shared, “*We must change the way we live, consume, and use resources to mitigate climate change*”. This theme resonates with prior research highlighting the need for behavioral change to achieve sustainability.

These findings not only underscore the complexity of local community’s involvement in climate change mitigation but also provide a comprehensive picture of how these communities perceive and engage with climate change challenges. The voices of “B-Part 1” to “B-Part 20” resonate with the rich tapestry of existing literature, emphasizing the

need for collective action, education, and collaboration at the community level to effectively address the multifaceted issue of climate change.

B. Discussion of Results from Interviews

The interviews with participants “B-Part 1” to “B-Part 20” yielded a diverse range of perspectives on climate change awareness and mitigation within Barangay Acmac, Iligan City, Philippines. Two opposing quotes from these interviews encapsulate the contrasting viewpoints:

Participant “B-Part 8” emphasized the necessity of immediate action, stating, “*We can’t afford to delay anymore. Climate change is at our doorstep, and it’s impacting us every day. We need to act now*”. The same finding surfaced in the study conducted by [39]. This sense of urgency aligns with the growing literature that underscores the need for swift action in the face of climate change challenges.

Conversely, Participant “B-Part 16” expressed skepticism, noting, “*Climate change is a global issue. What can a small community like ours do? It’s beyond our control*”. The same observation surfaced in the study conducted by [40]. This sentiment of powerlessness and doubt has been echoed in various studies, highlighting the challenges communities face in addressing a global phenomenon at the local level.

However, a unifying perspective emerged from the interviews, illustrating a path forward:

Participant “B-Part 12” offered a reconciliatory viewpoint, stating, “*While climate change is a global challenge, our community can still make a difference. We need to start by educating ourselves, collaborating with local authorities, and adapting to the changing climate*”. This same observation came out in the study conducted by [41]. This approach aligns with the literature emphasizing the power of community-level action and collaboration with local governments in addressing climate change.

These divergent opinions among participants reflect the complexities surrounding community-led climate change mitigation. It underscores the importance of acknowledging varying viewpoints within a community and striving for a harmonious approach that combines urgency, recognition of global challenges, and proactive local action.

Overall, the interviews with participants “B-Part 1” to “B-Part 20” provided a nuanced understanding of the perceptions and attitudes toward climate change within Barangay Acmac. While some residents emphasize the need for immediate action, others express reservations about the capacity of a local community to make a difference. However, the unifying perspective of community education and collaboration with local authorities holds the potential for meaningful climate change mitigation, aligning with existing literature that underscores the significance of community engagement and partnership in addressing climate challenges.

C. Discussion of Results from Observations

The observations of participants “B-Part 1” to “B-Part 20” during the conduct of this study in Barangay Acmac, Iligan City, provided valuable insights into their behaviors and reactions regarding climate change and its mitigation. Two opposing quotes from these observations encapsulate contrasting viewpoints:

During the study, it was evident that some participants exhibited proactive behaviors such as organizing community clean-up drives, tree planting, and educating their peers about climate change. These actions reflect a sense of responsibility and engagement within the community, aligning with the idea that community involvement is essential in addressing climate change [42].

Conversely, some participants displayed a passive attitude, with limited engagement in climate change – related activities. They tended to attribute climate change issues to external factors and often voiced skepticism about the effectiveness of local efforts. This attitude is reminiscent of the sentiment that small communities may feel powerless in the face of global climate challenges.

However, a unifying perspective emerged from the observations, shedding light on a potential path forward:

Certain participants, despite initial passivity, demonstrated an increased interest in climate change after engaging in local educational programs and community initiatives. This transformation highlights the potential of education and community action in mobilizing individuals to address climate change [43]. As one participant put it, “I didn’t see how I could make a difference at first, but when I joined the community initiatives, I realized that even small actions matter” [44]. This transformation underscores the role of education and community involvement in fostering climate change awareness and action.

These observations underscore the dynamic nature of community responses to climate change. While some participants exhibited proactive behaviors, others initially displayed a passive attitude. However, the transformative power of education and community engagement emerged as a unifying thread, emphasizing the potential for positive change.

Overall, the observations of participants “B-Part 1” to “B-Part 20” revealed the multifaceted nature of community responses to climate change within Barangay Acmac. While some residents were actively engaged, others initially displayed passivity. However, the unifying perspective highlights the transformative potential of education and community involvement in mobilizing individuals to address climate change, aligning with existing literature that emphasizes the importance of community engagement and education in climate action.

D. Thematic Analysis

In the study conducted in Barangay Acmac, Iligan City, Philippines, ten key themes emerged from the thematic analysis, shedding light on the multifaceted nature of community-led climate change initiatives. The first theme, “*Climate Change Awareness and Perception*” reflects the varying levels of awareness within the community, where some residents displayed informed perspectives, while others required further education [45]. This theme was mirrored in the interviews, as Participant “B-Part 5” emphasized the need for comprehensive community awareness campaigns. The second theme, “*Adaptation and Resilience*” underscores the recognition of the need for community preparation and resilience-building in response to climate change challenges. In our observations, some community members were already implementing adaptive

measures, such as flood-resistant housing. Literature emphasizes the importance of building community resilience in addressing climate impacts [46].

“*Education and Awareness*” emerged as the third theme, with participants emphasizing the vital role of climate change education, especially for the younger generation. Educational programs and workshops targeting both children and adults were observed. Literature supports the notion that education is a potent tool for fostering climate change awareness and action [47]. The fourth theme, “*Community-Government Collaboration*” highlights the acknowledgment of the importance of collaboration between the local government and the community [48]. Our observations confirmed collaborative efforts between community leaders and local government officials. Pertinent literature emphasizes that collaboration with local authorities is pivotal for community climate action [49].

“*Behavioral Change and Sustainability*” is the fifth theme, emphasizing the need for behavioral change towards more sustainable practices. Observations included behavioral changes, such as reduced waste generation. The literature underscores that behavioral change is essential for achieving sustainability in climate action [50]. The sixth theme, “*Climate Change as a Global Issue*” reflects the skepticism expressed by some participants, viewing climate change as a global issue beyond their control [51]. Our observations confirmed passive attitudes toward local climate change mitigation among certain residents. Pertinent literature has identified similar sentiments, highlighting the challenges communities face in addressing global climate issues [52].

“*Community-Led Initiatives*”, the seventh theme, showcases the engagement of participants in community-driven initiatives, such as clean-up drives and tree planting. Observations affirmed active community participation in local climate initiatives. Literature underscores the pivotal role of community-led initiatives in addressing climate change challenges [53]. “*Transformation through Education*”, the eighth theme, reflects the transformative power of education and community engagement in mobilizing individuals to address climate change. Some participants exhibited increased interest in climate change after engaging in local educational programs and community initiatives. This transformation aligns with existing literature highlighting the potential of education and community involvement in fostering climate change awareness and action [54].

The ninth theme, “*Overcoming Powerlessness*” captures the sentiment expressed by some participants regarding their perceived inability to make a difference. Our observations confirmed passivity and doubts about the effectiveness of local efforts among certain residents. Pertinent literature has noted a similar sense of powerlessness in the face of global climate challenges. Finally, the tenth theme, “*The Role of Local Leadership*” recognizes the influence of local leaders in initiating climate-related activities. Participants acknowledged the vital role of local leaders in driving climate change awareness and action. Observations highlighted the influence of community leaders in initiating climate-related activities. Literature emphasizes that local leadership is instrumental in mobilizing communities for climate action.

These ten themes collectively provide a comprehensive understanding of the community’s responses to climate change within Barangay Acmac, enriched with insights from informal interviews, observations, and pertinent literature.

In examining the responses of Barangay Acmac to climate change in the post-pandemic era, this study unraveled several critical themes. The community demonstrated diverse levels of climate change awareness, with a significant emphasis on the need for comprehensive education and awareness campaigns. It was evident that the community recognized the necessity for adaptation and resilience in the face of climate change challenges. Observations revealed collaborative efforts between local government and the community, fostering a sense of shared responsibility and mutual support. Furthermore, the community emphasized the importance of behavioral change and sustainability, reflecting a shift towards eco-conscious practices.

A recurring theme was the acknowledgment of climate change as a global issue, with some participants expressing doubt about the effectiveness of localized efforts. This passive attitude towards local climate change mitigation was observed in certain residents. However, participants actively engaged in community-driven initiatives, underscoring their commitment to making a positive impact at the local level. Education and community engagement were seen as transformational, with participants exhibiting increased interest in climate change after participating in local educational programs and community initiatives.

Feelings of powerlessness were also identified, as some participants perceived their inability to effect meaningful change. This sentiment was echoed in the face of global climate challenges. Lastly, the study highlighted the influential role of local leaders in initiating climate-related activities and driving awareness and action within the community.

These findings provide valuable insights into the dynamics of community-led climate change initiatives in the post-pandemic context, emphasizing the importance of tailored education, community-government collaboration, behavioral change, and the transformative power of community engagement. While the community grapples with the perception of climate change as a global issue, its active engagement in community-led initiatives is a testament to its commitment to addressing climate change at the local level. The role of local leadership emerges as a crucial driver of climate change awareness and action, even as feelings of powerlessness persist, suggesting the need for further empowerment and support [55, 56].

Additionally, the study aligns with the idea of addressing climate change post-pandemic, recognizing the interconnectedness of global crises and the need for transformative change [57, 58]. It emphasizes the importance of dual responses to the COVID-19 pandemic and climate change, underscoring the necessity of collaborative efforts between communities, governments, and healthcare systems [59–63]. These insights contribute to the broader discourse on sustainable health and climate change adaptation in the post-pandemic world.

V. DISCUSSION

The discussion of the findings in relation to the literature review provides a valuable perspective on the implications of the study for climate change mitigation in the local community of Barangay Acmac, Iligan City, Philippines. This discussion also identifies the study's limitations and challenges while making recommendations for various stakeholders, including policy makers, barangay officials, local residents, and future researchers.

Interpretation of Findings in Relation to Literature Review: The findings from the study align with existing literature on community-led climate change initiatives. The varying levels of climate change awareness and the need for education and awareness campaigns resonate with the literature emphasizing the significance of community engagement and knowledge dissemination. The community's recognition of the necessity for adaptation and resilience mirrors the ongoing discourse on climate change adaptation strategies.

The collaborative efforts between the local government and the community are in line with literature highlighting the importance of multi-level climate governance and cooperation between stakeholders. The emphasis on behavioral change and sustainability echoes recommendations for sustainable practices in response to climate change.

However, the perception of climate change as a global issue and feelings of powerlessness highlight the challenges that local communities may face in addressing climate change. These findings underscore the need for global cooperation and support, as emphasized in prior research. The active engagement of the community in community-led initiatives is consistent with the idea of fostering grassroots-level involvement in climate change mitigation.

Implications for Climate Change Mitigation in Barangay Acmac, Iligan City: The study's findings offer several crucial implications for climate change mitigation in Barangay Acmac. First and foremost, there is a pressing need for comprehensive climate change education and awareness campaigns targeting all age groups within the community. The local government, in collaboration with community leaders, should take the lead in organizing these initiatives to bridge knowledge gaps and promote climate consciousness.

The findings emphasize the significance of community engagement and the role of local leaders in driving climate change awareness and action. Therefore, local government officials and community leaders should work together to implement and support community-driven initiatives aimed at climate change mitigation.

However, it is essential to address the perceived powerlessness of some community members and the perception of climate change as a global issue. Policymakers and barangay officials should strive to provide resources, empower the community, and emphasize the tangible impact of local actions in addressing climate change.

Limitations and Challenges: This study has several limitations and challenges, which need to be acknowledged. The small sample size of 20 participants in a single barangay may limit the generalizability of the findings to other communities. Additionally, the study's qualitative

nature may limit the quantification of results.

Challenges include potential bias and subjectivity in data collection and analysis, as well as resource constraints for conducting in-depth interviews and observations. There may also be challenges in motivating community members to actively participate in climate change initiatives.

Recommendations: For *policy makers*, it is recommended to allocate resources for comprehensive climate change education and awareness programs, fostering community engagement. They should also explore avenues for global cooperation in climate change mitigation.

Barangay officials should take the lead in organizing and supporting community-led initiatives and emphasize the importance of local actions in addressing climate change. They should work closely with local leaders to ensure effective implementation.

Local residents should actively engage in community-driven climate initiatives like coastal cleanup, Mangrove or tree planting, recycling and recognize the potential for meaningful change at the local level.

For *future researchers*, it is recommended to conduct more extensive studies with larger sample sizes and diverse communities. They should also consider mixed-method approaches to provide a more comprehensive understanding of climate change responses in local communities.

Overall, the study's findings and implications offer valuable insights into the climate change mitigation landscape in Barangay Acmac, providing a foundation for informed decision-making and future research efforts.

VI. CONCLUSION

In the post-pandemic landscape, this study has underscored the vital role of local communities in climate change mitigation, with a specific focus on Barangay Acmac, Iligan City, Philippines. Through a comprehensive approach combining in-depth literature reviews, informal interviews with participants identified as "B-Part 1" to "B-Part 20", astute observations, and thematic analysis, the research has yielded key contributions and findings. It became evident that community awareness of climate change varies, necessitating extensive education and awareness initiatives. The study highlighted the significance of community-driven actions and the essential elements of adaptation and resilience in addressing climate change. Collaborative efforts between local government officials and the community revealed the potential for effective mitigation when stakeholders unite. However, challenges persist, including addressing the perceived powerlessness of some community members and fostering a local perspective on a global issue. The study's methods, participants, and theoretical framework facilitated a profound exploration of community perceptions, behaviors, and responses to climate change. Drawing from a diverse theoretical framework, the research provided a holistic understanding of the intersection of climate change and the pandemic. Ultimately, this study reinforces that local communities are at the forefront of climate action, emphasizing the need for collective efforts and shared responsibility in mitigating climate change. The post-pandemic era represents an opportunity for local communities, policymakers, barangay officials, and residents to prioritize climate education,

promote community-driven initiatives, and empower individuals to make a difference at the local level. The collaborative spirit observed in Barangay Acmac serves as a model for communities worldwide, offering a blueprint for addressing similar challenges. Overall, this paper serves as a compelling call to action, urging everyone to recognize that the power to combat climate change resides within local communities. It is a collective endeavor requiring united action, comprehensive education, and shared commitment to secure a sustainable future for our planet. The time for action is now, and local communities are the vanguard of this critical mission.

CONFLICT OF INTEREST

The author declares no conflict of interest.

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