

## INVESTIGATING THE LIVED EXPERIENCES OF TAGBAOBO RESIDENTS IN LANDSLIDE-PRONE AREA

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### ABSTRACT

Disasters pose a significant global challenge, as they disrupt communities' ability to cope with their limited resources and devastate property, lives, and livelihoods. Barangay Tagbaobo, a community in the Island Garden City of Samal, is identified as highly susceptible to landslides, with a history of mass wasting events in the area. Despite the risks, many residents continue to settle in the area, emphasizing a multifaceted interplay of various factors influencing their settlement decisions. With a qualitative and constructivist research design, following a phenomenological approach, a Focus Group Discussion (FGD) with nine (9) residents ranging from 18-52 years old was conducted to investigate their lived experiences in a landslide-prone area. Findings show that residents remain in Tagbaobo due to family ties, community bonds, and established livelihood. Residents were also found to have a high-risk perception of landslides, which they view as driven by natural and man-made activities such as quarrying, which increase landslide risks. Despite limited formal disaster preparedness measures, the community demonstrated resilience through flexible and adaptive behaviors. Further, residents' aspirations were highlighted, such as road redundancy and improved access to healthcare services.

**Keywords:** qualitative research, constructivism, phenomenology, focus group discussion, lived experiences, landslide-prone areas

## 1. INTRODUCTION

### 1.1 Background of the Study

Disasters pose a significant global challenge, as they disrupt communities' ability to cope with their limited resources and devastate property, lives, and livelihoods (Shaw & Krishnamurthy, 2009; WHO, 2021; IFRC, n.d.). These natural phenomena destabilize the affected areas, hampering the overall stability of these communities (Shaw & Krishnamurthy, 2009; Srivastava, 2010). The World Bank Group (WBG, n.d.) reports that the sudden onset of disasters displaces 25 million people annually worldwide, resulting in \$18 billion in direct damages, especially in peripheral and semi-peripheral countries. While this displaced population accounts for only about 0.3% of the global population, the data highlights a critical issue for countries with high poverty rates, as poverty itself is both a cause and a consequence of disasters (UNDRR, n.d.). The limited resources in these vulnerable regions hinder their ability to build resilience, making them more susceptible to hazards and increasing the likelihood of disaster.

Moreover, rapid urbanization in these countries has exacerbated the pressure to settle in disaster-prone areas, where the natural processes causing harm to vulnerable communities are becoming more pronounced (UNDRR, 2019). As long as these communities remain exposed to such hazards, the risk of disaster will persist, as emphasized by Blaikie et al. (1994) in their research, *At Risk: Natural Hazards, People's Vulnerability, and Disasters*. They argue that vulnerability stems from systems and structures that put pressure on critical factors like rapid population growth, urbanization, and declining soil productivity. These dynamics force communities to settle in high-risk areas, ultimately amplifying their vulnerability to disasters.

Landslides are one of the most devastating geohazards globally, causing significant loss of life and billions of dollars in damages. Between 1998 and 2017, the World Health Organization (WHO, n.d.) reports that landslides affected nearly 5 million people, leading to over 18,000 fatalities. One of the largest and most catastrophic landslides in history occurred after the eruption of Mount St. Helens on March 27, 1980. This event triggered the largest subaerial landslide ever recorded, resulting in 57 deaths, widespread destruction, and an estimated \$1 billion in damages (Harden, 2005).

In the Philippines, landslides are a recurring and deadly phenomenon. Notable incidents include the 1999 Cherry Hills Landslide, which killed 60 people; the 2003 Panaon Island Landslide, claiming 154 lives; the 2006 Guinsaugon Landslide, which took the lives of 1,200 people; and several others that resulted in hundreds of casualties. These events underscore the severe impact of landslides in the country and highlight the urgent need for national strategies to mitigate their effects, particularly for the vulnerable communities most at risk (Bueza, 2018).

The origins of landslides, as explained in *Essentials of Geology* by Stephen Marshak (2022), can largely be attributed to structural instability, triggered by seismic activity or hydro-induced processes. Ground shaking from earthquakes can

destabilize slopes, while heavy rainfall or flooding can saturate soils, triggering landslides. The Philippines is particularly vulnerable to these risks due to its location in the Pacific Ring of Fire, an area with high seismic activity, and the Pacific Typhoon Belt, which exposes the country to frequent and intense tropical storms. These geological and climatic factors, coupled with steep mountainous terrain and deforestation, significantly increase the likelihood of landslides (Mines and Geosciences Bureau, 2010). The Office of the Civil Defense (n.d.) further emphasizes that this combination of environmental challenges heightens the nation's vulnerability to such disasters, making preparedness and mitigation efforts essential to protect communities.

The growing threat of the climate crisis is significantly exacerbating natural processes, particularly those that increase the vulnerability of communities to landslides. In the western Pacific, while the overall number of storms has decreased since 1990, several alarming trends are emerging that directly impact the frequency and intensity of rainfall, a key trigger for landslides. Increased mean wind speeds, rapid intensification, and prolonged landfalling storms are all contributing to more extreme weather events. As tropical cyclones become more intense and travel further over land, they bring heavier rainfall that saturates soil, destabilizing slopes and increasing the likelihood of landslides. The increase in heavy rainfall events in East Asia since 1961 (Kossin et al., 2020; Song et al., 2020; Liu et al., 2020a; Chen et al., 2021a; Utsumi & Kim, 2022 as cited in Camargo et al., 2023) is particularly concerning for communities in vulnerable regions, especially in the Philippines, where steep terrain and widespread deforestation already heighten the risk of landslides.

In the Island Garden City of Samal, an isolated island in the Davao Gulf, the MGB Flood and Landslide Susceptibility Map indicates that the entire eastern portion of the mainland is highly susceptible to landslides. This poses a significant risk to the communities residing in the area. According to The Geology of the Philippines by the Mines and Geosciences Bureau (2010) and Essentials of Geology by Marshak (2022), the susceptibility to landslides in this region is influenced by several factors, including the area's geological structure, steep slopes, extreme chemical and physical weathering, and the potential presence of groundwater. These conditions destabilize the soil and increase the risk of landslides for the communities living nearby.

As indicated by the MGB Landslide and Flood Susceptibility Map, Barangay Tagbaobo is highly susceptible to landslides, with a history of mass wasting events in the area. These events involve rocks tumbling downhill onto the road, posing a serious risk to motorists using the only major route in the region. Reports from the City Public Order and Safety Office—City Disaster Risk Reduction and Management Division—suggest that this landslide phenomenon is primarily caused by extreme physical and chemical weathering.

According to The Geology of the Philippines (Mines and Geosciences Bureau, 2010), Samal Island comprises two major geological formations: the overlying Samal Limestone and the underlying Tagbaobo Conglomerate. The Tagbaobo Conglomerate, which predominates in Barangay Tagbaobo, is particularly vulnerable to intense physical weathering due to rapid temperature fluctuations and chemical weathering from the reaction of carbonic acid in the acidic ocean water with the matrix binding the conglomerate. These weathering processes create stress within the rock formation, leading to structural instability and triggering the frequent mass wasting events in the area.

Nearby the location of the mass wasting events, several communities have settled in the area despite the clear risks posed by landslides. According to the World Bank Group (n.d.), this settlement may be driven by the availability of resources that serve as residents' livelihoods. Additionally, Srivastava (2010) suggests that people may remain in these areas due to historical ties and the sense of stability provided by strong social bonds. As a result, the economic and social benefits of living in these areas often outweigh the perceived risks, leading residents to prioritize their immediate needs and social connections over the potential dangers their environment poses.

## 1.2 Statement of the Problem

Barangay Tagbaobo in the Island Garden City of Samal is a community prone to landslides, posing risks of disasters and significant concerns regarding the well-being and safety of its residents. Despite the risks, many residents continue to settle in the area, emphasizing a multifaceted interplay of various factors influencing their settlement decisions. This concern provides a gap in pursuing research that explores residents' lived experiences in disaster-prone areas like Barangay Tagbaobo to understand their motivations, risk perception, and coping strategies.

The limited understanding of the residents' lived experiences also poses challenges in crafting effective disaster risk reduction management plans that address local concerns and are appropriate to the needs and realities of the concerned communities. Moreover, exploring how local government initiatives and community-based programs are aligned with the resident's risk mitigation efforts is critically important. Without this perspective, disaster preparedness initiatives and sustainable settlement practices may not be able to address particular conditions and concerns of these vulnerable communities, such as Barangay Tagbaobo.

### 1.3 Objectives of the Study

This study aims to investigate the lived experiences of the residents of Brgy. Tagbaobo in the Island Garden City of Samal, with the barangay identified as a landslide-prone area. Particularly, this study aims to answer the following research questions:

1. What are the motivations of the residents to settle in Brgy. Tagbaobo? Particularly, are social and economic factors influencing their decision to settle in this area?;
2. Are the residents aware of the risks (i.e., landslides) associated with their barangay, and how do they perceive them; lastly,
3. How do the residents adapt and mitigate the risks present and identified in the barangay?

### 1.4 Significance of the Study

Investigating the lived experiences of Tagbaobo residents in a landslide-prone area contributes to achieving Sustainable Development Goal 11 on Sustainable Cities and Communities, highlighting the importance of ensuring that cities and human settlements are inclusive, safe, resilient, and sustainable. The findings of this research can provide a vital perspective on how residents make settlement decisions in vulnerable or hazard-prone environments, which can offer valuable information on how localized strategies can build resilient communities that promote safety and sustainability for people living in areas exposed to natural hazards.

With human settlements in disaster-prone areas identified as a global concern due to climate change and environmental degradation, this study also contributes to theoretical gaps in understanding human-environment interactions in the context of disaster resilience. Additionally, findings from this research can identify local coping mechanisms that can be adapted or applied to other disaster-prone communities.

At the national level, this research adds insights into understanding how Filipino communities in disaster-prone areas like Tagbaobo perceive and mitigate the risks of settling in these areas. Policies on managing human settlements in vulnerable regions can be referred to from the findings of this study, and evidence can be provided to guide nationwide efforts in developing more effective disaster risk reduction strategies, particularly in risk communication, disaster preparedness, and risk mitigation measures that can be tailored to local contexts.

Finally, this research offers the foundation for further research into how communities adapt to environmental risks and hazards and how policies should be developed to ensure safe and resilient settlements despite the pressing challenges of climate change.

### 1.5 Scope and Limitations

This research investigates the lived experiences of the residents of Barangay Tagbaobo, located in the Island Garden City of Samal, particularly on their settlement decisions, risk awareness and perception, and coping mechanisms. A limited number of participants (around 10-15) are purposely selected to ensure the representation of the whole community, wherein their participation will be entirely voluntary.

Due to the qualitative nature of this research, the findings of this study will be limited to the perspective and experiences of the identified residents in Barangay Tagbaobo. Generalization of findings to other communities or regions cannot be assumed due to the focus of this study on Barangay Tagbaobo specifically.

Further, subjectivity, which is common in qualitative research, is considered because of the different interpretations, gaps, and biases of both the researchers and the residents that can influence the analysis. Lastly, this study will not discuss other external variables that may affect the residents' settlement decisions, such as extensive socio-economic factors, government relocation programs, or comprehensive environmental policies, nor broadly explore landslide mitigation strategies and the impact of any government policies on disaster risk reduction management.

## 2 REVIEW OF RELATED LITERATURE

The Philippines is situated in the Pacific Ring of Fire, where volcanic eruptions and earthquakes happen frequently, with an average of 20 events reported daily. At the same time, the country is affected by typhoons, the Inter-Tropical Convergence Zone, and monsoons due to its location in the western Pacific Basin (Beroya-Eitner, 2017).

In recent times, landslides have become a widespread issue impacting numerous areas with varying landscapes. The Global Facility for Disaster Reduction and Recovery reports that landslides are responsible for approximately 1,000 deaths yearly, resulting in billions of dollars in global economic losses. From 2004 to 2016, there were 4,862 recorded landslide fatalities worldwide, excluding those triggered by earthquakes. Most of these events (95%) involved individual slope failures. Asia experiences the highest rate of landslides, contributing to 75% of all occurrences, particularly along the Himalayan Arc, in several Indian states, southeastern China, and neighboring nations like Laos, Bangladesh, and Myanmar, extending down to the islands of Indonesia and the Philippines (Froude & Petley, 2018).

Indonesia, the closest neighbor to the Philippines and one with significant vulnerability to various disasters has been experiencing landslides within its territory. According to a study by Cahyono et al. (2021) on local landslide disasters in Beiruk Village, Jatiyoso sub-district, Karanganyar Regency, the residents of this village have learned from their experiences with landslide-related disasters. This knowledge has enabled them to implement measures to reduce the impact of these events by continually monitoring their land for any signs of soil cracks, engaging in tree planting, and covering the soil with vegetation and grasses to decrease erosion. These community-driven efforts have allowed the residents to empower themselves and develop resilience against the challenges posed by potential landslides.

In the Philippines, Dales et al. (2021) explored the experiences of residents in Bukidnon, concentrating on regions that are prone to landslides and flooding, as well as the implementation of Community-Based Disaster Risk Reduction Management. In 2017, the Philippine Volcanology and Seismology (PHILVOLCS) warned the inhabitants of Kibawe, Magsaysay, Bukidnon, about a deep-seated landslide. Their research revealed that community members living in areas at risk of landslides are not adequately informed about disaster preparedness and the correct measures to take during emergencies, even with the enforcement of RA 10121. While the CBDRM program is advantageous, the top-down approach taken by authorities in Bukidnon did not achieve success because it failed to adhere to the CBDRM model, which emphasizes the participation of disaster risk communities in identifying, planning, analyzing, and evaluating disaster risks to help reduce their vulnerability and improve their ability to cope with adverse events, particularly landslides.

Derasin et al. (2021), in their research titled "Human Act or Act of Nature: The Lived Experiences of Landslide Victims in the City of Naga, Cebu, Philippines," indicate that landslide victims experience Post Traumatic Stress Disorder and other psychological issues, including depression, anxiety, and various behavioral problems. These victims also face financial hardships due to losing their homes and land, leading to displacement. Additionally, they lose their ability to be productive as their crops, livestock, and land productivity are affected. The study reveals that the victims felt that the loss of lives and property was regarded as insignificant by those responsible for such incidents, as the government must safeguard the lives and property of its citizens. Furthermore, the victims voiced their frustration with the government's failure to meet their needs, as Sugarman (2006) pointed out, a fundamental responsibility of the state is to ensure access to appropriate resources for compensation in the event of a disaster.

In an article by Mangadlao (2024), the inhabitants' experiences of Brgy. Masara, following the landslide on February 6, 2024, was explored. Though thankful for not losing their lives, they experienced extended displacement from their residences due to the event. Hence, their stay at the evacuation center, especially in the tent city, has proven difficult, particularly during midday when the sun's heat is most intense. The government's failure to quickly identify a safe and hazard-free relocation site further exacerbated the uncertainties faced by the survivors as they continued to endure the struggles of living in a tent city without a stable source of income. Historically, the residents affected by the 2024 Masara landslide are the same people who were forced to leave in 2008 because of a comparable incident. They were made to come back without the consent of the Local Government of the Municipality of Maco, as the government did not provide them with compensation after they were instructed to leave their properties, which had been designated as a permanent danger zone due to the threat of landslides.

Despite understanding that the overwhelming majority of landslide disasters occur in the Himalayan Arc, with 75% affecting Asia region along with Southeast Asia (Froude & Petley, 2018), we recognize that the Philippines lies within the Pacific Ring of Fire, where volcanic eruptions and earthquakes are common. (Beroya-Eitner, 2017). Still, many individuals in our country who reside in landslide-prone areas need more preparedness to handle potential landslides, as the government needs to sufficiently engage local communities in identifying, planning, and assessing their risks related to living in disaster-prone zones.

Additionally, the rehabilitation plans in place are inadequate, as demonstrated by the situation in the city of Naga, where residents have faced psychological issues due to their landslide experiences and feel that the government has failed to take appropriate action to provide compensation for the destruction of their homes (Derasin et al., 2021) and their displacement from their lands (Mangadlao, 2024).

Thus, it is essential to enhance the relevant policies to ensure that communities residing in areas vulnerable to landslides are educated, enabling them to evaluate the risks present. Additionally, adequate financial support should be given if they need to relocate due to the declaration of a permanent danger zone and heightened danger of landslide occurrences.

### 3 METHODOLOGY

This section provides the research methodology used in this study, which details the research design and philosophy, methods, sampling, data collection, data analysis, and ethical considerations.

### 3.1 Research Design and Philosophy

This study implements a qualitative research design, following a constructivist philosophy. Constructivism highlights individuals' and groups' active construction of reality through interactions and experiences. (Lim, 2023). This philosophy emphasizes the subjectivity of the residents' knowledge and the significance of understanding their unique and collective perspective in shaping their lived experiences.

### 3.2 Research Method

A phenomenological method has been adopted for this research to explore the lived experiences of the residents in Barangay Tagbaobo, Island Garden City of Samal. Phenomenology facilitates a thorough exploration of individuals' lived experiences, particularly in understanding the significance of certain events from the residents' viewpoint and uncovering the meaning they associate with their experiences. (Lim, 2023).

### 3.3 Sampling

Participants were purposely selected to ensure diverse perspectives relevant to the research questions. The sample was expected to include 10-15 residents, all of legal age (18 years old and above), who have lived in Barangay Tagbaobo.

### 3.4 Data Collection

Data were collected through Focus Group Discussions (FGDs), in-depth interviews conducted in a group setting (Mishra, 2016), guided by a semi-structured questionnaire. The session was audio-recorded (in the informed consent form) and conducted in the local language (Bisaya) to ensure inclusive communication.

### 3.5 Data Analysis

Patterns in the data collected were identified and interpreted through thematic analysis, particularly by utilizing a Table of Theories. The Table of Theories provides the framework for theoretical lenses that provide a foundation for understanding the findings of the FGD and analyze the elaborate concerns surrounding the residents' settlement decisions and risk perception. (Reeves et al., 2008).

### 3.6 Ethical Considerations

Ethical principles were strictly followed throughout the study. Informed consent was obtained from the participants, who were recognized for their voluntary participation and understanding of the purpose of the study. Confidentiality is maintained, and the participants were offered the right to withdraw from the FGD without any consequences.

## 4 RESULTS AND DISCUSSION

This section presents the findings of the focus group discussion (FGD) that explored residents' lived experiences in the landslide-prone area in Purok Rosal, Barangay Tagbaobo, Island Garden City of Samal. The researchers were able to interview nine (9) participants during the FGD, with the participants' ages ranging from 18 – 52 years old, and all provided their consent voluntarily to participate in the FGD. The research questions provided structure to present the results, focusing on key themes of settlement influences, risk perception, and coping mechanisms. The findings of this study were then aligned with appropriate theoretical frameworks (as presented in Table 1) to present a comprehensible connection between identified themes and conceptual lenses.

### 4.1 Lived Experiences of Tagbaobo Residents in Landslide-prone Area

Major themes and sub-themes were gathered from the interview conducted through the FGD. Presented below are the said identified themes and sub-themes, explained and supported by relevant theoretical frameworks.

### 4.2 Continued Settlement Despite Landslide Risks

As one of the stated objectives of the study, the FGD explored the residents' motivations to settle in Brgy. Tagbaobo, despite the landslide risks present in the area. With this, the following sub-themes have been generated.

**Familial Connections and Longstanding Family Roots.** Most residents stated that they chose to remain in Barangay Tagbaobo despite the landslide risks due to "Familial Connections" and their "Longstanding Family Roots" in the barangay. According to the Place Attachment Theory elaborated by Scannell and Gifford (2009), people develop emotional bonds in certain places, which can exist at individual and group levels.

For Barangay Tagbaobo, a strong group-level place attachment was observed. Verbatim statements "Dire nagpuyo ang mga ginikanan" (Our parents live here) and their account of living in the area since the time of their forebears demonstrate that the residents' connection to the area is deeply rooted in family lineage and shared history. This parallels the concept that group attachment is built on shared symbolic meanings. (Lows, 1992, as cited in Scannell & Gifford, 2009). These significant connections and shared experiences are deeply intertwined with family and make places meaningful (Manzo, 2005). Further, intergenerational connection to a particular place is a crucial component of group-level place attachment, as historic experiences are passed on to the succeeding generations (Virden & Walker, 1999, as cited in Scannell & Gifford, 2009).

These sub-themes were confirmed during the interview with Ms. J, who confirmed that she had moved to Tagbaobo due to marriage and that this was where they had built their family.

#### 4.3 Social and Economic Drivers of Settlement

Concerning the residents' motivations to settle in Tagbaobo, the FGD was also able to generate sub-themes specifying the social and economic factors drawing the residents to the area.

**Livelihood Opportunities.** In Barangay Tagbaobo, "Livelihood Opportunities" for residents are fundamentally connected to their local environment. Residents have established access to local resources such as fishing grounds and local markets, forming the foundation of their income source. This access provides a sense of stability essential for livelihood security.

As defined by Bohle (2009), Livelihood Security states that secured access to income-generating activities provides the capacity to "offset risks, ease shocks, and meet contingencies". This concept explains why Tagbaobo residents choose to stay in the location despite the recognized threat of landslides. Their choice shows a calculated trade-off between the critical need to maintain their livelihoods and the perceived risks. For most residents, familiarity with their present livelihoods and relative security prevail over potential threats. This reflects a practical assessment and prioritization of economic needs and an established way of life.

This has been confirmed through an interview with Ms. W, who mentioned that their jobs are within the area, where they get their income to sustain their living expenses.

**Community Bonds.** A strong "sense of community" was observed in Tagbaobo through the participants' account of community practices such as "Dayong" or "Tabo", which refers to the financial contributions of community members in times of crisis. This demonstrates the residents' sense of responsibility to support one another, especially during critical times. Further, this "Dayong" emphasizes a "neighboring behavior" focused on resource sharing, provision of assistance, and offering emotional support. These practices strengthen the community's social ties and reinforce their sense of belonging. These dimensions of "sense of community" and "neighboring behavior" form the foundation of the Social Capital Theory elaborated by Perkins et al. (2002). These key dimensions are highly relevant to understanding "Community Bonds" in Barangay Tagbaobo. The framework provided by Perkins et al. (2002) supports how these bonds were created and sustained, particularly in the context of shared challenges.

This sub-theme was confirmed through a statement by Mr. P, who mentioned that when a member of the community passes away, the neighborhood contributes financially to assist the bereaved family of the deceased.

#### 4.4 Landslide Risk Perception

Further to the residents' settlement motivations, the FGD also explored the residents' awareness of the risks (i.e., landslides) associated with their barangay and how they perceive them, resulting in the generated sub-themes.

**Perceived Risk Severity.** During the FGD, the participants were asked how they perceived the seriousness of landslide incidents in the barangay. On a scale from 1 to 10, with 10 being the most severe, the participants unanimously assigned the highest rating to the seriousness of landslide incidents. They believe it is severe, particularly those who frequently travel between the barangay and the city proper, as it disrupts their transportation route. There is always a concern about a potential collapse, especially during extended periods of rain, as the remaining boulders might fall and lead to road closures. While the residents may be aware of the statistical likelihood of landslides in their area to some degree, their high rating can be attributed to certain qualitative factors. According to Schmidt (2004), risk perception is not limited to objective data or "hard facts" but rather significantly shaped by social, psychological, and other qualitative factors or "soft facts". This provides a vital perspective regarding the residents' risk perception.

This perception was confirmed through an interview with Mr. C, who mentioned that landslide incidents seriously affect their transportation route due to road blockage and fear of falling debris or rocks.

**Quarrying Impact.** Further, based on the FGD, most participants perceived that quarrying activities in the area may have increased the risk of landslide incidents. Most of the participants concurred with the statement of one participant, stating in verbatim that "Sa una wala pa man me naka sugakod ug landslide diha, pero pag sugod sa naga quarry dihaa, nagsugod na pud ang landslide. (Previously, we did not encounter any landslide incidents in the area, but as soon as the quarrying activities started, the landslide incidents also started.)" Schmidt (2004) emphasized that man-made risks, such as those potentially aggravated by quarrying activities, are generally perceived as more severe as they are considered preventable and attributable to human action. The residents' statements demonstrate their attribution of the increased risk to these human activities, which leads them to recognize the risk as less acceptable and more alarming. This is aligned with Schmidt's (2004) point on people demanding accountability from those responsible for these man-made risks. This sub-theme was unanimously confirmed by the participants who all concurred to the statement mentioned on their experience in the community.

#### 4.5 Coping Mechanisms

From their perception of the present risks in the area, the FGD was also able to explore how the residents adapt and mitigate the risks present and identified in the barangay. The identified sub-themes elaborated these.

**Local Safety Measures and Limited Disaster Preparedness.** Findings from the FGD highlight that the Tagbaobo residents were found to rely on “Local Safety Measures” such as observing boulder movement and leaving their motorcycles with the barangay chairperson’s residence during landslide incidents. Further, residents mentioned that the community has no comprehensive disaster preparedness mechanism for landslide occurrences, as these typically only disrupt their transportation without posing immediate threats to their lives or properties. Consequently, residents remain home unless they have urgent matters outside their barangay. Those with small businesses or jobs beyond the barangay are forced to take longer routes, leading to increased fares and gasoline expenses. As mentioned by one participant, in verbatim, “Magpuyo na lang jud ug balay kung dili importante ang tuyo. (We will just stay at home, especially if our purpose to go out is not that important.)”

Norris et al. (2007) highlighted that community resilience is not merely focused on returning to a pre-disaster state, but also about adaptation, learning, and growth through experiences. Barangay Tagbaobo showcased that even with “Limited Disaster Preparedness” indicated by the lack of formal plans and infrastructure, the community displayed resilience through their flexibility and adaptive behaviors. Their “Local Safety Measures” are not merely isolated actions but mirror a broader community-based coping mechanism aligned with the community resilience principles defined by Norris et al. (2007). These circumstances highlight the importance of empowering communities to develop their tailor-fit adaptive capacities despite lacking comprehensive disaster preparedness measures. This will be vital in building resilience in recurrent hazards like landslides.

These statements were confirmed through an interview with Mr. T, who mentioned that the community has no known comprehensive disaster preparedness mechanism for landslide occurrences, as these typically only disrupt their transportation without posing immediate threats to their lives or properties. Consequently, residents remain home unless they have urgent matters outside their barangay.

#### 4.6 Community Aspirations

From their motivations, risk perceptions, and adaptation measures, the FGD explored what aspirations have all these concepts brought to the residents, and two sub-themes were generated.

**Road Connectivity (Redundancy).** When asked about their aspirations within the community, the participants unanimously hoped for an alternative road to Brgy. Bandera will be connected, as mentioned in their verbatim statement, “Matiwas ang dalan nga isa na padulong sa Bandera ([We want] the road going to Bandera to be completed)” hence, it will ease their suffering when the main road is closed. According to Jenelius (2010), road redundancy is important as road backups or alternatives ensure community resilience and minimize the impact of disruptions, as reflected in the residents’ forced action to take longer and more costly routes due to road closure caused by landslides. The residents’ longing for an alternative road is not just a matter of convenience but a crucial need for sustaining access and safety during emergencies.

This was confirmed through an interview by Ms. G, who mentioned the alternative route to Brgy. Bandera would significantly reduce travel time to the market or other important destinations or services.

**Improved Access to Healthcare.** Additionally, the participants hoped that a health center would be nearer so that those with health problems could be treated immediately. One participant mentioned, in verbatim, “Gusto jud ko maduol ang health center, kanang magkasakit sakit dali ra jud maatiman. (I really want the health center to be nearer, so that when we are sick, we can easily be accommodated.)” Franco et al. (2021) have highlighted that rural communities are often faced with the challenge of inadequate access to healthcare due to their geographic location. The landslide risks associated with Barangay Tagbaobo explain why access to healthcare is posed as a challenge, aligned with the study of Franco et al. (2021). It should be emphasized that the residents’ desire for a closer health center reflects the fundamental need to address the limited access to essential healthcare services.

This was confirmed through an interview with Ms. E, who mentioned that whenever landslide incidents occur, the barangay health center cannot be accessed by the residents, particularly those who live in Purok Rosal.

**Table 1.** Table of Theories

Research Question	Verbatim Statements/ Key Findings from FGDs	Theoretical Lens	Identified Themes
Why do Tagbaobo residents choose to	Most of the participants have lived in Tagbaobo since the time of their	Place Attachment Theory by Scannell and	Familial Connections

settle despite landslide risks?	forebears. One participant came from another barangay but moved to Tagbaobo due to a relationship. As mentioned by the particular resident, in verbatim, <i>“Taga Kanaan ko unya naminyo man ko ug taga Tagbaobo. (I’m from Kanaan, and then I got married to a guy from Tagbaobo.)”</i>	Gifford (2009) explains that emotional connections with a certain area are created by shared history and meaning. This is evident in the strong familial and generational ties of the residents to Barangay Tagbaobo.	Longstanding Family Roots
	Most participants indicated their responses were influenced by their longstanding family roots, supported by their answer that, verbatim, <i>“Diri nagpuyo ang mga ginikanan, (Our family live here)”</i> followed by marriage, and their means of living are also tied to the exact location.		
What are the social and economic factors influencing settlement decisions?	Two of the participants generate income through fishing, while two others run their small businesses. The remaining participants include a basketball player, a chainsaw operator, and a driver of a Bao-bao, which is a form of a tricycle.	The concept of Livelihood Security elaborated by Bohle (2009) explains the need of Tagbaobo residents to maintain their established “Livelihood Opportunities” to offset the residents’ perceived risks of landslides.	Livelihood Opportunities
	According to the participants, the community provides support through financial contributions during times of crisis for a family, referred to as “Dayong or Tabo,” especially when a loved one passes away.	Social Capital Theory, elaborated by Perkins et al. (2002), highlights the importance of community support and social connections. Community practices in Tagbaobo, such as “Dayong” or “Tabo,” demonstrate their strong social network, particularly in times of need.	Community Bonds
How do Tagbaobo residents perceive or know the risks associated with landslides?	On a scale from 1 to 10, with 10 being the most severe, the participants unanimously assigned the highest rating to the seriousness of landslide incidents. They believe it is severe, particularly those who frequently travel between the barangay and the city proper, as it disrupts their transportation route. There is always a concern about a potential collapse, especially during extended periods of rain, as the	As elaborately explained by Schmidt (2004), Risk Perception is influenced by qualitative factors, such as the risk’s origin and perceived controllability. The residents’ “Perceived Risk Severity” is intensified by attributing landslides to man-made	Perceived Risk Severity

	remaining boulders might fall and lead to road closures.	activities such as quarrying.	
	Most participants perceived that the presence of quarrying activities in the area may have added to the risk of landslide incidents. Most of the participants concurred with the statement of one participant, stating in verbatim that <i>“Sa una wala pa man me naka sugakod ug landslide diha, pero pag sugod sa naga quarry dihaa, nagsugod na pud ang landslide. (Previously, we did not encounter any landslide incidents in the area, but as soon as the quarrying activities started, the landslide incidents also started)”</i>		Quarrying Impact
How do Tagbaobo residents cope with the threat of landslides and mitigate risks?	The community has no comprehensive disaster preparedness mechanism for landslide occurrences, as these typically only disrupt their transportation without posing immediate threats to their lives or properties. Consequently, residents remain home unless they have urgent matters outside their barangay. Those with small businesses or jobs beyond the barangay are forced to take longer routes, leading to increased fares and gasoline expenses. As mentioned by one participant, in verbatim, <i>“Magpuyo na lang jud ug balay kung dili importante ang tuyo. (We will just stay at home, especially if our purpose to go out is not that important)”</i>	The Community Resilience Theory, elaborated by Norris et al. (2007), highlights the resident's capacity to cope and adapt to adversity. The residents of Barangay Tagbaobo have shown their resilience through their “Local Safety Measures”, despite the “Limited Disaster Preparedness” of the community.	Limited Disaster Preparedness
	Most participants indicated that the best way to protect their family during a landslide is to remain in their location. However, a few mentioned that they would walk from the Brgy. Tagbaobo properly attends to work or important matters, leaving their motorcycles in the barangay area for safekeeping. As mentioned by one of the participants, in verbatim, <i>“Ibilin ang motor sa ila Kapitan dayon magbaktas na lang diria. (We leave our motorcycle at the Chairwoman’s residence and just</i>		Local Safety Measures

	walk from there)” They also take precautions by carefully observing the boulders near the mountain.		
What are the broader perspectives and aspirations of the residents?	The participants unanimously hoped for an alternative road to Brgy. Bandera will be connected, as mentioned in their verbatim statement, “ <i>Matiwas ang dalan nga isa na padulong sa Bandera ([We want] the road going to Bandera to be completed)</i> ”; hence, it will ease their suffering when the main road is closed.	The Importance of Redundancy discussed by Jenelius (2010) highlights the importance of alternative routes to maintain the barangay's connectivity in disruptions caused by landslides, emphasizing the reason behind the community's aspiration for “Road Connectivity.”	Road Connectivity
	The participants also hoped that a health center will be nearer so that those who have health problems can be treated immediately. One participant mentioned, in verbatim, “ <i>Gusto jud ko maduol ang health center, kanang magkasakit sakit dali ra jud maatiman. (I really want the health center to be nearer, so that when we are sick, we can easily be accommodated.)</i> ”	Franco et al. (2021) underscored in their study on Healthcare Access in Rural Areas the challenges of accessing quality healthcare by rural communities due to spatial barriers and limited local resources, supporting Tagbaobo residents' aspiration for “Improved Access to Healthcare”.	Improved Access to Healthcare

From these findings, Figure 1 presents the framework that details the lived experiences of Tagbaobo residents in landslide-prone area.



**Figure 1.** Lived Experiences of Tagbaobo Residents in Landslide-prone Area

## 5 CONCLUSION

This research revealed that Tagbaobo residents' choice to stay in a high-risk area like their community is deeply tied to social and economic factors, such as longstanding family roots in the land, strong social connections, and an established way of life and livelihood. These factors were discovered to outweigh the perceived risks of landslides in the area. Significant challenges, such as the lack of comprehensive disaster preparedness plans, inadequate infrastructure, and limited access to essential services, were also presented in this study. These challenges increase the community's vulnerabilities yet present opportunities to strengthen their resilience. This study has emphasized the significance of understanding the lived experiences and local perspectives to design efficient and effective risk mitigation initiatives and improve the quality of life for vulnerable populations.

The following recommendations can be taken from the presented findings:

1. Community-Based Disaster Risk Management in Barangay Tagbaobo should be strengthened through the development of localized disaster preparedness programs built on local perspective and by conducting regular risk awareness campaigns;
2. Prioritize the construction of alternative roads to ensure minimized or eliminated disruptions in terms of the community's connectivity;
3. Establish a local health center, particularly in Purok Rosal, Barangay Tagbaobo, Island Garden City of Samal, which often face limited access to healthcare during landslide incidents due to road closure;
4. Present livelihood programs to the residents to diversify their income sources and be knowledgeable on more environmentally sustainable livelihood;
5. Implement stricter monitoring and regulation of quarrying activities in the area to reduce man-made risks and avoid further environmental degradation and
6. Engage the community in decision-making for disaster risk reduction management and infrastructure projects to ensure their requirements and perspectives are considered.

These recommendations aim to offset the community's vulnerabilities and improve the residents' quality of life.

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