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Living with Landslide Risk in Penanjong, Tutong

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Abstract

Landslides have been a concern for many residents in the Penanjong area of Tutong District. This is due largely to the proximity of their homes to the steep slope of sandstone ridges in the area. Affected residents have adapted to the condition as there is no landslide risk management for the area. The paper therefore aims to study the coping strategies of the residents. It focussed on two locations, where people are most affected. The paper employs the typology created by Sudmeier-Rieux et al. (2012) and Setiawan et al. (2014), as a basis to understand how residents cope with landslides. Data were acquired through interviews with affected residents as well as an officer in the public works department responsible for landslide response. The terrain was also examined and analysed using topographic maps and GIS. The study found that (a) landslides in the area were not deadly but impacted the affected household in terms of cost to deal with clean-up, as well as disruption to daily life activities; and that (b) response from government was slow and limited. The residents' coping strategy could be described as passive acceptance of landslide risks, dealing with emergency and installing some preventive measures. They are generally left to deal with the landslides by themselves with limited access to government help because the authority regards landslide risk as low due to their small scale. They residents have develop coping capabilities at their own expense to deal with landslides, which appears to be triggered largely by urbanisation processes. In the main, residents were able to deal with landslide risk on their own, although some revealed that they suffer mental anxiety because of the possibility of landslides.

Keywords: Landslides; Communities; Risk; Impacts; Perceptions; Coping Strategies

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Introduction

Landslides are natural hazards of concern in Brunei. The true cost of their impact is often underestimated due to underreporting of real losses, the scattered nature of landslides, and the perception that the risks are low (Jamalullail et al., 2021). Landslide risk, together with susceptibility and hazard are key components in landslide assessment (Shano et al., 2020). Susceptibility to landslides refers to the probability of a landslide happening in a certain area based on local circumstances such as slope gradient, soil, geology, landcover, human activity, while hazard is the geographical and temporal pattern of landslide occurrence. Risk is exposure. People living in landslide-prone places are also at risk of economic, social or mental harm (Azmi et al., 2015; Antronico et al., 2020; Burrows et al., 2021). Landslide risk mapping is important to minimise loss of life and property due to landslides (Shano et al., 2020). The hazards were often mitigated by local or relevant authorities through engineering works. However, if this does not happen, communities have to move or cope with the threat by themselves. Multiple variables contribute to the coping strategies used. They encompass knowledge or perception of landslide and landslide risk, individual and collective capacity and cohesion, access to resources, as well as experience (Setiawan et al., 2014 & Sudmeier-Rieux et al., 2012).

The study of landslides and identifying their causes are crucial to minimise damage from them. Examining their parameters and links to past landslides in a given location may help predict future ones. Landslides are often caused by a combination of factors: climate, hydro-geology, topography, land use/cover, and human activities can affect landslides. As such, a starting point for landslide investigation is physical environment context. To determine steep slope distribution and settlement and land use patterns, it is necessary to obtain topographic information first and consult soils and geological maps. Mapping such areas builds knowledge of the pattern of past landslides which can provide an important indicator of risk.

Residents of landslide-prone places are at risk of economic, social, and mental harm or death (Azmi et al., 2015; Antronico et al., 2020; Burrows et al., 2021). Residents' hazards were often mitigated by local or relevant authorities. If this does not happen, they have to move or deal with the threat. Multiple variables affect the ability of vulnerable groups to cope. This involves stress from landslide incidents and prevention attempts, as well as organic development from diverse individuals and households. Social complexity also influences coping strategies and success rate. With experience, knowledge, access to technologies, external intervention, and environmental changes, communities' coping strategies for steep slopes and landslides develop (Setiawan et al., 2014 & Sudmeier-Rieux et al., 2012). The aim of this paper is to investigate how residents at Penanjong in the Tutong District cope with landslides. First, it maps landslide patterns and then assesses landslide risk and vulnerability of the community at Penanjong. This allows it to further consider the impact of landslides on the residents and detail the coping strategies they employ.

Methodology

The study examines the physical environment by using topographic maps and data layers from GIS obtained from the survey department including contours (m), drainage and roads. Google Earth was employed to locate and digitize areas of interest. Firstly, topographic maps indicated the terrain and physical parameters. Combined with GIS Mapping, a risk map was created to identify areas susceptible to landslide. Given the paper's focus on household and community level impact and coping strategies, two field surveys were conducted in August and October 2022. They focussed mainly on the geological situation of each area, followed by interviews with the residents. The study also engaged the assistance of a local resident of Penanjong to serve as a facilitator and informant. Two sites in Penanjong identified by the informant were selected to represent the landslide risk situations. The informant provided background information and facilitated meeting with key respondents such as the village chief and a number of affected residents (AOI2). An interview was conducted with an officer from the public works department (JKR) to learn more about official landslide response and mitigation. Qualitative data-collection included semi-structured interviews with residents and JKR engineers, and probing techniques to get further information on the landslide scenario. A set of interview questions were divided into various sections. The first component comprised of general participant information while the second section dealt with specifics of their landslide experience including how it affected them, how they responded, and their perspectives about

getting help from the authorities. The third section focused on their coping strategies to determine the extent to which they ensured their own safety.

Interview data was recorded, translated, and analysed manually. English-language transcripts were used for analysis while Bruneian language references were made where appropriate. to identify. Collected interview data were analysed using conceptual frameworks from Sudmeier-Rieux et al (2012) and Setiawan et al (2014) (refer to Figure 2 and 3) to identify trends and draw out the correspondence of the interviewees' narratives about their landslide experiences and the larger patterns in their lives that emerged from those experiences.

Penanjong, Tutong: Overview of the landslide situation

Penanjong is a village in the sub-district (mukim) of Pekan Tutong in Tutong District. It has a total population of 2,065 individuals living in 339 houses (DEPD, 2016). The area of interest (AOI), location 4.8383°N, 114.6802°E, about 600 to 800m from the coast, is shown in Figure 1. The physical characteristics of the area make it susceptible to landslides. This includes geology that comprises of young, incompetent sedimentary rocks belong to the Seria Formation (Sandal, 1996), rapid soil formation process and a year-round warm and wet climate. In 2009, a severe landslide event in Tanah Buruk caused the evacuation of several houses and a car driving through took a direct hit when it occurred. Victims suffered substantial financial loss as they had to rebuild homes and retention walls. Due to the fact that people are presently residing in the region, the landslide risk should be examined and studied.

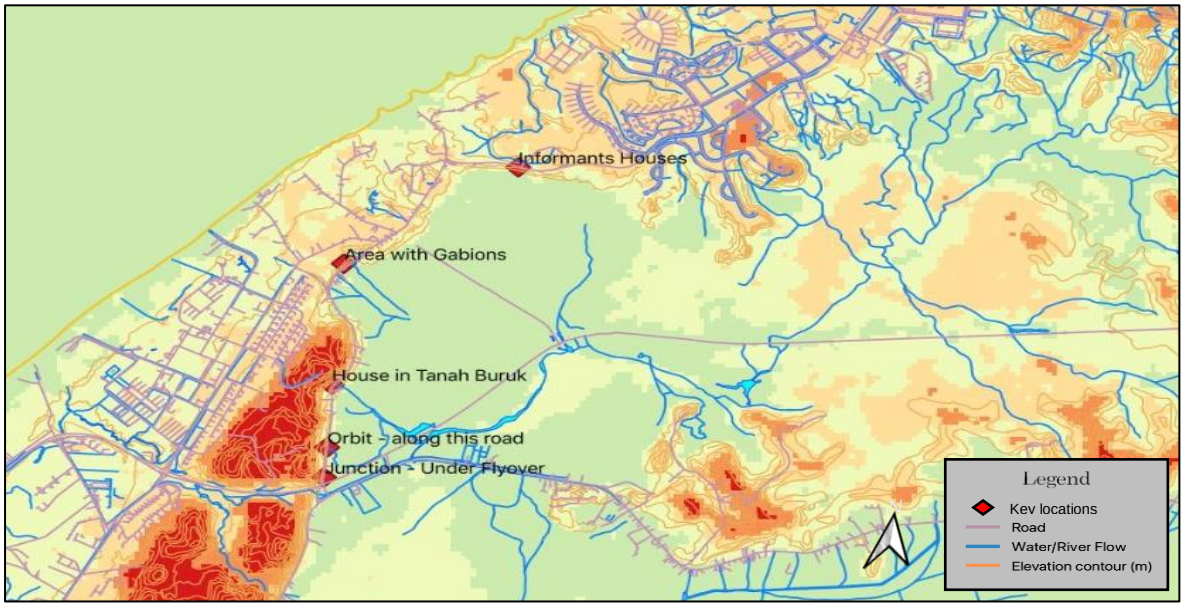

Figure 1. Area of Interest at Penanjong, Tutong showing topography and key features.
Source: SRTM 2000.

Figure 1 shows the topography and key features in the area of interest (AOI). The green-yellow-red colour indicate increasing altitude derived from the SRTM (Shuttle Radar Topography Mission) image flown by US NASA in 2000. Superimposed on the image are contour lines (light brown), roads (pink) and drainage network (blue). The key features are found on the lower edge of slopes. A prominent ridge extends from the lower left side of the image in NNE direction. The central area is low-lying. The main access road and residents' properties run along the main ridge (red).

A resident of the area agreed to serve as an informant in this study. According to the resident, landslides have affected this area for decades. She highlighted the key sites (red diamonds) and helped arrange meeting with the village head. Site visits found that the area is landslide-prone. The landslides are characterised as “muddy and runny flows”. The affected residents have sought assistance from the authorities, but they have received muted responses. In the recent years, landslides resulted in increasing occurrence of road blockages and loss of power supply. This has affected the daily lives of local residents, who are increasingly unhappy about the circumstances. However, people continue to reside in their homes despite the risk, and they have developed their own strategies to cope with the hazard.

Landslides in Penanjong: Types, Factors and Patterns

To situate the study in the literature on landslides, the following section outlines types of landslides, factors affecting them, patterns of landslides, how they impact on communities, common mitigation responses and coping measures by affected communities.

Landslide is a broad term that encompasses a variety of processes that result in the downward and outward movement of slope materials such as rock, soil, or artificial fill, or a combination of these factors (Varnes, 1978). The six forms of movement are as follows: fall, topple, slide, spread, flow, and slope deformation. The terms and definitions of landslide types used in this study are from Varnes (1978), Hungr et al. (2001), and Hungr et al. (2014). Table 1 shows the different types of landslides based on Hungr et al. (2014), which is a refinement of an earlier classification by Varnes (1978). The type of landslide that occurs in Penanjong could be classified under *clay/silt rotational slide* or *sensitive clay flowslide* (Jamalullail et al., 2021) and sometimes referred as slumps (Geologyin, n.d.). A soil slump is characterised by a pronounced head scarp and a back-tilted bench that forms the head. As from the spatial analysis, a number of landslide occurrences in Penanjong is located near an existing water body or content, which may also be exacerbated by the amount of rainfall.

There is a direct relationship between climate and slope stability (Crozier, 2010). This is especially true when it comes to the volume of water present on the slope, which is determined by factors such as precipitation, drainage, and other less obvious factors. In turn, they are influenced by elements like weathering, infiltration rates, hydraulic conductivities of the slope materials, and the type and degree of instability (Crozier, 2010). These hydromechanical processes could intensify with climate change. As the topsoil becomes more saturated, the capillary tension between soil particles decreases, resulting in a slope weakness. Additionally, the fluid exerts a destabilising, downward frictional drag due to the mobilised fluid flow inside the soil mass. Depending on soil permeability and the intensity and length of rainfall, infiltration may result in superficial slides or time-delayed, deep-seated failures due to accumulation in the water table (Laloui et al., 2010). Therefore, changes in precipitation and overall ground water levels plays a role in the occurrence of landslides.

Types of movement	Rock	Soil
Fall	Rock/ice fall	Boulder/debris/silt fall
Topple	Rock block topple	Gravel/sand/silt topple
	Rock flexural topple	
Slide	Rock rotational slide	Clay/silt rotational slide
	Rock planar slide	Clay/silt planar slide
	Rock wedge slide	Gravel/sand/debris slide
	Rock compound slide	Clay/silt compound slide
	Rock irregular slide	
Spread	Rock slope spread	Sand/silt liquefaction spread
		Sensitive clay spread
Flow	Rock/ice avalanche	Sand/silt/debris dry flow
		Sand/silt/debris flowslide
		Sensitive clay flowslide
		Debris flow
		Mud flow
		Debris flood
		Debris avalanche
		Earthflow
		Peat flow
Slope deformation	Mountain slope deformation	Soil slope deformation
	Rock slope deformation	Soil creep
		Solifluction

Table 1. Landslide types following Varnes, 1978.
Source: Hungr et al., 2014, p. 24

The potential of landslides increases with addition of weight to a slope, particularly at the top, or by cutting into a slope, particularly at or near the base (Forbes et al., 2013; Jamalullail et al., 2021, Sultan, 2000). Slope grade and curvature contribute to landslide susceptibility. Typically, slopes are steepened as they are cut to create a flat surface to accommodate properties and infrastructure in development. Penanjong's rocks are young sedimentary rocks

that quickly disintegrate into soil. Soil efficiently absorbs rainwater. Thus, during prolonged precipitation, the soil becomes heavy, and when the weight of the material surpasses the soil's cohesive strength, it slides down the slope. Vegetation clearance and the frequent exposure of exposed land areas to rain cycles and hot, humid tropical weather accelerate erosion and rate of landslides (Forbes et al., 2013; Jamalullail et al., 2021).

In summary, the main factors in landslide susceptibility are slope steepness, precipitation level and fluvial processes (Ohkubo et al., 2007; Forbes et al., 2013). They may also be influenced and provoked by human modifications of the slope, in particular unchecked slope development (Ahmad et al., 2014; Abd Rahim et al., 2017; Azmi et al., 2013). Natural slopes are often cut to facilitate public access. Although urbanisation is a necessary part of development, they are also associated with more landslides (Jamalullail et al., 2021; Abd Rahim et al., 2017; Azmi et al., 2013). As such, homeowners and landowners in affected areas had to spend their own money on further slope modification to protect their property from development-related damage.

Impact of landslides on communities

People and communities may suffer economically and socially due to landslides (Azmi et al., 2015; Antronico et al., 2020; Burrows et al., 2021). Azmi et al. (2013) investigate the cognitive choices and responses of communities to landslide tragedies in Ulu Kelang, Malaysia. Most, if not all, of the respondents from their research saw landslide tragedy as a serious concern. Despite the fact that several residents had evacuated the neighbourhood due to security concerns, many more remained. Many landslide victims expressed discomfort with what they had gone through, despite the fact that their families and houses were protected. They had to evacuate their houses, carry their belongings since the road was blocked or closed, stay in temporary shelters, and mourn the loss of family, and friends (Azmi et al., 2013). However, many of them were not directly engaged in past landslide incidents. They may not have felt a sense of urgency to leave their current position despite their dread of future landslides. It is reasonable to assume that respondents considered the risks of landslides, but also other variables like accessibility and privacy that may have influenced their decisions.

Mental health issues may arise from pre-dislocation traumas, relocation, and subsequent resettlement. Landslide-displacement in Banjarnegara, Indonesia, was studied by Burrows et al. (2021) with an emphasis on local understandings of the effects on mental health. Grief experiences evolved throughout time, but they did not go away entirely. Landslides are

generally over in minutes, but the experience is not. Victims' sense of home, family, and community were severely affected. Devastation of their farms caused both economic and intergenerational losses, since the land had been cultivated by their parents or ancestors before them (Burrows et al., 2021). Burrows et al. (2021) claim that receiving social or psychological help would have prevented emotional discomfort and the resulting psychological symptoms of PTSD. They emphasised the need of enhancing community-led recovery efforts following disasters, focusing on local needs. Their mental health is fragile due to the trauma of struggling to survive and rebuild new homes.

In comparison to Penanjong, it is important to note that people respond differently to the same hazards in different conditions. From various experiences demonstrates that although communities are impacted by landslide on a small or big scale, the ramifications vary according to availability to resources and skills of each area. As a result, communities are evolving their own coping mechanisms to deal with the negative consequences in an attempt to prevent more damages from landslides in the future.

Coping strategies and coping capabilities

There is a distinction between “coping strategies” and “coping capabilities”; the former describes an active decision-making process with an implicit knowledge of options, whilst the latter is equivalent with ‘abilities’, a more passive phrase (Sudmeier-Rieux et al., 2012). Decisions and choices must be made based on an evaluation of events and the probable outcomes or repercussions. In order to minimize hazards of landslides in the future, society has devised a variety of coping strategies, both individually and collectively. Government and non-governmental organisations are also working to reduce the probability of landslides. Landslide-prone areas must be examined and managed to minimise damage and improve residents' living circumstances. Locals may utilise a landslide-related coping strategy at both the household and community levels. Landslide-prone communities often have a strategy and take precautions to prevent damage.

In their study of landslides in the Karanganyar regency in Indonesia, Setiawan et al. (2014) found a mutually reinforcing link between people and how they cope, which means that they develop better coping strategies as their situation and understanding improves, and vice versa. Over time, affected people are more likely to have an effective plan for dealing with the landslides because they are more aware of the dangers they face and understand its characteristics. Figure 2 shows the relationship between people’s perception and coping

strategies from Setiawan et al. (2014). The situational elements were determined by an examination of respondent characteristics such as age, gender and occupation, while the cognitive components were determined through an investigation of people's knowledge of landslides which depends on their personal situation, level of awareness and media exposure. Analyzing respondents' knowledge about landslides is analogous to determining their perception. Perception is the process through which people arrange external inputs to create mental representations of events or circumstances (White, 2019). Situational elements and cognitive aspects have been shown to impact risk perception (Heryanti, 2010).

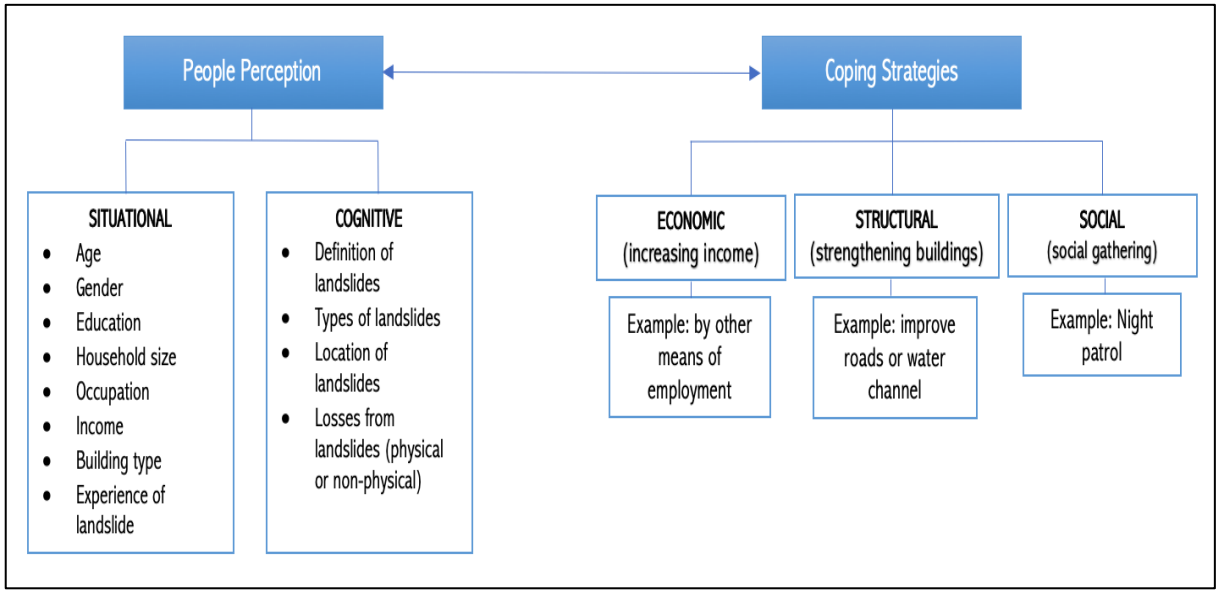

Figure 2. Perception-Coping Strategy Relationship adapted from Setiawan et al. (2014).

In the Indonesia study, local community were found to respond to landslide economically, structurally as well as socially and culturally (Setiawan et al., 2014). In any landslide mitigation initiatives, it is important to begin with considerable on-the-ground contact with local residents to understand how landslides affect them and how they react and cope (Anderson et al., 2021). Understanding how people perceive landslides helps in predicting how they will react to future landslides. Sudmeier-Rieux et al (2012) relate perception of landslide risk to cultural beliefs in their study of coping strategies of communities in Nepal. How the community coped is also dependent on their acceptance of risk, sense of responsibility and actions taken, as well as access to available resources. Their study revealed individual and societal coping strategies in dealing with landslides, as well as how different communities manage risk depending on their own capability and resources.

Coping Strategies Factors		FEW			MULTIPLE
Risk Acceptance, responsibility and actions	Risk Acceptance	Deny	Passive acceptance	Acceptance	Active acceptance
	Actions	Emergency actions only	Mainly emergency, some prevention	Preventive actions are taken	Drastic measures to ensure safety
	Responsibility	Lies with community	Some government responsibility/community	Government responsibility/little individual responsibility	Entirely with government or market forces
Risk Perceptions	Cultural beliefs	Fatalists • Lack strong cohesion group • Little personal control over risk	Egalitarians • Identify with their group • Outsiders are blamed for risk	Hierarchists • Respect authority • High group norms	Individualists • Self-regulation on risk
Access to resources	Political and economic factors: access to resources	Very low • Subsistence main priority over physical risks	Low to medium • Subsistence and physical risks	Medium to high • Greater concern with physical safety	High • Physical safety a priority

Figure 3. Typology of coping strategies and determining factors following Sudmeier-Rieux et al. (2012).

Referring to Figure 3, when a community has active acceptance of landslide risk, they take multiple strategies, and drastic measures to ensure safety. In such situations, responsibility tend to lie with the government or private sector (market forces) offering solutions services. The risk perception tends to be individualist, where multiple agencies and persons act to control the risk. In this scenario, access to resource is high. However, towards the other end of the spectrum, where there is general passive acceptance or even denial of landslide risk, actions are restricted to emergency responses, and some mitigation measures. The community is often left to cope. The cultural aspect here is to identify with one another in the community, but often with a sense of helplessness and acceptance that the risk is beyond their control. Access to resources is low, and subsistence hold higher priority than physical risk.

Study Findings

Landslide pattern and risk

Landslide susceptibility is strongly related to steep slope, water flow and urban structures (Ohkubo et al., 2007; Forbes et al., 2013; Ahmad et al., 2014). Using the data layer from survey department, the area outlined in red in Figure 4 would be the most prone to landslides due to the proximity of road and urban development to the steep slopes of the ridge. This was corroborated by the JKR officer and informants, the latter describing the landslides as muddy and runny flows. Figure 4 is the landslide hazard map based on physical environment. The

interview with JKR officer also found the following; (1) JKR will only respond if landslide reaches the building structure or when government assets were affected, (2) The process of getting approval for any mitigation measures to be put in place usually takes a longer period of time, as a thorough investigation is conducted to locate and understand the cause of landslide, (3) When it is discovered that residents contributed to the cause of landslides, it is beyond the authorities responsibility.

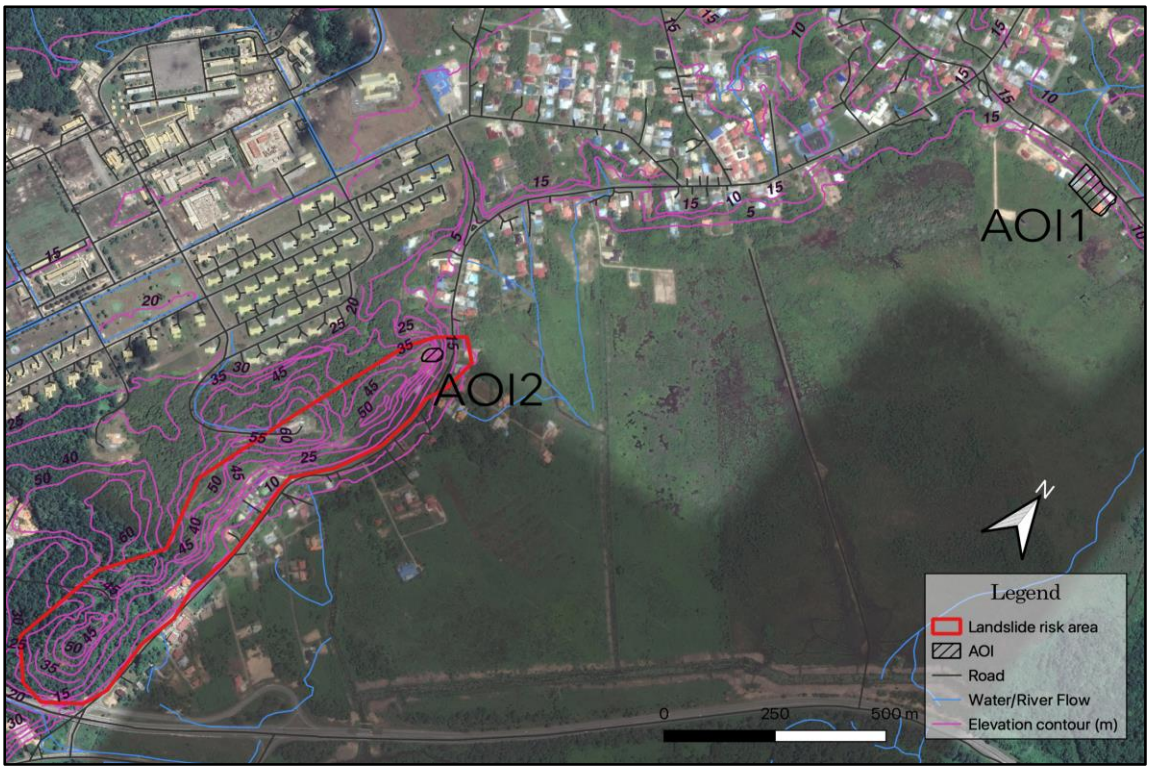

Figure 4. Landslide Risk Map

Figure 5 shows the area where there have been several landslides recently in late 2021 until middle of 2022. This is AOI1. Referring to the contour lines, it can be seen that that slope is a gentle 14° based on the contour lines (horizontal distance between 10m and 15m is 20 m, i.e. slope of 1 in 4). However, this slope was cut in the development of the property so that the 10-m contour is now very closer to the 15-m one, because a level ground is needed. This steepened the slope to 73°, which is highly unstable. Moreover, along the road (close to the 15-m contour line), electrical, water and internet cable were installed, which involved digging a narrow trench. It is therefore unsurprising that a number of landslides occurred due to steepening of the slope and disturbance of soil in the top region of the slope. At AOI1, at least 4 concave slump scars could be seen along the top edge of the slope. From Figure 5, it can also be seen

blue tarpaulin was used to cover exposed landslide scar and at the bottom right also shows a slump material.

In AOI 2 (see Figure 4), the residence is located at the base of a very steep slope. Referring to the contour lines in Figure 6, the initial slope drops 20m over 30m horizontal distance, i.e. gradient of 1 in 1.5 with an angle of elevation of 34°. However, with the construction of house, the slope was cut back so that its horizontal distance is only 6m, i.e. the gradient is steepened to 20 in 6, or 74°. This drastically increases its landslide susceptibility. According to the owner (interviewed on October 16th, 2022), a major landslide occurred (2004), which brought large amount of sand to the side of his property. He managed to clear the material by asking anyone interested to remove the sand without charge. The fact that an old but active Muslim cemetery is located on top of the ridge adds to the landslide risk because structures found there would promote infiltration of rainwater into the soil as well as erosion of the surface. The slope however has remained stable for 20 years, despite its steep slope. In adverse weather conditions, a number of trees above the ridge are likely to fall onto their property, which is the only remaining concern at present. As this has occurred in the past, the resident indicated feeling fearful and concerned. The leaning trees had fallen and struck a part of their home before. Fortunately, no one was injured, but the resident has incurred significant cost to restore the damage. The resident filed a complaint to relevant authorities in 2020 but they have resorted to clear out the trees on their own expense.

The situation in both areas is due to urban development, where the slope is being excavated and inadvertently steepened to make ways for building homes. It changed the slopes from being stable to unstable. The slope in AOI 1 was particularly gentle, until construction steepened it. This has placed the residents at risk of landslides.

Figure 5. On-site situation in AOI 1

Figure 6. Steep slopes in AOI 2 exposing sandstone **s**trata.

Impact of landslide on residents

In Area one (AOI 1), the residents recounted the physical and non-physical harms incurred as a result of the landslide. Residents mentioned feeling afraid and "*beuri*," which translates to being worried, as a result of the risk posed by their home's location beneath a steep slope. The resident explained in detail how they were unable to sleep due to the persistent fear that the landslide might strike their home at night. In terms of physical impact, the landslide has also caused secondary damage, such as power outage, which impacted telephone wires causing loss of internet access, and intermittent water service interruptions.

These were among the most significant effects the residents experienced. This has affected the entire community in AOI 1. They noted that it was particularly challenging during the COVID-19 pandemic with the imposition of work-from-home policies. This is due to the

underground shifting of the soil. In Figure 7 shows that it has impacted the electrical wiring (black wire) in such a way that it has been pulled by soil movement, and as can be seen from the surface, the road right above in AOI 1 has stress fractures that indicate movement of soil beneath the road down the slope.

Figure 7 Evidence of underground soil movement in AOI 1.
Left: Exposed electrical cable in landslide
Right: Stress fracture on roads reflecting soil movement towards slope.

In 2004, the resident in AOI 2 has reported to experience risks of toppling to strike their property, particularly their backyard. The house location is located directly below a steep slope. To prevent this, the resident has spent from their own expenses to hire private contractors as a mitigating effort to prevent toppling from re-occurring. The reported expense was about $5,000 BND. The nearing neighbours in AOI 2 have benefitted from this. Using an excavator to dig out the soil, members of the community were welcomed to take the slumped material for personal use, e.g. for building their own houses.

Coping strategy

Risk perceptions are comparable in both AOIs: residents in both areas are well aware of the risk of the landslide, particularly the areas of their homes that may be compromised. They both routinely monitor soil movement activity and occasionally employ private contractors to deal

with rubble from landslides or mitigate against landslide risk. Additionally, the two AOIs share a substantial amount of information about their property. They are both aware of the links between ground water and landslides, but only AOI 2 has the practical understanding to install proper drainage systems. JKR is the only governmental organization for managing and providing skills and technical knowledge in landslide mitigation. Yet management of landslide occurrences has been very slow in Penanjong, apparently due to the lack of budget.

Residents in AOI 1 resorted to taking issues into their own hands when the reaction time from authorities was unsatisfactory. One of the strategies was to plant trees on the slope, in the hope that they could stabilise the slope (see Figure 8). The resident reported that they employed private contractors to clear up the muddy waste, especially when it began to approach their residence. The reported budget cost about $400 BND. However, this strategy was only feasible for temporary period of time.

Figure 8. Trees planted by residents in AOI 1

As the causes of landslides were beyond their control, they would seek assistance from the relevant authorities. However, both AOIs have described the negligence of authorities, in terms of landslide prevention. Residents expressed they had to wait for long periods of time, even years, passed before they received assistance from authorities for mitigation. The village chief, on the other hand, had a different perspective, explaining that he never waits long after filing a complaint. This suggests the village head knows the procedure while others do not, or that the village head is unaware of the situation of some residents.

Discussion of Findings

For many residents of Penanjong, they are still awaiting government assistance in landslide mitigation. Meanwhile, they periodically engage in temporary mitigation efforts on their own. This is where they self-regulate the risks that were present. From Figure 3, the study characterises these coping mechanisms as "passive acceptance;" where they recognise the presence of landslide risk and occasionally act on their own, but primarily they wait for the authorities to resolve on mitigation (Burton et al, 1993). The responsibility then lies with the community, with some expectations from the government. The residents have good access to resources such that with their medium-level income, they are able to afford prevention actions. Also, relatively the residents are educated and have good access to the government and information, helped in them being aware of the risks and causes of landslides. Main risk priorities and coping strategies in the two AOIs are concentrated on household security, including some monitoring of the landslide, and occasional self-reliance (Table 2).

The findings are discussed in relation to the conceptual frameworks of Setiawan et al. (2014) and Sudmeier-Rieux et al. (2012). With respect to the former, the affected community were found to indeed developed coping strategies and capabilities structural, socially and culturally. In AOI 1, residents tried to reduce landslide risk by installing concrete blocks to hold back the steep slope and plant trees on the slump rubble. They have not evolved effective strategies socially or culturally, apart from keeping an eye and preparing for power outages and temporary disruption to internet and water supply. In AOI2, the resident engaged the community to help with clean-up of the rubble deposited by the landslide. In both cases, residents are affected economically in terms of having to bear the cost of clean-up and mitigation works. This is due to their situation, being a very small settlement away from the towns, and the scale of landslides relatively small and low impact. Authorities also do not see landslide risk as high, and therefore have not offered much in terms of mitigation measures.

With respect to the coping strategies model of Sudmeier-Riuex et al. (2012), the authority's percept of risk in low, i.e., they essentially deny its existence. Consequently, they only respond in emergency situation. They also hold a somewhat fatalistic view of landslide risk, noting that it is caused in part by the residents, and therefore out of their control. As for the community, they have a passive acceptance of landslide risks, responding in the event of landslides but also installing some preventive measures at their own expense. There are generally left to cope by themselves. Despite the lack of access to assistance (from government), residents choose to stay, favouring subsistence over physical risks. They have an 'egalitarian' culture, believing that they deserved help from the authority, unaware that they are responsible to some degree

for causing landslides. In their defence, development works, such as installing of water and electric cables by government contractors are also at fault.

Accordingly, this study further supports the positive link between people's perception and coping strategies hypothesised by Setiawan et al. (2014) and Sudmeier-Rieux et al. (2012). To contextualize the issue with authorities' indifference into perspective, consider that many of the homes are situated in locations that have undergone excavation for urban development. Prior to implementing mitigation measures, a thorough investigation is conducted to determine the source of the problem. In these situations, the government would only provide assistance based on the severity and in circumstances of emergency. Their economic and physical well-being is at jeopardy as a result of the authorities' inability to address their concerns. Since they are the ones who have lived in the area, rather than the authorities, the residents understandably feel a heightened sense of insecurity about their homes and personal safety. As a result, they employ their own coping mechanisms since they are more aware of the threats they encounter.

Conclusion

This paper investigated landslides in Penanjong, Tutong, and the coping strategies of the residents. Two main locations were used in the analyses. The types of landslides in AOI 1 displayed a rotational slide (slump) while at AOI 2, it was a topple. However, the severity of landslides is low, and it has not resulted in any human casualties or significant property loss. Residents are aware of the current risks and employ coping strategies at their own expense. The relevant authority does not regard the landslide risk as significant and therefore adopted a response policy to deal with emergency situations only and apportioned limited resources to mitigate landslides in the area.

The community in Penanjong therefore continue to live with landslide risk due to the nature of the physical environment, where urban structures are found close to steep slopes. The community is largely left to cope with landslides on their own. This has implication on their cost of living. It also adds to their anxiety of anticipating disruptions resulting from landslides, and the potential of more serious damage to property and lives. Nevertheless, they chose to remain where they are, cognizant of the low-degree of landslide risk and their individual and collective situation. They have developed a coping strategy that is still rudimentary and only the low-end of Sudmeier-Rieux et al. (2012)'s chart, but in AOI 2 at least, the situation appears stable as there have been no landslides for 20 years. In AOI 2, landslide is active because

disturbance is relatively recent. The residents however have shown coping capabilities and will survive further landslides, which will continue to impact their cost of living.

References

Ahmad, J., Lateh, H., & Saleh, S. (2014). Landslide hazards: household vulnerability, resilience and coping in Malaysia. *Journal of Education and Human Development*, *3*(3), 149-155.

Anderson, M. G., Holcombe, E., Blake, J. R., Ghesquire, F., Holm-Nielsen, N., & Fisseha, T. (2011). Reducing landslide risk in communities: Evidence from the Eastern Caribbean. *Applied Geography*, *31*(2), 590-599.

Antronico, L., De Pascale, F., Coscarelli, R., & Gullà, G. (2020). Landslide risk perception, social vulnerability and community resilience: The case study of Maierato (Calabria, southern Italy). *International journal of disaster risk reduction*, *46*, 101529.

Azmi, A. S. M., Salleh, W. A. R. W. M., & Nawawi, A. H. (2013). Cognitive behaviour of residents toward living in landslide prone area: Ulu Klang. *Procedia-Social and Behavioral Sciences*, *101*, 379-393.

Burrows, K., Desai, M. U., Pelupessy, D. C., & Bell, M. L. (2021). Mental wellbeing following landslides and residential displacement in Indonesia. *SSM-mental health*, *1*, 100016.

Burton, I., Kates, R. W., & White, G. F. (1993). The Environment as hazard (2nd ed.). New York: Guilford Press.

Crozier, M. J. (2010). Deciphering the effect of climate change on landslide activity: A review. *Geomorphology*, *124*(3-4), 260-267.

Cruden, D. M., & Couture, R. (2011). The working classification of landslides: material matters. In *Pan-Am CGS Geotechnical Conference, Toronto, Ontario, Canada*. Eastern Caribbean. Applied Geography, 31(2), 590e599.

Department of Economic Planning and Development. (2016). *Population and Housing Census Update Final Report.* Brunei Darussalam.

Forbes, K., Broadhead, J., Brardinoni, A. D., Gray, D., & Stokes, B. V. (2013). Forests and landslides: The role of trees and forests in the prevention of landslides and rehabilitation of landslide-affected areas in Asia Second edition. *Rap Publication*, 02.

Geologyin. (n.d.). *Types of Wasting: Slump, Rockslide & Debris Flow*. Retrieved April 5, 2022, from https://www.geologyin.com/2015/02/types-of-wasting-slump-rockslide-debris.html

Heryanti, D. N. (2012). *Community based approach to assess flood risk perception and coping mechanism along Code River, Yogyakarta Municipality* (Master's thesis, University of Twente).

Hungr, O., Evans, S., Bovis, M. J., & Hutchinson, J. N. (2001). Landslides of the Flow Type. *Environmental & Engineering Geoscience*, *7*(3), 221-238.

Hungr, O., Leroueil, S., & Picarelli, L. (2014). The Varnes classification of landslide types, an update. *Landslides*, *11*(2), 167-194.

Jamalullail, S. N. R., Sahari, S., Shah, A. A., & Batmanathan, N. (2021). *Preliminary analysis of landslide hazard in Brunei Darussalam, SE Asia. Environmental Earth Sciences, 80(16).* doi:10.1007/s12665-021-09815-z

Laloui, L., Ferrari, A., & Eichenberger, J. (2010). *Effect of climate change on landslide behaviour* (No. ARTICLE, pp. 36-41).

Nadim, F., & Lacasse, S. (2008). Strategies for mitigation of risk associated with landslides. *Landslides-Disaster Risk Reduction*.

Ohkubo, T., Tani, M., Akojima, I., Takahashi, S., Yamakura, T., Itoh, A., Kanzaki, M., Lee, H. S., Ashton, P. S., & Ogino, K. (2007). Spatial pattern of landslides due to heavy rains in a mixed dipterocarp forest, North-Western Borneo. *Tropics*, *16*(1), 59-70.

Rasidah Abu Bakar. (2019, December 20). Tutong remains on alert for more flooding. *The Scoop: Brunei Darussalam.* https://thescoop.co/2019/12/20/flood-alerts-remain-in-tutong/

Sandal, S. T. (Ed.). (1996). *The geology and hydrocarbon resources of Negara Brunei Darussalam*. Muzium Brunei.

Setiawan, H., Kingma, N. C., & van Westen, C. J. (2014). Analysis community's coping strategies and local risk governance framework in relation to landslide. *The Indonesian Journal of Geography*, *46*(2), 143.

Sen, A. (1982). Poverty and famines: An essay on entitlements and deprivation. Oxford: Clarendon Press.

Shano, L., Raghuvanshi, T. K., & Meten, M. (2020). Landslide susceptibility evaluation and hazard zonation techniques–a review. *Geoenvironmental Disasters*, *7*(1), 1-19.

Sudmeier-Rieux, K., Jaquet, S., Derron, M. H., Jaboyedoff, M., & Devkota, S. (2012). A case study of coping strategies and landslides in two villages of Central-Eastern Nepal. *Applied geography*, *32*(2), 680-690.

Sultan, S. A. (2000). Landslide and Embankment Stability, Perspective and Demand in Brunei Darussalam.

Sultana, N., & Tan, S. (2021). *Landslide mitigation strategies in southeast Bangladesh: Lessons learned from the institutional responses. International Journal of Disaster Risk Reduction, 62, 102402.* doi:10.1016/j.ijdrr.2021.102402

Varnes, D. J. (1958). Landslide types and processes. *Landslides and engineering practice*, *24*, 20-47.

White, G. F. (2019). Natural hazards research. In *Directions in geography* (pp. 193-216). Routledge.

Wisner, B., Blaikie, P., Cannon, T., & Davis, I. (2004). At risk, natural hazards, people's vulnerability and disasters. London and New York: Routledge.

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