

# Living in *Sawah-Sawah*: Between the cheapness of land and the expensiveness of peacefulness

Keyrina Adinda<sup>1\*</sup>, Muhammad Basir<sup>1</sup>

Department of Anthropology, Hasanuddin University, Indonesia.

\*Correspondence: keyrinaadinda@gmail.com

**Abstract:** The Tallo Riverbank is an area with a high potential for flooding. Even so, some community groups continue to survive and make the area their settlement, one of which is in the RT 3/RW 7 area, Antang Village, Manggala Subdistrict, Makassar City. This study aims to understand the community's views on flooding, the risks they face and perceive, as well as the practices undertaken in dealing with flood risks. Using a qualitative approach, this research explores the experiences and views of the community directly to gain a more comprehensive understanding of the community's struggle with flooding. Data collection techniques used were observation and in-depth interviews. This study involved 10 informants, which included 5 men and 5 women. This research shows that the community of RT 3/RW 7 faces various risks due to flooding, ranging from safety risks, economic risks, and health risks. However, economic limitations, proximity to livelihood sources and access to education, as well as strong social ties with the local community influence the perception of flood risks. Thus, the decision to live in flood-prone areas is not just a natural hazard with high risks, but part of daily life that must be faced by developing various practices to respond to flood risks ranging from mitigation, evacuation, to recovery. The results of this study are expected to be a reference for practical implementation through the development of community-based flood mitigation pilot projects.

**Keywords:** Flood; Risk Perception; Adaptation; Local Knowledge; Tallo Riverbank Communities

## 1. INTRODUCTION

At the end of 2022, various disasters resulting from natural hazards, particularly extreme weather, struck several regions of Indonesia. One of these was in South Sulawesi Province, where the forecasted extreme weather from December 23 to 25, 2022, resulted in multiple disasters. Social media was flooded with heartbreaking stories—widespread flooding, thousands of residents displaced, strong winds damaging rooftops, ocean waves striking coastal settlements, trees toppling in various locations, material losses amounting to hundreds of millions, and landslides and floods claiming lives.

The Head of the Center for Disaster Data, Information, and Communication, Indonesia's National Disaster Management Agency (BNPB), Abdul Muhari, stated that based on disaster records over the past ten years in South Sulawesi, extreme weather, floods, and landslides have been the most dominant, with floods accounting for the highest number of fatalities and missing persons. Flooding occurs when an area or land becomes inundated due to an increase in water volume—typically caused by heavy rainfall without sufficient land absorption, tidal surges, or flash floods from upstream rivers.

Makassar City is one of the areas in South Sulawesi frequently affected by floods. According to Rachmat and Pamungkas (2014), flooding in Makassar is largely due to land-use changes driven by a growing population, which reduces natural water catchment areas and green open spaces. Another key issue is the city's drainage system. Djameluddin et al. (2020) explained that most of Makassar's drainage relies on a network of small channels flowing into larger ones such as canals, which usually discharge into the sea through gravity. Consequently, areas that have transitioned from natural absorption zones to urban developments—especially those with

low elevation—are highly susceptible to flooding. Flood-prone areas in Makassar include former fish ponds and swamplands that have since become residential zones along the Tallo River basin—among them, Antang Subdistrict, Manggala District. According to one resident, floods in Antang occur whenever there's heavy rain. This indicates that the area experiences multiple flood events each year. Disaster records from South Sulawesi's BPBD show that floods occurred more than once in Manggala District during both 2021 and 2022.

Flooding in Antang not only results in material losses but also leads to post-flood illnesses. According to Media Indonesia, displaced residents from Antang reported symptoms such as coughs, colds, diarrhea, and itching. Additionally, flooding in Antang has also claimed lives. In 2019, a 17-year-old named Aser from RT 3/RW 7 died after being swept away by the floodwaters. That same year, other districts in Makassar—such as Biringkanaya and Panakkukang—were also hit by floods, though no casualties were reported there.

Mulyanto's (2013) study emphasized that variations in disaster impact between social groups are not only triggered by natural phenomena, but also by social, economic, and political conditions that make certain populations more vulnerable. Furthermore, the study highlighted that to assess vulnerability levels, attention must be paid to social structures and community practices during times of crisis.

Although flood-related studies in Makassar have long been of academic interest, most focus on the physical aspects of flooding (Mahardy 2014; Zulfahmi 2016; Setiawan 2022), urban spatial planning (Firdausiah 2022), the role of relevant agencies (Rismawati, Usman, and Ma'ruf 2015; Algefari and Surur 2021), or government policy analysis (Anriani et al. 2019). However, research exploring how local communities perceive floods and the practices they adopt in response—especially in Antang—remains scarce. Similarly, studies addressing the sociocultural dimensions that shape community vulnerability and resilience in the face of natural hazards still need to be developed. This study aims to explore these specific aspects.

## 2. METHODS

This research was conducted in RT 3/RW 7, Antang District, Manggala District, Makassar City. The selection of this location was based on the high frequency of annual flooding in the area, its position on the edge of the Tallo River corridor, and the number of victims recorded in 2019.

This study involved 10 informants who vary according to sex (5 women and 5 men), generational differences, and length of residence in the area. The approach used in this research is a qualitative approach. The type of data used in this research is primary data obtained through observations and in-depth interviews. Observations were conducted by staying and moving around the research location, which included residential areas and the banks of the Tallo River. This approach was taken to understand the research context and identify places where community members tend to gather. In addition, observations were carried out to gather data on the visible impacts of flooding and the practices adopted by the community in responding to it. In-depth interviews were conducted through question-and-answer sessions with informants. These interviews aimed to explore the community's knowledge of flooding, their perceptions of flood events, their understanding of the residential areas located near the river, their experiences during past floods, the beliefs that emerged in response to such events, and the practices they carried out when flooding occurred.

Data were analyzed by collecting daily notes in the field regarding interaction and events. The data were then combined with the interview transcripts for data classification or *coding*. Once the data were classified, the interrelationships between all the data were further analyzed by juxtaposing the literature review results and relating them to a higher level of abstraction.

### 3. RESULT AND DISCUSSION

#### a. History of RT 3/RW 7

Administratively, the area now known as RT 3 / RW 7 was originally part of RW 1 in the Antang Subdistrict. Over time, the Antang Subdistrict government reorganized the neighborhood units, and in 2018, RT 3 / RW 7 was officially established. However, whether as part of RW 1 or as RT 3 / RW 7, the area is more widely known by locals and nearby residents as Sawah-Sawah.

The nickname Sawah-Sawah is rooted in the early history of the area. Before it became a residential settlement, the region was composed of wetlands. Some parts were filled with *nipah* (a type of mangrove palm), while others were used for rice farming in what agricultural science refers to as tidal swamp rice fields. This aligns with the account of Yunus Parinding, a newcomer who arrived in 2005, who shared:

“Most people here are migrants who bought customary land. Back then, land was sold by rice fields, not by plots. We bought them as rice fields first; only after that people divided them into plots—that’s how it worked then. When I first arrived, there were only a few houses, maybe about 10. It was still quiet, and *nipah* plants were everywhere. You couldn’t see any of this—it was all *nipah* back then.”

A similar recollection was shared by Martina, one of the first residents in the area who settled in 1993. She recalled that the location was originally rice fields planted with paddy. Although currently no distinct rice field plots remain—according to the researcher’s observations—locals still refer to RT 3 / RW 7 as Sawah-Sawah to this day.

#### b. Community Perspectives on Flooding

- Definition of Flood

The residents of the *Sawah-Sawah* area generally define flooding as the overflow of water from the Tallo River that then flows into their residential settlements. This definition is shaped by their local knowledge of the area’s geographic and topographic characteristics. Geographically, *Sawah-Sawah* is located directly adjacent to the Tallo River on its northern side (Figure 1). The community understands that their neighborhood lies in close proximity to the river, and thus when the river overflows, the water naturally enters the residential zone and causes flooding.

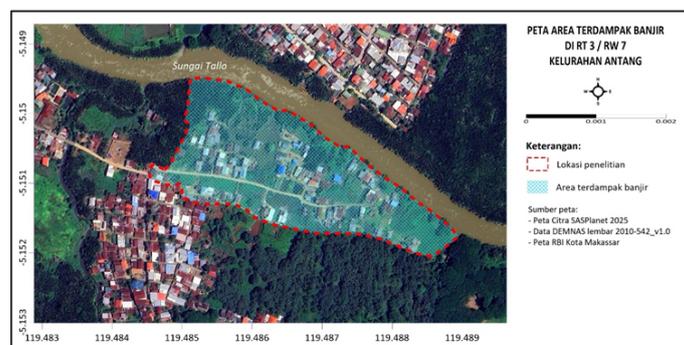


Figure 1. Map of RT 3/RW 7

This situation is further exacerbated by the topographical characteristics of the Sawah-Sawah settlement, which lies at a notably low elevation. Residents are aware that the area has been low-lying from the very beginning, as it was originally a swamp—an understanding supported by an interview with the head of RT 3/RW 7, Yunus Parinding. He recalled his arrival in Sawah-Sawah in 2005, at which time the area consisted of swampy land patterned like rice plots. Over time, residents purchased the land plot by plot, subdivided it into housing lots, and filled it in to make it suitable for building.

This view is consistent with what was shared by Mama Soni, who also noted that the Sawah-Sawah area is inherently low-lying. Despite having raised her house with 20 truckloads of soil over three stages, floodwater still reaches about one meter high inside her home—approximately waist-deep for an adult—according to the researcher’s observations. During the fieldwork, several areas were still visibly low and waterlogged, including the area directly in front of Mama Soni’s residence.

These findings are consistent with the topographic map analysis of the Sawah-Sawah area (Figure 2), which depicts the elevation of land surrounding the Tallo River. The map’s color scale—from green to light brown—illustrates elevation differences, from lowlands to higher terrain. Light to dark green tones represent lowland zones ranging from 0 to 5 meters above sea level, while light to dark brown indicates higher ground, reaching up to 14 meters above sea level.

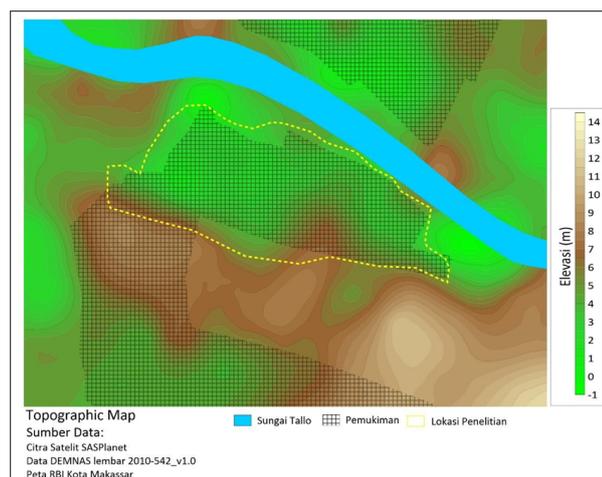


Figure 2. Topographic Map of RT 3/RW 7

The yellow dashed line indicates the boundary of the Sawah-Sawah area. According to the map, most of the residential zones within Sawah-Sawah lie at a very low elevation, ranging from 0 to 5 meters above sea level. Such topographical conditions suggest that Sawah-Sawah is highly vulnerable to flooding. The map also illustrates that Sawah-Sawah sits at a lower elevation than the surrounding areas, causing water to accumulate and stagnate in the settlement due to the absence of a natural drainage outlet.

### ● Causes of Flooding

The overflow of river water that leads to flooding is largely attributed to prolonged heavy rainfall lasting for three consecutive days, as explained by Mama Soni:

“If it rains for three days and nights without stopping, that’s a sign of flooding. That definitely means a flood is coming.” (Translated)

This statement aligns with information from the National Disaster Management Agency (BNPB), which also identifies extreme rainfall as one of the natural causes of flooding. The Meteorology, Climatology, and Geophysics Agency (BMKG) categorizes rainfall intensity based on monthly precipitation levels as follows: Low rainfall: 0 – 100 mm; Moderate rainfall: 100 – 300 mm; High rainfall: 300 – 500 mm; and Very high rainfall: >500 mm.

In Makassar, high-intensity rainfall typically occurs in December, January, and February. This observation was also shared by Ayu, who has lived in Sawah-Sawah for 25 years. She noted that during those months, heavy rainfall often floods the area. Aside from heavy rain lasting three consecutive days, flooding also occurs when the Bili-Bili Dam is opened, releasing water that flows into the Tallo River. Locals in Sawah-Sawah refer to this as *air tumpah* or *air kiriman* (spillover or water sent from elsewhere). According to Yunus Parinding, another common cause of flooding in the area is the incoming water from upstream sources. However, Yunus emphasized that heavy rainfall is not necessarily the main factor behind flooding in Sawah-Sawah, as he explained:

“Right below us is the Tallo River. If the sea is at high tide, followed by heavy rain or if Bili-Bili is opened, that’s when flooding happens. Even if it doesn’t rain, a high tide alone can trigger floods. From my observation, rainfall alone doesn’t cause flooding. But when the sea level rises, and then it rains heavily, the flooding happens quickly. Especially if it rains continuously in Malino and the dam gets opened—floods come very quickly. It never floods with just one night of rain. But if it rains all night, even for less than two hours, and it happens to coincide with a high tide, then a flood is guaranteed.” (Translated)

From this interview, it’s clear that Yunus Parinding sees high tides, the combination of heavy rainfall and high tides, and water discharged from Bili-Bili Dam as the primary drivers of flooding in Sawah-Sawah. His insights are informed by 18 years of lived experience in the area. Differences in understanding among residents—especially regarding the role of rainfall—are also influenced by varying levels of access to disaster education, such as flood preparedness training hosted by the Antang Subdistrict Office.

### c. Flood Risks

The flood-related risks faced by the Sawah-Sawah community are diverse, ranging from threats to personal safety, economic losses, and health hazards, to contamination of clean water sources and disruption of social and cultural activities. The following is a more detailed description:

- **Experienced Risks**

#### ***Safety Risks***

Floods in Sawah-Sawah pose serious threats to residents' safety. One of the most vivid memories tied to this risk is the tragedy of January 2019, when Aser—a high school student and the eldest child of Agustina—lost his life in the powerful current of a major flood. Agustina recounted the event, painting a powerful picture of the moment:

“In 2019, the floodwaters will come from Bili-Bili. That morning, my husband had gone to work, and there was no water yet—the road was still dry. Around 2 p.m., I was shocked as the water began rising. I rushed to move things to higher places. The children had already evacuated; I stayed until evening. When my cousin

arrived, I left with them. The next day, the rain stopped, but the water didn't recede. My husband wanted to return home to check on our belongings. Our son asked to come too—he had something to retrieve. He was a good swimmer, so we agreed. They crossed from behind, passing the mango tree, using a rope to navigate the water. But while crossing, the rope came loose, and suddenly he disappeared under the flood. That was the most painful moment of 2019. When I arrived, he was gone. Many of our belongings were washed away too." (Translated)

Agustina's account highlights two key issues related to flood safety in Sawah-Sawah. First, limited community awareness of dangerous currents contributes to unsafe behavior, which tragically led to Aser's drowning. Second, the available evacuation routes fall far short of safety standards. Agustina's story underscores the risks posed by makeshift, family-led evacuation efforts during severe flood events. Together, these points suggest that flooding in Sawah-Sawah presents a serious and life-threatening hazard for affected residents.

Another safety risk stems from the appearance of reptiles and other crawling animals during floods. As floodwaters rise, various creatures—leeches, snakes, monitor lizards, even crocodiles—are swept into residential areas or seek new shelter, increasing the danger of bites or attacks.

While residents can remove leeches with salt or force, dealing with snakes or crocodiles poses far greater danger. Movement during floods is already restricted, and as Ayu explained, when reptiles appear—especially in homes built on low, stilted foundations—residents often feel compelled to evacuate immediately.

### ***Material Losses***

Another flood-related risk faced by the Sawah-Sawah community lies in the economic sector, specifically in financial losses from the destruction of productive assets such as livestock. Ayu's family, which once relied on two sources of income—monthly wages and the sale of pigs—has since depended solely on the former after the 2013 flood. During that event, the family lost all of their pigs to cold exposure. Beyond Ayu's case, Yunus Parinding shared that most pig breeders in Sawah-Sawah experienced similar losses, with their animals either swept away by the current or succumbing to illness after the flood. As a result, only a few residents continue raising pigs today.

Floods have not only disrupted livelihoods but also damaged household furnishings and electronic appliances, as reflected in Agustina's account:

"That was in 2019—so many things had to be thrown away. During the big flood of 2013, only the mattress was soaked. But in 2019, the refrigerator, mattress, and chairs will all be ruined." (Translated)

Agustina's experience echoes that of Martina, who explained that every time flood water enters her home, it leaves behind mud on the sofas, wardrobes, beds, and mattresses. Mita also described the post-flood scene as one filled with people shopping for new household items to replace those lost.

The damage to household furniture and electronics significantly increases the cost of recovery after each flood. This repeated burden risks creating a cycle in which residents consistently suffer material losses, reinforcing economic vulnerability with each flood event.

### ***Health Risks***

Flooding in Sawah-Sawah not only results in physical losses but also poses significant public health risks, particularly due to water contamination. Floodwaters that inundate the settlement often mix with household waste and animal excrement, increasing the risk of skin infections. Direct contact with this polluted water can cause skin irritation, such as itching, and elevate the risk of infection—an issue experienced by Enos. Similarly, Ayu shared that itching is the most common flood-related skin ailment caused by direct exposure to contaminated water. Treatment for these conditions often relies solely on over-the-counter ointments purchased independently of local pharmacies.

In addition to water pollution, environmental pollution contributes to the spread of disease. Standing water and piles of post-flood waste create ideal breeding grounds for mosquitoes, increasing the risk of diseases such as dengue fever. According to Yunus Parinding, some residents developed dengue during the seasonal transition following a major flood. One of the affected residents was Mama Soni, whose home is particularly vulnerable to mosquito development. She described how, after floodwaters recede, the area beside her house becomes a collection site for debris of all kinds—garbage, carcasses, and large tree branches swept in by the current.

Beyond physical health, residents in Sawah-Sawah also face mental health risks in the form of anxiety. A study by Widhayanti et al. (2018) on anxiety levels among flash flood victims in Magelang revealed common symptoms such as fear, nervousness, and difficulty sleeping. These same symptoms were reported by informants in this study. For Agustina, anxiety emerged after losing her child to the 2019 flood. Before that event, she had been relatively calm when floods entered her home.

While Agustina's anxiety stems from the trauma of losing a family member, Mama Soni expressed her own fears due to the vulnerability of her stilt house, which could be struck by large debris or swept away by floodwaters. Her worry is intensified by the fact that all three of her children are still toddlers. Similar anxiety was also noted in a family member of Ayu. When asked about her psychological state during floods, Ayu said she remained calm unless there was a major flood like the one in 2019. She then recounted how her aunt always panics at the mere mention of an impending flood—driven by two factors: she has two young children and has only lived in Sawah-Sawah for two years, leaving her with little experience of managing flood situations.

### ***Disruption of Socio-Cultural Activities***

Flooding in the Sawah-Sawah area has a significant impact on residents' daily lives. When an area is inundated, daily routines become restricted. Submerged roads hinder mobility, limiting access to workplaces, schools, and social and cultural centers. This situation not only reduces individual movement but also disrupts broader social life, including interactions between neighbors and the continuation of routine activities that are integral to community life.

Both Yunus Parinding and Ayu emphasized that one of the main challenges during flooding is the difficulty of entering or leaving the Sawah-Sawah area due to the limited availability of transportation that can operate under flood conditions—particularly affecting those who need to commute to work. This transportation challenge is not only a concern for workers, but also for housewives like Agustina and Mita, who face difficulties shopping for household necessities when kitchen supplies run low during a flood.

- **Perceptions of Flood Risks**

In general, community perspectives toward natural events vary—flooding included. Hamka's (2019) research in Danau Tempe revealed that for the local population, flooding is seen as a blessing. As fishermen, they view floods as beneficial, since they bring an abundance of fish. In contrast, this study finds that flooding in the Sawah-Sawah area is perceived very differently—carrying a range of risks that significantly affect residents' lives, as previously outlined in the discussion.

Residents of Sawah-Sawah understand that their area is highly vulnerable to recurrent flooding. Even so, they continue to reside there. Acknowledging the persistent risks, they nonetheless choose to stay due to several factors, including limited economic capacity, proximity to sources of livelihood and education, and strong social bonds within the local community. This ambivalence results in a reluctance to leave Sawah-Sawah; instead, residents prioritize remaining in place and develop various strategies to cope with flooding.

For them, flooding is not merely a high-risk natural hazard, but a part of daily life—something that must be faced by cultivating adaptive practices in response to the challenges it presents. This finding aligns with Bankoff's research, which describes natural disasters such as flooding as "frequent life experiences"—events that occur so regularly throughout people's lives that their responses gradually become routine. In that context, the threat has, to some extent, been "normalized" (Bankoff, 2003).

#### **d. Practices in Responding to Floods**

- **Mitigation**

Mitigation refers to efforts aimed at preventing and reducing the risks caused by natural disasters—in this case, flooding. In the everyday lives of Sawah-Sawah residents, such mitigation practices are not always immediately visible without direct observation and physical presence in the field. This is because many of the community's mitigation efforts are embedded within their daily routines—such as in home construction, livestock management, and religious rituals. The flood mitigation practices adopted by the Sawah-Sawah community encompass a wide range of activities intended to reduce the impacts of flood risks.

##### ***Elevation of the Main Road in Sawah-Sawah through Community Self-Help Efforts***

The main road in Sawah-Sawah is a vital-shared asset, crucial for facilitating access in and out of the area. Agustina (40 years old) recalled that before the road was paved with concrete, she struggled to use what was then a narrow, muddy rice field embankment. She described her experience with the word "suffering," reflecting on the conditions of the main road—narrow and difficult to navigate, especially after floods receded.

As the population grew—beginning around 2010—the community began collaborating to raise funds for elevating the road. Relying on self-help funding, the process of road improvement took considerable time. In addition to collecting monthly contributions from each household, residents also organize fundraising events through auctions. These auctions were held during church services and other religious gatherings, such as weddings and funerals.

What began as a series of collective earthworks gradually transformed the road. With enough fill brought in through community donations, support eventually arrived from a local

council member to pave the road with concrete. The road construction was finally completed in early 2023. This long process was a testament to the collective spirit and solidarity of the Sawah-Sawah community. Sharing the same environmental conditions—living atop former swamp rice fields—instilled a strong sense of unity among residents.

### ***Raising Ground Elevation and Adapting Housing Structures***

Community awareness of the area's extremely low-lying topography has led to the adoption of flood resilience strategies, particularly through the elevation of ground levels—especially around housing areas—as a means to enhance protection against flooding. According to Yunus Parinding, residents raise ground surfaces using fill composed of clay and sand mixtures. Those who have elevated the ground beneath their homes have been able to reduce flood risk, whether living in stilt houses or brick houses.

Mama Soni also shared her efforts to elevate the ground around her home, which was originally built on very low terrain. She has undertaken multiple rounds of landfilling—amounting to 20 truckloads of material, each costing approximately Rp500,000. While flooding still occurs beneath her house, the water no longer reaches the floor level of her stilt home.

In addition to raising ground elevation, residents have also adapted their houses to be more flood-resilient. Three types of housing models were observed in Sawah-Sawah, selected by residents based on their socioeconomic capacity. There is a noticeable difference in adaptation strategies between middle-class and lower-class households. In this context, household categorization is based on occupation type and the form of housing selected. Permanent structural adaptations—such as raising land levels and/or adding floors—were typically undertaken by middle-class residents who chose brick houses, stilt houses, or hybrid forms, such as Yunus Parinding, Martina, and Agustina. In contrast, lower-class residents—such as Enos—primarily maintained traditional stilt houses and relied on temporary solutions such as raised shelving or makeshift bridges to cope with floods.

### ***Dissemination of Flood Warnings***

A formal early warning system is currently unavailable in the Sawah-Sawah area. To compensate for this gap, residents rely on their own local knowledge to anticipate incoming floods—particularly those caused by heavy rainfall, as previously discussed in the subsection on flood causes. However, when it comes to *air kiriman* (floodwaters arriving from upstream), the community employs its own informal communication strategies to disseminate warnings. Mama Soni explained that they often rely on information passed along by relatives living upstream along the Tallo River, in areas such as Moncongloe and Maros. One notable example was the major flood in 2019, which resulted from *air kiriman*. When upstream relatives warned of rising waters, the news was quickly spread through face-to-face conversations.

In addition to direct verbal communication, the community also utilizes social media platforms—such as Facebook and WhatsApp groups—to share flood-related information. However, as Ayu noted, news about *air kiriman* on social media (particularly regarding the planned release of water from the Bili-Bili Dam) is not always accurate. In some instances, it has sparked confusion and panic among residents. Ayu further explained that although official information is also disseminated via the RT (neighborhood head) through a dedicated Sawah-Sawah WhatsApp group, many residents tend to place greater trust in social media sources.

This reliance on informal systems highlights the absence of an institutionalized early warning mechanism. Rather than receiving alerts from designated authorities, residents are instead expected to report potential flooding and water levels to local government offices through their neighborhood heads. This illustrates that while communication does occur between residents and local authorities to anticipate flood severity and risks, a structured, official early warning system has yet to be established for the Sawah-Sawah community.

### ***Securing Household Items***

To reduce flood-related risks, another mitigation measure practiced by Sawah-Sawah residents involves evacuating essential belongings as soon as they receive flood warnings or observe water beginning to enter the settlement. This includes motor vehicles—both two- and four-wheeled—that are promptly relocated to higher ground, specifically at the intersection near the entrance of Sawah-Sawah.

In addition to vehicles, various household items are safeguarded using different strategies. To protect these belongings from floodwater, residents elevate furniture onto tables or plastic chairs, tie items to ceiling beams, or move them to the second floor if available. As Yunus Parinding explained, whenever his family anticipates a flood, they lift their sofa onto plastic chairs or suspend it with ropes tied to wooden beams. If the flood level is expected to reach the first floor of their brick house, they relocate all essential items to the second floor.

### ***Making Simple Boats***

During flood events, community activities become significantly disrupted. Mobility in and out of Sawah-Sawah is obstructed, making it difficult for residents to reach workplaces, schools, or purchase essential supplies. For those who choose to remain at home once flood waters reach their dwellings, getting out becomes a challenge. To overcome this, residents—particularly men, both young and adults—build simple boats using readily available materials and basic tools. Two main materials are commonly used for this purpose: banana trunks and plastic drums. Enos explained that when residents need to leave Sawah-Sawah during flooding, they are often unable to walk due to water depth and strong currents. In response, drawing on their creativity, they used water drums to construct makeshift boats. These plastic drums are assembled into a functional raft, allowing residents to navigate through floodwaters and maintain access to the outside area.

#### ● **Evacuation**

Flooding in Sawah-Sawah, which occurs repeatedly—ranging from small-scale to large-scale events, some causing casualties and material losses—has shaped the community's evacuation behavior patterns, as outlined below.

### ***Household-Based Voluntary Evacuation***

Household-based voluntary evacuation refers to a process initiated through mutual agreement among family members, without external coercion. This evacuation pattern is typically adopted by newer residents of “Sawah-Sawah” and families with young children. When floodwaters are anticipated—either through early signs or prior information—these families choose to evacuate to relatives' homes in upland or safer areas, often before the water arrives or when it reaches only knee height.

Mama Soni explained that mothers and children usually evacuate first. As a relatively new resident—2019 being only her second year in “Sawah-Sawah”—her experience of

dealing with floods was still limited compared to neighbors who had lived there for more than a decade. That inexperience, combined with the presence of a toddler, heightened her anxiety and led her to prioritize early evacuation. The same was true for Enos's family, who also evacuated early due to the presence of young children. When floodwaters nearly reached the floorboards of their stilt house, Enos and his family would leave their home.

While Mama Soni and Enos were driven by concern for their children, Ayu's motivation for evacuating was work-related. She explained that as long as the water level stayed below the knees, entering and exiting "Sawah-Sawah" remained manageable. However, once the water rose beyond that point, commuting became significantly more difficult. When floodwaters approached waist level, she would begin preparing to evacuate—gathering important documents, clothes (especially work attire), medications (particularly when unwell), and making sure to shut off the electricity. Her main concern was the possibility of strong winds striking before the flood had receded, especially if the house was left unattended.

### ***Evacuation Based on External Mobilization***

The second evacuation pattern is evacuation initiated through external mobilization. This process occurs when an outside party persuades or urges residents of Sawah-Sawah to evacuate immediately. Such action typically takes place when the flood is expected to intensify, with water levels projected to reach residents' rooftops.

Among those who often choose to remain at home are residents without young children. Their decision is usually supported by years of flood experience and confidence in the structural resilience of their homes, which makes them feel secure. However, during extreme flood events—such as the one in 2019—when the water was predicted to rise to roof level, the local neighborhood head (RT) contacted the Search and Rescue (SAR) team to initiate mandatory evacuations.

- **Recovery**

Environmental recovery is an important step to ensure that conditions are safe and comfortable for the community after the flood recedes. In order to restore the environment, the people of the Sawah-Sawah will carry out community service to clean up the environment of the Sawah-Sawah after their respective houses have been cleared of traces of flooding, such as mud and rubbish.

## **4. CONCLUSION**

Based on the discussion and data analysis concerning community perspectives on flooding, it can be concluded that the residents of RT 3/RW 7 have developed their knowledge of floods through observation of their residential environment and their firsthand experiences grappling with flood events.

The flood-related risks faced by the Sawah-Sawah community include loss of life, material damage, heightened anxiety, environmental pollution that contributes to disease, disruption of socio-cultural activities, and the appearance of leeches and reptiles. However, factors such as limited economic resources, proximity to livelihoods and educational access, and strong social bonds within the local community all influence how flood risk is perceived by residents.

For those who choose to live in Sawah-Sawah, flooding is not merely a high-risk natural hazard—it is an everyday reality that must be navigated through the development of diverse response practices. These include mitigation efforts such as socially driven initiatives to elevate

roads, raise land levels, modify housing structures, elevate livestock pens, circulate information about incoming floods, safeguard household belongings, and construct simple boats. Evacuation strategies vary between family-based self-reliance and external mobilization efforts. Environmental recovery practices also form a crucial part of the community's ongoing adaptation.

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