BUILDING RESILIENCE TOGETHER: ENHANCING COMMUNITY PREPAREDNESS FOR FLOOD DISASTERS IN METESEH SEMARANG

Lidya Rizki Safitri[1], Anang Widhi Nirwansyah[2*]
Universitas Muhammadiyah Purwokerto, Indonesia[1,2]

lidyarizkisafitri@gmail.com, anangwidi@ump.ac.id[1],

ABSTRACT

This study examines community preparedness for flood disasters in Dinar Indah, Meteseh Subdistrict, Semarang Municipal. Through qualitative analysis of data collected from 14 informants via in-depth interviews and observations, the study identifies various aspects of community preparedness. Additionally, the study highlights the importance of community cooperation and the implementation of emergency response plans, such as disaster management organizations, evacuation plans, simulations, and evacuation reports. The study reveals that the current warning system in Dinar Indah relies on traditional methods, such as kentongan (traditional instrument), electricity poles, and mechanical flood early warning tools. To address the challenges faced in Dinar Indah, the community mobilizes resources through human resources, funding, stakeholder coordination, and technical guidance. In summary, this research investigates community preparedness for floods in Dinar Indah, Semarang, focusing on key factors like knowledge, attitudes, experiences, vulnerabilities, and essential facilities. It emphasizes the significance of community collaboration, emergency response plans, and the need for an improved warning system. Furthermore, it highlights resource mobilization through human resources, funding, coordination, and technical guidance as vital elements for addressing the issues faced in Dinar Indah.

Keywords: Knowledge, Preparedness, Flood Disaster

ABSTRAK

Tujuan dalam penelitian ini adalah untuk menganalisis gambaran kesiapsiagaan masyarakat dalam menghadapi bencana banjir di Perumahan Dinar Indah, Kelurahan Meteseh, Kota Semarang. Kesiapsiagaan dalam menghadapi banjir membantu masyarakat dalam membentuk dan merencanakan tindakan yang perlu dilakukan ketika banjir terjadi. Data dikumpulkan menggunakan metode wawancara mendalam kepada empat belas informan (N=14) dan observasi yang selanjutnya dianalisis secara deskriptif kualitatif. Analisa data dimulai dari pengumpulan data, reduksi data, penyajian data dan penarikan kesimpulan. Dalam pengolahan data menggunakan analisis triangulasi. Hasil penelitian menunjukan bahwa masyarakat melakukan upaya kesiapsiagaan terdiri dari pengetahuan sikap pengalaman yang dimiliki, adanya kerentanan lingkungan, kerentanan fisik dan fasilitas penting, sikap dan kepedulian masyarakat saling gotong royong. Rencana tanggap darurat dilakukan dengan beberapa langkah yaitu organisasi pengelolaan

bencana, rencana evakuasi untuk keadaan darurat, perlu diadakan simulasi dan latihan evakuasi. Sistem peringatan bencana di Perumahan Dinar Indah masih menggunakan cara yang sederhana yaitu dengan suara kentongan, tiang listrik, dan alat peringatan dini banjir secara mekanik. Untuk menunjang permasalan di Perumahan Dinar Indah terdapat mobilisasi sumberdaya berasal dari sumber daya manusia, mobilisasi dana, koordinasi dan komunikasi antar stakeholder dan bimbingan teknis.
***Kata kunci:** Pengetahuan, Kesiapsiagaan, Bencana Banjir.*

A. INTRODUCTION

Disasters, whether natural or human-induced, can significantly disrupt people's lives and communities, resulting environmental damage, property loss, and psychological impacts (UU NO 24 2007). Among these disasters, floods occur when excessive rainfall leads to the inundation of land, posing a continuous challenge that demands attention from both the government and local communities. While floods cannot be entirely prevented, their impact can be controlled and minimized to reduce losses (Findayani 2015)**.** In 2021, the National Disaster Management Agency (BNPB) reports that hydrometeorological disasters, including floods, will dominate the disaster landscape. This can be seen in Table 1 below.

Table 1. Data on Disaster Events in Indonesia in 2021

No	Disaster Type	Number of events
1.	Flood	1,794
2.	Extreme weather	1,577
3.	Landslide	1,321
4.	Forest and land fires	579
5.	Tidal wave and abrasion	91
6.	Earthquake	24
7.	Drought	15
8.	Volcano eruption	1

Source: (BNPB 2021)

Geographically, Indonesia is an archipelagic country located between the Pacific Ocean and the Indian Ocean which is traversed by three tectonic plate confluence, namely the Eurasian plate, the Indo-Australian plate, and the Pacific plate. Indonesia is also located in a tropical climate region which has a rainy season and a dry season. This causes Indonesia to be prone to natural disasters such as tsunamis, floods, earthquakes (Oktari 2019). Indonesia has 42,210 watersheds (DAS), while 4,489 watersheds have been restored for 2020 to 2024 (KLHK 2021). Furthermore, for a total of 108 critical watersheds, only 15 critical watersheds are prioritized for restoration, and rehabilitation of 5.5 million hectares of critical land (KLHK 2018). For this reason, it is necessary to implement a watershed management and implementation policy that is in accordance with the carrying capacity and capacity to prevent further damage to the watershed (Ekawaty et al. 2018).

Central Java has 202 watersheds (Dinas Pusdataru Provinsi Jawa Tengah 2012), with seven watersheds in Central Java that need to restore their carrying capacity immediately

are Garang, Serang, Bodri, Juwana, Tuntang, Cacaban, and Pemali. Another watersheds that are not on the priority include Lampir, Banger, Babon, Blorong, Jragung, Kaliombe, Gede, Randugunting, Ijo, and Tipar (Perdana 2018). Currently, Babon Watershed is the most important part in preserving the ecosystem in megacity of Semarang and its surroundings (Suparjo 2009). Land use activities in the Babon watershed area such as industrial, residential, agricultural activities cause various environmental problems (Prabowo and Subantoro 2012).

A disaster is a severe disruption to a community or society, resulting in significant human, material, economic, or environmental losses that surpass the affected community's ability to cope (UNISDR 2009). Natural disasters have a profound impact on populations and can occur unpredictably, posing risks to human life and property (Hidayatush Sholikah et al. 2021). While disasters cannot be avoided, improving disaster planning is essential to mitigate risks (Purwani, Fridani, and Fahrurrozi 2019). Disaster risk encompasses the probability and consequences of hazardous events, influenced by natural and human interactions, vulnerabilities, exposures, and capacities (Nirwansyah and Braun 2021). According to (UNDRR 2022), disasters can be categorized into five types: small scale, large scale, frequent and rare, slow occurring, and sudden. Small-scale disasters affect local communities, requiring external assistance. Large-scale disasters impact people who need national or international support. Frequent and rare disasters depend on the probability and return period of specific hazards. Slow-moving disasters, such as droughts, desertification, sea level rise, and epidemics, occur gradually over time. Sudden disasters are triggered by unexpected events like earthquakes, volcanic eruptions, flash floods, chemical explosions, infrastructure failures, and traffic accidents.

There were 88 cases of floods in Semarang City in 2021 (BPBD Kota Semarang 2021), and in 2022 there were 49 floods (BPBD Kota Semarang 2022). One recorded flood event (on January 17 2021), caused a high discharge of run off water from the Pengkol River which headed lower part in Meteseh region (Wibisono 2021). The flood at the Dinar Indah was located in RT 6 RW 26 Meteseh Sub district. The location is right at the bend of the Pengkol river (Rasyid 2021). The location of the embankment which is lower than the Pengkol River make the water easily overflow into housing (Rahmawati 2021). The flood estimated to last approximately 3 hours with a height of 2 meters and affect a total of 33 residents or 120 people (BPBD 2021). Another flooding has struck this region on January 6, 2023 (Prihatnomo 2023). The water level reaches 50-150 cm (Hidayat 2023). Based on the BPBD report, the inundated housing areas are basin areas that are prone to flooding. According to records, 147 residents were affected by the floods with one person died (BPBD Kota Semarang 2023). In 2023, event has occured on February 18, with the flood began and followed by the collapse of 2 embankments at two sections (Purbaya 2023).

Flooding is a natural occurrence resulting from excessive water that overwhelms the drainage system, leading to detrimental inundation (Nurhadi, Sumunar, and Khotimah 2016). Floods are caused by heavy rainfall, causing water bodies like rivers and embankments to be unable to contain the excess water (Andriani and Kuncoro 2020). Preparedness encompasses organized activities aimed at anticipating disasters through appropriate and efficient measures steps (UU NO 24 2007). Communities residing near rivers are vulnerable to flooding and require understanding of flood preparedness to cope with and anticipate such events (Utami et al. 2021). Preparedness is an essential component of disaster management to mitigate the consequences of risk (Yatnikasari, Asnan, and Agustina 2021). Training can enhance the preparedness of individuals living in flood-prone areas by improving knowledge and attitudes (Mayangsari, Akbar, and Rachmah 2016). Previous research indicates a satisfactory level of public knowledge about flood disasters due to their experience in dealing with them (Akhirianto 2018). However, a survey conducted among communities facing cold lava floods in the Tugurara Watershed showed suboptimal results (Nasarudin, Kasnar, and Suwo 2020). This study focuses on an urban housing community using a qualitative approach. The impact on people's lives depends on the magnitude of disaster risk, influenced by the ability and capacity of the Dinar Indah Residential community. The knowledge and attitudes towards preparedness significantly affect the community's readiness in facing flood disasters (Hildayanto 2020). Thus, this research aims to analyze community preparedness in dealing with flood disasters in Dinar Indah, Meteseh Subdistrict, Semarang Municipal.

B. RESEARCH METHOD

This research was conducted at the RW 26 of Dinar Indah Residance, Meteseh Subdistrict, Semarang City. The focus in this study is community preparedness for flood disasters. This study was designed as a qualitative descriptive study which shows that the results of the research are based on the facts on the place (Sudirah et al. 2020). Data collection was carried out from December 2022 to February 2023. This study explored data through primary data, namely: In-depth interviews to fourteen subjects (N=14) from the Dinar Indah Residential Community, Meteseh Sub district, Semarang City.

Table 2. Research informants

No.	Subjects	Code	Number
1.	Head of village	PD	1
2.	Head of RT dan RW	TM	3
3.	Religious leaders	TA	2
4.	Youth organization	KT	2
5.	Head of the PKK	PK	1
6.	Residents Affected by Floods	WT	5
	Total		**14**

Observations also were made directly at Dinar Indah to observe evidence of flood events, tools and supporting facilities for flood mitigation. Secondary data was obtained from a review of flood event data documents from BPBD. According to Miles and Huberman in (Ahmad Rijali 2018) data analysis techniques start from data collection, data

reduction, data presentation and drawing conclusions. According to Creswell and Miller in data processing using data triangulation analysis to increase the credibility of qualitative research (Chariri 2009). This study refers to (LIPI-UNESCO/ISDR 2006) to measure the level of preparedness for this study using the following parameters and variables:

1. Knowledge and Attitude towards Disaster

    Knowledge of disaster is the main factor for someone to carry out preparedness. The knowledge possessed usually influences the attitude of community preparedness in anticipating disasters.

2. Emergency Response Plan

    Emergency response belongs to every individual or community as an important part of preparedness, especially with regard to evacuation, assistance and rescue, so that disaster victims can be minimized. For this reason, training and simulations are needed, these efforts are very crucial, especially during a disaster and in the first days after a disaster before aid from the government and outsiders arrives.

3. Early Warning System

    This system includes warning signs and information distribution in the event of a disaster. With this disaster warning, people can take appropriate actions to reduce loss of life, property and environmental damage. If the early warning system lights up or sounds, the community knows what to do and how to save themselves within a certain time, according to the location where the community located.

4. Resource Mobilization

    Available resources are a crucial factor namely human resources as well as funding. Main infrastructure for emergencies can support disaster preparedness.

Table 3. Flood Preparedness Variables

Parameter	Variable
Knowledge and Attitude towards Disaster	Understanding of disaster
	Environmental vulnerability, vulnerability of physical buildings and critical facilities for disaster emergencies
	Attitude and concern for disaster risk
Emergency Response Plan	Disaster management organization
	Evacuation plan, disaster post
	Important facilities for emergencies (hospitals/health posts, PDAM, etc.)
	Evacuation exercises and simulations
Disaster warning system	Traditional or technology-based disaster warning systems
Resource Mobilization	Human resources, availability of volunteers, skills and expertise
	Fund mobilization
	Coordination and communication between *stakeholders* involved in disaster preparedness
	Technical guidance and provision of natural disaster preparedness materials and supplies

Source: (LIPI-UNESCO/ISDR 2006)

C. RESULTS AND DISCUSSION

Knowledge and Attitude towards Disaster

The knowledge possessed influences the attitude and concern of the community to be ready and alert in anticipation of disaster, especially for those who live in areas that are prone to natural disasters (Erlia, Kumalawati, and Aristin 2017). The experience of the Dinar Indah community provides knowledge about the flood disaster hits and affects the attitude and concern of the community to be prepared for floods. Based on the results of the interviews, knowledge and attitudes possessed by residents were obtained from the experience of experiencing flood disasters since 2013 when flood disasters occur almost every year. As indicated by one of the residents' statements: "Flooding has occurred consistently every year, with incidents reported in 2015, 2016 (without entering houses), and a severe event in 2017 when the embankment on the south side broke, resulting in floodwater reaching a height of approximately 1.5 meters inside houses. In 2019, the floods were equally severe, and in 2020, the pattern continued. The most recent occurrence was in January 2023, with three instances of flooding affecting the house, followed by another event in February 2023". (Interview WT-01).

The primary factor contributing to flooding in Dinar Indah is its location in a basin, coupled with settlements situated too close to the river, violating the recommended distance of 10 meters from the river's edge. According to PD-01 and TA-02 data, the Babon River experiences a yearly increase in sedimentation, leading to higher silting and amplified water discharge from the upstream area in Semarang Regency. This water flow follows the path of the Babon River, which ultimately leads to the Banjir Kanal Timur (BKT). As a result, the upstream water discharge continually rises, becoming unpredictable.

Vulnerability is a condition caused by human activities (the result of physical, social, economic and environmental processes) which results in an increase in the community's vulnerability to hazards (BAKORNAS PB 2007). A complex problem, every year with the addition of a high-water discharge, a higher embankment is needed from housing. The drainage network in Dinar Indah is currently poor, as evident from technical and system-related issues. Technical problems in the drainage system include narrow and shallow channels that impede water flow, exacerbated by the accumulation of garbage causing blockages. To mitigate these challenges and enhance water flow, initial measures involve utilizing water pumps and dredging to remove sedimentation from the river. As indicated by the statements of the citizen interviews:*"Drainage has problems with channels that are too small, and also the presence of garbage. Then, because the river water level is higher and the canal system has a water gate model on the embankment, when there is water pressure the channel gate is closed, so that water from the upper housing is held back, water can come out (smoothly) when the river water discharge is not high"* (Interviews WT:02 and WT:03).

River Basin Center of Pemali Juwana (BBWS) built an emergency embankment at the Dinar Indah Residence to anticipate further flooding. Furthermore, some residents respond to physical and building vulnerabilities for disaster emergencies as indicated by one of the

residents' statements: *"The handling of incidental embankments so far has not been optimal and is not able to withstand overflowing river water, no matter how high the embankment is built, I don't think it can handle it. Because the water discharge is high and if you want to normalize the river it's actually not a small budget, we suggest the central government and it's not just at this point but from upstream to downstream. Actually, we need a big pump so that when the river water is high, and the sewer water cannot flow into the river, we need a pump to suck up the water and throw it into the river"* (Interview TM-02). Figure 1 presents the condition of the breached embankment and the research interview process.

Figure 1. (A) The condition of the embankment being broken (B) The process of collecting data through interviews with one of the residents (taken during a field survey in February 2023) Photo source Safitri, 2023

Individual preparedness and concern based on an emergency response plan is because individuals generally know what to do to save themselves from flood disaster, such as increasing knowledge about flood disaster, having an agreement on where to evacuate, knowing where to save themselves when a flood occurs, and having a medicine box (Murbawan, Ma'ruf, and Manan 2017). Residents' preparedness in Dinar Indah Residance is shown through several activities, as stated in the following interview: *"Living in this area necessitates strategic preparations, especially during the rainy season. Local residents have devised a plan where, in December, they coordinate with one another. They start storing essential items in elevated areas, such as shelves above the ceiling. Additionally, they inspect the embankments for any signs of leaks or cracks. To monitor the river's water level, they prepare an alarm system"*. (interview WT-02).

After the flood incident the Semarang City BPBD, Bhayangkara Supervisor for Community Security and Order (Bhabinkamtibmas), District Trustee Officer (Babinsa), Indonesian Red Cross (PMI), and all elements of society worked together to clean up the Dinar Indah Residance area. Based on information from community interviews as follows: *"The first is concerned, then the second is to help. It's appropriate as part of the community to help those who can be helped, however, there are many problems in the community below"* (interview TA-01). Signs of a flood disaster can be mapped such as at the end and the beginning of the year by the community based on the experience and knowledge of the Dinar Indah Residence community which experiences floods every year. Figure 2 presents the post-flood conditions of all elements of the community who work together to clean up the Dinar Indah area.

Figure 2. Community service cleaning the Dinar Indah Residential area
Photo source Safitri, 2023

Emergency Response Plan

Semarang City Government through BPBD, Indonesian Red Cross, Public Works Service for Water Resources and Spatial Planning (Dinas Pusdataru), Pemali Juwana River Basin Center (BBWS), Community Social Workers (PSM), Health Service in handling flood emergencies at Dinar Indah Residence. The evacuation route is in the RW hall and the mosque which is located higher. As revealed in the following interview session: "*The regional government provides PDAM water, age kitchens, medical facilities for the community. There is a disaster management organization, namely Bankom Lintang (Cross Tembalang Communication Assistance) that is a community organization engaged in social and natural and non-natural disasters that is always ready to provide such assistance services and coordinate with competent parties in their fields. Community-based disaster preparedness volunteer training (CBAT) established by the Indonesian Red Cross*" (Interview PD-01).

Awareness of disasters emerges by developing a disaster response and preparedness attitude regarding how to act when a disaster occurs (Suharini, Kurniawan, and Dafip 2019). Plans for dealing with disaster emergencies are an important part of preparedness related to the process of evacuation, first aid and disaster victims. Increasing awareness and knowledge about how to deal with disasters, including protecting vulnerable groups, needs to be pursued in order to strengthen community preparedness (Hildayanto 2020). The priority scale that was evacuated at Dinar Indah Residence was the elderly and children. Evacuation equipment for disasters is still minimal, Semarang City BPBD provides one rubber boat. PMI is providing public kitchen, clean water distribution, health checks, logistics and the Pemali Juwana River Basin Center (BBWS) is working on an emergency embankment to anticipate further flooding. For disaster evacuation plans, namely making an evacuation plan with rubber tires that are given ropes, and preparing necessities in case of an emergency such as medicines, food and drinks. Furthermore, several residents immediately responded to the early warning that had been prepared as indicated by one of the following residents' statements: "*Each time the alarm sounded, residents automatically went upstairs to evacuate*" (interview TM-01).

As the rainy season comes, residents are on guard to anticipate flooding returning to hit the settlement. If it rains at Dinar Indah Residence, residents immediately evacuate to the Ar-Rahmah Mosque, the Dinar Indah Housing cluster, which is located on higher ground, 270 meters from the location. The takmir of the mosque has determined that the

mosque area can be used as an evacuation site, next to the RW hall which is also an evacuation site. Based on information through the following interview statements: *"The reason is because there is no more place for evacuation, the location of the mosque is closer and there are water facilities for bathing and washing the toilet. It is possible that since 2014 or 2015 it has been used as a place to evacuate residents"* (Interview TA-02). Figure 3 shows the condition of the Ar-Rahmah Mosque when it was used as an evacuation site in the event of a flood on February 18, 2023.

Figure 3. Ar-Rahmah Mosque as an evacuation site (A) Condition of residents during evacuation
(B) Health check by PMI
Photo source Safitri, 2023

From the experience of the floods that hit the Dinar Indah Residence, local residents have been on alert so that their valuables have been saved before the water enters the house. Luggage that was brought to the evacuation site was only sufficient to be placed in a disaster preparedness bag containing clothes, food, medicine, important files. As indicated in the following interview statement: *"So for every Family Card, I really say prepare a disaster prepared bag for needs needed in an emergency as soon as there is an early warning to run away with a ready prepared bag" (Interview PK: 02)*. In the emergency response plan the use of CCTV has been used, however it is still felt to be lacking due to the limited functionality of the tool and some residents still have a sense of trauma. As indicated in this interview statement:*"In the past, we have often had training on how to evacuate if a disaster occurs, assistance to always be on the alert has always been there, we also always make monitoring points, install monitoring cameras/CCTV to monitor the river, and often there are night patrol to monitor the condition of the river"* (interview TM-02)*.* The readiness of the individual based on the emergency response plan is due to the fact that the individual generally knows what to do to save themselves from a flood. Residents in Dinar Indah Housing before the flood had prepared important items stored on ceiling racks, residents already knew the evacuation routes on higher ground at Majid Ar-Rahmah, provided first aid kits, prepared standard emergency equipment in disaster preparedness bags. If it rains in the upstream area, the impact will also be felt in other areas, for example in the Dinar Indah, the residents have started to prepare the goods to be raised, if there is an alarm sounding the residents have immediately gone upstairs to evacuate themselves with a standby bag and a vehicle. With the existence of an emergency response plan, the community understands better what actions and what kind of preparation is prepared in the face of a flood disaster.

Disaster emergency response drills and simulations for Dinar Indah Residential Residents were only carried out once by the Semarang City BPBD. This activity was carried out on April 26 2021 attended by one of the residents of Dinar Indah Housing who are

members of the Semarang Volunteer Forum, and all residents, especially in block 7 RT 6 RW 26 whose participants ranged from children, fathers and mothers. conduct a flood disaster evacuation simulation exercise with a number of participants of approximately 80 people. However, there were some residents who had not participated in the simulation activities because everyone's activities were different. Based on information from several interviews with residents:*"There was once a socialization from BPBD, simulating to residents everything was made into a video too" (interview WT:04).*

On December 12, 2021 and December 26, 2021, one of the residents independently took the initiative to provide education and emergency response training for Karangtaruna youths to form a generation of flood preparedness and response. Figure 4 shows the training and simulation activities for flood emergency response.

Figure 4. Training and simulation activities for flood emergency response (A) training and education for youth youth (B) Training and simulation with BPBD Semarang City
Courtesy: Trianggono, 2021

Early warning system

The early warning system aims to minimize the loss of life due to disasters by providing warning signals that exist and have been agreed upon in advance (Putri 2020). The early warning system used in the Dinar Indah has a simple method, namely by using the sound of a *kentongan* and the sound of an electric pole being hit. Furthermore, there is a mechanical flood early warning device in the form of an alarm that sounds when the water level reaches the specified limit. The disaster warning system uses a mechanical flood early warning device with a styrofoam cork as a sensor, for how the alarm works it uses a battery so that the water pressure system inside the PVC pipe rises. When the water discharge rises to touch the safe limit, the sensors in the PVC pipe will automatically rise according to the river water level. Then the closed PVC pipe is given a sweater/switch. If the water level rises, the styrofoam cork in the PVC pipe will be connected, which is already connected to a loudspeaker or alarm speaker which will sound continuously (see picture 5). The initiative of the residents of block 7, especially male, to self-warning floods so that an alarm has been made has been carried out since 2018, as shown by one of the statements from the residents' interview: *"The alarm from self-help residents can function well and durable"* (interview WT-05).

Figure 5. Mechanical flood early warning alarms used at research study locations
Trianggono Photo Source, 2023

When a disaster occurs, an alarm will sound and residents immediately run to save themselves to the gathering point following the evacuation route located at the RW Hall and the Ar-Rahmah Mosque. Dissemination of disaster warning information is also carried out through WhatsApp groups managed by the RT and residents, and the dissemination of information through social media such as TikTok, Instagram and Youtube is also quick among the community. Based on the latest information from the upstream area when it rains it is disseminated including weather forecast information from BMKG. Then communication between stakeholders through intensive gadgets or handy talkies (HT) from residents who live in the upstream area and residents who live downstream of Pucang Gading so that the floodgates are opened. An effective disaster warning system is beneficial for the Dinar Indah Housing community to minimize the hazards that occur.

Resource Mobilization

The mobilization of these resources includes the provision of materials and technical guidance, funding and logistics, social networking, and evaluation monitoring (Taryana, El Mahmudi, and Bekti 2022). In terms of emergency handlers, the local government has distributed logistical assistance and rescue and evacuation of affected residents at the Dinar Indah. For example, BPBD Semarang City provided a rubber boat to rescue residents. The community clearly details the location of the flood incident, so that volunteers and officers can find the location easily. The process for reporting flood events is made by the Dinar Indah Residential community which basically will help fellow residents affected. The volunteers contributed to helping BPBD Semarang City and Meteseh Subdistrict in mapping flood points so they could speed up the handling and evacuation of floods in the area. Coordination with stakeholders from sub-districts, sub-districts, RT, RW, Babinsa, CBAT, BANKOM LINTANG, etc. Opening on-site services, public kitchen tents, health check-up tents, logistics tents, and clean water distribution teams, then evaluation and monitoring will be carried out. All elements of society work together to clean the house, clean the gutters, dirty streets, don't litter, and so on.

Support from various groups or community came spontaneously because of information that was viral through social media. When there is a flood of information about the incident, it is immediately disseminated on the WhatsApp group of residents, because the information spreads very quickly due to social media. Assistance came from several groups, including the local area, environment, urban village, sub-district, and even from

other province. There are several committees on guard at the aid post to help secure the conditions of the residents. After the conditions felt safe, the committee socialized assistance to affected residents at the Dinar Indah Housing, as in the statement of this interview: *"There are also those who help, especially residents from outside, donating. Incidentally from yesterday's incident, there was a lot of income so we had time to set aside an emergency response fund and manage it for the current incident. Funds exceed emergency needs, yesterday's logistics stock was also quite a lot, and there was also a lot of cash. However, for the flood event in February 2023 there was no aid fund, usually after the incident the funds just arrived"* (Interview PK-01. Community provides such assistance during disaster response either in the form of funds or personnel.

In an effort to deal with flooding, it began with the regional government of Semarang City giving an early warning regarding the potential for extreme weather originating from the BMKG. Coordinating with regional stakeholders, village heads, sub-district heads, Babinsa, and community leaders is well established. There will be a relocation plan, such as the following interview statement: *"With yesterday's severe disaster, the Semarang City officials to want to relocate. Here, you have to look at the land, whether the Meteseh have land assets that can be used to relocate residents, and in terms of physical development assets. Do you have a large budget, if there are no demands? In this case Public works and Spatial Planning (or PUPR) can be applied. But, it will take time for an allocate the budget. But, for the time being there is a plan from the city officials to relocate 39 families from 44 housing units. While in RT 8, there are 7 families affected. The land that will be relocated must be clear about the status, and again it is depending on the current budget, for mutual interest"* (Interview P-01). BPBD gives routenly technical assistance with the community. There is also the SIBAT (*Siaga Bencana Berbasis Masyarakat*) educating the community with materials on disaster mitigation, community awareness of environmental matters, and analysing potential disasters in their area, and what to do if they occur. However, not all residents have received disaster training and outreach.

D. CONCLUSION

The Dinar Indah, Meteseh Subdistrict, is a residential area that has experienced frequent flooding since 2013. The flooding was caused by its location which is in the form of a basin and the settlement is too close to the river. Communities carry out preparedness efforts consisting of knowledge, attitude, experience they have, the existence of environmental vulnerabilities, physical vulnerabilities, important facilities, attitudes, and community care for cooperation. Emergency response plans are carried out in several steps, namely disaster management organizations, evacuation plans for emergencies, simulations, and evacuation drills. The disaster warning system in Dinar Indah still uses a simple method. Resource mobilization comes from the assistance of personnel, funding, and infrastructure from the surrounding community, government, and several agencies in the city of Semarang. There are indicators of the main limitations of this study where the

location of settlements does not comply with the housing construction requirements, lack of outreach and evacuation drills for emergency response, and poor drainage. Therefore, it is necessary to hold periodic training and simulations to build community preparedness and improve the physical environment.

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