Proceeding The 2nd ICHELSS, August 24-25, 2022, Jakarta, Indonesia

ISBN: 978-623-92475-1-5
ISSN: 2963-1351

The Level of Preparedness of Grocery Store Owners Against Flood Disasters in Flood Prone Areas Along Ciliwung, Jatinegara District, East Jakarta

Shalsa Billa[1], Rayuna Handawati[2], Ilham Badaruddin Mataburu[3]
Universitas Negeri Jakarta, Indonesia[1,2,3]

Abstract: *This study aims to measure the level of preparedness of grocery Store owners in dealing with flood disasters, which is focused on flood-prone areas along Ciliwung, Jatinegara District, East Jakarta (Kelurahan Kampung Melayu and Kelurahan Bidara Cina). This research was conducted from January to June 2022. The method used is a quantitative method with a descriptive approach using a weighting scoring technique that refers to LIPI-UNESCO through the distribution of questionnaires. The population of this study amounted to 62 grocery stalls. The sampling technique used the saturated sample method, which amounted to 62 grocery stores. This study uses 2 data collection techniques, namely using observation and distribution questionnaires. The data analysis in this study consisted of an area analysis that produced a map of flood-prone areas and a map of the distribution of grocery stalls in flood-prone areas as well as an analysis of the level of preparedness measurement that produced a description of the level of preparedness of grocery store owners in flood-prone areas of Kampung Melayu Village and Bidara Cina Village. The results of the analysis show that the highest level of preparedness is in areas of low flood susceptibility with an index value of 66 ready categories. Overall, the level of preparedness of grocery store owners in dealing with flooding in flood-prone areas along Ciliwung, Jatinegara District is in the almost ready category with an index value of 61, while the parameter with the highest level of preparedness is a disaster warning system with an index value of 77 ready categories.*

Keywords: *Flood, Grocery Store, Preparedness*

Introduction

BNPB (2021) noted that in 2021 the total number of natural disasters in Indonesia was 3,891 events. These natural disasters were dominated by floods with a total of 1,051 incidents. The impacts caused by the flood disaster were 450 people died, 53 people were missing, 1,389 people were injured, 404,913 people were displaced, and 4,272,061 people felt the suffering caused by this disaster. Meanwhile, for property losses, as many as 94,613 houses and 48 public facilities were damaged by the flood. One of the provinces that are still frequently hit by floods

[1] Correspondent Author E-Mail: shalsabilla_1402618026@mhs.unj.ac.id

ISBN: 978-623-92475-1-5
ISSN: 2963-1351

every year is DKI Jakarta. In 2021, there were 16 flood disasters in the capital, dominated by the East Jakarta Municipality area, with 6 incidents.

Kampung Melayu and Bidara Cina are sub-districts located in East Jakarta, DKI Jakarta Province which is regularly flooded every year. Based on its geographical location, Ciliwung traverses these two sub-districts so that judging from the topography in the form of lowlands (< 200 mdpl), this village is prone to flooding. Kampung Melayu Village has 9 RWs, eight of which are prone to flooding due to overflowing Ciliwung, namely RW 001, RW 002, RW 003, RW 004, RW 005, RW 006, RW 007, and RW 008, while Bidara Cina Village has 16 Pillars of Residents (RW).), where the sixteen RWs are part of the area of each RW which is prone to flooding. A total of 12 RWs are prone to flooding due to the overflow of Ciliwung, namely RW 001, 002, 003, 004, 005, 006, 007, 011, 012, 013, 014, 015, and 016 while the other 4 RWs are prone to flooding due to the overflow of East Baru River.

Kampung Melayu Village has an area of 0.48 km2 with a population of 31,026 people, while Bidara Cina Village has an area of 1.26 km2 with a population of 44,021 people. Based on these data, both are included in the village that has a high population density. Almost the entire land use of this area is covered by buildings. The condition of the area which is densely populated, rarely found by plants or water infiltration, as well as its low topography and traversed by rivers, is no wonder that these two villages are vulnerable to the impact of floods. Living in a flood-prone area is no longer a problem for the people of Bidara Cina and Kampung Melayu. Through brief interviews with several residents, some of them have understood how to deal with the disaster, even some of those who have lived for a long time think that the flood is not a disaster but guests who can come at any time, so they want it or not and are not ready to prepare. and receive the guest. Many of them build houses with more than one story to use as a shelter for them and their valuables in the event of a flood disaster.

However, not a few of them still do not understand flood disaster preparedness, one of which is the owner of a grocery store. Based on the results of a brief interview from one of the grocery store owners who live in flood-prone areas, when the floods were high in 2020, he admitted that he suffered a loss of around tens of millions. When the store owners are evacuating, they rarely pay attention to their merchandise. This is what makes them lose some of their merchandise due to damage or being washed away by the flood and stolen by irresponsible people.

The majority of the population in Kampung Melayu and Bidara Cina sub-districts work as entrepreneurs. Since Indonesia has implemented the Work From Home (WFH) system, many people have started trading, so UMKM is found in almost every street in these two villages. Usaha Mikro, Kecil, dan Menengah (UMKM) are businesses or businesses carried out by individuals, groups, or business entities. The grocery store is one part of the UMKM that can survive the brunt of the monetary crisis during the COVID-19 pandemic which ravaged Indonesia's economic structure. This is what causes people to choose to open a business to support their family because it is easy to do and hopes to improve the family's economy. Based on the data obtained, Kelurahan Kampung Melayu has 77 registered grocery stalls, while Kelurahan Bidara Cina has 104 Kelontong Warungs that have been registered with licenses. Most grocery store owners make their stalls their main income and depend on the income from the sales of the store.

ISBN: 978-623-92475-1-5
ISSN: 2963-1351

Seeing this reality, it is very necessary to prepare grocery store owners in the face of flood disasters. The preparedness action is in the form of steps that can reduce losses due to disasters, either directly or indirectly, which aims to ensure that the resources needed for disaster response are used effectively and efficiently. For this reason, a special discussion is needed that examines the preparedness of grocery store owners in the face of flood disasters. The researcher plans to innovate scientific work related to the level of preparedness by taking research subjects from grocery store owners located in two different locations, namely Kampung Melayu Village and Bidara Cina Village. The researcher then distributed it in research entitled "The Level of Preparedness of Grocery Store Owners Against Flood Disasters in Flood Prone Areas Throughout Ciliwung, Jatinegara District".

Literature Review

Disasters can be caused by nature or outside natural factors that can cause damage that has an impact on human life. As explained by Sudibyakto (2011) that disasters can cause human casualties, property losses, environmental damage, damage to infrastructure and facilities, and can cause disturbances to the life and livelihoods of the community.

The size of the impact of a disaster depends on the level of threat/hazard (hazard), vulnerability (vulnerability), and capacity (capacity) in dealing with disasters. The greater the threat and vulnerability of an area, the greater the chance of the impact. Likewise, the lower the capacity to respond to disasters, the greater the chance of impacts arising from disasters. All three are related to each other.

One of the disasters that often occur in the capital is flooding. Based on Government Regulation no. 38 of 2011 floods occurred due to overflowing of river water beyond the riverbed (the lowest topography of the river channel). Meanwhile, Rahayu (2009) argues that flooding is a condition of a place that is inundated with water due to excess capacity, causing economic, physical, and social losses.

To minimize the impact of losses due to floods, preparedness is needed. This is explained in Law no. 24 of 2007 that preparedness is carried out to anticipate the occurrence of disasters through coordination and through appropriate and efficient steps aimed at ensuring quick and appropriate action in dealing with disasters.

The Indonesian Institute of Sciences - United Nations Educational, Scientific, and Cultural Organization/International Strategy for Disaster Reduction or abbreviated LIPI – UNESCO/ISDR (2006) formulates parameters to determine community preparedness for flood disasters, namely:

1. Knowledge and attitude

Knowledge is the key to preparedness. The experiences of disasters that occurred in various regions in Indonesia provide lessons and increase awareness of the importance of knowledge related to natural disasters. Someone who knows can usually influence the attitude, behavior, and concern of the community to be ready to anticipate disasters, especially for those who live in areas prone to natural disasters.

2. Policies, Regulations, and Guidelines

A disaster preparedness policy is very crucial and is a real effort to take disaster preparedness steps. Policies that have a significant impact on preparedness include public education, contingency planning, disaster warning systems, and resource mobilization,

ISBN: 978-623-92475-1-5
ISSN: 2963-1351

including financial, organizational management, human resources, and key disaster relief facilities. Policies take various forms but are more meaningful if they are specifically regulated in regulations such as decrees or regulations with clear job descriptions. Operational guidelines are needed for policies to function properly.

3. Plans for emergencies

This plan is the most essential part of emergency preparedness, especially concerning evacuation, emergency relief, and rescue to minimize disaster victims. This effort is very important to do before aid arrives, especially during a disaster and in the early days after a disaster occurs. Based on the experience of disasters that have occurred in Indonesia, one of which was the tsunami that occurred in Aceh, outside assistance could not come directly in a short time due to a lot of damaged infrastructure such as roads, bridges, and ports.

4. Disaster warning system

The early warning system includes warning signs and distributing information about an impending disaster. With this warning, the public can take appropriate steps to minimize losses such as loss of life and damage to property and the environment. For this reason, training and simulations are needed on what to do when hearing a warning, where and how to escape at a certain time, and according to the location of the community at the time of the warning.

5. Ability to Mobilize Resources.

Available resources, including human resources (HR), funding, and infrastructure, are potentials that can support or even hinder disaster preparedness. Therefore, resource mobilization is important.

As for measuring the level of preparedness of individuals and households using only 4 parameters, namely knowledge and attitudes, emergency response plans, early warning systems, and resource mobilization. The level of community preparedness in dealing with natural disasters can be determined using parameters from LIPI – UNESCO/ISDR (2006) as a benchmark to obtain a value from that level. The higher the number in the score or score, the higher the level of preparedness. The level of community preparedness is classified into five categories, as follows:

Table 1. Preparedness Level Parameter Index

Score	Category
80 - 100	Very Ready
65 – 79	Ready
55 - 64	Almost Ready
40 – 54	Less Ready
< 39	Not Ready

Source: LIPI-UNESCO/ISDR (2006)

Methodology

The location chosen in this study is in a disaster-prone area in Kampung Melayu Village and Bidara Cina Village, Jatinegara District, East Jakarta Municipality. This is because the majority of the population is self-employed. In addition, these two sub-districts have a low-lying topography that is directly adjacent to Ciliwung, making them vulnerable to flood disasters. This research took place for 6 months from February to July.

ISBN: 978-623-92475-1-5
ISSN: 2963-1351

The target population in this study were all grocery store owners located in flood-prone areas along Ciliwung, Jatinegara District, both those who already had a permit or not, which amounted to 62 grocery stalls. According to Arikunto (2012) if the total population is less than 100 people, then the total sample is taken, but if the population is more than 100 people, then 10-15% or 20-25% of the total population can be taken. So that the sampling technique used in this study is a saturated sample, which is 62 grocery stalls.

To dig up data and information that is in sync with this research, the researchers used 2 data collection techniques, namely observation to determine flood-prone areas and distributing questionnaires to determine the level of preparedness. Therefore, this study uses 2 data analyzes, namely:

1. Flood Area Analysis

Flood area analysis is needed to determine the population and samples to be used in the study. The first is to delineate flood-prone areas. In this study, the location to be taken is a small area (small scale) so in determining flood-prone areas only historical data for maximum flood heights for 2020-2022 and DEMNAS maps are then processed using the *ArcGIS 10.8* application. Furthermore, the results of the processing were validated with flood incident data in Kampung Melayu Village and Bidara Cina Village. The result of this processing is a map of flood-prone areas along Ciliwung, Jatinegara District.

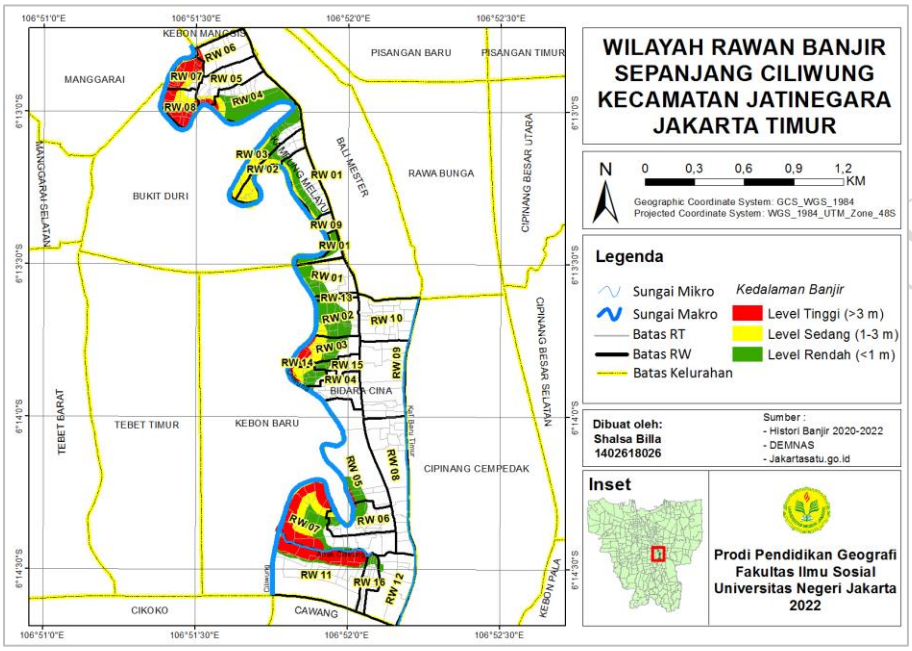

Figure 1. Map of Flood Prone Areas

Source: Research Results (2022)

The second is by marking the location of the grocery store. Before marking the location of grocery stalls, a map of flood-prone areas is first inputted into the *Avenza* application for plotting. The results of this processing are in the form of a map of the distribution of grocery stalls in flood-prone areas along Ciliwung, Jatinegara District.

ISBN: 978-623-92475-1-5
ISSN: 2963-1351

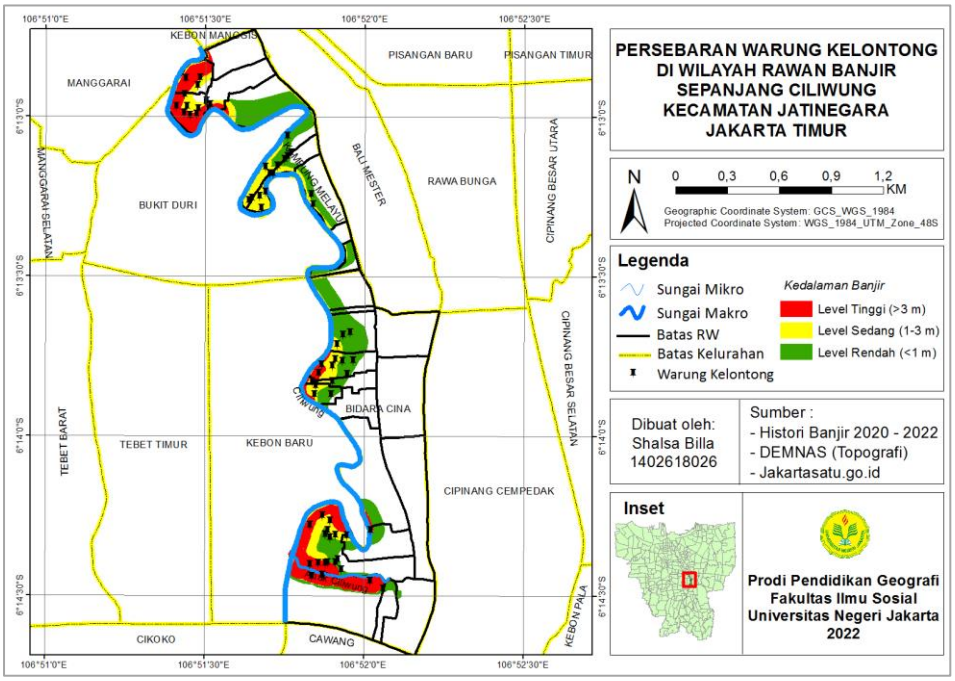

Figure 2. Distribution of Grocery Stalls
Source: Research Results (2022)

2. Preparedness Index Analysis

In this study, each question and statement in the parameter has the same weight (worth one) so that the combined index is not weighed. Determination of the index value for each parameter uses the following formula:

$$Index : \frac{\textbf{Total real value of parameter}}{\textbf{Max. value of parameter}} \; x \; 100$$

The total real value is obtained from the results of combining the respondents' values in answering questions and statements of each related parameter. Meanwhile, the maximum value of the parameter is obtained from the maximum value (overall) in the indexed parameter. The index is in the range of values 0-100, the higher the index value, the higher the level of preparedness.

After getting the index of each parameter, the next step is to calculate the weighted combined index. In this study, each parameter has a different weight so to measure the level of preparedness of a grocery store, it is necessary to combine the values of all parameters with the following formula:

Indeks Individu *= 0,45*indeks KA + 0,35*indeks EP + 0,05*indeksWS + 0,15*indeks RMC*

Information:
KA (Knowledge and Attitude)
EP (Emergency Planning)
WS (Warning System)
RMC (Resource Mobilization Capacity)

ISBN: 978-623-92475-1-5
ISSN: 2963-1351

Findings & Discussion

1. Measurement of Index Value Indicators of Preparedness Levels Using the Unweighed Composite Index Formula

a. Knowledge and Attitude

Table 2. Results of Respondents' Knowledge and Attitudes

Indicator (Question Number)	Respondent's Answer						Index Value	
	Low		Medium		High			
	F	%	F	%	F	%	%	Category
Understanding the meaning of flood disaster (1)	19	90,5	20	87	16	88,9	**88,7**	**Very Ready**
Understanding the causes and effects of floods (2, 3, 4, 5)	59	70,2	63	68,5	49	68,1	**69,0**	**Ready**
Understand how to deal with floods (6)	15	71,4	19	82,6	10	55,6	**71,0**	**Ready**
Understand how to reduce the impact of floods (7)	16	76,2	17	73,9	10	55,6	**69,4**	**Ready**
Have concern for merchandise when a flood occurs (8, 9, 12)	45	71,4	49	71,0	35	64,8	**69,4**	**Ready**
Have concern for yourself and your family when a flood occurs (10, 11, 13)	46	73,0	37	53,6	32	59,3	**61,8**	**Almost Ready**
Response when the water starts to recede (14)	9	42,9	7	30,4	8	44,4	**38,7**	**Not Ready**
Index Value	**71,7%**		**65,8%**		**63,5%**		**65,4%**	

Source: Research Results (2022)

Based on table 1, on the knowledge parameter, as many as 88.7% of respondents understand the meaning of flood disaster, this indicates the category is very ready. This indicator is a basic knowledge of common disasters in Indonesia, but it also indicates that most respondents are familiar with their environmental conditions. The knowledge of grocery store owners regarding the causes and consequences of the flood disaster was obtained by 69% of respondents in the ready category. Meanwhile, knowledge in understanding how to deal with floods and how to reduce the impact of flooding is included in the ready category.

On the attitude parameter, as many as 69.4% of respondents have a concern for merchandise when the flood occurs, this indicates the ready category. Meanwhile, the attitude of caring for oneself and one's family during a flood is in the almost ready category with 61.8% of respondents. The response of the grocery store owner when the water receded showed the

ISBN: 978-623-92475-1-5
ISSN: 2963-1351

category was not ready with the number of respondents amounting to 38.7%. This is because some of them earn their main livelihood from selling stalls, so when the water starts to recede they immediately clean up the remnants of dirt caused by the flood while serving buyers.

b. Emergency Response Plan

Table 3. Results of Respondents' Emergency Response Plan

Indicator (Question Number)	Respondent's Answer						**Index Value**	
	Low		Medium		High			
	F	%	F	%	F	%	**%**	**Category**
Has preparedness equipment and supplies (15, 16)	29	69,0	20	43,5	20	55,6	**55,6**	**Almost Ready**
Has important facilities (17)	5	23,8	7	30,4	6	33,3	**29,0**	**Not Ready**
The existence of first aid, rescue and security efforts (18, 19, 20)	49	77,8	44	63,8	39	72,2	**71,0**	**Ready**
Index Value	**65,9 %**		**51,4%**		**60,2%**		**58,9%**	

Source: Research Results (2022)

Based on table 2, it can be seen that 55.6% of respondents have preparedness equipment and supplies such as logistics goods, disaster preparedness bags containing first aid kits, clothing, emergency equipment, and others. This is in the almost ready category because there are still many grocery store owners who do not prepare disaster preparedness bags. Meanwhile, only 29% of respondents claimed to have important facilities. This shows that respondents are still not ready and are not aware of the importance of keeping emergency numbers. Questions 18, 19, and 20 measure indicators of first aid, rescue, and security efforts. From the results of the study, 71% of respondents admitted to taking these actions so that they were included in the ready category.

c. Early Warning System

Table 4. Results of Early Warning System

Indicator (Question Number)	Respondent's Answer						**Index Value**	
	Low		Medium		High			
	F	%	F	%	F	%	**%**	**Category**
Understanding of both traditional and modern disaster early warning systems (21, 22)	25	59,5	34	73,9	26	72,2	**60,5**	**Almost Ready**
Have skills in accessing information sources related to flood warnings (23)	20	95,2	22	95,7	16	88,9	**93,5**	**Very Ready**
Index Value	**71,4%**		**81,2%**		**77,8%**		**82,3%**	

ISBN: 978-623-92475-1-5
ISSN: 2963-1351

Source: Research Results (2022)

Based on table 21, it can be seen that 60.5% of respondents understand disaster early warning systems, both traditional and modern. Most of the respondents admitted that they often received information from the head of the RT through mosque loudspeakers rather than the sound of sirens. This is because many of the DEWS or disaster early warning systems deployed in the two villages are no longer functioning so the RT or other social institutions participate in disseminating information related to flood warnings. Meanwhile, as many as 93.5% of respondents already have skills in accessing information sources related to flood warnings. This indicates a very ready category.

All grocery store owners have telecommunications equipment in the form of cellphones as a need to communicate and access the internet but have not been used optimally to find information related to the flood disaster. Most of the respondents admitted that they often get information related to flooding from the Jakarta Flood Early Warning application released by the DKI Jakarta PUSDATIN DSDA or through social media such as Facebook and WhatsApp.

d. Resource Mobilization

Table 5. Results of Respondents' Resource Mobilization

Indicator (Question Number)	Respondent's Answer						**Index Value**	
	Low		Medium		High			
	F	%	F	%	F	%	**%**	**Category**
Knowing public facilities that are still functioning to help cope with flooding (24)	6	28,6	5	21,7	6	33,3	**27,4**	**Not Ready**
There are skills related to special preparedness for grocery store owners (25)	5	23,8	6	26,1	7	38,9	**29,0**	**Not Ready**
There is an allocation of funds/insurance/other assistance related to disaster preparedness (26, 27, 28)	38	60,3	33	47,8	40	74,1	**59,7**	**Almost Ready**
Index Value	**46,7%**		**38,3%**		**58,9%**		**47,7%**	

Source: Research Results (2022)

Based on table 22, it is known that 27.4% of respondents know that public facilities around are still functioning to help overcome floods. This shows that the category is not ready because there are still many residents who do not know about public facilities such as water pumps. In addition, according to the results of brief interviews with several RW heads in flood-prone areas, it was revealed that the water pumps in their Rw neighborhoods were having problems so they were not functioning optimally which hindered the inflow of water to Ciliwung. The skill indicators related to special preparedness for grocery store owners are in the unprepared category. Only 29% of respondents admitted that they had conducted disaster preparedness training, although they did not specifically discuss the preparedness of grocery

ISBN: 978-623-92475-1-5
ISSN: 2963-1351

store owners. Questions 26, 27, and 28 measure funding indicators that are in the almost ready category. As many as 63.4% of respondents already have insurance and emergency funds to restore the economy, as well as having relatives or friends who help during disaster emergencies

2. Measurement of Preparedness Level Index Value Using the Weighed Combined Index Formula

A. Preparedness of Grocery Stores in Facing Floods Based on the Level of Vulnerability

Table 6. Index Value Based on the Level of Vulnerability

Parameter	Tingkat Kerawanan Banjir					
	Low	Category	Medium	Category	High	Category
KA	71	Ready	66	Ready	63	Almost Ready
EP	66	Ready	51	Less Ready	60	Almost Ready
WS	71	Ready	81	Very Ready	78	Very Ready
RMC	47	Less Ready	38	Not Ready	59	Almost Ready
Index Value Individu	66	**Ready**	57	**Almost Ready**	62	**Almost Ready**

Source: Research Results (2022)

The highest level of knowledge and attitude of grocery store owners in dealing with flood disasters is owned by respondents who live in low vulnerability levels with an index value of 71 ready categories. Based on the identity data of respondents, respondents who live at low-vulnerability levels on average have relatively high education, most of them have also been living for a long time so they know and understand their environment. The higher the level of education a person has, the better the knowledge and attitudes they have (Aprilin, et al. 2018). This statement is also supported by Notoatmodjo (2012) that the educational background of an individual will affect the pattern of his life. The high level of knowledge and attitude of grocery store owners living in low-risk areas is offset by good emergency response plans.

Grocery store owners who live in low flood susceptibility levels have a high emergency response plan with an index value of 66 ready categories compared to those who live in medium and high vulnerability levels. This shows that the grocery store owner realizes that it is important to prepare equipment and supplies for preparedness and keep emergency numbers in hand. The same is true for first aid, rescue, and security efforts.

Overall, grocery store owners have a good understanding of the disaster early warning system. The highest index value of the early warning system parameter is owned by respondents who live in moderate flood susceptibility levels with an index value of 81 categories of very ready. DEWS (Disaster Early Warning System or disaster early warning systems such as sirens are widely distributed in high and moderate flood susceptibility levels compared to low flood susceptibility levels. However, in high flood susceptibility levels, many sirens are not functioning optimally so in receiving information related to flood warnings, they get it through mosque or musholla speakers announced by the head of the RT or other community institutions.

ISBN: 978-623-92475-1-5
ISSN: 2963-1351

On the parameters of resource mobilization, it can be concluded that it is still not good. Most grocery store owners do not yet have skills related to preparedness. The highest level of resource mobilization is found in grocery store owners who live in high vulnerability levels with an index value of 59 almost ready categories. This is because one resident (former RW head) who has lived in flood-prone areas for a long time, said that several years ago BNPB had held preparedness socialization and training, but most of those who came were people living on the banks of Ciliwung (high vulnerability level). People who live in moderate and low levels of vulnerability still think that their area is safe enough from flooding, so they don't care about socialization and preparedness training.

The lower the level of vulnerability, the less functioning infrastructure and facilities are found and fewer residents have ever conducted training or seminars on flood preparedness. In addition, respondents who live in high-risk areas are always faced with floods every year so almost all respondents have relatives or friends who are ready to help during an emergency.
From table 5, it can be found the combined index value based on the level of vulnerability. At the low vulnerability level, an index value of 66 was obtained in the ready category, while the moderate and low flood vulnerability levels were in the almost ready category with index values of 57 and 62, respectively.

B. Preparedness of Grocery Stores in Facing Floods Based on Location

Table 7. Index Value Based on Location

Parameter	Kampung Melayu		Bidara Cina	
	Indeks	Category	Indeks	Category
KA	63	Almost Ready	67	Ready
EP	56	Almost Ready	61	Almost Ready
WS	83	Very Ready	82	Very Ready
RMC	41	Less Ready	53	Almost Ready
Index Value Individu	**58**	**Almost Ready**	**64**	**Almost Ready**

Source: Research Results (2022)

The level of knowledge and attitude of the grocery store owner in Bidara Cina Village is higher than in Kampung Melayu Village. The difference between the two is not that far and only a difference of 4 values. This shows that respondents already have good knowledge and attitudes about flood disasters which they get directly from their experiences.

In the emergency response plan parameters, the highest value is still held by the Bidara Cina Village with a difference of 5 points compared to the Kampung Melayu Village. This is good enough, but awareness needs to be increased, one of which is in carrying out first aid, rescue, and security measures.

The highest value in the early warning system parameter is in Kampung Melayu Village with a difference of 1 value with Bidara Cina Village. Each village has installed DEWS or a disaster early warning system in the form of sirens at several points in areas that are considered vulnerable. However, based on the information obtained, the sirens in Bidara Cina did not function optimally, so some respondents admitted that they had experienced sudden flooding without any prior warning announcements.

In the resource mobilization parameter, Bidara Cina Village has a higher value than Kampung Melayu Village with a fairly large difference in the value of 12. On average,

ISBN: 978-623-92475-1-5
ISSN: 2963-1351

respondents in Kampung Melayu Village admit that they are immigrants from outside Jabodetabek who only bring modest money so they do not have any insurance and emergency funds. Most of them have never done any training related to preparedness and are still not aware of the existence of public facilities to help deal with flooding around them.

From the table above, it can be found the combined index value based on the location of the region. In the Kampung Melayu Village area, an index value of 58 was obtained with the almost ready category, while the Bidara Cina Village obtained an index value of 64 with the same category, which is almost ready.

C. Preparedness of Grocery Stores in Facing Floods in Flood-Prone Areas Along Cilliwung, Jatinegara District

Table 8. Preparedness Index Value

Parameter	Preparedness level	
	Indeks	**Category**
Pengetahuan dan Sikap	65	Ready
Rencana Tanggap Darurat	59	Almost Ready
Sistem Peringatan Bencana	77	Ready
Mobilisasi Sumber Daya	49	Less Ready
Index Value Individu	61	**Almost Ready**

Source: Research Results (2022)

Based on this index value, the preparedness of grocery store owners in flood-prone areas along Ciliwung, Jatinegara sub-district, East Jakarta is in the almost ready category with a combined index value of 61. The level of knowledge and attitudes of grocery store owners is in the ready category with an index value of 65, meaning that most of the respondents already understand the meaning of flood disaster, the causes, and effects of floods, how to deal with floods, and how to reduce the impact of floods. In addition, respondents also have an attitude of caring for themselves, their families, and merchandise. This condition can occur from the experience of respondents whom they get from previous flood events.

In terms of emergency response plans, the index value obtained is 59 with the almost ready category. This is already good enough for doing first aid, rescue, and security. Some of them are also aware of preparing preparedness equipment and supplies and keeping emergency numbers that they feel are important.

In the early warning system parameters, an index value of 77 was obtained with the ready category. This is very good, most of the respondents already understand the disaster early warning system using both traditional and modern systems. In addition, they are also considered skilled in accessing sources of information related to flood warnings.

The index value on the resource mobilization parameter for grocery store owners is 49 with the category of being unprepared. Most of the respondents admitted that they had never received any material related to flood disaster preparedness. They learn independently from their experiences when a flood disaster occurs. In terms of funding and insurance allocation, they are not good enough because the savings they have are only enough for their daily needs. While another assistance to their relatives or friends is considered good even though sometimes they have to borrow to maintain their lives

ISBN: 978-623-92475-1-5
ISSN: 2963-1351

References

Aprilin, H., Haksama, S., & Makhfludi. (2018). Kesiapsiagaan Sekolah Terhadap Potensi Bencana Banjir Di SDN Gebangmalang Kecamatan Mojoanyar Kabupaten Mojokerto. Jurnal Biosains Pascasarjana, 20 (2), 133 – 145.Arikunto, S. (2012).*Metode Penelitian Kualitatif*. Jakarta: Bumi Aksara.

Badan Nasional Penanggulangan Bencana. (2021). Data Informasi Bencana Indonesia. 2021. https://dibi.bnpb.go.id

Notoatmodjo, S. (2012). Promosi Kesehatan Dan Perilaku Kesehatan. Jakarta: PT Rineka Cipta

Peraturan Pemerintah No. 38 Tahun 2011 Tentang Sungai. (2011)

Rahayu, S., Widodo, R. H., Van, N. M., Suryadi, I., Verbist, B. (2009). *Monitoring Air di Daerah Aliran Sungai*. Bogor: World Agroforesty Center – ICRAF Asia Tenggara

Sudibyakto. (2011) *Manajemen Bencana di Indonesia Kemana*. Yogyakarta: Gajah Mada University Press

Undang-Undang No. 24 Tahun 2007 Tentang Kesiapsiagaan, (2007).

LIPI-UNESCO/ISDR. (2006). Kajian Kesiapsiagaan Masyarakat dalam Mengantisipasi Bencana Gempa Bumi dan Tsunami. *LIPI UNESCO ISDR*. Retrieved from Lembaga Ilmu Pengetahuan Indonesia.

About the Author:

Chief Researcher
Shalsa Billa *State University of Jakarta, Indonesia*
Researcher Member
Rayuna Handawati *State University of Jakarta, Indonesia* **Ilham Badaruddin Mataburu** *State University of Jakarta, Indonesia*