

## Analysis of Workers' Understanding About Emergency Preparedness and Response To Disaster at The War Ship Division PT. PAL Indonesia

**Marta Bela Kartika\***, Moch. Sahri, Achmad Syafiuddin, Mursyidul Ibad  
Faculty of Health, Public Health Study Program\*, Occupational Health and Safety Study  
Program, Public Health Study Program, Universitas Nahdlatul Ulama Surabaya,  
Indonesia

[martabelakartika10@gmail.com](mailto:martabelakartika10@gmail.com), [sahrimoses@unusa.ac.id](mailto:sahrimoses@unusa.ac.id),  
[achmadsyafiuddin@unusa.ac.id](mailto:achmadsyafiuddin@unusa.ac.id), [mursyidul.ibad@unusa.ac.id](mailto:mursyidul.ibad@unusa.ac.id)

### Article Information:

Submitted: 13 September  
2022

Accepted: 15 September  
2022

Online Publish: 20  
September 2022

### Abstract

**Introduction:** Indonesia has conditions where it is possible for disasters to occur caused by natural factors, non-natural factors and human factors. Increased understanding of emergency preparedness and response in the community, especially workers, needs to be done to reduce losses due to future disasters.

**Objective:** The purpose of the study was to identify the level of understanding of workers about emergency preparedness and response in an effort to deal with disaster risk in the Warship Division of PT. Indonesian PAL. **Method:** This research uses quantitative method with descriptive research type. **Result and Discussion:** The results of the study showed that knowledge on disaster preparedness was mostly adequate (75.7%), policies on disaster preparedness were mostly very good (86.5%), emergency planning on disaster preparedness was very good (78.4%), warning system on disaster preparedness sufficient (75.7%) and resource mobilization regarding disaster preparedness is very good (78.4%). From this research, it can be concluded that the workers understand all aspects of emergency preparedness and response in an effort to deal with disaster risk. **Conclusion:** Based on the results of the study, the researcher provides suggestions for more frequent socialization of emergency response, updating the installation of disaster signs, increasing the number of means of transportation, updating the information system, providing location maps and evacuation routes as well as training for disaster preparedness teams.

**Keywords:** Disaster Preparedness; Emergency Response; Workers;

### How to Cite

Marta Bela Kartika, Moch. Sahri, Achmad Syafiuddin, Mursyidul Ibad/Analysis of Workers' Understanding About Emergency Preparedness and Response To Disaster at The War Ship Division PT. PAL Indonesia. Vol. 1, No. 12, 2022

### DOI

<https://doi.org/10.54543/kesans.v1i12.111>

### e-ISSN/p-ISSN

2808-7178 / 2808-7380

### Published by

Rifa'Isntitute

## **Introduction**

Indonesia has geographic, geological, hydrological, and demographic conditions that make it possible for disasters to occur, whether caused by natural factors, non-natural factors or human factors which result in human casualties, environmental damage, loss of property, and psychological impacts that are in a state of disrepair. can interfere with national development (INDONESIA, 24 C.E.)

Data results from the National Disaster Management Agency (BNPB), for the 2010-2020 period the number of disasters in Indonesia occurred in 2019, namely 3,814 incidents. In the last decade, disasters that have hit Indonesia include floods, landslides and tornadoes (Pusparisa, 2010). Research conducted by the Central Statistics Agency, the highest number of natural disaster events in East Java Province by district/city in 2018 was the highest in tornadoes, namely 145 incidents (Badan Pusat Statistik, n.d.). Data released by the National Disaster Management Agency for disaster events in East Java as of 2021 shows 279 incidents with 48 deaths, 2 missing victims, 179 injured victims and 387,018 displaced victims (BNBP, 2021) Disaster management regulated by Law Number 24 of 2007 still has weaknesses, one of which is the slow response in disaster mitigation and emergency response (Carolina, 2018)

In achieving the Sustainable Development Goals (SDGs) 2015-2030, the President of Indonesia issued Presidential Regulation Number 87 of 2020 concerning the 2020-2044, Rencana Induk Penanggulangan Bencana Tahun 2020-2044 (RIPB) to achieve sustainable community resilience to disasters by establishing a 2020. RIPB refers to one of the 7 targets in the Sendai Framework for Disaster Risk Reduction 2015-2030, namely increased availability and access to multi-hazard early warning systems and information and disaster risk assessment for the community (Bencana, 2020)

In one study, it was stated that the average preparedness in earthquake disaster management for workers in high-rise buildings was 60% of respondents who were ready and 40% of respondents who were not ready (Haryawan et al., 2018). Another study stated that regarding knowledge about health service preparedness in the face of floods, nurses working in Puskesmas had poor knowledge of 52.4%, while those with good knowledge were 47.6% (Setiawati et al., 2020). In a study on the preparedness of midwives in dealing with the earthquake and tsunami disaster at the Padang City Health Center, there were 56.5% of respondents who were not prepared to deal with the earthquake and tsunami disaster (Hesti et al., 2019)

Warship Division PT. PAL Indonesia has not had any research or data collection regarding disaster preparedness. Therefore, this study wanted to know the level of workers' understanding of disaster risk, emergency preparedness and response in the Warship Division of PT. PAL Indonesia.

## **Method**

This research uses a descriptive quantitative approach to measure a variable about the level of understanding of workers about emergency preparedness and response to disasters in the Warship Division of PT. PAL Indonesia. The population in this study

were all field and office employees in the Warship Division, totaling 243 people. The number of samples to be used in this study were 37 workers. Sampling technique in this study was using *probability sampling* with simple *random sampling*.

The questionnaire instrument refers to the standard questionnaire made by LIPI and UNESCO/ISDR (2006) in (Lestari & Husna, 2017). The contents of the questionnaire include demographic data from respondents and statements about disaster preparedness in the form of a Likert scale. This instrument will be modified according to the questions aimed at workers. In this study, the data analysis that will be used is univariate analysis by analyzing the quality of one variable at a time.

## **Result and Discussion**

### **Knowledge in Disaster Preparedness**

Following table below regarding the distribution of frequencies based on knowledge of disaster preparedness in the Warship Division of PT. PAL Indonesia:

**Table 1.**

Frequency distribution based on knowledge of disaster preparedness in the Warship Division of PT. PAL Indonesia

No.	Category	Frequency	
		n	%
1.	Excellent	0	0,0
2.	Enough	28	75,7
3.	Less	0	0,0
4.	Very Less	9	24,3
Total		37	100

*Sumber: Data Primer, Juni 2022*

Based on the results of the data in table 1, out of 37 worker respondents it was found that the majority (75.7%) were sufficient in understanding knowledge about disaster preparedness while the rest (24.3%) were very lacking in understanding knowledge about disaster preparedness. This is because workers receive dissemination and disaster preparedness training held by the Warship Division K3LH Department once a year.

Disaster knowledge is the ability to remember an event or a series of events that threaten or disrupt people's lives and livelihoods due to natural or non-natural factors and human factors, which can result in loss of life, environmental damage, property damage and the influence of moral damage (Pembriati & Santosa, 2015)

Thus it can be concluded that the knowledge of workers about disaster preparedness and emergency response in dealing with disaster risk at PT. PAL Indonesia is in the sufficient category, so it is expected to reduce risks when a disaster occurs

### **Policies in Disaster Preparedness**

Marta Bela Kartika, Moch. Sahri, Achmad Syafiuddin, Mursyidul Ibad/**KESANS**  
**Analysis of Workers' Understanding About Emergency Preparedness and Response**  
**To Disaster at The War Ship Division PT. PAL Indonesia**

Following table below regarding the distribution of frequencies based on policies on disaster preparedness in the Warship Division of PT. PAL Indonesia:

**Table 2.**

Distribution of frequencies based on policies on disaster preparedness in the Warship Division of PT. PAL Indonesia

No.	Category	Frequency	
		n	%
1.	Excellent	32	86,5
2.	Enough	0	0,0
3.	Less	0	0,0
4.	Very Less	5	13,5
Total		37	100

*Sumber: Data Primer, Juni 2022*

Based on the results of the data in table 2, out of 37 worker respondents it was found that the majority (86.5%) were very good at understanding policies on disaster preparedness while the rest (13.5%) were very lacking in understanding policies on disaster preparedness. This is because the work environment of the Warship Division has provided media and signs about disasters to warn workers to stay alert in facing disaster risks.

Disaster preparedness policies are very important and make a real contribution to disaster preparedness. Policies that have a significant impact on capacity include community education, emergency planning, disaster warning systems, resource mobilization including funding, disaster management organizations, and critical facilities (MPBI-UNESCO in (Nugroho, 2007)

Thus it can be concluded that the policy regarding disaster preparedness and emergency response for workers in dealing with disaster risk at PT. PAL Indonesia is in the very good category, so it is expected to reduce risks when a disaster occurs.

### **Emergency Planning on Disaster Preparedness**

Following table shows the distribution of frequencies based on emergency planning on disaster preparedness at the Warship Division of PT. PAL Indonesia:

**Table 3.**

Frequency distribution based on emergency planning on disaster preparedness in the Warship Division of PT. PAL Indonesia

No.	Category	Frequency	
		n	%
1.	Excellent	29	78,4
2.	Enough	0	0,0
3.	Less	0	0,0
4.	Very Less	8	21,6

Total	37	100
-------	----	-----

*Sumber: Data Primer, Juni 2022*

Based on the results of the data in table 3, out of 37 worker respondents it was found that the majority (78.4%) were very good at understanding emergency planning regarding disaster preparedness while the rest (21.6%) were very lacking in understanding emergency planning regarding preparedness disaster. This is because every workshop and office has provided a first aid kit and the Warship Division has provided means of transportation and information systems such as telephone numbers for the fire department, police and others.

Emergency planning is a plan owned by individuals or communities to deal with emergencies caused by natural disasters in an area. Emergency planning is very important, especially on the first day of a disaster or when outside help has not arrived (Erlia et al., 2017)

Thus it can be concluded that emergency planning regarding disaster preparedness and emergency response for workers in dealing with disaster risk at PT. PAL Indonesia is in the very good category, so it is hoped that it can minimize casualties when a disaster occurs and make workers more emergency responders to disasters.

#### **Warning system for disaster preparedness**

The table below shows the frequency distribution based on the warning system for disaster preparedness at the Warship Division of PT. PAL Indonesia:

**Table 4.**

Frequency distribution based on the warning system on disaster preparedness in the Warship Division of PT. PAL Indonesia

No.	Category	Frequency	
		n	%
1.	Excellent	0	0,0
2.	Enough	28	75,7
3.	Less	0	0,0
4.	Very Less	9	24,3
Total		37	100

*Sumber: Data Primer, Juni 2022*

Based on the results of the data in table 4, out of 37 worker respondents it was found that the majority (75.7%) were sufficient in understanding the warning system regarding disaster preparedness while the rest (24.3%) were very lacking in understanding the warning system regarding disaster preparedness. This is because the Warship Division's work environment has provided disaster warning system tools such as alarms and there are several evacuation gathering points or *muster points*.

Disaster warning systems are an important part of preparing individuals and communities for natural disasters. Because disaster warning is an important factor that combines emergency preparedness and response, and the signals given make the community, especially their families, better prepared (Bencana, 2012)

Thus it can be concluded that the warning system regarding disaster preparedness and emergency response for workers in dealing with disaster risk at PT. PAL Indonesia is in the sufficient category, so it is expected to be able to anticipate the impact that will be caused by disasters on workers so that they are better prepared in dealing with disasters.

### **Resource Mobilization on Disaster Preparedness**

Following table below regarding the distribution of frequencies based on resource mobilization on disaster preparedness in the Warship Division of PT. PAL Indonesia:

**Table 5**

Frequency distribution based on resource mobilization on disaster preparedness in the Warship Division of PT. PAL Indonesia

No.	Category	Frequency (N)	
		n	%
1.	Excellent	29	78,4
2.	Enough	0	0,0
3.	Less	0	0,0
4.	Very Less	8	21,6
Total		37	100

*Sumber: Data Primer, Juni 2022*

Based on the results of the data in table 5, out of 37 worker respondents it was found that the majority (78.4%) were very good at understanding resource mobilization regarding disaster preparedness while the rest (21.6%) were very lacking in understanding resource mobilization regarding preparedness disaster. This is because workers attend disaster training and have a disaster preparedness team along with an organizational structure such as a firefighting unit (Sat-PK) created and organized by the Warship Division K3LH Department.

Resource mobilization is the fulfillment of the basic needs of disaster victims as part of an effort to carry out an emergency response. The usual necessities are medicine, food, clothing, and a communication system. The distribution of these resources must be well planned so that the resources can be immediately received by disaster victims (Nugroho, 2007)

Thus it can be concluded that the mobilization of resources regarding disaster preparedness and emergency response for workers in dealing with disaster risk at PT. PAL Indonesia is in the very good category, so it is hoped that workers will attend disaster training and seminars so that they know more about what to do during pre-disaster, disaster and post-disaster times.

### **Conclusion**

Based on the results of research that has been carried out regarding the analysis of workers' understanding of emergency preparedness and response in an effort to deal with disaster risk at PT. PAL Indonesia can be concluded from the understanding of workers in the Warship Division of PT. Indonesian PALs are mostly adequate (75.7%) in understanding knowledge about disaster preparedness, very good (86.5%) in understanding policies on disaster preparedness, very good (78.4%) in understanding emergency planning on disaster preparedness, moderate (75.7%) in understanding the warning system on disaster preparedness, very well (78.4%) in understanding resource mobilization on preparedness.

### Reference

- Badan Pusat Statistik. (n.d.). Jumlah Kejadian Bencana Alam di Provinsi Jawa Timur Menurut Kabupaten/Kota [Go.id]. *Badan Pusat Statistik Provinsi Jawa Timur*. <https://jatim.bps.go.id/statictable/2019/10/11/1851/jumlah-kejadian-bencana-alam-di-provinsi-jawa-timur-menurut-kabupaten-kota-2018-.html>
- Bencana, B. N. P. (2012). *Pedoman Sistem Peringatan Dini Berbasis Masyarakat*. Jakarta: *Badan Nasional Penanggulangan Bencana*.
- Bencana, B. N. P. (2020). *Rencana Nasional Penanggulangan Bencana 2020-2024*. BNPB, Jakarta, 1–115.
- Carolina, M. (2018). Kelemahan-kelemahan penanggulangan bencana alam di Indonesia. *Buletin APBN Pusat Kajian Anggaran Badan Keahlian DPR RI*, 3(18), 3–8.
- Erlia, D., Kumalawati, R., & Aristin, N. F. (2017). Analisis kesiapsiagaan masyarakat dan pemerintah menghadapi bencana banjir di Kecamatan Martapura Barat Kabupaten Banjar. *JPG (Jurnal Pendidikan Geografi)*, 4(3).
- Haryawan, I. G. A., Negara, N. L. G. A. M., & Dewi, N. K. P. P. (2018). *Kajian Kesiapsiagaan Penanggulangan Bencana Gempa Bumi Bagi Pekerja Pada Gedung Bertingkat Di Denpasar*. 140–143.
- Hesti, N., Yetti, H., & Erwani, E. (2019). Faktor-Faktor yang berhubungan dengan Kesiapsiagaan Bidan dalam Menghadapi Bencana Gempa dan Tsunami di Puskesmas Kota Padang. *Jurnal Kesehatan Andalas*, 8(2), 338–345.
- INDONESIA, P. R. (24 C.E.). *Undang-Undang Republik Indonesia Nomor 24 Tahun 2007 tentang Penanggulangan Bencana*.
- Lestari, A. W., & Husna, C. (2017). Sistem peringatan bencana dan mobilisasi sumber daya dalam menghadapi bencana gempa bumi dan tsunami. *Idea Nursing Journal*, 8(2), 23–29.
- Nugroho, A. C. (2007). *Kajian kesiapsiagaan masyarakat dalam mengantisipasi bencana gempa bumi dan tsunami di Nias Selatan*. Jakarta: *MPBI-UNESCO*.



Marta Bela Kartika, Moch. Sahri, Achmad Syafiuddin, Mursyidul Ibad/**KESANS**  
**Analysis of Workers' Understanding About Emergency Preparedness and Response**  
**To Disaster at The War Ship Division PT. PAL Indonesia**

Pembriati, E. Z., & Santosa, S. (2015). PENGARUH MODEL PEMBELAJAR TERPADU PADA PENGINTEGRASIAN MATERI PENGURANGAN RISIKO BENCANA DALAM MATA PELAJARAN IPS SMP TERHADAP PENGETAHUAN DAN KESIAP SIAGAAN BENCANA. *GeoEco*, 1(2).

Pusparisa, Y. (2010). *2020: Dekade Penuh Bencana Bagi Indonesia*.

Setiawati, I., Utami, G. T., & Sabrian, F. (2020). Gambaran pengetahuan dan sikap perawat tentang kesiapsiagaan pelayanan kesehatan dalam menghadapi bencana banjir. *Jurnal Ners Indonesia*, 10(2), 158.

**Copyright holder:**

Marta Bela Kartika, Moch. Sahri, Achmad Syafiuddin, Mursyidul Ibad (2022)

**First publication right:**

KESANS: International Journal Health and Science