

The Challenges and Obstacles Management Natural Disaster in the Region

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Abstract. Various disasters hit almost all corners of the country, giving rise to the notion that Indonesia is a "supermarket" of disasters. The implementation of disaster management involves all government agencies, including the TNI and all of its elements. The purpose of this study is to discuss challenges and obstacles in disaster management in the regions and the solutions needed to overcome them. This research uses a statutory approach with a normative type of research that requires primary and secondary data and the process of analyzing the data uses a qualitative descriptive method related to the involvement of elements of the TNI in the regions in disaster management in the Kudus Regency area along with its challenges and obstacles. . The results of the study concluded that it was necessary to fulfill infrastructure facilities in the form of means of conveyance or transportation, shelters, emergency electricity supplies,

Keywords: Challenge; Disaster; Obstacle.

1. Introduction

Natural disasters are a phenomenon that often occurs in Indonesia. It is recorded from BNPB data that in 2022 there have been a total of 3,351 disasters with 851 fatalities and the most common type of disaster was floods which occurred up to 1,524 times.¹This condition is influenced by the geographical and geological situation of Indonesia which is located in an area prone to natural disasters, namely being on the "ring of fire", the confluence of 3 tectonic plates, the area with the shape of islands, being in the tropics, and the phenomenon of climate change.²Various disasters, such as: earthquakes, tsunamis, floods, landslides,

¹Major Disaster of 2022 | Geoportal Kebencanaan Indonesia, (nd), Retrieved January 12, 2023, from <https://gis.bnppb.go.id/arcgis/apps/sites/#/public/pages/bencana-besar-tahun-2022>

²Agung, D., 2019, Natural Disasters, Military and National Defense, Wira Journal, 3(3), 5–7.

typhoons, and tornadoes hit almost all corners of the country so that the assumption emerged that Indonesia was a "supermarket" of disasters.³

There are several definitions related to disaster. UN-ISDRR defines a disaster as a serious disruption to the functioning of a community or society at any scale, due to a hazardous event that results in the emergence of vulnerabilities that lead to personal, material, economic and environmental losses.⁴ Whereas in an Islamic perspective, disaster is defined as a calamity, calamity, test or trial and the Qur'an uses the word calamity to mean something that is unpleasant to befall humans and is an inevitability dropped by Allah.⁵

The government is responsible for all conditions that can threaten its people including from the threat of disaster, this has been stated in the Preamble to the 1945 Constitution of the Republic of Indonesia, paragraph IV, which mandates that the Government of the Unitary State of the Republic of Indonesia protect the entire nation and all of Indonesia's bloodshed, promote general welfare, the intellectual life of the nation.⁶ The realization of this national mandate is carried out through the issuance of Law no. 24 of 2007 concerning Disaster Management which explains that the Central Government and Regional Governments are responsible for implementing disaster management. This task is handled by the National Disaster Management Agency (BNPB) for the national level and the Regional Disaster Management Agency (BPBD) for the regional level.⁷

BPBD has one of the functions of coordinating the implementation of disaster management activities in a planned, integrated and comprehensive manner. BPBD in carrying out its duties can coordinate with other parties, including business and international institutions including other government institutions. During a disaster emergency, the Head of BPBD authorized to mobilize human resources, equipment, and logistics from agencies/agencies and the community to carry out emergency response.⁸

One area in Indonesia that is prone to disasters is Kudus Regency. Floods and landslides are disasters that often occur in the Kudus Regency area. Based on BPBD data from Kudus Regency, floods occurred 24 times in 2022, even at the beginning

³Hidayati, D., 2008, Community Preparedness: A New Paradigm of Natural Disaster Management in Indonesia, Indonesian Population Journal, 3(1), 70.

⁴Disasters | UNDRR, (nd), Retrieved January 12, 2023, from <https://www.undrr.org/terminology/disaster>

⁵Abdul Hakim, 2013, The Meaning of Disaster According to the Qur'an: A Study of the Phenomenon of Disasters in Indonesia, Hermeneutics, Vol. 7, No. 2, December.

⁶The 1945 Constitution of the Republic of Indonesia.

⁷Rusfiana, Y., & Lestari, MN, 2021, Strategy for Anticipating Potential Natural Disasters in Bandung Regency, Constituent Journal, 3(1), 31–39.

⁸Article 25 PP No. 21 of 2008 concerning Implementation of Disaster Management.

of 2023 there were floods that submerged 17 villages and affected 21,421 people.⁹while landslides were recorded to have occurred 24 times. From the disaster-prone map, the dislocations of flood-prone areas are in the south of Kudus Regency bordering Demak and Pati, namely the Kaliwungu, Jati, Mejobo and Undaan Districts as the worst affected, while landslides occurred on the slopes of the Muria mountains.¹⁰ Disaster management by the Kudus Regency BPBD involves other agencies in the area including the Kodim 0722/Kudus.

Kodim 0722/Kudus is a territorial unit of the Indonesian Army dislocated in the Kudus area which is involved in disaster management. This involvement is based on Law no. 34 of 2004 concerning the TNI regarding the duties of the TNI in article 7 paragraph 2b, namely carrying out Military Operations Other Than War in the form of one of which is helping to cope with the consequences of natural disasters, evacuation and providing humanitarian assistance. The aim of Kodim 0722/Kudus to be involved in disaster management is as an effort to help overcome the people's difficulties by preventing the increasing loss of both lives and property as well as restoring the community's condition through rehabilitation efforts. Kodim 0722/Kudus plays a role starting from the mitigation, emergency response and post-disaster rehabilitation stages.

However, the involvement of Kodim 0722/Kudus in disaster management is felt to be less than optimal. There were several challenges and obstacles experienced by Kodim personnel which resulted in this role not being carried out properly even though the role of Kodim 0722/Kudus was quite dominant. The main obstacles faced are related to limited facilities and infrastructure whose existence will greatly affect disaster management operations which will have an impact on less than optimal assistance provided to victims in terms of quality and quantity. In order to overcome this, this research will discuss the challenges and obstacles of Kodim 0722/Kudus in handling disasters in the Kudus area and the solutions needed to overcome them.

2. Research Methods

This research uses method of approach to the law (statute approach),¹¹carried out by reviewing all laws that are related to the issue being handled. Research specifications are carried out in the form of normative research, namely research procedures scientifically aiming to find the truth in accordance with the logic of

⁹Floods in Kudus are Widespread, 17 Villages Submerged and 21,421 Affected Lives, (nd), Retrieved January 13, 2023, from <https://regional.kompas.com/read/2023/01/02/120802678/banjir-di-kudus-increasingly-widespread-17-villages-submerged-and-21421-people-affected>

¹⁰Disaster Prone Map – BPBD Kudus Regency. (n.d.). Retrieved January 12, 2023, from <https://bpbd.kuduskab.go.id/peta-rawan-bencana/>

¹¹Peter Mahmud Marzuki. 2011. Legal Research, Jakarta, Kencana Prenada Media Group, p.35.

legal science from a normative perspective.¹²The data needed is in the form of primary data and secondary data. Primary data was obtained from carrying out interviews with the Secretary of the Kudus BPBD and Kodim 0722/Kudus Operations Section Officers. Secondary data was obtained through a literature study on primary legal materials, namely Law no. 24 of 2007 concerning disaster management and Law no. 34 of 2004 concerning the TNI. Data analysis used a qualitative descriptive method with the aim of understanding the meaning and uniqueness of the object under study.¹³

3. Results and Discussion

3.1. Duties of Kodim 0722/Kudus

Kodim 0722/Kudus which is located in Kudus Regency, is the executing Command of the 073/Makutarama Military Resort Command which is regional in nature and is directly under the Commander of the 073/Makutarama Military Resort.

The main task of Kodim 0722/Kudus is to organize training ability, strength and degree of power, organizes territorial development For prepare a defense area on land and maintain the security of its territory in order to support the main tasks of the Korem.¹⁴To carry out this task, Kodim 0722/Kudus carries out the task of Territorial Development in the region Regency Kudus namely:

- a. Helping the Government of Kudus Regency in preparing its potential. The national defense force becomes a land aspect defense force that is prepared in advance early warning, covering the area of defense and its supporting forces, for carry out Military Operations for War (OMP), the implementation of which based on the interests of national defense.
- b. Assisting the Government of Kudus Regency in organizing mandatory basic military training for citizens in accordance with regulations/legislation.
- c. Assisting the Kudus District Government in empowering the Supporting components.
- d. Assisting the Kudus District Government in providing humanitarian assistance, dealing with the effects of natural disasters, evacuation, rehabilitation of infrastructure and overcoming problems resulting from strikes and communal conflicts.
- e. Build, maintain, improve and strengthen the unity of the People's Armed Forces.

¹²Johnny Ibrahim, 2005, Theory & Methods of Normative Legal Research, Malang, Bayumedia Publishing, p.57.

¹³Sugiyono, 2017, Qualitative Research Methods, Alfabeta, Bandung, p.165.

¹⁴Kasad Regulation Number: Perkasad / 111 / XII / 2012 dated 12 December 2012 concerning the Organization and Duties of the Military District Command.

In carrying out these tasks the Kodim 0722/Kudus was arranged in the form organization consisting of leadership echelon, echelon assistant leadership and echelon services with the following information:

- a. Leadership Echelon. Commander of the Military District Command, abbreviated Dandim.
- b. Leadership Assistant Echelon.
 - 1) Chief of Staff of the Military District Command, abbreviated as Kasdim.
 - 2) Intelligence Section Officer, abbreviated as Pasiintel.
 - 3) Operations Section Officer, abbreviated Pasiops.
 - 4) Officers of the Personnel Section, abbreviated as Pasipers.
 - 5) Logistics Section Officer, abbreviated as Pasilog.
 - 6) Territorial Section Officer, abbreviated Pasiter.
- c. Service Echelon. Head of Administrative and Internal Affairs Group, abbreviated as Kapoktuud.
- d. Executive Echelon.
 - 1) Commander of the Military District Command, abbreviated as Danramil.
 - 2) Kodim Intelligence Unit Command, abbreviated Danunitinteldim.

Kodim 0722/Kudus oversees a number of Koramil as the executive echelon headed by a Danramil who is responsible to the Dandim. There are 9 Dislocated Koramil in each subdistrict area of Kudus Regency, namely Koramil 01/Kota Kudus, Koramil 02/Jati, Koramil 03/Undaan, Koramil 04/Jekulo, Koramil 05/Mejobo, Koramil 06/Bae, Koramil 07/Dawe, Koramil 08/Gebog, Koramil 09/Kaliwungu.

3.2. Kodim 0722/Kudus in disaster management in the Kudus area

The disasters that often occur in Kudus Regency are hydrometeorological disasters. This type of disaster is the most frequent in all regions of Indonesia, reaching 96.8%.¹⁵ Hydrometeorological disaster is a phenomenon of natural disasters or destructive processes that occur in the atmosphere (meteorology), water (hydrology), or oceans (oceanography) which in general are caused by

¹⁵Rosyida, A., Nurmasari, R., & Suprpto, 2019, Comparative Analysis of the Impact of Hydrometeorological and Geological Disaster Events in Indonesia in terms of the Number of Victims and Damage (Study: Data on Indonesian Disaster Events 2018), Journal of Disaster Management Dialogue, 10(1), 12–21.

rainfall, humidity, temperature and wind.¹⁶According to the BMKG, hydrometeorological disasters can take the form of extreme rain, strong winds, tornadoes, floods, droughts, forest and land fires.

In the period of 2022 in Kudus there were landslides, flash floods and strong winds. Landslides occurred in Gebog District: Ds. Rahtawu and Ds. Menawan, Dawe District: Ds. Japan and Ds. Colo, due to the less dense local soil conditions, the land contour is unstable so that it cannot hold water infiltration and is exacerbated by the absence of drainage channels for rainwater drainage. Floods occurred in Undaan District: Ds. Karangrowo (Karjan Hamlet), Mejobo District: Ds. Kesambi and Ds. Payaman, Jati District: Ds. Pasuruhan Lor (Dusun Goleng), Ds. Jati Wetan and Ds. Japanpakis, Kaliwungu District: Ds. Setrokalangan (Karangturi Hamlet), this happened because the area is lowland, and is in the watershed of the Wulan, Juana, Jratun Seluna, SWD 1, Gelis, Piji, Dawe and Bakinah, that when it rains with high intensity, the area around the DAS will be affected by an overflow of rainwater which overflows into rice fields and housing areas. Flash floods occurred in Undaan District: Ds. Wonosoco, due to the bare condition of the Kendang mountains, especially in the border area with Pati Regency. Strong winds occurred in Kota, Bae, Gebog and Dawe Subdistricts, causing trees to fall and damage to community buildings.¹⁷

The principles in disaster management are fast and precise, priority, coordination and integration, efficiency and effectiveness, transparency and accountability, partnership, empowerment, non-discrimination, and non-proliferation. This principle is implemented by the Kudus BPBD, especially on the principles of coordination, integration and empowerment by involving the Kodim 0722/Kudus in disaster management in the Kudus area. This is in line with the Pentahelix concept of disaster management by involving government, community, business, academia and media elements. The TNI, in this case Kodim 0722/Kudus, is one of the elements of the government

Kodim 0722/Kudus is involved in every phase of disaster management in the Kudus area. In the prevention and mitigation phase, Babinsa personnel together with village officials provide outreach to the community about protecting the environment in order to reduce the possibility of disasters such as keeping waterways and rivers clean from garbage. In addition to preparing alternative places of refuge in the event of a disaster. During the preparedness phase, Kodim 0722/Kudus was involved in preparing equipment for disaster management and

¹⁶What is a hydrometeorological disaster? This is definition, type, and prevention. (n.d.). Retrieved February 3, 2023, from <https://news.detik.com/berita/d-6439542/apa-itu-bencana-hidrometeorologi-ini-definisi-tipe-untuk-pencegahan>

¹⁷Interview with the Secretary of BPBD Kudus, Drs. Rinardi Budiyo on January 23, 2022 at the Kudus BPBD Office.

Babinsa together with village officials prepared alternative routes and locations for the victims' evacuation. During the emergency response phase, Kodim 0722/Kudus was involved in evacuating victims, mobilizing affected residents to evacuation posts, carrying out search for victims and distributing logistics.

The involvement of Kodim 0722/Kudus in disaster management is based on several considerations. The first is, the hierarchical system in the military organizational structure facilitates the process of executing and delegating orders. Second, personnel readiness can be deployed at any time according to the needs and location required. Third, the speed in reacting considering the military has been trained in such a way to be able to adapt quickly in the region. Fourthly, materials can be optimally functioned to assist the community in disaster management.

Materiel owned by Kodim 0722/Kudus to support disaster management includes means of transport and equipment. The means of transportation consist of 2 units of transport trucks, 1 unit of LCR rubber boat, 1 unit of traditional boat and 1 unit of OBM (Out Board Motor) boat. Equipment that can be utilized is in the form of 2 standing AC units which are used when the Kodim hall room is used as an evacuation site.

3.3. Challenges and obstacles of Kodim 0722/Kudus in disaster management in the Kudus area

Indonesia is a constitutional state in accordance with the mandate of the 1945 Constitution of the Republic of Indonesia.¹⁸ A rule of law is defined as a country that places law as the basis of state power and the exercise of this power is carried out under the rule of law.¹⁹ The involvement of Kodim 0722/Kudus to deal with disasters already has a legal basis and legal certainty, namely through Law no. 34 of 2004 concerning the TNI which states that the TNI carries out the duties of Military Operations Other than War (OMSP), one of which is helping to cope with the consequences of natural disasters, evacuation and providing humanitarian assistance.

Based on the theory of expediency, the involvement of Kodim 0722/Kudus as part of a legal product in disaster management, it must be able to provide benefits to the community. The purpose of law and the products it produces is happiness for as many people as possible, in line with Jeremy Bentham's adage "The aim of law is the greatest happiness for the greatest number". So that the involvement of Kodim 0722/Kudus should have an impact on accelerating disaster management

¹⁸Article 1 paragraph 3 of the 1945 Constitution

¹⁹A. Hamid S. Attamimi, 1992, "Theory of Indonesian legislation", paper on the Speech Ceremony of Permanent Professor Inauguration at the Faculty of Law UI, Jakarta, h. 8.

in the Kudus area supported by adequate infrastructure.

But in reality it is felt that these infrastructure facilities have not met the expected needs, including the condition of both land and water transportation equipment, shelters, emergency power supplies, and limited means of communication. The consequences of these limitations include the speed in evacuation and the number that can be saved is limited. In addition, the quality of life of refugees in shelter locations has also decreased. This condition becomes a challenge and an obstacle in disaster management, which in turn reduces the value of the benefits of involving the Kodim 0722/Kudus. Recognizing the challenges and obstacles that exist and the resulting consequences, it is necessary to make efforts to provide appropriate infrastructure facilities in accordance with the character of the disasters that occurred in the Kudus area.

3.4. Infrastructure facilities in disaster management in the Kudus area

Conveyance or transportation is one of the important facilities and infrastructure in disaster management. Means of transportation are used for SAR (Search and Rescue) operations, evacuating disaster-affected communities to places of treatment and evacuation, helping to fulfill basic needs and for restoring vital infrastructure and facilities in the context of disaster management. The types of transportation required are land transportation and water transportation, namely:

- a. Truck capacity of 2.5 tons.
- b. Water tank truck.
- c. *Pick-up*.
- d. Field public kitchen vehicle.
- e. *Ambulance*.
- f. *Vehicle Rescue* (0.5 tons truck).
- g. Toilet Vehicle.
- h. Logistics and multi-purpose vehicles.
- i. *Motorcycle Trail*.
- j. Polyethylene speed boats.
- k. speedboat fiber.
- l. Piron boat.

Shelters play an important role during a disaster and are an important part of disaster response and recovery. Disaster relief shelters are used to provide a private and safe place for people who have been abandoned or made homeless as

a result of a disaster.²⁰Shelter is a basic human need which is very important to survive in the event of a natural disaster. It provides security, personal safety and protection from the weather, and maintains health and prevents disease.²¹In order to get a decent shelter, it is necessary to have the following infrastructure:

- a. Platoon tent with a capacity of 30 people
- b. Canvas Tarpaulin (30'x3').
- c. Plastic sheeting(12'x12').
- d. Blanket.
- e. Field Mattress (Field Bed)
- f. Pillow.
- g. Base tarpaulin.

An emergency power supply is needed during disaster management considering that the normal electrical system is not functioning. An emergency power system is an independent power source that supports critical electrical systems in the event of a loss of normal power supply. The electricity generated is used for various needs such as search and rescue, treatment, shelter, sanitation and drinking water systems and other needs to improve the welfare of the victims. The existence of a power supply as a temporary source of electricity until the normal electricity network can function again. A standby power system may include standby generators, batteries and other equipment. The required power supply package includes:

- a. Mobile generator with a capacity of 50 KVA and its supporting equipment.
- b. Mobile generator with a capacity of 30 KVA and its supporting equipment.
- c. *Tool kit*electrical repair.
- d. Emergency lighting system.

Communication tools have a very vital role when a disaster occurs both during emergency response and after a disaster. In a disaster emergency situation, communication is needed as a function of management, control and coordination between local government, Kodim 0722/Kudus, victims, community, volunteers and mass media. A good emergency communication system can make coordination and decision-making functions stable. Emergency communication can include warnings and directions regarding evacuation, measures to protect oneself and conveying information about status and conditions, family members,

²⁰Bashawri, A., Garrity, S., & Moodley, K., 2014, An Overview of the Design of Disaster Relief Shelters. *Procedia Economics and Finance*, 18, 924–931. [https://doi.org/10.1016/s2212-5671\(14\)01019-3](https://doi.org/10.1016/s2212-5671(14)01019-3)

²¹Setchell, CA, Argeñal, EJ, Malany, LGL, & Giannone, PJ, 2018, Shelter and Settlements. In *Health in Humanitarian Emergencies: Principles and Practice for Public Health and Healthcare Practitioners* (pp. 257–269). <https://doi.org/10.1017/9781107477261.019>

available assistance, and other matters affecting disaster management. Post-disaster time is used as further coordination in the process of rehabilitation, reconstruction and recovery for disaster victims. The necessary communication infrastructure is:

- a. VSAT terminals.
- b. HX Radio Set.
- c. VHF system.
- d. Handheld Radio Device (HT).
- e. VHF transmitting station.
- f. *Repeaters*VHF transmitter.
- g. Satellite phone.
- h. 4 KVA and 2 KVA Portable Gensets.

4. Conclusion

Kudus Regency is one of the areas in Indonesia which is prone to floods and landslides. In handling disasters, the BPBD of Kudus Regency involves other agencies including the Kodim 0722/Kudus which is a territorial unit of the Indonesian Army dislocated in the Kudus area. This involvement is based on Law no. 34 of 2004 concerning the TNI regarding the duties of the TNI in Military Operations Other than War (OMSP).

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