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# Principles of integrated disaster emergency response management in Indonesia

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#### **ABSTRACT**

Disaster problems in recent years have become an interesting study, not only discussed by the government but also non-governmental organizations and the community. Facing this situation, the government must react and look for strategies to prevent natural (man-made) disasters or reduce the negative impacts following natural disasters.. Disaster phenomena can be studied from various scientific perspectives, including public administration. Disaster emergency response is a series of activities to deal with the direct negative impacts of disasters. According to BNPB Regulation Number 3 of 2018 concerning Handling Refugees in Disaster Emergency Situations, the Government's responsibilities in implementing Disaster Management include protecting the community from the impacts of disasters and ensuring the fulfillment of the rights of communities and refugees affected by disasters fairly and in accordance with minimum service standards. Based on the discussion above, it can be concluded that disaster management is part of a series implemented by the central and/or regional government through BNPB and/or BPBD in implementing post-disaster management or after a disaster by implementing in an integrated and comprehensive manner the principles that have been established which will implemented in stages determined by government regulations.

## Keywords:

mitigation; policy; countermeasures; disaster

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#### INTRODUCTION

Disaster problems in recent years have become an interesting study, not only discussed by the government but also non-governmental organizations and the community. A disaster is an event that causes and impacts human livelihoods both in material and non-material

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terms and even results in loss of life. Judging from its geographical location, Indonesia is an area that is very vulnerable to natural disasters. Facing this situation, the government must react and look for strategies to prevent natural (man-made) disasters or reduce the negative impacts following natural disasters. This is predicted in the Civil Protection Law no. 24 of 2007 (Gerungan, 2020). The ratification of this directive also changed the management paradigm which was previously more reactive than preventive.

Nature should not only be responsible for disasters. There is a saying that you get what you give; in this context, it can be interpreted as nature "causing" disasters for us because we are also the ones "fighting" against it. What humans can do as owners of the highest spirit living on earth is to protect it and take preventive measures, especially the government as the leader of the country or region. The board has a strong connection with management activities, but this does not mean only management, accounting or the like. Management here means planning, managing and organizing an organization. Therefore, the science of disaster prevention administration is also being developed, because it is important for the Indonesian state administration where natural disasters often occur (Rahim, Muksin, et al., 2023).

According to Article 1 Paragraph 9 of Law Number 24 of 2007 concerning Disaster Management, natural disaster management is "an effort to reduce disaster risk through physical development and awareness and increasing capacity before the threat of disaster". Based on this definition, it appears that there are two mitigation models in Indonesia, namely structural and non-structural mitigation. The structural model is more oriented towards physical development with a technological approach, while the non-structural model is more oriented towards physical development, so non-physical mitigation efforts such as legislation, capacity building or spatial planning. The hope is that by balancing physical and non-physical prevention efforts, damage due to natural disasters can be prevented and reduced (Gerungan, 2020).

Disaster management is implemented based on 4 (four) aspects including: social, economic and community culture; environmental sustainability; usefulness and effectiveness; and broad regional coverage. In disaster management, the government can: designate disaster-prone areas as prohibited areas for settlement; and/or revoke or reduce part or all of each person's ownership rights over an object in accordance with statutory regulations and are entitled to compensation in accordance with statutory regulations. Disaster management consists of 3 (three) stages including: pre-disaster; during emergency response; and post-disaster (Islam et al., 2016).

In the context of systematic, integrated and coordinated disaster management, the government has ratified and established Law Number 24 concerning Disaster Management in 2007. This law aims to provide a strong legal basis for the implementation of disaster management at the district/city level. , provincial and national. Implementing disaster management is a series of activities that include formulating policies regarding disaster risk management, disaster prevention, disaster management and recovery.

Disaster management or management includes 3 phases, namely: the phase before the disaster occurs, the phase during the disaster, and the phase after the disaster occurs. The implementation of disaster management is carried out at the pre-disaster, emergency response and post-disaster stages, because each stage has different handling characteristics, the problem then becomes the technical principles and regulations for organizing/implementing disaster management at the emergency response stage (Agustino, 2016).

Various unexpected disaster events have opened the eyes of all stakeholders to the importance of disaster management in the future, even Hughes in his book*Management and Public Administration* stated that crisis/disaster management (*disaster management*) is one

of the important problems in the study of Public Administration. Therefore, disaster phenomena can be studied from various scientific perspectives, including public administration (Hughes, 2012).

Some people believe that disasters that occur are events caused by natural events that are detrimental to humans, while others believe that disasters are the destiny of the Almighty as a punishment or warning for humanity. Disasters on earth are caused by God's will or God's actions, or disasters caused by human actions. However, the National Disaster Management Agency stated that 85% of disasters in the last five years were caused by environmental damage and around 80% of Indonesia's population lives in disaster-prone areas (Hughes, 2012). It is as if Indonesia is a disaster laboratory where everyone learns about various types of disasters and their consequences, such as earthquakes and tsunamis (Putera et al., 2020).

Due to the high vulnerability and vulnerability to existing disasters, disaster risk reduction measures are one of the most important things to minimize property losses and accidents. It is very important to implement coordination between stakeholders in disaster reduction activities. This is because disasters have a direct impact on people's lives and livelihoods and hinder the process of sustainable development (Taslim & Akbar, 2019).

Integrated principles in managing disaster relief in Indonesia cover various aspects to ensure effective and coordinated disaster relief. These principles reflect the efforts of the government and various stakeholders to improve post-disaster response and recovery (Setiani, 2015). From the explanation above, researchers will conduct research on integrated principles for handling disaster emergency response in Indonesia.

# **METHOD**

The research entitled "Integrated Principles of Disaster Management in Indonesia" is normative research. The research sources used in normative research are primary sources consisting of laws and regulations related to disaster management. Secondary sources are library materials such as books, journals, research, articles and other documents related to this research, while tertiary sources are sources that provide complete information from primary and secondary materials such as legal dictionaries and language dictionaries (Moleong, 2014). The research sources obtained are classified thematically then the activities obtained are qualitative, namely. According to the quality of truth, then presented as a picture illustrating the application of the precautionary approach to protection. how to commercialize genetic resources (Pahleviannur, 2022). In this way, a comprehensive picture of the answer to the problem formulation presented can be obtained (Arent et al., 2023).

# **RESULT AND DISCUSSION**

Disaster emergency response is a series of activities to deal with the immediate adverse impacts of a disaster. This includes efforts to rescue and evacuate victims, provide assets, fulfill basic needs, protect and handle refugees, as well as rescue and restore infrastructure and facilities. Implementation of Emergency Response in Disaster Management in Indonesia is based on BNPB Regulation Number 3 of 2018 concerning Handling Refugees in Disaster Emergency Situations that the Government's responsibilities in Implementing Disaster Management include protecting the community from the impact of disasters and ensuring the fulfillment of the rights of communities and refugees affected by disasters fairly and appropriately. With minimum service standards. In Law of the Republic of Indonesia Number 24 of 2007 article 6 states several authorities and responsibilities of the government in implementing disaster management, including:

First, Disaster Risk Reduction and Integration with Development Programs. Disaster Risk Reduction: Steps to identify, assess, and reduce disaster risks. It involves prevention, mitigation, and planning efforts to reduce society's vulnerability to disasters. Integration with Development Programs: Integration of disaster risk reduction concepts into development programs to ensure that sustainable development is carried out by considering and reducing the potential impact of disasters (Rahim, Rifai, et al., 2023).

Second, Community Protection from the Impact of Disasters: Efforts to involve the community in the risk reduction process and provide protection against the impacts of disasters. This includes education, training, evacuation planning, and building disaster-resilient infrastructure. Third, guaranteeing the fair fulfillment of the rights of communities and refugees: ensuring that the rights of communities and refugees affected by disasters are fulfilled fairly and in accordance with minimum service standards. This involves fairness in the distribution of aid, health services, education, and other aspects.

Fourth, Condition Recovery from the Impact of Disaster: Actions taken to restore normal conditions or rebuild after a disaster occurs. This involves infrastructure rehabilitation, economic recovery, psychosocial support, and reconstruction of affected areas. Fifth, Adequate Disaster Management Budget Allocation in the APBN: Ensure that there is sufficient budget allocation for disaster management activities in the State Revenue and Expenditure Budget (APBN). It involves government financial planning to respond to disasters and reduce the economic impact (Rahim, Jaziroh, et al., 2023).

Sixth, Disaster Management Budget Allocation in the Form of Ready-to-Use Funds: Creating reserve funds or ready-to-use funds that can be accessed quickly when a disaster occurs. This enables a faster and more effective response to emergencies, and seventh, authentic and credible archives/documents sorting: Organizing and storing trustworthy official documents related to the threat and impact of disasters. It includes scientific data, risk mitigation information, and other important records to guide future policy, planning, and response (Gerungan, 2020). Mitigation efforts and handling are explained in Figure 1 below.

#### MITIGATION AND TREATMENT EFFORTS



 $\label{lem:figure 1.} \textbf{Mitigation efforts and their handling} \ \textit{Source: (http://beritabpbd.blogspot.com/2016/07/pengepenangan-dan-mitigation.html)}$ 

In a disaster situation, the implementation of disaster management has three stages, namely the pre-disaster stage, during emergency response, and post-disaster. In this regard, the implementation of disaster management during emergency response in article 3 of Government Regulation Number 21 of 2008 concerning Disaster Management, namely: rapid and precise assessment of location, damage, losses and resources; determining the

status of a disaster emergency; rescue and evacuation of disaster-affected communities; fulfillment of basic needs; protection of vulnerable groups; and immediate restoration of vital infrastructure and facilities (Wahab & Solichin, 2012).

The implementation of disaster management in emergency situations is controlled by the Director of BNPB or the Director of BPBD in accordance with their authority in stages as follows: The assessment as intended in Article 21 (a) must be carried out quickly and precisely to identify needs and appropriate actions in disaster management in emergency situations. The rapid and precise assessment as intended in paragraph 1 is carried out by the Rapid Assessment Group based on the mandate of the Director of BNPB or in accordance with the authority of the Director of BPBD. A quick and accurate assessment as referred to in number 1 is carried out by identifying: (1) the coverage of the disaster location, (2) the number of disaster victims, (3) damage to infrastructure and facilities, (4) disruption to the function of public services and, (5) disruption on government functions, and (6) the capabilities of natural and artificial resources.

Disaster location coverage refers to the area or geographic region where a disaster occurs. This includes information about how wide an area is affected by the disaster, whether it is local, regional, or even global. Regarding the number of disaster victims, it refers to the number of people affected by the disaster, whether in the form of injury, loss of life, or loss of residence. This information is important for evaluating the extent of damage and the urgency of response and recovery. Damage to infrastructure and facilities includes all types of infrastructure and facilities damaged as a result of disasters, such as roads, bridges, buildings, electrical facilities, and others. Evaluation of this damage is important for recovery and reconstruction planning (Maulana & Nugroho, 2019).

Disruption to the function of public services refers to the impact of a disaster on basic services such as health, education, clean water, sanitation and other public services. Disasters can disrupt or even temporarily disable these services. Disasters can also cause disruption to government functions. This includes the ability of local governments to provide assistance, coordinate emergency responses, and maintain security and order. Natural and artificial resource capabilities refer to the extent to which an area has the resource potential to support post-disaster response and recovery. This includes aspects such as the availability of clean water, agricultural land, and infrastructure that can be used to support recovery efforts. An assessment of these elements helps relevant authorities and organizations in developing emergency response strategies, planning recovery and managing disasters more effectively.

Determination of the status of a disaster emergency as referred to in Article 21 letter b is carried out by the Government or regional government in accordance with the disaster level. When a disaster emergency status is declared, BNPB and BPBD have easy access in the areas of: (1) mobilizing human resources, (2) deploying equipment, (3) deploying logistics, (4) immigration, excise and quarantine, (5) licensing, (6) procurement of goods/services, (7) management and accountability of money and/or goods, (8) rescue, and (9) command to order agencies/institutions (Nasrullah et al., 2021).

Human resource mobilization refers to the process of mobilizing and assigning people with the skills and expertise needed to overcome a disaster. This includes health workers, security personnel, volunteers and other emergency personnel. Equipment deployment involves organizing and transporting equipment necessary for disaster response. This can include medical equipment, heavy equipment, firefighting vehicles, and other technical equipment. Logistics deployment includes the management and distribution of materials and supplies necessary for disaster response, such as food, clean water, medicine, blankets, and other supplies.

In disaster contexts, immigration, customs and quarantine can be important for managing the inflow and outflow of people, goods and services. This includes border control, quarantine supervision, and security monitoring. Licensing relates to official permits or approvals required to carry out certain activities in emergency situations, such as establishing refugee camps or building emergency response facilities. Procurement of goods and services involves the process of obtaining additional needs for disaster response, such as procuring medical equipment, building materials, or contractor services.

Management and accountability of money and goods involves careful and accountable financial management of funds and assets used in disaster response. Rescue involves efforts to save lives and property from the dangers of disasters, such as evacuating residents, searching and rescuing trapped people, and other emergency efforts. Command in the context of disaster response refers to the leadership and command organization necessary to coordinate and direct the activities of all agencies and institutions involved in a disaster response. Each of these elements is critical in managing and coordinating a disaster response effectively, involving collaboration between various parties and institutions to achieve optimal results.

Rescue and Evacuation according to PP Number 21 of 2008 concerning the Implementation of Disaster Management, Article 24, namely: Rescue and evacuation of communities affected by disasters as intended in Article 21 letter c, is carried out through search, rescue and rescue efforts and activities for communities as victims of disasters. Search, assistance and rescue of communities affected by disasters as referred to in paragraph (1) is carried out by a rapid reaction team involving elements of the community under the command of the Commander for disaster emergency management, according to the location and level of the disaster.

In disaster escalation, BNPB can provide support to BPBD to carry out rescue and evacuation of disaster-affected communities as intended in paragraph (1) and paragraph (2). Disaster emergency assistance as intended in paragraph (1) is prioritized for disaster-affected communities who have suffered serious injuries and vulnerable groups. For people affected by the disaster who died, efforts were made to identify and bury them.

Fulfillment of basic needs as intended includes providing assistance in accordance with the provisions of PP Number 21 of 2008 concerning the Implementation of Disaster Management, Article 52, numbers, namely: (1) clean water and sanitation needs, (2) food, (3) clothing, (4) health services, (5), psychosocial services, and (6) shelter and shelter.

The need for clean water and sanitation becomes critical in disaster situations. Distribution of clean water, provision of safe sanitation facilities, and education about hygiene are priorities to prevent diseases that can spread through unclean water or environments. In disaster situations, providing sufficient and safe food becomes very important. This involves distributing food that meets nutritional needs, planning for long-term food supply availability, and monitoring potential hunger and food shortages.

Clothing needs include clothing and protection against extreme weather. Providing warm clothing, sleeping gear, and protection against other weather elements is important to protect people from the risk of hypothermia or other health problems associated with extreme weather conditions. In disasters, health services become critical to responding to injuries, illnesses, and other urgent medical needs. This involves the provision of medical equipment, ambulance services, emergency health centers, and distribution of medicines.

Psychosocial services aim to provide emotional and psychological support to individuals and communities affected by disasters. It involves counseling, mentoring, and mental recovery programs to help people overcome psychological trauma and stress. Providing temporary shelter and shelter becomes important when disasters cause people to

lose their homes. This involves building refugee camps or providing other temporary facilities to provide a safe haven for those affected.

It is important to provide these basic needs in a holistic and coordinated manner to ensure the recovery and well-being of communities affected by disasters. Many agencies and organizations are involved in this effort, working together to provide assistance as efficiently and effectively as possible. Fulfillment of basic needs as intended is carried out by the Government, regional governments, communities, business institutions, international institutions and/or foreign non-governmental institutions in accordance with minimum standards as regulated in the provisions of statutory regulations.

Protection of Vulnerable Groups is carried out by giving priority to seriously injured disaster victims and vulnerable groups in the form of rescue, evacuation, security, health and mental health services. Actions related to the protection of vulnerable groups are carried out by agencies/institutions coordinated by the Head of BNPB and/or the Head of BPBD, using a mentoring/facilitation model. Immediate restoration of critical infrastructure and facilities immediate restoration of critical infrastructure and facilities aims to ensure that critical infrastructure and facilities can operate immediately so that people's lives can continue. Immediate restoration of critical infrastructure and facilities is the responsibility of agencies/institutions coordinated by the Director of BNPB and/or the Director of BPBD in accordance with their authority.

Integrated principles for handling disaster emergency response in Indonesia cover various aspects to ensure an effective and coordinative response to disasters. These principles reflect the commitment of the government and various stakeholders to improve post-disaster response and recovery. Some of the main principles that are generally adopted are as follows: Participative, Coordinative, Responsive to Needs, Risk Based, Integrated and Coordinated, Fast and Efficient, Information and Technology Based, Sustainable (Continuous):

Encourage active participation of local communities and related parties in planning, implementing and evaluating emergency responses. Community involvement can improve understanding of local needs and strengthen capacity to act in emergency situations. Emphasizes the importance of effective coordination between relevant institutions and agencies in responding to disasters. Good coordination helps avoid overlap, maximize efficiency, and ensure proper distribution of resources.

Ensure that emergency responses are based on an accurate assessment of urgent needs, including the needs of vulnerable populations such as children, the elderly and people with disabilities. Emphasizes a risk-based approach, which involves identification and indepth understanding of disaster risks as well as appropriate risk prevention and management measures. Encourage integration between different sectors and different levels of government. Good coordination between local, regional and national levels is essential to overcome the complexity of disasters (Andi & Muhammad, 2020).

Ensure a fast and efficient response to reduce the impact of disasters and support rescue and recovery as quickly as possible. Utilize technology and information systems to support data collection, situation monitoring, communication and coordination more effectively. Integrate sustainability principles in emergency response planning and implementation, including considering long-term impacts and post-disaster recovery measures. These principles reflect a holistic approach involving multiple stakeholders, including governments, humanitarian organizations, the private sector and civil society. The aim is to increase emergency response capacity, minimize risks, and promote sustainable recovery (Hayat, 2017).

## **CONCLUSION**

Based on the discussion above, it can be concluded that the Government's implementation of Disaster Management includes, among other things, protecting the community from the impacts of disasters and guaranteeing the fulfillment of the rights of communities and refugees affected by disasters fairly and in accordance with minimum service standards. Disaster management is part of a series implemented by the central and/or regional government through BNPB and/or BPBD in implementing post-disaster management. Occurs or after a disaster by implementing in an integrated and integrated manner the principles that have been established which will be implemented in stages as determined by government regulations.

Integrated principles in handling disaster relief in Indonesia cover various aspects to ensure an effective and coordinated disaster response. These principles reflect the efforts of the government and various stakeholders to improve post-disaster response and recovery. Several integrated principles for handling disaster emergency response in Indonesia are: participatory, coordinated, responsive to needs, risk-based, integrated and coordinated, fast and efficient, information and technology-based, and sustainable.

Handling disaster emergency response in Indonesia is by applying principles such as participatory, coordinated, responsive to needs, risk-based, integrated and coordinated, fast and efficient, information and technology-based, and sustainable.

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