

The Effect of the Performance of TNI-AU Search and Rescue Team Personnel during the Cianjur Regency Earthquake Emergency Response

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Abstract

Earthquakes are natural phenomena that have the potential to result in physical damage and loss of life. In an emergency like this, the performance of the TNI-AU Search and Rescue team has a direct influence on the effectiveness and efficiency of rescue efforts, as happened during the earthquake emergency response period in Cianjur Regency. A quick and precise response from the TNI-AU Search and Rescue team in emergency situations such as earthquakes can have a direct impact on the safety of victims. This study aims to evaluate the ability of personnel to deal with earthquake emergency response situations in Cianjur, West Java. The research method used is a qualitative approach that involves in-depth document analysis. In general, the TNI-AU has succeeded in achieving effectiveness and efficiency in rescue efforts during the earthquake emergency response period in Cianjur Regency, including in terms of fast and appropriate victim handling, coordination with related institutions, monitoring the latest information, and the availability of equipment and defense equipment support. The results of SAR training applied by the TNI-AU have proven to provide positive results, as can be seen from direct actions taken in a short time after the earthquake.

Keywords: *Cianjur Earthquake, TNI-AU Search and Rescue Team, Performance Evaluation*

INTRODUCTION

Earthquakes are natural disasters that can inflict physical damage and cause loss of life (Mavrouli et al., 2023). In an emergency situation like this, the performance of TNI-AU Search and Rescue team personnel can directly affect the effectiveness and efficiency of rescue efforts such as the Cianjur Regency earthquake emergency response period. In emergency situations such as earthquakes, quick and precise action from the SAR team can have a direct impact on safety (Auclair et al., 2021) and the safety of victims, especially health issues (Widayatun & Fatoni, 2013). Some of the reasons why the performance of TNI-AU Search and Rescue team personnel has a significant influence on the effectiveness and efficiency of rescue efforts during the Cianjur Regency earthquake emergency response period include: 1) Fast and precise handling of victims. The effective performance of TNI-AU Search and Rescue team personnel can affect the speed in evacuating trapped victims and providing necessary medical assistance. Their ability to handle emergency situations, such as search and rescue in collapsed buildings, can affect the chances of survival and recovery of victims in any type of disaster (Kanigara et al., 2020). 2) Coordination with relevant institutions. The performance of TNI-AU Search and Rescue team personnel also plays an important role in collaboration and coordination with other SAR agencies, local governments, and humanitarian agencies. Effective collaboration in any type of organization enables efficient task sharing, accurate exchange of information, and optimal use of resources in rescue efforts (Darise et al., 2023). 3) Monitoring of up-to-date information. The good performance of TNI-AU Search and Rescue team personnel also involves monitoring the latest information related to earthquake developments, weather conditions, mapping earthquake-prone areas, and information related to victims or affected facilities. Accurate and up-to-date

information enables the TNI-AU Search and Rescue team to plan and implement timely and effective emergency response actions (Risdar et al., 2022).

4) Availability of defense equipment and support. The performance of TNI-AU Search and Rescue team personnel is also influenced by the availability and readiness of equipment and defense equipment support needed in SAR operations. Adequate tools, such as communication equipment, medical equipment, and cutting and rescue equipment, as well as adequate logistical support, enable the TNI-AU Search and Rescue team to work efficiently and effectively in the rescue of all types of disasters (Nayar et al., 2020).

TNI-AU Search and Rescue team personnel have several advantages related to earthquake emergency response (Kanigara et al., 2020): (1) The TNI-AU Search and Rescue Team generally has special experience and training in SAR operations. They have been trained to deal with emergency situations and natural disasters, including earthquake management. SAR experience and training are important aspects (Hughes & Ferrett, 2008). This allows them to operate SAR equipment efficiently, recognize the best tactics and strategies in rescue, and work synergistically within the team. (2) The TNI-AU is usually equipped with advanced equipment and technology that assists in SAR operations. They have search and rescue helicopters, sophisticated communications equipment, infrared scanning equipment, and emergency medical equipment. Adequate equipment allows them to search, evacuate, and provide medical assistance more effectively and efficiently (Emiroglu, 2021). (3) TNI-AU Search and Rescue team personnel cooperate with other relevant parties, such as the Regional Disaster Management Agency (BPBD), the police, and local government agencies. Good coordination between the TNI-AU Search and Rescue team and related parties allows them to support each other, share information, and utilize resources effectively. This will increase the efficiency and effectiveness of rescue operations. (4) The performance of TNI-AU Search and Rescue team personnel is characterized by the speed of response in responding to earthquake disasters. They have the ability to immediately move to affected locations, conduct search and evacuation, and provide medical assistance to victims. This speed of response can help save more lives and reduce the negative impact caused by disasters. (5) TNI-AU Search and Rescue team personnel have experience in working in teams and have high discipline. They are accustomed to strict command and control as well as good coordination between team members. This allows them to work effectively and efficiently in stressful emergency situations.

Regarding the Cianjur Regency earthquake emergency response period, insight into the factors that affected the performance of the TNI-AU at that time needed to be done. Then how it can be improved to achieve optimal results also needs to be known. Data collection was carried out through document analysis related to earthquake emergency response in Cianjur Regency. Data on the actions of TNI-AU Search and Rescue team personnel at that time. Analysis of the data that has been collected is carried out using an inductive approach. Identify patterns, themes, and concepts that emerge from the data. Based on data analysis and preliminary findings, theories can emerge that explain the effect of the performance of TNI-AU Search and Rescue team personnel during the earthquake emergency response period in Cianjur Regency. The theory is based on findings emerging from the data collected and analyzed, and must take into account factors affecting the performance of TNI-AU Search and Rescue team personnel.

Previously, an analysis was carried out to increase the ability of Matra 1 Paskhas Detachment in dealing with natural disasters. In order to achieve this goal, the research was conducted using qualitative methods through in-depth interview techniques in various agencies related to purposive sampling techniques, passive observation and document review. As a result, Matra 1 Paskhas Detachment carried out several effective actions such as: training coaching, preparation and checking of equipment and defense equipment, knowledge sharing and collaboration, and updating information and the latest situation (Kanigara et al., 2020).

Some time ago, a description and analysis of the strategy of the Air Force Corps in supporting operations for natural disaster management of the earthquake and tsunami in the Mentawai Islands in 2010 was carried out. The data analysis technique used is Miles and Huberman's interactive data analysis technique which consists of data reduction, data presentation, and ends with conclusions / verification. As a result, the Air Force Corps prepared personnel and equipment quickly and meticulously, dividing the work force into small units quite effectively, this proved effective (Risdar et al., 2022).

The novelty of this study lies in a comprehensive approach in evaluating factors that affect the performance of TNI-AU Search and Rescue team personnel, including aspects of training, collaboration with related institutions, monitoring the latest information, and the availability of defense equipment and support. This research will conduct a comprehensive evaluation of the training received by TNI-AU Search and Rescue team personnel. This includes the ability of personnel to deal with earthquake emergency response situations. This comprehensive approach allows research to identify existing weaknesses and provide recommendations for improvement. This research will also pay attention to the level of collaboration and cooperation between the TNI-AU Search and Rescue team and other SAR agencies, local governments, and humanitarian agencies.

Through a comprehensive approach, the study will identify factors that influence collaboration, such as coordination, information exchange, and effective task sharing. The results of this study can provide insight into the importance of good collaboration and provide recommendations for improving inter-agency cooperation in earthquake emergency response (Shah et al., 2021). This study will examine how TNI-AU Search and Rescue team personnel monitor up-to-date information relevant to earthquake emergency response situations.

A comprehensive approach will pay attention to the sources of information used, monitoring methods, and the ability of personnel to analyze and apply the information in decision making and action. Thus, this research will provide a deeper understanding of the role of monitoring current information in improving the performance of the TNI-AU Search and Rescue team. This study will also evaluate the availability of equipment and defense equipment support used by TNI-AU Search and Rescue team personnel in earthquake emergency response. A comprehensive approach will pay attention to the quality, readiness, and capability of the tools and defense equipment support available to personnel. This research will provide an understanding of the importance of the availability of adequate tools and provide recommendations to improve the availability and quality of the tools used.

RESEARCH METHODS

Moving on from the importance of observing the performance of TNI-AU search and rescue team personnel during the earthquake emergency response period of Cianjur District, this research was conducted with an in-depth qualitative approach through document analysis. Document analysis can involve a review of training records, operations reports, and other related documents. This qualitative data can then be analyzed with a thematic approach or content analysis to identify patterns, findings, and emerging themes related to factors affecting personnel performance.

This research will be conducted on document analysis in Cianjur Regency, where an earthquake occurred which is the focus of research. Cianjur Regency is located in West Java Province, Indonesia. Data processing can involve thematic analysis or content analysis. Qualitative data collected from document analysis can be identified, categorized, and analyzed to identify emerging patterns, findings, and themes related to factors affecting personnel

performance. A deep understanding of individual contexts and experiences can also be revealed through this qualitative analysis.

RESULT AND DISCUSSION

Geology of the Cianjur Earthquake on November 21, 2022

The information provided by the Geological Agency in 2022 is very detailed regarding physical

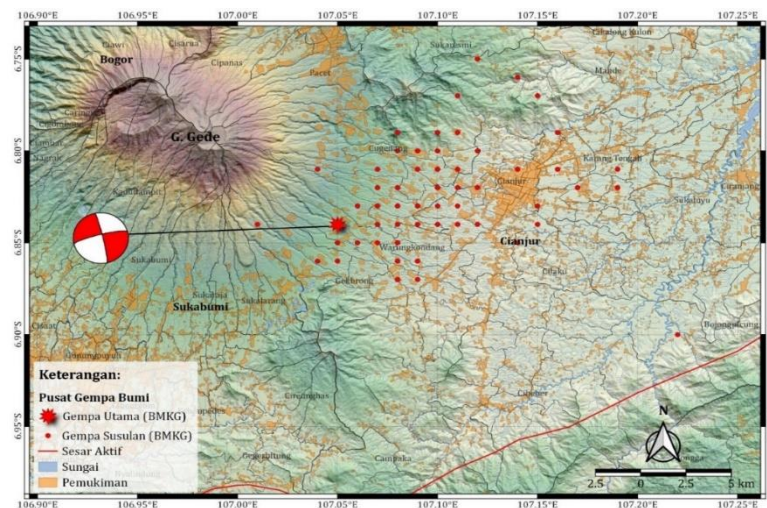


Figure 1. Map of the epicenter of the Cianjur earthquake 2022

information. The earthquake occurred in Cianjur on November 21, 2022 at 13:21:10 WIB. The epicenter of the earthquake was at coordinates 6.84 LS - 107.05 BT with a depth of 11 km and magnitude 5.6. Furthermore, BMKG recorded 297 aftershocks until November 28, 2022, at 07:00 WIB. The magnitude of aftershocks ranges from M1.0 to M4.2, with the largest magnitude reaching M4.2 and the smallest magnitude of M1.0 and shown as shown in Figure 1.

Earthquake events and aftershocks are common natural phenomena that occur after a major earthquake. Aftershocks are a series of small earthquakes that occur after a major earthquake in the same region. Although the magnitude of aftershocks tends to be smaller than that of major earthquakes, it is still important to remain alert to the possibility of further damage or additional impacts that could arise. The information shows significant seismic activity in Cianjur in that period. For those living in the region, it is very important to follow the instructions and warnings of local authorities and prepare for earthquakes and possible aftershocks by maintaining vigilance and following recommended safety procedures.

The Geological Agency conducts mapping to determine the location and extent of damage to buildings and the location of soil movement. This information is collected through field surveys and involves data from mass media and the population. Here is a summary of the mapping results:

The most severe damage occurred in an area consisting of Mount Gede (Qvyg) breccia and lava deposits and is shown as shown in Figure 2. Morphologically, areas that experience damage are generally areas with undulating hilly morphology. In Cugenang District, the earthquake intensity reached VII-VIII MMI (Modified Mercalli Intensity), which was characterized by massive building damage, especially in Gasol and Sarampad Villages, Cugenang as shown in Figure 2. It can be seen that a red circle indicates the location of the damage to the building. The size of the circle reflects the degree of damage which can also be interpreted as intensity (MMI).

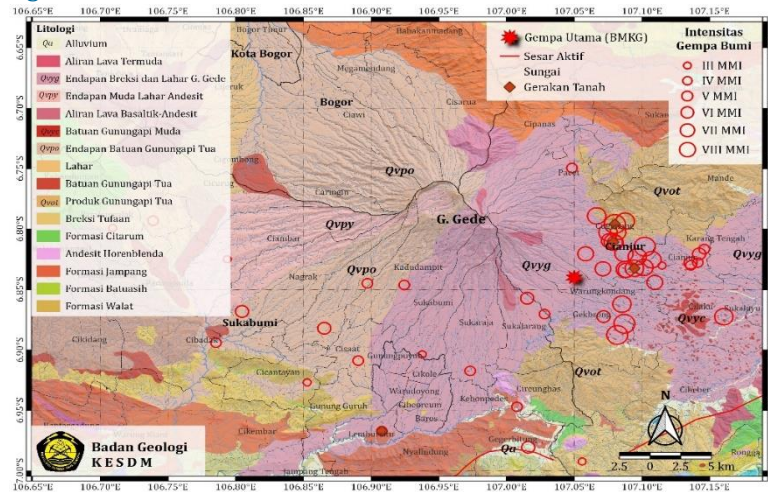


Figure 2. The location of the damage is plotted on a geological map

In addition to Cugenang District, severe damage with an intensity of up to VII MMI also occurred in Cianjur, Warungkondang, and Gekbrong Districts. In Kadudampit Village, Rancagoong Village, Cilaku District, there was a unique phenomenon where many 2-3 storey buildings suffered heavy damage, even one minimarket building collapsed completely (Figure



Figure 3. (Left) Minimarket building



Figure 3. (Left) Minimarket building & (Right) 2-3 storey building

In addition to building damage, earthquakes also cause ground movement. The largest ground movement caused by this earthquake occurred in Cijedil Village and caused more than 30 casualties. This soil movement occurs in areas consisting of Old Volcano Products (Qvot) that have undergone weathering. In Sarampad Village, precisely in Cisarua Village, earthquake shocks also caused ground movement with dimensions of length, width, height, and area of 70 m, 70 m, 2 m, and 3,400 m² respectively shown in Figure 4.



Figure 4. Aerial photo of the location of the earthquake triggered ground movement in Cisarua Village, Sarampad Village, Cugenang District.

The Geological Agency has made VS30 regional maps for the Cianjur and Sukabumi areas. This map depicts the level of hardness of rocks at ground level, where lower Vs values indicate the presence of softer rocks, and vice versa. On the map in Figure 5, it can be seen that building damage and soil movement occur in areas consisting of class C (hard soil) and D (medium soil) rocks. The map in Figure 5 shows the hardness of the rock surface and was created using the Matsuoka Method. In making this map, consider the type of rock, age of the rock, rock thickness, elevation, slope slope, and distance to Tertiary or older mountains. In the map, it can be seen that building damage and landslides occurred in areas consisting of medium soil and hard soil (class D and C). The worst-affected areas are generally located in areas with class C rocks.

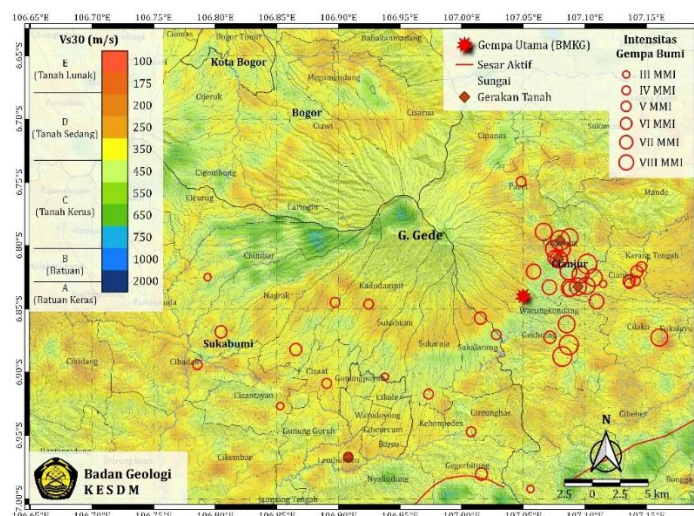


Figure 5. Map of Vs30 Cianjur and Sukabumi Areas

By considering various earthquake sources such as active faults on land, subduction, and background earthquakes, as well as local geological conditions such as Vs30 (hardness of surface rock) and basin depth or sediment thickness above bedrock, the Geological Agency has compiled an Earthquake Prone Area Map for the Cianjur and Sukabumi regions. The map was created with a probability approach for a 500-year anniversary period. In the map, it can be seen that all damage to buildings and ground movement occurs in areas that have a high level of vulnerability to earthquake shocks as shown in Figure 6.

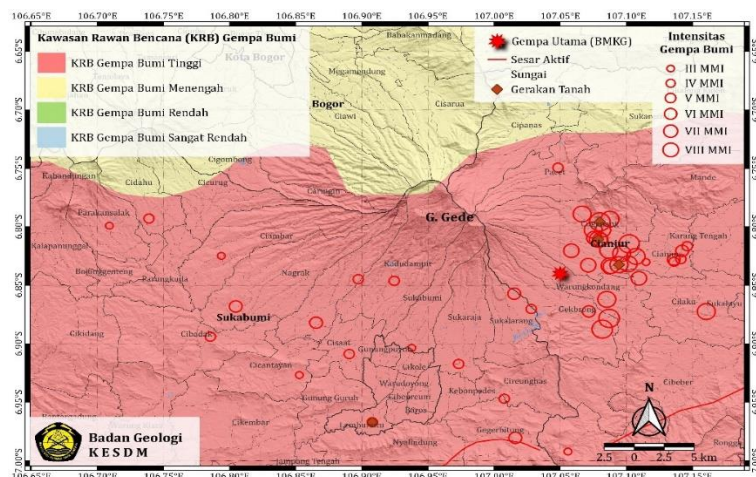


Figure 6. Map of KRB Cianjur and Sukabumi earthquakes

The map was compiled using a probabilistic method with a 500-year re-period. Earthquake shocks are calculated by considering all known faults and subductions, as well as local geological factors such as Vs30 (hardness of surface rock) and sediment thickness above bedrock to estimate amplification. All damage sites are located in areas that have a high level of vulnerability.

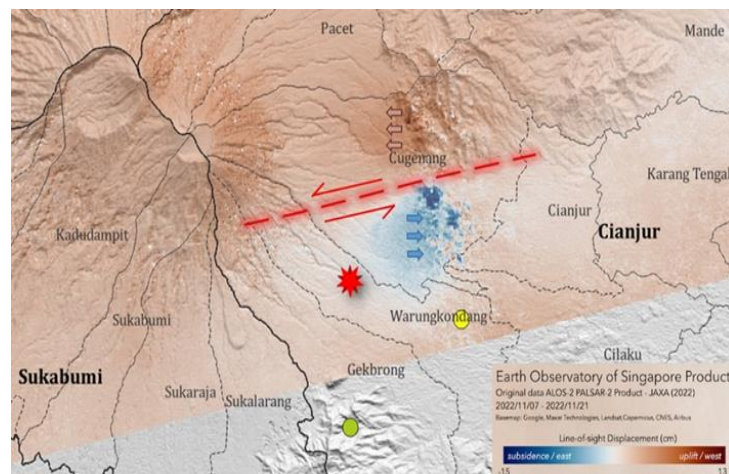


Figure 7. Fault lines that cause the 2022 Cianjur Earthquake

By comparing the fault area with the damage site, it can be seen that the most severe damage occurred within the fault area. Meanwhile, areas outside the fault area experienced shaking with lower intensity. It is important to remember that the source of an earthquake is a field, and the epicenter is the initial location of the fault movement that caused the earthquake. Although the epicenter is the starting point of fault movement, not always the greatest movement or deformation occurs in the epicenter, so the most severe damage does not always occur in the epicenter.

Based on earthquake center distribution data, focal mechanisms, morphology, damage distribution, and InSAR results (EOS products), it is estimated that the fault line that is the source of the earthquake as Figure 7 has a southwest west (WSW) - northeast (ENE) orientation, with irrigating shear fault mechanisms and a southward slope of the fault plane (dip).

TNI-AU Quick Response Action

Based on the summarized report, compiled by the TNI-AU in 2022, the actions of the TNI AU in carrying out humanitarian and disaster management mission operations in Cianjur after the earthquake are an important response in emergency situations. The following are some of the steps taken by the TNI-AU in the operation: (1) Deployment of Helicopter Defense Equipment. Helicopters are often used in SAR operations to conduct aerial surveillance, search and rescue, and logistics distribution. Helicopters can access hard-to-reach areas by ground vehicle and help reach isolated or severely affected areas. (2) The establishment of the Air Force Refugee Post established three evacuation posts in Ciherang Village, Ciputri Village, and Buni Kasih Cianjur Village. The evacuation post serves as a coordination center to provide services and assistance to refugees. They can provide temporary shelter, food, clean water, basic medical care, and other immediate needs (Dispen, 2022).

The TNI-AU also established posts in nearby locations. Each post has an important role in providing assistance and services to refugees and affected communities. The post leaders and Air Force personnel involved are responsible for coordinating and implementing activities at each post, including the distribution of aid, health services, and maintaining security around the posts. There are at least 3 posts in the area:

1. Ciherang Post:

Chairman: Major Lek Oki Hartanto

Number of personnel: 27 Air Force personnel

Number of refugees served: 150

Number of people around the post who need assistance: 3,000 people

Activities: 1) Receive and distribute logistical assistance from Kasau and BPBD Cianjur Regency. 2) Provide health services to refugees and people around the post. 3) Conduct patrols to maintain security and stability around the post.

2. Yonkesau and Pasgat Post in Buni Kasih Village:

Chairman: Letkol Pas Renry

Activities: 1) Conducting general treatment and treating injured victims. 2) Set up four health tents to serve the health needs of the community and refugees.

3. Posko Desa Ciputri:

Chairman: Major Tek Endang

Number of refugees served: 300 people at the post, and 700 victims around the post

Activities: 1) Provide assistance to refugees who are at the post. 2) Provide assistance to victims around posts in need. 3) The possibility of providing health services and basic medical care to communities in need.

Discussion

Broadly speaking, the TNI-AU fulfills the effectiveness and efficiency of rescue efforts during the Cianjur Regency earthquake emergency response period, such as fast and appropriate handling of victims, coordination with related institutions, monitoring the latest information, & availability of equipment and defense equipment support.

Fast and precise victim handling

Based on the summarized report, compiled by the TNI-AU in 2022, the actions of the TNI AU in carrying out humanitarian mission operations and disaster management in Cianjur after the earthquake were carried out with an important response in emergency situations. The following are some of the steps that the TNI-AU took in the operation:

The TNI-AU uses helicopters in SAR operations to conduct aerial monitoring, search and rescue, and logistics distribution. Photo documentation by TNI-AU is shown as Figure 8. Their focus is on helping, hence the sober documentation that is done. The presence of helicopters allows them to reach hard-to-reach areas by ground vehicle and helps reach isolated or severely affected areas.



Figure 8. Photo Documentation of Helicopter Deployment for Logistics Distribution

The TNI-AU established three evacuation posts in Cihorang Village, Ciputri Village, and Buni Kasih Cianjur Village. The evacuation post serves as a coordination center to provide services and assistance to refugees. They provide temporary shelter, food, clean water, basic medical care, and other urgent needs. Each post has an important role in providing assistance and services to refugees and affected communities. Post leaders and TNI-AU personnel involved are responsible for coordinating and implementing activities at each post, including the distribution of aid, health services, and maintaining security around the posts.

Fast and precise handling of casualties is an important factor in measuring the performance of TNI-AU Search and Rescue Team personnel during the earthquake emergency response period in Cianjur Regency. Through a quick response, the TNI-AU Search and Rescue team can provide the assistance and services needed by victims effectively and efficiently. Efforts to handle victims quickly include evacuation and rescue that is immediately carried out after the earthquake occurs. The TNI-AU Search and Rescue team worked quickly to evacuate victims trapped in the rubble of buildings and affected areas. They also provide first aid to victims who have injuries or medical emergencies.

In addition, proper handling of casualties also involves providing logistical assistance, including food, clean water, bedding, and other basic necessities to refugees. The TNI-AU Search and

Rescue Team strives to ensure that logistical assistance is distributed on target and immediately reaches those who need it.

The performance of TNI-AU Search and Rescue Team personnel is also evaluated based on their ability to provide medical care and psychological support to victims. They work closely with medical personnel and other volunteers to ensure that victims receive adequate care and optimal recovery after disasters. In measuring the performance of TNI-AU Search and Rescue Team personnel, factors such as response speed, handling effectiveness, and coordination with related parties are the main concerns. Mission success evaluations are conducted to evaluate the effectiveness of actions taken and identify areas where improvements can be made to improve future casualty response and handling.

Coordination with relevant institutions

Coordination with relevant agencies is an important factor in the performance of TNI-AU Search and Rescue Team personnel during the earthquake emergency response period in Cianjur Regency. In the operation, the TNI-AU coordinates and cooperates with several related institutions to maximize disaster management efforts. Some of the institutions involved in the coordination include: 1) Regional Disaster Management Agency (BPBD). The TNI-AU collaborates with BPBD Cianjur Regency in collecting information related to emergency situations, urgent needs, and aid distribution. BPBD is responsible for planning, coordinating, and implementing disaster management activities at the local level. 2) Local Government: The TNI-AU coordinates with the local government of Cianjur Regency to obtain the latest information on affected areas and community needs. This cooperation is important in harmonizing disaster management efforts and ensuring that the response provided by the TNI-AU is in accordance with local government directives. 3) Other SAR teams: The TNI-AU collaborates with other SAR teams, including search and rescue teams from the Indonesian Army, Indonesian Navy, Basarnas, and other disaster management agencies. This coordination is needed to divide tasks, support each other in search and rescue, and maximize efforts to handle victims. 4) Medical Team, TNI-AU coordinates with medical teams from nearby hospitals or other health facilities to provide medical care to victims. The medical team is responsible for providing first aid, follow-up care, and evacuation of victims who need emergency medical care. 5) Volunteers and Community Organizations. The TNI-AU also works with volunteers and local community organizations involved in disaster management activities. This coordination enables the effective utilization of additional human resources and distribution of aid.

Through coordination with related institutions, the TNI-AU can obtain accurate information, distribute aid efficiently, and maximize disaster management efforts in earthquake emergency response in Cianjur Regency.

Monitoring of up-to-date information

Monitoring the latest information is one of the important aspects in the performance of TNI-AU Search and Rescue Team personnel during the earthquake emergency response period in Cianjur Regency. In an emergency situation, the TNI-AU Search and Rescue team needs to continue to monitor and update the latest information related to emergency conditions, disaster developments, and the needs of affected communities. Some steps that can be taken in monitoring the latest information are as follows: 1) Official Sources of Information. The TNI-AU Search and Rescue Team needs to follow official sources of information issued by relevant institutions, such as the National Disaster Management Agency (BNPB), the Meteorology, Climatology and Geophysics Agency (BMKG), and local governments. This official information provides actual data on earthquake conditions, damage estimates, evacuation locations, and other urgent needs. 2) Communication with Related Teams. The TNI-AU Search and Rescue Team needs to establish effective communication with relevant teams, including SAR teams from other agencies, medical personnel, security forces, and volunteers. Through well-established

communication, the latest information can be obtained and conveyed quickly for appropriate decision making in handling victims. 3) Social Media Monitoring. Social media can also be an important source of up-to-date information. The TNI-AU Search and Rescue Team can monitor the official social media accounts of BNPB, BMKG, and local governments, as well as seek information from eyewitnesses or local residents who share information about the latest conditions in the affected areas. However, it is important to verify the correctness of the information before taking action based on the information obtained from social media. 4) Evaluation and Reporting. The TNI-AU Search and Rescue Team must regularly evaluate the information obtained to ensure the accuracy and completeness of the data. The results of the evaluation can be reported to the authorities and related parties to support the right decision making in handling earthquakes.

By carefully monitoring the latest information, the TNI-AU Search and Rescue Team can obtain an accurate picture of the emergency situation, so that it can respond quickly and appropriately in handling earthquake victims in Cianjur Regency.

Availability of defense equipment and support

The availability of equipment and support for defense equipment (the main tool of the weapon system) plays an important role in improving the performance of TNI-AU Search and Rescue Team personnel during the earthquake emergency response period in Cianjur Regency. The following are some examples of defense equipment tools and support that can affect their performance: 1) Helicopter. Helicopters are one of the main tools that are important in SAR operations. Helicopters allow TNI-AU search and rescue teams to conduct aerial monitoring, search and rescue, and logistics distribution to remote or isolated areas that are difficult to reach by ground vehicles. The availability of adequate helicopters will speed up the response and evacuation of earthquake victims. 2) Communication Tools. Reliable and up-to-date communication tools are a critical factor in supporting coordination and collaboration between TNI-AU Search and Rescue Team personnel. By using good communication tools, the SAR team can communicate smoothly and get the latest information about emergency situations, task progress, and coordinate activities with related teams. 3) Rescue equipment. The TNI-AU Search and Rescue Team must be equipped with adequate rescue equipment, such as ropes, safety harnesses, safety helmets, emergency medical equipment, lighting equipment, and first aid equipment. This equipment will assist in carrying out the rescue and evacuation of earthquake victims safely and effectively. 4) Land Vehicles. In addition to helicopters, the availability of adequate ground vehicles is also important in supporting the mobility and accessibility of search and rescue teams. Ground vehicles such as trucks, ambulances, and logistics transport vehicles allow search and rescue teams to reach remote areas and transport victims or aid quickly. 5) Logistics and Supplies. Defense equipment support also includes logistical supplies such as food, clean water, clothing, blankets, and other urgent needs. These supplies must be sufficient and well maintained so that the SAR team can provide assistance to refugees and affected communities effectively.

With the availability of adequate equipment and defense equipment support, TNI-AU Search and Rescue Team personnel will be able to carry out tasks more efficiently and effectively in handling earthquake emergency response in Cianjur Regency.

CONCLUSION

In a report compiled by the TNI-AU in 2022, there is an emphasis on the importance of the TNI AU's response in humanitarian mission operations and disaster management in Cianjur after the earthquake. One of the key factors in the performance of TNI-AU Search and Rescue Team personnel is coordination with related agencies. In the operation, the TNI-AU cooperates and coordinates with various related institutions to maximize disaster management efforts. In addition, monitoring the latest information is also an important aspect in the performance of TNI-AU Search and Rescue Team personnel during the earthquake emergency response period in Cianjur Regency. In such emergency situations, the TNI-AU Search and Rescue team needs to continue to update and monitor information related to emergency conditions, disaster developments, and the needs of affected communities.

Furthermore, the availability of defense equipment and support also has an important role in improving the performance of TNI-AU Search and Rescue Team personnel during the earthquake emergency response period in Cianjur Regency. This includes the main means of weapons systems and adequate equipment, such as helicopters, communication equipment, rescue equipment, ground vehicles, and logistical supplies. The availability of these tools and support will help the TNI-AU Search and Rescue team in carrying out their tasks efficiently and effectively.

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