

The Effect Of The Performance Of The TNI-AU SAR Team Personnel During The Kab. Cianjur

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Abstract – Earthquakes are natural phenomena that have the potential to cause physical damage and loss of life. In an emergency like this, the performance of the Indonesian Air Force's search and rescue team has a direct influence on the effectiveness and efficiency of rescue efforts, as happened during the emergency response to the earthquake in Cianjur Regency. The fast and precise response of the Indonesian Air Force SAR 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 involving in-depth document analysis. In general, the TNI-AU succeeded in achieving effectiveness and efficiency in rescue efforts during the earthquake emergency response period in Cianjur Regency, including in terms of prompt and appropriate handling of victims, coordination with relevant agencies, monitoring of the latest information, and availability of tools and defense equipment. The results of the SAR training implemented by the TNI-AU have proven to be positive, as seen from the direct actions taken in a short time after the earthquake occurred.

Keywords – Cianjur Earthquake, Indonesian Air Force SAR Team, Performance Evaluation

I. INTRODUCTION

Regarding the emergency response period for the Cianjur Regency earthquake, insight into the factors affecting the performance of the TNI-AU at that time needed to be carried out. 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. The data is based on the actions of the TNI-AU SAR team personnel at that time. The 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 initial findings, a theory can emerge that explains the influence of the performance of the TNI-AU SAR team personnel during the earthquake emergency response period in Cianjur Regency. This theory is based on the findings that emerge from the collected and analyzed data and must take into account the factors that affect the performance of the personnel of the TNI-AU SAR team.

Previously, an analysis of the capacity building of the Matra 1 Paskhas Detachment had been carried out to overcome natural disasters. In order to achieve this goal, the research was conducted using qualitative methods through in-depth interview techniques at various relevant agencies using purposive sampling techniques, passive observation, and document review. As a result, the Matra 1 Paskhas Detachment carried out several effective actions, such as coaching training, preparing and checking equipment and defense equipment, sharing knowledge and collaboration, and updating information and the latest situation [1].

Some time ago, a description and analysis of the Indonesian Air Force Corpskhas strategy was carried out in support of operations for the earthquake and tsunami natural disaster in the Mentawai Islands in 2010. The data analysis technique used was Miles and Huberman's interactive data analysis technique, which consisted of data reduction, data presentation, and ending with

drawing conclusions or verification. As a result, the Special Forces of the Indonesian Air Force carried out the preparation of personnel and equipment quickly and carefully, dividing the work force into small units quite effectively, which has proven to be effective [2].

The novelty of this research lies in a comprehensive approach to evaluating the factors that affect the performance of the TNI-AU SAR team personnel, including aspects of training, collaboration with related institutions, monitoring of the latest information, and the availability of tools and defense equipment support.

This research will conduct a thorough evaluation of the training received by the personnel of the Indonesian Air Force SAR team. This includes the ability of personnel to deal with earthquake emergency response situations. This comprehensive approach enables the 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 Indonesian Air Force SAR team and other SAR agencies, local governments, and humanitarian agencies.

Through a comprehensive approach, this research will identify factors that influence collaboration, such as coordination, exchange of information, and effective division of tasks. The results of this study can provide insight into the importance of good collaboration and provide recommendations for increasing inter-agency cooperation in earthquake emergency response [3]. This research will examine how the personnel of the Indonesian Air Force SAR team monitor the latest information that is relevant to the earthquake emergency response situation.

A comprehensive approach will pay attention to the sources of information used, monitoring methods, and the ability of personnel to analyze and apply this information in decision-making and action. Thus, this research will provide a deeper understanding of the role of monitoring the latest information in improving the performance of the Indonesian Air Force's SAR team. This research will also evaluate the availability of tools and defense equipment support used by the TNI-AU SAR team personnel in the 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.

II. LITERATURE REVIEW

2.1. Earth Quake Disaster

Earthquakes are natural disasters that can cause physical damage and loss of life [4]. In an emergency situation like this, the performance of the Indonesian Air Force's search and rescue team can directly influence the effectiveness and efficiency of rescue efforts, such as the emergency response period for the Cianjur Regency earthquake. In an emergency situation such as an earthquake, the quick and precise action of the SAR team can have a direct impact on safety [5] and the safety of victims, especially health issues [6]. There are several reasons why the performance of the TNI-AU SAR team personnel had a significant influence on the effectiveness and efficiency of rescue efforts during the Cianjur Regency earthquake emergency response period, among them:

- 1) Quick and precise handling of victims, the effective performance of the TNI-AU SAR team personnel can affect the speed of evacuating trapped victims and providing the necessary medical assistance. Their ability to handle emergency situations, such as search and rescue in collapsed buildings, can affect victims' chances of survival and recovery in any type of disaster [1].
- 2) Coordination with related institutions, the performance of the TNI-AU SAR 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 division of tasks, the exchange of accurate information, and the optimal use of resources in rescue efforts [7].
- 3) Monitoring the latest information, the good performance of the TNI-AU SAR team personnel also involves monitoring the latest information regarding earthquake developments, weather conditions, mapping of earthquake-prone areas, and information regarding victims or affected facilities. Accurate and up-to-date information enables the TNI-AU SAR team to plan and carry out timely and effective emergency response actions [2].

- 4) Availability of tools and defense equipment support, the performance of the TNI-AU SAR team personnel is also influenced by the availability and readiness of the tools 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, allow the TNI-AU SAR team to work efficiently and effectively in rescuing all types of disasters [8].

2.2. TNI-AU SAR

The TNI-AU SAR team personnel have several advantages regarding earthquake emergency response [1]: (1) The TNI-AU SAR team generally has experience and special training in SAR operations. They have been trained to deal with emergency situations and natural disasters, including earthquakes. Search and rescue experience and training are important aspects [9]. This allows them to operate search and rescue equipment efficiently, identify the best tactics and strategies in rescue, and work synergistically in teams. (2) The TNI-AU is usually equipped with sophisticated equipment and technology that assists in SAR operations. They have SAR helicopters, sophisticated communication equipment, infrared scanning equipment, and emergency medical equipment. Adequate equipment allows them to search, evacuate, and provide medical assistance more effectively and efficiently [10]. (3) The TNI-AU SAR team personnel cooperate with other related parties, such as the Regional Disaster Management Agency (BPBD), the police, and local government agencies. Good coordination between the Indonesian Air Force SAR 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 the personnel of the TNI-AU SAR team is marked by their speed of response in responding to the earthquake disaster. They have the ability to immediately move to affected locations, carry out searches and evacuations, and provide medical assistance to victims. This speed of response can help save more lives and reduce the negative impact of disasters. (5) TNI-AU SAR team personnel have experience working in teams and have high discipline. They are used to strict command and control and good coordination between team members. This enables them to work effectively and efficiently in stressful emergency situations.

III. RESEARCH METHODS

Moving on from the importance of observing the performance of the Sartni-Au team's personnel during the earthquake emergency response period in Kab. Cianjur, this research was conducted with an in-depth qualitative approach through document analysis. Document analysis can involve reviewing training records, operations reports, and other related documents. This qualitative data can then be analyzed using a thematic or content analysis approach to identify emerging patterns, findings, and themes related to factors influencing personnel performance.

This research will be carried out on document analysis in Cianjur Regency, where an earthquake occurred, which is the focus of the 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 influencing personnel performance. In-depth understanding of individual contexts and experiences can also be revealed through this qualitative analysis.

IV. DISCUSSION

4.1. Geology of the Cianjur Earthquake on November 21, 2022

The information provided by the Geological Agency in 2022 is very detailed regarding physical information [11]. An earthquake occurred in Cianjur on November 21, 2022, at 13:21:10 WIB. The epicenter of the earthquake was at coordinates 6.84 LS and 107.05 E, with a depth of 11 km and a magnitude of 5.6. Furthermore, the BMKG recorded 297 aftershocks until November 28, 2022, at 07:00 WIB. The magnitude of the aftershocks ranged from M1.0 to M4.2, with the largest magnitude reaching M4.2 and the smallest magnitude reaching M1.0, as shown in Figure 1.

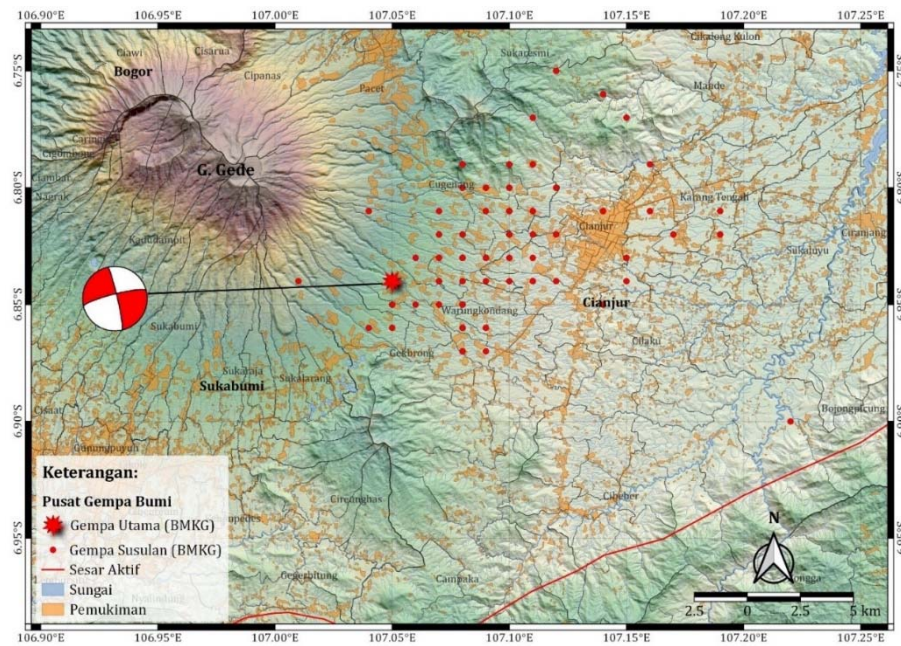


Fig 1. Map of the epicenter of the 2022 Cianjur earthquake

Earthquake events and aftershocks are natural phenomena that commonly occur after the main earthquake. Aftershocks are a series of small earthquakes that occur after the main earthquake in the same area. Even though the magnitude of the aftershocks tends to be smaller than the main earthquake, it is still important to remain alert to the possibility of further damage or additional impacts that may arise. This information indicates significant seismic activity in Cianjur during that period. For those living in the area, it is very important to follow the instructions and warnings from 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 level of damage to buildings and the location of ground movements. This information was collected through field surveys and involved data from the mass media and residents. The following is a summary of the mapping results:

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

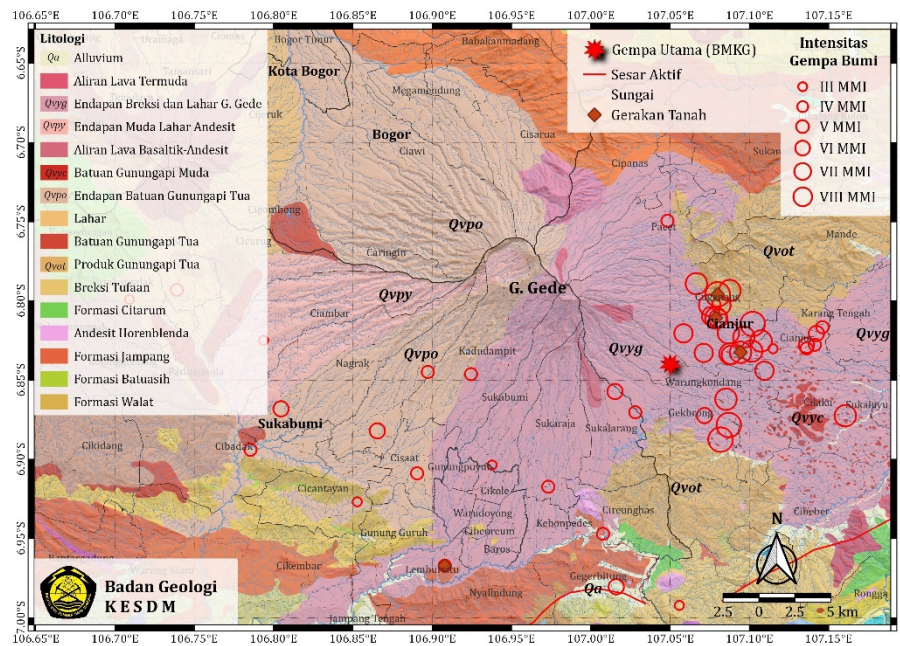


Fig. 2. The damage location is plotted on the geological map

Apart from Cugenang Subdistrict, quite severe damage with an intensity of up to VII MMI also occurred in Cianjur, Warungkondang, and Gekbrong Subdistricts. In Kadudampit Village, Rancagoong Village, and Cilaku District, a unique phenomenon occurred where many buildings with floors 2–3 were heavily damaged, and even a minimarket building completely collapsed (Figure 3).



Fig. 3. (Left) Minimarket building; (Right) 2-3 story building

In addition to building damage, earthquakes also cause ground movements. The largest ground movement caused by this earthquake occurred in Cijedil Village and caused more than 30 fatalities. This ground motion occurs in an area consisting of weathered Old Volcano Products (Qvot). In Sarampad Village, in Kampung Cisarua to be precise, the earthquake shaking also caused ground movements with dimensions of length, width, height, and area of 70 m, 70 m, 2 m, and 3,400 m², respectively, as shown in Figure 4.



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

The Geological Agency has produced a VS30 regional map for the Cianjur and Sukabumi areas. This map illustrates the hardness of rock at the ground surface, where a lower Vs value indicates the presence of softer rock and vice versa. On the map in Figure 5, it can be seen that building damage and ground movement occurred in an area consisting of class C (hard soil) and D (medium soil) rocks. The map in Figure 5 displays the surface hardness of the rock and was made using the Matsuoka Method. In making this map, rock type, rock age, rock thickness, elevation, slope, and distance to mountains are considered tertiary or older. On the map, it can be seen that building damage and landslides occurred in areas consisting of medium and hard soils (classes D and C). The most severely affected areas were generally located in areas with class C rocks.

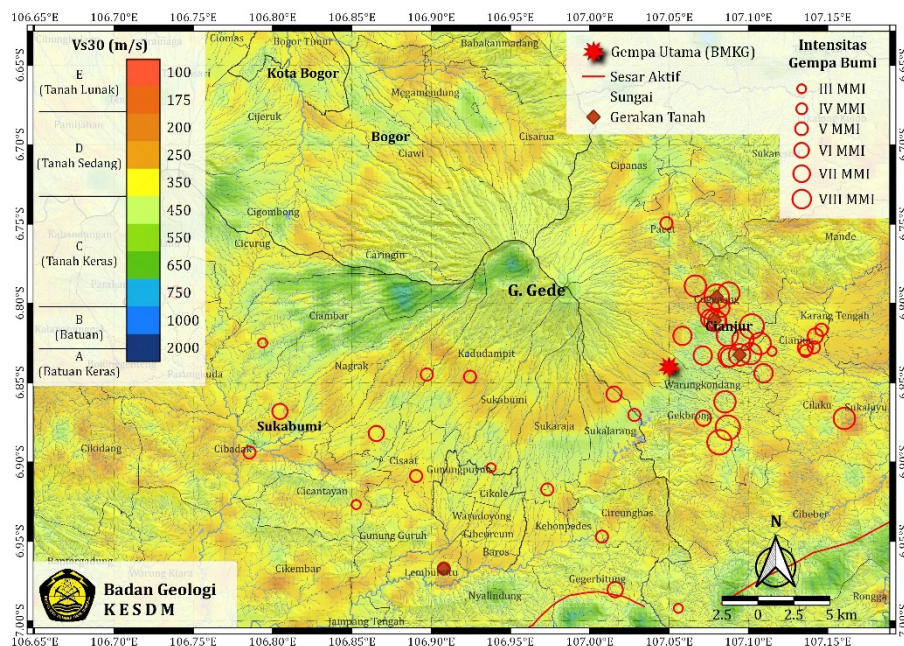


Fig 5. Vs30 Map of Cianjur and Sukabumi Regions

Taking into account various sources of earthquakes, such as active faults on land, subduction, and background earthquakes, as well as local geological conditions such as Vs30 (surface rock hardness) and basin depth or sediment thickness above bedrock, the Geological Agency has prepared a Map of Earthquake-Prone Areas. Bumi for the Cianjur and Sukabumi regions The map is made using the probability approach for a return period of 500 years. On the map, it can be seen that all the damage to buildings and ground movements occurred in areas that have a high level of vulnerability to earthquake shocks, as shown in Figure 6.

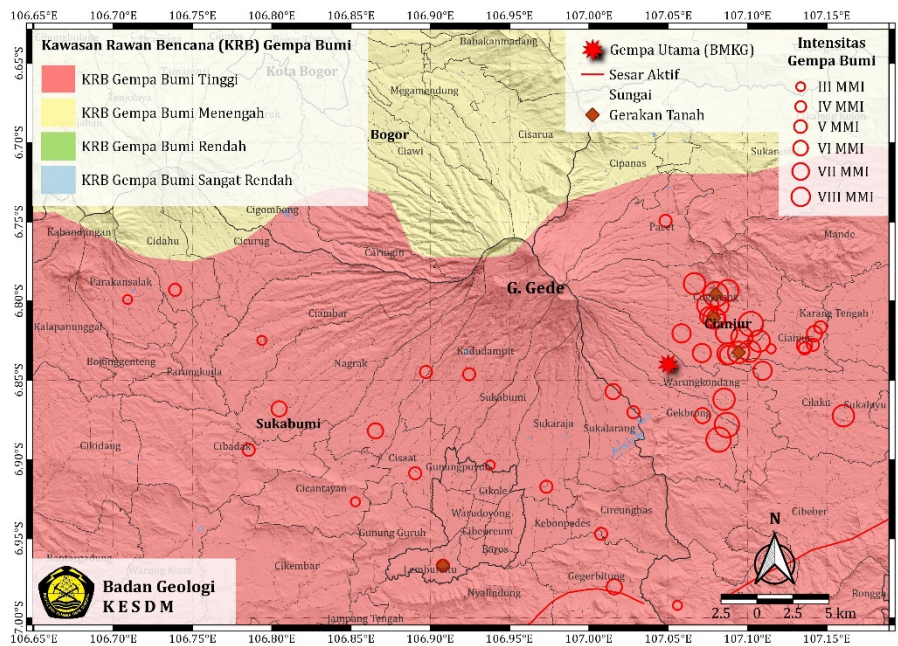


Fig 6. KRB Map of the Cianjur and Sukabumi Earthquakes

This map was compiled using a probabilistic method with a return period of 500 years. Earthquake shock is calculated by considering all known faults and subductions as well as local geological factors such as Vs30 (hardness of surface rock) and the thickness of sediment overlying bedrock to estimate amplification. All damage locations are located in areas that have a high level of vulnerability.

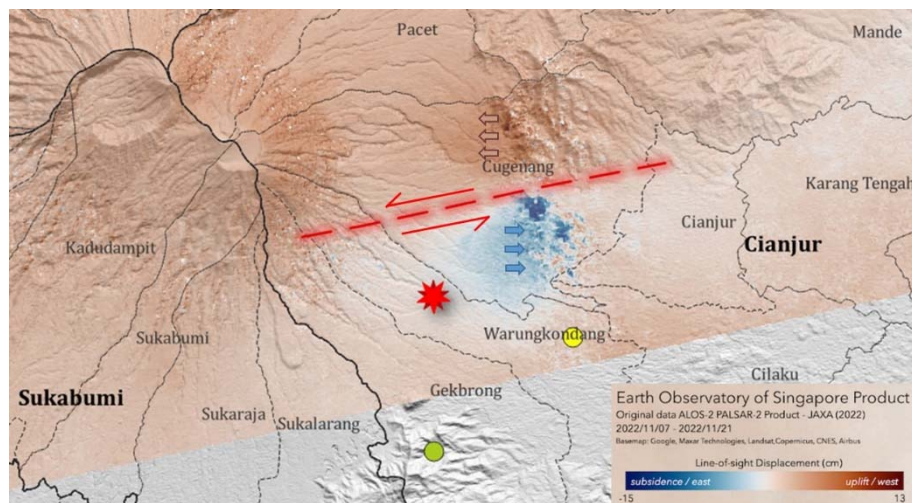


Fig 7. The fault line that caused the 2022 Cianjur earthquake

By comparing the fault area with the location of the damage, it can be seen that the most severe damage occurred within the fault area. Meanwhile, areas outside the fault area experience shocks with lower intensity. It is important to remember that the source of an earthquake is a plane, and the epicenter is the initial location of the fault movement that causes the earthquake. Even though the epicenter is the starting point of the fault movement, the greatest movement or deformation does not always occur at the epicenter, so the most severe damage does not always occur at the epicenter.

Based on data on the distribution of epicenters, 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 shown in Figure 7, has an orientation of west southwest (WSW) to east northeast (ENE), with a shear fault mechanism left and the slope of the fault plane (dip) to the south.

4.2. Indonesian Air Force (TNI-AU) Quick Response Action

Based on the summarized report compiled by the TNI-AU in 2022 [12], the actions of the Indonesian Air Force in carrying out humanitarian and disaster management mission operations in Cianjur after the earthquake are an important response in an emergency situation. The following are some of the steps taken by the Indonesian Air Force in this operation: (1) Deployment of Helicopter Defense Equipment Helicopters are often used in SAR operations to carry out aerial monitoring, search and rescue, and logistics distribution. Helicopters can access areas that are difficult to reach by land vehicles and help reach isolated or severely affected areas. (2) Establishment of Air Force Evacuation Posts to establish three evacuation posts in Ciherang Village, Ciputri Village, and Buni Kasih Cianjur Village. Evacuation posts function as coordinating centers to provide services and assistance to refugees. They can provide temporary shelter, food, clean water, basic medical care, and other urgent needs. (Dispen, 2022).

The TNI-AU also set up command posts in nearby locations. Each post has an important role in providing assistance and services to refugees and affected communities. The command post and the TNI AU personnel involved are responsible for coordinating and implementing activities at each post, including distributing aid and health services and maintaining security around the post. There are at least three posts in the area:

4.2.1. Ciherang Post:

Leader: Major Lek Oki Hartanto

Number of personnel: 27 Indonesian Air Force personnel

Number of refugees served: 150 people

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

Activity:

- Receiving and distributing logistical assistance from Kasau and the BPBD of Cianjur Regency
- Providing health services to refugees and people around the post
- Conducting patrols to maintain security and stability around the command post

4.2.2. Yonkesau and Pasgat Command Posts in Buni Kasih Village:

Leader: Lt. Col. Pas RenryActivity:

- Organizing general medical treatment and treating injured victims
- established four health tents to serve the health needs of the community and refugees.

4.2.3. Ciputri Village Post:

Leader: Major Tech Endang

The number of refugees served was 300 at the post and 700 around the post.

Activity:

- Providing assistance to refugees who are in command posts
- Providing assistance to victims around the post who need it
- The possibility of providing health services and basic medical care to people in need

4.3. Analysis

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 precise handling of victims, coordination with related institutions, monitoring of the latest information, and availability of tools and defense equipment support.

Handling victims quickly and precisely

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

The TNI-AU uses helicopters in SAR operations to carry out aerial monitoring, search and rescue, and logistics distribution. Photo documentation by the TNI-AU is shown in Figure 8. Their focus is on helping; therefore, minimal documentation is carried out. The presence of helicopters allows them to reach areas that are difficult to reach by land vehicles and helps reach isolated or severely affected areas.



Fig 8. Documentation Photo of Helicopter Deployment for Logistics Distribution

The TNI-AU set up three evacuation posts in Ciherang Village, Ciputri Village, and Buni Kasih Cianjur Village. Evacuation posts function as coordinating centers 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. The command post and the TNI-AU personnel involved are responsible for coordinating and implementing activities at each post, including distributing aid and health services and maintaining security around the post.

Quick and appropriate handling of victims is an important factor in measuring the performance of TNI-AU SAR Team personnel during the earthquake emergency response period in Cianjur Regency. Through a quick response, the Indonesian Air Force SAR team can provide the assistance and services needed by victims effectively and efficiently. Efforts to deal with victims quickly included evacuation and rescue immediately after the earthquake occurred. The Indonesian Air Force SAR team worked quickly to evacuate victims who were trapped in the rubble of buildings and affected areas. They also provide first aid to victims who experience injuries or medical emergencies.

Apart from that, proper handling of victims also involves providing logistical assistance, including food, clean water, sleeping equipment, and other basic needs for the refugees. The Indonesian Air Force's SAR team is trying to ensure that logistical assistance is distributed on target and reaches those who need it as soon as possible. The performance of the TNI-AU SAR Team personnel was 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 an optimal recovery after a disaster. In measuring the performance of the TNI-AU SAR 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 the actions taken and identify areas where improvements can be made to improve response and victim care in the future.

Coordination with related agencies

Coordination with related institutions is an important factor in the performance of TNI-AU SAR Team personnel during

the earthquake emergency response period in Cianjur Regency. In this operation, the TNI-AU coordinates and cooperates with several related institutions to maximize disaster management efforts. Some of the institutions involved in this coordination include:

- 1) Regional Disaster Management Agency (BPBD) The TNI-AU is working with the Cianjur Regency BPBD to gather information regarding emergency situations, urgent needs, and aid distribution. BPBD is responsible for planning, coordinating, and implementing disaster management activities at the regional level.
- 2) Local Government: The Indonesian Air Force coordinates with the local government of Cianjur Regency to obtain the latest information on affected areas and community needs. This collaboration is important in aligning disaster management efforts and ensuring that the response given by the TNI-AU is in accordance with the directions of the local government.
- 3) Other SAR teams: TNI-AU cooperates with other SAR teams, including those from the Indonesian Army, Indonesian Navy, Basarnas, and other disaster management agencies. This coordination is necessary to divide tasks, support each other in search and rescue, and maximize efforts to deal with victims.
- 4) The medical team from TNI-AU coordinates with the medical team from the nearest hospital or other health facility to provide medical care to the victim. The medical team is responsible for providing first aid, follow-up care, and evacuating 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 allows for the effective use of additional human resources and the distribution of aid. Through coordination with related institutions, the TNI-AU can obtain accurate information, distribute assistance efficiently, and maximize disaster management efforts in the earthquake emergency response in Cianjur Regency.

Up-to-date information monitoring

Monitoring the latest information is an important aspect of the performance of the TNI-AU SAR Team personnel during the earthquake emergency response in Cianjur Regency. In an emergency situation, the team needs to continue to monitor and update the latest information regarding emergency conditions, disaster developments, and the needs of affected communities. Several steps that can be taken to monitor the latest information are as follows:

- 1) Authorized Information Source. The Indonesian Air Force SAR team needs to follow official sources of information issued by related institutions, such as the National Disaster Management Agency (BNPB), the Meteorology, Climatology, and Geophysics Agency (BMKG), as well as local governments. This official information provides actual data on earthquake conditions, damage estimates, evacuation locations, and other urgent needs.
- 2) Communication with the Relevant Team. The Indonesian Air Force SAR team needs to establish effective communication with related teams, including SAR teams from other agencies, medical officers, security forces, and volunteers. Through well-established communication, up-to-date information can be obtained and delivered quickly for making the right decisions in handling victims.
- 3) Social Media Monitoring. Social media can also be an important source of up-to-date information. The Indonesian Air Force SAR team can monitor the official social media accounts of BNPB, BMKG, and local governments, and seek information from eyewitnesses or local residents who share information about current conditions in affected areas. However, it is important to verify the truth of the information before taking action based on it.
- 4) Evaluation and Reporting. The Indonesian Air Force SAR 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 making the right decisions in handling earthquakes. By carefully monitoring the latest information, the Indonesian Air Force's SAR Team can obtain an accurate picture of the emergency situation, so that it can respond quickly and appropriately when handling earthquake victims in Cianjur Regency.

Availability of tools and defense equipment support

The availability of tools and support for defense equipment (the main weapon system tool) plays an important role in improving the performance of the TNI-AU SAR Team personnel during the emergency response to the earthquake 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. The helicopter enables the Indonesian Air Force's SAR team to carry out aerial monitoring, search and rescue, as well as logistics distribution to remote or isolated areas that are difficult to reach by land vehicles. The availability of adequate helicopters will speed up the response and evacuation of earthquake victims.
- 2) Communication Tool. Reliable and up-to-date communication tools are a critical factor in supporting coordination and collaboration between personnel of the TNI-AU SAR Team. By using good communication tools, the SAR team can communicate smoothly and obtain the latest information about emergency situations, progress of tasks, and coordinate activities with related teams.
- 3) Rescue Equipment. The Indonesian Air Force SAR team must be equipped with adequate rescue equipment, such as ropes, safety ropes, safety helmets, emergency medical equipment, lighting equipment, and first aid equipment. This equipment will assist in carrying out rescue and evacuation of earthquake victims safely and effectively.
- 4) Land Vehicles. Apart from helicopters, the availability of adequate ground vehicles is also important in supporting the mobility and accessibility of the SAR team. 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 Inventory. 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 effectively provide assistance to refugees and affected communities. With the availability of adequate tools and defense equipment support, TNI-AU SAR Team personnel will be able to carry out their duties more efficiently and effectively in handling earthquake emergency response in Cianjur Regency.

V. CONCLUSION

In a report prepared 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 the TNI-AU SAR Team personnel is coordination with related institutions. In this operation, the Indonesian Air Force cooperates and coordinates with various related institutions to maximize disaster management efforts.

In addition, monitoring the latest information is also an important aspect of the performance of the TNI-AU SAR Team personnel during the earthquake emergency response period in Cianjur Regency. In this emergency situation, the TNI-AU SAR team needs to continue to update and monitor information regarding emergency conditions, disaster developments, and the needs of affected communities.

Furthermore, the availability of tools and defense equipment support also plays an important role in improving the performance of the TNI-AU SAR 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, communications equipment, rescue equipment, ground vehicles, and logistical supplies. The availability of these tools and support will assist the TNI-AU SAR team in carrying out their duties efficiently and effectively.

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