



STRATEGY OF THE ARMY NUBIKA ZENI COMPANY TO FACE THE COVID-19 PANDEMIC

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Abstract

The threat of pandemics and epidemics of dangerous and deadly diseases is very likely to occur in Indonesia. The spread of Covid-19 that is out of control and exceeds the capacity of the epidemic, has made the status of the spread of Covid-19 a pandemic outbreak. Pusziad CBRNE Company is a central level which implementing agency in the field of CBRNE. Biological threats increase and spread, such as in handling the Covid-19 pandemic, Pusziad CBRNE Company has limitations. Pusziad CBRNE Company's capability is not sufficient from the aspect of organization, personnel resources and equipment. This study analyzes how the strategy of Pusziad CBRNE Company in dealing with the Covid-19 pandemic with qualitative research and data collection through observation, interviews and documentation. The occurrence of the Covid-19 pandemic that hit the world, including in Indonesia with a fairly high death rate, is clear evidence of a biological threat. Biological threats in Indonesia are increasing evident with the development of bio-science and its supporting facilities in Indonesia as well as the opening up to bioterrorism actions. With increasing biological threats such as the Covid-19 pandemic, the role of Pusziad CBRNE Company becomes very important. Faced with the limitations of Pusziad CBRNE Company, the strategies that need to be suggested are reviewing the Pusziad CBRNE Company organization to be upgraded to a detachment or battalion, proposing optimal budget support, equipping special equipment for CBRNE and increasing the human capacity resources of Pusziad CBRNE Company personnel. Therefore, against the backdrop of increasing perceptions of biological threats in Indonesia, Pusziad CBRNE Company needs to improve its organization, personnel capabilities and equipments, so that Pusziad CBRNE Company has reliable capabilities supported by a proportional organization with professional personnel and sophisticated equipment.



Keywords: Nuclear biology and chemistry (CBRNE), Biological Threats, Covid-19 Pandemic, Capabilities and Strategies

Introduction

Nowadays, the development of technology both at the international, regional and national levels is very rapid, including the development of Nuclear Biology Chemical (Nubika) technology, thus demanding a country against the consequences/risks of utilizing the development of Nubika technology. The positive use of Nubika's technological developments will be beneficial for increasing the knowledge, capabilities and welfare of a country. However, if it is used negatively for certain purposes, of course it will affect the defense aspect of a country, so that it demands that preventive actions always be carried out so that it does not lead to repressive actions. Nubika's threats and dangers generally come from the use of Nubika weapons, the use of Nuclear/Radioactive materials, biological agents and chemical agents, both in installations and in transportation/transportation as well as due to natural disasters with Nubika aspects. Nubika's dangers can threaten the safety of humans and the environment, including animals and plants. The level of impact caused in an area is very dependent on the type and amount of Nubika material released into the environment.

The development of synthesis and biological engineering is very useful in improving human welfare, as well as in medical and medical interests. But on the other hand, this development is also a threat if it is used for the purposes of terror



or war. At this time the trend of the use of biological and chemical substances by terrorists is increasing. The use of Sarin Gas and Avian Influenza Virus can be used by terrorist groups as weapons. The threat of a pandemic/epidemic of dangerous and deadly diseases is very likely to occur in Indonesia as a consequence of the rapid and massive globalization of the current movement of goods and people. Various actors can use biological toxins as chemical weapons to attack other individuals, groups or countries through acts of terrorism or sabotage.

The threat of biological toxins can be caused by natural events, namely the natural transfer of viruses from animals and then transmitted to humans, accidents in research facilities or due to closed biological weapons attacks. Various phenomena have shown the impact of the threat of the development of biotechnology and microbiology today, especially in the research of various viruses that cause disease in humans, animals, or plants. Various viruses that have been known previously have no effect on human, animal or plant health, but due to microbiological engineering they have the ability to kill, incubate, and grow in a fairly short time in the host's body. Biological disasters that arise in the form of the emergence of various diseases that are symptomatic in epidemics and can kill humans and animals in a short time with a large enough number. Several viruses that are known and are very dangerous for living things, have been the cause of epidemic diseases and have the potential to be used as weapons of mass destruction, such as anthrax bacteria, Ebola virus, marbug virus, bubonic plague virus, cholera-causing bacteria and others. Another potential that can be used as a biological weapon is the poison contained in plants such as Ricin which comes from the Castor Bean plant (Robert Eryanto Tumanggor, 2018).



The use of biological agents as weapons is not new. For example, in 1767 during the war between England and France against Indian tribes in North America, British soldiers gave blankets contaminated with smallpox virus to local Indians. In World War I, the German Army used Anthrax and Glander to make cattle which were exported to the allied army's territory so that they were infected. Germany uses cholera in Italy and Plague in St. Petersburg. And the murder of Georgi Ivanov MARKOV, a fugitive from Bulgaria, was killed because his writings were considered harmful to the Communists by using the Ricin Poison (Team Subditbin Nubika Ditziad, 2020).

A pandemic is a condition of the spread of certain types of diseases that occur in more than one country. This epidemic has spread in almost all parts of the world. A pandemic condition describes a situation where the spread of a disease is out of control. Recently, the world's population has been shocked by the new corona virus or another name from the WHO, "COVID-19". Starting from Wuhan, China, now the deadly virus has spread to several countries in the world. World scientists continue to conduct research on this corona virus and a number of researchers say that this new corona virus is similar to SARS and MERS. This virus was first reported to WHO on December 31, 2019. WHO designated the corona virus as a Public Health Emergency of International Concern (PHEIC) since January 30, 2020 due to a significant increase in cases in several countries. country. On February 12, 2020, WHO officially designated this novel coronavirus disease in humans as Coronavirus Disease (COVID-19).

The spread of Covid-19 that is out of control and exceeds the capacity of the epidemic, has made the status of the spread of Covid-19 a pandemic outbreak. Covid-19 is caused by SARS-COV2, which belongs to the same large family of



coronaviruses as the one that caused SARS in 2003, only with a different type of virus. The symptoms are similar to SARS, but the SARS death rate (9.6 %) is higher than Covid-19 (currently less than 5%), although the number of Covid-19 cases is much higher than SARS. Covid-19 also has a wider and faster spread to several countries than SARS (Ministry of Home Affairs Working Team for COVID-19 Task Force Support, 2020).

The increase in the number of Covid-19 cases is happening quite quickly and has spread to 224 countries in the world. As of August 2021, 4,517,240 people have died worldwide and 217,558,771 people have tested positive for Covid-19 (WHO, 2021). In Indonesia, the death rate due to Covid-19 has reached 133,676 people as of August 2021. The increasing number of deaths due to Covid-19 is in line with the emergence of new variants of the virus. Although several countries have used vaccines as a preventive measure, due to the ferocity of the new variant of Covid-19, the number of deaths due to Covid-19 continues to increase.

The Covid-19 pandemic has caused global socioeconomic disruption and has changed the global order and international relations between countries in the world. The Covid-19 pandemic has forced many countries to close their territories. Transportation activities and community movements are also restricted. Bilateral and multilateral relations between countries have been disrupted due to this pandemic.

In the midst of the Covid-19 pandemic, a global trend emerged, namely global business competition for vaccine production among countries. They are competing to find a vaccine for this disease which must be addressed immediately, so that there is a business aspect that is undeniable even though the state pays for it , but the company will benefit. The global political situation due to



the pandemic has created competition among countries in the world. This can be seen from the competition between countries in finding a Covid-19 vaccine.

Since the beginning of the Covid-19 outbreak, the Indonesian government has actually taken steps to pick up and secure Indonesian citizens in Wuhan, China for observation on Natuna Island. The Nubika Pusziad team carried out a humanitarian mission to observe Indonesian citizens from Wuhan China for 14 days in early February 2020, however, the spread of Covid-19 in Indonesia was unavoidable.

National defense is structured to be able to ward off various forms of military threats and non-military threats (Ministry of Defense of the Republic of Indonesia, 2015). Attacks using biological weapons are a form of military and non-military threat. As a military threat is to use biological weapons in warfare, while non-military threats are to use biological weapons to attack civilians when a war does not occur. The forms of military and non-military threats that use biological weapons require a strong state defense system.

Law of the Republic of Indonesia No. 3 of 2002 concerning National Defense states that national defense is all efforts to defend the sovereignty of the state, the integrity of the Unitary State of the Republic of Indonesia and the safety of the entire nation from the possibility of disasters and disturbances to the integrity of the nation and state. The Law of the Republic of Indonesia Number 3 of 2002 concerning National Defense states that the TNI is the main element of national defense in the face of military threats. Meanwhile, for non-military threats, the TNI is a supporting element for national defense.

In accordance with Article 7 of Law Number 34 of 2004 concerning the TNI, one of the duties of the TNI is in Military Operations Other than War (OMSP). The



use of TNI AD forces in various OMSP activities is essentially part of the interests of state defense carried out by the TNI. Pusziad as the person in charge of developing Nubika's capabilities within the TNI-AD, in its implementation, is organized by the Pusziad Nubika Sub-Directorate General. Activities in the field in the field of nubika were carried out by 1 Nubika Engineering Company, 12 Yonzipur Nubika Platoon, 8 Denzipur Nubika Platoon, and 1 Pusziad Nubika Laboratory. The Nubika Pusziad Engineer Company is better prepared to deal with Nubika's dangers in the field.

The main task of the Pusziad Nubika Engineer Company based on the Orgas Company Nubika Decree No. Kep/3/VI/1991 dated 26 June 1991 is to organize and carry out Nubika investigations and decontamination in the context of securing troops and or the community against the dangers of Nubika due to enemies or environmental pollution by waste/ an industrial accident or by a natural event. The Kizinubika Pusziad organization is equipped with personnel, material, and software as well as programmed training according to the applicable doctrine, to create stability and operational readiness of the unit to be reliable in carrying out the tasks it carries out. In order to have stability and operational readiness, coaching is carried out continuously. The success rate of coaching is assessed from the results of achieving stability and readiness of the unit.

The Nubika Pusziad Engineer Company (Kizi) was inaugurated on April 22, 1986. This unit is capable of carrying out investigations on nuclear radiation, biological agents and war/non-war poisons in a certain location. The next capability is carrying out complete decontamination of personnel and material contaminated with Nubika, carrying out Nubika laboratory research and carrying out technical assistance to units within the Indonesian Army. In carrying out its



duties, of course, the Pusziad Nubika Engineering Company has limited capabilities, including in carrying out the detection and identification of radioactive dust, samples of biological agents and war/non-war poisons which are limited to those commonly known. Then in carrying out complete decontamination of personnel and individual equipment and units, it is limited to only 1 (one) Infantry Battalion, while for field decontamination it is limited to only 9000 m²/1,000-liter of decoction material solution within 3 hours.

The Covid-19 pandemic until 2021 has not ended and the emergence of new variants has caused the spread of the virus to be faster and wider in various countries. The Indonesian government continues to strive to suppress the rate of transmission of the virus through various social restriction policies, including involving the TNI in assisting the handling of the Covid-19 pandemic. One of them is the involvement of the Nubika Engineer Company (Kizi Nubika) Pusziad as the only strategic unit in the Indonesian Army that specifically handles the danger of Nubika. When viewed from the condition of Kizi Nubika's capabilities, within the organization, Nubika's personnel and special equipment, requires meeting the needs of modern and sophisticated Nubika special personnel and equipment. Moreover, with the wide spread of Covid-19 which is a biological disaster, it requires the development of a unit which is currently only at Company level which is only able to handle 2 (two) trouble spots simultaneously. The Upper Command's policy regarding the development of Kizi Nubika is still running slowly, so it requires an analysis of its current capabilities. Based on the 2020 Nubika Kizi Unit report, there are no personnel who have reliable capabilities in identifying biological hazards. Special tools for identifying biological threats have not been updated and are not yet modern and raw materials for identification are



not available. Moreover, if a biological threat or disaster occurs in various regions in Indonesia, such as the Covid-19 pandemic, then Kizi Nubika cannot carry out his duties optimally.

Research methodology

The increasingly widespread outbreak of the Corona virus which has claimed many deaths, has an impact on the sluggish global economy. The involvement of the TNI AD in carrying out assistance tasks to the government in dealing with the Covid-19 pandemic so far is a form of calling and concern to participate in reducing the burden on people who are experiencing difficulties due to the Covid-19 pandemic. This task is in line with what is the main task of the Indonesian Army according to Law No. 34 of 2004 concerning the TNI, especially on the task of Military Operations Other than War (OMSP).

In conducting research on the strategy of the Nubika Pusziad Company of Engineers in dealing with the Covid-19 pandemic, the researchers chose qualitative research methods to obtain research objectives effectively and efficiently. Qualitative research method is a research method based on post-positivism or enterpretative philosophy, used to examine the condition of natural objects, which are used in natural conditions, so that researchers are the key instrument in conducting research, data collection techniques are carried out by triangulation (combined), the analysis is inductive/qualitative, and the results of qualitative research emphasize meaning rather than generalizations (Sugiyono, 2014). To solve a holistic and complex problem with the object of the research conducted, data collection was carried out by means of interviews or interviews,



observation, and data collection with documents and triangulation, in order to support a sharper and in-depth analysis process for solving the problems studied.

Researchers want to describe and dig deeper related to the ability of the Nubika Engineer Company in dealing with biological emergencies faced with the threat of today's war and the Covid-19 pandemic phenomenon that is sweeping the world. After the data is obtained, the researcher analyzes and then interprets the data.

Qualitative research requires qualitative data such as document data, audio-visual data, interview data, and literature study (Creswell, 2014). The phenomenological approach itself is a study of awareness from a person's main perspective of the existence of a certain phenomenon (Moleong, 2014). In collecting data, the researcher uses a qualitative phenomenological method where the researcher collects data with participant observation to find out the participants' essential phenomena in life experiences. Phenomenological research steps that must be carried out are to find research phenomena that are reasonable to be researched, analyze whether these phenomena are suitable to be revealed through phenomenology. If human interaction occurs, both as individuals and as groups using tools, signs, or symbols in communicating, then phenomenology is reasonable to use, then determine the subject under study, carry out data collection in the field by making notes, including photos, data analysis, followed by report writing. . Data analysis has been going on since the beginning of the research, data reduction and data triangulation so that the description of the real phenomenon is carried out carefully and carefully.

Qualitative research data to be collected can be conveyed in a narrative manner including, among others, detailed descriptions of certain situations,



activities or events or phenomena concerning humans, other human relationships, direct opinions from experienced people, attitudes, ways of thinking, views, behavior. behavior of a person, archives or report documents. Qualitative research data that will be presented in descriptive or narrative form, what is presented from the research results is expected to be sourced from data that has been collected in the form of recordings, photos, interviews and personal documents about an object of research and then reported according to what it is (Sugiyono, 2014) .

Results and Discussion

Research result

From the results of research conducted by conducting interviews with several sources, information was obtained that from the explanation of the Head of the Army Engineer Center, Major General TNI M. Munib, SIP that biology can be said to be a threat if it is used for the purposes of terror or war. At this time the trend of the use of biological and chemical substances by terrorists is increasing. The use of Sarin Gas and Avian Influenza Virus can be used by terrorist groups as weapons.

The same thing was conveyed by Paban III/Binsipapsat Sopsad Headquarters Col. Inf Djauhari, SE, MM related to the rapid development of synthesis and biological engineering, stated that the current development of biotechnology and microbiology, especially those aimed at researching various viruses that cause disease in humans, animals or plants, has been quite advanced. Various previously known viruses have no effect on human, animal or plant health but



due to microbiological engineering have the ability to kill, incubate and develop in a fairly short time in the host's body.

Biological threats in Indonesia have occurred, considering that during the last decade in the country and in regional countries, various infectious and dangerous diseases have spread. In accordance with the statement from Paban III/Binsipsat Sopsad Headquarters that biological threats in Indonesia have occurred with the outbreak of several infectious diseases caused by viruses, such as SARS, Avian Influenza, Anthrax and Polio. All of them are endemic and spread to most of the people.

The current Covid-19 outbreak that is attacking the entire world can be said to be the worst crisis since the end of World War II. The spread of Covid-19 that is out of control and exceeds the capacity of the epidemic, has made the status of the spread of Covid-19 a pandemic outbreak. The consequences will be many, causing instability in many countries, economic crises, political crises, social crises and possibly conflict. The United Nations called it, what is happening now is not only a health crisis, but a humanitarian crisis. Regarding the Covid-19 pandemic, the Head of the AD Zeni Center stated that until now there is no certainty about the source of the cause of the spread of Covid-19, due to natural factors, an accident at a biological research facility or indeed a biological weapon attack. However, one thing that is more important is that Indonesia's readiness and ability to deal with it is needed before this is proven and becomes a reality.

Furthermore, regarding Kizi Nubika Pusziad, the results of an interview with the Head of the Army Engineer Center explained that the Nubika Company which was formed in 1986 had embryos from the Menzikon line unit. The unit was later designed to become the Nubika Rapid Reaction Engineer Battalion. It was a unit



designed to be the nubika rapid reaction engineer battalion. However, until 34 years had passed, this unit remained as a company only. It was also repeatedly proposed that the Nubika Engineer Company be upgraded to the Nubika Engineer Detachment, before becoming a battalion. But it always runs aground on the grounds of a minimal defense budget.

Furthermore, regarding the involvement of personnel and engineering units in dealing with the Covid-19 pandemic, Paban III/Binsipsat Sopsad Headquarters explained that currently the Engineer Units involved in handling the Covid-19 pandemic include Kizi Nubika Pusziad at Wisma Atlet Hospital, Kemayoran and Ton Nubika Yonzipur 1 /DD Kodam 1/BB at Galang Island Hospital. Activities carried out include: Decontamination of Medical Personnel/Vehicles/Medicine Fields and Rooms and Medical Waste Disposal. While at the regional level, the Nubika Platoon in the Yonzipur or Denzipur Units is actively involved in handling Covid-19 in their respective Kodam areas, through decontamination and sterilization of personnel and equipment of the Regional Covid-19 Emergency Hospital, decontamination of important/vital facilities, public and social services as well as burial of the bodies of Covid-19 victims, engineering of decontamination/sterilization booths, manufacture of decontamination solutions, hand sanitizer solutions, hand washing basins, and cloth masks.

In relation to the capability of Kizi Nubika Pusziad, the Head of Sub-Directorate of Jihandak Nubika Pusziad Col. Czi Basuki Sabdono explained that by looking at the development trend of the Nubika threat, an organization at the Company level as a strategic unit of the Indonesian Army which is only able to handle 2 trouble spots, makes it impossible to deal with increasing threats. So it



needs to be developed to a minimum of Battalion level so that it can cover the 3 Kogabwilhan currently available.

The obstacle faced for the involvement of the Nubika Pusziad Engineer Company in dealing with biological threats is the limited number of personnel with scientific backgrounds in Physics/Nuclear, Biology, and Chemistry. Then there are still limited new equipment, especially the detection of Biological Weapons Agencies. Observing the current progress of Nubika technology and the development of Nubika's threats, it is necessary to increase Nubika's equipment both in quantity and quality, especially in protection equipment, field detection equipment, decontamination materials, and laboratory identification tools for viral types of biological agents.

By looking at the condition of the equipment owned by the Kizi Nubika Pusziad unit, the Head of Sub-Directorate of the Jihandak Nubika Pusziad stated that in general the quality and quantity of the Nubika Pusziad Engineer Company Matsus used for operational purposes is currently still limited. Observing the current progress of Nubika technology and the development of Nubika's threats, it is necessary to increase both the quantity and quality, especially in protection equipment, field detection equipment, decontamination materials, and laboratory identification tools for viral types of biological agents.

The same thing was conveyed by Dankizi Nubika Pusziad. Following up on the condition that Matsus Nubika is currently faced with modern threats with increasingly sophisticated technology, stated that Matsus Nubika in the Pusziad Nubika Engineering Company is not sufficient, especially in the face of the current development of the Nubika threat. It's also technologically behind and needs to be improved with new tool updates. The current condition of supporting materials



that are consumable, especially to support the detection function of biological agents, have an expiration date of less than 1 (one) year. Kizi Nubika's laboratory capabilities are limited to the equipment they have, so to detect complex biological agents they still rely on the Pusziad Zeni Laboratory.

Discussion

Perception of Biological Threats in Indonesia

The development of Synthetic Biology Science and Technology and Microbiological Genetic Engineering is currently so advanced in order to improve human welfare, as well as in medical and medical interests. Genetic engineering is the transplantation of one gene to another, both between genes and across genes to produce products that are useful for living things.

At first, genetic engineering was only done on plants to solve the food shortage of the world's population. In its development, genetic engineering does not only apply to similar plants and animals, but has evolved in humans and across species. The basic principle of genetic engineering technology is manipulating changes in the composition of DNA nucleic acids or inserting new genes into the DNA structure of the recipient living organism, this means that the inserted gene in the recipient organism can come from another living creature.

Nubika's threat and danger is a state of danger that threatens the life of the nation and state, caused by the threat of enemy weapons or due to a Nubika emergency. Nubika's threats and dangers can come from the use of Nubika weapons, industrial installation accidents, acts of terror/sabotage and natural disasters with Nubika aspects.

Biological weapon is a weapon system using living things/poisons to cause plague, death, destruction to humans, animals, plants and supplies with the



intention of weakening the opponent's potential. Examples of biological weapons are bacteria, viruses, protozoa and so on by taking into account the influence of factors of temperature, humidity, wind, terrain that can affect the life of bacteria, viruses, protozoa and other types used by the enemy.

Based on the explanation from the sources above, it is necessary to believe that there is a possibility that Indonesia is being attacked by biological weapons by certain groups. Some of the underlying facts include: First, the systematic epidemic of various diseases in Indonesia. From the beginning of 2004 to the middle of 2005, various communicable diseases have occurred in Indonesia. The epidemic of these various diseases has attacked both humans, animals or a combination of both. This is found in various places in Indonesia systematically and continuously.

Several diseases that are epidemic and attack humans in Indonesia include the outbreak of SARS, the Hong Kong flu virus that attacks children and adults. Wild Polio Virus which attacks and causes paralysis in children under five on the island of Java (Sukabumi, Indramayu and Jakarta). Cases of wilted paralysis in adults whose cause is currently unknown in Solo - Central Java.

Some viruses that attack animals in Indonesia include the Avian Flu Virus. This virus attacks various poultry animals in various areas in Sulawesi and the island of Java (chicken or quail). A virus that attacks goldfish on people's farms in Lake Toba, North Sumatra. While the virus that attacks humans and animals at the same time in Indonesia is the Anthrax Virus. This virus attacks cattle and communities around grazing or rearing in Bogor. Based on these facts , it is appropriate to suspect and be wary of the possibility of a biological weapons



attack taking place in Indonesia. These attacks may be carried out by certain groups for certain purposes.

The second fact that suspects the possibility of Indonesia being attacked by biological weapons is the exclusion of Bio Farma from the list of WHO partners. This is an attempt to weaken the ability of the Indonesian government to produce vaccines. The production of this vaccine is mainly for the prevention of various diseases caused by harmful germs (bacteria or viruses). Bio Farma, a state-owned company engaged in the production of various vaccines, has been removed from the WHO's list of partners since the end of December 2004. The reason for removing Bio Farma from the WHO partner list is that a scratch was found on the bottle of Bio Farma's vaccine during a routine inspection by WHO.

With the exclusion of Bio Farma Company from the list of WHO partners in vaccine production, it will give a bad image to the Bio Farma company. As a result, any quality of vaccines issued by Bio Farma will be deemed unfit for use as an effort to prevent various infectious diseases caused by viruses. In addition, the company Bio Farma will not get a license to obtain various viral vaccines belonging to the WHO. Especially for virus vaccines that are not owned by the Bio Farma company to be reproduced and produced in Indonesia. With this fact, before the Bio Farma Company is re-entered the WHO partner list, the country's ability to deal with various infectious diseases will be very vulnerable and weak.

The threat of Nubika in an emergency is a real threat that has occurred in Indonesia, including biological threats that have had an impact on national emergencies. The reasons why Indonesia is prone to biological threats, so that it becomes the basis for the need to increase the ability to deal with Nubika hazards,



include: First, the development of Bio-science and its supporting facilities in Indonesia.

Domestically, there has been an increase in the number and quality of health care facilities, health laboratories and research facilities for bioscience purposes. Most of these facilities import a lot of materials and laboratory equipment, especially various pathogenic microorganisms as reference materials or materials for research.

The problem is that the safety standards of the microbiology laboratory are still classified as Biosafety level 2, but some of them have plans to be upgraded to Biosafety level 3. This condition requires the ability to carry out supervision of the ownership and use of microbiological pathogens so that they are not used for deviant purposes and prevent their release. materials from these facilities either intentionally or unintentionally.

The second reason why Indonesia is prone to biological threats is that Indonesia is open to terrorist attacks with biological weapons (Bioterrorism).

The fact that Indonesia has experienced several acts of terrorism in the form of bombs detonating using conventional explosives or dual-use chemicals, various arrests and seizures of illegal possession of explosives that have taken place until now, this indicates that our country is still vulnerable. against acts of terrorism.

Terrorists prefer biological weapons over nuclear or chemical weapons. The reason is that the content of biological weapons (Biological Agencies) itself is invisible (low visibility) so it is not easily known and makes it easier to keep its confidentiality during the transportation process. Then biological agents are relatively easy to deliver (relatively easy to deliver). The funds needed for the manufacture of biological weapons are relatively small (substantial accessibility)



because the materials for biological weapons are living things in the form of bacteria or viruses which are relatively easy to obtain and breed. The use of biological weapons does not cause damage to buildings (doesn't affect structures), is undetectable and can stay in a contaminated place for a relatively long time. This condition guarantees its effectiveness to cause fear and panic in the community.

Kizi Nubika Pusziad's Strategy in Combating the Covid-19 Pandemic

Covid-19 opens up horizons, how important it is for a country to have a nubika unit, apart from medical, to deal with the dangers of nubika. In accordance with Presidential Instruction Number 4 of 2019 concerning capacity building in preventing, detecting, and responding to outbreaks, diseases, global pandemics and Nubika emergencies, in the third part it is stated that State Ministries and Institutions must establish policies and take steps in order to increase the ability to prevent, detecting, and responding to disease outbreaks, global pandemics, and nuclear, biological, and chemical emergencies are carried out in accordance with the implementation action plan as stated in the attachment to the Presidential Instruction.

Pusziad as the person in charge of developing Nubika's capabilities within the Indonesian Army, which in its implementation is organized by the Sub-Directorate of Jihandak Nubika Ditziad. Currently, the implementation of activities in the field of Engineers AD has 1 Nubika Engineer Company, 15 Yonzipur Nuclear Platoon, 7 Denzipur Nubika Platoon and 1 Pusziad Nubika Laboratory. The Nubika platoon will later become the embryo of the Nubika Company as desired by Headquarters. So that the Indonesian Army now has one company and 22 Nubika platoons, equivalent to eight companies or two



battalions. Among these units, Kizi Nubika Pusziad and Ton Nubika Yonzipur 10/2 Kostrad were better prepared to deal with the dangers of Nubika in the field.

Kizi Nubika as the implementing unit of Pusziad, participates in disaster management activities in the emergency aspect of Nubika. However, with the current condition of Kizi Nubika, it is felt that it is not optimal in carrying out its capabilities to prevent, detect, and respond to disease outbreaks, global pandemics and Nubika emergencies. This is because Kizi Nubika is currently seen from the condition of Kinubika's personnel only consisting of 96 members who are still considered insufficient to carry out covering areas in facing the threat of Nubika's modern era. Owned materials also need to be updated according to the nature of today's modern threats.

Strategy in a narrow or broad sense consists of three elements, namely ends, means and ways (Matlaff, 1967). In terms of goals (ends), the deployment of Kizi Nubika Pusziad to support the main tasks of the TNI and TNI AD was expanded by involving Kizi Nubika in assisting civilian agencies. This requires engagement rules, standard procedures, and contingency plans. In line with the policy of building defense-based capabilities, the modernization and validation of the organization and the tasks of Kizi Nubika Pusziad were renewed to be able to support all types of operations that have the impact of Nubika threats.

In terms of facilities (Means), the modernization carried out on Kizi Nubika Pusziad has an impact on the strengthening of Nubika's special equipment to support TNI operations. However, this must still be balanced with a larger personnel and organizational structure so that it is in accordance with the level of operations carried out by TNI units. Nubika's special tools have an influence on national defense as was done after the spread of the Covid-19 pandemic. Nubika's



special equipment with a limited number of personnel experienced an excessive workload in assisting the government in accordance with the mandate of Law Number 34 of 2004.

National defense has a relationship with sovereignty and security (Balcerowicz, 1999). National defense complements each other to preserve and protect sovereignty and security. Sovereignty is a guarantee of security and security guarantees national defense. By understanding this view, the way that Kizi Nubika can improve his role is to involve himself more broadly with agencies that are related to biological threats. The increasingly real escalation of biological threats requires the involvement of TNI Nubika units on a large scale in coordination with relevant agencies.

As the implementation of a strategy consisting of three elements, several strategic steps of Kizi Nubika Pusziad in dealing with the Covid-19 pandemic include: First, Danki Zeni Nubika must try to make a study of the organization currently in effect as a suggestion for input to the top Command, so that it becomes a good input for the top command to be followed up immediately through an assessment at the Kodiklatad level. The thing that underlies the study is the ability of the Nubika Engineer Company, which only handles two trouble spots in the field in the face of Nubika's threats. Then the urgency of the Covid-19 pandemic, is a biological threat that has an impact on the socio-economic life of the country.

The second step, Kapusziad as the branch builder who knows for sure the need for budget support needed to meet the needs of Alsus Nubika Nubika Engineer Company in dealing with biological emergencies, then the efforts are



made by conducting an inventory of materials and equipment which are described in the form of budget requirements and submitted to the Top Command.

Third, to optimally support the main tasks of the Nubika Engineer Company, it is necessary to have Nubika special equipment and base facilities that are modern and in good condition as the main tools used to support the implementation of Nubika's disaster management tasks. In fulfilling this need, it must pay attention to the priority scale as a form of material guidance that has been outlined by the Upper Unit, but must also be guided in accordance with the material Organization and Tasks (TOP) of the Nubika Engineer Company so that it can continue to support the mobility of the TNI AD units in carrying out their main tasks. TNI AD optimally.

Next is the fourth step, by adding to the experience of assignment and increasing the human resources of the personnel of the Nubika Zeni Company. Having assignment experience will have a positive impact on the personnel of the Nubika Zeni Company both in terms of the use of equipment and supporting materials as well as in terms of other knowledge and skills. Increasing the quantity of personnel by planning the fulfillment of Company personnel by allocating the number of formation education participants in accordance with the needs of the unit. Meanwhile, efforts to improve the quality of personnel are carried out through education, training and collaboration with relevant agencies, both in the form of training and upgrading.

Conclusion



The development of biology in genetic engineering is growing rapidly along with the development of science and technology, if not anticipated properly it can become a serious threat.

Biological threats are a current trend with the outbreak of the Covid-19 pandemic that has hit the world, including Indonesia, with a fairly high death rate. This biological threat has often occurred, including in the country with the systematic epidemic of various diseases. The Covid 19 pandemic is a clear example of the biological threat that has hit the world, including Indonesia, and has had a negative impact on all aspects of life, resulting in the national defense system. Therefore, the perception of biological threats should not be underestimated and should be taken seriously.

Kizi Nubika's strategy in dealing with the Covid-19 pandemic has elements of goals (ends), means (means), and ways (ways). The role of Kizi Zeni Nubika in dealing with biological emergencies, including the current Covid-19 pandemic, is very important. The current organizational structure is only able to handle two trouble spots.

As an implementation, steps were taken by reviewing the improvement of the Kizi Nubika to the Datasemen level or even the Nubika Rapid Response Battalion. The fulfillment of Nubika's special equipment and modernization with the latest technology is carried out in stages and on target and based on a priority scale. The improvement of human resources for Kizi Nubika's personnel is very important both in quality and quantity, through education, training and cooperation.

As for the recommendation on the perception of biological threats in Indonesia, Kizi Nubika Pusziad, must be able to detect biological threats early.



Intelligence is needed, especially in detecting biological agents. Furthermore, preparing the Procedures and SOPs by making the Covid 19 pandemic an experience and evaluation, so that in the future we can anticipate so that incidents of this kind can be prevented at least.

Recommendations for the Kizi Nubika Pusziad strategy in dealing with the Covid-19 pandemic include: (1) Routinely carried out in the Binsat to deploy units of the Indonesian Armed Forces in charge of the Nubika field; (2) Reviewing the organizational structure in accordance with the threats and challenges of tasks faced in the future, including referring to the experience of dealing with the Covid-19 pandemic; (3) There needs to be organizational adjustments to upgrade Kizi Nubika to the Datasemen level or even the Nubika Rapid Response Battalion; (4) It should be a priority to fulfill Nubika's special equipment and modernization with the latest technology carried out in stages and on target and based on a priority scale; (5) It should be a priority to increase Kizi Nubika's human resources both in quality and quantity, through education, training and collaboration with other relevant agencies.

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