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Strategy For Treating Bioterrorism Threats In Indonesia Post Pandemi Covid-19

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Abstract

The Covid-19 pandemic has revived interest in the impact of using pathogens as weapons. Bioterrorism is the intentional release of viruses, bacteria or other agents used to cause disease or death in humans, animals or plants. There is the potential for state-sponsored terrorism against strategic targets and the potential for the use of biological agents in committing crimes that have no political goals but are committed for extortion or revenge. This study aims to analyze the threat of bioterrorism in Indonesia using a qualitative descriptive method. This study involved collecting data from various sources, such as related documents and reports, as well as interviews with relevant experts and stakeholders. The results of the study show that Indonesia is facing a real threat of bioterrorism which can endanger national defense and security as well as public health. Like Covid-19, even though it has been declared a pandemic, Covid-19 can also be called a bioterrorism threat even though it is not fully realized. Through this study, researchers want to show that threat identification in Indonesia still needs to be improved. This also needs to be accompanied by optimizing efforts to prevent and deal with bioterrorism, especially in the aspect of inter-agency coordination and increasing state intelligence capabilities. In supporting these efforts, regulations, human resources, technology and infrastructure need to be prepared as early as possible in order to deal with the threat of bioterrorism.

Keywords: Threats, Bioterrorism, Intelligence, Terrorism, Covid-19

INTRODUCTION

The current Covid-19 pandemic has caused unprecedented global political, economic and social dynamics. The governments of world countries are struggling to overcome the impact of this pandemic and demand their legitimacy and capacity to get out of the pandemic situation effectively. The current situation has raised new concerns after seeing the extraordinary economic, psychological and social impacts of Covid-19 so that it can become a tool of exploitation for countries in the world if it is not anticipated as early as possible, including in Indonesia. Former CIA official Charles Faddis argues that currently, terrorists are already planning future biological terrorist attacks based on what they have learned from the current Covid-19 pandemic (Faddis, 2020). A similar opinion was shared by an international security researcher, Michelle Bentley, who said that Covid-19 could currently change the calculation of the risk of bioterrorism by changing biological weapons from unknown to known by showing the meaning and display of biological warfare attacks (Bentley, 2020). Likewise, Walter Meade argues that Covid-19 has given the world an extraordinary demonstration of the power of weaponised biology (Mead, 2020).

The current Covid-19 pandemic case has created a spectrum of new threats related to the use of biological weapons based on the effects of the coronavirus outbreak, which has created a situation of uncertainty experienced by countries around the world. The Covid-19 pandemic has revived interest in the impact the use of pathogens as weapons can have. Bioterrorism is the intentional release of viruses, bacteria, or other agents used to cause disease or death in humans, animals, or plants (Jansen et al., 2014). Burnette also defines bioterrorism as the threat of using biological agents as weapons to cause fear, terror, economic and political disruption,

and unrest among the population to achieve political, ideological, social, and religious goals, which are the hallmarks of bioterrorism (Burnette, 2013). Bioterrorism aims to create victims, terror, social disruption, or economic loss inspired by ideological, religious, or political beliefs. Usually, terrorists try to achieve their goals through terror, which is caused by violence.

There is the potential for state-sponsored terrorism against strategic targets and the potential for using biological agents in committing crimes that do not have political goals but are carried out for blackmail or revenge purposes (Carus, 1999). The root of bioterrorism is the word "terrorism". In essence, the goal of terrorism is not always the loss of large numbers of lives. Conversely, terrorism is said to be successful if it has caused terror or fear in many people. One definition of terrorism states that terrorism is a criminal act intended or calculated to provoke a state of terror in the general public, a group of people, or certain people for political purposes under any circumstances (Burnette, 2013). There are various terrorist mechanisms and weapons, from the commercial aircraft used in the September 11, 2001 attacks, to suicide bombings in public places, to chemical, biological, radiological, and nuclear weapons (CBRN). Bioterrorism requires biological agents such as bacteria, viruses, parasites, fungi and other microorganisms. According to WHO, the definition of a biological agent is a microorganism such as a virus, bacterium, fungus or other poison that is produced and released intentionally to cause disease and death in humans, animals or plants. Biological agents, such as anthrax, botulinum toxin, and plague, can threaten public health security, causing large numbers of deaths in a short period and are difficult to control.

The damage caused by mass biological weapons can infect every living thing through the air, water and soil, causing an outbreak or pandemic, and it is difficult to detect to prove the motive for its spread. In its history, bioterrorism was carried out in 1763 during the war against the Pontiac (Indian) Tribe in America. General Jeffrey Amherst suggested using smallpox (the variola virus that causes smallpox) and spreading it to the Pontiac Tribe, causing 90% of people from that tribe to be killed (Soeliongan, 2020). Smallpox is spread through infected blankets and handkerchiefs. Then in 1993, in Tokyo, the religious group "Aum Shinrikyo" launched a terror by spreading Sarin poison gas mixed with bacterial spores *Anthrax* in the subway network. And then, in October 2001 in America, there was a terror attack using spore powder *Anthrax* as a bioterrorism agent that was spread through mail envelopes and caused 22 cases of exposure consisting of 11 cases of exposure through inhalation (*inhalation*) and 11 cases of skin exposure (*cutaneous*), finally, in 2009, *Federal Bureau Investigation* (FBI) closed the investigation of the case with the conclusion that Dr Bruce Ivins who is a researcher *Anthrax* from US *Army Medical Research Institute of Infectious Diseases* are perpetrators of bioterrorism*Anthrax* (UPMC Center For Health Security, 2014). Acts of bioterrorism today are more of an effort to cause damage and create fear in society. The impact of using biological weapons differs from other weapons of destruction, such as nuclear and chemical weapons.

Currently, the international world is struggling with an outbreak of the SARS-CoV-2 virus or COVID-19. Although, to date, there is no official and credible evidence regarding whether the Covid-19 virus outbreak was a deliberately engineered biological weapon, the current outbreak of the virus has influenced the assessment of the risks posed by bioterrorism. Covid-19 provides clear evidence of the effects that large-scale disease outbreaks like Covid-19 can have today. The current pandemic will increase the ability of terrorist groups to use biological weapons. According to the Secretary General of the United Nations, Antonio Guterres said that the weakness and lack of preparedness caused by this pandemic illustrate how bioterrorist attacks can occur and can also increase the risk (Clarke, 2020). In addition, leveraging the advantages of studying the effects of the Covid-19 outbreak can not only be studied by terrorist groups. The dual-use nature of biotechnology means that increased investment in biomedical research due to the pandemic will lead to a proliferation of usable laboratories, staff, and materials. misused. Of particular concern are studies that create new

lines of viruses with increased transmissibility or lethality to assess the risk that wild-type coronavirus lines can be transmitted from humans to humans or mutate and acquire the ability to jump from animals to humans, and this should be watched out. So as not to be misused by bad actors (Imperiale & Casadevall, 2020).

The current Covid-19 pandemic outbreak has caused much harm to countries affected and victims of the spread of the Covid-19 virus, including in Indonesia. Indonesia suffered huge losses due to the spread of the Covid-19 virus in the economic, political and social sectors. The Indonesian government must change economic, political, and social policies to adapt them to the handling the Covid-19 outbreak. Based on the conditions experienced regarding the impact caused by the current Covid-19 virus outbreak, which has caused a situation of uncertainty experienced by countries around the world, it shows that the impact caused by bioterrorism can be very extraordinary. A threat must be paid attention to and preparedness is needed to deal with outbreaks that may reappear. Jessica Stern argues that while bioterrorism will likely remain rare because the potential damage from such an attack would be "very high", countries should prepare for potential bioterrorist attacks (Stern, 1999). Terrorists will usually use available weapons, but some will also continue to try to adopt tactics of inflicting mass casualties to achieve ideological, vengeful or religious goals (Leitenberg, 2005).

The development of this new trend of terrorism has taught us that terrorists act as actors who are always dynamic and innovative when necessary, according to developments in the environment and existing conditions. Most of the social science-based studies have explored the intensive possibilities behind the intentions and ambitions of terrorist actors to acquire and explore capabilities in the field of biological agents in carrying out terrorist activities. Terrorism nowadays also involves technology which has the potential to happen to anyone, anywhere and anytime. That shows that the development of the global security environment has a new, more complex face with an increased risk of terrorist threats trying to acquire and propagate terror attacks using biological agent methods. Using biological agents as weapons for terrorist groups is not very common in Indonesia. However, there have been several terrorist attacks using elements of biological substances. The problems that cause biological agents to become a very dire threat are the impacts that are mass and related to broad areas of life.

The definition of a threat according to the State Intelligence Act Number 17 of 2011, a threat is any attempt, work, activity, and action, both domestic and foreign, which is assessed and proven to endanger the safety of the nation, security, sovereignty, territorial integrity The Unitary State of the Republic of Indonesia, and national interests in various aspects, whether ideological, political, economic, socio-cultural, as well as defence and security. Threats to national interests and security today are not only traditional but are more tinged with non-traditional threats. The nature of threats has undergone a shift in meaning, not only covering internal threats, and threats from outside that are symmetrical (conventional), but also asymmetrical (non-conventional), which are global and difficult to identify and categorised as threats from outside or from within. The form and nature of threats also change to be multi-dimensional. Thus, the identification and analysis of threats must be carried out more comprehensively in terms of sources, nature and form, and trends, and following the dynamics of strategic environmental conditions.

In Indonesia, the rules regarding criminal acts of terrorism using biological weapons have been regulated in Law Number 5 of 2018 concerning the Eradication of Criminal Acts of Terrorism. Everyone who unlawfully imports into the territory of the Unitary State of the Republic of Indonesia, manufactures, receives, obtains, delivers, controls, carries, has supplies on him or has in his possession, stores, transports, hides, or removes from the territory of the Unitary State of the Republic of Indonesia chemical weapons, biological weapons, radiology,

micro-organisms, nuclear, radioactivity or its components, with the intent to commit a criminal act of terrorism is deemed to have violated the law in Indonesia. Supervising hazardous materials with chemical and biological elements must also be carried out to prevent the distribution of hazardous materials (B2) with elements of biological weapons to minimise the misuse of B2 as a basic ingredient that can cause terror threats. The Government of Indonesia has regulated this in the Regulation of the Minister of Trade of the Republic of Indonesia Number: 44/M-DAG/PER/9/2009 Concerning Procurement, Distribution and Control of Hazardous Materials. The regulation states that hazardous materials are prohibited from being traded freely, and their distribution is strictly monitored. The manufacturer does this to the user.

Efforts to assess these threats can be realized well if the intelligence apparatus, as part of the national security system, which is the first line can carry out early detection and early warning of various forms and nature of threats, both potential and actual. State intelligence has the role of carrying out efforts, work, activities and actions for early detection and early warning in the context of prevention, deterrence and response to any threats that may arise and threaten national interests and security, including the threat of bioterrorism. The intelligence approach seems to be the main choice in counteracting the threat of biological weapons attacks from terrorist groups.

Based on the description that has been explained above, the authors are interested in researching and analysing in depth the importance of the roles and strategies implemented by intelligence apparatus related to intelligence frameworks, processes and products to overcome or eliminate threats such as bioterrorism and also to provide support for effective decision making. So that policymakers can act to prevent or reduce threats that disrupt Indonesia's national security. Strategy is needed for state intelligence institutions implement that in overcoming the threat of bioterrorism so that state intelligence institutions can properly provide important information as a reference for policymakers to understand current and emerging threats and estimate the risks they pose related to the threat of bioterrorism, supported by the implementation biosecurity in Indonesia.

RESEARCH METHODS

This research uses a qualitative approach with a descriptive type. This type of descriptive qualitative research is research where the researcher tries to provide an understanding through a complete description of a phenomenon that occurs with data support. Sugiyono (2017) defines a descriptive qualitative approach as an approach in a study with a post-positivism paradigm (viewpoint) that views if the subject has a role in the existence of reality. Poerwandari explained that the case in question could take the form of a decision, policy, process or certain special event.

Data collection uses data from primary data sources (the data is obtained directly and has been given to researchers). Then there are secondary data (data sources that are not directly given to researchers but with documents or come from others) (Moleong, 2019). In descriptive qualitative research like this study, the method used to analyze data is the model developed by Miles, Huberman and Saldana. According to Miles, et.al (2014), several main components must be considered in the qualitative analysis process, including data condensation, data display and conclusion drawing, which is done in an interactive form accompanied by a data collection process.

RESULT AND DISCUSSION

The current challenges and threats to Indonesia's defence and security are no longer an open war using conventional weapons. Changes and developments in the international strategic environment have caused a shift in international security. Threats have become increasingly complex and multidimensional in the form of military, non-military, and hybrid threats. One global threat that has received international attention is the misuse of biological agents as weapons and the threat of biological weapons attacks. War in the era of globalisation has changed along with the development of technology, communication and transportation. War at this time has experienced a change in concept from conventional to non-conventional (modern war). The weapons used began to take advantage of the sophistication of modern technology and science. Technological developments have made it easier for humans to find ways to reproduce weapons of mass destruction, one of which is biological weapons. War in the modern era using weapons of mass destruction has a lower cost and greater results than conventional weapons.

The threat of bioterrorism includes real threats that have the potential to disrupt national security stability. Following the meaning of the threat itself from an intelligence point of view through Law number 17 of 2011, what is meant by a threat is every attempt, work, activity and action, both from within the country and abroad which is assessed and proven to endanger the safety of the nation, security, sovereignty, territorial integrity of the Unitary State of the Republic of Indonesia and national interests in various aspects, whether ideological, political, economic, social, cultural as well as defence and security. Faced with the development of the potential threat of bioterrorism in Indonesia, it is still included in the low intensity level. This is reinforced by the development of acts of terror using biological weapons in Indonesia in the last period.

The National Counterterrorism Agency (BNPT) and the State Intelligence Agency (BIN) also provided information that the potential threat of bioterrorism in Indonesia does exist but on a manageable scale. This is due to the limited resources owned by the terrorists, both related to funding and expertise in the biological agents themselves. This is because the existing terror groups have never attended military training like the former Jemaah Islamiyah (JI) group. However, it should be noted that currently, many chemicals and the like are sold freely and without strict requirements on the market. This should be of particular concern because the availability of these materials can trigger a potential threat of bioterrorism.

Bioterrorism is a series of terror activities using biological materials as weapons. In general, there are three forms of biological weapons: first, using poison mixed in food or drinks. Second, using microorganisms such as viruses or bacteria, and third, using the structure of inoculated biological agents (Khoiriyah, 2005). Biological agents used in bioterrorism are microbes that can be engineered, enhanced, extracted for poison, made, and even mutated, so terror using biological agents can cause a high risk of depopulation caused by the spread and infection of diseases in infected living things. The biological agents used in bioterrorism are called bioweapons.

The threat of bioterrorism is real even though the frequency of attacks is still rare when compared to terror attacks in the form of bombs or mass shootings. However, history has recorded various bioterrorism attacks that have been carried out. For example, food contamination in several salad shops in Oregon, United States (US), which was mixed with salmonella bacteria was carried out by a Buddhist sect named Bhagwan Shree Rajnnesti, as a form of sabotage to disrupt the election at that time in 1984, or in 1942, the Soviet Union. Used tularemia germs on Wehrmacht (German Armed Forces) units during the battle of Stalingrad. During World War II, several countries such as Germany, the Soviet Union and the US developed biological weapons by researching various microbes that could potentially become

biological agents. With different usage motives, the development of this biological weapon can also be used for defensive purposes from possible bioterrorism attacks. For example, in Germany, under Hitler's instructions, biological weapons are developed for defence purposes in the form of vaccines to prevent the effects of bioterrorism from other countries.

When viruses, bacteria, fungi and other microorganisms are used as terror weapons, the consequences will be enormous, can weaken the economic, political, health and security sectors and cause death on a large scale. In addition, the spread of biological agents in the act of terror is torturous and detrimental to every individual affected. The recovery time needed also takes a long time if vaccines are not yet available, eventually causing death and paralysis of the national system. Bioweapons have been prohibited from using and developing them by International Law. The Biological Weapons Convention (BWC) effectively prohibits the development, production, acquisition, transfer, stockpiling and use of biological or toxic weapons. Bioweapons can be used to attack humans and other living things, such as livestock and food crops. Bioweapons are very deadly and contagious. Diseases caused by bioweapons will not stay in one area but will spread quickly throughout the world.

Bioweapons can be produced easily and cheaply compared to nuclear weapons, which require lots of radioactive elements, or chemical weapons, which require more complex components. The tools used to make bioweapons are easily accessible due to their common use in the education, agriculture, and research industries. In addition, its slow effect makes it difficult for the bioweapon to be detected at the start of its release, making it difficult to catch the perpetrators. This quality makes bioweapons the biggest threat and a challenge for every country to prepare in various aspects so that they can face bioterrorism attacks at any time (Kwak, 2016). Bioterrorism is a global threat that must be watched out for because transmission knows no jurisdiction boundaries, so every country must be prepared to deal with it. Particularly in public health, state preparedness should focus more on equipping the health system so that it is always on standby if a situation becomes an emergency and gets out of control. The responsibility of public health agencies is to monitor the spread of communicable diseases, detect and track potential outbreaks, identify the types of agents and their transmission, and develop strategies for the prevention and control of communicable diseases. The most important thing in the health system and medical research is that the people concerned must protect biological agents that have the potential to become bioweapons so that they do not leak or be misused.

Bioterrorism will have a very bad impact on the stability of the country, which in particular, will be felt by more and more people as the main victims of bioterrorism. Bioterrorism is a germ war as a form of genetic colonization in political economy because it is directly related to the international market to weaken a country's economy, making the country dependent on other countries or collapsing, for example, in the case of the H5N1 bird flu, which managed to spread to Indonesia, infecting thousands of birds, causing huge losses, especially since Indonesia was faced with the ASEAN free market (Aktual.com, 2020). The impact of bioterrorism on the country's economy will greatly affect the people. In dealing with the impact of bioterrorism, the government will automatically mobilize all available resources, for example, allocating priorities in the state budget, which will add to the length of the state spending list to minimise and resolve the adverse effects of bioterrorism, bearing in mind the effects of biological agent attacks will target every living thing, namely to humans, food, and livestock, can contaminate air, water, soil, and contaminate every existing surface. So that within a certain period, each country's defence will decrease due to the weakening of available resources.

In its action against the threat of bioterrorism, the government issued several regulations, as contained in Presidential Instruction (Inpres) Number 4 of 2019, concerning Capacity Building in Preventing, Detecting, and Responding to Disease Outbreaks, Global Pandemics.

Nuclear, Biological, and Chemical Emergencies instruct the Minister of Finance to provide support for budget allocation for various activities to prevent, detect, and respond to various diseases and or events that can potentially cause public health emergencies. Then the next sector that is most crucial and vulnerable to the threat of bioterrorism is public health, which is the main sector that receives a heavy impact due to attacks by biological agents. Inpres No. 4 of 2019 also provides instructions to the Minister of Health to review and refine laws and policies in the health sector related to increasing global health resilience and financing support so that the Health Quarantine provisions in Law No. 6 of 2018 can be critically criticized in the mirror of the actual situation in Indonesia after the spread of COVID-19 which has reached pandemic levels. Substance in Law no. 6 of 2018 concerning Health Quarantine in Article 1 paragraph 2 concerning Public Health Emergencies, namely public health conditions that are extraordinary due to the spread of infectious diseases so that the government will impose quarantine.

The motive for the spread of the COVID-19 virus is unknown, whether it is natural or intentional. However, this situation can be used as an example and learning material. If this outbreak is caused by bioterrorism, the readiness and capability of the state must be based on appropriate protocols and regulations to mitigate its effects. Society must not be protected with proper legal protection. In an emergency, every policy set by the government will be a knife of criticism for the country's ability to protect its people during an outbreak of an infectious disease, such as the uneven and effective implementation of policies, lack of supply of medical devices to each regional hospital, preparedness of experts, medical staff medical services, and related agencies, supply of medicines and ease of accessing health facilities for everyone.

Realistically, the condition of the territory and environment, which is increasingly damaged, degraded and degraded in quality, has had an impact on world conditions marked by widespread instability and anarchy, globalisation is increasing rapidly, which is supported by increasingly open relations between nations and technology, so that the opening of access to biotechnology provides a great opportunity that leads to deviation, and ultimately leads to a dangerous act of terror through bioterrorism. In Indonesia, until now, there has been no specific regulation on bioterrorism and a defence system specifically prepared to deal with the threat of bioterrorism, so the formulation of an effective biodefense system is urgently needed (Bakrie, 2007). Biodefense is a biological defence against the threat of attack by biological agents in the form of microorganisms such as viruses, bacteria, fungi, germs and other microbes that can cause disease and disrupt the health of living things and the environment. Biodefense can be realised through a systematic health system that can be coordinated at every level of the regional bureaucracy to the center during an emergency. The impact of bioterrorism will be burdensome for the public health system. An effective public health system with strong communicable disease surveillance, rapid mapping and laboratory investigations, efficient health management, information, education and communication will be required to counter bioterrorism attacks (Fidler, 2002).

In Indonesia, there have been several regulations covering public health in the event of an outbreak of infectious disease, for example, Law no. 6 of 2018 concerning Health Quarantine, Law no. 4 of 1984 concerning Outbreaks of Infectious Diseases, and Law no. 36 of 2009 concerning Health, Minister of Defense Regulation No. 20 of 2014 concerning the National Defense Health System, Minister of Defense Regulation No. 5 of 2015 concerning Mitigation of the Hazardous Impact of Biological Agents From Health Aspects in the Ministry of Defense and TNI, as well as Regulation of the Minister of Health no. 82 of 2014 concerning the Prevention of Communicable Diseases. Meanwhile, in Law Number 5 of 2018 concerning Eradication of Criminal Acts of Terrorism, specifically in Article 10A paragraph 1, which states that every person who unlawfully makes, receives, carries, stores, or expels microorganisms from the territory of the Unitary State of the Republic of Indonesia by intention to commit a crime of terrorism will be subject to imprisonment or the death penalty. It

can be observed that the substance contained in this article only targets criminal sanctions for an act that carries out the process of transferring, possessing, or controlling a biological agent to commit a criminal act of terrorism.

Indonesia has ratified the Biological Weapons Convention (BWC) with Presidential Decree No. 58 of 1991. Until now, this convention has a derivative organization and a verification system that can examine alleged misuse of biological agents as weapons of mass destruction. In Article 4, BWC states that under the constitutional process of each country party to the convention to take the necessary steps to implement this convention into its national system. Even though an international agreement has not yet been reached regarding the expansion of the work system related to BWC, the Ministry of Foreign Affairs reported that Indonesia has prepared a Biological Security Bill which will include the implementation of BWC and incorporate the implementation of agreements in the World Health Organization (WHO), namely the International Health Regulation (IHR) and the Pandemic Influenza Preparedness Framework. The formulation of a form of legal protection against the threat of bioterrorism must function and work as a means to realise protection that is predictive, adaptive, anticipatory and flexible, namely realising the desired goal to be achieved through predicting the scenario of the hazard faced, where the law must always be able to adapt to social dynamics because the law grows within it, anticipating the development of biotechnology and terror that comes behind the shadow of technological advances so that the law can flexibly embrace what is needed to fulfil the people's welfare at the same time as implementing the state's obligations in tackling bioterrorism which of course will risk human rights. on its way.

Increased early detection also needs to be carried out by state intelligence in dealing with the threat of bioterrorism in Indonesia. The implementation of intelligence in Indonesia is accommodated by the State Intelligence Agency (BIN), which serves as the coordinator and executor of the state intelligence function. By the law's mandate, BIN is making efforts related to preventing potential threats of terrorism in Indonesia. Through its Counter-Terrorism Directorate and Nubika Engineering Sub-Directorate, BIN aims to prevent potential threats of bio-terrorism in a comprehensive and integrative manner. The State Intelligence Agency has formed a Task Force (Satgas) consisting of internal BIN and a joint Task Force with related parties such as the TNI, Polri, BNPT, Customs, Immigration and others. With this activity, closed intelligence operations are carried out to carry out early prevention, detection and anticipation of potential terror threats, especially those related to potential bioterrorism threats.

State intelligence is important in gathering information about bioterrorism threats that exist within and outside the country. By having accurate and complete information about these threats, state intelligence can assist the government in planning and implementing policies and actions needed to deal with the threat of bioterrorism. In addition, state intelligence also has a role in the early detection of bioterrorism threats. In this case, state intelligence can monitor activities and developments around areas suspected of being a potential source of bioterrorism threats. This can be done by monitoring the movement of people, goods, and chemicals that can be used to produce biological weapons.

State intelligence can also warn the public and related parties about the threat of bioterrorism. This can be done by providing accurate and reliable information to the public and related parties regarding the existing threat of bioterrorism and ways to avoid or overcome this threat. State intelligence needs to develop capabilities in science and technology, such as biotechnology, genetics, and molecular biology, and detection and analysis technologies related to bioterrorism threats. State intelligence also needs to improve cooperation and coordination with relevant parties in dealing with the threat of bioterrorism, such as the police, military and disaster management agencies. This can be done by strengthening inter-agency collaboration, sharing information and resources, and developing training and capacity-building programs.

State intelligence plays an important role in handling bio-terrorism in Indonesia. State intelligence gathers information about bio-terrorism threats that could harm public security and health. In this context, state intelligence must cooperate with various institutions, including health and security agencies, to obtain accurate and up-to-date information about existing bioterrorism threats. This includes gathering and analysing information about the likelihood of bioterrorism attacks and identifying threat sources and perpetrators.

After obtaining sufficient information, state intelligence then provides recommendations and suggestions to the government to take preventive or responsive actions in dealing with the threat of bioterrorism. State intelligence also plays a role in monitoring and tracking the movements of groups or individuals who are suspicious and have the potential to become perpetrators of bioterrorism. State intelligence must comply with applicable ethical and legal standards in carrying out its duties. This means that information collection must be done lawfully and does not violate human rights and individual privacy. In order to improve state intelligence capabilities in dealing with bio-terrorism, adequate investment in human resources, technology and infrastructure is required. Governments should also commit to providing ongoing training and education for state intelligence personnel to enhance their ability to collect and analyse information on bioterrorism threats. Overall, state intelligence plays an important role in handling bio-terrorism in Indonesia. By coordinating and cooperating well with other related institutions, state intelligence can help prevent and respond to bioterrorism threats so that people can feel safe and protected.

CONCLUSION

Handling bio-terrorism in Indonesia requires cooperation between various related agencies, including state intelligence. State intelligence has an important role in gathering information about bio-terrorism threats that could endanger public security and health, providing recommendations and suggestions to the government, and monitoring and tracking the movements of suspicious groups or individuals. In order to improve state intelligence capabilities in handling bio-terrorism, it is necessary to invest in adequate human resources, technology and infrastructure. The government must also provide ongoing training and education for state intelligence personnel. By carrying out good coordination and cooperation between various related agencies and increasing the ability of state intelligence, the threat of bio-terrorism in Indonesia can be faced and minimised so that people can feel safe and protected.

Strengthening detailed regulations in handling forms of bioterrorism terror also needs to be carried out so that there is no ambiguity regarding acts of terrorism that are currently taking place in Indonesia, which are in tandem with advances in science and technology which have an impact on the development of methods of terrorist groups in carrying out their actions to achieve their goals. Regulations in combating criminal acts of terrorism currently only cover radicalism that leads to acts of terror in general and includes the impact that can arise from infectious diseases caused by biological agents and how to deal with them that are general but do not regulate in a comprehensive and in-depth manner the scope of meaning and needs the truth of bioterrorism, biotechnology, biodefense, and biosecurity.

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