RABEK
Regionalna asocijacija za bezbednost i krizni menadžment

GLOBAL SECURITY

8th INTERNATIONAL SCIENTIFIC - PROFESSIONAL CONFERENCE

SECURITY AND CRISIS MANAGEMENT -THEORY AND PRACTICE

SAFETY FOR THE FUTURE 2022

PROCEEDINGS

BELGRADE 2022

8th INTERNATIONAL FORUM “SAFETY FOR THE FUTURE” 2022

8th Scientific-professional conference
SECURITY AND CRISIS MANAGEMENT -THEORY AND PRACTICE
(SeCMan)

September 29th and 30th, 2022. Sremska Kamenica, REPUBLIC OF SERBIA

FOREWORD

*A forum **Safety for the Future** arose out from the idea and the need to see security problems as a whole, and yet separately, through a prism of scientists and experts to bring science, company practice and economy together. The forum contains several important events: the International Scientific Conference "Security and Crisis Management-Theory and Practice", an exhibition of tools and equipment, demonstration exercises on the usage of different assets and equipment in various security activities and numerous debates and discussions with a variety of topics.*

This year, for the eighth time, we are realizing the conference "Security and Crisis Management-Theory and Practice", with new elements of researching security phenomena in the field of crisis management, but also including all related areas. The fact is that the environment in which individuals and legal entities exist is increasingly complex, and the range of phenomena that affect the security of an entity is becoming wider. It is consist of familiar and unfamiliar circumstances. Managing those circumstances is possible to a certain extent if there is an optimal and necessary quantum of knowledge. Hence, knowledge is the foundation on which is necessary to build the capabilities of individuals and legal entities to be able to recognize, prevent and react to threats.

Crisis management has become an everyday need, essential for the survival of individuals, companies or society as a whole. It is more and more difficult to assess the risk of events with negative effects at the very beginning of their occurrence, and coping with negative consequences leaves harder effects on society. Scientific research of security phenomena has become the priority of society's sustainable development. Scientific knowledge is necessary for systematic knowledge of phenomena in the environment, and practice for checking their usability.

Scientific findings do not always come to those who perform security tasks, such as individuals or legal entities. Therefore, there is a need for scientists and experts to meet and exchange ideas, opinions and knowledge. Materialization of knowledge is carried out daily in the process of modern business and management. Exposed to the impacts of a turbulent environment, and focused on sustainability, modern business and management require permanent monitoring of changes and adaptation to these changes.

Comprehension of the environment in which modern society exists is possible if there is the necessary knowledge of the phenomena that characterize it. That knowledge provides an opportunity for preventive action through an efficient risk assessment system. Only knowledge, formed as a symbiosis of science and profession, has quality and strength, which guarantees the possibility of preventive action and an optimal level of readiness to react to negative events. The resistance of contemporary society to negative events depends on the degree of knowledge development.

This year's conference is organized in specific conditions, with physical gatherings. Namely, the world is facing a serious risk of an outbreak of armed conflict on a global scale. Not analyzing the necessity of solving international disputes through war, it is the fact that in the year 2022 we are standing on the edge of possible war between the Russian Federation and NATO. That automatically implies the conflict on a global level. The special military operation, conducted by the Russian Federation on the Ukrainian territory, has triggered a sequence of events which affect the security of the whole world (economy, demography, energy, finances, etc.). This crisis is just another proof that forum Security for the Future properly observes the complexity of the security environment and steers it towards crisis management. Bearing in mind that it is not possible to put all the problems in one Proceedings

or to answer all the questions, the forum will continue to deal with the contemporary security challenges, risks and threats in the future, as well.

Proceedings from the 8th International Conference - Security and Crisis Management - Theory and Practice, present a new value in the observation of a portfolio of security phenomena at the strategic, company, and individual levels. The papers published in the proceedings are new findings and views of the authors. A wide range of issues, confirms the assumption of the necessity of such a conference. The papers presented at the last seven conferences have unambiguously demonstrated the need for regional cooperation and the harmonization of joint capacities. And spreading knowledge becomes a priority in the development of a security culture.

The proceedings represent a review of existing knowledge, a source of new knowledge, assistance to researchers and practitioners in solving security problems, support for those who practically deal with security and a source of an initiative to improve existing knowledge in the field of security, management and engineering.

We hereby invite all interested scientists and professionals to improve the quality of future publications with their papers.

Program Committee

PROGRAM COMMITTEE

Branko Babic PhD, *Higher Technical School of Professional Studies, Novi Sad - Chairman*
Aleksandar Andrejevic PhD, *EDUCONS University, Sremska Kamenica, Serbia*
Andrea Andrejevic Panic PhD, *EDUCONS University, Sremska Kamenica, Serbia*
Goran Andjelic PhD, *EDUKONS University, Faculty of Security Studies, Sremska Kamenica, Serbia*
Darko Bozanic PhD, *University of Defense, Military Academy, Belgrade, Serbia*
Marijan Brozovic PhD, *Polytechnic of Karlovac, Croatia*
Ruggiero Cafari Panico PhD, *Full Professor of European Union Law, University of Milan, Italy*
Gian Luigi Cecchini PhD, *Full Professor of European Union Law, University of Trieste, Italy*
Sinisa Domazet PhD, *EDUCONS University, Faculty of Security Studies, Sremska Kamenica, Serbia*
Drazan Erkic PhD, *The Republic of Srpska Ministry of the Interior - Police Administration Zvornik, Bosnia and Herzegovina*
Tatjana Gerginova PhD, *University of St. Kliment Ohridski, Faculty of Security Skopje, Northern Macedonia*
Ljubomir Gigovic PhD, *University of Defense, Military Academy, Belgrade, Serbia*
Ladin Gostimirovic PhD, *College of Business and Technical Education, Doboj, Bosnia and Herzegovina*
Emina Hadzic Dreznjak PhD, *University of Sarajevo, Faculty of Civil Engineering, Bosnia and Herzegovina*
Predrag Ilic PhD, *Institute for Protection, Ecology and Informatics, Banja Luka, Republika Srpska, Bosnia and Herzegovina*
Zeljko Ilic PhD, *Republic Administration CZ, Republika Srpska, Bosnia and Herzegovina*
Vladimir Jakovljevic PhD, *University of Belgrade, Faculty of Security, Belgrade, Serbia*
Aco Janicijevic PhD, *Accreditation Body of Serbia, Belgrade, Serbia*
Jelena Jesic PhD, *EDUCONS University, Sremska Kamenica, Serbia*
Radislav Jovicic PhD, *Business and Technical College, Doboj, Bosnia and Herzegovina*
Dragisa Jurisic PhD, *Security Research Center, Banja Luka, Republika Srpska, Bosnia and Herzegovina*
Samed Karovic PhD, *EDUCONS University, Faculty of Security Studies, Sremska Kamenica, Serbia*
Savo Kentera PhD, *Atlantic Alliance of Montenegro, Podgorica, Montenegro*
Nenad Komazec PhD, *University of Defense, Military Academy, Belgrade, Serbia*
Tomaz Kramberger PhD, *University of Maribor, Faculty of Logistics Celje, Slovenia*
Mirjana Laban PhD, *University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia*

ORGANIZING COMMITTEE

Milica Mladenovic, PhD candidate, *S4 GLOSEC Global Security, Belgrade, Serbia, Chairman*
Slavica Dabizljevic, PhD candidate, *RASEC, Belgrade, Serbia*
Maja Mijatovic, MSc, *S4 GLOSEC Global Security, Belgrade, Serbia*

IMPRESSUM

Editorial
Komazec Nenad, PhD, Belgrade, Serbia
Babic Branko, PhD, Novi Sad, Serbia

Publisher
Regional Association for Security and Crisis Management-RASEC
S4 GLOSEC Global Security

Reviewers
Kramberger Tomaz, PhD – Slovenia
Karovic Samed, PhD – Serbia
Strbac Katarina, PhD – Serbia
Pamucar Dragan, PhD – Serbia
Babic Branko, PhD – Serbia
Randjelovic Aca, PhD – Serbia
Jurisic Dragisa, PhD – Bosnia and Herzegovina
Bozanic Darko, PhD – Serbia
Komazec Nenad, PhD – Serbia
Maksimovic Goran, PhD – Bosnia and Herzegovina
Tatjana Gerginova, PhD – North Macedonia
Milic Aleksandar, PhD – Serbia
Slobodan Simic, PhD – Bosnia and Herzegovina

Design
Mladenovic Milica, PhD candidate
Komazec Nenad, PhD

Edition
70 copies

The press:
Stamparija Donat Graf, Grocka, Belgrade

ISBN

978-86-80692-09-8

Notes:
The authors opinions expressed in this book do not necessary reflect the views of the institution in which they are employed
All papers are reviewed and checked for plagiarism
Papers which express any form of discrimination shall not be published

CONTENT

VIII INTERNATIONAL SCIENTIFIC PROFESSIONAL CONFERENCE
SECURITY AND CRISIS MANAGEMENT – THEORY AND PRACTICE (SeCMan)
-SAFETY FOR THE FUTURE-
29th and 30th September 2022, Sremska Kamenica, Republic of Serbia

THE EFFECT OF BIOTERRORISM TO THE ENVIRONMENT

Zorana Ivetic[1], Jovanka Tosic[2]
[1] University of Educons, Faculty of security studies, Vojvode Putnika 67, Sremska Kamenica, Republic of Serbia, zoranaivetic@yahoo.com
[2] University of Educons, Faculty of security studies, Vojvode Putnika 67, Sremska Kamenica, Republic of Serbia, tosicjovanka@gmail.com

Received: 20th July 2022
Accepted: 15th August 2022

Professional paper

Abstract: *The situation in which the world found itself at the beginning of 2020 is one of the examples of how infectious diseases can become a global problem. An even bigger problem arises in recognizing the ways and causes of occurrence. Timely recognition of the disease is one of the most effective ways for the adequate response of health institutions. If the mass illness of people is viewed from the point of view of health security, it is irrelevant how the disease originated, but from the point of view of state security, it is very important to reveal the history of the infection, with special emphasis on the possibility of bioterrorist action. The use of biological agents is classified as a bioterrorist attack, as well as the use of chemical, radiological and nuclear weapons. Biological agents are most often used, because they are cheaper than radiological and nuclear weapons. There is a real danger of bioterrorist attacks in the 21st century, and the question is no longer whether a bioterrorist attack will occur, but when biological agents will be attacked by terrorist groups.*

Key words: *security, bioterrorism, environment, biological agents, contamination*

1. INTRODUCTION

The modern world has brought with it progress in armaments, and thus the number of possibilities and opportunities for the choice of weapons, which can be used by terrorist organizations to achieve their goals, has increased. Terrorist organizations make enormous efforts aimed at increasing the consequences of attacks and do not hesitate to use all available scientific discoveries for their purpose.

Bioterrorism is one of the more brutal forms of terrorism, as well as a form of political violence. It is an unpredictable, increasingly likely and highly damaging event that has a huge impact on the environment. Contamination of the environment can be done through a different spectrum of negative phenomena and agents. The most dangerous contamination of the environment certainly comes from the use of weapons of mass destruction. Knowing the basic characteristics of weapons of mass destruction is an essential element for undertaking adequate environmental protection measures. In a large number of cases, timely response is difficult, and sometimes even impossible, due to the characteristics of the biological, chemical and

radiological weapons themselves. Rapid identification of agents is one of the biggest problems, because they are agents that cannot be detected by the senses.

The problem of pollution and destruction of the environment is increasingly given importance, because it goes beyond the borders of one country and becomes a global problem. Any negative impact on the environment leaves an indelible mark. The damage caused by a bioterrorist attack can sometimes never be compensated. Extinction of plant and animal species, pollution of water, air and soil directly affect human life and health.

The work covers the entire concept and characteristics of bioterrorism, forms of manifestation and methods of action, as well as protection against the action of biological agents, environmental contamination, radioactivity, chemical weapons and biological agents.

2. THE TERM AND CHARACTERISTICS OF BIOTERRORISM

Terrorism is defined as a method of deliberate and systematic use of violence with the aim of instilling fear in people and representatives of the government, all in order to achieve personal, political and other ideological goals. (Mijalkovic, 2018) Terrorist organizations have at their disposal weapons that can be classified into four categories: conventional weapons and explosives, nuclear and radioactive weapons, chemical weapons and biological weapons. (Heyer, 2001)

The term bioterrorism can be defined as the deliberate use of biological agents (viruses, bacteria, fungi or toxins of living organisms), which lead to the death or illness of people, animals or plants, for the sake of the manifestation of ideological discontent directed towards a certain government or population, which is done through attacks on civilians and resources. Bioterrorism means: the use of biological agents that cause diseases, the use of weapons of mass destruction, scientific research into biological weapons and the misuse of scientific knowledge in the field of genetic engineering, with the aim of producing germs that kill innocent people, the production and smuggling of biological weapons and the illegal sale of dangerous strains. (Talijan, 2016) Like classical terrorism, bioterrorism is characterized by a politically motivated target and a large number of innocent victims. With the help of bioterrorism, various goals can be achieved: psychological pressure, mass death, endangering the environment, the death of animal and plant life, as well as enormous economic damage.

Bioterrorism can be seen as one of the more brutal forms of terrorism, as well as a form of political violence that has been resorted to throughout history. In the modern world, the use of biological weapons is considered an inappropriate means of warfare, but terrorists have become aware that by using deadly viruses and other forms of biological weapons, they can threaten national and international security in the most effective way. (Cvetkovic, Popovic, 2011)

Bioterrorism theorist Jeffery Simon points to a number of reasons that could motivate terrorists to use biological weapons, namely: the need for new and more aggressive forms of action, while causing mass casualties, the influence of state entities on overcoming obstacles in the development and application of biological weapons, as well as the availability of information, knowledge and people. (Jeffrey, 1989) The use of biological weapons favors terrorist organizations, due to the easy discovery of biological agents in laboratories, a short incubation period, strong virulence and contagiousness, and as a result, mass illness and death, which leads to the creation of panic and fear. Biological agents work even in small doses and require smaller amounts of money, and have a specific effect on humans, plants and animals. Today, the production of biological weapons is even simpler than before, the necessary knowledge is more accessible, as is the equipment. It is very difficult to detect a bioterrorist attack in a timely

and efficient manner, which leads to difficulties in establishing adequate measures to neutralize the attack and adequate and quick treatment of the sick. (Cvetkovic, Popovic, 2011).

2.1. Forms of manifestation and methods of action of bioterrorism

The use of biological agents for bioterrorist purposes differs from the use of other instruments of warfare because it consists predominantly of living organisms. A bioterrorist attack manifests itself in the form of disease. Depending on which biological agent is used, it differs: bacterial, viral, fungal and rickettsia diseases of humans, animals and plants. (Stojanovic, Ristanovic, 2010)

Bioterrorists have a wide range of options available to them when it comes to their operations. The characteristics of biological agents, which are reflected in the absence of odor, taste and color, provide many avenues for easy expansion of the agent. Biological agents can spread through contaminated food, water, infected contacts and objects, infected substances and insects, through an aerosol cloud containing infected particles, infected shipments and in many other ways. (Ristanovic, 2016) The most common way of infection is through the air, i.e., aerosols, using aerial spray, explosive bombs and rockets with infectious materials. (Ristanovic, 2016) Aerosols have several characteristics that favor bioterrorists, namely: length of functionality, which increases the chance for a larger area where the infection will spread; by inhaling contaminated air, the agent remains in the lungs deeper and longer, and the result of the disease is greater, when the agent is deposited in the lungs. (Ristanovic, 2016) The problem with this type of infection is the impossibility of controlling the area that will be infected, because wind, rain, temperature and other climatic factors affect the speed and surface of the contamination.

2.2. Protection against the action of biological agents

Biological defense against the action of biological agents includes methods, plans and procedures that establish and implement defense measures against attacks by biological weapons. (Ristanovic, 2016) One of the problems when it comes to protection against the action of biological agents is that a large number of biological agents are found in nature, so it is very difficult to distinguish in a timely manner in which situations the infection was intentionally spread, and when it occurred naturally via. For this reason, there is a need for constant epidemiological surveillance of infectious diseases, regular monitoring of seasonal diseases and unusual manifestations of known diseases, monitoring of morbidity and mortality of animals and other phenomena that may possibly be an indication of unnatural changes. The occurrence of a bioterrorist attack can be indicated by a sudden and unexpected occurrence of illness and death, simultaneous infection with two or more pathogens, as well as when a disease appears in a geographical area for which it is not characteristic (for example, the appearance of tropical diseases in Europe). When a bioterrorist attack is suspected, it is necessary to conduct a field epidemiological investigation in order to gather all the data that will confirm or refute the suspicion of a bioterrorist attack. The detection of biological agents can be done through samples of water, air, food, through blood, urine, stool, from samples of various tissues and organs of people, animals and plants. (Ristanovic, 2016) If it is determined that it is a bioterrorist attack, it is necessary to implement biological decontamination measures. It is necessary to coordinate and synchronize the police services, as well as the controlled and efficient activity of all other services, which are involved in emergency situations, such as firefighters, emergency medical assistance, civil organizations and others. Effective protection also requires the cooperation of states. This is very important in all forms of terrorist activity, including in the case of a bioterrorist attack.

3. ENVIRONMENTAL CONTAMINATION

The term environment means all natural and work-created values. (Djordjevic, 2014) Environmental contamination is a consequence of the action of a different spectrum of negative phenomena and agents. In recent years, the problem of environmental pollution has been increasingly given importance, because this problem goes beyond the borders of one country and becomes a global problem. There are no boundaries in the environment and consequently, the contamination of one element of the environment has the potential to affect a large part of the planet. The most dangerous environmental contamination comes from the use of weapons of mass destruction (radiological, chemical and biological weapons

3.1. Radioactivity

A radiological weapon is a weapon that distributes radioactive materials through an uncontrolled fission reaction. The effect of radiological weapons is delayed. Radioactivity can be defined as the energy that is released from radioactive materials during a nuclear reaction, and consists of unstable and radioactive atoms that emit radiation in the process of decay, that is, splitting. (Cvetkovic, Popovic, 2011) Artificial sources of radiation come from atomic weapons, ammunition with depleted uranium, radioactive waste disposal, etc. Radiation to the human body causes damage to individual cells. The same radiation does not cause the same effect on all cells, but it depends on the types of cells and their sensitivity. The largest number of diseases caused by radiation originates from tissues that divide rapidly, so the consequences of damage to the bone marrow, gastrointestinal tract and damage to the central nervous system can be observed first. Harmful consequences manifest themselves in different time intervals, and they leave a mark both on the person they affect and on the offspring.

The likelihood of misuse of radiological weapons has increased in recent years. In support of this, data show that criminal activities related to theft and smuggling of radioactive material are on the rise. An attack with radiological weapons is more attractive to terrorist groups than an attack with nuclear weapons. The reason for this is that radiological weapons are not as demanding as nuclear ones, and they cause a reaction. A bioterrorist attack can be carried out using a dirty bomb. A dirty bomb is a low-power explosive device that disperses radioactive material into the environment by means of an uncontrolled fission reaction using a classic explosive. (Cvetkovic, Popovic, 2011) At the moment when detonation occurs, radioactive material spreads into the environment. The effect of a dirty bomb is determined by the intensity of the initial impact caused by the explosion, the action of ionizing radiation and contamination. Urban places with a high population density are especially suitable, because panic is caused among the population. An attack with this weapon can be carried out almost unnoticed, for example by leaving a small suitcase at a train station, where there is a lot of traffic.

Radioactive materials that can be used for production are relatively available, such as cesium nucleotides, depleted uranium, radioisotopes of iodine, americium, cobalt, radium and others. Cesium is stored in the body of humans and animals, mostly in muscle tissue. Depleted uranium means uranium with a content of the isotope 235-U below 0.7% (most often the content is around 0.2%) and isotope 237-U in the amount of 99%. (Bakrac, Klem, Milanovic, 2018) It is a toxic, by-product of the uranium enrichment process and is a very dangerous radioactive waste. The entire living world is destroyed at the sites of the explosion of depleted uranium missiles. When this weapon is used at the moment of pollination of plants, spawning of fish and mating of terrestrial animals, it disrupts the population structure of species and leaves permanent consequences for the number of species, and also creates gene mutations.

The main threats of the use of radiological weapons are economic, social and psychological in nature. When radioactive material is dispersed, it causes great economic consequences, because the decontamination process is very expensive. The contaminated area must be closed, the population evacuated, and thus the normal functioning of people's lives is disrupted. In addition to these consequences, a mark is left on the environment, the functioning of the plant and animal life is disrupted.

3.2. Chemical weapons

harm in some other way. Chemical weapons act through chemical reactions and leave effects on objects, and survivors usually have permanent health effects. (Indjic, Terzic, Andric, 2019)

Characteristic features that favor terrorist organizations are: high toxicity, different effects on organs, hidden initial effect, impossibility of perception by the senses, weak possibility of detection and quick identification. The impossibility of quick identification of the agent means that its recognition is based on the symptoms it cause (Gary, Jeremy, 1999).

Chemical means can be used for terrorist purposes, by chemically contaminating a certain space, water, air and food. Chemical contamination means the presence of chemical agents in dangerous concentrations in the form of droplets, vapors, fumes or gases. (Rutic, 2016) Chemical weapons are considered a silent and invisible killer, because the absence of smell, color and any other properties that would allow the abuse of chemical weapons to be noticed in time, can lead to major consequences for the environment. There is almost no safe protection. Toxic chemical agents are able to disturb, incapacitate or kill the population, animal and plant life, contaminate the soil and everything found in the area affected by the agents. They can cover an area of several tens to several hundreds of hectares, and carried by air currents, they can spread over several square kilometers (Gacinovic, 2012).

3.3. Biological agents

Biological weapons are not a characteristic of the 20th and 21st centuries, but their use has roots in the distant past. As proof of this claim, an example from the 4th century BC can be cited, when the Scythians used arrows unmelted with the blood of those suffering and dying from infectious diseases, in order to achieve victory in the fight against their enemies. (Ristanovic, 2016) The 2001 anthrax letter attack is one of the more famous bioterrorist attacks in recent history. Namely, at that time, 5 letters with high purity anthrax spores were sent through the postal system of the United States of America. The consequences of this attack are reflected in the death of five people, 22 infected persons and over 30,000 citizens who were exposed to risk and were treated preventively. The material costs of decontamination are measured in billions of dollars (Kokoskov, Trbojevic, 2020).

Biological weapons are one type of weapon of mass destruction. For the first time, the concepts of biological weapons and biological warfare officially appear after the Second World War, after the session of the General Assembly of the United Nations (Cvetkovic, Popovic, 2011). Biological agents, according to the definition of the Resolution of the General Assembly of the United Nations: "are living organisms that are used in war to cause infection or death of people, animals and plants, either due to their nature or the infectious substances they release, and whose actions in the attacked organism are based on the process of reproduction." (Resolution 2603 (XXIV), 1969) According to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological and Toxic Weapons and on the Obligation to Destroy Them, biological weapons are understood as microbiological or other biological agents or toxins, regardless of their origin or method of production, which by type and quantity are not intended for use for prophylactic, protective, or other peaceful purposes and weapons, or equipment intended for the use of such agents or toxins for hostile purposes

or in armed conflict. This Convention on the international level legally regulates the prohibition of storage and development of biological materials, and it was supplemented by the Geneva Protocol, which obliges the signatory states to provide the United Nations with all data on research, findings and the existence of biological weapons (Raicevic, 2010).

Understanding the process of transforming biological agents into biological weapons is essential to understanding bioterrorism. Milton Leitenberg (Milton Leitenberg) talks about the essential prerequisites, which must be met, in order to produce biological weapons, namely: possession of a suitable strain of pathogenic microorganism, expert knowledge, skills in handling microorganisms in their processing, cultivation, storage and effective dispersion. (Leitenberg, 2005) William Clark states that it is necessary to have material means, professional people, but also people who are ready to carry out a bioterrorist attack (Clark, 2008). A special convenience for the use of biological agents is the fact that the production is not very expensive and that no special sophisticated equipment is required. Certain biological agents can be transported over long distances without any problems under favorable climatic conditions. The risk of using biological agents for terrorist purposes has increased, and the reason for this is a large number of new institutional and non-institutional laboratories whose work does not have total insight, simplicity in production, and wide availability of important information. The effect of a bioterrorist attack depends on the organization, size and financial capabilities of the terrorist organization.

One of the more famous attacks with biological weapons took place on March 20, 1995 in Tokyo. Five members of the Aum Shinrikyo sect dispersed the poisonous sarin gas in the Tokyo subway. The consequences of this attack were the death of 12 people, over 1,000 people were injured, 17 of whom were life-threatening. This sect also tried to use other biological agents, such as anthrax.

4. CONCLUSION

Under the influence of the development of humanity, terrorism is also developing, which represents an increasing problem of modern society. Classic forms of terrorism have largely been replaced by modern forms that use new scientific knowledge and achievements. The use of weapons of mass destruction is becoming more and more realistic. Unfortunately, it is very difficult to identify and react in a timely manner due to the very nature of biological, chemical and radiological weapons.

The goal of a bioterrorist attack is endangering a large number of innocent victims, psychological pressure, mass death, endangering the environment, the death of animal and plant life, as well as enormous economic damage. Permanent consequences on the environment can be seen in the extinction of certain plant and animal species, various mutations that manifest themselves in the form of degenerative diseases.

A bioterrorist attack requires the coordination and synchronization of police services, but also the controlled and efficient activity of all other services, such as firefighters, emergency medical services, civil organizations and others. Effective protection also requires the cooperation of states in order to suppress the effects of an attack, because the misuse of biological, chemical or radiological agents leaves a mark on the environment that goes beyond the borders of a single state.

REFERENCES

Bakrac, S., Klem, E., Milanovic, M., (2018). Environmental consequences of the NATO bombing of the Republic of Serbia in 1999, Vojno delo, Vol. 70, ISSN 0042-8426, Belgrade

Clark, W. (2008). Bracing for Aramagedon – The Science and Politics of Bioterrorism in America, Oxford University Press, ISBN 978-01-95336-21-4, Oxford

Cvetkovic, V., Popovic, M., (2011). Possibilities of weapon of mass destruction abuse of terrorism purposes, Bezbednost, Vol. 53, ISSN 0409-2953, Belgrade.

Djordjevic, S., (2014). Environmental protection, Applied ecology, Ministry of agricultzre and environmental protection Serbia, ISBN 978-86-86859-40-2, Belgrade.

Gacinovic, R., (2012). Models of modern terrorism, NBP Journal of criminalistics and law, Vol. 17, No 1, ISSN 0354-8872, Belgrade.

Gary, A., Jeremy, T., (1999). Jihadists and Weapons of Mass Destruction, CRC Press, ISBN 978-1-4200-6964-8, Florida.

Heyer, R., (2001). Introduction to NBC Terrorism: an awareness primer and preparedness quide for emergency responders, The Disaster Preparedness and Emergency Response Association, ISSN 1521-1592, United States.

Indjic, D., Terzic, M., Andric, I., (2019). Development of capabilities of the atomic-biological-chemical service in response to threats with chemical weapons, Vojno delo, Vol. 71, ISSN 0042-8426, Belgrade.

Jeffrey, S., (1989). Terrorism and Potential Use of Biological Weapons, A discussion of Possibilities, RAND Corporation, ISBN 0-8330-0987-7, South Monica.

Kokoskov, N., Trbojevic, M., (2020). Bioterrorism as a post-Covid-19 security threat: old myths or new truth, Infectious Diseases as a Global Security Challenge - The COVID-19 Pandemic: Reality and Consequences , Institut za meDjunarodnu politiku i privredu, ISBN 978-86-80144-44-3, Belgrade.

Leitenberg, M., (2005). Assessing the Biological Weapons and Bioterrorism Threat, Strategic Studies Institute, ISBN 1-58487-221-7, Carlisle.

Mijalkovic, S., (2018). National security, Universitz of Criminal Investigation and Police Studies, ISBN 978-86-7020-402-7, Belgrade.

Raicevic, N. (2010). The prohibition of biological weapons in the international humanitarian law, Zbornik, Vol. 49, eISSN 2560-3116

Resolution 2603 (XXIV) of the United Nations General Assembly, 16 December 1969.

Ristanovic, E., (2016). Bioterrorism: an old challenge in the new security architecture of modern world, The Policy of National Security, Vol. 7, ISSN 2334-959X, Belgrade.

Ristanovic, E., (2016). Health and security challenges of the 21st century – bioterroris, ABC journal of emergency medicine, Vol. 16, ISSN 1451-1053, Serbia.

Rutic, S., (2016). Chemical terrorism, Vojno delo, Vol. 68, ISSN 0042-8426, Belgrade.

Stojanovic, Dj., Ristanovic, E., (2010). Race against time: the relationship of biological weapons and international security, Political review, Vol. 24, ISSN 1452-4281, Belgrade.

Talijan, M., (2016). Contemporary terrorism and manifestations of contemporary urban terrorism, The Policy of National Security, Vol. 7, ISSN 2334-959X, Belgrade.

CIP - Каталогизација у публикацији
Народна библиотека Србије, Београд

005.334(082)
351.78(082)
351.861(082)

INTERNATIONAL Scientific-Professional Conference - Security and Crisis Management - Theory and Practice SeCMan - International Forum "Safety for the Future" 2022 (8 ; 2022 ; Sremska Kamenica)
Proceedings / 8th International Scientific-Professional Conference - Security and Crisis Management - Theory and Practice SeCMan - 8th International Forum "Safety for the Future" 2022, September 29 and 30 Sremska Kamenica 2022 ; [editorial Nenad Komazec, Branko Babić]. - Belgrade : Regional Association for Security and Crisis Management : S4 GLOSEC Global security, 2022 (Beograd : Donat graf). - 487 str. : graf. prikazi ; 24 cm

Tiraž 70. - Bibliografija uz svaki rad.

ISBN 978-86-80692-09-8 (RASCM)

а) Кризни менаџмент -- Зборници б) Ванредне ситуације -- Управљање -- Зборници
в) Безбедносни сектор -- Зборници

COBISS.SR-ID 74870025