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CBRN TERRORISM AS THE EXISTING SECURITY THREAT

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Abstract

Due to the ongoing conflicts in countries that own (owned) different types of weapons of mass destruction (WMD), the danger of abuse WMD or they destructive elements by terrorist groups is increasing. The paper focuses on the characteristics of CBRN, relevance of CBRN terrorism, preferred types of CBRN materials by terrorist groups as well as the efforts in preventing CBRN terrorist attacks.

Key words:

weapon of mass destruction, terrorist act, combating CBRN terrorism

TERRORISM AND CBRN TERRORISM

The concept of terrorism is nowadays very current. But the exact declaration what terrorism represents, which are acts of terrorism is difficult. Basically, there is no comprehensive definition of this term. The reason is that the formulation is based on the specific social relations and law. Thus, the

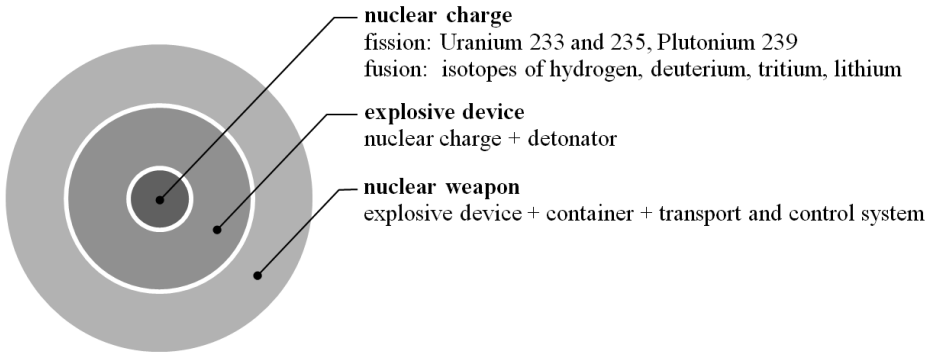
definition is always tied to a particular entity, which may be the state or the international community. While on the one hand, it is seen as an act of advocacy of traditional cultural and religious values, on the other hand, it is viewed as a terrorist act. Nevertheless, commonly acceptable definition is prerequisite for effective prevention measures in the fight against terrorism.

The United Nations convention provides text, where it is considered a terrorist act "any act intended to cause death or serious bodily injury to a civilian, or to any other person not taking an active part in the hostilities in a situation of armed conflict, when the purpose of such act, by its nature or context, is to intimidate a population, or to compel a government or an international organization to do or to abstain from doing any act". Essentially conformable definition was adopted by the European Union at the end of 2001. Terrorist act is expressed as "intentional act, which, given its nature or its context, may seriously damage a country or an international organisation, as defined as an offence under national law, where committed with the aim of seriously intimidating a population, or unduly compelling a Government or an international organisation to perform or abstain from performing any act, or seriously destabilising or destroying the fundamental political, constitutional, economic or social structures of a country or an international organisation". The definition further specifies in detail the relevant areas of activity, which are considered a terrorist act, among others, in the form of "manufacture, possession, acquisition, transport, supply or use of weapons, explosives or of nuclear, biological or chemical weapons, as well as research into, and development of, biological and chemical weapons".

WMD in the hands of terrorist groups pose the most severe security threat. This awareness can be declared by national security strategies and security strategies of international organizations.

Given the focus of this paper is need to clarify the answers to two questions. What is CBRN? What is the connection between WMD and CBRN? First, "CBRN is an acronym for chemical, biological, radiological, and nuclear issues that could harm the society through their accidental or deliberate release, dissemination, or impacts".

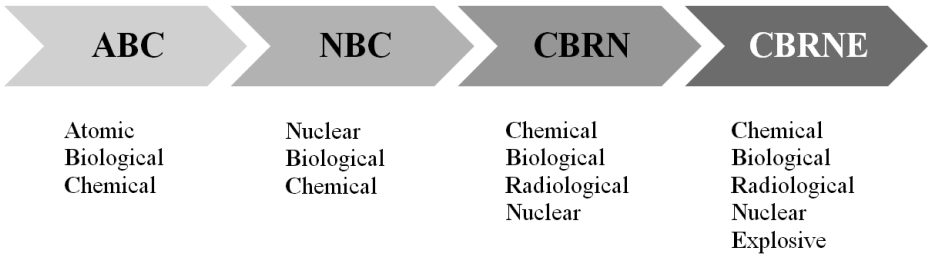
Secondly, CBRN is a group of materials that provide destructive potential WMD. Can form a nuclear charge, charge of chemical or biological agents or radioactive material to be spread out over the ground without a nuclear reaction. They are the crucial part of WMD.



Picture 1 Components of nuclear weapon

In a picture 1 is shown the nuclear weapon composition. Nuclear weapon is a kind of WMD and a nuclear charge is a material from the CBRN group.

"The term CBRN is a replacement for the cold war term NBC (nuclear, biological, and chemical), which had replaced the previous term ABC (atomic, biological, and chemical) that was used in the fifties. "N" covers the impact by an explosion of nuclear bombs and the misuse of fissile material, "R" stands for dispersion of radioactive material e.g. by a dirty bomb".



Picture 2 Historical development of CBRN materials marking

The letter "E" in the CBRN acronym was added to include explosive substances or events. Subsequent definition of WMD is saying that WMD are chemical, biological, nuclear or high-yield explosive munitions with the capacity to kill large numbers of human beings. The reason for the inclusion of conventional explosive materials in the CBRN group was a terrorist attack on the World Trade Centre in New York on 11 September 2001. It is a paradox that the first terrorist act of mass destruction was not a result of a CBRN weapon. But the consequences were terrible. "Besides

the 246 passengers of the four Boeings, 2,603 people were killed at the World Trade Centre, and 125 people were killed at the Pentagon. Despite the appalling death toll it could have been as high as 50,000 if the twin towers of the World Trade Centre had collapsed immediately."[1]

An example of approach to understanding CBRN in the EU environment may be considered a broader description of the terrorist threat concerning CBRN materials as "all uses of chemical, biological, radiological or nuclear substances and materials for terrorist purposes. An approach which looks at all possible ways in which terrorists can use these materials is the only one acceptable from a point of view of prevention and detection, since all possible risks concerning these materials should be covered"[2].

RELEVANCE OF CBRN TERRORISM

In todays troubled world, full of different regional conflicts are emerging the new suspicion and sometimes direct evidence of abuse of WMD or CBRN materials to further the goals of different groups. Also in the past, the world has recorded attempts to use CBRN substances, particularly chemical and biological agents, but today we are witnessing the loss of any moral principles or instinct of survival of life by terrorist groups. Actions of terrorist groups are terrifying, more variable and influence security on a global scale.

Suspected use of chemical substances, have been presented in the Middle East Review of International Affairs (MERIA) Journal in July, 2014. The report states that "according to Kurdish activists, the use of the chemical agent by IS took place on July 12th, in the village of Avdiko, in the eastern part of the Kobani enclave"[3]. With regard to an expert who have seen the pictures[4], they appear to indicate the use of some form of chemical agent, probably mustard (blister agent), but it is not possible to con-

[1] Cole, B., The changing face of terrorism, I.B. Tauris, London, 2011, p. 1.

[2] Communication from the Commission to the European Parliament and the Council on Strengthening Chemical, Biological, Radiological and Nuclear Security in the European Union – an EU CBRN Action Plan, http://ec.europa.eu/home-affairs/summary/docs/com_2009_0273_en.pdf, (19.02.2016).

[3] MERIA special report: Did ISIS use chemical weapons against the Kurds in Kobani?, http://www.rubincenter.org/2014/10/meria-special-report-did-isis-use-chemical-weapons-against-the-kurds-in-kobani-warning-graphic-content, (19.02.2016).

[4] MERIA Journal has acquired exclusive access to photographs of the bodies of these fighters.

clusively confirm this without further investigation. As a possible source for obtaining these agents, was indicated a chemical factory Muthanna, which was used for the production of chemical weaponry including mustard agent. The evidence also indicates it is likely that as a result of the capture of the al-Muthanna compound, stockpiles of chemical munitions have come into the IS group's possession.[5]

Other suspected use of chemical weapons by the Islamic State (ISIS) was published in February 2016. The article presents an evidence that ISIS has chemical weapons, and is willing to use them. "Tests by the Organization for the Prohibition of Chemical Weapons (OPCW) found that ISIS deployed the chemical agent in August 2015 on some 35 Kurdish soldiers fighting just southwest of Erbil, the capital of Iraqi Kurdistan."[6] The results of the tests provides also the international news agency Reuters. "The chemical - which causes severe delayed burns to the eyes, skin and lungs and is banned under international law - was used during a battle between Islamic State insurgents and another rebel group".[7] Also "it raises the major question of where the sulphur mustard came from. Either ISIS gained the ability to make it themselves, or it may have come from an undeclared stockpile overtaken by ISIS. Both are worrying options."[8]

Also look at the opinion of the "other" side of the countries involved in the conflict. "The ISIS militant group is likely to be using chemical weapons against its enemies in Syria and Iraq, Russia has claimed, after evidence of exposure to deadly nerve agents was reported by the UN."[9] An article continues with the announcement that "Russia's foreign ministry said the OPCW's findings made it a "very high" probability Isis has developed its own nerve agents, and called for an urgent investigation"[10].

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[5] Ibidem.

[6] A brief history of chemical weapons in Iraq and Syria, http://www.vocativ.com/news/285206/a-brief-history-of-chemical-weapons-in-iraq-and-syria, (19.02.2016).

[7] There's growing evidence that ISIS has used chemical weapons in Syria, http://www.businessinsider.com/r-exclusive-chemical-weapons-used-in-syrian-fighting-watchdog-2015-11, (19.02.2016).

[8] Ibidem.

[9] ISIS chemical weapons: Russia says militants have developed dirty bombs as UN finds sarin evidence in Syria, http://www.independent.co.uk/news/world/middle-east/isis-chemical-weapons-russia-says-militants-have-developed-dirty-bombs-as-un-finds-sarin-evidence-in-a6797521.html, (19.02.2016).

[10] Ibidem.

On the above events is presented a probable application of prohibited substances. Although they are not the hundred-percent evidences, these facts are sufficient to international concerns.

The use of CBRN materials is truly despicable act, which is inevitably faced with the fierce international response. Finally, the resulting effect can be counterproductive for terrorists. Therefore, it is possible to ask the logical question, what are the reasons for terrorists use CBRN materials? What are their possible motives? In formulating the response we must be based on the fundamental postulates of terrorism. From this perspective, terrorists will seek CBRN materials and use them in order:
-create an atmosphere of fear,
-attract attention,
-destabilize the state,
-provoke the government to fierce retaliation that could discredit him,
-enforce or change the internal and foreign policy of the state.

The real danger of misuse of CBRN materials was highlighted by Hillary Clinton at the 7th Biological and Toxin Weapons Convention Review Conference. She noted that "a crude, but effective, terrorist weapon can be made by using a small sample of any number of widely available pathogens, inexpensive equipment, and college-level chemistry and biology"[11] and added that "terrorist groups have made it known they would want to acquire and use biological weapons"[12].

PREFERRED CBRN MATERIALS AND INDICATORS OF A CBRN ATTACK

Despite the fact that CBRN materials represent a wide range, not all of them are of interest to terrorists. The reasons could be:
-difficulty or even impossibility of obtaining them,
-complexity of production requiring advanced technology and expertise,
-complicated method of application and low efficiency.

Terrorists will prefer materials that meet their specific requirements. For example, biological agents should have the following features:
-reliability causing the desired effect - death, disease,
-low amount of substance necessary for the transmission of infection,

[11] Remarks at the 7th Biological and Toxin Weapons Convention Review Conference, http://www.state.gov/secretary/20092013clinton/rm/2011/12/178409.htm, (20.02.2016).

[12] Ibidem.

-high index of infectivity,
-short and predictable incubation period,
-availability,
-the speed and simple method of distribution,
-low immunity of persons who have been exposed to the b-agent.[13]

Perhaps most compelling for terrorists are nuclear weapons. These are characterized by their complexity. "Nuclear weapons are extremely difficult to manufacture, even for a modern state with all of the necessary resources. However, a distinction must be drawn between the finely engineered military weapons with high explosive yields which states seek to develop and the much cruder devices with low yields with which terrorists would be satisfied."[14]

In comparison with nuclear weapons, radiological weapons are more affordable. "Radiological weapons, or 'dirty' bombs, are considerably easier to develop than nuclear weapons. The purpose of such weapons is to spread radioactive contamination rather than cause casualties through blast effects."[15]

And finally, chemical weapons are amongst the easiest CBRN weapons to produce. "The production processes of some agents are simple, accurately described in publicly available sources and require only commonly available laboratory glassware, good ventilation and commercially available chemicals."[16] The disadvantage of these weapons is that their effectiveness depends to a great extent on the nature of the agent and the conditions under which it is used.

What are the symptoms of a CBRN attack? Answer is not simple. For example, if the use of nuclear weapons is easy to detect, biological weapons have hidden and delayed effect. Detection of the CBRN materials application is complicated and requires careful assessment of occurred following events:
-unusual numbers of people dying in an area, or from strange causes,
-unusual numbers of sick or dying animals, birds or fish,
-lack of insect life where it should be seen,

[13] Maršálek, D., Ščurek, R., Hrozba CBRN látek se zaměřením na třídu biologických agens, „Vojenské rozhledy", 2012, no. 3.

[14] Cole, B., The changing face of terrorism, I.B. Tauris, London, 2011, p. 35.

[15] Ibidem, p. 39.

[16] Ibidem, p. 41.

-unusual numbers of people in an area complaining of blisters/rashes, nausea, disorientation, difficulty in breathing, convulsions, localized sweating, conjunctivitis (reddening of the eyes), erythema (reddening of the skin), or any irregular symptoms,
-strange coloured smoke coming from the area of a detonation,
-explosions that seem to do very little damage or which release an unusual amount of smoke,
-unusual appearance of any liquid droplets, particularly where there should be none,
-abandoned aerosol sprayers in the area of sick people,
-people reporting unusual odours or tastes,
-sudden or unexplained appearance of low-lying clouds,
-unidentified, low-flying aircraft (particularly crop dusters) over a populated area.[17]

When attempting to prevent or eliminate CBRN attacks, it is necessary to focus attention on the likely places where terrorists can use CBRN materials. Such are the sites of the increased concentration of people (airports, bus and train stations, shopping centres, cultural and sporting events, hospitals), government buildings, police stations, military bases, communications facilities (bridges, tunnels) et cetera.

The effort to prevent the proliferation of CBRN materials, is negatively affected by circumstances that are favourable to the terrorists. Such factors are:
-in some crisis areas are dislocated nuclear facility or research institutes, which can be misused to steal technology or production of WMD,
-civilian nuclear industry produces huge amounts of plutonium, which, if not reprocessed, is not prohibitive to the theft; in relation to chemical weapons is amount of necessary materials available from commercial sources,
-the information revolution (the Internet) combined with a large number of physicists, chemical engineers and biologists increases the likelihood of people's access to critical information how to make not only explosives, but also poisons,
-concealment and transportation of these weapons is due to their small size, relatively easy,
-urbanization increases the chance of mass loss in case of attack,

[17] Heyer, R., Introduction to CBRNE terrorism, http://www.disasters.org/dera/library/Heyer%20WMD.pdf, (21.02.2016).

-detection of the presence of certain chemical or biological agents is often difficult and in many cases are not known antidotes.[18]

From the above facts it is clear that the fight against CBRN terrorism is difficult. The measures go beyond the possibilities of one country and require concentrated international effort.

THE FIGHT AGAINST CBRN TERRORISM

The fight against terrorism is a specific, time-consuming, resource-intensive activity, which is characterized by:
-long-term effort using non-military means and instruments,
-use of political, diplomatic and economic tools,
-the main focus is on the prevention and elimination of negative phenomena,
-military intervention is not excluded, but only as a last resort.

An important role in the prevention of terrorism plays intelligence agencies and services. They gather and analyse information about the intentions and movements of terrorist groups and individuals. Their work is peculiar what is illustrated by:
-evaluation of their effectiveness is difficult, due to their concealed mode,
-despite the variability of deployed means the monitoring of terrorist groups is very complicated,
-infiltration into terrorist groups is almost impossible.

The expert research facilities are other players in the fight against terrorism. They are involved in extensive research of CBRN terrorism causes, manifestations and consequences. They allow access to the results of their research activities and practical application of lessons learned.

Generally, the most famous elements of combating terrorism are the special counter-terrorist units. They are not a tool of prevention but are exclusively intended to deal with the particular situations. For that they are technically and tactically equipped and ready to eliminate terrorist groups.

Military force plays an important role in liquidation of terrorism, but alone cannot defeat the terrorist threat. The armed forces provide assistance to and cooperate with the special counter-terrorist units and the police. They are having their own special units, which can be directly deployed against terrorism in accordance with the actual situation.

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[18] Schmidt, A. P. (2001): Terrorism and The Use of Weapons of Mass Destruction: From Where The Risk? In Taylor, M, Horgan, J. (ed.): The Future of Terrorism. London, Portland: Frank Cass, pp. 11 - 132.

Complexity of measures to stop the proliferation of CBRN materials, technologies and expertise as well as measures to preclude CBRN attacks requires an international cooperation and joint effort. In this respect an important role play the international treaties, conventions and plans. Their variability and range are considerable. Therefore, the attention will be given to some of them.

Internal legal framework concerning biological weapons includes, among others, the Biological and Toxin Weapons Convention (BTWC), which has been in force since 1972. It represents the most comprehensive instrument concerning this type of weapons. The Convention, due for its seventh review in 2011, prohibits developing, producing, stockpiling, acquiring and retaining:

- microbial or other biological agents, or toxins in quantities that have no justification for prophylactic, protective or other peaceful purposes,
- weapons, equipment or means of delivery designed to use them for hostile purposes or in armed conflict.[19]

A convention on chemical weapons is from 1993. The Chemical Weapons Convention (CWC) aims to eliminate an entire category of WMD by prohibiting the development, production, acquisition, stockpiling, retention, transfer or use of chemical weapons by states parties. "All States Parties have agreed to chemically disarm by destroying any stockpiles of chemical weapons they may hold and any facilities which produced them, as well as any chemical weapons they abandoned on the territory of other States Parties in the past."[20] CWC established the Organisation for the Prohibition of Chemical Weapons (OPCW) as its implementing body.

In the matter of nuclear weapons an essential regulatory instrument represents The Treaty on the Non-Proliferation of Nuclear Weapons (NPT). NPT is an international treaty whose objective is "to prevent the spread of nuclear weapons and weapons technology, to promote cooperation in the peaceful uses of nuclear energy, and to further the goal of achieving nuclear disarmament and general and complete disarmament"[21]. Treaty

[19] Bakowski, P., CBRN terrorism: threats and the EU response, http://www.europarl.europa.eu/RegData/etudes/BRIE/2015/545724/EPRS_BRI(2015)545724_REV1_EN.pdf, (22.02.2016).

[20] Chemical Weapons Convention, https://www.opcw.org/chemical-weapons-convention, (22.02.2016).

[21] Treaty on the Non-Proliferation of Nuclear Weapons, https://en.wikipedia.org/wiki/Treaty_on_the_Non-Proliferation_of_Nuclear_Weapons, (22.02.2016).

entered into force in 1970. NPT is interpreted as "a three-pillar system, with an implicit balance among them:
-non-proliferation,
-disarmament, and
-the right to peacefully use nuclear technology."[22]

CONCLUSION

Terrorism is an adaptable phenomenon which determines security on a global scale. CBRN terrorism is a specific kind. To promote its objectives use means such as WMD or their parts. The fight against CBRN terrorism requires international efforts. While treaties provide a legal framework, practical steps can be found in the specific plans. An example is the EU CBRN Action Plan[23]. The plan is aimed at strengthening CBRN security in the European Union. Its overall goal is to reduce the threat and damage from CBRN incidents of accidental, natural and intentional origin. The EU CBRN Action Plan is broadly based on an all-hazard approach, including terrorist threats, and contributes to the implementation of the EU Counter Terrorism Strategy. Moreover, the EU has established the European Union Chemical Biological Radiological and Nuclear Risk Mitigation Centres of Excellence Initiative. It "was launched in response to the need to strengthen the institutional capacity of countries outside the European Union to mitigate CBRN risks"[24].

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[22] Ibidem.

[23] http://ec.europa.eu/home-affairs/summary/docs/com_2009_0273_en.pdf

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