

The study of crime begins with the knowledge of oneself*

* *"The Air-Conditioned Nightmare"*
Henry Miller

What does CBRN stand for? Normally, there is a simple answer that relates to hazardous substances. Ultimately, this abbreviation encompasses a much broader context than chemical, biological, radiological and nuclear materials with certain chemical, biological, and physical properties. If these materials are used in illegal activities, there is a visible impact on many aspects of people's lives and society.

It is, of course, possible to create several, rather literary CBRN definitions covering different perspectives. For example: Crowd, Began, Running, Noisily or Complicated, Blood-Curdling, Redoubtable, Nuisance.

This suggests that there is more to the four letters than just chemistry, biology, physics and nuclear science. CBRN threats must also be assessed from socio-psychological, sociological, medical, communications and economic points of view. In any CBRN threat, it is necessary to assume the emergence of crowd psychosis and the uncontrollable behaviour of the population, which can lead to secondary injuries - the crowd began running noisily, for instance.

At the same time, it is crucial to take into account media communications. On one hand that is a tool for terrorist organisations. On the other, during the preparation of communication channels in the event of a CBRNE terrorist attack, it is strategic to think in advance of multichannel communication, which will effectively bring together the

authorities responsible for crisis management, news media, civil society and citizens¹.

Failure to do so may result in serious errors. Confusion will be created, which will lead to even more misconduct: Confusion, Bringing, Radical, Negative acts. During field security exercises in various countries, we could see the frequent occurrence of errors during operational procedures, unless communication was clear and unambiguous and information flowed in the right direction. Therefore, during a CBRN criminal incident, we should use: Clear, Befitting, Rigorous, Notification.

Failure to do so may result in serious health consequences: Casualties, Became, Rapidly, Numerous. CBRN threats can ultimately have a devastating impact on the economy and society, which is illustrated by our next definition: Consumptive, Babel, Reinforcing, Nasty mess.

CBRNE is not just about terrorism

It is important to emphasise a fact that is infrequently considered and often overlooked by the competent authorities. CBRNE crime is not just a link to terrorism. In recent years, we have seen in practice that it has a much broader dimension than simply terrorism. This theory must, however, be confirmed by further research.

CBRNE materials can be misused, or used for a wide range of malicious and dangerous activities. Their negative impacts can be seen in the form of threats to public security, damage to the health of the population, the environment (as such), fauna and flora and property, and it also impacts agriculture and the economy.

In this context, it is necessary to mention other much more common cases of CBRNE crime, even though the definition of CBRNE crime is not yet



Does CBRN = Consumptive, Babel, Reinforcing, Nasty mess? Tbilisi airport had a case of Yperite ©Georgian Interior Ministry/ISEMI

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sufficiently and uniformly established in criminal law worldwide. These include an increase in the number of acid assaults, the illegal trafficking, production and possession of CBRNE materials, the illegal transport and dumping of hazardous wastes, and the illegal sale of CBRNE material via the darknet, etc².

To fully define CBRNE crime, it is important to explain several related concepts. Although many dictionaries on CBRNE threats are publicly available, they only deal marginally with crime.

Legislation on CBRNE crime

Based on our study of the legislation of 40 countries around the world, we have proposed the definition and categorisation of this type of crime in the full version of the CBRNE Crime and Offender's Motives article³.

Each country defines different categories of crime in its criminal code or other connected codes. Some specifically mention CBRNE and/or hazardous materials in their national criminal codes, while some laws do not mention them at all. For purposes of comparison, we present a review of criminal and similar laws (environmental codes, nuclear energy acts, war weapons control acts, counterterrorism acts, etc.) from the 40 selected countries in America, Europe, Asia and Africa. We drew information from Legislation Online, CBRN CoE Project 61⁴ and directly from colleagues in many police agencies. At the time of publication, however, some may have been updated and the information below may no longer apply.

With regard to offences involving explosives, all the criminal and similar laws we studied contained paragraphs relating to explosives, whether they were definitions or descriptions of specific offences.

Many terms were contained individually or in combination in the criminal and related codes of the countries concerned. These included: CBRN, toxic substances, asphyxiating gases, suffocating or burning substances, toxins, pathogens, dangerous infectious diseases, bacteriological and toxic weapons, chemical weapons, radiological

and nuclear weapon, radiation sources, poisons, dangerous substances, hazardous material, destructive, injurious, obnoxious, noxious or harmful substance, lethal device, harmful industrial or domestic waste, etc.

They were found in sections on general terms and definitions, sections relating to aggravation and/or in the characterisation of individual offences within the relevant categories of offences, or in reference to other related laws. The terms were automatically included in laws banning chemical, biological and nuclear weapons. Some, mostly large countries, deal with CBRN materials in separate laws related to terrorism. In some criminal codes, these terms have been described in detail or their definitions have been located in the associated legal norms in order to avoid double interpretation. The most detailed interpretation of the above mentioned terms was found in the US Criminal Code.

Definition of CBRNE crime

CBRNE crime can be considered as an offence against public safety and security, health, human and animal life, plants, soil, air, water, forest, environment, property, consumer rights, nation, state, humanity, peace, international regulations and the economy in the criminal or similar law of a given country. By definition it includes, directly or indirectly, hazardous CBRNE materials. CBRN materials can be also dispersed using explosives in certain crimes, and therefore we add the 'E' to the abbreviation CBRN.

Returning to our definitions concept, CBRNE crimes are: Combined, Broad, Radical, Non-Linear, Extreme acts. Finally, this: Crime, Began, Rapidly, Non-Stop, Evolving.

Drawing on practical experience, we consider it important either to incorporate a separate category of CBRNE offences into legislation or to automatically define existing offences using CBRNE and hazardous materials as involving aggravation. In particular, there is a need to analyse developments in this area effectively and regularly, possibly using statistics on individual

types of CBRNE crime. These statistics can be helpful in predicting CBRNE criminal behaviour in certain regions and countries and help prevent such behaviour, including potential terrorist attacks, smuggling of CBRN material, and illegally dumping it into environment by organised groups, etc.

There are several reasons for extending aggravation in criminal law to certain offences. The first is the use or attempted use of hazardous CBRNE materials that can significantly endanger the health and life of individuals or groups, as well as the environment due to cross contamination, rapid spread or intrusion into the environment, and potential prolonged exposure depending on persistence; substance or half-life in the case of radionuclides. Thus, an attack on just one person using dangerous materials could have a wider impact affecting more people, the environment and property, as in the Skripal case in UK in 2018, which involved the nerve agent Novichok⁵.

Another reason for creating a separate category of CBRNE crimes is a specific approach to their investigation, criminal assessment of the circumstances in which hazardous materials have been used or misused and prosecution. For security forces, it is primarily a matter of recognising the special responsibility and importance of particular procedures related to intervention under CBRNE conditions. These include saving lives, threat detection, risk assessment, the collecting of evidence at the crime scene and forensic analysis, as well as protecting the health and lives of investigators and other intervening forces. Adequate procedures and tactics for various situations and scenarios must be set up and applied for all the necessary teams, be they special weapons and tactics, canine, explosive ordnance disposal, undercover intelligence, special operations, special security and protection forces, public order/riot police, CBRN units or on-site investigators.

Interaction with other, non-police forces is equally important. These include firefighters, civil protection agencies, civil defence, environmental



'Now, where to sample...' CBRN material doesn't have to be manufactured it can also be stolen © Slovak police via ISEMI

agencies, public health authorities, nuclear regulatory bodies, radiological institutes, biological and chemical laboratories, military CBRN protection battalions, international non-profits like the Red Cross, Red Crescent, Médecins Sans Frontières, and the International Security and Emergency Management Institute etc. Mutual cooperation and training of the police, rescue service and fire brigade, form the basis for success in timely responses to CBRNE incidents. Each agency must understand the roles of the others to create synergies and to avoid errors that would increase the spread of CBRNE threats, risk lives or damage evidence at the crime scene. Specialised security forces, the prosecutor's office and the judiciary in this area would also have a significant positive impact on the proceedings and the delivery of judgments that reflect

the substance of the offence so perpetrators are suitably punished.

It is important to note that some CBRNE offences are conditional and interconnected. In addition to producing CBRNE weapons, terrorist groups can, for instance, obtain CBRNE materials from unauthorised landfills, steal them from industrial warehouses or during transport, and use them to attack. It is worth mentioning the fact that in many countries there are illegal landfills for hazardous waste, some of which are easily accessible. These are surface landfills in forests, meadows, and peripheral to villages, in abandoned buildings, old farms, or below the surface in disused mining tunnels, etc.

Categorising CBRNE crime

Incorporating the definitions of crimes involving CBRN and hazardous materials into the laws of different

countries has been influenced by their individual experiences. Exchange of information between security and judicial authorities at the international level has also helped. Different countries also inspire each other.

As for our analysis' conclusions, we state that specific categories of CBRNE crimes need to be created within individual criminal laws. If they can be registered separately within existing categories then they can be monitored better and allow improved adoption of preventive measures. Based on our own experience, previous studies, and reviews of different criminal, penal, counterterrorism and environmental codes, and the European parliament and council directive 2008/99 / from 19 November 2008, we suggest dividing CBRNE crimes into four main categories. The proposed crime categorisation is based on cases already recorded by

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individual countries, on criminal and similar laws, or assumptions about potential future crimes.

1. CBRN-E Crime against human life and health
2. CBRN-E Crime against environment
3. CBRN-E Crime against public safety and security, administration of justice, consumer rights and property
4. CBRN-E Crime against community, humanity, nation and state system – terrorism

Conclusions

In conclusion, we wanted to emphasise that there are certain shortcomings in the assessment and perception of CBRNE crime at the international level, or through underestimation of certain categories of CBRNE crime. This is mainly due to inconsistent terminology and differing legislation. We recognise that there are different legal customs and systems in other countries, but if we want to fight the CBRNE threats together at the international level, we must at least try to unify procedures and also be familiar with other countries' systems. Exchange of good practice will thus enable us to speed up and streamline joint investigations in cases of international scope. As we can see, most of the cases considered had cross-border or international impact. The criminal cases we actually assessed, as well as those from examined literature and legislation, clearly point to shortcomings in the different perceptions of terminology, and, in particular, in assessing the seriousness of CBRNE crimes.

Countries with highly developed



Will your response measure up to the threat? ©Czech police via ISEMI

institutional and legislative systems for environmental protection take into consideration the crimes of illegal storage of hazardous waste as well as other serious crimes that harm human health and endanger society and the state. This is not the case in regions where awareness of environmental protection is not developed. After several interviews in unnamed

countries, law enforcement colleagues were surprised to present scenarios about the possible misuse of hazardous materials from illegal landfills by terrorist organisations, for example. Finally, there are always opportunities to improve capacity and capabilities building within preparedness and response for CBRNE crime. Much can be done.

¹ Ruggiero, A.-M., Vos, M., Mykkänen, M., & Palttala, P., (2015) CBRN Communication Scorecard. In S. Schmidt, & M. Vos (Eds.), Behavior and communication in CBRN crisis: Findings and recommendations in case of chemical, biological, radiological, and nuclear attacks on society (pp. 106-139). Pabst-Science Publishers

² Kolencik, M. (April 2021) Preprint paper: Crime scene investigation in a CBRN context, ISEM Institute, Slovakia. DOI: 10.13140/RG.2.2.21684.37762/1

³ https://www.researchgate.net/publication/352860728_CBRN-E_crime_and_offenders'_motives_What_is_it_Why_people_do_it

⁴ Legislation online (N.D.) Available at: <https://www.legislationline.org/documents/section/criminal-codes/country/47>;
<https://law.moj.gov.tw/ENG/LawClass/LawAll.aspx?pcode=C0000001>;

<https://www.refworld.org/docid/54294d164.html>; Project 61 of CBRN CoE implemented by SCJS (UK), PHE (UK), Vertic (UK), ISEMI (SK) and RIVM (NL), <https://www.cbrnproject61.com/about>

⁵ Royal Courts of Justice, Approved Judgment, Case No: 13228376 & 13228382, <https://www.judiciary.uk/wp-content/uploads/2018/03/sshd-v-skrupal-and-another-220180322.pdf>

Credit: Kolencik, M. (June 2021) CBRN-E crime and offenders' motives, ISEM Institute, Slovakia, Version 5. DOI: 10.13140/RG.2.2.11835.34083