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Hotzone Solutions Group

Gold Standard Preparedness

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CBRN threat awareness and national protection capacity

- In the aftermath of the terrorist attacks in Brussels on 22 March, the deadliest terror act in the history of Belgium, Ambassador Amano, the Director-General of the International Atomic Energy Agency, stated "*Terrorism is spreading and the possibility of using nuclear material cannot be excluded.*"

- More recently, the United States' President, speaking at the fourth Nuclear Security Summit in Washington DC said about ISIS *"There is no doubt that if these mad men ever got their hands on a nuclear bomb or nuclear material, they would certainly use it to kill as many people as possible."*

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Bhopal - India - Methylisocyanate

- 500 000 people exposed - 10 000 people killed

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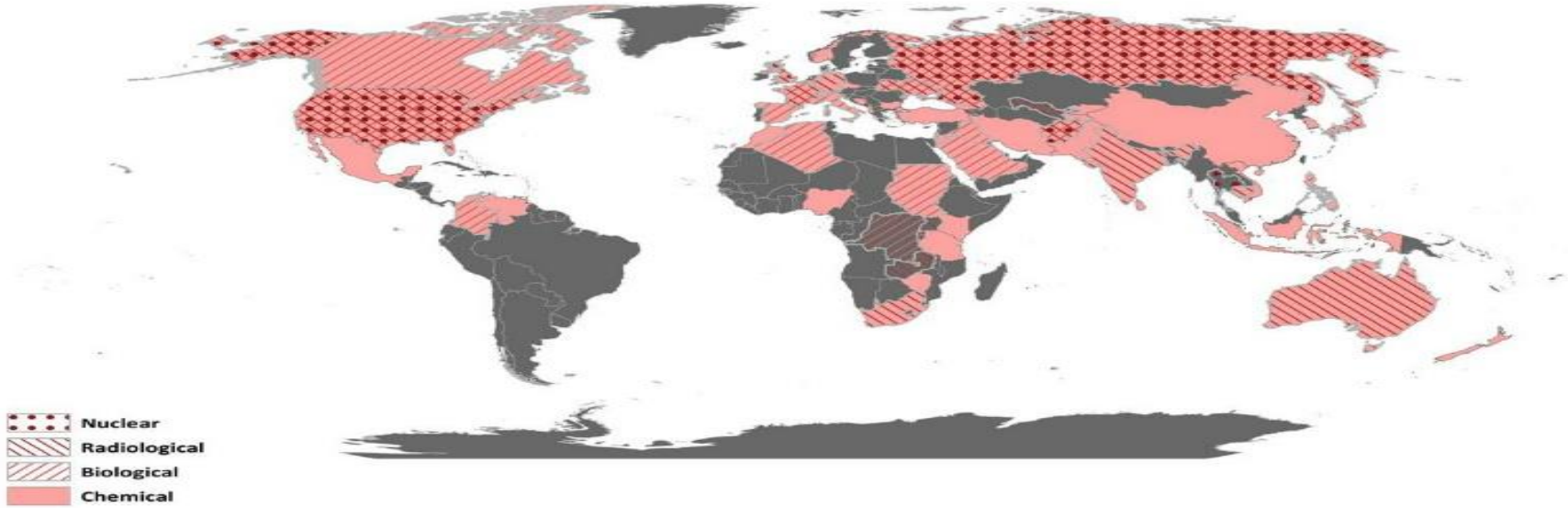
Tokyo Sarin Attack

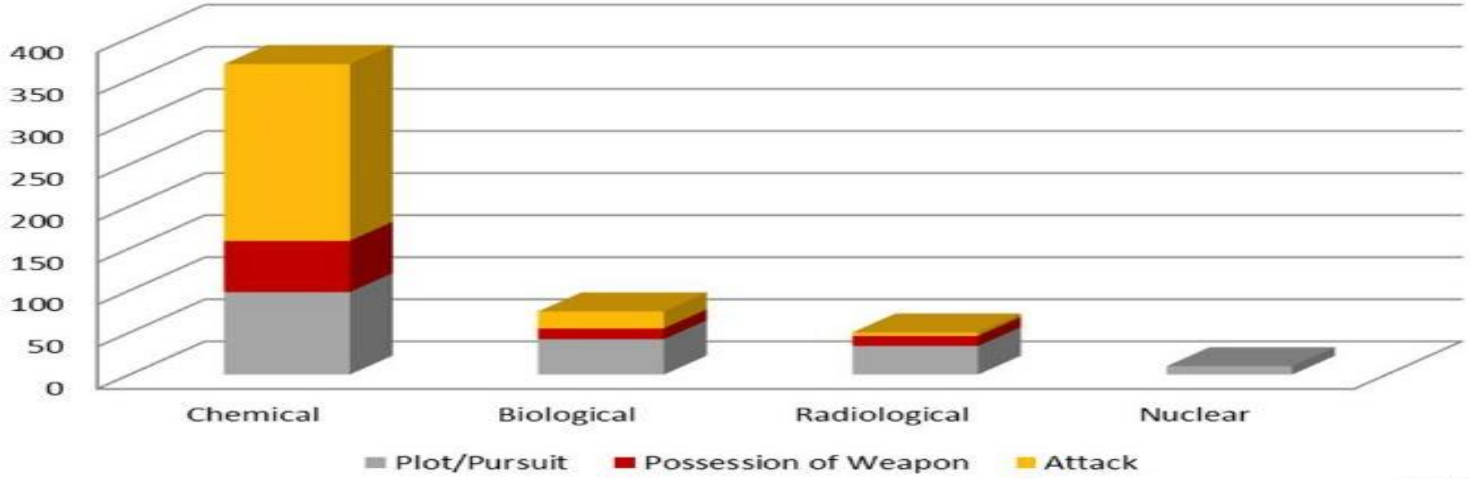
March 20, 1995

- 5 500 people exposed
- 12 people died
- 2 227 went to Hospital
- Essentially no decontamination of patients

CBRN Events Worldwide, 1990-2013



CBRN Agent and Event Type



START

Source: Profiles of Incidents involving CBRN by Non-state actors dataset

Published by WAR ON ROCKS

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STRATEGIC CONTEXT, KEY NOTIONS (DEFINITIONS), AND OVERVIEW

PURPOSE: The strategy guides necessary preparations to exclude or minimize the risk of chemical and biological attacks by terrorists with the purpose of inflicting death or harm to the population and/or to disrupt the normal functioning of the communities and economic infrastructure; and, in case an incident occurs, to minimize the casualties and damage and to ensure speedy return to normalcy. Developing a strategy is a multi-stakeholder process; once adopted by a state, it should be regularly tested through various exercises and peer reviews, including internationally.

STRATEGIC CONTEXT: Chemical and biological, as well as toxin weapons are banned by the Biological and Toxin Weapons Convention (1972) and by the Chemical Weapons Convention (1993). The ban is comprehensive, while more detailed procedures to enforce are of various strength in the case of the CWC and almost non-existent in the case of BWC. Both conventions cover the toxins. Definition of biological weapons in the BWC is wider than the definition of chemical weapons in the CWC in the sense that the former explicitly includes bio agents and toxins that act against plants, while the chemical anti-plant agents and toxins are not affected under the latter.

In spite of these discrepancies both conventions helped to develop a strong international norm against chemical and biological weapons and their use, and nowadays, there is hardly a state, willing to be seen as a possessor or user of these weapons. Both conventions have been, to a certain degree, useful in terms of addressing chemical and biological coming from terrorist groups.

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Strategy to counter chemical and biological terrorism

The key factor is accessibility.

Namely: denying access to chemical and biological agents by non-state actors and similar

The threat posed by terrorist or non-state actor's use of CBW is now higher than the "traditional" use by regular military forces in a regular combat environment.

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TERMINOLOGY AND NOTIONS:

While we often use in everyday life such words as “terrorist use of chemical or biological weapons”, in practical terms, for the purposes of describing the threat or preparing preventive or counter-measures, they may not be the most adequate. For example, there is no widely agreed definition of “terrorism” or “terrorist”, and even if there were such a definition, practical experience has shown that it is simply impossible to design and implement measures to prevent access to and use of chemical and biological warfare agents by terrorists exclusively.

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Strategy to counter chemical and biological terrorism

OVERVIEW: The following sections address the main components of any strategy to counter chemical and biological terrorism. They are:

- **Prevention**
- **Preparedness**
- **Response**
- **Recovery**

In a number of expert studies and documents one can find various variations of this **PPRR** list. For example, some prefer to consider response and recovery as one element, which is quite legitimate as well. Many prefer to single out **protection** as a separate element. Protection is of course a key task and a key segment of preparedness and response.

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PREVENTION

1. GENERAL

- **Main purpose**: to prevent terrorist groups from acquiring capability for a biological or chemical attack and from carrying it out
- **Two main areas**: prevention of terrorism in general and prevention of cb (+rn) terrorism in particular

2. TERRORISM PREVENTION: focus on terrorism, terrorist groups and individuals as such.

Logic: no terrorism = no risk of CBRN terrorism

3. IDENTIFICATION AND PREVENTION OF TERRORIST CBW CAPABILITIES AND CBW USE: Important:

a) not all terrorist groups are interested in CBW

b) identifying terrorist interest in CBW is not sufficient.

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Role of deterrence in prevention is probably low; yet, deterrence can be relatively enhanced by:

- Ensuring adequate levels of preparedness, including protection, which would allow to minimise expected effects of a terrorist CB attack.
- Effective legal basis and law enforcement system (including forensic component).

- **Suspension and/or withdrawal of activities** - threat of temporary suspension, withdrawal of programme activities to change security situation
- **Armed protection** - use of armed guards to protect staff and assets
- **Diplomatic deterrence** - international actors exerting diplomatic pressure to ensure security
- **Military deterrence** - military protection of humanitarian assistance

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PARTICULAR IMPORTANCE OF ENSURINNG ADEQUATE LEVELS OF CHEMICAL AND BIOLOGICAL SAFETY AND SECURITY. NEED FOR SAFETY AND SECURITY CULTURE AT FACILITIES, WHICH MAY BE ATTRACTIVE TARGETS FOR TERRORIST ACTIVITIES (RECRUITMENT, THEFT OR SABOTAGE)

This involves a wide range of activities, such as:

- physical protection
- access control and special access to most sensitive areas or facilities;
- exit controls
- personnel screening
- personnel training
- reliable accounting and tracking system for materials, processes and people
- technology process controls, including safe emergency process interruption
- safety back-up systems
- continuous environmental and other monitoring
- reliable emergency communication system.

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PREPAREDNESS

GENERAL Preparedness means the availability of resources, including materials, equipment, facilities and trained personnel, as well as plans, which would allow to respond immediately and adequately to any real or suspected case of terrorist use or release of chemical and biological substances. Even more than in **prevention,** measures in this category have to rely upon much **wider range of activities designed to protect population and environment from various natural and other emergencies and longer-term hazards**

- **SURVEILLANCE, DETECTION AND ASSESSMENT CAPABILITIES**
- **PROTECTION CAPABILITIES.**
- **EVACUATION.**
- **HOSPITALISATION.**
- **COORDINATION AND COMMUNICATION AMONG FIRST RESPONDERS.**
- **COMMUNICATION WITH LOCAL POPULATION.**
- **PREPAREDNESS FOR BIOLOGICAL INCIDENTS.** the recent **outbreak of Ebola** in Western Africa and its lessons for fighting bio-terrorism.
- **STRATEGIC COORDINATION.**

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RESPONSE

RESPONSE – a series of actions that need to be undertaken immediately after the first report of a chemical o biological terrorist incident comes in is basically crisis management. No more time for preparations, and almost no time to correct the plans that turn out to be inadequate. This is when prevention and deterrence fail, and all earlier preparations come to test.

The sequence of actions has already been outlined in section iii above: detection, assessment, work of first responders, initial treatment of casualties, preventive treatment evacuation, and hospitalisation. Timely delivery of special protection equipment, medical antidotes, vaccines and other medical life-supporting materiel is necessary to save lives. Almost the same priority should be given to ensuring at least elementary, but clean and safe supplies for people – both casualties and not. Paramount importance must be given to safety of first responders – because if they are incapacitated or worse, nobody would be there to help other people.

In addition, **communication** among various responders is also crucial, as is communication between the authorities and population. Population must receive clear indications about the situation and clear instructions. Losing control over population and mass panic must be avoided almost at all costs.

In the case of **a biological incident** the most important initial tasks are identification of the nature of the disease, the most appropriate treatment protocols for those infected, vaccination of population in the affected areas and beyond, timely supply of medication and other means of treatment and decisions on evacuation, restriction of movement and regular, frequent controls of population without symptoms.

RECOVERY

RECOVERY is the last stage of active measures related to a biological or chemical incident, including of terrorist origin. There are no clear boundaries between recovery and the previous stage – response, but it is widely assumed that recovery should begin after the situation is more or less stabilized and allows to proceed to final decontamination (in chemical incidents), when the need for hospital facilities starts to decline and additional capacities can be gradually dismantled. This is the period when evacuated population will receive permission – and assistance - to return to their homes. During this stage consumed emergency supplies will have to be replenished, new antidotes, vaccines and medical supplies identified and ordered, and communities will struggle to start a new life. It goes without saying that for the counter-terrorism and CB(+RN) community it will be a period of lessons learned, reporting lessons to international organisations and pursuing further forensic and other investigations.

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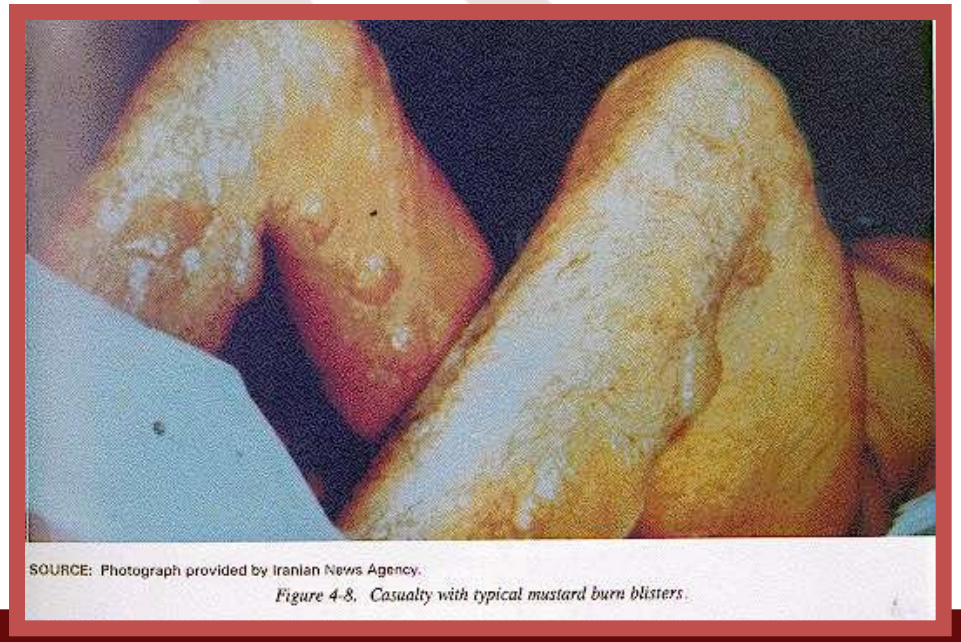
Mustard

Mode of action

- Catastrophic DNA damage to the skin
- Destroys White Blood Cells and depresses Bone Marrow production of WBC's.



Mustard

Signs/Symptoms

- 2 - 24 hours = Reddening and blisters on the skin.
- 2-36 hours = Initial chest tightness, sneezing, hoarseness, cough.

SOURCE: Photograph provided by Iranian News Agency.

Figure 4-9. Casualty with severe blisters on the back.

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OPCW

Law Enforcement

Military

Emergency Responders

Medical Personnel

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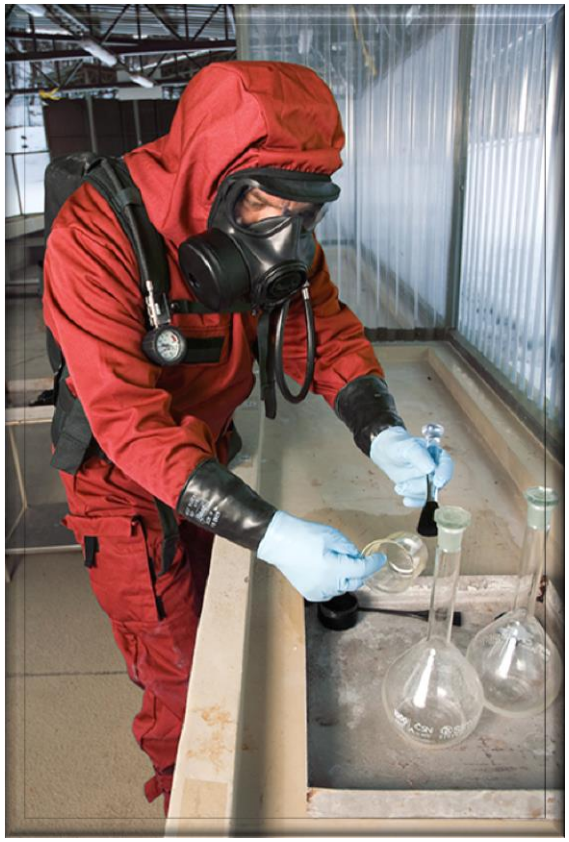

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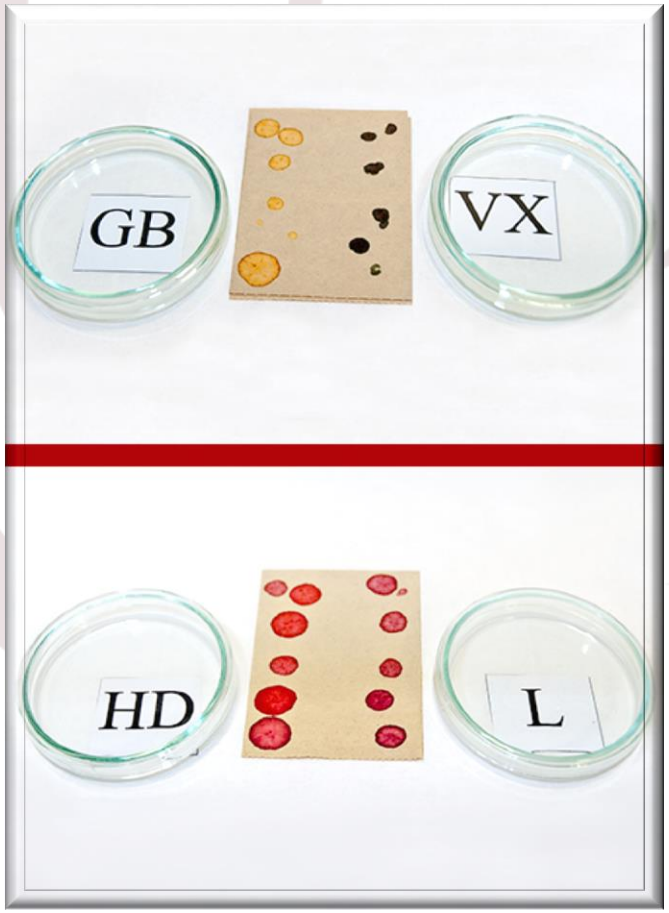

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Thank You !