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WMDTerrostatic attack.A realistic overwiev

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2012

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WMD terrorist attack. A realistic overview

The possibility that a terrorist organization might launch a WMD attack remains one of the gravest threats to many countries homeland security. The main concern was in the past posed by the al-Qaeda organization, who tried to obtain nuclear material and develop chemicals and biological agents; fortunately, western efforts to dismember the group have greatly diminished their chances to successfully accomplish a WMD attack.

As commonly recognized, a risk is understood as the probability of damage that an event could cause because of the vulnerability of people and property exposed. Probability, vulnerability and damage are thus the parameters needed to quantitatively assess the risk.

To summarize the importance of today's so-called weapons of mass destruction, one just have to remember the political decision that lead to the last Iraqi conflict, boosted from the alleged presence of WMD in Saddam Hussein country; another example is related to the actual crisis between Iran and the international community caused by the nuclear program progress in the land of the Ayatollahs. These two events clearly indicate the international concerns that always follow the discovery of these deadly weapons.

The use of unconventional weapons against the enemy has been known since ancient times; millennia BC prohibitions against the use of toxic substances were contained in the Mahabharata and Ramayana¹, while Chinese and Assyrians in the first millennium BC used sulfur during war campaigns.

The Romans also made use of toxic substances in the second half of the first century BC; among other things, they provided their horses with a protective garment for the face (such a system, sufficiently developed, much later become today's gas mask).

Until the XIXth century a rich literature acknowledged the use of WMD in military operations, with various mention in war treatises as the "Stratagematon" of Sextus

¹ Religious Indu text

Julius Frontinus, the "Treatise on War" by Hassan el Ambramach, as well as in Leonardo da Vinci and Von Leibnitz writings.

In the XXth century various chemicals (chlorine, mustard gas, phosgene) were developed and used during World War I, while the nuclear weapons devastating effect decreed the end of World War II. Nerve agents were then produced and tested, while in the biological field germs, viruses and toxins were developed.

The situation today is quite different, with joint international effort to stop and ban WMD use and proliferation, while in the meantime single government are still testing and stocking WMD agents ready for use as the Moscow 2002 experience remind us².

Intelligence agencies around the world are today mainly concerned about WMD use during a terrorist attack; as the previous experience tells us, al-Qaeda and other extremist organizations tried to obtain and use various chemicals as well as biological agents and radioactive material³.

As for the nuclear and radiological aspect, the possibility that today a terrorist group can blow a small nuclear bomb is quite rare; this capability strongly depends on the terrorist group's access to nuclear materials as well as engineering and scientific expertise. Extremists could also look to underground smuggling networks and international criminal organizations for aid in acquiring or developing a nuclear devices. The whole process however is quite difficult and complex, especially now that no base or laboratory are readily available to assemble and develop a nuclear device. The possibility of a nuclear power plant attack is also quite unlikely; the chance of a massive explosion is real and could be planned, but the subsequent "fallout effect" would involve also Islamic countries with logical negative feedback on the global jihad support.

Nevertheless, the detonation of a radiological weapon⁴, which would use conventional explosives to disperse radioactive material, could cause a significant

² A modified nerve gas was used by Russian special forces to enter a theatre in which Chechen terrorist were detaining more than 800 hostages. More than 90 civilians were killed as well as 50 terrorist that were unable to use their explosive belts because of the nerve effect.

³ Al-Qaeda released a video in 2003 in which dogs were exposed to nerve gas agents as demonstration of their capability to use such chemicals for a terrorist strike.

⁴ The so called *dirty bomb*

amount of panic and financial disruption. This event would not be as deadly and calamitous as a nuclear attack, but the psychological effect would be almost the same; moreover the radioactive substances massive presence in nearly every country means it is much easier to acquire the materials to assemble such a weapon.

Regarding the biological field, resources required to produce such a weapon are available in laboratories worldwide, and many agents could be isolated from nature. Al-Qaeda is believed to have pressed harder than other terrorist groups to obtain or produce biological weapons in the past.

If properly produced and released, biological agents can kill on a massive scale and, if terrorists use a pathogen that can be transmitted from person to person, the disease could quickly spread through commercial air travel across oceans and continents before authorities realize their nations have been attacked.

On the other hand, biological agents also needs laboratory and security containment measures, as well as scientists who possess the know-how and who are willing to spread a pandemic infection through the world. At the present stage, the biological attack risk is probably the lowest, due to the difficult process of pathogen isolation and containment, but it is also the most dangerous; it is something people can't avoid, cause they can't see, hear or sense it. Also the governments are supposed to understand a biological attack after day 4/5 of a contamination; combine this with the present transnational movement and transportation speed to understand how far and fast a pandemic infection can move through the planet.

The growth and sophistication of the worldwide chemical industry, including the development of complex synthetic and dual-use materials, may make the task of preventing and protecting against this chemical weapons threat more difficult.

The only terrorist known WMD attack was made in Tokyo in 1995⁵ by means of a diluted nerve agent; gases are implicitly invisible and often without odor, which complicates the detection and the first paramedic response, with the possibility for the rescuers to became victims themselves.

⁵ The religious sect Aum Shinrikyo used a Sarin gas agent inside some Tokyo tube stations. To be transported and used the gas was contained in plastic bags full of water that limited the Sarin lethality. 12 people were killed and more than 6000 were intoxicated.

This is probably the attack with the foreseeable highest rate of success for a terrorist organization. Almost every chemical scientist can isolate a chemical agent from precursors or basic elements and then diffuse it in an air conditioning system inside a commercial centre or a closed arena.

Priorities for the law enforcement agencies include identifying extremists capabilities and plans to develop unconventional weapons; preventing terrorists from acquiring resources, especially through international “triangulations” with nations who possess the agents and know-how and are willing to sell them is the main concern for all the intelligence community.

A particular focus is then established on fissile materials, dangerous pathogens and poisonous chemicals; the second level of intelligence info and analysis is then directed towards detection and deterrence of would-be attackers.

The international terrorist network suffered several significant setbacks in the recent years due to joint efforts and military operations aimed at eliminating militant strongholds. Leadership losses and defection, as well as the increased difficulty in money raise and transfer, low level recruits training are also affecting the capability to perform a terrorist attack with WMD use.

However, an assault involving a disease agent is of particular concern, given the abstract wide availability of such materials and the amount of casualties that would derive from such attack. This anxiety was boosted after September 11th 2001 attacks and the following anthrax and ricin incidents in the US⁶ and other western countries.

A future terrorist WMD attack could in fact have long-term consequences for a country, both for its population and their political establishment.

The people could suffer a high number of casualties, large-scale infections, and psychological consequences, as happened in the United States after the September

⁶ Army scientist Bruce Ivins, was identified as the perpetrator of the 2001 US anthrax mailings that killed five people and infected 17 others.

2001 attacks, when a higher rate of PTSD⁷ was registered. The fear of such a subtle attack has become a new collective stressing factor, creating discomfort and uneasiness and leading metropolis inhabitants to fewer attend places such as subways, stations and airports.

But also and above all for the obvious political consequences, a terrorist attack by means of WMD would cause economic and social unrest. The risk of excessive retaliatory actions following an event of this magnitude could, in fact increase an economic crisis and feed xenophobic factions within civil society. This would also boost the 70's European terrorism cycle of provocation - repression - solidarity which would provide additional support to their ranks.

Being cautious but realistic we must admit that at present, the main trans-national terrorist organization – al-Qaeda - is in a phase of reconstruction and relocation after the loss of logistic and training camps in Afghanistan and Pakistan, besides the death of some of his influential characters, including its founder, Shaikh Osama bin Laden.

Al-Qaeda and its offshoots then (AQIM, AQAP, AQI) does not seem to possess at this stage the know-how nor the laboratory facilities required to assemble WMD. The chance that “raw” material and precursors are still available to terrorist organization could not be excluded however; on the internet various jihadist and anarchic websites contain plenty of information on how to assemble a small WMD weapon and “lone wolf terrorist” are the most concerning topic for law enforcement agencies around the globe.

⁷ Post Traumatic Stress Disorder is a psychological pathology that includes all the strong psychological sufferings, which may last life long, in the aftermath of a violent or traumatic event.