Weapons of War: State Actors and Chemical Weapon through the Years

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Summary

Throughout the history of warfare attempts have been made to use chemical agents as weapons of war. Most attempts were unsuccessful until the growth of the chemical industry during the latter-half of the 19th century. By the outbreak of World War I in 1914, the first military chemical agents were already in the arsenals of the major powers.

Like the other weapons of mass destruction, Chemical warfare agents (Chemical weapons-CW) have all the appalling elements which represent a serious danger to the living beings at large. Countries like the US, UK, China, Russia, Iraq and Libya were the pioneers in the field of chemical weapons research and production in the world. As a matter of fact, any country which possessed a well-developed chemical industry could produce chemical agents for warfare purposes. Presently, large numbers of industrialized countries have the potential to produce a variety of chemical agents.

Chemical warfare agents have been defined in a report authorized by the United Nations General Assembly as "chemical substances, whether gaseous, liquid, or solid, which might be employed because of their direct toxic effects on human, animals and plants."[1] These toxic chemical agents (CWs) may be used to accomplish a wide variety of military missions. Tagged as 'search weapons', the CW agents are able to penetrate shelters, buildings, trenches, bunkers and other types of military fortifications; they are also capable of inflicting casualties over large areas without damaging vital economic and military infrastructures. Chemical weapon agents are largely invisible and indiscriminate in their effects and offer a prospect of killing or incapacitating enemies and civilians. This category of insidious weapons generates more fear than any other conventional munitions; could very well terrorize civilian populations and demoralize any ill-equipped and exposed military units.

CWs in World Wars

Throughout the history of warfare attempts have been made to use chemical agents as weapons of war. Most attempts were unsuccessful until the growth of the chemical

industry during the latter-half of the 19th century. By the outbreak of World War I in 1914, the first military chemical agents were already in the arsenals of the major powers. The French were the first to use chemical agents in the form of tear gas grenades against the Germans, who defoliated with tear gas artillery shells. Their effect was minimal, mainly due to a complete lack of understanding of how to utilize such weapons. On April 22, 1915, the Germans launched a chlorine gas attack against British and French troops at Ypres resulting in 5000 deaths.[2] The second major development was the use by the Germans of mustard gas and phosgene at Verdun in 1917. The persistence of this agent and its effects were such that in a few months the number of British casualties reached 125, 000, one third of the total British gas casualties for the whole war.[3]

The only incidents involving the actual use of gases between the world wars were in 1936, when the Italians employed a type of mustard gas against the Abyssinians (Ethiopians), and several occasions in 1937 and 1945, when Japan attacked China. About 50,000 Ethiopian army fatalities were caused by chemical weapons during the Italian invasion. It is stated that the Italians used mainly vesicants and asphyxiants.[4]

The use of gas against Chinese civilians was extensive between 1941 and 1942. When Chinese peasants took refuge from the invaders in the caves and tunnels, the Japanese troops used chemical agents to drive them out. In May 1942, Japanese soldiers are said to have discharged gas into the tunnels, killing some 800 Chinese people.[5] After World War II, there have been numerous reports of the use of poison gas in warfare. The first was in Korea and China in the early 1950s. It was claimed that in May 1951, one B-29 aircraft attacked the city of Nampo (North Korea) with gas bombs. As a result, a thousand people were affected and nearly 50% died of suffocation.[6] Again in July, August and in January of the next year, US planes were said to have spread gas in Won San and Hwanghai. However, the casualties and damage done by these attacks were not known.

CWs in the Post World War Era

During the 1963-67 civil-wars in the Yemen between the Royalist regime and the Republican authorities, allegations were made that lethal gas was used by Egyptian forces. It was alleged that gas had killed people and animals by asphyxiation in Kitaf (North Yemen) in January 1967.[7]

Chemical agents were used on a large scale as defoliants to remove jungle growth and prevent their use as cover for guerrilla activities in Indo-China in 1960-70. After this, it was left to the Iran-Iraq conflict to spawn yet another round of large scale use of chemical weapons in war. The war showed definite evidence of the employment of nerve and mustard agents in the Persian Gulf War during 1980-88. It is necessary to discuss at length the massive use of chemical agents in these two above mentioned wars, not only because of large-scale employment of chemical agents but also because of its devastating effects on ecology and mankind. Also the curious case of Libya needs special mention here which secretly stockpiled CWs even after declaring and destroying some of them as per international obligations.

Beginning in 1961, the United States started the "experimental" use of herbicides in South Vietnam as a weapon to exterminate forests and crops The initial objective was to undermine the economic resources of the national liberation movement. In 1962, defoliants became a central weapon in overall chemical and biological warfare strategy of America throughout South-east Asia. Estimates suggest that between 1965

and 1970, more than 50,000 tons of herbicides were dropped on South Vietnam alone.[8] Although the operation began with the intention of merely destroying the economic base of the National Liberation Front (NLF), it was soon expanded into a critical aspect of the shift from ground to air power in South Vietnam. Besides destroying crops, defoliants were used to destroy the forest canopy that hid NLF Forces from detection by air.

The major anti-plant agents that were employed by the United States in Indo-China were 2,4-D, 2,4,5-T, cacodylic acid and picloram. The agents used have been described in two classes, herbicides and defoliants.[9] Most of the anti-plant chemicals were dispersed from C-123 transport aircraft equipped to deliver somewhat over 3600 litres. Some were dispensed from helicopters, and others by truck and boat-mounted spray rigs.Official American reports state that from 1961 only five million acres of land were sterilised. But Vietnamese statements contend that in the first two months of 1969 alone, some 37 of the 44 provinces of South Vietnam were sprayed, contaminating 285,000 people. At least 500 people died. In these raids more than 905,000 hectares of rice, orchards and other crops were destroyed. Between late 1961 and October 1969, it is estimated that 43 per-cent of the arable land and 44 per-cent of the total forest area of South Vietnam were sprayed at least once and in many cases two or three times with herbicides. Over 1,293,000 people were directly contaminated.[10] Due to this, agricultural productivity has been severely curtailed in many regions. The delta area of South Vietnam, once considered the rice bowl of South-east Asia, became an importer of rice from foreign countries.[11] Besides defoliants and herbicides, more than 7,000 tons of other poisonous gases were used between 1964 and 1969.

Both Iran and Iraq used poison chemicals a number of times during the course of war between 1980 and 1988. By 1983, Iraqi production of mustard gas was sufficient for Iraq to begin to deliver small amounts with artillery, fighters, and MI-8 helicopters. It is unclear exactly when Iraq developed bombs using chemical agents, but it seems to have used 250-kilogram bombs bought from Spain.[12] In comparison to Iraq, Iran seems to have begun a crash effort to acquire an internal production capability in 1983-1984. These efforts began to pay off in 1986-1987. Iran began to produce enough lethal agents to load its own weapons. Like Iraq, it could produce blood agents like hydrogen cyanide and phosgene gas.

It was alleged by Iranian governmental agencies that by the autumn of 1984 Iraq had used chemical weapons in more than 130 instances since the beginning of the Gulf War in 1980, killing or injuring at least 3500 people, including non-combatants.[13] On March 12, 1985, within a few hours of the opening of the long-expected Iranian offensive across the Hoveyzeh Marshes, the official Iranian news agency announced that Iraq intended to use chemical weapons. Over the next four weeks, according to Iranian reports, there were 32 further attacks in which 4600 Iranians were killed or injured by chemical weapons.[14]

Iraq continued to use chemical agents in its war with Iran. During the second week of February 1986, around 10 percent of a large Iranian force attacking Faw became casualty to chemical weapons; some 2000 people are said to have been burned with mustard gas on February 13 alone.[15] In mid April 1987, it was alleged that Iran used mustard, tabun and phosgene in artillery shells against Iraqi forces on the Southern Front causing 385 casualties.[16] This was denied by the Iranian government. Iraq made massive use of chemical weapons during its re capture of

Faw in early 1988 and in its assaults to recover its positions outside Basra. By April 1988, Iran claimed that the new round of attacks had raised the total number of casualties from chemical weapons since the start of the war to around 25,600, with some 260 dead.[17] During the final months before the cease-fire, Iraq used chemical weapons in its attacks on Iranian positions in Mehran, the Majnoon Islands, the Hawizeh Marshes and Deh Loran. The worst single use of gas against civilians occurred at the village of Halabjah on 16 March 1988 when mustard gas and nerve agents were used to kill up to 5,000.[18]

The other example is Libya which produced chemical weapons during the 1980s, and is suspected to have used CWs against Chadian troops in September 1987.[19] The notorious Rabta industrial complex (located southwest of Tripoli) produced mustard gas, sarin, and phosgene. The Gaddafi regime declared possession of at least 25 metric tonnes of mustard agent and 1,400 metric tonnes of precursor chemicals, which are used to make chemical weapons.[20] Even though the Rabta remained inactive and Libya destroyed some chemical weapon artillery shells under the supervision of the Organization for the Prohibition of Chemical Weapons (OPCW), it is now came to light that the just ousted Libyan regime has stockpiled CWs secretly, in an apparent breach of promises made in 2004 when Libya joined the OPCW.

Conclusion

The intentional use of chemical weapons in Vietnam has set a dangerous precedent. Though some have gone so far as to describe it as a valuable experiment in ecology, it must be considered as one of the most irresponsible and criminal acts of the century. This so-called experiment led to a major proliferation of chemical weapons, especially in the Third World countries, where chemical weapons are considered a "poor man's" nuclear weapon. Most of these countries argued for the production and stockpile of CWs only because of the idea of a chemical weapons stockpile as a deterrent. The production and use of chemical weapons for the Iran-Iraq war and the case of Libya's secret CW arsenal demonstrated the proliferation and capability of State actors to produce militarily significant arsenals of weapons of mass destruction.

However, this proliferation of chemical weapons was not confined to nations alone. The ability of terrorist groups and individuals to disseminate chemical weapons is an issue of considerable concern in recent times. The 1995 Japanese subway attack demonstrates this ability when the religious cult Aum Shinrikyo used lethal sarin nerve gas in a busy subway in Tokyo, killing and injuring many people.[21] This development aptly reflected the availability and danger of CWs in the hands of terrorist groups as well as rogue states.

Endnotes:

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5 Ibid., p. 149.

6 Murphy, et al., No Fire, No Thunder, p. 15.

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[8] Orville Schell and B. Weisberg, "Ecocide in Indo-China", in B. Weisberg, ed., *Ecocide in Indo-China: The Ecology of War*, Canfield Press, San Francisco, 1970, p. 19.

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[11] Ibid., 20.

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[21] "The Sarin Gas Attack in Japan and the Related Forensic Investigation", 1 June 2001, Accessed on 12 November 2011, available at http://www.opcw.org/news/article/the-sarin-gas-attack-in-japan-and-the-related-forensic-investigation/