

## Appendix B: Chemical Weapons

The issue of chemical weapons in Syria came close to involving the United States in military actions that might have led to another multi-trillion-dollar Middle East war. So it is important to understand what chemical weapons are, how they have been used, their effects, their location and number, their role in strategy and their legal status.

*First, what chemical weapons are:* According to the “1993 Convention on the Prohibition of the Development, Production, Stockpiling and use of Chemical Weapons and on their Destruction,”<sup>1</sup> a chemical weapon is “Any chemical which through its chemical action on life processes can cause death, temporary incapacitation or permanent harm to humans or animals. This includes all such chemicals, regardless of their origin or of their method of production, and regardless of whether they are produced in facilities, in munitions or elsewhere.”<sup>2</sup> Chemical weapons include gas (the most common being mustard and various nerve agents such as Sarin, Tabun and VX) and solid or liquid burning elements (such as napalm and phosphorous). Some “crowd control” gases clearly fall within the prohibition, but governments have not felt bound by the Convention’s definition.

In summary, chemical weapons are a part of the trilogy of Weapons of Mass Destruction (WMD) that also include nuclear and biological weapons.

*Second, how chemical weapons have been used.* During the Syrian civil war, chemical weapons appear to have been used at least twice. But the use of chemical weapons in war has a long history.

Chlorine, phosgene and mustard gas were used by the Germans, French, British and Americans against entrenched infantry during the First World War. They were credited with killing about a hundred thousand soldiers. Most of the dead were Russians and were killed by the Germans.

While most people were horror-stricken by those uses of gas, governments continued to use it when retaliation was unlikely. After the armistice between the Allies and the Central Powers, during their attempt to overthrow the Communist Revolution, the British also used gas against the Red Army. The British, ordered by Winston Churchill, then Colonial Secretary, used mustard, chlorine and other gases against tribesmen in Iraq. As he said, “I am strongly in favour of using poisoned gas against uncivilised tribes.” In the same spirit, the Spaniards used gas against the Moroccan Rif Berbers in the late 1920s; the Italians used it against Libyans and Ethiopians in the 1930s; and the Japanese used it against the Chinese in the 1940s. The attitude of governments then was that chemical weapons were simply weapons to be employed as needed. As Winston Churchill quipped, acceptability of its use “was simply a question of fashion changing as it does between long and short skirts for women.”

During the Second World War, Germany and Britain reached a secret understanding not to use gas weapons. Each government had its own reasons: the Germans in 1939-1940 did not think they needed chemical weapons and the British, who thought they did need them, did not have enough. However, Prime Minister Winston Churchill wrote a memo to his senior military adviser that if the Blitz threatened to succeed against England, he “may certainly have to ask you to support me in using poison gas. We could drench the cities of the Ruhr and many other cities in Germany...” His staff urged him not to do so as the Germans had far more gas than the English and would surely have overwhelmingly

retaliated. But, in an attempt to relieve German pressure on England, Churchill offered a thousand tons of mustard gas to Stalin to use against the German army; Stalin refused.<sup>3</sup>

As it turned out, the only significant amount of poison gas released during the war resulted from a Luftwaffe air strike that exploded and sunk an American ship which was carrying gas to the European theater in case the Allies decided to use it.<sup>4</sup>

At the end of the Second World War, both Western and Soviet-led governments built up huge supplies and constructed numbers of specialized factories to produce chemical (and also biological) weapons. By restricting information on them, governments gave themselves free rein. Unlike the public outcry at the end of the First World War, the public seemed uninterested. At least there was no significant public protest. Personally, I feel strongly about this issue because, while a member of the Policy Planning Council, I was briefed in 1962 by the US Army on the effects and plans to use gases and biological weapons. I was horrified by what I learned and urged that we immediately and completely abandon them. The armed services were staunchly opposed because they found napalm useful in Vietnam. Nothing was done to change policy until in November 1968 President Nixon unilaterally moved to ban poison gas. It was President Nixon to whom we owe the Convention banning chemical weapons. Nixon's bold move was later countermanded by President Reagan who restarted the production of the nerve gas, Sarin.

The most famous two cases of the use of poison gas came after the end of the Vietnam war. They were, first, the Iraqi regime's attack on the Kurdish population of the northern Iraqi town of Halabja in 1988. This attack killed more than 3,000 people and incapacitated perhaps three or four times that many. Then, several times during the 1980s, the Iraqis used gas against advancing "human wave" Iranian infantry in the Iraq-Iranian war. Gas killed perhaps 10,000 Iranians. These attacks were verified by UN inspection teams.<sup>5</sup>

What we now know is that the materials used to assemble the poison gasses were knowingly provided to Iraq by the US because President Reagan was determined to punish the Iranian government for taking American hostages.<sup>6</sup> As *Washington Post* correspondent Michael Dobbs wrote,<sup>7</sup> "The administrations of Ronald Reagan and George H.W Bush authorized the sale to Iraq of numerous items that had both military and civilian applications including poisonous chemical and deadly biological viruses, such as anthrax and bubonic plague." We did not, at that time, attempt to dissuade Saddam Husain from using gas although later we blamed him for doing so.

In 1962, I was told by the then chief of the CIA's Middle Eastern covert action section (DDP), James Critchfield that the Egyptians had used lethal concentrations of tear gas in their campaign against royalist guerrillas in Yemen. I know of no confirmation of this and during my visit to the various battle sites I saw no evidence of it.

*Third, the effects of chemical weapons.* Gas derives its power mainly from the fact that it is sudden, dramatic and generally cannot be anticipated. Its use or threat of its use spreads terror not only among its intended victims but also among the population of a wide area. Despite the horror the use or threat of poison gas evokes, however, it is effective only in certain circumstances. The target must be concentrated, as for example in trenches that typified combat in the First World War, or in mass formations, as in the "human wave"

suicide attacks of Iranians during the Iraq-Iran war, or in more or less enclosed areas, such as the Kurdish villages of northern Iraq or the confined space of a subway as in the 1995 terrorist attack in Tokyo. When used in the open, there is a danger that a change of wind may blow the gas back into the attacker's location and harm him even more than the intended target. Even shifting winds can dissipate the gas so that it does little or no harm. To draw a comparison, once released, gas acts like a balloon whereas artillery is like an airplane and can be aimed. For this reason, most military planners do not place much reliance on gas.

In the Syrian civil war, gas caused relatively few casualties. In the best studied use, around Damascus in August 2013, the numbers are variously reported: Médecins Sans Frontières (MSF) International counted 355; French Direction Générale de la Sécurité Extérieure (DGSE), 281; British MI6, 350; the insurgent "Syrian National Coalition," 650; and the US Government (organization unspecified), 1,429. These are, of course, tragic figures and should not be overlooked, but against them "conventional" arms killed well over 100, perhaps as much as 120 or even 130, thousand people and destroyed large parts of Syria's cities and towns.

If chemical weapons were relatively unimportant in the Syrian civil war, why did the Syrian Government manufacture and keep them and why did the rebels seek to buy them? The answer for the Government, of course, is that they were not intended to be used in a civil war; rather they were intended to deter an Israeli attack and to balance Israel's own inventory of nuclear, biological and chemical weapons.<sup>8</sup>

Why the insurgents tried to buy chemical weapons<sup>9</sup> is still obscure. The answer has been a matter of controversy and speculation. One allegation is that they may have received the gas or perhaps the components from which it could be blended from a foreign intelligence source seeking to embarrass the al-Assad regime. As of this writing, we simply do not know.

*The Wall Street Journal* has laid out what appears to be the US Government's position on the event.<sup>10</sup> Basing itself on what the writers were told of communications intercepts, the article maintains that "A special Syrian unit that handles chemical weapons was ordered closer to the front lines, officials briefed on the intelligence say, and started mixing poisons. For two days, warning signs mounted until coded messages went out for the elite team to bring in the 'big ones' and put on gas masks...Just before 2:30 a.m. on Aug. 21, the first salvo of poison-filled rocket streaked through the clear night sky and crashed into rebel strongholds."

The reporters also maintain that "The Obama administration had been closely monitoring Syria's chemical-weapons stockpile since the conflict began in 2011, and had watched the regime carry out about a dozen small-scale chemical attacks before the big one, U.S. officials say."

*The Wall Street Journal* article is the most complete account of the events we have since the US Government has not come forward authoritatively with whatever it had found out and the UN investigation was ordered to avoid fixing the source of the attack.<sup>11</sup> But the story we have been given, that the Syrian government was responsible, raises a number of questions. Among them are:

- Timing of the event – just when a UN inspection team had arrived almost on the spot. Why would the Syrian government have picked a time of maximum danger to itself?
- Target – the place attacked was not a “game changer” in the civil war but would almost certainly provoke a reaction. Moreover, even a small change in the atmosphere might have blown gas into Damascus with catastrophic effects on the population and the regime. It is difficult to believe that any regime would have taken such a chance. If it decided to use chemical weapons, a more logical target would have been far from its major remaining territory and its capital such as the rebel held area near Dair az-Zour.
- Source of the gas – we now know that the Syrian government had poison gas and the means to deliver it. The rebels are known to have been seeking to acquire chemical weapons by purchase in Turkey and possibly elsewhere. They certainly received arms and probably received rockets from Libyan *jihadis*. Were the Syrian government troops the only ones who could have made the attack? Israeli “policy circles” have pointed out that the rebels “could [have] acquired CW [chemical weapons] from Syrian stockpiles” in areas they overran.<sup>12</sup>
- Motives -- *Some* outside states, notably Qatar and Saudi Arabia, were spending billions of dollars, supplying at least convention arms and engaging in political campaigns to bring down the Asad regime. What if any was their role?

These and other questions require a fuller account than we now have. Finally, it is disturbing that the US government, if it really had the information leaked to the *Journal*, did not itself produce a full report immediately or at least before threatening to attack Syria.<sup>13</sup> As it turned out, we were lucky to have been able to avoid war.

*Fourth, where gas is now located and how much there is of it.* Major arsenals of chemical weapons are still maintained by the United States, the Russian Federation and Israel. The Syrian gas weapons were estimated at 1,200 tons before the current program of identifying them and the process of destruction or withdrawal was begun. The United States previously had some 31,500 tons. The chemical weapons arsenals of the Russian Federation previously held some 39,967 tons. Both the Americans and the Russians have destroyed most of their huge stocks, but neither has met its treaty obligations to destroy the remaining portion. The US is known to still have approximately 3,000 tons of Sarin, VX and Mustard gas; Russia is believed to have a comparable amount.

Israel, which signed but did not ratify the Chemical Weapons Convention, is thought to have significant but unknown amounts of chemical weapons as well as biological and nuclear weapons.<sup>14</sup>

In any event, President Assad informed the United Nations on September 10, 2013 that, influenced by President Putin of the Russian Federation, Syria would sign the 1997 chemical weapons convention and forwarded to New York the preliminary documents. Subsequently, the UN inspectors found that he kept his promise.<sup>15</sup> Today, “Syria’s ability to produce chemical weapons has been destroyed and its remaining toxic armaments secured...” It has also disabled the equipment needed to assemble the components into weapons.<sup>16</sup>

Why did he do this is a fascinating question. So let us look briefly at the strategy of WMD.

*Fifth, the role of chemical weapons in strategy.* Gas has been called the “poor nations’ weapon of mass destruction.” Relative to nuclear weapons, gas is cheap to manufacture and easy to store. A binary system of gas enables it to be assembled immediately before use from components that are in themselves not lethal. Phosphorous is more volatile and more difficult to store. And the third of the three WMD, biological weapons, are about as cheap as gas but have a short “shelf life.” Within weeks or months of manufacture, they become ineffective. While terrifying, they are even less controllable and less effective than gas.

We have seen during the last half century that nations seek to balance the power of their traditional enemies by acquiring comparable weapons systems. Most have to rely on conventional weapons, but when they have the means, nations tend to opt for WMD. America started the process by developing the first nuclear weapons; England and France followed suit more as a matter of prestige than in fear; the Soviet Union then sought to balance American power with its own nuclear weapons. Each then mirrored the other as WMD became more lethal and the numbers of them multiplied. China followed, in part to balance the Soviet arsenal. Israel joined the parade in the 1960 in collaboration with South Africa. Finally, India developed nuclear weapons and in response Pakistan “went nuclear.” A few but not many states then gave them up.

During this process, a number of states also built stockpiles of chemical and biological weapons and acquired the means to make them. Syria was among them. Its motivation was its fear of Israeli power. That fear has not lessened. Israel is still overwhelmingly powerful. The Syrian motivation has not lessened.

So why did Syria accept the Russian proposal to eliminate them? Of course, we cannot be certain, but it appears to me that the reasons include the following:

First, I presume that the Syrian Government received from the Russians a security guarantee and perhaps the stationing of both soldiers and technicians in Syria. The enhanced Russian presence would presumably negate the danger of an Israeli attack which Syria’s possession of chemical weapons failed to do. So Syria arguably gained by giving them up in the way it did. It is difficult to exaggerate the importance of this change: Syrians governments have lived literally under the gun for half a century. Periodically, Israel has violated Syrian air space and bombed Syrian installations. With a Russian force in residence and forced to protect its widely scattered personnel, probably eventually a significant UN peacekeeping force interspersed among the Russians and advanced conventional weapons such as more effective anti-aircraft missiles, the Syrian Government can to some degree discount external aggression.

Covert subversive activities are likely, of course, to continue. The Syrian Government has not been able to stop them and is unlikely to be able to do so in the future. But the Syrians have learned to live with this threat, and it is probable that the Russian presence will bring the concomitant of security assistance. This is almost certain to include sharing of counterintelligence.

A Russian presence presumably would also allow the Syrian Government to assign more of its military establishment, necessarily heretofore mainly engaged as a deterrent of Israel, to recapture some of the territory it has lost to the rebels. Press reports suggest that this now happening.

Second, acceptance of the Russian proposal to divest itself of chemical weapons has enabled the Syrian Government, which has been maladroit and slow in its public relations, to begin to reverse its foreign image. It can now portray itself as reasonable and responsible in contrast to the rebels who have refused even to attend the proposed Geneva II negotiating sessions and have threatened any Syrians who do so with the charge of treason.

Third, with the entry of Russia into the Middle Eastern arms equation, Israeli reliance on WMD becomes both less relevant and more dangerous. It is perhaps not a coincidence that after years of refusal to consider the creation of a WMD free zone – which I have been advocating for half a century – the Israelis are now tentatively discussing it with the Arab states.<sup>17</sup>

Fourth, Syrian acceptance of the Russian offer has made an imminent and devastating American attack unlikely or even impossible. Press reports suggest that the mood in Damascus already reflects this new optimism.

Finally, although it has not been announced, I think it likely that President Putin must have offered President Assad aid, particularly in wheat of which Syria is desperately short. If I were a Russian planner I would see augmenting the food supply of the Syrian people as a major foreign policy opportunity and if I were a Syrian policy planner I would rush for the chance to get what would most immediately and directly appeal to the Syrian people.

Finally, we should be clear about the legal status of chemical weapons. Those countries that have signed and ratified the Convention are obligated not to use them and to destroy existing stocks. This is a major move forward in the cause of peace. If this first step leads on to a banning of all WMD in the Middle East, we will have moved further from the danger of war toward the establishment of a peace in which we all can participate.

William R. Polk  
November 28, 2013

---

<sup>1</sup> Which entered into force in 1997 when 60 states adhered. Syria was 190<sup>th</sup> signer on Sept 14, 2013 with its adhesion becoming effective on Oct 14, 2013. 6 states (Israel, North Korea, Burma, Egypt, Angola and South Sudan) have not adhered.

<sup>2</sup> Article II, Definition and Criteria.

<sup>3</sup> Robert Harris and Jeremy Paxman, *A Higher Form of Killing: The Secret Story of Chemical and Biological Warfare* (London, 1982) cited by Patrick Cockburn in *The Independent*, October 13, 2013, "Like Assad, Churchill liked to stockpile poison gas."

<sup>4</sup> On November 28, 1943, the SS John Henry was bombed when it was carrying some 514 tons of mustard gas. When the ship exploded, the gas escaped and killed 96 American soldiers. The event was kept secret for the next 20 years perhaps because Britain and US were embarrassed that they had been planning a massive gas attack on Germany. See Organization for the Prohibition of Chemical Weapons, "Brief History of Chemical Weapons" and *The Economist*, August 31, 2013, "The history of chemical weapons: The shadow of Ypres. "How a whole class of weaponry came to be seen as indecent."

<sup>5</sup> The Security Council, "Report of the Mission Dispatched by the Secretary-General to Investigate Allegations of the Use of Chemical Weapons in the Conflict Between the Islamic Republic of Iran and

---

Iraq," *New York Times*, March 12, 1986 and *New York Times*, August 24, 1988, "Special to the *New York Times*, U.N. panel says Iraq used gas on civilians"

<sup>6</sup> This is particularly ironic since President Reagan probably owed his sweeping victory against incumbent President Jimmy Carter to Iran. Allegedly, Reagan had benefitted from a deal worked out with George H.W. Bush to delay releasing the American hostages held in Iran until after the election. On this see Gary Sick, *October Surprise*, New York, 1991. On the American supply of the component chemicals to Iran, see *Foreign Policy*, August 26, 2013, "Exclusive: CIA Files Prove America Helped Saddam as He Gassed Iran. The U.S. knew Hussein was launching some of the worst chemical attacks in history -- and still gave him a hand." Authorization was given in the still-classified National Security Decision Directive 114 of November 26, 1983.

<sup>7</sup> *The Washington Post*, December 30, 2002, Michael Dobbs, cited in Glenn Kessler, *The Fact Checker*, "History Lesson: When the United States looked the other way on chemical weapons." September 4, 2013.

<sup>8</sup> Although "undeclared," Israel is known to have not only upwards of 400 nuclear weapons but also a robust program of chemical and biological manufacture, research and training. It is also known to have imported chemicals used to produce Sarin nerve gas from the US.

<sup>8</sup> *The Los Angeles Times*, September 13, 2013, Patrick U. McDonnell, "Syrian rebel groups sought sarin gas material, Turkish prosecutors say." The suspected groups were Jabhat an-Nusra and Ahrar ash-Sham.

<sup>10</sup> November 22, 2013, Adam Entous, Nour Malas and Rima Abushakra, "As Syrian Chemical Attack Loomed, Missteps Doomed Civilians." In addition to unnamed government officials, the reporters say that they interviewed "eyewitnesses, rebels, medics, activists and Western intelligence officials."

<sup>11</sup> *The New York Times*, September 19, 2013, C.J. Chivers, "Data points to elite unit in Syrian gas attack." As Mr. Chivers wrote, "The inspectors, instructed to investigate the attack but not to assign blame, nonetheless listed the precise compass directions of flight for two rocket strikes that appeared to lead back toward the government's elite redoubt in Damascus, Mount Qasioun, which overlooks and protects neighborhoods and Mr. Assad's presidential palace and where his Republican Guard and the army's powerful Fourth Division are entrenched."

<sup>12</sup> *NTI*, February 2013, "Israel: Chemical."

<sup>13</sup> *The Independent*, Sept 22, 2013, Robert Fisk, "Gas missiles 'were not sold to Syria.'" Fisk points out "Since Gaddafi's fall in 2011, vast quantities of his abandoned Soviet-made arms have fallen into the hands of rebel groups and al-Qa'ida-affiliated insurgents. Many were later found in Mali, some in Algeria and a vast amount in Sinai. The Syrians have long claimed that a substantial amount of Soviet-made weaponry has made its way from Libya into the hands of rebels in the country's civil war with the help of Qatar - which supported the Libyan rebels against Gaddafi and now pays for arms shipments to Syrian insurgents." Moreover, the timing of the attack, he found to be curious: "Why, for example, would Syria wait until the UN inspectors were ensconced in Damascus on 18 August before using sarin gas little more than two days later - and only four miles from the hotel in which the UN had just checked in? Having thus presented the UN with evidence of the use of sarin - which the inspectors quickly acquired at the scene - the Assad regime, if guilty, would surely have realized that a military attack would be staged by Western nations."

<sup>14</sup> James Martin Center for Nonproliferation Studies, Monterey Institute of International Studies (Middleberry College), August 22, 2013 and The Center for Arms Control and Non-Proliferation, Fact Sheet: Global Nuclear Weapons Inventories in 2013, July 2013, prepared by Lesley McNiesh and updated by Justin Bresolin and Sam Kane.

<sup>15</sup> *The New York Times*, November 1, 2013, Anne Barnard, "Syria Destroys Arms Sites, Inspectors Say." "Syria's ability to produce chemical weapons has been destroyed and its remaining toxic armaments secured, weapons inspectors said Thursday..."

<sup>16</sup> *The New York Times*, November 1, 2013, Anne Barnard, "Syria Destroys Chemical Arms Sites, Inspectors Say." *The Guardian*, October 31, 2013, Ian Black and John Meikle, "Syria meets chemical weapons deadline amid fears of polio outbreak."

<sup>17</sup> *Maariv*, October 31, 2013; *Middle East Monitor*, October 31, 2013;