

# **Syria's Chemical Weapons - The Terrorism Threat**

## **International Institute for Counter-Terrorism (ICT) Report**

**September 8, 2013**

### **Background**

Since the uprising began in Syria in March 2011, more than 100,000 people have been killed, 2 million people have fled the country becoming refugees, and 4.25 million people are internally displaced.

The will of Assad's forces to fight is still there, but they are struggling to combat the Syrian rebel's gains until recently. It is believed that the al-Assad regime is desperate enough to use anything in its power to stay the ruling government, including use of any of its poisonous gases, as was the case this past March through May.

Besides the use of chemical warfare by the Syrian government there is a real and immediate threat that chemical weapons, agents or precursors could fall in the hands of terrorist organizations, be it Hezbollah (in which case the regime itself could be willing to provide them to its staunch ally), pro-Syrian Palestinian organizations, the Free Syrian Army and its local units or the various Islamist and jihadists factions like Jabha al-Nusra.

This report is the first part of an ICT project intended to evaluate the threat of proliferation of Syrian chemical weapons to local and regional terrorist organizations and beyond. The report includes information on the status of chemical weapons in Syria and their use updated to mid-June 2013 and an addendum presenting the main points of the United States and French intelligence communities' evaluation concerning the August 21, 2013 chemical attacks in the suburbs of Damascus.<sup>1</sup>

### **The Syrian chemical arsenal**

After its defeats in its wars against Israel, Syria began to develop a chemical weapons program as a way to deter the Israeli military might.

Syria was heavily dependent on outside help in procuring important precursor chemicals and equipment from Russia, Egypt, West Germany, France, Iran, North Korea, and possibly other countries over a period of 20 years. However Syria, which refused to sign the Chemical Weapons Convention and after 1973 began to produce its own chemical weapons, further intensified its program after the signing of the Israeli-Egyptian Peace Treaty in 1979. It is believed Syria started producing locally mustard gas as well as sarin in the 1980s.

Syria has one of the largest chemical weapons arsenals, including traditional chemical agents, such as mustard, and more modern agents, such as sarin, and persistent

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<sup>1</sup> The report is based in great part on the paper by Rachel Schwartz (ICT intern), "Case Study: Syria's Chemical and Biological Weapons Program and the Use of These Weapons in the Syrian Civil War Today," *The International Institute for Counter-Terrorism Website*, August 2013, at <http://www.ict.org.il/LinkClick.aspx?fileticket=Dc-lfZow0Fc%3d&tabid=66>.

nerve agents, such as VX. Syria has accumulated since the 1980s a stockpile of approximately 1,000 tons of chemical weapons, stored in some 50 different cities, mostly located in the northern part of the country close to the Turkish border. Since 2009 Syria has been amassing a larger chemical weapons arsenal and engineering more complex chemical compounds.

Syria has a variety of platforms it can use to deliver its chemical weapons including aerial bombs, artillery shells and rockets, and ballistic missiles. In 1993 Syria was even the first to produce tube and rocket artillery rounds filled with mustard-gas-type blistering agents...the first weaponization of its kind.<sup>2</sup>

Much of Syria's chemical weapons designed for large-scale military use are binary, or stored as two separate ingredients that must be combined before lethal use, making it hard for its detonation by non-professional elements.

Until July 23, 2012 when the Syrian government implicitly acknowledged possessing stocks of chemical weapons reserved only for national defense against foreign countries, there had been no admittance from Syria that it had chemical weapons.<sup>3</sup>

Not much is known about the location of the chemical weapons. Are they stored in mass quantities? Are they stored in heavy artillery shells or missile heads? Are they located in close proximity to each other? General Martin Dempsey, chairman of the Joint Chiefs of Staff, announced in April 2013 that the Syrian government keeps moving the chemical weapons,<sup>4</sup> specifically its stocks of sarin and mustard gas from storage sites to trucks.<sup>5</sup> It seems that the Syrian government is consolidating its chemical arsenal into fewer locations because in December 2012 American intelligence agencies indicated that there had been significant movement of chemical weapons stores as well as indications that the Syrian government had been mixing chemicals.<sup>6</sup> According to one information the Russians advised the regime to consolidate their weapons depots into two to four main storage facilities.<sup>7</sup>

### **Chemical weapons facilities**

Syria's chemical weapons arsenal can be divided into four types of facilities: production, research and development, dual-infrastructure, and storage.

<sup>2</sup> "Syria's chemical weapons stockpile and human impact." *BBC News*. 26 April 2013. Web.

<http://www.bbc.co.uk/wp.test.ebaytoday.ru/news/world-middle-east-22307705>

<sup>3</sup> MacFarquhar, Neil. "Syria Says Chemical Arms Reserved for Attack From Abroad". *New York Times*. 23 July 2012. [http://www.nytimes.com/2012/07/24/world/middleeast/chemical-weapons-wont-be-used-in-rebellion-syria-says.html?pagewanted=all&\\_r=0](http://www.nytimes.com/2012/07/24/world/middleeast/chemical-weapons-wont-be-used-in-rebellion-syria-says.html?pagewanted=all&_r=0)

<sup>4</sup> Vandiver, John. "Troops needed to secure Syria's chemical weapons, some experts say." *Stars and Stripes*. 29 May 2013. Web. <http://www.stripes.com/news/troops-needed-to-secure-syria-s-chemical-weapons-some-experts-say-1.223510>

<sup>5</sup> The Tower Staff. "Israeli Air Strikes Reported as Both Rebels and Hezbollah Close In on Syria's Chemical Weapons." *The Tower*. 3 May 2013. Web. <http://www.thetower.org/israeli-air-strikes-reported-as-both-rebels-and-hezbollah-close-in-on-syrias-chemical-weapons/>

<sup>6</sup> Baker, Peter; Mark Landler and David E. Sanger. "Obama's Vow on Chemical Weapons Puts Him in Tough Spot." *NYTimes*. 11 June 2013. Web. <http://www.nytimes.com/2013/05/05/world/middleeast/obamas-vow-on-chemical-weapons-puts-him-in-tough-spot.html?pagewanted=all>

<sup>7</sup> "Syria 'secures chemical weapons stockpile'". *Aljazeera*. 23 Dec 2012. Web. <http://www.aljazeera.com/news/middleeast/2012/12/201212221532021654.html>

Western specialists have indicated that chemical weapons production facilities of sarin and VX are located at 5 sites: al-Safira, Hama, Homs, Latakia, and Palmyra.<sup>8</sup> Storage facilities are located at least at al-Furqlus, Dumayr, Khan Abu Shamat, and the Scientific Studies and Research Centre (Centre d'Etudes et de Recherches Scientifiques - CERS).<sup>9</sup>

### ***Production***

Hama - The site is located 47 kilometers north of Homs and 140 kilometers south of Aleppo. The facility was established and began producing missiles in 1993 and today is under the direct control of CERS.

Homs - Located outside the perimeter of the Homs Refinery and is subordinate to CERS.

Lattakia - Located on the Syrian northern coast and is subordinated to CERS.

Al-Safira (As Safirah, Al Safir, Safiyah, Aleppo) is located in the northwest of the country on a ridge 1 kilometer south of Al-Safira and 20 kilometers southeast of Aleppo and is four by eight kilometers big. It was established in 2005, and is one of the premier chemical weapons facilities for production, storage, and weaponization including sarin.

### ***Research and Development***

Centre d'Etude et Recherche Scientifique - CERS, located in Damascus, is the principal facility for both chemical and biological research, development, testing, production, and storage. The research center concentrates on upgrading chemical and biological war agents and dispersal and delivery systems for those agents. It also works on research for a variety of different weapons. CERS has worked closely with the Syrian military and reports directly to president Bashar al-Assad. It is in charge of operating several other chemical production facilities that have been listed above. For over a decade CERS has been the focus of western sanctions.

Jamraya - Located northwest of Damascus, was established in the 1980s with help from the Soviet Union. It is the most clandestine and highest profile research and development center in Syria. It is home to some of the most important strategic military bases in Syria and critical weapons are developed and stored there.<sup>10</sup>

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<sup>8</sup> Pike, John. "Special Weapons Facilities". *Global Security*. 5 June 2011. Web. <http://www.globalsecurity.org/wmd/world/syria/facility.htm>

<sup>9</sup> Pita, Rene. "Analysis of Syria's Chemical and Biological Threat." *Instituto Espanol de Estudios Estrategicos*. 14 April 2012. Web. [http://www.ieee.es/en/Galerias/fichero/docs\\_opinion/2012/DIEEEE033-2012\\_AnalisisAmenazaQuimicaBiologicaSiria\\_RenePita\\_ENGLISH.pdf](http://www.ieee.es/en/Galerias/fichero/docs_opinion/2012/DIEEEE033-2012_AnalisisAmenazaQuimicaBiologicaSiria_RenePita_ENGLISH.pdf)

<sup>10</sup> "Profile: Syria's top-secret Jamraya research centre." *BBC*. 5 May 2013. Web. <http://www.bbc.co.uk/news/world-middle-east-22421732>



Image 1- The Syrian military research center at Jamraya [Aljazeera]

### *Storage*

Khan Abu Shamat Depot located some 20 kilometers east of Dumayr.

Furqlus Depot- Located approximately 40 kilometers southeast of Homs and 4 kilometers northeast of al-Furqlus. It is subordinate to the Syrian government.

Masyaf, 7 kilometers northeast of Masyaf, is subordinated to CERS.

Palmrya, northeast of Damascus: its status is questionable.

Dumayr, 40 kilometers northeast of Damascus: its status is questionable.

### *Dual-use infrastructure*

Setma Ltd. is located in the Damascus area.

Homs General Fertilizer Company is located on the shore of Lake Katina, a district of Homs, southwest of the city's center. It is composed of three separate facilities for fertilizer production, two sulfuric acid plants, and an anhydrous ammonia plant.

Homs Oil Refinery (Syrian State Petrol Company) located approximately 5 kilometers west of the center of Homs inside ring road.

Banias Oil Refinery in the city of Banias is subordinate to Sytrol, General Corporation for Refining and Distribution of Petroleum Products, and the Ministry of Petroleum.

## The use of chemical warfare in the Syrian civil war

The chemical weapons stores are “in the hands of chemical weapons-trained loyalists of Assad’s Alawite clan...[and] most of the chemical weapons have been transported to Alawite areas in Latakia and near the coast”, so as to fire them using medium range surface-to-surface missiles. This means that irregular militias, who have the possibility to defect from the regime’s control, will have the knowledge to use these chemical ammunitions. Other chemical weapons remain in bases around Damascus and the chief research center CERS “and have been deployed with artillery shells.”<sup>11</sup>

The Syrian government military has strategically focused on solidifying control of major urban cities and main supply routes and lines of communications between the most strategic areas. The government forces have been able to hold all major cities, except Al-Raqqah, despite facing serious challenges in Aleppo, Dara’a and Dayr Al-Zawr. In Aleppo, Assad forces control the western half of the city, while in Homs Assad officials reported by the beginning of July that they have overhauled the Khaldiveh district as opposition spokesmen deny this declaration.<sup>12</sup>

However, opposition forces have cemented control over northern and eastern governorates and are continuously trying to overrun Syrian weapons depots, which they have not succeeded to do except for the suspected takeover of a factory outside of Aleppo by Jabha al-Nusra in August 2012.<sup>13</sup> According to official Syrian sources, opposition rebels were found to control two containers of sarin in a raid by Syrian government forces on a militant hideout in al-Faraich, Hama.<sup>14</sup>

From this we can infer that the chemical weapons stores located in the major cities as well as near Lattakia on the coast are held and controlled by Syrian government forces or related militias. In areas near the major cities in flux however, it is unclear who holds these facilities.

Until recently it was difficult to evaluate the accuracy of the information published by France, Britain, the United States, Turkey and Israel, concerning the actual use of chemical weapons by the Syrian army due to its uncertain origin, time and way of delivery, and accessibility to the region.

In December 2012 Assad tested the waters by using limited chemical weapons allegedly against the town of Baba Amr and threatened to use them in al-Zabadani where gas masks were provided to government troops.<sup>15</sup>

The Assad regime then used chemical weapons at least in four instances between March and May. According to the June 13, 2013 White House statement use of chemical

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<sup>11</sup> Deutsch, Anthony and Khaled Yacoub Oweis. “Syria’s Chemical weapons program was built to counter Israel”. Reuters. 5 June, 2013. Web. <http://www.reuters.com/article/2013/06/04/us-syria-crisis-chemical-idUSBRE9530QC20130604>

<sup>12</sup> “Arab World.” *Foreign Policy*. 15 July 2013. Web. [http://mideast.foreignpolicy.com/category/region/arab\\_world](http://mideast.foreignpolicy.com/category/region/arab_world)

<sup>13</sup> Baker, Aryn. “Syria’s Civil. War: Mystery Behind a Deadly Chemical Attack.” *CNN*. 1 April 2013. Web. <http://world.time.com/2013/04/01/syrias-civil-war-the-mystery-behind-a-deadly-chemical-attack/>

<sup>14</sup> “Syrian Army seizes Sarin gas from rebels.” *ZeeNews*. 3 June 2013. Web.

<sup>15</sup> “Assad regime distributed gas masks and radiation suits to troops.” *Asharq-Alawsat*. 6 December 2012. Web. <http://www.aawsat.net/2012/12/article55239621>.

weapons resulted in an estimated 100-150 deaths in Syria.<sup>16</sup>

There are also claims, mainly by the regime and Russian officials, that the rebels have also used chemical weapons against Syrian citizens since the beginning of this year.<sup>17</sup>

### **Known chemical attacks by the Syrian army**

There are reasonable grounds to believe that limited quantities of toxic chemicals were used since December 2012 in four attacks between March 9 to April 2013. It has not been possible, on the available evidence, to determine the precise chemical agents used, the delivery systems or the perpetrator, although most serious sources have evaluated that the Syrian army or elements of the regime were behind these attacks. See below map prepared by the ICT team: *Syria's chemical weapons and attacks* (Map was modified from: [http://global-atlas.jrc.it/maps/PUBLIC/2148\\_Syria\\_political\\_A1.jpg](http://global-atlas.jrc.it/maps/PUBLIC/2148_Syria_political_A1.jpg)).

#### December 23, 2012 - Homs

On Dec. 23, 2012, an attack in Homs province killed seven and wounded more than 50. The inhalation of poisonous gases was determined as the source of deaths though this has yet to be confirmed. According to one IDF official, this was a “test of the world’s reaction.”<sup>18</sup>

The symptoms of those affected suggest that the Syrian regime utilized the BZ nerve gas, also known as Agent 15. According to Dr. Nashwan Abu-Abdo, symptoms included asphyxiation, mental confusion including hallucinations and behavior changes, and general or partial seizures.<sup>19</sup>

#### March 19, 2013, Khan al-Assal

The alleged attack in the northern town killed a reported 31 people and caused symptoms in roughly 300 others. Both sides called for an inquiry and blamed each other for the attacks.

Dr. Zaher Sahloul, president of the Syrian-American Medical Association, stated that the patients he saw in Khan al-Assal had symptoms “consistent with cholinergic syndrome”. This syndrome is a common effect of “exposure to nerve gas.” He noted that the patients had respiratory - including shortness of breath, bronchospasm, a lot of secretion and respiratory failure requiring mechanical ventilation, large concentration

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<sup>16</sup> Feickert, Andrew, Paul K Kerr, and Mary Beth Nikitin. “Syria’s Chemical Weapons: Issues for Congress.” *Congressional Research Service*. 1 July 2013, at <http://www.fas.org/sgp/crs/nuke/R42848.pdf>. See also Julian Perry Robinson, “Alleged Use of Chemical Weapons in Syria,” Harvard Sussex Program Occasional Paper, Issue 4 (26 June 2013).

<sup>17</sup> “Russia Criticizes UN Report on Syrian Human Rights Abuses.” *RiaNovosti*. 4 June 2013. Web. <http://en.rian.ru/russia/20130604/181503953.html>

<sup>18</sup> Baker, Landler and Sanger. “Obama’s Vow on Chemical Weapons Puts Him in Tough Spot.”

<sup>19</sup> Spencer, Richard. “Syria Homs Attack Might Have Included Use of Chemical Weapons”. *The Telegraph* <http://www.telegraph.co.uk/news/worldnews/middleeast/syria/9806675/Syria-Homs-attack-may-have-included-use-of-chemical-weapons.html>

oxygen; and also neurologic symptoms - confusion, convulsions, and some of them went into comas; and also eye symptoms.”<sup>20</sup>

Syrian doctors in Aleppo transferred blood samples to Reyhanli, Turkey. The White House noted that in this case there were strong signs and “some degree of varying confidence” that Syrian government forces had utilized sarin gas in combat.<sup>21</sup>

Allegations over the perpetrators of the attack continue. On July 9, 2013, the Russian government accused the Bashair al-Nasr brigade, an affiliate of the Free Syrian Army, of firing a sarin-filled “Bashair-3 unguided projectile” into the town. These allegations followed a UN declaration that “limited quantities of toxic chemicals” had indeed been utilized in Khan al-Assal, but that it had been impossible to identify the perpetrators of the attack.<sup>22</sup>

#### March 19, 2013, Al-Otaybeh

On the same days as the Khan al-Assal attack, Syrian activists uploaded video clips of victims of an alleged chemical bombardment of Al-Otaybeh, shown struggling to breathe. One of the videos features an interview with a local doctor, who suggested his patients have suffered from exposure to an organophosphate chemical. He noted that he treated one of the men with atropine, a remedy for exposure to nerve agents. Douma officials, a neighboring town, have stated that they have conserved six corpses linked to chemical weapons attacks, with some having died in Al-Otaybeh.<sup>23</sup>

#### March 24, 2013, Adra

The Local Co-ordination Committees, a group of Syrian activists, stated that dozens had been wounded and at least 2 killed when Adra was attacked by Syrian army rocket launchers with “chemical phosphorous bombs.” The injured were reported suffering from muscular cramping and respiratory problems. A video that featured on The Shaam News Network showed further symptoms including “convulsions, excess saliva, narrow pupils and vomiting.”<sup>24</sup>

#### April 13, Sheikh Maqsoud, Aleppo

The Syrian Observatory for Human Rights (SOHR) reported that two women and two children had been killed due to exposure to “gases from bombs dropped by an

<sup>20</sup> Hilleary, Cecily. “What We Know About Chemical Weapons in Syria.” *Voice of America*. 2 May 2013. Web. <http://www.voanews.com/content/what-we-know-about-chemical-weapons-in-syria/1653286.html>

<sup>21</sup> Fahim, Kharim. “Still More Questions Than Answers on Nerve Gas in Syria.” *NYTimes*. 11 June 2013. Web. <http://www.nytimes.com/2013/06/11/world/middleeast/still-more-questions-than-answers-on-nerve-gas-in-syria.html?pagewanted=all>

<sup>22</sup> *BBC*. “Russia Claims Syria Rebels Used Sarin at Khan al-Assal” <http://www.bbc.co.uk/news/world-middle-east-23249104>

<sup>23</sup> “Syria chemical weapons allegations.” *BBC News*. 17 May 2013. Web. <http://www.bbc.co.uk/news/world-middle-east-22557347>

<sup>24</sup> *Ibid*.

aircraft on the Sheikh Maqsoud neighborhood.” Online footage allegedly showed victims “frothing at the mouth and twitching, both symptoms of exposure to nerve gas.”<sup>25</sup> Twelve more people were injured, a majority of them succumbing to illness following exposure to the original victims of the attack.<sup>26</sup>

The final death toll of the attack states that 31 people were killed, including 10 soldiers, and wounded scores more.<sup>27</sup> United Nations investigators in Geneva reported on the same day that they had found “reasonable grounds to believe limited quantities of toxic chemicals were used” in Aleppo, Damascus, and Idlib.<sup>28</sup>

#### April 29, 2013, Saraqeb

On-ground reports suggest that government forces shelled the city and used a helicopter to drop at least two containers believed to have contained poisonous gases. Local hospital workers stated that eight people had suffered respiratory problems and vomiting. A video showed patients with bloodshot eyes and some appear to have constricted pupils.<sup>29</sup> The recovered containers were described as “box-like with a hollow concrete casing inside.” An alleged on-scene video showed what appeared to be white powder surrounding one of the devices.

Notably, the French Foreign Minister Laurent Fabius stated that recovered samples of the Saraqeb victims had tested positive for sarin, which left him “no doubt”, that government forces were responsible for the gas attacks.

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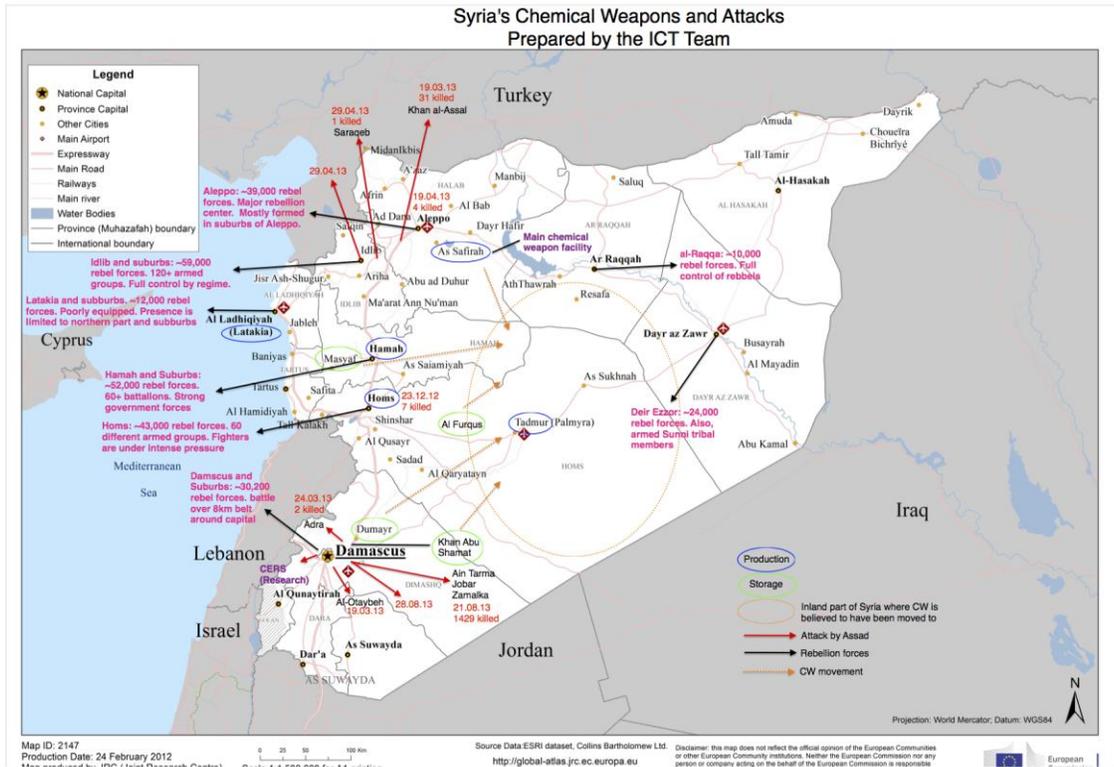
<sup>25</sup> Ibid.

<sup>26</sup> Ibid.

<sup>27</sup> Baker, “Syria’s Civil. War: Mystery Behind a Deadly Chemical Attack.”

<sup>28</sup> Cumming-Bruce, Nick, and Seven Erlanger. “France Offers Evidence of ‘Multiple’ Uses of Nerve Gas in Syria.” *New York Times*. 4 June 2013. Web. <http://www.nytimes.com/2013/06/05/world/middleeast/france-offers-evidence-of-multiple-uses-of-nerve-gas-in-syria.html?pagewanted=all>

<sup>29</sup> Pannell, Ian. “Syria Crisis: ‘Strong Evidence’ of Chemical Attacks, in Saraqeb”. *BBC* <http://www.bbc.co.uk/news/world-middle-east-22551892>



## The August 21, 2013 chemical attack near Damascus

On August 21, 2013, just days after UN inspectors arrived in Syria to investigate the possible use of chemical weapons, the Syrian opposition accused the regime to have launched a large rocket attack in the Damascus suburbs using chemical weapons. There were wildly differing reports on the number of casualties, from "dozens" to 200 to over 650 and in the end some 2000. Witnesses, reporters on the ground and videos posted on the Internet confirmed that some kind of attack took place and that many children were among the dead.

Syria's state media denied the claims and accused the rebels to be behind the chemical attacks.

The White House condemned the possible new use of chemical weapons in Syria and called for the UN team to investigate with urgency.

On August 30, 2013, the United States Government issued an assessment of the Syrian Government's use of chemical weapons in the Damascus suburbs on August 21. The U.S. government assesses with high confidence that the Syrian regime has used chemical weapons on a small scale against the opposition multiple times in the last year, including in the Damascus suburbs.<sup>30</sup>

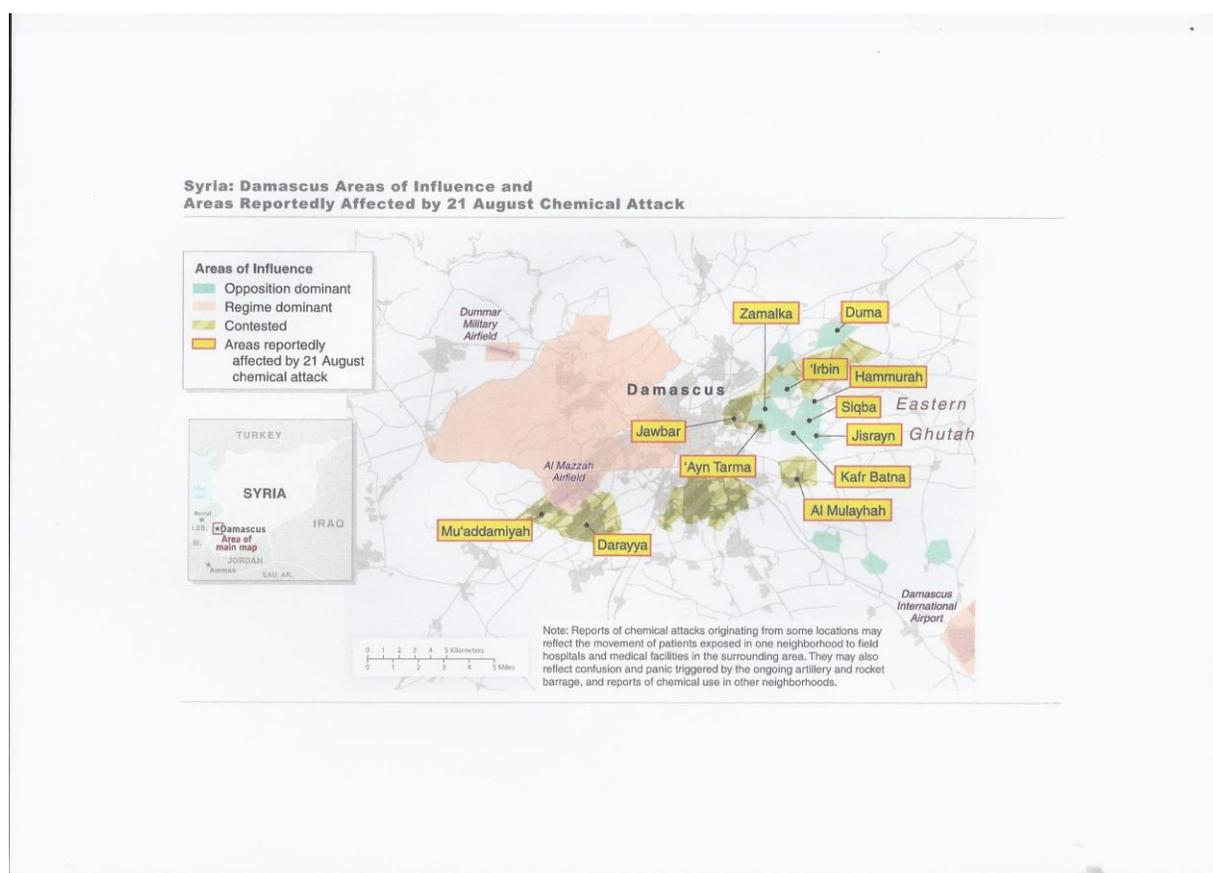
The report used U.S. signals and geospatial intelligence, accounts from

<sup>30</sup> "Government Assessment of the Syrian Government's Use of Chemical Weapons on August 21, 2013," *The White House Office of the Press Secretary*, August 30, 2013, at <http://www.whitehouse.gov/the-press-office/2013/08/30/government-assessment-syrian-government-s-use-chemical-weapons-august-21>.

international and Syrian medical personnel, videos, witness accounts, and thousands of social media reports from at least 12 different locations in the Damascus area to analyze the August 21, 2013 chemical attack.

The preliminary U.S. assessment determined with high confidence that the Syrian government carried out the chemical weapons attack against opposition elements and that 1,429 people were killed in the attack, including at least 426 children.

Multiple streams of intelligence indicate that the regime executed a rocket and artillery attack against the Damascus suburbs including Kafr Batna, Jawbar, 'Ayn Tarma, Darayya, and Mu'addamiyah. Satellite detections corroborate that attacks from a regime-controlled area struck neighborhoods where the chemical attacks reportedly occurred. See below the map of Damascus areas of influence and areas reportedly affected by 21 August chemical attack as published by the White House.<sup>31</sup>



The reported symptoms of victims included unconsciousness, foaming from the nose and mouth, constricted pupils, rapid heartbeat, and difficulty breathing. Several of the videos show what appear to be numerous fatalities with no visible injuries, which is consistent with death from chemical weapons, and inconsistent with death from small-

<sup>31</sup> Syria Damascus Areas of Influence and Areas Reportedly Affected by 21 August Chemical Attack, at [http://www.whitehouse.gov/sites/default/files/docs/2013-08-30\\_map\\_accompanying\\_usg\\_assessment\\_on\\_syria.pdf](http://www.whitehouse.gov/sites/default/files/docs/2013-08-30_map_accompanying_usg_assessment_on_syria.pdf)

arms, high-explosive munitions or blister agents.

A French intelligence assessment paper released on September 2, 2013 reported that there was massive use of chemical agents in the August 21 attack and that only the regime could have been responsible. It said the attack combined ground strikes and chemical weapons in a coherent tactical maneuver and intelligence officials had concluded that rockets used in the attack were fired from regime-controlled areas.<sup>32</sup>

Based on video reports, French intelligence had counted at least 281 dead; the French NGO *Médecins Sans Frontières (MSF or Doctors Without Borders)* reported at least 355 casualties; but reports by different other sources of up to 1,500 killed were consistent with such heavy use of chemical weapons.

The French intelligence believes the Syrian opposition does not have the capacity to carry out an operation of such magnitude with chemical agents.

### **The danger of Syrian chemical weapons falling in the hands of terrorist groups**

Besides the use of chemical warfare by the Syrian government there is a real and immediate threat that chemical weapons, agents or precursors could fall in the hands of terrorist organizations.

The Assad regime has a strategic alliance with the Lebanese Hezbollah, which is involved in the fight against the opposition forces. Thousands of Hezbollah fighters have participated in the recent military victory over rebel forces in al-Qusayr and are presently engaged in the battles for the control of the big cities, Aleppo and Homs.

The Syrians have provided in the past long-range missiles and other heavy weapons to Hezbollah and Israel has bombed attempts to transfer to the organization advanced anti-aerial SA-17 missiles.

The possibility of transfer of chemical weapons to the Lebanese terrorist organization is therefore realistic and worries the neighboring countries and especially Israel. Hezbollah is in possession of over 50,000 rockets and missiles, which include ones with a range sufficient of striking at most of Israel. A highly sophisticated and hierarchical organization trained by the Iranian Islamic Revolutionary Guards Corps (IRGC), Hezbollah could be able to use chemical weapons or agents under Iranian or Syrian guidance.

The *Al Arabiya* TV reported on May 4, 2013 that, according to a Free Syrian Army spokesperson, Hezbollah along with forces loyal to the Syrian president had been using chemical weapons against the armed opposition. Residents of al-Qusayr claimed that Hezbollah used mustard-gas artillery shells during the fighting around the strategic town.<sup>33</sup>

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<sup>32</sup> *Synthèse nationale de renseignement déclassifié. Programme chimique syrien. Cas d'emploi passés d'agents chimiques par le régime. Attaque chimique conduite par le régime le 21 août 2013, 2 septembre 2013, at*

[http://www.gouvernement.fr/sites/default/files/fichiers\\_joints/syrie\\_synthese\\_nationale\\_de\\_renseignement\\_declassifie\\_02\\_09\\_2013.pdf](http://www.gouvernement.fr/sites/default/files/fichiers_joints/syrie_synthese_nationale_de_renseignement_declassifie_02_09_2013.pdf) .

<sup>33</sup> *Al Arabiya*, 4 May 2013, <http://english.alarabiya.net/en/News/middle-east/2013/05/04/FSA-accuses-Hezbollah-of-using-chemical-weapons-in-Qusayr-.html>

The Assad regime could decide in certain conditions to provide chemical weapons to its proxy Palestinian organizations, especially the Popular Front for the Liberation of Palestine – General Command, the faction led by Ahmed Jibril, one of the most sophisticated and dangerous Palestinian terrorist groups.

Finally, the nightmarish scenario of chemical weapons falling in the hands of the Free Syrian Army's many local "brigades", or worse in the hands of the various Islamist and jihadists factions, like Jabha al-Nusra, could materialize at any moment. These groups have already captured in the past military camps, airports and missile bases and possibly have already some chemical weapons or precursors in their possession, and some professional defectors from the Syrian army.

It is critical therefore to continue to keep track of the movements of Syrian government and opposition forces in order to evaluate in which areas the control of the arsenal of chemical weapons could be lost.

ICT intends to focus in its future reports on the potential operational implications of terrorist organizations in the area getting hold of chemical weapons and the ways to contain and combat such an occurrence.