COUNCIL on FOREIGN RELATIONS

# Probing for Chemical Attacks in Syria

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Two years after the start of the revolt against Bashar al-Assad in Syria, there is renewed concern that the regime may resort to the use of chemical weapons. On March 12, Director of National Intelligence James Clapper warned that "an increasingly beleaguered regime, having found its escalation of violence through conventional means inadequate, might be prepared to use CW against the Syrian people."

Last week, the Syrian government and rebels traded accusations that the other had **used chemical weapons**. The state-controlled Syrian Arab News Agency reported that twenty-five were killed and eighty-six injured on March 19 by a rebel chemical attack in the town of Khan al-Assal, near the city of Aleppo. Meanwhile, rebels denied the claims and said the government was responsible for the attack. Rebels also alleged that the Assad regime launched a chemical attack in the town of Otaiba, near the capital of Damascus, which caused an unknown number of casualties.

In response to a request from the Syrian government, Secretary-General Ban Ki-moon announced that the UN would investigate the Aleppo incident. Ban's decision was supported by Russia, but the United States, United Kingdom, and France also want the UN to scrutinize the attack reported by rebels near Damascus. Given these developments, it is useful to review what we know of Syria's chemical weapons, their role in the civil war so far, and prospects for a UN investigation.

### Taking Inventory

Syria has had an active chemical weapons program since the 1980s. The Scientific Studies and Research Centre in Damascus is the Syrian government agency responsible for the regime's chemical and biological weapons and ballistic missile programs. The Syrian chemical weapons complex is large and geographically dispersed with at least a dozen sites associated with storage, production, and preparation. Syria is believed to possess a stockpile of sulfur mustard, sarin, and VX chemical warfare agents as well as missile warheads, aerial bombs, and artillery rockets that can be used to deliver these agents.

Sulfur mustard was first used as a chemical weapon during World War I and later by Iraq against Iran and the Kurds. Mustard belongs to the class of blister agents since it causes chemical burns on the skin. Mustard is an oily liquid generally regarded as a persistent chemical agent that can contaminate exposed surfaces for more than 24 hours.

Sarin and VX are nerve agents that inhibit a key enzyme which controls muscle activity. They are the most toxic type of chemical weapon and can cause death in minutes. Iraq also used sarin against both Iran and the Kurds in the 1980s. Syria has reportedly developed a binary version of its nerve agents in which two less toxic chemicals are stored separately and are mixed together shortly before or after launch to produce a highly lethal chemical. Binary chemical weapons are easier to store and handle than traditional chemical weapons.

**Red Lines in the Sand**

Reports have emerged periodically throughout the uprising that the Syrian government was either preparing to use chemical weapons or had launched a chemical attack. The United States has detected the movement of chemical weapons, probably related to efforts by the regime to consolidate and secure its stockpile, on **several occasions**. On July 23, 2012, a spokesman for the Syrian Foreign Ministry acknowledged that Syria possessed unconventional weapons and **threatened** to use them against foreign aggression. Last December, the United States reportedly detected signs that Syria was **preparing** some of its chemical weapons for possible use. Later that month, Syrian opposition sources reported that seven died and dozens were injured by an unidentified chemical agent used by the government in the city of Homs. An initial **investigation** by the U.S. embassy in Turkey determined that the Syrian opposition had "made a compelling case" that the Assad regime had used a chemical weapon in Homs. However, the White House and State Department quickly backed away from this claim.

In response to intelligence reports, Syrian government statements, and rebel allegations of chemical attacks, President Barack Obama and other world leaders have warned repeatedly that Syria's use of chemical weapons would cross a "red line." While visiting Israel last week, President Obama stated that Syria's use of chemical weapons would be a "game changer." This deterrence strategy appears to have worked well so far. Indeed, it is hard to think of how the Assad regime could use chemical weapons where the benefits would outweigh the costs.

Chemical weapons are difficult to use effectively under the best of circumstances. These difficulties multiply when the target is a decentralized rebel movement fighting in a highly fluid urban battleground. The use of these weapons also comes with major political risks for the Assad regime. Crossing this "red line" would alienate Russia and China, which have so far shielded Syria from UN

Security Council action. Indeed, the use of chemical weapons is probably the only Syrian action that could galvanize direct foreign military intervention and accelerate the demise of the Assad regime.

**The UN's Evolving Role**

The UN's move to investigate the most recent allegation of chemical weapon use adds a new dimension to this issue. Syria is not a signatory to the 1993 **Chemical Weapons Convention**, which prohibits the production and use of chemical weapons. Therefore, the **Organization for the Prohibition of Chemical Weapons** (OPCW), the international body responsible for implementing the treaty, does not have the authority to investigate the alleged use of chemical weapons within Syria.

The secretary-general has had the authority since the 1980s to launch investigations into the alleged use of chemical, biological, and toxin weapons. During the Iran-Iraq War, this mechanism was used several times to investigate the alleged use of chemical weapons by both sides. The UN confirmed Iranian allegations that Iraq used mustard and nerve agents during the conflict. In 1992, Secretary-General Boutros Boutros-Ghali launched investigations of alleged chemical attacks in Mozambique and Azerbaijan; in both cases, no evidence of chemical weapon use was found.

The **Office of Disarmament Affairs** is the UN entity responsible for organizing and conducting investigations of alleged chemical, biological and toxin attacks. Although the Secretary-General's investigative mechanism fell into disuse after 1992, it was recently revived by ODA. ODA has recruited 237 experts and 42 laboratories to participate in such an investigation. In 2007 ODA rewrote the guidelines and procedures governing its field investigations, and in 2009 it held its first training course for experts. ODA also has access to the OPCW's considerable resources under a 2000 Memorandum of Understanding between the two bodies.

**Drawing Conclusions**

Previous experience with such investigations indicates that they are more likely to succeed if the investigative team is able to inspect the site of alleged attack as soon as possible, is granted unrestricted access, is able to conduct medical examinations of the dead and injured, is free to interview eyewitnesses, and is able to collect clinical and environmental samples for further analysis.

Even under these conditions, however, conclusively demonstrating that a chemical attack, launched by the government or the rebels, did or did not occur will be difficult. Urban battlefields are likely to contain toxic substances that could cause symptoms similar to those associated with chemical weapons, local healthcare personnel may not be properly trained to diagnose these symptoms, and eyewitnesses can be unreliable. While confirming an attack is possible with a positive sample from a

munitions fragment or discovery of an intact weapon, a potential attack can never be completely disproven. At best, investigators may be able to say that there is no credible information to support the allegation.