

REPORT SYRIA

No Justice for Khan Sheikhoun

NOVEMBER 6, 2017 — ARON LUND

A few years ago, it could have sparked a major international crisis, but now, the conclusion of a UN investigative panel that Syrian President Bashar al-Assad's forces have used nerve gas is unlikely to change the course of the war.

On October 26, an investigative panel created by the UN Security Council said it was "confident" that Assad's air force was behind a chemical attack against the jihadi-controlled Syrian city of Khan Sheikhoun on April 4, 2017. Not only that, but the nerve gas used was drawn from old Syrian stockpiles that Assad had vowed to destroy in 2013, providing further evidence that Damascus has systematically cheated international inspectors for the past four years.

Western governments are outraged at what they describe as Assad's brutality and Russia's complicity. Yet they are unable to seek accountability for the war crimes in Khan Sheikhoun through the UN Security Council, where Russia holds veto rights. Instead, it is the Russians that have gone on the offensive, threatening to eliminate the UN investigation altogether.

As Western governments scramble to find other ways to follow up on the report and salvage continued inspections, the truth is that the Kremlin holds a better hand. Although Assad's critics may unilaterally impose sanctions or initiate investigations outside the Security Council's remit, such initiatives are unlikely to change the Syrian government's behavior or bring perpetrators to justice.

With Assad seemingly on track to win the Syrian war, some Western nations seem to fear that a major clash could weaken the international inspections regime in which Assad was snared in 2013. Ultimately, many seem to have concluded that ensuring continued access for international inspectors to Syria, even while recognizing that these inspections are flawed and cannot prevent Damascus from cheating on its commitments, is the best that can realistically be achieved.

It is a cruel and painful tradeoff, in which accountability for the victims of gas warfare may ultimately be sacrificed to shore up a flawed and frail system of inspections in the service of long-term nonproliferation goals. But on this question, there are no easy answers—just different ways of muddling through and trying to weigh one principle against another.

This Century Foundation report, which is the third in a series on Syria's chemical weapons question—the previous two were "Red Line Redux: How Putin Tore Up Obama's 2013 Syria Deal" from February 2017 and "Mission Impossible? Investigating the Khan Sheikhoun Nerve Gas Attack in Syria" from July 2017—is based on approximately two dozen interviews over the past year and in the last week, with diplomats and politicians, chemical weapons experts, and others involved with the investigations in Syria. It also draws on reports from the United Nations, the Organization for the Prohibition of Chemical Weapons, and other investigative bodies concerned with Syria, as well as on an extensive survey of media reports in English and Arabic.

The Killings in Khan Sheikhoun

Activists in Khan Sheikhoun, a small city of some 16,000 inhabitants on the lower end of northwestern Syria's Idlib Governorate, reported that the city had been hit by a chemical bomb on early April 4, 2017. Local reporters, armed groups, and activists soon saw their claims echoed by the United States, France, and other governments, which concluded that a Syrian jet had dropped sarin nerve gas on the city, killing scores of locals. Two days after the attack, the United States launched cruise missiles against the Shayrat Air Base, from which the American government said the Syrian jet had taken off. Damascus and Moscow protested vehemently.⁴

When surrendering its chemical arms stockpile after a Russian-American deal in 2013, Syria had also been forced to join the Chemical Weapons Convention and its implementing body, the Organization for the Prohibition of Chemical Weapons (OPCW).⁵ The OPCW is a multilateral organization with 192 state members—all signatories to the convention—that works closely with the UN, but is not part of it.

Since 2014, OPCW inspectors have been working in Syria through two separate mechanisms, both of which operate under ground rules agreed between the OPCW and the Syrian Ministry of Foreign Affairs:

- *The Declaration Assessment Team* conducts talks and inspections aimed at verifying that all chemical arms were declared and destroyed in 2013-2014.⁶ The mission had so far come up short, and the OPCW noted in 2016 that the lack of full Syrian government cooperation prevented complete verification.⁷
- *The Fact-Finding Mission* was tasked with investigating reports of new chemical attacks. However, since the mission was "conditioned on having the support of the Syrians," it was only allowed to investigate whether or not a chemical attack had been committed, and it could not name the suspected perpetrators.⁸

When news of Khan Sheikhoun broke, the OPCW quickly dispatched Fact-Finding Mission teams to Damascus and Turkey with orders to seek information from both the Syrian government and from Syrian groups in Idlib. For reasons of safety and because of the group's limited mandate, the inspectors did not attempt to visit Khan Sheikhoun or the Shayrat Air Base, as Russia and the Syrian government insisted they should.⁹

The inspectors were, however, able to interview numerous witnesses, many of whom had been brought to their attention by either the Syrian government or by rebels and rebel-friendly NGOs, and worked to corroborate or falsify their stories using cross-examination techniques and physical and photographic evidence. OPCW scientists were able to conduct

their own tests on wounded or deceased victims, and both sides also provided the inspectors with environmental samples from Khan Sheikhoun that tested positive for sarin.



CHILD TREATED AFTER KHAN SHEIKHOUN ATTACK. SOURCE IDLIB MEDIA CENTER.

The fact that both rebels and loyalists concurred that sarin had been used and handed over samples that tested identically and matched the OPCW's own biomedical samples helped dispel concerns over the so-called chain of custody —that is, the investigators' ability to safeguard against evidence tampering. In late June 2017, the Fact-Finding Mission's final report concluded that sarin had indeed been used. All sides endorsed this result. In

Contradictory Narratives

What remained, of course, was a sharp disagreement over who had released the sarin. Rebels, rebel-friendly NGOs, and pro-opposition governments insisted that a bomb had been dropped by the Syrian Arab Air Force in the morning of April 4, killing upwards of a hundred people. The United States released a map of the flight path of the airplane that had allegedly dropped the bomb. The disagreement over who had released the sarin. Rebels, rebel-friendly NGOs, and pro-opposition governments insisted that a bomb had been dropped by the Syrian Arab Air Force in the morning of April 4, killing upwards of a hundred people. The United States released a map of the flight path of the airplane that had allegedly dropped the bomb.

However, the Syrian government categorically denied using any chemical weapons.¹⁴ To counter the American and rebel claims, Syrian and Russian officials put forth a series of alternative scenarios, but their credibility was undermined by

the fact that these versions often contradicted each other. Moscow and Damascus first claimed to know that nerve gas had been released from a secret jihadi chemical arms depot in Khan Sheikhoun when it was bombed by Syrian jets. When the OPCW issued its report in June, it undermined these claims. Both nations then dropped the depot story and instead claimed to have evidence that the rebels had set off a chemical bomb on the ground. Several other incongruent versions, whose only common denominator was that Assad was innocent, would also float through Russian and Syrian government media and statements from April until October. ¹⁵

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To outside observers, these abrupt shifts and changes appeared less convincing than as additional evidence that Moscow and Damascus were engaged in a cover-up. Neither Russian nor Syrian officials seemed to care whether their new claims were internally coherent or plausible, as long as they could exonerate Assad's government.¹⁶

The JIM Investigation

Once the OPCW Fact-Finding Mission had announced its sarin finding on June 29, the Joint Investigative Mechanism (JIM) took over. Created through the unanimous adoption of UN Security Council Resolution 2235 in 2015, the JIM is a combined UN-OPCW mission, but in practice it operates mostly under the UN Security Council's umbrella.¹⁷

The group has previously attributed three chlorine attacks to Assad's forces. It has also accused the extremist group known as the Islamic State of carrying out attacks with mustard gas.¹⁸

Though it had a broader mandate, the JIM faced many of the same obstacles as the OPCW, including a brief episode of stalling behavior by Damascus and the dangers posed by fighting, bombing, anarchy, and extremist factions in the rebel-held territories.¹⁹

Already very hostile to the JIM since its chlorine identifications the previous year, Moscow and Damascus kept up a steady barrage of attacks on the mission's credibility in the media. Both nations continually raised the need for a visit to the Shayrat Air Base and to Khan Sheikhoun, arguing that a failure to visit these sites would discredit the investigation.

The JIM visited Shayrat in early October to interview air force personnel and collect information on flight routes and Syrian Arab Air Force equipment, but the inspectors did not seek to take environmental samples, since they had no information on a specific location associated with chemical activities. Russian-Syrian criticism then shifted from calling for a visit to attacking the JIM for its purported refusal to take samples. In its report, the JIM notes that it would be useless and a waste of time and resources to randomly pick up soil from an air base that stretches over 10 square kilometers, half a year after an alleged, brief presence of chemical weapons. Russian and Syrian officials have ignored this argument and continue to portray the JIM's failure to collect environmental samples at Shayrat as evidence of unprofessionalism or a sinister conspiracy.

As for Khan Sheikhoun, there was little chance that the JIM would send a team of unarmed chemists into a jihadi-ruled war zone, especially not since they had reason to believe that at least one party to the conflict would likely want to kill them rather than see their mission succeed. The time that had passed since the attack also limited the value of a visit—for example, the suspected impact crater, which was on Khan Sheikhoun's main road, had long since been filled in with concrete.²¹

The JIM team therefore had to make do with information that could be gathered by other means, including material already collected by the OPCW. The JIM inspectors added fresh witness interviews, including with Syrian officials and air force personnel, and brought new chemical examinations to the table.

On October 26, the JIM's report was finished and sent to Security Council members, and on November 2 it was made 22

The Conclusions of the JIM Report

The JIM report noted that there was little evidence to support the early Moscow-Damascus narrative of an accidental sarin release from a bombed rebel depot. Echoing the OPCW Fact-Finding Mission, the JIM instead found that sarin had been released from a crater in northern Khan Sheikhoun, which Western governments and Syrian activists had consistently pointed to as the site of the attack. Russian and Syrian officials had also belatedly endorsed the crater theory, but argued that it had been caused by a ground explosion rather than an aerial bomb.

The appearance of the crater was well documented with photographic, satellite, and video footage. On the strength of this evidence, several forensic institutes and independent experts consulted by the JIM concluded that it was "most probably caused by a heavy object travelling at a high velocity, such as an aerial bomb with a small explosive charge." Metal fragments seen in the crater "were likely from an aerial bomb." The Moscow-Damascus scenario of a ground

explosion "could not be completely ruled out," wrote the JIM, but it was judged "less likely," partly due to the lack of shrapnel and explosive damage to certain nearby objects.

Since the Syrian insurgents do not have airplanes and since no side had reported Russian, American, or other non-Syrian aircraft near Khan Sheikhoun on the morning of April 4, this determination pointed to the Syrian Arab Air Force as the likely perpetrator. After comparing radar-monitored flight paths, Shayrat flight logs, and corroborating information, the inspectors concluded that although Syrian government jets were at some distance from the city at the time of the alleged chemical airstrike, they would indeed have been able to hit the area of the crater.²³

What the Sarin Said

The JIM's most significant breakthrough came through an analysis of the sarin collected from Khan Sheikhoun.

The OPCW's Fact-Finding Mission had found sarin and related breakdown products in environmental samples provided by both the Syrian government and by rebel-connected NGOs and activists, and the inspectors had also conducted their own biomedical sampling of victims in Turkey. By analyzing these samples, the JIM was able to reverse-engineer the methods used to create the sarin found in Khan Sheikhoun. They found that it matched the sarin formula invented by the Syrian government.

Sarin can be made through several different processes. In the Syrian case, government scientists had configured it as a binary weapon, meaning that it was stored in the form of two separate chemicals, methylphosphonyl difluoride (DF) and isopropanol. Immediately before an attack, the two chemicals would be mixed and poured into munitions, then handed over to the military for deployment by airplane or missile.

The process is very dangerous if improperly done, not least because it produces highly corrosive gases. To reduce these side effects and increase the yield of sarin, the Syrians had realized that they could add hexamine, a commonly available commercial chemical. It was an ingenious solution that was unique to the Syrian production process, and international chemical weapons experts were initially baffled as to why Syria declared eighty tons of hexamine as part of their chemical weapons stockpile in 2013, before figuring out that it belonged to the sarin process. ²⁴ "To the best of my knowledge, they are the only people who used hexamine in their sarin formula. I have never seen hexamine mentioned by anyone else," says former senior OPCW official Ralf Trapp. "You never see it in the literature." ²⁵

Samples from sarin attacks in Syria in 2013, such as in Khan al-Assal and the Ghouta, also found hexamine traces. The 2017 attack in Khan Sheikhoun proved no exception: there was hexamine all over the sarin samples brought to OPCW inspectors, including in those volunteered by the Syrian government.

These findings left inspectors with little doubt that the sarin had been produced according to the Syrian government's formula. It was suggestive of a Syrian government role, and the JIM then managed to take its analysis one step further.

By studying DF precursor traces from Khan Sheikhoun, the JIM was able to determine that they came from a batch of DF that had been in Syrian government warehouses when they were surrendered to the OCPW in 2013. The OPCW had sampled the stockpile at the time and kept records, and these were now used to match the DF handed over by the Syrian government in 2013 with the DF found in Khan Sheikhoun four years later.²⁶

"It is as water-tight as it can be concerning where the precursors are from, where this weapon was manufactured," says Magnus Normark, a senior analyst at the Swedish Defense Research Institute, whose experts were consulted by the JIM.²⁷

What it meant was that part of Assad's old stockpile still existed, saved from destruction and hidden somewhere, and was now being used to launch new chemical attacks.

After tallying up its list of conclusions—Khan Sheikhoun was attacked with government-origin sarin, the crater was caused by an airstrike, witnesses and survivors also described an air strike, and Syrian government jets were within firing range at the time—the JIM brought the hammer down. We are "confident that the Syrian Arab Republic is responsible for the release of sarin at Khan Shaykhun on 4 April, 2017," the report concluded.²⁸

While alternative explanations could also be construed, they would rely on some combination of high-stakes conspiracy and freakish coincidences, involving a range of actors from al-Qaeda to the United States, as well as the JIM, the OPCW, and a large number of well-established international scientists, experts, and forensic institutes.

While alternative explanations could also be construed, they would rely on some combination of high-stakes conspiracy and freakish coincidences, involving a range of actors from al-Qaeda to the United States, as well as the JIM, the OPCW, and a large number of well-established international scientists, experts, and forensic institutes. There was no physical evidence for such a humongous plot or mass outbreak of human error, and none of these hundreds of people from numerous nations and walks of life—including Syrians injured and deprived of loved ones on April 4—had broken the omertà. While such speculation could certainly be entertained as an intellectual exercise, it stood little chance of surviving an encounter with Occam's Razor.

Indeed, no chemical weapons expert contacted for this report has questioned the JIM's conclusions.²⁹ To the veteran disarmament specialist Paul Walker, the JIM report is "more convincing than ever that Syria is violating the Chemical Weapons Convention."³⁰

Western diplomats have of course praised the report, which confirms the version of events they have supported since April.³¹ "We are absolutely supportive of its findings, and I think they're conclusive," says a U.S. State Department official.³²

Syrian and Russian officials take the opposite view. The Syrian Foreign Ministry accuses the JIM of acting on U.S. orders and said the report was "prepared in advance by the Western intelligence services" Russian diplomats called the JIM "amateurish" and the Russian Defense Ministry repeated its claim that the sarin had been disseminated from the ground —not by an air strike, certainly not by a Syrian air strike. Both nations continue to argue that the JIM's failure to visit Khan Sheikhoun or take environmental samples during its visit to the Shayrat Air Base invalidate the report's conclusions. 35

Western officials are unimpressed. "We can all guess why they feel that way," said the State Department official, referring to Russia's protestations. "It doesn't support the theories they put out before it came out. It also shows their ally in, well, not a great light, and it shows they haven't been able to really deliver on those promises that they made when former Secretary of State Kerry and Foreign Minister Lavrov made that agreement in September 2013 after East Ghouta."

The Russian government was contacted through two channels for this report. One did not respond, the other declined to comment.

Saving JIM or Finding a Replacement?

For the remainder of November 2017, and perhaps longer, Assad's allies and enemies will tangle over the JIM report in international fora, including the UN and the OPCW.

On November 7, the UN Security Council will convene to debate the report. The meeting will almost certainly be angry and unproductive, and British-American attempts to draft a sanctions resolution stand no chance given Russia's veto powers and refusal to let the Security Council endorse any accusations against Assad.³⁷ Western governments may then impose sanctions unilaterally, but they will likely first focus on salvaging the JIM—if possible.

On November 16, the JIM's mandate will expire, and Russia has already once vetoed a one-year extension proposed by the United States. ³⁸ The Security Council members are now readying for a tense battle over the JIM's future mandate against the backdrop of its Khan Sheikhoun report. Russia professes to want to keep the JIM, and Western diplomats and experts contacted for this report were in broad agreement that a failure to extend the JIM mandate would be a major setback for nonproliferation and accountability efforts in Syria and beyond. ³⁹

Russia has proposed a draft resolution that would save the JIM, at the cost of discrediting its Khan Sheikhoun report and changing its mandate to focus attention on non-state actors. Such a resolution stands no chance of passing, and it remains to be seen whether Russia is floating it as a flexible starting bid for negotiations or if the resolution was simply conceived of as an excuse to veto the JIM out of existence.⁴⁰

If Russia eliminates the JIM come November 16, that's not necessarily the end of the story. "Even if the JIM is vetoed we will not stop looking at attribution and accountability," says the U.S. State Department official. "We'll try to find whatever mechanism works for that." ⁴¹

Several options are now being discussed among Western nations. One possibility is to act through the OPCW, which takes decisions through majority vote without veto rights. Two Western diplomats told me they may call a meeting of the OPCW's forty-one-nation Executive Council, which would likely endorse the JIM report. Separately, on November 27, the OPCW's Conference of States Parties will assemble in the Hague for a previously scheduled session to which all 192 OPCW member states are invited, and where the JIM report "will definitely be a major subject of discussion." However, there are practical limits to what can be achieved through the OPCW, a traditionally consensus-oriented and technical organization where Assad's critics may find support for their position but could still fail to rally a majority for tangible action or confrontative statements.

Transforming the OPCW's Fact-Finding Mission into a new JIM with powers to identify perpetrators would perhaps be possible, but it is not likely to happen. "I think it would be very difficult to expand the mandate for the Fact-Finding Mission to encompass identification of perpetrators," says a Swedish diplomat, who also perceives practical difficulties

with such a proposal. "The people in the JIM are experts on forensics and police investigations," the diplomat says. "That expertise doesn't exist at the OPCW. Their expertise is to fly in, take samples, which are then analyzed in order to determine whether chemical weapons have been used."⁴³

However, the OPCW could be used as a springboard to launch renewed action in the UN. Both the OPCW Executive Council and the OPCW Conference of States Parties could opt to refer Syria to the UN Security Council or the UN General Assembly over noncompliance with the Chemical Weapons Convention. 44



UN SECURITY COUNCIL MEETS AFTER THE KHAN SHEIKHOUN ATTACK. SOURCE: RICK BAJORNAS, UN PHOTO.

The General Assembly, where there are also no veto powers, could perhaps conjure up some new identification mission to replace the JIM, or voice support for international prosecutions or other measures. The UN Human Rights Council has created a commission monitoring abuses in Syria since 2011, which has issued reports on the chemical weapons issue, including one that blamed Assad's forces for the Khan Sheikhoun killings.⁴⁵

Another option for Western states and others seeking to revive a JIM-style mission after November 16 would be to rely on a what is known as the UN Secretary General's Mechanism, an arrangement that allows the secretary general to

launch an investigation into alleged use of chemical weapons use at the request of any UN member state. It does not require Security Council approval and allows him to use OPCW expertise and resources. The Mechanism is rarely activated, but former UN Secretary General Ban Ki-moon relied on it to order investigations of chemical attacks in Syria in 2013.⁴⁶

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Such investigations would not be beholden to the Security Council, which means that Russia would have no power to influence or stop them. However, it also means they would be easier to dismiss as partisan creations and that Damascus could simply refuse to let them into Syria. Coercive measures through the Security Council would remain subject to Russian approval.

Western diplomats seem resigned to the fact that there is no alternative to the JIM that would have the same stature and official standing with the Security Council. "I mean, any form of accountability is good, but some forms of accountability are better than others," says one Western diplomat. "Those that are signed up to by everyone are better, and that's why the JIM is so important."⁴⁷

If all efforts to save the JIM or establish another collaborative mechanism fail, Western nations would likely be more inclined to seek retribution for chemical attacks through unilateral action. The U.S. attack against Shayrat in April, after the Khan Sheikhoun attack, came against the backdrop of Russian and Chinese vetoes defanging the JIM earlier that spring. Trump may have acted for other reasons, but many otherwise diplomacy-minded American officials also felt that there was no longer any point in waiting for a JIM investigation that would obviously be vetoed.

Since Khan Sheikhoun, both U.S. President Donald Trump and French President Emmanuel Macron have threatened to unilaterally retaliate with military means against any future use of chemical weapons. That may very well come to pass—but none of them seems keen on being drawn deep into the Syrian war, and most Western nations appear uncomfortable with the idea of pushing Syria out of the OPCW's orbit.⁴⁸

The reality is that there are limits to how far Assad's opponents will likely want to go to ensure accountability for chemical attacks, since at some point punitive military or diplomatic action may come to threaten Syrian cooperation—such as it is—with other aspects of OPCW work in Syria.

The Imperative of Staying Involved

As things stand, Bashar al-Assad is winning the war.⁴⁹ Much may still happen to change this trajectory, and the Syrian central government will be hard-pressed to reestablish itself over the entirety of its territory. Nevertheless, Assad's regime will likely remain a reality for years or decades to come. That has implications for how other nations approach the question of Syria's chemical weapons program.

Even as they seek ways to punish Syrian noncompliance with the Chemical Weapons Convention, Western nations apparently remain invested in the OPCW's Syria inspections and eager to maintain the Fact-Finding Mission and Declaration Assessment Team, despite the limited results they have yielded so far. This may explain Western governments' apparent unwillingness to end the OPCW's chemical weapons talks with Syria or encourage the country to leave the Chemical Weapons Convention, no matter how often they repeat that Bashar al-Assad has violated it.

Putting pressure on Syria to leave the convention and the OPCW "wouldn't really solve anything, and besides, it is doubtful whether there would be a majority in favor," notes a Swedish diplomat, who argues that when faced with a state hoarding weapons of mass destruction, flawed inspections are better than no inspections. From an OPCW perspective, the diplomat says, calls to end verification talks with Syria make little sense because it "isn't a verification organization's role to refuse to verify." ^{50, 51}

In some ways, the inspections in Syria are now reduced to a charade. All involved seem convinced that the Syrian government is lying, has broken its disarmament pledges, and continues to store and use chemical weapons.

And yet, without international inspectors periodically dropping in on Syrian research facilities to inspect work routines and take samples, and without OPCW teams continuing to verify that military sites disabled in 2013 and 2014 remain inactive, there would be no obstacles at all to the Syrian regime's chemical rearmament.

Even Assad's harshest critics—indeed, perhaps particularly his harshest critics—seem prepared to live with continued cheating and violations of the Chemical Weapons Convention, as long as the OPCW can continue to shine a faint little light into the darkness of Syria's military-industrial complex.

Even Assad's harshest critics—indeed, perhaps particularly his harshest critics—seem prepared to live with continued cheating and violations of the Chemical Weapons Convention, as long as the OPCW can continue to shine a faint little light into the darkness of Syria's military-industrial complex, which has proven that it is capable of producing hundreds of tons of lethal weapons of mass destruction.

There will almost certainly be no accountability for chemical attacks in Syria, but perhaps something can still be done to limit the fallout and prevent additional proliferation.

"I think it's important that we do everything we can, and not just push them out, because our ability to hear from the Declaration Assessment Team and our ability to hear from the Fact-Finding Mission, those are incredibly important steps toward the goal of removing Syria's chemical weapons," says the U.S. State Department official. "Obviously, it hasn't gone the way we hoped. We've removed the strategic threat, but obviously there are chemical weapons still in Syria. So we'll continue to support them." 52

Waiting for the World

Syrian critics of Assad are of course incensed at what they see as a failure to stop war crimes and stem the use of chemical weapons.

"If these weapons are used and the perpetrator of these crimes isn't held to account, it will develop and grow worse," the anti-chemical weapons activist Nidal Shikhani told me, arguing that the credibility of international nonproliferation efforts is now at stake.

"In 2014, you tell me you don't have chemical arms," Shikhani said. "Then in 2017 comes JIM, saying we've got missile fragments and it came from this height and struck with this force and made this big a hole and resulted in the killing of these people. We've got the crime, the instruments of the crime, the criminal, and the people targeted. It's all there

scientifically, it's not just blah-blah."53

Scientifically, Shikhani may be right. But although the crime may well have been solved by the JIM, it is unlikely to be punished. As Syria slowly fades from the headlines, few will bother to follow arcane debates at the Security Council or care what happens to the UN and OPCW's chemical weapons investigations, ineffectual and tainted by partisanship, political maneuvering, and vetoes at the Security Council.

And yet, there is one place where people are still waiting to hear what the world has to say.

"We talk about chemical weapons and the terrible things we saw in April of this year," says Alaa al-Yassin, a man from Khan Sheikhoun who says he was at work as a nurse in a local hospital on the day of the chemical attack. "It was a terrifying sight. The children and women died like slaughtered chickens."

April 4 made a mark on all of Khan Sheikhoun, where some citizens now struggle to cope with psychological traumas and many live in fear of another gas attack.

Sarin survivors from half a year ago still suffer, Alaa says, explaining that April 4 made a mark on all of Khan Sheikhoun, where some citizens now struggle to cope with psychological traumas and many live in fear of another gas attack.

"Now, everyone in town follows this topic and its international developments," Alaa told me, as we spoke a few days ago over a poor online connection. "They follow it in detail." ⁵⁴

Notes

- 1. Aron Lund, "Red Line Redux: How Putin Tore Up Obama's 2013 Syria Deal," The Century Foundation, February 2017, https://tcf.org/content/report/red-line-redux-putin-tore-obamas-2013-syria-deal.
- 2. Aron Lund, "Mission Impossible? Investigating the Khan Sheikhoun Nerve Gas Attack in Syria," The Century Foundation, July 2017, https://tcf.org/content/report/mission-impossible-investigating-khan-sheikhoun-nerve-gas-attack-syria.
- 3. Thanassis Cambanis, "After Khan Sheikhoun, 'War Crimes' Might Have No Meaning," The Century Foundation, April 4, 2017, https://tcf.org/content/commentary/khan-sheikhoun-war-crimes-might-no-meaning.
- 4. Aron Lund, "Return of the Red Line," IRIN News, April 26, 2017 https://www.irinnews.org/analysis/2017/04/26/syria-return-red-line; Aron Lund, "Why Haven't Chemical Weapons Inspectors Gone to Syria's Shayrat Air Base?" The Century Foundation, June 29, 2017, https://tcf.org/content/commentary/havent-chemical-weapons-inspectors-gone-syrias-shayrat-

air-base.

- 5. Lund, "Red Line Redux," 2017.
- 6. "The Declaration Assessment Team spoke informally of loopholes in the declaration that you could drive a truck through, that you could drive a whole chemical weapons program through," recalls the American chemical weapons disarmament expert Paul Walker. "There was just extreme skepticism given the lack of information in the Syrian declaration." Author's interview with Paul Walker, Green Cross International, Skype, June 2017.
- 7. Specific problems included the Syrian government's persistent refusal to provide documentation for chemical arms that it claimed to have destroyed without OPCW involvement, or allow the Declaration Assessment Team to interview officials involved with the issues in dispute, as well as suspicions of unreported chemical arms production. As inspections continued and the Declaration Assessment Team gained access to new locations, additional irregularities in the Syrian claims were spotted, raising new question marks. According to OPCW Director-General Ahmet Üzümcü, "a majority of sample results indicated the presence of unexpected or undeclared chemical compounds" that "indicate potentially undeclared chemical weapons-related activities at these locations." - "Conclusions on the outcome of consultations with the Syrian Arab Republic regarding its chemical weapons declaration," OPCW, EC-82/DG.18, July 6, 2016, https://www.opcw.org/fileadmin/OPCW/EC/82/en/ec82dg18 e .pdf.
- 8. Interview with Ralf Trapp, former senior OPCW official and currently an international consultant on chemical and biological weapons arms control and related security issues, phone, May 2017.
- 9. Khan Sheikhoun—and indeed most of Idlib—is controlled by hardline Islamists, including extremists with ties to international terrorist groups and kidnappings. A previous bid to conduct a cross-line investigation to an area close to Khan Sheikhoun in April 2014 nearly led to the death of several inspectors after a roadside bomb was triggered by unknown assailants, and they were briefly detained by a local rebel faction as they tried to flee back to government-held Syria. The Fact-Finding Mission considered visiting Khan Sheikhoun, but decided against doing so after finding that they could fulfill their mandate, which was simply to determine whether or not a chemical attack had taken place, without taking such risks. As for Shayrat, the mission argued that since it was not allowed to speak to the identity of the perpetrator, a visit to the air base would be outside of its remit. This was stated in the Fact-Finding Mission's June 29, 2017 report, but the OPCW issued an additional clarification in late October in response to Russian and Syrian criticism. See "Letter dated 25 October 2017 from the Secretary-General addressed to the President of the Security Council," United Nations, S/2017/905, October 27, 2017, http://undocs.org/S/2017/905.
- 10. "After reading the [OPCW Fact-Finding Mission] report on Khan-Shaykhun, one thing is clear: sarin or a similar agent was used there," Russian OPCW representative Alexander Shulgin told the OPCW Executive Council in July 2017. See "Remarks by Permanent Representative of the Russian Federation to the OPCW Ambassador and head of the Russian delegation Alexander Shulgin at the 55th meeting of the OPCW Executive Council (the report on investigation of the Khan Shaykhun incident), The Hague, July 5, 2017," Russian Ministry of Foreign Affairs, July 10, 2017,

http://www.mid.ru/en/foreign_policy/news/-/asset_publisher/cKNonkJE02Bw/content/id/2811032.

11. "Report of the OPCW Fact-Finding Mission in Syria regarding an alleged incident in Khan Shaykhun, Syrian Arab Republic, April 2017," S/1510/2017, June 29, 2017, https://www.opcw.org/fileadmin/OPCW/Fact Finding Mission/s-15102017_e_.pdf. The Fact-Finding Mission report and other OPCW statements characterized certain biomedical or environmental samples from Khan Sheikhoun as bearing evidence of "sarin or a sarin-like substance," a phrase that in OPCW jargon indicates sarin or closely related nerve agents, such as soman. Conspiracy theorists have seized on this phrase as evidence that the OPCW wasn't quite sure what it had found, but chemical arms experts tell me this is unadulterated nonsense, and the Fact-Finding Mission report does in fact make clear that the final finding was of sarin, full stop. The content of certain samples could not be narrowed down further than to a sarin-style nerve agent—hence the use of the phrase "sarin-like substance" for these samples—but other tested materials were unambiguously found to contain sarin. All sides have endorsed this conclusion, including American, French, British, Chinese, Russian, and Iranian officials, as well as the Syrian government and its opponents. This is further reinforced by the JIM report of October 26, which goes into detail about the composition of the sarin used in Khan Sheikhoun.

- 12. See for example "Chemical Attack in Syria National Evaluation presented by Jean-Marc Ayrault following the Defense Council Meeting (26 April 2017)," French Foreign Ministry, April 26, 2017, https://www.diplomatie.gouv.fr/en/country-files/syria/events/article/chemical-attack-in-syria-national-evaluation-presented-by-jean-marc-ayrault.
- 13. Luis Martinez and Paul Blake, "US releases flight path of plane used in Syria chemical attack," ABC News, April 7, 2017, abcnews.go.com/International/us-releases-flight-path-plane-syria-chemical-attack/story?id=46651125.
- 14. "Army general Command categorically denies using chemical materials in Khan Shaikhoun," Syrian Arab News Agency, April 4, 2017, http://sana.sy/en/?p=103554.
- 15. First on the scene was Major General Igor Konashenkov, a Russian Defense Ministry spokesperson notorious among journalists for routinely making false claims. Konashenkov stated that chemical weapons had been released as the result of a Syrian jet hitting a rebel warehouse where chemical arms were stockpiled, sometime between 11:30 a.m. and 12:30 p.m. on April 4. ("Syria Strikes Warehouse Storing Chemical Weapons Being Delivered to Iraq," Sputnik News, April 5, 2017, https://sputniknews.com/middleeast/201704051052301312-syria-strikes-chemical-weapons-warehouse.) A couple of weeks later, Konashenkov changed his story to propose a second version, saying there was no evidence anyone had been poisoned in Khan Sheikhoun. ("Defense Ministry: No complaints about chemical incidents in Syria's Idlib," TASS, April 18, 2017, http://tass.com/world/941862.) Syrian Foreign Minister Walid al-Moallem backed Konashenkov's first version, saying that the government had targeted a building that turned out to be "an ammunition storage belonging to the Nusra Front, in which there were chemical materials." (Press conference with Syrian Foreign Minister Walid al-Moallem, Ruptly TV on Youtube, April 6, 2017, https://www.youtube.com/watch?v=AcaF1vC8SPA.) Days later, Bashar al-Assad suggested that this was "one of the possibilities." (Bashar al-Assad interviewed by AFP's Sammy Ketz: transcript published by the Syrian Arab News Agency, April 13, 2017, http://sana.sy/en/?p=104255.) After the release of the OPCW Fact-Finding Mission's report, which located the sarin release to a crater in northern Khan Sheikhoun, Syrian Deputy Foreign Minister Feisal Megdad came up with a third version, saying the entire incident had been staged and that rebels had themselves added a "quite a large quantity of sarin gas to the alleged explosion site." ("Syrian diplomat stresses Khan Shaykhun incident staged by militants," TASS, August 16, 2017, http://tass.com/world/941862.) Later still, Mikhail Ulyanov, director of the Russian Foreign Ministry's Department for Non-Proliferation and Arms Control, proposed a fourth scenario, according to which the crater was the result of a nerve gas bomb placed on the ground. ("Briefing «SYRIAN CHEMICAL DOSSIER: THE RUSSIAN

VIEW» by Ambassador Mikhail Ulyanov Head of the Russian delegation in UNGA First Committee, Director of the Department for Non-Proliferation and Arms Control of the MFA of Russia on the margins of the 72nd session of the UN General Assembly," Russian Ministry of Foreign Affairs, October 16, 2017, http://www.mid.ru/en/foreign_policy/news/-/asset_publisher/cKNonklE02Bw/content/id/2904623

- .) This is not an exhaustive list. Other theories were launched by fringe actors and promoted by official and unofficial outlets of the Russian and Syrian governments. That included a story by the American journalist Seymour Hersh, who claimed to have inside information that the Khan Sheikhoun victims were poisoned by a mixture of chlorine and fertilizers released from a bombed warehouse, not by sarin, thus taking elements from a previous Russian-Syrian narrative but adding another twist. Days later, however, the OPCW presented a detailed confirmation of its sarin findings, destroying Hersh's thesis. (Seymour Hersh, "Trump's Red Line," Die Welt, June 25, 2017,
- https://www.welt.de/politik/ausland/article165905578/Trump-s-Red-Line.html; "Report of the OPCW Fact-Finding Mission, June 2017.)
- 16. Several fruitless attempts have been made to elicit comment on these issues from Syrian officials since April 2017, including in the past week. Russian government officials either did not respond to requests for comment, or referred to previous statements while declining to answer any specific questions on why Moscow keeps changing its story.
- 17. "Security Council Unanimously Adopts Resolution 2235 (2015), Establishing Mechanism to Identify Perpetrators Using Chemical Weapons in Syria," United Nations, SC/12001, August 7, 2015,
- https://www.un.org/press/en/2015/sc12001.doc.htm; "The JIM, as a subsidiary organ of the United Nations Security Council, carries out its further investigations and makes its findings as an independent body," I'm told by an OPCW press spokesperson. "It presents its reports to the Security Council, and informs the OPCW." Author's contact with the OPCW, email, October 2017.
- 18. Lund, "Red Line Redux," 2017. The JIM's October 26, 2017 report blamed the Islamic State for a sulphur mustard attack near Aleppo. Islamic State-related issues will not be dealt with in this report. Although the JIM's attribution of chemical attacks to the Islamic State is by no means unimportant, the legal or political ramifications are limited since the group already operates as an outlaw non-state actor.
- 19. The JIM initially had trouble securing a visa from the Syrian Foreign Ministry for its Damascus liaison, as JIM head Edmond Mulet complained before the UN Security Council, but, according to the JIM's own reporting, this problem was resolved by mid-July and Damascus "engaged constructively" with the inspectors thereafter.
- 20. "Taking samples was not an objective of the visit to Sha'irat airbase," the JIM writes in its October report. "The Mechanism had determined that the collection of samples at the airbase would not advance the investigation. The Mechanism considered that if a single chemical munition had been flown from that base, there was little chance of finding any trace of sarin or its degradation products at an airbase of that size (approximately 10 km2) without specific information as to where to collect samples." On the controversies about visits to Shayrat, see Lund, "Why Haven't Chemical Inspectors Gone to Syria's Shayrat Air Base," 2017.
- 21. On Khan Sheikhoun, the JIM report notes: "With respect to Khan Shaykhun, the crater from which the sarin emanated was disturbed after the incident and subsequently filled with concrete. As such, the integrity of the scene was devalued.

The Leadership Panel considered that the high security risk of a site visit to Khan Shaykhun, which is currently in a situation of armed conflict and under the control of a listed terrorist organization (Nusrah Front), outweighed the benefits to the investigation. [...] Notwithstanding the above, the Leadership Panel considered that the Mechanism had gathered sufficient information to come to a conclusion in both cases."

- 22. The JIM's seventh report can be found enclosed in "Letter dated 26 October 2017 from the Secretary-General addressed to the President of the Security Council," United Nations, S/2017/904, October 26, 2017, undocs.org/S/2017/904.
- 23. The Russian government has protested this conclusion, arguing that the Syrian jets could not hit Khan Sheikhoun in the time interval required. Russian officials say this is evidence that their own theory of a ground explosion is more credible. See "Russia rejects possibility of chemical agents' use in Khan Shaykhun from Syrian aircraft," TASS, November 2, 2017, http://tass.com/defense/973875.
- 24. The significance of hexamine in environmental samples from the Ghouta in 2013 was first noted by Dan Kaszeta, an American-British chemical warfare expert and consultant. See Dan Kaszeta, "Initial Observations on the 'Final Report of the United Nations Mission to Investigate Allegations of the Use of Chemical Weapons in the Syrian Arab Republic,'" Strong Point Security, December 13, 2013, http://strongpointsecurity.co.uk/site/wp-content/uploads/2013/12/Initial-Observations-on-12-Dec-UN-report.pdf.
- 25. Interview with Ralf Trapp, former senior OPCW official and current international consultant on chemical and biological weapons arms control, phone, May 2017.
- 26. To quote the JIM report, "The presence of marker chemicals that are believed to be unique is a strong indication that the sarin released in Khan Shaykhun, as well as in previous incidents, was produced using DF from the Syrian Arab Republic stockpile." The JIM also noted that this production process "indicates a high degree of competence and sophistication in the production of DF and points to a chemical-plant-type production method."
- 27. Author's interview with Magnus Normark, Swedish Defense Research Agency, phone, October 2017. "Of course," Normark added, "if the Syrian government stored these weapons and ammunition in a site they lost control over, someone could have captured them, but then they'd have to deliver them to the site of the attack as well, in the circumstances that actually prevailed." As the JIM had noted, that would entail using a lab and trained chemists to perform the sarin mixing, and then, per the JIM's conclusions, launching it from an aircraft.
- 28. Although the JIM was confident about its conclusion, it did note uncertainties and contradictory information. An interesting note is made in the report's second annex, where the authors note that rebel and pro-rebel groups may have produced misleading evidence and engaged in media theatrics, whether as a result of the chaos of the moment or as a way to embellish or distort reports about the attack. However, this behavior, while possibly indicative of attempts to manipulate reporting, was considered incidental to the issue of how and from where sarin was released in Khan Sheikhoun. "While some potentially important irregularities were identified throughout the rescue operation and in medical records," the JIM wrote, "they may be explained by factors such as poor training or the chaotic conditions, or by attempts to inflate the gravity of the situation for depiction in the media." As much as they may seem worthy of further investigation, these issues had no bearing on the JIM's decisive conclusions, which concerned the origin and quantity of

the sarin used, the time of the attack, the way the crater was created, and Syrian Arab Air Force flight paths.

- 29. Author's interviews with four chemical weapons or investigative specialists, October-November 2017.
- 30. Author's interview with Paul Walker, Green Cross International, email, November 2017.
- 31. Author's interviews with three Western diplomats, November 2017.
- 32. Author's interview with U.S. State Department official, phone, November 2017.
- 33. "Syria rejects report of OPCW-UN Joint Investigative Mechanism," Syrian Arab News Agency, October 27, 2017, http://sana.sy/en/?p=116695.
- 34. "Syria chemical probe report 'amateurish' Russia's UN mission," TASS, November 1, 2017, http://tass.com/world/973526; "Russia rejects possibility of chemical agents' use in Khan Shaykhun from Syrian aircraft," TASS, November 2, 2017, http://tass.com/defense/973875.
- 35. It bears noting that the issue of on-site inspection is exclusively being raised in cases where Assad's government has been found guilty of chemical attacks. Both the Russian and the Syrian government have been supportive of JIM reporting that attributed chemical attacks to the Islamic State without visiting the alleged attack sites.
- 36. Author's interview with U.S. State Department official, November 2017. For more on the September 2013 agreement, see Lund, "Red Line Redux," February 2017.
- 37. "Britain calls for UN sanctions on Syria over sarin attack," AFP/Telegraph, October 28, 2017, http://www.telegraph.co.uk/news/2017/10/28/britain-calls-un-sanctions-syria-sarin-attack.
- 38. "Security Council Fails to Renew Mandate of Joint Investigative Mechanism on Chemical Weapons Use in Syria, as Permanent Member Casts Veto," United Nations, SC/13040, October 24, 2017,

http://www.un.org/press/en/2017/sc13040.doc.htm. The draft resolution can be read at:http://undocs.org/S/2017/884.

- 39. "There are some sixty cases of alleged use of chemical weapons in Syria that are currently examined by OPCW and that could later be referred to JIM. One can also not exclude the possibility of new attacks. If JIM did not already exist, we would simply have to invent it," said Sweden's ambassador to the UN, Olof Skoog, after Russia vetoed a JIM extension in late October. "Explanation of Vote by Sweden at the UN Security Council following the consideration of draft resolution S/2017/884," Government of Sweden, October 24, 2017, .
- 40. Nabil Abi Saab, "Russian draft calls on JIM to 'reevaluate earlier assessments, conclusions'," UN Report (Documents), November 2, 2017, https://un-report.blogspot.se/2017/11/russian-draft-calls-on-jim-to.html.
- 41. Author's interview with U.S. State Department official, November 2017.
- 42. Author's interview with Paul Walker, November 2017.
- 43. Author's interview with a Swedish diplomat, phone, November 2017.
- 44. Author's interview with John Hart, a chemical weapons expert at the Stockholm International Peace Research Institute (SIPRI), email and phone, October 2017.
- 45. "Report of the Independent International Commission of Inquiry on the Syrian Arab Republic," United Nations General Assembly, A/HRC/36/55, August 8, 2017, undocs.org/A/HRC/36/55.
- 46. "Secretary-General's Mechanism for Investigation of Alleged Use of Chemical and Biological Weapons," UN Office for Disarmament Affairs, https://www.un.org/disarmament/wmd/secretary-general-mechanism.

- 47. Author's interview with a Western diplomat, phone, November 2017.
- 48. Lund, "Syria: Return of the Red Line," April 2017; "Discours d'Emmanuel Macron en ouverture de la Conférence des Ambassadeurs," French Presidency, August 29, 2017, http://www.elysee.fr/videos/new-video-44; "Chemical weapons a red line in Syria, France's Macron says," Reuters, May 29, 2017, https://www.reuters.com/article/us-france-russia-syria-macron/chemical-weapons-a-red-line-in-syria-frances-macron-says-idUSKBN18P1OH.
- 49. Aron Lund, "How Assad's Enemies Gave Up on the Syrian Opposition," The Century Foundation, October 17, 2017, https://tcf.org/content/report/assads-enemies-gave-syrian-opposition.
- 50. The Syrian government's behavior "is somewhat similar to what happened on the nuclear side with Iran," the Swedish diplomat says. "Sometimes it was felt that Iran wasn't being forthcoming with information, and that information was missing. First you would get nothing but then one day before a meeting you would often receive a large amount of information that may not have been what you had asked for, so that Iran would be able to claim at the meeting that they were cooperating. That process went on for a very long time, and then a deal was finally struck when the situation was politically ripe for it. What's important is that you report clearly about the difficulties you face," says the diplomat. "That's the way to do it, not to break contacts." Author's interview with a Swedish diplomat, phone, November 2017.
- 51. A previous version of this report suggested that Syria could be expelled from the OPCW as a punitive measure, but this is not the case, and the text was amended on November 8, 2017 to reflect that fact. Nations join the OPCW by signing the Chemical Weapons Convention, which Syria did in 2013. As noted in §2 of the convention's Article XIII, no member state can be expelled, though §2 of Article XVI allows signatory states to withdraw from the convention under certain conditions. While the OPCW could recommend the UN Security Council to order sanctions and other coercive measures against one of its member states, the OPCW's own internal punitive measures are restricted to suspending rights and privileges granted under the convention, e.g. by stripping voting rights, refusing the member state to speak at meetings, and preventing its delegates from accessing certain flows of information. The Chemical Weapons Convention can be accessed via the OPCW website: https://www.opcw.org/chemical-weapons-convention.
- 52. Author's interview with U.S. State Department official, phone, November 2017.
- 53. Author's interview with Nidal Shikhani, manager of the Brussels-based activist group Same Justice/Chemical Violations Documentation Center in Syria, phone, October 2017.
- 54. Author's interview with Alaa al-Yassin, a nurse at the Rahma Hospital in Khan Sheikhoun, voice and text chat, November 2017. Contact with Alaa al-Yassin was arranged by the organization Same Justice/Chemical Violations Documentation Center in Syria, a Belgium-based Syrian activist group that documents chemical attacks in Syria. I cannot independently verify Alaa al-Yassin's statements, but I have found no reason to doubt that they were genuinely and freely expressed.



Aron Lund, Fellow

Aron Lund is a Swedish writer on Middle Eastern affairs and a fellow at The Century Foundation who has published several books and reports on Syrian politics.