

III. Investigation of alleged chemical weapon use in Syria and other locations in the Middle East

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Allegations of chemical weapon use by state and non-state actors in the Middle East and surrounding regions increased substantially in 2015. International efforts to clarify the nature of the allegations and to mitigate the consequences of the attacks continued. The main areas affected by the suspected chemical weapon attacks were in Iraq and Syria. The Syrian Government was accused of carrying out further attacks, while the Islamic State (IS) was alleged to have used chemical weapons in both countries.

Iraq

Iraq has committed at least \$55 million towards the destruction of the remnants of its chemical weapons and chemical weapon production facilities (CWPFs) dating from the government of Saddam Hussein.¹ Some chemical weapon destruction project equipment was looted when the Iraqi Government lost control of the al-Muthanna site to IS-affiliated insurgents in June–November 2014.² In addition, Iraqi forces had to remove mines and other explosive devices left behind at the site after they had recaptured it from the IS-affiliated insurgents.³

In August 2015 Iraq accepted an offer of assistance from the Organisation for the Prohibition of Chemical Weapons (OPCW) to investigate alleged chemical weapon use in northern Iraq (see below). The OPCW sent personnel to Iraq three times ‘to provide broad-ranging technical support’.⁴ In January 2016 Germany delivered to Iraq a mobile modular laboratory for the detection of toxic chemicals and their precursors.⁵ This was part of a commitment made in 2012, which also included the provision of training worth €2 million (approximately \$2.3 million).⁶ The assistance from Germany and the OPCW more generally will bolster quality control during chemical

¹ US Department of State, Compliance with the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction, Condition 10(c) Report, 15 Apr. 2015, p. 2.

² Hart, J. and Clevestig, P., ‘Chemical and biological security threats’, *SIPRI Yearbook 2015*; and US Department of State (note 1).

³ US Department of State, (note 1), p. 2.

⁴ OPCW, Conference of the States Parties, 20th session, ‘Opening statement by the Director-General’, Note by the Director-General, OPCW Document C-20/DG.17, 30 Nov. 2015, para. 19.

⁵ German Federal Foreign Office, ‘Germany is assisting in the destruction of Iraq’s chemical weapons stockpiles’, Press release, 20 Jan. 2016.

⁶ German Federal Foreign Office (note 5).

weapon destruction operations and, in principle, will support Iraqi investigations of alleged use of such weapons in the ongoing armed conflict in Iraq.

Allegations of chemical weapon use by the Islamic State

Data released by IHS Conflict Monitor implies that there was a shift by IS forces in 2015 away from improvised explosive devices (IEDs) towards chemical-filled projectiles.⁷ Some observers have inferred that IS has the capacity to manufacture or use toxic chemicals as a method of warfare based on its capture of the University of Mosul in Iraq in 2014 and a presumption that some technically trained persons are located in territories under IS control.⁸

Allegations of chemical weapon use in Iraq

On 14 March 2015 Kurdish authorities in Iraq stated that they had evidence that IS forces had used chlorine against Kurdish forces.⁹ A statement described how Kurdish forces had fired a rocket at a car on a highway between Mosul and the Syrian border on 23 January 2015 and that approximately 12 members of the Kurdish forces subsequently experienced symptoms that included nausea and vomiting.¹⁰ An unidentified 'European-Union certified laboratory' reportedly analysed soil and clothing samples from the incident, which had been provided by the Kurdish Regional Government to a 'partner nation' in the anti-IS coalition led by the United States.¹¹

On 30 January 2015 Salih Jasim Muhammed Falah al-Sabawi (also known as Abu Malik), an Iraqi chemical weapon engineer during the regime of Saddam Hussein and an alleged member of IS, was reportedly killed in an airstrike.¹² In addition, a purported sulphur mustard facility was reportedly destroyed in the Wadi Ekab suburb of Mosul in August 2015.¹³

Allegations of chemical weapon use in Syria

There were allegations that IS militants employed 'makeshift chemical projectiles' against Kurdish military units in Hasakah City and Tal Brak in Syria

⁷ Bretton-Gordon, H. and Godfrey, R., 'Use of chemical weapons continues in Syria', *Jane's Intelligence Review* (18 Dec. 2015), p. 6. IHS is a multinational analytics corporation headquartered in Colorado, USA. For further details of actions by the Islamic State in 2015 see chapter 2, section II, in this volume.

⁸ Bretton-Gordon and Godfrey (note 7), p. 9.

⁹ Coles, I., 'Iraqi Kurds says Islamic State used chlorine gas against them', Reuters, 14 Mar. 2015.

¹⁰ Coles (note 9).

¹¹ Coles (note 9).

¹² Coles (note 9); and Ackerman, S., 'Isis weapons engineer killed in airstrike in Iraq, claims US military', *The Guardian*, 31 Jan. 2015.

¹³ Bretton-Gordon and Godfrey (note 7), p. 9.

on 28 June 2015.¹⁴ The Kurdish People's Protection Units (YPG) reportedly issued a statement which said that 'Upon impact, the [chemical] projectiles released a yellow gas with a strong smell of rotten onions. The ground immediately around the impact sites was stained with an olive green liquid that turned to a golden yellow after exposure to sunshine'.¹⁵ Soldiers exposed were said to have experienced burning sensations, vomiting, headaches and impaired concentration. The YPG statement also noted that 'industrial grade gas masks' had been captured from IS fighters. The Syrian Observatory for Human Rights reported 12 cases of chemical poisoning among the YPG units, and stated that it had documented use of gas by IS during the shelling of Rajm al-Tfihl (south of Tal Brak) on 28 June 2015.¹⁶

One shell prompted particular interest. This was said to be an unexploded 120 mm mortar shell that was recovered on 29 June largely intact (a photo of the shell was widely distributed in media articles relating to these allegations).¹⁷ It was reported that the tail of the shell had broken off and a liquid smelling of chlorine was leaking out.¹⁸ An 'internal report to the Kurdish government in Iraq' reportedly stated that the shell had been manufactured in an '[IS] workshop by casting iron into mold method. The mortar contains a warhead filled with a chemical agent, most probably chlorine'.¹⁹

IHS Conflict Monitor data confirms that sulphur mustard was used in attacks at Marea in Syria in August 2015. The provenance of the sulphur mustard remained unclear and may either have originated from former Iraqi or Syrian stocks or been manufactured by IS.²⁰

Syria

IHS Conflict Monitor data suggests that after the Syrian Government declared its chemical weapon stockpile to the OPCW in 2013, the majority of the allegations of chemical weapon use have blamed Syrian Government forces, with the most common agent being chlorine dropped from helicopters.²¹ The data also implies that Syrian Government forces have used chemical weapons in contested areas (e.g. when government forces were cut off in Idlib in northwest Syria in March 2015) or to instil fear.²²

¹⁴ Bulos, N., 'Isil "chemical attack" on Kurds raises fear of gas warfare', *The Telegraph*, 18 July 2015.

¹⁵ Bulos (note 14).

¹⁶ Syrian Observatory for Human Rights, "'Islamic State' uses gas in targeting YPG", 17 July 2015.

¹⁷ Chivers, C. J., 'ISIS has fired chemical mortar shells, evidence indicates', *New York Times*, 17 July 2015.

¹⁸ Chivers (note 17).

¹⁹ Chivers (note 17).

²⁰ Bretton-Gordon and Godfrey (note 7), p. 7.

²¹ Bretton-Gordon and Godfrey (note 7), p. 4.

²² Bretton-Gordon and Godfrey (note 7), p. 4.

International efforts to determine responsibility for the use of chemical weapons in the Syrian armed conflict have continued since 2013 at which time the United Nations Secretary-General sent a team to the country to investigate multiple and conflicting allegations. However, disagreement at the political level remains and the accession by Syria to the 1993 Chemical Weapons Convention (CWC) in 2013 is perhaps the only action upon which the international community has agreed.²³ Nonetheless, the 2013–14 maritime chemicals removal operation by an OPCW–UN Joint Mission demonstrated that cooperation between members of the international community on technical matters is possible, despite conflicting geopolitical priorities within the UN Security Council and elsewhere (see section II). In addition, some national defence establishments have carried out useful work on sampling and analysis in consultation and cooperation with the OPCW, including with biomedical samples. Some of this work is applicable to further improving the technical guidelines for the UN Secretary-General’s investigative mechanism for alleged use of chemical and biological weapons (see section II).

Allegations of Syria’s non-compliance with CWC obligations

A number of reports and statements were issued in the first half of 2015 that raised concerns about Syria’s compliance with the CWC. Canada released a partially declassified report on Syria in March 2015, which included a conclusion that the Syrian Government was responsible for the chemical attack in Ghouta, Syria, in August 2013.²⁴ In April 2015 the USA issued a report identifying the following areas for which it is seeking further clarification with regard to Syria’s CWC obligations: (a) Syria’s use of chlorine, (b) ‘inconsistencies and gaps’ in Syria’s declarations to the OPCW, (c) delays in meeting the deadlines mandated by the OPCW’s Executive Council (EC), and (d) delays in the destruction of CWPFs.²⁵ In July 2015 the European Union (EU) summarized overall Syrian Government compliance with its CWC obligations as follows:

The EU reiterates its concern about the insufficient information provided by the Syrian Government regarding questions arising from the discrepancies and inconsistencies in the initial declaration and subsequent Syrian explanations to the [OPCW’s] Technical Secretariat. It is regrettable that despite raising specific concerns repeatedly in the past, these worrying discrepancies have still to be addressed: namely the lack of original documentation, the fate of the 2000 aerial bombs that

²³ Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction (Chemical Weapons Convention, CWC), opened for signature 13 Jan. 1993, entered into force 29 Apr. 1997.

²⁴ Bell, S., ‘Declassified: documents on Canada’s response to the chemical weapons attack in Syria’, *National Post*, 2 Mar. 2015.

²⁵ US Department of State (note 1).

Syria claims to have converted, various questions concerning a ricin programme, the actual role of the SSRC [Syrian Scientific Studies and Research Centre] in the Syrian chemical programme, the lack of information about small calibre munitions and, the recent analytical findings in relation to the samples taken by the DAT [the OPCW's Declaration Assessment Team], showing traces of chemicals directly linked to the production of VX [nerve agent] and sarin.²⁶

UN condemnation of the use of toxic chemicals as a method of warfare

On 6 March 2015 the UN Security Council adopted Resolution 2209 (2015) condemning the use of any toxic chemical in Syria.²⁷ The resolution, which did not attribute responsibility, was passed by a vote of 14 in favour and 1 abstention (Venezuela).²⁸ The resolution essentially authorizes the use of force under Chapter VII of the UN Charter (action with respect to threats to the peace, breaches of the peace, and acts of aggression) if such weapons are employed again. Venezuela explained its abstention by stating that the UN Security Council vote would 'prejudge' the result of the ongoing investigation by the OPCW.²⁹ The USA attributed responsibility to the Syrian Government based on findings from the OPCW. The United Kingdom supported referral of the situation in Syria to the International Criminal Court (but this, according to the UK, was opposed by two permanent members of the UN Security Council—namely China and Russia).³⁰ Russia stated that 'a careful reading of the [2014] OPCW investigation suggests that it was not based on conclusive ground[s] to warrant' attributing responsibility for the chemical weapon attacks to the Syrian Government.³¹

The implementation of the Joint Investigative Mechanism

Members of the OPCW's EC and the UN Security Council remained unable to agree on attribution of responsibility for the various incidents. In an attempt to achieve clarity on the issue of attribution of responsibility, the UN Security Council passed Resolution 2235 (2015) on 7 August 2015, which

²⁶ OPCW, Executive Council, European Union (EU), 'Luxembourg statement on behalf of the European Union delivered by H. E. Ambassador Pierre-Louis Lorenz Permanent Representative of Luxembourg at the Seventy-Ninth Session of the Executive Council', OPCW Document EC-79/NAT.6, 7 July 2015, p. 2.

²⁷ UN Security Council Resolution 2209, 6 Mar. 2015. See also 'Security Council condemns use of chemical weapons in Syria', UN News Centre, 6 Mar. 2015; and United Nations, 'Adopting Resolution 2209 (2015), Security Council condemns use of chlorine gas as weapon in Syria', Press Release SC/11810, 6 Mar. 2015.

²⁸ United Nations SC/118105 (note 27).

²⁹ United Nations SC/118105 (note 27).

³⁰ United Nations SC/118105 (note 27).

³¹ United Nations SC/118105 (note 27); and Russian Ministry of Foreign Affairs, [Commentary by the Department of Information and Publications of the Russian Ministry of Foreign Affairs in connection with the adoption of a resolution by the UN Security Council on the use of chlorine as a chemical weapon in the Syrian Arab Republic], Press Release 429-12-03-2015, 12 Mar. 2015 (in Russian).

established an OPCW–United Nations Joint Investigative Mechanism (JIM). The mechanism is mandated:

to identify to the greatest extent feasible individuals, entities, groups or governments that were perpetrators, organisers, sponsors or otherwise involved in the use of chemicals as weapons . . . where the OPCW Fact-Finding Mission determines or has determined that a specific incident in the Syrian Arab Republic involved or likely involved the use of chemicals as weapons, including chlorine or any other toxic chemicals as weapons.³²

On 15 September the UN Secretary-General appointed Virginia Gamba of Argentina to head the JIM, which comprises 24 experts and is basing its work partly on the activities of the OPCW’s Fact-Finding Mission (FFM), including the FFM’s three reports of October 2015 and a fourth report issued in December 2015 (see below). The JIM will seek to identify the broader context of the alleged chemical weapon attacks, including ‘co-conspirators, organizers, financial backers and sponsors’. The JIM became fully operational on 13 November 2015. It has offices in The Hague and New York, and may also open an office in Damascus. It was due to issue its first report in February 2016. JIM milestones are summarized in table 18.1.

The Fact-Finding Mission’s 2015 reports

The OPCW’s FFM issued three reports in October 2015. Two of the reports were final. The third was an interim report that was subsequently issued in final form in December 2015.

The FFM’s first set of findings were presented in the interim report (OPCW Document S/1318/2015).³³ The interim report was based on a series of *notes verbales* transmitted by Syria to the OPCW starting in 2014, which detail 26 chemical weapon (essentially chlorine) use incidents that resulted in 432 casualties.³⁴ From June–October 2015, the FFM conducted 75 interviews in connection with 6 alleged incidents. The incidents were all in neighbourhoods in Damascus (Jober, al-Maliha, al-Kabbas, Nubel, al-Zahraa and Darayya). Syrian Government military personnel were the victims in all alleged cases.

Some of the findings in the interim report concern an alleged chemical weapon incident in Jober on 29 August 2014. The FFM investigation relied on testimonies supplemented by background documentation and open-source reporting. Much of the focus of the FFM interim report rests on the extent to which the testimonies are internally consistent or consistent with

³² UN Security Council Resolution 2235, 7 Aug. 2015, para. 5.

³³ OPCW, Technical Secretariat, ‘Interim report of the OPCW Fact-Finding Mission in Syria regarding the incidents described in communications from the Deputy Minister for Foreign Affairs and Expatriates and Head of the National Authority of the Syrian Arab Republic from 15 December 2014 to 15 June 2015’, Note by the Technical Secretariat, OPCW Document S/1318/2015, 29 Oct. 2015.

³⁴ OPCW Document S/1318/2015 (note 33).

Table 18.1. Joint Investigative Mechanism milestones

Date	Milestones
7 Aug. 2015	The UNSC passes Resolution 2235 (2015) establishing the OPCW–UN JIM.
13 Aug. 2015	The Acting High Representative for Disarmament Affairs sends an IOM to various Under-Secretary-Generals requesting their assistance to implement the Resolution (e.g. designating members for an interdepartmental task force).
17 Aug. 2015	The Acting High Representative for Disarmament Affairs sends a letter to the Director-General of the WHO transmitting a copy of the Resolution.
27 Aug. 2015	The UN Secretary General sends a letter to the President of the UNSC with recommendations on the establishment and operation of the JIM.
10 Sep. 2015	The President of the UNSC sends a letter (S/2015/697) to the UN Secretary General authorizing these recommendations for the establishment and operation of the JIM.
14 Sep. 2015	The Acting High Representative for Disarmament Affairs sends an IOM to the UN Department of Management requesting that a trust fund be established in support of the implementation of the Resolution.
15 Sep. 2015	The UN Secretary-General appoints Virginia Gamba of Argentina to head the JIM.
22 Sep. 2015	Gamba invites the OPCW to participate in an operational planning workshop with the participation of key partner organizations in New York on 1–2 Oct. 2015. The Director-General of the WHO and the Executive Director for Police Services of Interpol are also invited.
24 Sep. 2015	The JIM Leadership Panel is officially established and comprises a head and two deputies. Gamba circulates letters to Permanent Representatives to the UN requesting financial support to contribute to the trust fund. She also addresses a letter to the Executive Director of Justice Rapid Response inviting that organization to participate in the October planning meeting.
1–2 Oct. 2015	A JIM planning meeting convenes in New York comprising 16 participants, including Interpol, the OPCW, the UNODA, the UNDPKO and the WHO.
22 Oct. 2015	The Acting High Representative for Disarmament Affairs meets the High Commissioner for Human Rights to discuss how the Independent International Commission of Inquiry on the Syrian Arab Republic may interact with the JIM.
5 Nov. 2015	The JIM Leadership Panel meets the chairman of the UN's ACABQ. The OPCW establishes the Trust Fund for Syria Missions.
6 Nov. 2015	Gamba and Leadership Panel members brief the ACABQ on the proposed programme and budget for the period 2016–17 in accordance with UN document A/70/348/Add.7 regarding the JIM resource requirements for 1 Jan.–30 Sep. 2016.
13 Nov. 2015	The JIM becomes fully operational.
2 Dec. 2015	Acting High Representative for Disarmament Affairs briefs the UNSC on the JIM status, and confirms that it is fully staffed and funded. The first JIM report is to be submitted within 90 days (i.e. in Feb. 2016).

ACABQ = Advisory Committee on Administrative and Budgetary Questions; JIM = Joint Investigative Mechanism; IOM = inter-office memorandum; OPCW = Organisation for the Prohibition of Chemical Weapons; UNDPKO = UN Department for Peacekeeping Operations; UNODA = UN Office for Disarmament Affairs; UNSC = UN Security Council; WHO = World Health Organization.

Source: Author compilation.

a given incident or case report. The interim report emphasized the importance of the OPCW taking its own samples or overseeing this process. It also noted the difficulty of excluding possible chemical irritant effects from conventional explosives from those of chemical warfare agents. The information collected by the FFM for the interim report largely consisted of audio and video recordings, drawings of explosives provided by interviewees, and digital and hard copies of medical records.

The FFM issued its final version of the interim report in December 2015 (OPCW Document S/1318/2015/Rev.1).³⁵ The final report reached three principal conclusions:

1. The FFM could not ‘confidently determine’ whether a chemical had been employed at five of the locations reported by the Syrian Government. These related to (a) two incidents in al-Maliha, the first on 16 April 2014, the second on 11 July 2014; (b) an incident in al-Kabbas on 10 September 2014; (c) incidents in Nubel and al-Zahraa on 8 January 2015; and (d) an incident in Darayya on 15 February 2015.

2. Based on blood sample analysis, the FFM concluded that there was ‘a high degree of probability’ that some individuals identified by the Syrian Government were exposed to sarin or a sarin-like substance during the incident at Darayya on 15 February 2015.

3. The FFM concluded that some individuals said to have been exposed to toxic chemicals during other incidents may have been exposed to non-persistent irritating substances, but that it was unable to obtain ‘complementing evidence’.³⁶

The FFM’s second set of findings from 2015 are contained in a final report that examined alleged chemical weapon attacks (in particular chlorine) in the Idlib Governate between 16 March and 20 May 2015 (OPCW Document S/1319/2015).³⁷ Mandated on 1 May 2015 by the OPCW’s Director-General to investigate the allegations, the FFM reported that it had found sufficient evidence to conclude that one or more toxic chemicals (probably containing chlorine) was or were used as a weapon.

The FFM conducted video- and audio-taped interviews with witnesses. The FFM report comprises incident summaries (each with a narrative and epidemiological analysis). A designated OPCW laboratory analysed the

³⁵ OPCW, Technical Secretariat, ‘Report of the OPCW Fact-Finding Mission in Syria regarding the incidents described in communications from the Deputy Minister for Foreign Affairs and Expatriates and Head of the National Authority of the Syrian Arab Republic’, Note by the Technical Secretariat, OPCW Document S/1318/2015/Rev.1, 17 Dec. 2015.

³⁶ OPCW Document S/1318/2015/Rev.1 (note 35), p. 4.

³⁷ OPCW, Technical Secretariat, ‘Report of the OPCW Fact-Finding Mission in Syria regarding alleged incidents in the Idlib Governate of the Syrian Arab Republic between 16 March and 20 May 2015’, Note by the Technical Secretariat, OPCW Document S/1319/2015, 29 Oct. 2015.

relevant samples. With respect to environmental samples, the FFM followed established OPCW standard operating procedures (SOPs) for sample preparation for analysis of organic species.³⁸ Arrangements were made for biomedical analysis partly based on recent methodologies and testing experience obtained through OPCW networks and general scientific programmes of work. However, biomedical analysis was not feasible partly because no known, reliable biomarkers for chlorine exposure have been validated.³⁹

The summaries of alleged remnants of chemical munitions are of particular interest in this FFM report. The most significant improvised chemical munition said to have been used was a fin-stabilized barrel bomb.⁴⁰ The Syrian 50–100 kilogram chlorine-filled barrel bombs reportedly create a downwind hazard approximately 220 metres long and 100 metres wide.⁴¹ The FFM report also placed great emphasis on the weather conditions recorded at the time of the incidents.

The FFM's third set of findings from 2015 are contained in a final report concerning alleged incidents in Marea on 21 August 2015 (OPCW Document S/1320/2015).⁴² Other incidents (not covered by this report) were alleged to have taken place in Marea on 1 and 4 September 2015.⁴³ The area was outside of Syrian Government control at the time of the alleged incidents in August and September. In addition to the FFM report, Doctors Without Borders (Médecins Sans Frontières, MSF) personnel have issued public statements regarding the nature of these incidents and on the treatment of victims (confirmed or suspected).⁴⁴

The FFM interviewed victims undergoing medical treatment in an unnamed neighbouring country and was provided access to medical records and biomedical samples.⁴⁵ The FFM's main interaction was with a family that

³⁸ Sample preparation included the use of gas chromatography–electron impact mass spectrometry/dual flame photometry detection, liquid chromatography–high-resolution mass spectrometry, and nuclear magnetic resonance spectroscopy. Inorganic species were analysed using inductively coupled plasma mass spectrometry, inductively coupled plasma optical emission spectrometry, ion chromatography, and X-ray fluorescence.

³⁹ The Swedish Defence Research Agency (FOI) will soon publish further research relevant to identifying and validating pulmonary chlorine exposure biomarkers. This is a priority research area for a number of states parties to the CWC and a side event at the 20th Conference of the States Parties (CSP) was devoted to this topic.

⁴⁰ See The Trench blog for a depiction of the barrel bomb, <<http://www.the-trench.org/idlib-chlorine-attacks-2015/>>.

⁴¹ Oppenheimer, A., 'The heartlands of chemical warfare', *Military Technology*, vol. 39, no. 11 (Nov. 2015), p. 48.

⁴² OPCW, Technical Secretariat, 'Report of the OPCW Fact-Finding Mission in Syria regarding alleged incidents in Marea, Syrian Arab Republic, August 2015', Note by the Technical Secretariat, OPCW Document S/1320/2015, 29 Oct. 2015.

⁴³ OPCW Document S/1320/2015 (note 42), para. 3.2.

⁴⁴ See e.g. Médecins Sans Frontières (MSF), 'Syria: MSF treats patients with symptoms of exposure to chemical agents', Press statement, 25 Aug. 2015.

⁴⁵ It is notable that these interviews were based on public reporting by Médecins Sans Frontières on the Marea incident—not official information. The unnamed country is almost certainly Turkey.

was exposed to sulphur mustard after an artillery shell landed on the family's home. A treating physician, the father and the mother were interviewed separately. The FFM observed the collection of four biomedical samples (blood and urine) from two family members. Blood plasma and urine were divided into three 'splits' (aliquots) that arrived at the OPCW laboratory on 11 September 2015. Analysis was then performed at two OPCW-designated laboratories, while the first aliquot was archived at the OPCW laboratory. The two OPCW-designated laboratories found known derivatives from sulphur mustard in the blood plasma. With respect to the urine analysis, one of the laboratories reported a negative result, while the other confirmed the presence of known sulphur mustard metabolites.

The Fact-Finding Mission's methodology

The two final FFM reports issued in October 2015 set out three overarching methodological principles that can guide the OPCW in future when gathering data and information. The interim report did not include a restatement of these methodological principles. The three principles are (a) use a validated methodology for the acquisition and analysis of evidence, where possible; (b) ensure that FFM personnel possess the proper skills and training; and (c) apply chain-of-custody procedures.

The two final FFM reports from October 2015 noted that, in each case, the FFM used at least four OPCW SOPs, six OPCW Work Instructions, and modified questionnaires that were originally developed by the OPCW for investigations of alleged use of chemical weapons. The modifications made to the questionnaires by the FFM were minor and implemented in consultation with the OPCW's Office of the Legal Advisor and Office of the Director-General. The FFM also conducted background information collection, including from open sources and non-governmental organizations (NGOs). For example, the FFM had contact with the Chemical Violations Documentation Center of Syria to help identify locations of suspected chemical weapon victims. Information was collected in the field by conducting interviews and (as appropriate and feasible) the taking of samples. An important principle for such investigations was for team members to have complete, direct and immediate access to sites of alleged chemical weapon use. The FFM reports noted that high-value interviewees were those identified by the investigation team in the field or those obtained via sources deemed to be reliable due to their 'proximity' or 'involvement'.⁴⁶

The two final FFM reports from October 2015 also set out epidemiological cause and effect principles: (a) the existence of a biologically plausible link between the exposure and outcome; (b) a plausible time frame for the suspected exposure and the outcome; and (c) no plausible alternative expla-

⁴⁶ See e.g. OPCW Document S/1320/2015 (note 42), para. 2.7.

nation for the displayed symptoms. Shortcomings in the FFM epidemiological investigations included lack of physical access to the sites of the alleged incidents; such physical access would have permitted the FFM to visit other medical facilities where casualties were treated and to assess the geography of the sites.

Major methodological challenges included the fact that FFM members were not permitted by Syrian Government officials to control fully the selection of interviewees and to take their own samples.⁴⁷

States parties' reactions to the Fact-Finding Mission's reports

The OPCW's EC received an update on the status of the FFM in Syria at its 80th regular meeting on 6–9 October 2015.⁴⁸ It reviewed the three reports issued by the FFM in October at its 50th special meeting on 23 November 2015.⁴⁹ The 20th Conference of the States Parties (CSP) to the CWC, held in The Hague from 30 November to 4 December 2015, later issued statements on Syria's compliance with the CWC in general and the implications of the reports in particular (see section II).

At the October meeting of the EC, Brazil, India, Japan and Russia were among the EC participants that refrained from criticizing the Syrian Government. By contrast, Australia, the EU, New Zealand and the USA were open in their criticism. Turkey was unusually pointed in its criticism of Syria stating: 'This consistent non-compliance by Syria [with respect to the OPCW's Declaration Assessment Team] should no longer be tolerated without inflicting severe consequences on the Assad regime in accordance with the relevant United Nations Security Council resolutions'.⁵⁰

Russia stated that a key to the FFM's success is cooperation and exchange of information, including information on its work in third countries. It also emphasized the critical importance of the OPCW in the JIM, implying that the balance should be more towards the OPCW side as the natural repository of chemical weapon verification expertise.⁵¹ This position has resonance with some governments that consider the UN to be unduly influenced by the

⁴⁷ It should also be noted that the OPCW conducts annual inter-laboratory proficiency tests. As of Sep. 2015 the OPCW had 19 designated laboratories of which 5 were temporarily suspended. OPCW, Technical Secretariat, 'Status of laboratories designated for the analysis of authentic samples', Note by the Director-General, OPCW Document S/1308/2015, 2 Sep. 2015.

⁴⁸ Documents relating to the 80th Session of the OPCW's Executive Council (EC) are available at: <<https://www.opcw.org/?id=2555>>.

⁴⁹ Documents relating to the 50th Meeting of the OPCW's Executive Council (EC) are available at: <<https://www.opcw.org/?id=2600>>. See also Trapp, R., 'Lessons learned from the OPCW mission in Syria', OPCW Report, 16 Dec. 2015.

⁵⁰ OPCW, Executive Council, Turkey, 'Statement by H. E. Ambassador Sadik Arslan, Permanent Representative of Turkey to the OPCW at the Eightieth Session of the Executive Council', OPCW Document EC-80/NAT.5, 6 Oct. 2015, p 2.

⁵¹ OPCW, Executive Council, Russia, 'Statement by the delegation of the Russian Federation at the Eightieth Session of the Executive Council', OPCW Document EC-80/NAT.10, 7 Oct. 2015, p. 2.

permanent members of the Security Council in relation to its interactions with other international regimes (such as the OPCW).

At its 50th special meeting in November, the EC issued a draft decision for the consideration of and possible adoption by the CSP.⁵² The EC condemned the use of chemical weapons ‘by anyone under any circumstances’ and expressed grave concerns regarding the FFM’s conclusion that chemical weapons had been used again in Syria in at least two instances.⁵³

At the CSP in November–December 2015 the states parties to the CWC expressed concern about the continued use of toxic chemicals as a method of warfare (some proven, others alleged).⁵⁴ Turkey stated that ‘The Assad regime is still acting with impunity in Syria by continuous use of chlorine as a weapon against civilians’.⁵⁵ Away from the main sessions (and presumably during the closed session of the CSP) other states parties were also pointed in their remarks towards Syria.⁵⁶

Syria and some other states focused solely on the alleged use of chemical weapons by non-state actors. In its statement to the CSP, Syria noted that the OPCW had confirmed the use of sulphur mustard by IS in Iraq and Syria. It added that it had repeatedly warned against the risks resulting from third parties providing ‘armed terrorist gangs’ with toxic chemicals.⁵⁷ Iran stated that ‘terrorists’ had used chemical weapons in Iraq and Syria.⁵⁸ It added that it has been supportive of Syria’s accession to the CWC and that Syria should be treated as ‘a normal Member State’.⁵⁹ Iran also noted that it expects the JIM to fulfil its mandate in a professional, neutral manner. In its statement, the Non-Aligned Movement (to which China is affiliated) noted that it was ‘deeply concerned about recent reports on the use of chemical weapons and toxic chemicals in terrorist attacks’, and called upon the Technical Secretariat ‘to investigate all reports on the use of chemical weapons and to keep States Parties informed about steps taken’.⁶⁰

⁵² OPCW, Executive Council, ‘Further reports of the OPCW Fact-Finding Mission in Syria’, OPCW Document EC-M-50/DEC.1, 23 Nov. 2015.

⁵³ OPCW Document EC-M-50/DEC.1 (note 52).

⁵⁴ OPCW official, Communications with author at CSP, The Hague, Dec. 2015.

⁵⁵ Turkey, ‘Statement by H. E. Ambassador Sadik Arslan, Permanent Representative of the Republic of Turkey to the OPCW’, 20th CSP, The Hague, 30 Nov.–4 Dec. 2015, p. 2.

⁵⁶ OPCW official, Communications with author at CSP, The Hague, Dec. 2015.

⁵⁷ OPCW, Conference of the States Parties, 20th session, Syria, ‘Statement by Syria’, 30 Nov. 2015. Opcwonline, ‘20th Session of the Conference of the State Parties (PM)’, YouTube, 30 Nov. 2015, <<https://www.youtube.com/watch?v=TbNFSYZofBo>>.

⁵⁸ OPCW, Conference of the States Parties, 20th session, Iran, ‘Statement by H. E. Dr. Alireza Jahangiri, Permanent Representative of the Islamic Republic of Iran’, OPCW Document C-20/NAT.49.1 Dec. 2015, p. 3.

⁵⁹ OPCW Document C-20/NAT.49 (note 58) p. 2.

⁶⁰ OPCW, Conference of the States Parties, 20th session, Iran, ‘Statement by H. E. Dr. Alireza Jahangiri, Permanent Representative of the Islamic Republic of Iran to the OPCW on behalf of the member states of the Non-Aligned Movement that are states parties to the Chemical Weapons Convention and China’, OPCW Document C-20/NAT.4, 30 Nov. 2015, p. 5.

Achieving clarity and agreement on attribution of responsibility

The allegations regarding the use of chemical weapons in Iraq and Syria highlight the underlying technical and political issues of proving that such weapons have, in fact, been used and who is responsible. Agreeing standards of evidence and achieving a reasonable level of proof in specific cases remains problematic. This is especially the case when set against the broader geopolitical context of competing narratives over the nature of the armed conflicts in Iraq and Syria, and associated preferred political interpretations and outcomes among governments.

A 2015 qualitative analysis comparing media reporting in Russia and in the West on allegations of chemical weapon use in Syria sheds some light on the basis for these competing narratives. The analysis suggests that Russian perspectives are ‘significantly shaped by [a] strong rhetorical commitment to international principles’ and that these are the ‘conservative principles of stability, sovereign equality, and non-interference’ rather than Western ‘liberal principles of justice and human rights’.⁶¹ It concludes that the prospects for Russian–Western cooperation are poor. This is because the differences are not merely those of government policy, but are instead rooted within broader public discourse.⁶²

Together with the associated OPCW and national documentation, the FFM findings provide an ample basis for open-ended legal, technical and political debate. While some of this activity could take the form of reductionist ‘drilling down’ to challenge every item of information, the JIM should help to clarify the nature of and responsibility for the continued acts of chemical warfare. However, the fact remains that governments can selectively emphasize some baseline data in order to support preconceived or politically preferred interpretations. Consequently, some governments can, in principle, point to non-state actors as being solely responsible, while others can, in principle, also attribute some of the incidents to the Syrian Government.

The JIM will almost certainly produce findings that add further iterative clarity to the various allegations. However, whether the JIM and associated processes produce some (or all) of the ‘smoking guns’ remains to be seen. Nor is it self-evident that all governments would acknowledge that a smoking gun has been produced. Nevertheless, international legal inquiries and processes adjacent to chemical weapon verification may, in effect, achieve a critical momentum and displace the current arms control verification dynamic of competing political narratives. Notwithstanding the tragic consequences of the continued use of chemical weapons, the current arms

⁶¹ Brown, J. D. J., “A nightmare painted by Goya”, Russian media coverage of the Syrian chemical weapons attacks in comparative perspective’, *Problems of Post-Communism*, vol. 62 (2015), p. 243.

⁶² Brown (note 61), p. 243.

control verification work and experience should ultimately strengthen the OPCW's future capacity.