International Mechanisms for the Investigation of Alleged Use of Biological Weapons—A Primer

調查涉嫌使用生物武器的國際機制 - 入門

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Biological weapons are a major threat to the security of the United States and its deployed troops and allies. A biological incident may have implications under the "Convention on the Prohibition of the Development, Production, and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction" (commonly known as the "Biological Weapons Convention") or United Nations Security Council Resolution (UNSCR) 1540 (2004) if the incident can be attributed to the actions of a foreign party.[2,3] Under the United Nations (UN) charter, the UN Secretary-General is authorized to investigate alleged biological weapon use. There are several resources available to UN member states for requesting an investigation. For deployed troops engaged in weapons of mass destruction (WMD) elimination (now commonly referred to as countering weapons of mass destruction [CWMD]) operations, knowledge of the international mechanisms for the investigation of alleged biological weapon use is valuable for planning considerations and for the close integration of military activities with related international efforts.

生物武器是美國及其部署部隊和盟國安全的主要威脅。依據"禁止發展、生

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2."Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction," commonly known as the "Biological Weapons Convention," 10 April 1972.

3. UNSCR 1540 (2004), 28 April 2004, <http://www.un.org/en/ga/search/view_doc.asp?symbol=S/RES/1540(2004)>, accessed on 10 September 2018.

產與儲存細菌(生物)及毒素武器與銷毀此種武器的公約”(俗稱“生物武器公約”)或“聯合國安全理事會決議(UNSCR)1540(2004)”，生物事件可能意味著如果事件可歸因於外國組織的行為[2,3]。根據聯合國(UN)章程，聯合國(UN)秘書長有權調查所謂的生物武器使用。有幾種資源可供聯合國成員國請求調查。從事消除大規模毀滅性武器(WMD)(現在通常稱為“對抗大規模毀滅性武器(CWMD)”)行動的部署部隊，對於調查涉嫌使用生物武器的國際機制理解，是有利於計畫的考慮與軍事活動和相關國際工作的密切整合。

Biological Threats生物威脅

Joint Operating Environment 2035, The Joint Force in a Contested and Disordered World, contends that, by 2035, the United States will likely face a future security environment in which dangerous consequences will arise from fragile or failing states that are unable to maintain positive control of their WMD arsenal and WMD-related materials or to contain infectious disease outbreaks.[4] It further emphasizes that aggressive states may seek to challenge the U.S. system of alliances and partnerships of the future or change international rules in their favor; therefore, the joint force must be prepared to provide “military support to alliances and international law.”[5]

“2035年聯合作戰環境—一個有爭議和無序世界的聯合部隊”堅持認為，到2035年，美國面臨未來的安全防衛環境，將產生危險後果，其中脆弱或失敗的國家無法維持對其大規模毀滅性武器(WMD)兵工廠和大規模毀滅性武器(WMD)相關材料的積極控制或遏制傳染病爆發[4]。進一步強調，侵略國家可能會試圖挑戰美國的未來聯盟和夥伴關係體系，或改變對他們有利的國際規則；因此，必須準備聯合部隊，提供“為聯盟和國際法提供軍事支援”[5]。

As noted in the Summary of the 2018 National Defense Strategy of the United States of America, biological weapons are becoming more feasible for sovereign states and non-state actors, as biological agents, materials, knowledge, and expertise are widely available.[6] Information about biological weapons programs and the intent to use biological weapons has been difficult to ascertain (Iraq was thought to have an active biological weapon program during the lead-up to the second Gulf War but actually did not, while the former Soviet Union managed to hide a sophisticated biological weapon program employing tens of thousands of personnel). There is also a multitude of subjective opinions and a lack of consensus among experts with regard to

4.Joint Operating Environment 2035, The Joint Force in a Contested and Disordered World , 14 July 2016, <http://www.jcs.mil/Doctrine/Joint-Concepts/JOE/>, accessed on 11 September 2018.

5.同註 4

6.U.S. Department of Defense, Summary of the 2018 National Defense Strategy of the United States of America, <https://www.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>, accessed on 10 September 2018.

the threat level and the inherent difficulty in distinguishing whether an outbreak is natural, deliberate, or accidental in origin.[7,8]

正如“2018年美國國防戰略摘要”所指出的，隨著生物毒劑、材料、知識和專門技能的廣泛應用，生物武器對主權國家和非國家行為者來說變得更加可行[6]。鑒於生物武器計畫和使用生物武器的意圖的資訊很難確定，(伊拉克被認為在第二次海灣戰爭期間有一個積極的生物武器計畫，但實際上沒有；而前蘇聯設法隱藏僱用成千上萬人員的複雜生物武器計畫)。專家們對威脅程度以及在區分傳染病爆發是自然的、有意的還是偶然的起源，存在固有的困難，也存在大量的主觀意見和缺乏共識[7,8]。

International Arms Control Treaties and Nonproliferation Framework國際軍備控制條約和防擴散框架

In the international arena, the following agreements are relevant to prohibitions on the use of chemical, biological, and toxin weapons:

在國際舞台上，以下協議與禁止使用化學、生物和毒素武器有關：

- “Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare,” commonly known as the “Geneva Protocol.”[9]
- “禁止在戰爭中使用窒息、有毒或其他毒氣與細菌的戰爭方法的議定書”，俗稱“日內瓦議定書”[9]
- “Biological Weapons Convention.”[10]
- “生物武器公約”[10]
- “Convention on the Prohibition of the Development, Production, Stockpiling, and Use of Chemical Weapons and on Their Destruction,” commonly known as the “Chemical Weapons Convention.”[11]

7.Crystal Boddie et al., “Assessing the Bioweapons Threat: Is There a Foundation of Agreement Among Experts About Risk?” Science, Volume 349, Issue 6250, 21 August 2015, pp. 792–793, <http://www.centerforhealthsecurity.org/our-work/pubs_archive/pubs-pdfs/2015/Science2015Boddie7923_1.pdf>, accessed on 10 September 2018.

8.Z. F. Dembek et al., “Review Article: Discernment Between Deliberate and Natural Infectious Disease Outbreaks,” Cambridge University Press, 2007, pp. 353–371, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2870591/pdf/S0950268806007011a.pdf>, accessed on 10 September 2018.

9.“Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare,” commonly known as the “Geneva Protocol,” 17 June 1925.

10.同註 2

11.OPCW, “Convention on the Prohibition of the Development, Production, Stockpiling, and Use of Chemical Weapons and on Their Destruction,” commonly known as the “Chemical Weapons Convention,” 3 September 1992, <https://www.opcw.org/chemical-weapons-convention/download-the-cwc/>, accessed on 10 September 2018.

- “禁止發展、生產、儲存和使用化學武器及銷毀此種武器的公約”，俗稱“化學武器公約”[11]
- UNSCR 1540 (2004).[12]
- 聯合國安全理事會第1540號決議(2004年) (UNSCR 1540 (2004))[12]

The “Geneva Protocol” prohibits the use of chemical and biological weapons in war. These prohibitions have become so widely accepted that they are considered by many to be customary international law and binding on all states.

“日內瓦議定書”禁止在戰爭中使用化學和生物武器。這些禁令已被廣泛接受，許多人認為這些禁令是習慣國際法，對所有國家都具有約束力。

The “Biological Weapons Convention” is supported (in terms of meetings, outreach, and implementation support services) by a three-person implementation support unit.[13] Article VI of the “Biological Weapons Convention” allows any State Party to lodge a complaint with the UN Security Council if they believe other member states are violating the convention and requires each State Party to cooperate with the subsequent investigation.[14] However, Article VI power has never been invoked.

“生物武器公約”得到三人執行支助單位的支持(在會議、外聯和執行支助服務方面)[13]。“生物武器公約”第六條任何締約國如果認為其他成員國正在違反公約，允許向聯合國安全理事會提出申訴，並要求每個締約國配合後續調查[14]。然而，第六條權力從未被援引過。

On the other hand, Article V of the “Biological Weapons Convention” mandates that States Parties consult with one another and cooperate, bilaterally or multilaterally, to solve compliance concerns.[15] In 1997, Article V was invoked by Cuba when it requested a formal consultation on an alleged use of biological weapons by the United States. The Cuban allegations and the U.S. response were distributed to States Parties for consideration. About 20 countries commented, and almost all of them agreed that there was no significant evidence supporting the allegations and that a natural outbreak was plausible.[16] If the deliberations had yielded a different result, the UN Security Council could have levied sanctions (an unlikely scenario since the United States holds veto power).

12同註 3

13.“Biological Weapons Convention Implementation Support Unit,” UN Office at Geneva Web site, <https://www.unog.ch/80256EE600585943/(httpPages)/16C37624830EDAE5C12572BC0044DFC1?OpenDocument>, accessed on 10 September 2018.

14.同註 2

15.同註 2

16. “Cuban Accusations of U.S. Insect Raid on Island to Be Studied,” The New York Times Web site, 28 August 1997, <https://www.nytimes.com/1997/08/28/world/cuban-accusations-of-us-insect-raid-on-island-to-be-studied.html>, accessed on 10 September 2018.

另一方面，“生物武器公約”第五條規定，締約國相互協商，雙邊或多邊合作，以解決遵約問題[15]。在1997年，古巴援引了第五條要求，指稱美國使用生物武器，進行正式協商。古巴的指控和美國的答覆分發給締約國進行審議。大約20個國家提出評論，幾乎所有國家都同意沒有重要證據支持這些指控，並且傳染病自然爆發是合理的[16]。如果審議產生了不同的結果，聯合國安理會可能會採取制裁措施，(這種情況不太可能發生，因為美國擁有否決權)。

The “Chemical Weapons Convention” bans chemical weapons and requires the destruction of legacy stockpiles within a specified period. It is implemented by the Organization for the Prohibition of Chemical Weapons (OPCW). Certain biological toxins (ricin, saxitoxin), while covered under the “Biological Weapons Convention,” are also under the purview of the “Chemical Weapons Convention” as toxic chemicals produced by living organisms.[17]

“化學武器公約”禁止化學武器，並要求在特定時期內銷毀遺留的庫存。這由“禁止化學武器組織(OPCW)”執行。某些生物毒素(蓖麻毒素、蛤蚌毒素)雖然屬於“生物武器公約”所涵蓋，但也屬於“化學武器公約”的範圍，是生物體產生的有毒化學品[17]。

Together, the “Biological Weapons Convention” and the “Chemical Weapons Convention” prohibitions extend to all biological agents and toxins and, essentially, to all chemicals unless they are intended for peaceful purposes or their types and quantities are consistent with such purposes. These treaties are far more comprehensive than the “Geneva Protocol,” which outlaws the use but not the possession of biological and chemical weapons.

“生物武器公約”和“化學武器公約”禁令一起適用於所有生物毒劑和毒素，本質上，對所有化學品而言，除非它們用於和平目的，或者它們的類型和數量與上述條約目的一致。這些條約比“日內瓦議定書”更加全面，“日內瓦議定書”僅禁止使用，而不是擁有生物和化學武器。

The Department of State publishes an annual report on compliance with international treaties. In recent reports, the United States indicated that Russia has outstanding “Biological Weapons Convention” compliance issues (no evidence was provided that Russia destroyed or diverted to peaceful purposes the offensive biological research and development programs inherited from the Soviet Union), that North Korea may consider the use of biological weapons (contrary to its obligations under the “Biological Weapons Convention”), and that it is uncertain whether Syria would consider the use of biological weapons as a military option.[18,19] These annual reports illustrate

17.同註 11

18.U.S. Department of State, 2017 Report on Adherence to and Compliance With Arms Control, Nonproliferation, and Disarmament Agreements and Commitments, 14 April 2017, <https://www.state.gov/t/avc/rls/rpt/2017/270330.htm>, accessed on 10 September 2018.

how difficult it is to assess compliance and gain a clear understanding of the security threat posed by the activities of certain countries.

國務院發布關於遵守國際條約的年度報告。在最近的報告中，美國表示俄羅斯有顯著的"生物武器公約"承諾問題，(沒有證據表明俄羅斯摧毀自蘇聯繼承的攻擊性生物研究和發展計畫，或轉移到和平用途)，北韓可能考慮使用生物武器，(違反"生物武器公約"規定的義務)，並且不確定敘利亞是否會考慮將生物武器用作軍事選項[18,19]。這些年度報告說明，評估遵守情況，與清楚了解某些國家的活動所構成的安全威脅，是多麼困難。

UNSCR 1540 (2004) was unanimously adopted in 2004 under Chapter VII of the UN charter to address the risk that terrorists and other nonstate actors could acquire WMD or related materials.[20] The resolution also created a committee (the 1540 committee), supported by a group of experts, to monitor implementation of the resolution. Chapter VII gives the UN Security Council the authority to "determine the existence of any threat to the peace, breach of the peace, or act of aggression" and to take military and nonmilitary action to "restore international peace and security."[21] Decisions adopted under Chapter VII are binding upon all member states and override other international obligations. UNSCR 1540 (2004) places three major obligations on member states:

"聯合國安全理事會第1540號決議(2004年)(UNSCR 1540)(2004)"根據聯合國憲章第七章一致通過，以解決恐怖分子和其他非國家行為者獲得大規模毀滅性武器(WMD)或相關材料的風險[20]。該決議還設立了一個委員會(1540委員會)，由一組專家支援，以監督該決議的執行情況。第七章賦予聯合國安全理事會"決定是否存在對和平的威脅、破壞和平或侵略行為"的權力，並採取軍事和非軍事行動來"恢復國際和平與安全"[21]。根據第七章通過的決定對所有成員國具有約束力，並超越其他國際義務。"聯合國安全理事會第1540號決議(2004年)(UNSCR 1540)(2004)"對成員國規定了三項主要義務：

- Refrain from providing any form of support to non-state actors that attempt to develop, acquire, manufacture, possess, transport, transfer, or use WMD or their means of delivery.
- 避免向試圖開發、獲取、製造、擁有、運輸、轉移或使用大規模毀滅性武器(WMD)或其酬載工具的非國家行為者提供任何形式的支援。
- Adopt and enforce appropriate, effective laws prohibiting WMD proliferation to non-state actors.

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19. U.S. Department of State Web site, Adherence to and Compliance With Arms Control, Nonproliferation, and Disarmament Agreements and Commitments, April 2018, <https://www.state.gov/documents/organization/280774.pdf>, accessed on 10 September 2018.
20. 同註 3
21. 同註 3

- 通過並執行適當、有效的法律，禁止大規模毀滅性武器(WMD)擴散到非國家行為者。
- Implement and enforce appropriate controls over WMD related materials.
- 實施並強制對大規模毀滅性武器(WMD)相關材料的適當控制。

The UN Security Council adopted subsequent resolutions reemphasizing the importance of UNSCR 1540 (2004) and the need for all member states to effectively implement it.[22] Through UNSCR 2325 (2016), the UN Security Council also called upon member states to take into account the evolving nature of risk of proliferation and rapid advances in science and technology in their implementation of UNSCR 1540 (2004).[23] Despite being adopted under Chapter VII authority, UNSCR 1540 (2004) does not address ways for the UN Security Council to intervene in cases of flagrant violations. However, through UNSCR 2118 (2013), the Security Council recalled state members' obligations under UNSCR 1540 (2004) and decided that "Member states shall inform immediately the Security Council of any violation of resolution 1540 (2004) . . . in order to take necessary measures . . ."[24]

聯合國安全理事會隨後通過的決議，再次強調了"聯合國安全理事會第1540號決議(2004年)(UNSCR 1540)(2004)"的重要性以及所有成員國有效實施該決議的必要性[22]。經由通過"聯合國安全理事會第2325號決議(2016年)(UNSCR 2325)(2016)"，聯合國安全理事會還呼籲成員國在實施"聯合國安全理事會第1540號決議(2004年)(UNSCR 1540)(2004)"時，考慮到擴散風險和科學技術的迅速發展[23]。儘管根據第七章的規定獲得通過，但"聯合國安全理事會第1540號決議(2004年)(UNSCR 1540)(2004)"並沒有解決聯合國安全理事會干預公然侵權案件的方法。無論如何，經由通過"聯合國安全理事會第2118號決議(2013年)(UNSCR 2118)(2013)"，聯合國安全理事回顧了"聯合國安全理事會第1540號決議(2004年)(UNSCR 1540)(2004)"規定的國家成員的義務，並決定"會員國應立即通知聯合國安全理事任何違反"聯合國安全理事會第1540號決議(2004年)(UNSCR 1540)(2004)"的行為……為了採取必要的措施……"[24]。

United Nations Secretary-General's Mechanism for Investigation of Alleged Use of Chemical, Biological, and Toxin Weapons聯合國秘書長調查涉嫌使用化學、生物和毒素武器的機制

22. UN Security Council Web site, "Security Council Resolutions," <http://www.un.org/en/sc/1540/resolutions-committee-reports-and-SC-briefings/security-council-resolutions.shtml>, accessed on 10 September 2018.
23. UNSCR 2325 (2016), 15 December 2016, <http://www.un.org/ga/search/view_doc.asp?symbol=S/RES/2325(2016)>, accessed on 10 September 2018.
24. UNSCR 2118 (2013), 27 September 2013, <https://www.securitycouncilreport.org/atf/cf/%7b65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7d/s_res_2118.pdf>, accessed on 10 September 2018.

In 2011, approximately 100 civilian and military personnel from the United States and other countries participated in a tabletop exercise focused on the United Nations Secretary-General's Mechanism (UNSGM) for Investigation of Alleged Use of Chemical and Biological Weapons in Tbilisi, Georgia.[25] The fictional scenario started with a letter to the Secretary-General from a UN member state alleging that biological weapons were used against its civilian population by a separatist faction, leaving numerous people dead or seriously ill. This tabletop exercise, facilitated by the United Nations Office for Disarmament Affairs (UNODA), was the first to use the updated UNSGM technical guidelines and procedures in a fictional biological weapon scenario. At the time, UNODA facilitators stressed that UNSGM was solely a fact-finding mission and, in accordance with its mandate, the UN team would not seek to identify perpetrators or assign blame.[26]

在2011年，來自美國和其他國家的大約100名文職和軍職人員在Georgia州的Tbilisi參加了一次桌面演習，重點是聯合國秘書長機制(UNSGM)調查涉嫌使用化學和生物武器[25]。虛構的想定開始於一封聯合國成員國致秘書長的信，聲稱生物武器被分離主義派系用於對付其平民，造成許多人死亡或重病。在聯合國裁軍事務廳(UNODA)的協助下，這項桌面演習是第一次在虛構的生物武器想定中使用最新的聯合國秘書長機制(UNSGM)技術準則和方法。當時，聯合國裁軍事務廳(UNODA)協調人強調，聯合國秘書長機制(UNSGM)只是一個事實調查任務，根據其任務規定，聯合國小組不會尋求查明肇事者或指責[26]。

Since then, chemical weapon attacks in Syria have led to international condemnation. UNSGM was activated with regard to the 2013 chemical weapon use in Syria; but using UNSCR 2235, the UN Security Council, for the first time, expressed its determination to identify and hold accountable those responsible for such acts.[27] The resolution established the OPCW–UN Joint Investigative Mechanism with the mandate to identify, to the greatest extent feasible, the individuals, entities, groups, or governments who were

25. U.S. Department of Health and Human Services, "After Action Report, Countering Biological Threats: National Implementation of the Biological Weapons Convention and Multinational Outbreak Response and Bioterrorism Investigation Demonstration," Tbilisi, Georgia, 17–19 May 2011, <https://www.phe.gov/Preparedness/international/Documents/countering-threats.pdf >, accessed on 10 September 2018.
26. UN Office for Disarmament Affairs Web site, "Fact Sheet, The Secretary-General's Mechanism for Investigation of Alleged Use of Chemical and Biological Weapons," January 2016, <https://unoda-web.s3.amazonaws.com/wp-content/uploads/2016/01/SGM-fact-sheet-Jan2016.pdf>, accessed on 10 September 2018.
27. UN Office for Disarmament Affairs Web site, The Secretary-General's Mechanism for Investigation of Alleged Use of Chemical, Bacteriological (Biological), or Toxin Weapons: A Lessons-Learned Exercise for the United Nations Mission in the Syrian Arab Republic, May 2015, <https://unoda-web.s3-accelerate.amazonaws.com/wp-content/uploads/assets/publications/more/syrian-ll-report/syrian-ll-report-2015.pdf>, accessed on 10 September 2018.

perpetrators, organizers, sponsors, or otherwise involved in the use of chemicals as weapons in Syria.[28] This request for identification represents a step up in the basic authority given to the Secretary-General in the late 1980s by the UN General Assembly for ascertaining alleged violations of the "Geneva Protocol."

從那以後，敘利亞的化學武器襲擊事件引發了國際譴責。對於2013年敘利亞化學武器的使用，聯合國秘書長機制(UNSGM)被起動；聯合國安全理事會第一次使用"聯合國安全理事會第2325號決議(UNSCR 2325)"，表示決心查明並追究對此類行為負責者的責任[27]。該決議設立了"禁止化學武器組織(OPCW)"— "聯合國聯合調查機制"，其任務是盡可能確定在敘利亞的肇事者、組織者、贊助者或其他參與使用化學品作為武器的個人、實體、團體或政府[28]。這一身份查驗要求代表了聯合國大會在1980年代後期向秘書長提供的基本權力，以確定涉嫌違反"日內瓦議定書"的行為。

The Joint Investigative Mechanism and six other previous UNSGM investigations (four related to the Iran–Iraq War and two in response to reports of alleged chemical weapon use in Mozambique and Azerbaijan) expanded the collective knowledge and understanding of UN investigations of alleged chemical weapon use, which led to updates in the technical methods and procedures applied in the field. However, there is currently a lack of academic forward thinking about how the lessons learned from these investigations may be applicable to future investigations of alleged biological weapon use or, even more controversial, to investigations of alleged biological weapon development. It is a hopeful sign that in 2013, upon completion of the UN mission to investigate allegations of the use of chemical weapons in Syria, the Secretary-General called for a lessons-learned process to strengthen preparedness in order to enhance the effectiveness of future UNSGM investigations.[29] A similar lessons-learned process has yet to be applied to the Joint Investigative Mechanism since its conclusion.

聯合調查機制和以前的六次聯合國秘書長機制(UNSGM)調查(四個與伊朗–伊拉克戰爭有關，另外兩個是對莫桑比克(Mozambique)和阿塞拜疆(Azerbaijan)涉嫌使用化學武器的報導的回應)擴大了聯合國對涉嫌使用化學武器的調查的共同知識和理解，從而更新了該領域的技術方法和程序。然而，目前缺乏學術前瞻性思考，如何從這些調查中汲取的經驗教訓如何適用於未來對指稱的生物武器使用的調查，或者甚至更有爭議的是對涉嫌生物武器發展的調查。這是一個充滿希望的徵兆，表明在2013年聯合國調查敘利亞關於使用化學

28. UN Office for Disarmament Affairs Web site, "Fact Sheet, OPCW–UN Joint Investigative Mechanism," June 2017, <https://s3.amazonaws.com/unoda-web/wp-content/uploads/2017/07/JIM-Fact-Sheet-Jul2017.pdf>, accessed on 10 September 2018.
29. 同註 28

武器的指控的任務完成後，秘書長呼籲採取經驗教訓，加強準備，以提高未來聯合國秘書長機制(UNSGM)調查的有效性[29]。聯合調查機制自作成結論以來，尚未採用類似的經驗教訓過程。

Under the UN charter, the Secretary-General has the standing authority to investigate the use of biological weapons. However, the UN Security Council can request that the Secretary-General investigate any threat to international peace and security, including biological weapon development, possession, testing, transfer, or accidental release. Such investigations can also be carried out at the request of state members. For biological investigations, the Secretary-General has the authority to make advanced arrangements (enlisting the support of relevant international organizations such as the World Health Organization) for investigating alleged biological weapons at the request of any member state. In the case of chemical investigations, as illustrated by the recent history of Syria, OPCW can participate in joint investigations with the UN and carry out its own fact-finding mission.

根據聯合國憲章，秘書長有權調查生物武器的使用。但是，聯合國安全理事會可以要求秘書長調查對國際和平與安全的任何威脅，包括生物武器的開發、擁有、測試、轉讓或意外釋放。此類調查也可以應成員國家的要求進行。對於生物調查，秘書長有權根據任何成員國的要求作出先進安排(爭取世界衛生組織等有關國際組織的支持)調查所謂的生物武器。就化學調查而言，如敘利亞最近的歷史所示，“禁止化學武器組織(OPCW)”可以參與與聯合國的聯合調查，並開展自己的事實調查任務。

The UNSGM is triggered by a request to the Secretary-General (by the Security Council or a UN member state) to investigate the possible use of chemical and biological weapons in violation of the “Geneva Protocol” or other relevant rules of customary international law.

聯合國秘書長機制(UNSGM)是由秘書長(由安全理事會或聯合國成員國)要求調查可能使用化學和生物武器違反“日內瓦議定書”或其他習慣國際法規則引發的。

The key elements of the mechanism are the technical guidelines and procedures for the conduct of investigations and the roster of experts and laboratories provided by member states. The technical guidelines and procedures were first published in 1989 and updated in 2007.[30,31]The skills,

30. UN General Assembly, Report of the Secretary-General, “Chemical and Bacteriological (Biological) Weapons, A44/561, 4 October 1989, <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N89/234/36/IMG/N8923436.pdf>, accessed on 24 October 2018.
31. UN Office for Disarmament Affairs, Appendices to the Secretary-General’s Mechanism, <https://www.un.org/disarmament/wmd/secretary-general-mechanism/appendices>, accessed on 10 September 2018.

knowledge, equipment, and other resources in the roster are made available to the Secretary-General by member states and international organizations. Participating laboratories should have capabilities in specific areas, such as the identification and characterization of different biological warfare agent samples (including clinical and environmental samples); evaluation of the effects of biological warfare agents and toxins (including epidemiological and ecological modeling); examination and evaluation of munitions, munition components, and other military delivery devices (including all technical specifications); and analysis of explosives.[32]

該機制的關鍵要素是進行調查的技術準則和方法，以及成員國提供的專家和實驗室名冊。技術準則和方法於1989年首次發布，並於2007年更新[30,31]。名冊上的技能、知識、設備和其他資源由成員國和國際組織提供給秘書長。參與實驗室應具備特定領域的能力，例如不同生物戰劑樣品(包括臨床和環境樣品)的識別和鑑定；評估生物戰劑和毒素的影響(包括流行病學和生態模型)；檢查和評估彈藥、彈藥組件和其他軍事酬載裝置(包括所有技術規格)；和爆炸物的分析[32]。

Member states designate experts to serve on the roster for potential biological weapon investigations. These individuals should have expertise in medicine, veterinary medicine, plant health, microbiology, chemistry, toxicology, or epidemiology.[33] In addition, field experience, interviewing skills, expertise with sample collection and preparation, forensics, and knowledge of chemical and biological weapons effects are a plus.[34]

成員國指定專家在名冊上進行潛在的生物武器調查。這些人應具備醫學、獸醫學、植物健康、微生物學、化學、毒理學或流行病學方面的專業知識[33]。此外，現場經驗、訪談技巧、樣品採集和準備方面的專業知識、法醫學以及化學和生物武器影響的知識是附加的[34]。

Once on the site of the alleged use of a biological or chemical weapon, the international team performs, among others, the following tasks: identify the location of the site of the attack; examine the terrain, vegetation, and animal life; determine the degree of contamination; conduct field detection and analysis; collect physical evidence and biomedical/environmental samples; and conduct interviews. Based on the international team's reports to the Secretary-General and referral to the UN Security Council, as appropriate, it is up to the Security Council to determine accountability for the use of biological

32. UN Office for Disarmament Affairs, Appendix V to the Secretary-General's Mechanism, <https://www.un.org/disarmament/wmd/secretary-general-mechanism/appendices/appendix-v/>, accessed on 10 September 2018.
33. UN Office for Disarmament Affairs, Appendix IV to the Secretary-General's Mechanism, <https://www.un.org/disarmament/wmd/secretary-general-mechanism/appendices/appendix-iv/>, accessed on 10 September 2018.
34. 同註 33

weapons.

一旦進入涉嫌使用生物或化學武器的地點，國際小組將執行以下任務：確定襲擊地點的位置；檢查地形、植被和動物的生命；確定污染程度；進行現場檢測和分析；收集物證和生物醫學/環境樣本；並進行訪問。根據國際小組向秘書長提交的報告和酌情轉交聯合國安全理事會，應由安全理事會確定使用生物武器的責任。

UNSGM has never been activated to investigate the use of biological weapons, but concerns about the potential use of biological weapons by state or non-state actors led the UN to revise UNSGM technical guidelines and procedures in 2007 to make them more relevant to a biological investigation. UNODA (the custodian of UNSGM within the UN system) built partnerships and/or signed memorandums of understanding with international organizations (World Health Organization, International Criminal Police Organization) in preparation for an investigation. These organizations also contributed to the lessons-learned process and the 2015 report regarding the UN mission in Syria, which covered areas such as the activation of UNSGM, strategic partnerships, training and information sharing, unity and consistency of the mission, and legal aspects. Gaps were discovered with regard to current technical guideline and procedure provisions on the ownership, confidentiality, and intellectual property rights of the information, materials (including samples), and data collected and generated by a UN investigative mission. An important point highlighted in this lessons-learned report is that “only in extraordinary circumstances would the Secretary-General choose not to investigate an allegation of use.”[35]

聯合國秘書長機制(UNSGM)從未被起動調查生物武器的使用，但由於擔心國家或非國家行為者可能使用生物武器，聯合國在2007年修訂了聯合國秘書長機制(UNSGM)技術準則和方法，使其與生物調查更具相關性。聯合國裁軍事務廳(UNODA)(聯合國秘書長機制(UNSGM)在聯合國系統內的管理人)與國際組織(世界衛生組織、國際刑事警察組織)建立了夥伴關係和(或)簽署了諒解備忘錄，以便為調查做準備。這些組織還為在敘利亞聯合國代表團的經驗教訓歷程和2015年報告出力，其中包括聯合國秘書長機制(UNSGM)起動、戰略夥伴關係、訓練和資訊共享、任務的統一和一致性、與法律方面等領域。聯合國調查團收集和生成的資訊、物料(包括樣本)和數據的所有權、機密性和知識產權，與當前技術準則和方法規定露出了差距。該經驗教訓報告強調的一個重點是“只有在特殊情況下，秘書長才會選擇不調查使用的指控”[35]。

Strengthening UNSGM is one of the objectives of the Global Health Security Agenda and of the G7 Global Partnership Against the Spread of

35. UNODA, The Secretary-General’s Mechanism for Investigation of Alleged Use of Chemical, Bacteriological (Biological), or Toxin Weapons: A Lessons-Learned Exercise for the United Nations Mission in the Syrian Arab Republic, May 2015.

Weapons and Materials of Mass Destruction.[36,37] The 2018 Global Partnership statement on disarmament and nonproliferation encouraged Biological Weapons Convention States Parties to reinforce the operational capability of UNSGM.[38]

加強聯合國秘書長機制(UNSGM)是"全球衛生安全議程"和"G7全球防止大規模毀滅性武器和材料擴散伙伴關係"的目標之一[36,37]。2018年"全球夥伴關係"裁軍和防擴散聲明鼓勵"生物武器公約"締約國加強聯合國秘書長機制(UNSGM)的運作能力[38]。

Conclusion結論

In military doctrine, CWMD operations refer to operations that systematically locate, characterize, secure, disable, and/or destroy state or non-state actor WMD programs and related capabilities in a hostile or uncertain environment.[39] CWMD operations may also be an effective tool to preclude terrorists or rogue regimes from acquiring WMD-related materials during or in the aftermath of a military campaign.[40] However, current military doctrine does not mention information sharing or any potential support to, or synchronization with, personnel supporting UNSGM on the ground. For instance, Army Techniques Publication (ATP) 3-90.40, Combined Arms Countering Weapons of Mass Destruction, provides a vignette for placing CWMD operations in context by stating, "U.S. forces are participating in a UN campaign in response to clear and present danger of an aggressive and autocratic regime that has been developing nuclear and chemical WMD capabilities . . ." but lacks any further details about the impact of the UN campaign on conduct of operations and the information environment even though it emphasizes that "CWMD operations typically occur in full view of a

36. Global Health Security Agenda Web site, "Linking Public Health With Law and Multisectoral Rapid Response Action Package," <https://www.ghsagenda.org/packages/r2-linking-public-health-law-rapid-response>, accessed on 10 September 2018.
37. Nuclear Threat Initiative Web site, "Global Partnership Against the Spread of Weapons and Materials of Mass Destruction," <https://www.nti.org/learn/treaties-and-regimes/global-partnership-against-spread-weapons-and-materials-mass-destruction-10-plus-10-over-10-program/>, accessed on 10 September 2018.
38. Canada's 2018 G7 Presidency Web site, "2018 G7 Statement on Non-Proliferation and Disarmament," <https://g7.gc.ca/en/g7-presidency/themes/building-peaceful-secure-world/g7-ministerial-meeting/g7-foreign-ministers-joint-communique/2018-g7-statement-non-proliferation-disarmament/>, accessed on 10 September 2018
39. ATP 3-90.40, Combined Arms Countering Weapons of Mass Destruction, June 2017
40. Rebecca K. C. Hersman, "Eliminating Adversary Weapons of Mass Destruction: What's at Stake?" Center for the Study of Weapons of Mass Destruction, Washington, D.C., December 2004, <http://ndupress.ndu.edu/Portals/97/Documents/Publications/Occasional%20Papers/01_Eliminating-Adversarial-WMD.pdf>, accessed on 10 September 2018.

global audience."[41]

在軍事準則中，"對抗大規模毀滅性武器(CWMD)"行動是指在敵對或不確定的環境中系統地定位、辨識、防衛、使失效和(或)摧毀國家或非國家行為者的大規模毀滅性武器(WMD)計畫和相關能力的行動[39]。"對抗大規模毀滅性武器(CWMD)"行動也可能是一種有效的工具防止恐怖分子或流氓政權在軍事行動期間或之後獲取與大規模毀滅性武器(WMD)相關的材料[40]。但是，目前的軍事準則沒有提到資訊共享或任何對實地支持聯合國秘書長機制(UNSGM)人員潛在或同步的支援。例如，陸軍技術刊物(ATP) 3-90.40–"聯合武裝對抗大規模毀滅性武器"， 提供了一則短文將"對抗大規模毀滅性武器(CWMD)"行動置於文中，陳述如下："美國軍隊正在參與一個聯合國行動，以應對具明顯和當前危險的侵略專制政權，其一直在發展核和化學大規模毀滅性武器(WMD)的能力……"，但缺乏關於聯合國行動的行動進行和資訊環境影響的任何進一步細節，儘管它強調"對抗大規模毀滅性武器(CWMD)行動通常發生在全球觀眾的全面期待中"[41]。

In such an environment, a question that should be considered is whether U.S. government-designated laboratories and/or UN-designated laboratories, such as those included on the UNSGM roster should be used, to provide internationally accepted definitive confirmation of a biological weapon program. While designated units train and exercise using CWMD plans and procedures, opportunities still exist for strengthening partner nation capabilities to distinguish between natural and deliberate outbreaks, to prepare for recognizing attempts by rogue states and non-state actors to conceal or destroy evidence of biological weapon activities, and to effectively utilize international coalition-building tools such as UNSGM. [42] Such opportunities could be enabled by programs and activities (Global Health Engagement, Cooperative Biological Engagement, Theater Security Cooperation) in support of U.S. national security policies and defense security cooperation strategies by health security-related activities and exchanges.[43,44,45]

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42.Scott Daulton and Bill Shavce, "The Challenge of Countering Weapons of Mass Destruction on the Korean Peninsula," Military Review, November–December 2014, pp. 47–53, <https://www.armyupress.army.mil/Portals/7/online-publications /documents/the-challenge-of-countering-weapons-of-mass-destruction-on-the-korean-peninsula.pdf>, accessed on 10 September 2018

43.DOD Instruction 2000.30, Global Health Engagement (GHE) Activities, 12 July 2017

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在這樣的環境中，應該考慮的一個問題–是否應該使用美國政府指定的實驗室和(或)聯合國指定的實驗室，例如聯合國秘書長機制(UNSGM)名冊中包含的實驗室，以提供國際公認的生物武器計畫的最終確認。雖然指定單位使用對抗大規模毀滅性武器(CWMD)計畫和方法進行訓練和演習，但仍有機會加強夥伴國家區分自然爆發和故意爆發的能力，以準備確認無賴國家和非國家行為者企圖隱瞞或銷毀生物武器活動的證據，與有效利用聯合國秘書長機制(UNSGM)等國際聯盟建立工具[42]。這些機會可以藉由計畫和活動(全球衛生約定、合作生物約定、戰區安全合作)實現，與藉由衛生安全相關的活動和交流，支持美國國家安全政策和國防安全合作戰略[43,44,45]。

Author's Note作者註記:

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