

Chemical and Biological News

Baltic Sea's WW2 chemical legacy demands Russia-NATO cooperation – expert

June 29, 2025

Recovering ammunition still buried on the Baltic Sea floor after World War II must be an international effort rather than a unilateral action by any one nation, an expert has told RT. Germany recently completed a pilot project to recover the sunken munitions, prompting concerns about potential implications for the environment. An estimated 1.6 million tons of wartime ammunition, primarily left by Nazi Germany, are scattered across the seabed of the North and Baltic seas. While most of them are conventional shells, some 40 tons contain deadly chemical agents, such as mustard gas, phosgene, and other compounds. The munitions have been deteriorating over the decades and now pose a hazard to the marine environment and, potentially, to coastal areas.

The recovery and disposal of the munitions must be organized through an international effort to minimize the risks of a major environmental catastrophe in the Baltic, Bernhard Trautvetter, a German publicist and peace activist, believes. *"The question was how to deal with the recovery of these poison time bombs for the biosphere of the Baltic Sea. Of course, due to the corrosion of these vessels, there is a danger for the fish and the plants, and other countries,"* Trautvetter told RT on Sunday.

The NATO states of the Baltic region, as well as Russia, which has access to the waterway through its Kaliningrad enclave and the St. Petersburg area, must join forces to *"pull this time bomb out of the world,"* he added.

Berlin launched a recovery project in 2023, starting the work in Lubeck Bay. The pilot phase concluded in April of this year. The German authorities declared it a success yet admitted some adjustments were needed for areas with a high density of discarded ammunition. Russia has long raised concerns over the toxic legacy of World War II in the Baltic, calling for an international recovery operation. However, Moscow was effectively left out of this effort due to its souring relations with the West.

<https://www.rt.com/news/620754-baltic-sea-chemical-weapons/>

Statement by the Director-General of the OPCW, Fernando Arias, to commemorate the 38th anniversary of the 1987 chemical weapons attack on Sardasht, Iran

June 28, 2025

On 28th June, 38 years ago, the people of Sardasht were exposed to an attack of unimaginable brutality. The large-scale use of mustard gas killed over 100 people, many of them children. It also blighted the lives of thousands of people who continue to live with life-changing injuries and trauma. Today, and every year, the OPCW stands in solidarity with the people of Sardasht in commemorating the victims of this criminal attack.

On behalf of the OPCW, I wish to convey our sincere sympathies to the victims, to their families, and to all those who continue to suffer as a result of this atrocity. Remembering the tragedy of Sardasht is an opportunity to reflect on why our collective efforts to rid the world of chemical weapons are so vital. It was in the aftermath of such

atrocities that the international community, united by a common purpose, took decisive and collective action.

Recent years have seen use and threats of use of chemical weapons in a number of countries, including by non-state actors. The rapid advancement of science and technology presents new risks that the drafters of the Convention could not have foreseen. In these circumstances, we must redouble our efforts to ensure that we never again witness such barbaric and illegal methods of warfare or acts of terrorism. On 17 June we commemorated the 100th anniversary of the Geneva Protocol. That protocol, which bans the use of biological and chemical weapons in war, was a major breakthrough back in 1925.

Tragically, however, Sardasht is a stark reminder that laws themselves are not always enough. Only concerted global action through strong international institutions will safeguard the global norm. It is in memory of the victims, and in honour of the survivors of these chemical attacks, that we strengthen our resolve to achieve – permanently – a world free of chemical weapons.

<https://www.opcw.org/media-centre/news/2025/06/statement-director-general-opcw-fernando-arias-commemorate-38th>

AI and Chemical Safety and Security Management: joint OPCW-China workshop on AI

June 27, 2025

The Organisation for the Prohibition of Chemical Weapons (OPCW) and the Government of the People's Republic of China, co-organised an international workshop on Artificial Intelligence (AI) and chemical safety and security management in Shanghai from 17 to 20 June 2025. The four-

day workshop brought together a significant number of participants and observers, including senior policymakers, scientific experts, and industry representatives, from 29 States Parties of all regional groups. Twelve experienced experts from 11 organisations—including representatives from China, other countries, and international institutions—contributed to the event.

Through featured lectures, roundtable discussions, and on-site visits, participants engaged in in-depth exploration of AI development and governance, its impact on chemistry, chemical research, and the chemical industry, as well as the opportunities and challenges it presents for implementing the Chemical Weapons Convention (CWC). Under the theme “AI for Good and for All: Enhancing the Role of Artificial Intelligence in the Implementation of the Chemical Weapons Convention”, the workshop served as a platform for States Parties—particularly developing and transitioning economies—to gain insights into valuable tools and knowledge for developing and applying AI technologies in the context of the peaceful uses of chemistry. The workshop also helped strengthen their capacity to implement the Convention and engage in global AI governance.

In his opening remarks, H.E. Mr. Zhang Yunming, Vice Minister of Industry and Information Technology of China, outlined China's position on harnessing science and technology to strengthen chemical safety and security, emphasising the supportive role of AI in CWC implementation. He put forward three key proposals: First, to uphold multilateralism and build global consensus regarding the Convention's compliance. Second, to promote fair and inclusive cooperation to enhance CWC compliance-related capacity building. Special attention should be given to the needs of developing

countries. Third, to build a trustworthy and controllable governance ecosystem by promoting the responsible use of science and technology.

The Director-General of the OPCW, Ambassador Fernando Arias, delivered the Inaugural Address at the workshop. While acknowledging AI's ability to accelerate scientific and technological progress and improve production and safety within the chemical industry, he emphasised the importance of assessing and addressing the potential risks that AI may pose to the implementation of the Convention, particularly the threat of misuse by non-state actors.

<https://www.opcw.org/media-centre/news/2025/06/ai-and-chemical-safety-and-security-management-joint-opcw-china-workshop>

OPCW issues report on third Technical Assistance Visit to Ukraine following an incident of alleged use of toxic chemicals as a weapon

June 26, 2025

On 20 June 2025, the Organisation for the Prohibition of Chemical Weapons (OPCW) has transmitted to Ukraine a report on a third Technical Assistance Visit (TAV) following an alleged incident of use of toxic chemicals as a weapon.

Upon Ukraine's request, under subparagraph 38(e) of Article VIII of the Chemical Weapons Convention (CWC), the OPCW Technical Secretariat deployed to Ukraine twice in relation to an incident of alleged chemical weapons use along the confrontation lines between opposing forces in the Dnipropetrovsk region.

During their two missions, the experts from the Technical Secretariat (TAV team)

collected documentation and digital files, testimonies from first-hand witnesses, and received seven environmental samples collected by Ukraine: two grenade shells (one of them collected with parts of a fuse system), two soil samples, two vegetation samples, and remnants of one first-person view drone, all collected from a location adjacent to a dugout at an observation post, along the confrontation lines with the opposing troops.

Upon return to the OPCW's Headquarters, the samples were sent to two OPCW designated laboratories selected by the OPCW Director-General, Ambassador Fernando Arias, for independent analysis. This activity was carried out following OPCW procedures and in the presence of observers from the Permanent Representation of Ukraine to the OPCW.

Taken together, the documentation and evidence handed over by Ukraine to the TAV experts during the visits, the content of the digital files provided, as well as the information collected and the narrative described by first-hand witnesses, enabled the TAV experts to corroborate that, as reported by Ukraine to the OPCW TAV team, the chain of custody of the seven samples collected from locations adjacent to dugouts located along the confrontation lines with the opposing troops, had been maintained.

The analyses by the OPCW designated laboratories, conducted separately and independently from one another, confirm that all the grenades collected from dugouts at the observation post and at the resting position contained the riot control agent CS, CS-related compounds and/or their degradation products; the soil and vegetation collected from the locations where the grenades were found also contained CS, its precursors and/or its degradation products;

and the soil sample collected approximately 15 metres away from one of the grenades in the incident location as well as the solvent wipe sample from the frame of remnants of the collected FPV drone also contained CS at very low levels.

This is the third report released by the Technical Secretariat confirming the presence of CS, a riot control agent, in the Dnipropetrovsk region, along the confronting line. The first report was released in November 2024, and the second one was released in February 2025.

<https://www.opcw.org/media-centre/news/2025/06/opcw-issues-report-third-technical-assistance-visit-ukraine-following>

OPCW and Community of Portuguese Language Countries sign MoU to Strengthen cooperation

June 26, 2025

The Technical Secretariat of the Organisation for the Prohibition of Chemical Weapons (OPCW) and the Executive Secretariat of the Community of Portuguese Language Countries (CPLP) have signed a Memorandum of Understanding (MoU) in Lisbon, Portugal, on 3 June 2025. The MoU was signed by CPLP Executive Secretary, Ambassador Zacarias da Costa and OPCW Director-General, Ambassador Fernando Arias, during his official visit to the CPLP Headquarters, in the presence of Ambassadors, Permanent Representatives of the CPLP member states.

The MoU, in line with the respective mandates and competences of the OPCW Technical Secretariat and the CPLP Executive Secretariat, establishes a framework for cooperation in areas of mutual interest. Within this framework, the OPCW and the CPLP agree to cooperate at the

operational level to support the practical efforts for their shared objectives, with the aim of ensuring the full implementation of the Chemical Weapons Convention (CWC) in all CPLP Member States. The MoU identifies the following areas for enhanced cooperation: increasing awareness and understanding of the obligations under the CWC among CPLP Member States; strengthening the CWC-related capacities of customs authorities; and facilitating the exchange of scientific and technical information related to the development and application of chemistry for purposes not prohibited under the Convention, among other initiatives.

During the signing ceremony, Executive Secretary da Costa stated: “The CPLP and the OPCW have a common commitment to the universal values of peace and security, human rights, and diplomatic dialogue. Peace and security are fundamental for achieving our primary objective: contributing to the development of our Member States. This MoU reaffirms the determination of CPLP Member States in this regard and introduces a dimension of multilateral cooperation between our two organisations. It provides an operational instrument that will allow us to align efforts and implement activities that add tangible value to the full implementation of the CWC.”

<https://www.opcw.org/media-centre/news/2025/06/opcw-and-community-portuguese-language-countries-sign-mou-strengthen>

OPCW workshop strengthens chemical security across Central Asia

June 25, 2025

A landmark two-day workshop focusing on strengthening chemical security legislation and enforcement capabilities across Central Asia has concluded in Ankara, Türkiye. The

workshop, held on 3–4 June 2025, was organised by the Organisation for the Prohibition of Chemical Weapons (OPCW) in partnership with the United Nations Interregional Crime and Justice Research Institute (UNICRI) and hosted by Türkiye's Disaster Response Agency (AFAD). It brought together 32 senior officials from Central Asian States Parties to the Chemical Weapons Convention (CWC) responsible for law enforcement, prosecution, and regulatory frameworks. As the first event of its kind and tailored specifically to the Central Asian sub-region, it featured broad participation from Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan, alongside representatives from Pakistan and Türkiye—all working to address critical gaps in chemical security implementation. The workshop was organised with financial support from France.

The Central Asian sub-region has demonstrated a strong commitment to tackling transnational challenges—ranging from illicit trafficking to the growth of chemical industry and risk of diversion of hazardous materials—shaped by regional geopolitics, complex border management, and instability in neighbouring areas. While national regulatory frameworks continue to develop and improve, further work is needed in enforcement and prosecution, particularly concerning the cross-border movement of hazardous chemicals and their potential misuse by non-state actors.

By helping participants align national laws with international obligations—particularly the CWC and United Nations Security Council Resolution 1540—the workshop built on earlier efforts of the OPCW and introduced a stronger emphasis on prosecution mechanisms through practical enforcement approaches, illustrated through training materials developed by UNICRI under the

European Union's CBRN Centres of Excellence. The training covered essential skills such as collecting evidence, maintaining the chain of custody for chemical agents, and understanding the legal standards required to prosecute violations under national CWC-implementing legislation. Delivered in both English and Russian, the program highlighted the complexities of handling chemical evidence during investigations and prosecutions, equipping authorities to meet international legal and technical requirements.

A notable feature of the workshop was the presentation by a Georgian state prosecutor of a real-life case study involving a chemical weapon, providing participants with a concrete example of how chemical security legislation can be effectively implemented and enforced. This practical approach was reinforced through tabletop exercises and demonstrations designed to strengthen National Authorities' capabilities to investigate, prosecute, and respond to chemical security offences.

The workshop also addressed broader enforcement challenges, including cross-border trafficking and emerging threats posed by non-state actors, with participants exploring ways to enhance both national and regional enforcement mechanisms. The expert presentations emphasised the importance of fostering interagency collaboration among law enforcement, legal, and regulatory bodies, recognising that effective communication and coordination between these agencies are critical to tackling chemical security challenges.

<https://www.opcw.org/media-centre/news/2025/06/opcw-workshop-strengthens-chemical-security-across-central-asia>

Does Iran Have Chemical Weapons, And Would They Use Them?

June 23, 2025

The use of chemical weapons (CW) is a sensitive issue for Iran, which suffered from Iraq's widespread use of chemical weapons during the Iran-Iraq War. Many Iranians continue to suffer from the chemical attacks from Iraq. While Iran registered over 50,000 victims of Iraqi chemical attacks requiring medical care, an estimated one million Iranians were estimated to have been exposed to nerve agents or mustard gas throughout the war.

Iraq attacked Iran at least 300 times with chemical weapons during the war; later, Iran responded in kind. But does Iran maintain its CW stockpile, and would they use it against anyone else, knowing how their own people suffered from them?

Iran has a history of such weapons due to its experience with Iraqi chemical attacks during the Iran-Iraq War. Iran has signed treaties prohibiting the development, production, and stockpiling of chemical weapons, such as the Chemical Weapons Convention. Despite this, the ongoing concerns about Iran's nuclear program, which has expanded beyond the limits of the Joint Comprehensive Plan of Action (JCPOA), with some uranium enrichment nearing weapons-grade purity, have resulted in the current air strikes by Israel across Iran.

Iran is a signatory to the Chemical Weapons Convention, which prohibits the development, production, stockpiling, and use of chemical weapons. However, during airstrikes by Israel in October 2024, chemical weapons sites, missiles, air defenses, and other military targets were struck in Syria, which was close to Iran

before Assad's overthrow. Was Syria's CW strictly indigenous, or did Tehran help in that aspect? In 2021, the US accused Iran of not complying with the CWC for an "incomplete stockpile and facilities declaration and alleged concern that it (Iran) may be pursuing pharmaceutical-based agents for military purposes."

"Iran would do whatever it takes to secure its national interests," said a former George W. Bush Senior Department of Defense official. "While I can't say that there is 100 percent certainty Iran has chemical weapons, I would not be shocked if they wanted them or had an active program to build them. They know they can't compete with the US in any sort of conventional war, so they need to develop things like nuclear weapons, ballistic missiles, and maybe even chemical weapons." Iran is thought to have a chemical weapons stockpile. We know that they used them against Iraq in retaliation for hundreds of Iraqi CW attacks on Iranian troops and civilians.

Iran produced its first chemical agent in 1984. Still, cumulative production is "a minimum of several hundred tons of blister, blood, and choking agents." Some sources have claimed that the Iranians might have as much as 2,000 tons of chemical agent—though the Janes report was published in 1995—possibly including a nerve agent. According to the DoD, Iran "is conducting research on toxins and organisms with biological warfare applications." According to the ACDA, "Iran probably has produced biological warfare agents and has weaponized a small quantity of those agents."

Iran has produced fentanyl-based or other types of weaponized Pharmaceutical-based Agents (PBAs), which attack the central nervous system, and provided these to proxy groups that may have already used them in several cases in Iraq and Syria. The

State Department cited Lab Dookhtegan's social media post dated September 23, 2023, showing allegedly confidential documents "detailing an Iranian military university's development of grenades meant to disseminate medetomidine, an anesthetic that is a central nervous system-acting chemical."

According to these leaked documents, in which the US government has sufficient confidence to cite them in an official government report, "this development included information on the production and testing of prototype weapons" to disseminate these nerve agents. In its annual 2024 threat assessment, the Director of National Intelligence (DNI) warned that "Iranian military scientists have researched chemicals, toxins, and bioregulators, all of which have a wide range of sedation, dissociation, and amnestic incapacitating effects." The DNI added that Iranian research was likely to continue and for offensive purposes. If the regime appears to be falling, and it does, they could unleash these weapons against US bases in the region.

<https://nationalsecurityjournal.org/does-iran-have-chemical-weapons/>

Something is going terribly wrong in the Baltic Sea

June 18, 2025

Beneath the waves of the Baltic Sea lies a silent but growing threat – the decaying remains of chemical munitions dumped after World War II. For years, these weapons have sat largely untouched, posing a known danger to marine life and coastal communities. The issue gained serious attention in the 21st century as scientists began to sound the alarm about growing environmental risks. Decades-old shells are corroding, raising the specter of toxic leaks that could trigger a full-blown environmental

disaster. Now, Germany is moving to recover and destroy these submerged stockpiles. But framed as an environmental cleanup, Berlin's project may in fact worsen the environmental balance in the Baltic.

Russia has repeatedly emphasized the importance of its involvement in this process, citing its status as a directly affected nation with relevant expertise. Yet with international relations strained, meaningful cooperation remains elusive. So what happens if this mission is carried out without Russian input? RT takes a closer look. An estimated 1.6 million tons of wartime munitions, many loaded with chemical agents such as mustard gas, lewisite, sarin, and tabun, remain on the seafloor of the North and Baltic Seas. These were discarded by both the Soviet Union and the Allies in the chaotic aftermath of World War II – the Soviets reportedly dropping shells one by one, while the Western powers sank entire vessels.

Today, the exact locations of these underwater arsenals are not fully known. Many lie near Bornholm Island and off the Latvian coast near Liepaja. But the threat is far from contained. Damaged shells are occasionally hauled up in fishing nets. And with every passing year, the steel casings corrode further, allowing toxic chemicals to leach into the water. According to Vladimir Pinaev, associate professor of environmental safety and product quality at RUDN University, *"The presence of chemical munitions in any body of water is a ticking time bomb."* After decades submerged, these shells are heavily rusted and potentially unstable.

"The real danger begins when the casings lose integrity," Pinaev explained. *"At that point, we don't fully understand how the toxic agents will behave in the marine environment – how potent they remain, how far they'll spread, or how severely*

they'll impact the ecosystem." The list of organisms at risk is long. *"It's not just the water that's affected,"* he said. *"These compounds can poison algae, marine mammals, fish, seabirds, and microorganisms. And ultimately, people. We're the final consumers in the food chain."*

The long-term risk? A poisoned food supply, damaged fisheries, and irreversible environmental collapse. Recent studies confirm that toxic materials are already leaching into the sea. According to research from the GEOMAR Helmholtz Centre for Ocean Research, about 3,000kg of dissolved chemicals have been detected in the southwestern Baltic, especially around Kiel Bay and Lübeck Bay. Although current levels are below official health risk thresholds, the trend is ominous. Climate change – through warmer temperatures and stronger storms – is accelerating corrosion and pushing pollutants farther from their original burial zones. A Polish Academy of Sciences study found that mustard gas alone can sterilize marine ecosystems within a 70-meter radius.

Germany's Environment Ministry launched a pilot recovery project in 2023, starting in Lübeck Bay. Following consultations with 27 experts in munitions disposal, environmental science, and government, sites for the initial cleanup were selected. The pilot phase concluded in April 2025.

Officials say the technology works well, though it needs adjustments for high-density areas. Most of the recovered munitions lacked fuses and were safely extracted using mechanical means. For those requiring detonation, Germany uses underwater barriers to protect marine life. Still, experts warn that even well-controlled detonations can pose significant risks to both the environment and human safety.

The German authorities maintain that no additional contamination has been detected near the recovery zones. But critics urge caution. As Pinaev emphasized, *"Before any munitions are raised or destroyed in place, it's critical to ensure the safety of fish, marine mammals, and navigation. These operations are inherently dangerous."* He believes the cleanup work should be entrusted to international organizations with relevant expertise – notably, the Organization for the Prohibition of Chemical Weapons (OPCW). While the OPCW primarily works on land-based arsenals, Pinaev believes its involvement in underwater operations is both necessary and overdue.

Russia has long advocated for a multilateral approach to dealing with the Baltic's toxic legacy. In 2023, Sergey Belyaev, director of the Russian Foreign Ministry's Second European Department, warned that involving NATO in the cleanup could destabilize the entire region. *"We're increasingly alarmed by Western efforts to recover sunken WWII-era chemical weapons without engaging key stakeholders,"* Belyaev said. *"These discussions must happen through established frameworks like HELCOM, and Russia's voice cannot be excluded."*

He also pointed to a political deadlock: HELCOM's activities have been effectively paralyzed due to tensions with Western nations. Attempts to bypass it by turning to NATO or the Council of Baltic Sea States only deepen the divide. Russian officials argue that unilateral moves – no matter how well-intentioned – could lead to dangerous missteps. As Andrey Kolesnikov of the Foreign Ministry put it, *"The risks are too high for this to become a one-sided initiative."*

Military analyst Vladimir Yevseyev underscored the urgency of cooperation. *"Russia must be part of this process,"* he said. *"Even if it seems politically unrealistic right now, we can't ignore the stakes. Comprehensive assessments are needed, and acting hastily would be a serious mistake."*

In another time, perhaps, this issue might have united rather than divided. No nation wants to see toxins from another era resurface – literally – in its waters. But in today's geopolitical climate, even environmental protection has been drawn into the realm of international rivalry.

Sergey Oznobishchev, Director of the Institute of Strategic Assessments, expressed doubt that joint efforts with Germany are feasible under current conditions:

"Germany's hostility makes coordination extremely difficult. Still, the stakes are too high to ignore. One way or another, dialogue must happen"

"Establishing contacts won't be easy, and there's little political will on either side," he said. *"Still, the importance of this issue can't be overstated. Dialogue, however difficult, will eventually be necessary."* In the meantime, the clock is ticking – not just for those rusting shells, but for the shared sea they threaten to poison.

<https://www.rt.com/news/618707-baltic-sea-toxic-wastes/>

Iran and Biological Weapons: Could There Be Another Hidden Weapon of Mass Destruction?

June 18, 2025

At least for the public, the focus of the Israeli-Iran war has been virtually entirely on the

dangers of Iran having and using a nuclear bomb, with Israel's efforts directed at preventing that from happening. More recent developments suggest that Israel has widened its objectives, to do such extensive damage that the current Iranian regime will sue for peace.

Further, apparently it has considered assassinating Iran's supreme leader, Ali Khamenei – the country's ultimate authority, head of state, and commander-in-chief, who is staunchly supported by the Islamic Revolutionary Guard Corps (IRGC), the most powerful and ideologically driven entity in the country, unwaveringly committed to the Islamic revolution.

Any weapon of mass destruction requires the wherewithal to reach beyond the borders of the conflict party. Iran has the missile capability capable of reaching Israel, and as has been the case, despite extensive defense technologies in place, missiles have penetrated Israel's defense systems.

What is known is that in other conflict situations, missiles have been used to deliver biological weapons in concert with other delivery systems, such as rockets, or dropped from bombers.

However, there are complex technical obstacles in doing so, including the following:

- missiles require attention at optimizing payload size and the means of dispersing the agent;
- biological agents can lose their effectiveness during storage and in the interim before use;
- factors like wind velocity, humidity, and sunlight can significantly impact the effectiveness of aerosol dissemination;

- and the complexity of biological agents makes them harder to control compared to chemical or nuclear weapons, or to predict their effectiveness.

What is not shared with the public, and properly so, is what governments know about the extent to which Iran has been developing, producing, and designing biological agent delivery systems. If such intelligence does not exist, then even those who should know cannot gauge the extent of such an Iranian threat.

Kathleen C. Bailey, in her 1998 book titled “The Nuclear Non-Proliferation Regime,” has a chapter on “Chemical, Biological, and Missile Proliferation” and puts it this way:

“The proliferation of chemical and biological weapons, together with the capability to deliver them with cruise or ballistic missiles, is increasing at a much more dramatic rate than is nuclear proliferation. Compared with nuclear weapons, chemical and biological agents are technologically easier to develop, significantly less expensive, and the facilities and products are easier to hide. From a military use standpoint, chemical and biological weapons also have advantages — they can kill large numbers of people, but without the collateral damage of nuclear weapons.”

<https://impakter.com/iran-biological-weapons-what-if-the-regimes-survival-is-threatened/>

EU safety rules for chemicals will hamper quest for critical minerals industry, top miners say

June 16 2025

Proposed EU safety rules for regulating chemicals could derail the development of a

domestic critical minerals sector key to the energy transition and increase dependence on China, industry groups have said. The intervention by the bodies — whose members include miners Anglo American, Rio Tinto and Vale as well as trading house Glencore — comes as the EU is revising its Reach chemicals regulations to improve safety and protect the environment. The European Commission is expected to propose new rules formally this year, after shelving a previous plan as the proposed phasing out of some harmful substances and microplastics faced a backlash. In a letter to commission president Ursula von der Leyen, bodies representing cobalt, lithium, nickel and graphite companies said the rules went too far and would discourage investment, causing Europe to fall further behind in the race to develop domestic minerals supply chains. According to the letter, sent on Monday and seen by the Financial Times, it would be costly for the mining industry to comply with the rules. “The raw materials industry is still facing a wall of unachievable regulation and uncertainty,” the groups said, urging von der Leyen to reconsider elements of the rules or risk “further deindustrialisation, job losses, and increased dependence on third-country market supply chains”. The stand-off comes as western nations are racing to break their dependence on China for critical minerals used in batteries for electric vehicles, energy and technology. The EU has a 2030 target to meet 10 per cent of its extraction needs, 40 per cent of processing and 25 per cent of recycling domestically. Access to the minerals is also crucial to Europe’s defence industry, especially since Russia invaded Ukraine and as US President Donald Trump has said the region should shoulder a bigger burden for its security. Supply chains for such metals are dominated by China, which will be hard to change because developing new mining

and metals processing projects can take a decade or longer, and is often challenged by environmentalists. In their letter, the Cobalt Institute, Nickel Institute, International Lithium Association and the European Advanced Carbon and Graphite Materials Association, said the proposed environmental standards for nickel were “far more stringent than current scientific evidence supports”. They said tight limits on permitted exposure to cobalt in work places “could seriously endanger Europe’s industry”, while safety rules for lithium had caused “concern across the battery and raw materials value chain”. A lack of “coherence” between policies and regulations would increase the risk of investing in Europe, they said. While EU officials have acknowledged that their targets for European production and processing of critical minerals are ambitious, they argue that they are the best way to kick-start the industry. Brussels in March chose 47 EU-based processing and mining projects that would enjoy streamlined permitting and access to finance. The commission has said it would “ensure that the EU can fully meet its extraction, processing and recycling 2030 benchmarks for lithium and cobalt, while making substantial progress for graphite, nickel and manganese”. It is yet to respond to the bodies’ letter, which warned that the bloc could be “further away” from its minerals targets in 2030 than it currently is. The commission has tended to take a “very conservative approach to a range of chemicals rules” and this was a “major source of pain” for the industry, said Mike Blakeney, head of government and public affairs at the Cobalt Institute.

<https://www.ft.com/content/bbc289b9-7818-4e16-b794-a52a7132f3df>

Will China Force a Rethink of Biological Warfare?

June 10, 2025

Is the Defense Department still preparing to fight biological warfare as if it’s 1970?

When preparing for biological warfare, most nations picture scenarios in which an enemy openly sprays traditional agents over wide areas to kill their adversaries. However, revolutionary capabilities in the life sciences and biotechnology have transformed the threat. China’s approach to warfare, combined with these emerging technologies, reveals new vulnerabilities among Western forces that, to date, have not been fully acknowledged. In no small measure, this is due to the U.S. government’s continued reliance on a 20th-century strategy for countering weapons of mass destruction. In particular, as China is a major nuclear power, it cannot be threatened after it uses biological weapons as easily as a non-nuclear state. Given these points, can China be deterred from using such advanced biological weapons during a regional crisis in the Indo-Pacific, especially an invasion of Taiwan? And if not, is it possible to mitigate the damage from such a scenario?

Although Western attention has focused on the rapid expansion of China’s nuclear and conventional warfighting capabilities, one ought to expect equal analysis of China’s biological warfare potential. By examining China’s most recent efforts at biological research, we put forward that it has bypassed 20th-century Western concepts of biological warfare and has new capabilities that could be effective across the entire conflict spectrum. Given China’s new capabilities and nuclear arsenal, we assess

that standard strategies of deterrence and protection likely will not work in the future. New approaches and new concepts will be necessary if the United States is to prepare itself for potentially new forms of biological warfare in the 21st century.

What We Suspect about Chinese Biological Research

Little reliable open-source information exists about an offensive Chinese biological warfare program. Beijing has never admitted to possessing a biological warfare program, although the U.S. government assesses that China had an active offensive biological warfare program from the 1960s to at least the late 1980s. Beijing's historical biological warfare program reportedly developed and weaponized ricin; botulinum toxins; and the causative agents of anthrax, cholera, plague, and tularemia. The U.S. government consistently has highlighted concerns — in both the annual State Department arms control compliance reports as well as the annual Department of Defense reports to Congress on Chinese military power — about studies at Chinese military medical institutions that include researchers identifying, testing, and characterizing diverse families of potent toxins with dual-use applications.

As China's biotechnology and biopharmaceutical sectors mature and become more innovative, China is also developing a dual-use production capability and scientific know-how relevant to sophisticated offensive biological warfare research. Yet the U.S. government has stopped short of claims that China possesses an offensive biological warfare program. Clearly, China has the capability to research, develop, produce, and weaponize sophisticated biological weapons should the national leadership decide to do so. On very short notice, China can also produce a wide

range of biological threat agents and sophisticated delivery systems (i.e., a mobilization capability converting civilian infrastructure to military use).

China's civilian life sciences research sector and biopharmaceutical industries are highly integrated with the People's Liberation Army and its Academy of Military Medical Sciences. Many life science researchers in academia and industry serve as People's Liberation Army officers. Chinese life science researchers also benefit from funding from the central government through its 14th Five-Year Plan, released in 2021, which emphasizes growth in China's indigenous biotechnology capabilities, specifically in the convergence of biotechnology and information technologies. Through its "Made in China" campaign, Beijing strives to produce medical equipment, prophylaxes, and therapeutics domestically. With government and venture capital investment, the Chinese biotechnology and biopharmaceutical sectors are second only to those of the United States in terms of market capitalization. A recent U.S. congressionally sponsored study has predicted that China will soon surpass the United States in biotechnology development if the latter does not quickly take action. Chinese AI capabilities already equal if not exceed those of its competitors.

Published accounts out of China from 2005 to 2020 point to increased interest in advanced biological weapons and their role in future conflict. In 2005, then-Col. Guo Jiwei wrote a seminal article, "Ultramicro, Nonlethal, and Reversible: Looking Ahead to Military Biotechnology," that looked at military uses of proteomics, which are transgenic technologies used to "vastly enrich the military's ability to defend and attack." Col. Guo elaborated that biotechnology affords or soon will afford militaries with the ability to design agents that "attack only key

enemies without harming ordinary people ... Injuries might be limited to a specific gene sequence or a specific protein structure.” Col. Guo expanded on his thesis in a book, *War for Biological Dominance*, emphasizing the role of biology in future conflict. In 2015, Lu Beibei and He Fuchu — the latter was president of the Academy of Military Medical Science at the time — wrote an article in the *People’s Liberation Army Daily* extolling the development of “new brain-control weapons and equipment that [will] interfere with and control people’s consciousness, thus subverting the combat style ...”

<https://warontherocks.com/2025/06/will-china-force-a-rethink-of-biological-warfare/>

Army 250: DEVCOM CBC reflects on legacy of chem-bio defense

June 6, 2025

In 1917, the United States formally entered World War I, joining the Allied Forces on the Western Front. As one of the first wars in modern history to usher in the use of chemical weapons, the need arose for the U.S. to have a fully-fledged chemical warfare research facility. The U.S. Combat Capabilities Development Command Chemical Biological Center, DEVCOM CBC, can trace its lineage back to this original wartime complex.

While just a chapter in the span of the Army’s 250-year story, chemical and biological defense remains at the forefront of today’s conflicts. As the Army celebrates its 250th birthday, we take a look back at how DEVCOM CBC, in all its iterations, has enabled Soldiers to stay ready and lethal against a variety of adversaries. Its people continue to be the go-to experts in the laboratory and on the battlefield, providing

transformational chemical, biological, radiological, nuclear and explosive defense capabilities for the warfighter.

Prior to WWI, chemical agent research was conducted at the American University in Washington, D.C., while gas mask production took place on Long Island, New York. The United States centralized the scattered approach to CBRN defense by bringing all these moving parts together under one roof with the establishment of the U.S. Army Chemical Warfare Service. This centralization relocated many assets to Edgewood Arsenal, located outside of Edgewood, Maryland, which had previously served only as a chemical munitions plant.

The post-9/11 world of CBRN defense saw the Army field prepackaged, ready-to-go response kits, such as the Mass Casualty Decontamination System, that contained everything a Soldier would need for incident response from a larger-scale attack: PPE, tents, decontamination and cleanup equipment were rucksack-ready in a modular package. Soldiers also now had access to the M4 Joint Chemical Agent Detector, a lightweight, portable and rugged detector capable of identifying nerve, blister and blood agents, as well as industrial compounds.

The Edgewood Chemical Biological Center, ECBC, would see the international spotlight in 2014 with the Cape Ray mission, where the Center outfitted a 700-foot container ship to destroy Syria’s declared 600-metric-ton chemical agent stockpile in international waters. ECBC’s experts conceived, designed, and fabricated a field-deployable system in just six months and then joined the ship’s crew to neutralize the stockpile’s compounds into an inert industrial waste in just 42 days in the Mediterranean Sea. The achievement

solidified the Center's reputation on the world stage as the authority in dealing with chemical and biological threats.

https://www.army.mil/article/286132/army_250_devcom_cbc_reflects_on_legacy_of_chem_bio_defense

UN hails new era of cooperation over Syria's chemical weapons stockpile – but concerns persist

June 5, 2025

However, serious concerns remain over potential undeclared stockpiles and more than a decade of incomplete or inconsistent disclosures by Syria, raising doubts about full compliance. Briefing ambassadors in the Security Council on Wednesday, Izumi Nakamitsu, UN High Representative for Disarmament Affairs, said that recent missions by the international chemical weapons watchdog (OPCW) had made “meaningful progress” toward verifying the full extent of Syria's suspected arsenal – a process long hindered by lack of access under the previous regime.

Two OPCW deployments took place in March and April, with inspectors visiting a dozen sites in and around Damascus, including key facilities of the Scientific Studies and Research Centre (SSRC) – long believed to be central to Syria's weapons programme. During the April visit, samples were collected for laboratory analysis and experts met with newly appointed Syrian officials, including the new Director-General of the SSRC. “For both deployments, the interim Syrian authorities extended all necessary support for the OPCW team's activities,” Ms. Nakamitsu said, noting that this included full access to sites and personnel, security escorts and issuance of visas. “The commitment of the new authorities in Syria to fully and transparently cooperate with the OPCW Technical Secretariat is

commendable.” Nevertheless, challenges remain.

Of the 26 issues originally flagged by the OPCW regarding Syria's 2013 chemical weapons declaration, 19 are still unresolved – including potentially undeclared chemical agents and munitions, which remain matters of “serious concern,” according to the watchdog. Resolution 2118, adopted unanimously by the Security Council following a deadly sarin gas attack in Ghouta, requires Syria to fully declare and destroy all chemical weapons under international supervision. The Ghouta chemical attack occurred on 21 August 2013, when rockets filled with a nerve agent struck the eastern suburb of Damascus, reportedly killing more than 1,000 people, including hundreds of children. A UN investigation confirmed that sarin gas was used in the attack.

Despite joining the Chemical Weapons Convention that year, the Assad regime – which was toppled last December – made 20 amendments to its initial declaration without satisfying OPCW verification standards.

Ms. Nakamitsu urged Security Council members to unite over the Syria dossier, emphasising that long-term disarmament and non-proliferation there would require additional international support and resources. “The work ahead will not be easy,” she said, noting the need for training and equipment support to prevent the reemergence of chemical weapons and to enable the national authorities to investigate chemical weapons issues effectively. “The United Nations stands ready to support and will continue to do our part to uphold the norm against the use of chemical weapons – anywhere, at any time.”

<https://news.un.org/en/story/2025/06/1164126>

We applaud Syria's determination to ensure Assad's chemical weapons programme is destroyed: UK statement at the UN Security Council

June 5, 2025

The UK is greatly encouraged by Syria's operational and logistical support to the deployments carried out by the Organisation for the Prohibition of Chemical Weapons, including access to sites and people, and by Syria's commitment to engage with the international community. We also welcome the OPCW Technical Secretariat's deployments to Syria in March and April. The persistence and professionalism shown by OPCW staff in Syria has been exceptional. As has the consistently high quality of the Technical Secretariat's work on this important file in a very challenging technical environment.

Important progress has been made towards setting up OPCW offices in Syria and the collection and analysis of samples. These are vital steps towards Syria's full implementation of the Chemical Weapons Convention and UN Security Council resolution 2118, which the Assad regime so flagrantly violated. There is, however, President, much more work to do in a difficult operational environment. Due to the secrecy and complexity of Assad's illegal chemical weapons programme, the precise extent of the challenge ahead is still unknown. Allow me to make three brief points. Firstly, both the Syrian government and the OPCW will need to be operationally agile to address any proliferation or health risks found in inspecting sites of concern. The OPCW's role is vital. As mandated by the Chemical Weapons Convention and by resolution 2118, the OPCW must verify the Syrian-led declaration and destruction of any remaining elements of Assad's chemical weapons programme.

Secondly, to achieve this, the OPCW will need technical, financial and logistical assistance from the international community. The OPCW has provided States Parties with its estimated costs for its work in Syria. The UK has already provided more than \$1 million to the OPCW Syria Missions to support their immediate work and will look to provide further assistance. We join High Representative Nakamitsu in encouraging others to also provide the necessary resources. In particular, President, we welcome Qatar's role in representing Syria at the OPCW in The Hague.

Finally, military action by neighbouring states risks delaying OPCW deployments as well as the preservation of evidence at chemical weapons sites. We therefore urge Israel to de-escalate their actions in Syria. President, we have a historic opportunity to rid Syria of Assad's chemical weapons. Let us do our part to support Syria and the OPCW, to enable the new Syrian government to finally close the file on the scourge of chemical weapons use, and on this dark chapter in Syria's history.

<https://www.gov.uk/government/speeches/we-applaud-syrias-determination-to-ensure-assads-chemical-weapons-programme-is-destroyed-uk-statement-at-the-un-security-council>

United States Mission to the United Nations: Remarks at a UN Security Council Briefing on Chemical Weapon Use in Syria

June 5, 2025

In Riyadh, President Trump opened a new chapter in U.S.-Syrian relations. We are now in a moment of great opportunity in which Syria, with international support, can come into compliance with the Chemical Weapons Convention and Resolution 2118. The United

States welcomes the initial positive steps taken by the OPCW and the Syrian government. We commend them both on successfully initiating inspections on the ground in spite of extremely challenging conditions.

We welcome the Syrian government's commitment to providing all necessary support and cooperation to the Technical Secretariat. It is essential that efforts to address any remnants of the Assad regime's chemical weapons program be conducted safely and securely. We look forward to turning the page on the Assad regime's chemical weapons program and, in doing so, making Syria and the wider region more secure. The change in Syria-OPCW cooperation finally presents an opportunity to determine the actual scope and size of this program and eliminate it once and for all. This cooperation also presents a historic opportunity for the Syrian government to demonstrate a good-faith effort to the international community, that it shares in our vision of a world free of chemical weapons.

The OPCW inspectors and the Syrian government face the difficult task of establishing a full inventory of any remaining chemical weapons and related sites – including any production facilities, equipment, munitions, precursors, and other components – ahead of their verified destruction, while establishing a permanent in-country presence. The success of this mission depends on the OPCW Technical Secretariat receiving the additional funding, expertise, and resources needed to conduct such a massive and complex effort.

The United States welcomes the professional and transparent work of the OPCW, and we commend partners and allies who are doing the same. But much more action is needed. We therefore echo the OPCW Director-

General and the Technical Secretariat's calls for vital financial contributions to ensure timely and effective solutions to this challenge. We all have a stake in the success of the Chemical Weapons Convention. It is our shared responsibility to future generations to rid the world of chemical weapons. We look forward to the Syrian government's efforts to eliminate its chemical weapons programs and welcome their efforts toward the victims and families of past attacks who have long deserved justice. We must remain seized of this critical matter until the work is done.

<https://usun.usmission.gov/remarks-at-a-un-security-council-briefing-on-chemical-weapon-use-in-syria-2/>

Chinese couple charged with attempt to smuggle noxious fungus into US

June 4, 2025

The justice department has charged two Chinese nationals with a conspiracy to smuggle a "potential agroterrorism weapon" into the US. Federal prosecutors accused a postdoctoral research fellow at the University of Michigan and her boyfriend of seeking to bring a noxious fungus into the US to research it in the college laboratory, according to a criminal complaint announced on Tuesday. The alleged conduct was "of the gravest national security concerns", Jerome Gorgon, interim US attorney for the Eastern District of Michigan, said in a statement. The case is the latest by the US targeting Chinese nationals as Washington continues to focus on national security risks stemming from Beijing. It comes as the two countries are locked in a bitter trade war while the US seeks to quash the flow of illicit fentanyl originating from China. The toxins of the *Fusarium graminearum* cause liver damage, vomiting and reproductive defects in livestock as well as humans; diseases that

have an impact on rice, wheat and other crops; and lead to billions of dollars in losses each year, according to federal prosecutors. According to an FBI agent's affidavit, Liu Zunyong was stopped and questioned by customs officers as he entered the US through a Detroit airport in July last year. It said he admitted he had smuggled the fungus and that he aimed to conduct research on it at the University of Michigan laboratory where his girlfriend, Jian Yunqing, worked. Liu said he planned to clone different strains of the organism and that he had sought to hide samples in his backpack due to US import restrictions. Liu, who could not be reached for comment, was ultimately denied entry to the US and returned to China after the samples were seized. The charges come nearly a year after Liu was stopped at the Detroit airport. Asked about the gap, the DoJ said the case featured regular investigative steps and due diligence. Jian researched "plant-pathogen interactions" in China before moving to the US. Her visa application said she intended to study topics "distinct and different" from *Fusarium graminearum*, according to the affidavit. Jian, a member of the Chinese Communist party, initially claimed she had no information on Liu's conduct. But electronic communications showed the pair had discussed shipping biological materials, the FBI agent said.

A statement from the University of Michigan said it was co-operating with the investigation, adding: "We strongly condemn any actions that seek to cause harm, threaten national security or undermine the university's critical public mission." Jian on Tuesday made her initial appearance in a Detroit court, after which she was temporarily detained. The judge set a detention hearing for Thursday. Jian's lawyer did not immediately respond to a request for comment. The charges against Jian and Liu include conspiracy to defraud

the US, smuggling goods into the country, visa fraud and false statements.

<https://www.ft.com/content/9ea35e39-1d97-4b9e-9a9a-4518487a1893>

Chinese researchers' alleged plot to smuggle crop-killing fungus into US is an 'attack on US food supply': feds

June 4, 2025

National security authorities and members of Congress are raising alarm over the alleged plot by two romantically involved Chinese researchers to smuggle samples of a dangerous crop-killing fungus into the US. Yunqing Jian, 33, a Communist Party loyalist and lab researcher at the University of Michigan who received Chinese government funding for her work, plotted the illicit transport of the pathogen with her boyfriend, Zunyong Liu, 34, the FBI alleged. Liu was caught at Detroit Metropolitan Airport last July after allegedly attempting to sneak packages of *Fusarium graminearum* into the country, the feds said. "This is an attack on the American food supply," one senior Trump administration official told The Post.

The fungus is already present in the US, but if it was manipulated to become resistant to treatment or to spread more easily, it could have the potential to devastate American farms, one expert told The Post. The US should be testing the fungus sample for any evidence it's been tampered with, the expert added. There are similar allegations that the virus that causes COVID-19 was enhanced by China's Wuhan Institute of Virology as part of US-funded "gain-of-function" research of the naturally occurring SARS pathogen. China denies that COVID leaked from the lab, but US intel agencies now say that appears to be the most likely cause of the pandemic.

“The CCP will use every tool in its warfare toolbox to cripple the United States and bring us to our knees. A pathogen like this, if successfully introduced into a crop, could inflict significant economic loss for U.S. agriculture producers,” House Intelligence Committee Chairman Rick Crawford (R-Ark.) told The Post. Sen. Joni Ernst (R-Iowa) said it appears the FBI may have intercepted a “potential bioweapon.” “We are very fortunate the Trump administration and federal law enforcement stopped this potential bioweapon before it compromised our nation’s food supply,” Ernst told The Post. “This is exactly why I have always said and will continue to say – food security is national security. Between this latest bioweapon and China’s highly-concerning purchases of U.S. farmland around our military bases, we must stay on guard against the threat from Communist China in our own backyard.”

According to the feds, the Chinese couple discussed how they could smuggle *Fusarium graminearum* into the US — a biological pathogen considered “a potential agroterrorism weapon” capable of destroying crops and poisoning both livestock and humans, according to a criminal complaint filed in federal court in Michigan Monday. Both Jian and Liu were charged Monday in a federal criminal complaint with conspiracy, smuggling goods into the US, false statements and visa fraud. “The bacteria infects wheat, barley, corn and rice. When it does, it can devastate crops,” one national security source who specializes in agricultural microbiology told The Post.

“The key question is if the bacterial strain being brought in has been modified to make it resistant to treatment or to make it more pathogenic.” The source added that it could be dangerous “if the Chinese manipulated the strain” and that federal investigators

should “have a genome sequence done” on the samples Jian and Liu allegedly conspired to smuggle into the country. On July 27, 2024, Liu, who works as a researcher at Zhejiang University in Hangzhou, arrived in Detroit on a Delta flight from Shanghai and was interviewed by Customs and Border Patrol agents about the purpose of his travel. He claimed he was in the US to visit Jian, a lab researcher at the University of Michigan whom he identified as his girlfriend. Upon searching his belongings, agents found four plastic baggies containing “fibrous material” infected with the pathogen, as well as a round piece of filter paper with a series of circles drawn on it, concealed in his backpack in a ball of wadded up tissues.

According to the criminal complaint, Liu initially denied the items were his, suggesting someone else had put them into his bag without his knowledge. However he later admitted they were different strains of *Fusarium graminearum* he intended to research at the Molecular Plant-Microbe Interaction (MPMI) Laboratory at the University of Michigan, where Jian conducts research on similar pathogens. He also acknowledged he hid the materials when traveling to the US because he knew border patrol agents would confiscate them if they were discovered.

The circled filter paper found in his possession contained 10 separate coded samples, including one that “would allow a researcher to propagate live *Fusarium graminearum*,” the complaint states. Liu told investigators that he planned to clone the different strains and make more samples if the experiments on the bagged materials failed. He was denied entry into the US and fast-tracked for removal to China. While searching one of Liu’s cell phones, they found an article in PDF form titled “2018 Plant-Pathogen Warfare under Changing Climate

Conditions.” Authorities said the article specifically referenced *Fusarium graminearum* as “an example of a destructive disease and pathogen for crops” and is “responsible for billions of dollars in economic losses worldwide each year.”

The FBI interviewed Jian at the MPMI Laboratory in February, where she first claimed she only learned of the alleged smuggling scheme when Liu was caught by CBP, and denied assisting him in his research of *Fusarium graminearum*. Upon searching Jian’s cell phone, the FBI said it discovered a document she signed originating from Zhejiang University, where Liu conducts research on the pathogen, which included a loyalty pledge to “adhere to the four basic principles” and “support the leadership of the Communist Party of China.”

FBI Special Agent Edward Nieh said in his affidavit that one of the principles Jian signed her allegiance to includes “upholding Mao Zedong thought and Marxism-Leninism.” Investigators said she signed the document Jan. 11, 2024, just six months before Liu allegedly flew to Detroit with the samples in tow. Further investigation into Liu and Jian’s communications indicate it wasn’t the first time the pair had discussed smuggling the fetid fungus into the US. One unearthed exchange from Aug. 12, 2022 on the Chinese messaging app WeChat reveals the couple scheming on how to sneak the seeds past US customs officials, with Liu advising Jian to hid the materials in her shoes.

<https://nypost.com/2025/06/04/us-news/chinese-researchers-alleged-plot-to-smuggle-crop-killing-fungus-into-us-is-an-attack-on-us-food-supply-feds/>

Chinese Nationals Charged with Conspiracy and Smuggling a Dangerous Biological Pathogen into

the U.S. for their Work at a University of Michigan Laboratory

June 3, 2025

Yunqing Jian, 33, and Zunyong Liu, 34, citizens of the People’s Republic of China, were charged in a criminal complaint with conspiracy, smuggling goods into the United States, false statements, and visa fraud, announced United States Attorney Jerome F. Gorgon, Jr. Gorgon was joined in the announcement by Special Agent in Charge Cheyvoryea Gibson, Federal Bureau of Investigation, Detroit Division and Marty C. Raybon, Director of Field Operations, U.S. Customs and Border Protection. The FBI arrested Jian in connection with allegations related to Jian’s and Liu’s smuggling into America a fungus called *Fusarium graminearum*, which scientific literature classifies as a potential agroterrorism weapon. This noxious fungus causes “head blight,” a disease of wheat, barley, maize, and rice, and is responsible for billions of dollars in economic losses worldwide each year. *Fusarium graminearum*’s toxins cause vomiting, liver damage, and reproductive defects in humans and livestock.

According to the complaint, Jian received Chinese government funding for her work on this pathogen in China. The complaint also alleges that Jian’s electronics contain information describing her membership in and loyalty to the Chinese Communist Party. It is further alleged that Jian’s boyfriend, Liu, works at a Chinese university where he conducts research on the same pathogen and that he first lied but then admitted to smuggling *Fusarium graminearum* into America—through the Detroit Metropolitan Airport—so that he could conduct research on it at the laboratory at the University of Michigan where his girlfriend, Jian, worked. United States Attorney Gorgon stated: “The

alleged actions of these Chinese nationals—including a loyal member of the Chinese Communist Party—are of the gravest national security concerns. These two aliens have been charged with smuggling a fungus that has been described as a ‘potential agroterrorism weapon’ into the heartland of America, where they apparently intended to use a University of Michigan laboratory to further their scheme.”

“The federal charges announced today against Yunqing Jian and Zunyong Liu, both residents of the People’s Republic of China, signify a crucial advancement in our efforts to safeguard our communities and uphold national security,” said Cheyvoryea Gibson, Special Agent in Charge of the FBI Detroit Field Office. “These individuals exploited their access to laboratory facilities at a local university to engage in the smuggling of biological pathogens, an act that posed an imminent threat to public safety. Thanks to the exceptional investigative efforts of the FBI Detroit Counterintelligence Task Force, in close cooperation with U.S. Customs and Border Protection’s Office of Field Operations these dangerous activities have been effectively halted. The FBI remains resolutely committed to collaborating with our law enforcement partners to protect the residents of Michigan and defend the United States against such grave threats.”

U.S. Custom and Border Protection, Director of Field Operations Marty C. Raybon stated, “Today’s criminal charges levied upon Yunqing Jian and Zunyong Liu are indicative of CBP’s critical role in protecting the American people from biological threats that could devastate our agricultural economy and cause harm to humans; especially when it involves a researcher from a major university attempting to clandestinely bring potentially harmful biological materials into the United States. This was a complex investigation involving CBP offices from

across the country, alongside our federal partners. I’m grateful for their tireless efforts, ensuring our borders remain secure from all types of threats while safeguarding America’s national security interests.” Jian will be appearing this afternoon in federal court in Detroit for her initial appearance on the complaint. A complaint is only a charge and is not evidence of guilt. Trial cannot be held on felony charges in a complaint. When the investigation is completed, a determination will be made whether to seek a felony indictment.

<https://www.justice.gov/usao-edmi/pr/chinese-nationals-charged-conspiracy-and-smuggling-dangerous-biological-pathogen-us>

Chinese national couple charged with smuggling crop-killing fungus into US: ‘Potential agroterrorism weapon’

June 3, 2025

A Chinese national couple was hit with criminal charges Tuesday for allegedly smuggling a dangerous fungus into the US capable of destroying crops and poisoning humans and livestock. Zunyong Liu, 34, was caught by US Customs and Border Protection officers attempting to smuggle *Fusarium graminearum* — a biological pathogen considered “a potential agroterrorism weapon” — into the US via the Detroit Metropolitan Airport last July, according to a criminal complaint filed in a federal court in the Eastern District of Michigan. Liu initially made false statements about his visit to the US and his knowledge of the pathogen before admitting to law enforcement that he was bringing the noxious fungus to his girlfriend, 33-year-old University of Michigan lab researcher Yunqing Jian, according to authorities. The complaint alleges that Jian received “Chinese government funding for her work”

on *Fusarium graminearum* in China and that she is a loyal member of the Chinese Communist Party.

Meanwhile, Liu “works at a Chinese university where he conducts research on the same pathogen.” Jian denied that she was aware of her boyfriend’s intent to smuggle the pathogen during an interview with the FBI, but an investigation determined that the couple “discussed the shipping of biological materials and research being done in the laboratory” ahead of Liu’s arrival in Detroit. Evidence also suggests Jian has been involved in “smuggling packages of biological material into the United States on prior occasions,” according to the complaint.

The couple will face conspiracy, smuggling, false statements and visa fraud charges, US Attorney Jerome Gorgon Jr. announced Tuesday.

“The alleged actions of these Chinese nationals — including a loyal member of the Chinese Communist Party — are of the gravest national security concerns,” Gorgon said in a statement. “These two aliens have been charged with smuggling a fungus that has been described as a ‘potential agroterrorism weapon’ into the heartland of America, where they apparently intended to use a University of Michigan laboratory to further their scheme,” he added. *Fusarium graminearum* can contaminate wheat, barley, maize and rice crops with a disease known as “head blight,” which is responsible for billions of dollars in economic losses worldwide each year, according to the Justice Department.

The toxins *Fusarium graminearum* gives off can lead to vomiting, liver damage and reproductive defects in humans and livestock if consumed.” The federal charges announced today against Yunqing Jian and Zunyong Liu, both residents of the People’s

Republic of China, signify a crucial advancement in our efforts to safeguard our communities and uphold national security,” Cheyvorzea Gibson, special agent in charge of the FBI Detroit Field Office, said in a statement. “These individuals exploited their access to laboratory facilities at a local university to engage in the smuggling of biological pathogens, an act that posed an imminent threat to public safety.”

Jian is slated to make her initial appearance at a federal courthouse in Detroit this afternoon. In a statement, the University of Michigan said it received “no funding from the Chinese government in relation to research conducted by the accused individuals” and that it has and will continue to “cooperate with federal law enforcement in its ongoing investigation and prosecution.” “We strongly condemn any actions that seek to cause harm, threaten national security or undermine the university’s critical public mission,” the university said.

<https://nypost.com/2025/06/03/us-news/chinese-national-couple-charged-with-smuggling-crop-killing-fungus-into-us-potential-agroterrorism-weapon/>

OPCW strengthens chemical emergency response in francophone Africa

May 26, 2025

The Organisation for the Prohibition of Chemical Weapons (OPCW), in collaboration with the Académie Internationale de Lutte Contre le Terrorisme (AILCT) and with the support of the National Authority of Côte d’Ivoire, conducted the “Advanced course on the Investigation of Chemical Incidents for French-Speaking Member States in Africa” from 4 to 11 April in Jacqueville, Côte d’Ivoire.

The hands-on training was specifically designed to equip first responders with the knowledge and practical skills needed to effectively investigate chemical incidents. Focusing on scene documentation and sampling techniques, the course exposed participants to real-life scenarios building their capacity to respond to incidents involving toxic industrial chemicals (TICs) or chemical warfare agents (CWAs) potentially used as weapons.

Ms Sika Dossim, a Pharmacist Biologist and Senior Lecturer at the University of Kara in Togo, reflected on the practical training she received: “Conducting an investigation in the event of chemical crime means playing a smooth game with all the components of the investigation: equipment, environment, colleagues and collaborators.” Her comment echoes the course’s emphasis on coordination, preparedness, and methodical response in a real-world scenario.

A first training of its kind in the region focusing on chemical incident investigation, the course forms part of a broader training cycle under the objective of enhancing protection and response capabilities against chemical incidents or attacks—of the sixth phase of the OPCW Africa Programme. Funded by France, the course addresses the capacity-building needs expressed by French-speaking African Member States.

The event brought together 15 participants from seven countries: Algeria, Burundi, Cameroon, Côte d’Ivoire, Morocco, Senegal, and Togo—marking a significant step in strengthening regional preparedness and cooperation in chemical emergency response.

<https://www.opcw.org/media-centre/news/2025/05/opcw-strengthens-chemical-emergency-response-francophone-africa>

Imposing Measures on Sudan for its Use of Chemical Weapons

May 22, 2025

On April 24, 2025, the United States determined under the Chemical and Biological Weapons Control and Warfare Elimination Act of 1991 (the CBW Act) that the Government of Sudan used chemical weapons in 2024. This determination was delivered to Congress today, along with an addendum to the April 15, 2025, Condition 10(C) Report on Compliance with the Chemical Weapons Convention (CWC) that finds the Government of Sudan in non-compliance with the CWC, to which it is a party. Following a 15-day Congressional notification period, the United States will impose sanctions on Sudan, including restrictions on U.S. exports to Sudan and on access to U.S. government lines of credit.

The sanctions will take effect upon publication of a notice in the Federal Register, expected on or around June 6, 2025. The United States calls on the Government of Sudan to cease all chemical weapons use and uphold its obligations under the CWC. The United States remains fully committed to hold to account those responsible for contributing to chemical weapons proliferation.

<https://www.state.gov/releases/office-of-the-spokesperson/2025/05/imposing-measures-on-sudan-for-its-use-of-chemical-weapons>

U.S. to Impose Sanctions on Sudan Over Use of Chemical Weapons

May 22, 2025

The United States intends to impose new sanctions on Sudan’s military-led government after determining that it used chemical weapons last year, the State Department said. In a brief statement

announcing the decision, the State Department offered little detail about where or how the weapons had been used, saying only that it had notified Congress of a breach of the Chemical Weapons Convention, the international treaty that outlaws the production or use of chemical weapons. But in January, The New York Times reported that Sudan's military had used chemical weapons at least twice against the Rapid Support Forces, or R.S.F., the powerful paramilitary group it is fighting for control of the country.

Then, senior U.S. officials told The Times that the military had used chlorine gas against R.S.F. troops in remote areas over the preceding months. They feared the weapons might be used in the capital, Khartoum, which at the time was divided between the warring sides. The sanctions are expected to take effect June 6. Sudan's military-led government did not immediately respond to the announcement of the American sanctions, although it has vociferously denied using chemical weapons in the past. Last week, the military appointed a former United Nations official, Kamel Idris, as prime minister.

Many other Sudanese expressed skepticism about the American determination, largely because there had been no local news reports of chemical weapons use on the battlefield. Addressing that discrepancy, American officials said the weapons use had been small in scale, had taken place in remote areas and had not been very effective. The chemical weapons accusation documents yet another line crossed in a catastrophic civil war that has seen countless atrocities. Since fighting started in April 2023, the conflict in Sudan has killed tens of thousands of people, forced 13 million people from their homes and led to widespread famine.

Both sides have been accused of war crimes, although only the R.S.F. has been accused of

genocide by the United States, which in January imposed sanctions on the group's leader, Lt. Gen. Mohamed Hamdan. A week later, the Biden administration also imposed sanctions on Sudan's army chief, Gen. Abdel Fattah al-Burhan. At the time, American officials said privately that General al-Burhan had authorized the use of chemical weapons. But they did not publicly disclose the use of chemical weapons until this week. Under the new round of sanctions, the United States will restrict exports to Sudan and its access to U.S. government loans, the State Department said. The statement called on Sudan to stop using chemical weapons and said the United States was committed to holding "to account those responsible for contributing to chemical weapons proliferation."

<https://www.nytimes.com/2025/05/22/world/africa/us-sanctions-sudan-chemical-weapons.html?searchResultPosition=3>

Kiribati Accedes to the Biological Weapons Convention

May 20, 2025

The United States congratulates Kiribati, which deposited its instrument of accession to the Biological Weapons Convention (BWC) with the United States on May 20, 2025. In this 50th anniversary year of the BWC, the United States, as one of the treaty's depositary governments, recognizes and welcomes Kiribati's important decision to join the more than 180 other BWC States Parties in advancing the goal of complete elimination of biological weapons. With Kiribati's accession, all countries in the Asia Pacific region are now party to the BWC, increasing our collective security.

The BWC is critical to international efforts to address the threat posed by biological weapons, whether in the hands of State or

non-State actors. Maximizing the BWC's effectiveness requires all States to become Parties and fully implement its obligations. We strongly urge all States not party to the BWC to join the Convention without delay.

<https://www.state.gov/releases/office-of-the-spokesperson/2025/05/kiribati-accedes-to-the-biological-weapons-convention>

Regional Workshop for Southeast Asian and Pacific Island States on 'Strengthening Regional Support for the Global Norm against Biological Weapons in the Context of the BWC, UNSCR 1540, and UNSGM'

May 19, 2025

From 6-8 May 2025, the United Nations Office for Disarmament Affairs (UNODA) convened a joint regional workshop at the Economic and Social Commission for Asia and the Pacific (ESCAP) Conference Centre in Bangkok, Thailand for Southeast Asian and Pacific Island States on "Strengthening Regional Support for the Global Norm against Biological Weapons in the Context of the Biological Weapons Convention (BWC), United Nations Security Council Resolution 1540 (2004), and the United Nations Secretary-General's Mechanism for Investigation of Alleged Use of Chemical and Biological Weapons (UNSGM)."

The BWC, UNSCR 1540 (2004), and UNSGM are key instruments adopted by the international community to address the threat posed by proliferation or use of biological weapons. While these initiatives are separate and independent of each other and address distinct issues related to biological weapons disarmament and proliferation, they all contribute to a comprehensive approach to preventing and deterring the use of biological weapons and involve cooperation with many similar stakeholders at the

national and regional levels. Within UNODA, initiatives to strengthen implementation, engagement, and cooperation on these measures are supported through the Implementation Support Unit for the BWC (BWC ISU), the United Nations Security Council Resolution 1540 (2004) Support Unit (UNSCR 1540 Support Unit) and the UNODA team in support of the UNSGM, often in collaboration with relevant stakeholders and partners.

The three-day workshop brought together experts from 17 States in Southeast Asia and the Pacific Islands, including representatives from relevant ministries charged with the implementation of the BWC and UNSCR 1540 (2004), experts in relevant fields, and representatives from relevant laboratories and technical institutions dealing with disease outbreaks. The presentations and discussions aimed to raise awareness about the three instruments and serve as a forum for discussion, information exchange and sharing of best practices from the region related to strengthening each instrument.

The first day focused on the BWC and included presentations by staff from the BWC ISU and the United Nations Institute for Disarmament Research (UNIDIR). The session began with an overview of the BWC, its main provisions, past efforts to strengthen the Convention and tools to facilitate national implementation. Then, a panel of National Contact Points (NCPs) from Southeast Asia and Pacific Island States shared practical insights and best practices in implementing the BWC. Additionally, participants engaged in breakout groups to address various aspects in relation to awareness raising, national implementation, regional and international collaboration, and implications in view of advances in science and technology. The Working Group on Strengthening the Convention was also introduced, and participants heard a

statement by the Chair of the Working Group and participated in an online panel discussion with the Friends of the Chair.

The second day focused on UNSCR 1540 (2004). A representative from the 1540 Committee Group of Experts provided a virtual presentation introducing the resolution and outlining key tools and resources, such as the 1540 Matrices, National Reports, and Assistance Mechanism, followed by the session which highlighted UNODA's assistance provided for Asia-Pacific States toward the full implementation of UNSCR 1540. In the afternoon, the UNSCR 1540 Support Unit led the participants in a group discussion on national experiences and assistance needs as well as on further collaboration opportunities in implementing the resolution in the region.

The third day focused on the UNSGM. UNODA provided an overview of the mechanism's background, mandate and history, as well as the Guidelines & Procedures for a UNSGM investigation. UNODA also shared information about different ways in which Member States can support the mechanism, including the nomination process for the roster of experts and laboratories that might be called upon to support a UNSGM investigation, as well as the training programme and exercises for experts and laboratories once nominated. Then, participants heard from an expert and a representative from a laboratory nominated to the UNSGM roster on their experience with UNSGM activities.

To wrap up, the BWC-ISU, the UNSCR 1540 Support Unit, and the UNODA team in support of the UNSGM led a joint roundtable discussion on connections and synergies between the BWC, UNSCR 1540, and the

UNSGM in strengthening regional support for the global norm against biological weapons.

In addition to the support provided by the partners mentioned above, financial support for the workshop was generously provided by the Government of Canada.

<https://disarmament.unoda.org/update/regional-workshop-for-southeast-asian-and-pacific-island-states-on-strengthening-regional-support-for-the-global-norm-against-biological-weapons-in-the-context-of-the-bwc-uns-1540-and-uns/>

Voice from China: This is why Moscow and Beijing stand together, now more than ever

May 12, 2025

The 'Joint Statement on Maintaining Global Strategic Stability' reaffirms the two countries' consistent stance on preventing the proliferation of weapons of mass destruction, safeguarding the international arms control and disarmament system, and more. It also systematically establishes a comprehensive dialogue and cooperation framework that includes nuclear security, strategic deterrence balance, and governance of militarization of emerging technologies. Notably, this statement marks the first time that biological security, chemical weapons control, and military ethics in artificial intelligence have been included in the global strategic stability agenda, signaling a significant breakthrough for China and Russia in shaping a new international security paradigm for the future.

<https://www.rt.com/news/617396-russia-china-leader-agreement/>

Evolving threat of chemical weapons calls for united front

May 9, 2025

The Fifth Plenary Meeting of the Global Congress on Chemical Security and Emerging Threats has concluded with recommendations to boost global action against chemical security threats. These include strengthening regional networks, developing a centralized chemical database, and addressing challenges posed by emerging technologies and artificial intelligence (AI). Chemical weapon threats continue to undermine the security landscape, with technological advancements increasing accessibility to chemicals of concern and advanced chemical dispersal mechanisms.

Emerging technologies, particularly artificial intelligence, pose significant concerns. Non-state actors are already using AI to create propaganda and plan attacks. Chemical synthesis and cyberattacks against chemical facilities are potential AI-facilitated threats. The proliferation of weapons of mass destruction, with non-state actors exploiting vulnerabilities and trafficking hazardous materials, poses a significant threat. Fragmented regulatory controls exacerbate the illegitimate diversion of chemical precursors, and new technologies, including uncrewed systems such as drones, increase their range and threat potential.

Major General Al-Maaytah of Jordan's Public Security Directorate emphasized the global nature of chemical security:

“Chemical security is no longer only a national or regional responsibility, but rather a global priority requiring significant cooperation between governments and institutions.”

Gathering 300 delegates from over 100 countries and six international organizations to forge a united front against these evolving

threats, the four-day meeting (5 – 8 May) underscored the need for enhanced cooperation, public-private partnerships, and information sharing through a unified global platform coordinated by INTERPOL.

INTERPOL President Ahmed Naser Al-Raisi highlighted the importance of collective strength and partnerships:

“Chemical security is a global responsibility that demands our collective attention and action. We must commit to fostering a culture of shared responsibility and strengthen partnerships across borders, sectors, and disciplines to create a safer, more secure future for all.”

The Global Congress, co-implemented by INTERPOL, Global Affairs Canada, the US Cybersecurity and Infrastructure Security Agency (CISA), the US Defense Threat Reduction Agency (DTRA), and the FBI, aims to cultivate a global and multi-sectoral culture of chemical security. Launched in 2018, it brings together international stakeholders to share expertise, develop innovative strategies, and promote cooperation and information sharing against chemical security threats.

<https://www.interpol.int/News-and-Events/News/2025/Evolving-threat-of-chemical-weapons-calls-for-united-front>

China to release movie on Japanese biological warfare unit in summer

May 07, 2025

A Chinese movie featuring the Imperial Japanese Army's notorious Unit 731 is expected to be released in China this summer, according to local media reports, with the Japanese government worried about a possible negative impact from the film on bilateral ties. The production of the movie about the unit, which is thought to

have undertaken covert biological and chemical warfare research in China during World War II, was announced in August 2020. It was made with the cooperation of an exhibition hall dedicated to the unit in Harbin in the northeastern province of Heilongjiang.

The film is set to be released in China on July 31 this year, which marks the 80th anniversary of the end of the Sino-Japanese conflict, which Beijing calls the 1937-1945 War of Resistance against Japanese Aggression. Film director Zhao Linshan has told Chinese media that Unit 731 represents “a cruel history that terrified” people in China and abroad and that he hopes to arouse the sympathies of the audience through the movie.

Zhao also said in a Chinese media interview the production is aimed at letting “the light of peace shine on the journey of human civilizations.” A Japanese government source expressed concern over the film’s release, saying it could “rekindle rows over history” between the two Asian neighbors and negatively affect bilateral relations. Set in China’s northeastern region, the movie has an antiwar purpose and is designed to “reveal the crimes” of Unit 731 through a focus on ordinary individuals, according to media reports.

The research operation of the unit is believed to have included lethal experimentation and testing on humans. Prisoners of war were secretly experimented upon to develop, among other things, plague and cholera-based biological weapons, according to historians. The Japanese government maintains the view that it has not confirmed any evidence to indicate the unit’s human experiments.

<https://english.kyodonews.net/articles/-/53685?phrase=spacex&words=>

Africa pushes ahead on chemical weapons legislation at landmark OPCW conference in Namibia

May 5, 2025

Senior government officials and legal experts from across Africa gathered in Namibia on 28 and 29 April 2025 for a landmark regional conference to accelerate the adoption of comprehensive national legislations to implement the Chemical Weapons Convention (CWC). The two-day event, jointly organised by the Organisation for the Prohibition of Chemical Weapons and the Government of Namibia, brought together delegates from 23 African countries that have yet to fully enshrine the CWC’s requirements into their domestic legal systems. It featured an innovative and unique approach, including fostering the capacities of representatives in areas of advocacy for passing legislation and the dynamics of parliamentary proceedings.

Addressing delegates during the opening session, Namibia’s Deputy Prime Minister Natangwe Ithete remarked, “As Member States to the Convention, we all have collective responsibility to uphold the international norm against the development, production, stockpiling and use of chemical weapons established under the Convention. Signing and ratifying the CWC commits countries to the verified destruction of all stockpiles of chemical weapons.” There is near-universal adherence of African countries to the CWC, which bans the development, production, stockpiling, and use of chemical weapons. However, almost half still need to enact the robust national laws required for full compliance. As of July 2024, 18 out of the 52 African States Parties to the Convention still lack any national implementing legislation, while nine others have only partially addressed the Convention’s obligations in their legal

frameworks. The OPCW is working with national authorities in the region to bridge these gaps.

“Your presence here is evidence of the commitment of your countries to the Chemical Weapons Convention,” OPCW Deputy Director-General Ambassador Odette Melono told delegates during the opening session. “The States Parties represented here share a mutual understanding that a world free of chemical weapons can only be achieved if all countries implement the Convention and fulfil their obligations.” At present, citizens in more than half of African countries are not fully protected against the threat of chemical weapons due to lacking legislation, Ambassador Melono remarked. These countries “could unknowingly become safe havens for illicit and prohibited activities.”

The absence of comprehensive legislation is widely recognised as leaving countries vulnerable to the misuse of toxic chemicals and undermining global non-proliferation efforts. Porous borders, new and emerging technologies, varying capacities to exercise control and threats by non-state actors present a unique set of challenges for African States Parties in that context. During the conference in Namibia, the OPCW’s Technical Secretariat worked with these countries to help address the range of challenges that remain to the full enactment of the Convention.

The event featured thematic discussions, case studies, and breakout sessions designed to help participants share experiences, identify challenges, and learn from best practices. Topics included strategies for stakeholder mobilization, advocacy and communication, and the intersection of CWC implementation with broader chemical security and United Nations Security Council

obligations. The programme also featured numerous opportunities for delegates to share the latest updates on the status of their national legislation, information that is crucial to tailoring OPCW assistance and maximising its effectiveness.

Alongside government delegations from African countries still striving towards full CWC implementation, the conference included representatives from countries with successful CWC legislation, as well as experts from international and regional bodies such as the African Union, UN Security Council Resolution 1540 Committee and the UN Office on Drugs and Crime, under the leadership of the OPCW. The conference was also a component of the OPCW Africa Programme, a special initiative by the Technical Secretariat to respond/ to the particular needs and priorities of African Member States in their endeavour to comprehensively and effectively implement the Convention.

The OPCW’s ongoing international cooperation and capacity-building initiatives including for legislation have already benefited a large number of professionals from Africa. However, additional targeted assistance and cooperation is still needed to bridge the remaining gaps. “As we pursue our mission, we do so in an increasingly fragile security environment. Today, the international disarmament architecture is under unprecedented pressure,” Ambassador Melono remarked to assembled delegates. The full implementation of the Convention “is a journey whose completion requires persistence and stamina.”

<https://www.opcw.org/media-centre/news/2025/05/africa-pushes-ahead-chemical-weapons-legislation-landmark-opcw-conference>

A quarter century of chemical weapons prevention

April 30, 2025

The Defence Science and Technology Laboratory (Dstl) is marking a significant milestone today – 25 years of continuous recognition as a Designated Laboratory for the Organisation for the Prohibition of Chemical Weapons (OPCW). Since 1999, Dstl has successfully maintained this prestigious status through rigorous annual proficiency testing, establishing itself as one of the world's leading chemical analysis facilities in support of the Chemical Weapons Convention (CWC).

Dstl's Chemical and Biological Analysis and Attribution Capability represents a critical UK sovereign capability that supports both homeland incidents and international government priorities. The team delivers high-impact science to identify and attribute hazardous chemical and biological substances and weapons. Professor Andy Bell, Dstl's Chief Science and Technology Officer, said: Dstl's Designated Laboratory is of critical importance to the UK.

This sovereign capability forms part of our wider work where we are able to deliver internationally in matters relating to the Chemical Weapons Convention thus advancing the world towards being free from chemical weapons. The OPCW network currently comprises 30 national laboratories across 25 countries. The annual testing regime maintains a network of highly performing laboratories that can analyse samples to support investigations of alleged chemical weapons use, thereby deterring chemical weapons attacks and holding perpetrators accountable. The proficiency

testing process demands exceptional expertise and dedication.

Sarah, Dstl scientist, said:

You get 15 days to turn around everything from the first opening of the samples to reporting the result. It's a stressful time, working weekends and long hours, but with a great team work ethic and professionalism. Dstl recently assisted the OPCW in designing, preparing and shipping environmental samples for the 56th Official OPCW Environmental Proficiency Test. This involved creating realistic test scenarios that simulate investigations of suspected chemical weapons releases, with months of extensive quality assurance testing to ensure samples met stringent OPCW standards.

Chris, senior team member at Dstl, said:

We're seen as one of the top laboratories and well respected around the world. People come to us for advice. We train some of the OPCW inspectors. To mark this significant milestone, Dstl is hosting a special event today, bringing together current and former employees, cross-government stakeholders, and OPCW representatives to celebrate this extraordinary achievement.

Professor Andy Bell concluded:

Sharing knowledge is an absolute critical aspect of our day-to-day work. Maintaining this type of international-level performance for 25 years is phenomenal and is absolutely testament to the fact that across those 25 years, we have had phenomenal people at the heart of it.

<https://www.gov.uk/government/news/a-quarter-century-of-chemical-weapons-prevention>

OPCW AI Research Challenge: Harnessing AI tools to enhance global chemical security

April 29 2025

he OPCW has partnered with four research institutions selected for the OPCW Artificial Intelligence Research Challenge, an initiative launched in July 2024, funded by the European Union and the United Kingdom of Great Britain and Northern Ireland (UK). The challenge aims to explore AI applications to enhance OPCW's ability to detect and respond to current and future chemical threats. The four teams – Canada's University of Alberta, Netherlands Organisation for Applied Scientific Research, Republic of Korea's Military Academy, UK's Defence Science and Technology Laboratory – were announced, and each given an opportunity to provide an overview of their proposed research, at a side event during the 108th session of the OPCW Executive Council.

"The AI Research Challenge has the potential to provide innovative tools that could enhance the OPCW's capabilities to safeguard global security helping us stay ahead of these threats," said OPCW Director-General, Ambassador Fernando Arias. "Through collaborations with leading scientific institutions, OPCW could leverage emerging technologies to fulfil its mission of achieving a world free of chemical weapons," he added. "The United Kingdom recognises the immense potential of emerging technologies and the opportunities presented to accelerate inclusive development, support non-proliferation and strengthen the implementation of the Chemical Weapons Convention," said the Ambassador, Permanent Representative of the UK to the OPCW, H.E. Ms Joanna Roper CMG.

"As such, I am pleased that the UK is supporting the OPCW's AI Research

Challenge which aims to find innovative ways to strengthen the OPCW's work using artificial intelligence to the benefit of all States Parties. I look forward to seeing the outcomes of the four chosen projects," she highlighted. "The European Union is a long-term supporter of the OPCW's Scientific Advisory Board activities. In this context, we are proud to co-finance the OPCW AI Research Challenge with a view to enhancing the implementation of the Chemical Weapons Convention based on AI solutions," Ambassador Mika-Markus Leinonen, European Union Liaison Officer to The Hague.

"The OPCW's AI Research Challenge plays a crucial role in fostering innovation to strengthen global security, enabling advanced technologies to support the detection, verification, and mitigation of potential chemical threats," said Keunhong Jeong, Army Lieutenant Colonel and Professor at the Korea Military Academy; one of the participants in the Challenge and a member of the OPCW's Scientific Advisory Board (SAB). "We are honoured to contribute to OPCW's efforts to rid the world of chemical weapons by leveraging AI to advance the Organisation's chemical identification and forensic analysis capabilities," he added.

<https://www.opcw.org/media-centre/news/2025/04/opcw-ai-research-challenge-harnessing-ai-tools-enhance-global-chemical>

France contributes •591,000 to support key OPCW activities

April 29, 2025

France has reaffirmed its longstanding support for the work of the Organisation for the Prohibition of Chemical Weapons (OPCW) through its new voluntary contribution of •591,000 to support key

OPCW activities. The contribution was formalised on 15 April 2025 in a signing ceremony held between the Ambassador, Permanent Representative of the French Republic to the OPCW, H.E. Mr François Alabrune, and the OPCW Director-General, Ambassador Fernando Arias, at the OPCW's Headquarters in The Hague./

The voluntary contribution will support three OPCW Trust Funds:

- Trust Fund for Syria Missions: •200,000 will be dedicated for the work of the OPCW in Syria.
- Trust Fund for the Implementation of Article X: •241,000 will be used to support key capacity-building initiatives, such as CHEMEX Africa 2025, an Integrated Advanced Course and Exercise for OPCW French-speaking African Member States, as well as provision of OPCW assistance and protection activities in Ukraine.
- Trust Fund for Training: •150,000 will be utilised to support a biotoxin analysis initiative for Africa and an international technical seminar to strengthen the global academic network in the field of chemical disarmament.

“The Organisation can always count on France’s support in achieving its mandate. We are delighted to be able to make this additional contribution in order to enable the Technical Secretariat to realise its missions regarding the Syrian chemical weapons dossier,/ “ said Ambassador Alabrune. ”Ensuring that the Secretariat has sufficient financial means to respond to Ukraine’s needs is a priority for us. Also, we are very pleased to contribute to the OPCW’s Article X programmes, such as CHEMEX Africa, reinforcing capacities in French-speaking African countries,” he added.

Director-General Arias expressed his appreciation for France’s voluntary contribution and important partnership with the OPCW: “France plays a vital role in strengthening the implementation of the Convention. This generous contribution reflects France’s deep commitment to uphold the global norm against chemical weapons and achieve a world where chemistry is only used to advance progress, peace and prosperity.”

<https://www.opcw.org/media-centre/news/2025/04/france-contributes-eu591000-support-key-opcw-activities>

Pesticides used as chemical weapons harmed 17,000 families amid land conflicts in Brazil, says report

April 28, 2025

Land conflicts rose by 763% while the total of families affected jumped by 582% compared to last year

The Pastoral Land Commission’s (CPT, in Portuguese) annual report on land conflicts in Brazil’s countryside, published on Wednesday (23), revealed a frightening situation: there is a chemical war going on in the country. The targets are Quilombola communities, peasants, land reform settlers and Indigenous peoples. In 2024 alone, more than 17,000 Brazilian families were victims of this kind of crime. The main culprits are agribusiness people interested in expanding their agricultural frontiers.

In all, there were 276 incidents of this type involving 17,027 families on more than 3.3 million hectares. These figures represent a 763% increase in the number of conflicts and a 582% increase in the number of families affected by chemical warfare compared to 2023. That year, 32 conflicts occurred and 2,498 families were poisoned by pesticides.

“Pesticides are chemical weapons agribusiness uses against the peasant population, Indigenous peoples, Quilombola and traditional communities,” says the Permanent Campaign Against Pesticides and For Life, author of the article in the report. “We can say that these chemical weapons and their technological package add to the arsenal of firearms and other mechanisms that have been used for decades to destroy the ways of life of these populations and enable the expropriation of their territories,” she adds.

Of the 276 conflicts analyzed, 198 mention the terms “aerial spraying”, “plane” or “drone”. One of the cases involves seven rural workers who were victims of work analogous to slavery or overexploitation, where pesticides are among the components that characterize the labour violation. Another 44 cases refer to individualized poisoning, in various contexts, which occurs when there is detailed information about the victims, such as gender, age or social identification.

For researcher and post-doctoral fellow in human geography Larissa Bombardi, this practice is a manifestation of chemical colonialism, which perpetuates violence and inequality in the countryside.

“In classical colonialism, native peoples were violently expelled from their lands to make way for monocultures. This was the process by which Latin American countries emerged as such. So this conflict, this annihilation was how the large estate imposed itself on Brazil and other countries. What is happening today is that, in addition to the physical violence, which persists, there is also chemical violence,” says Bombardi, author of the book *Pesticides and Chemical Colonialism*.

The researcher criticizes the lack of supervision and the slow progress of Brazilian

authorities in banning dangerous pesticides in Brazil. “In the European Union, aerial spraying is banned. It’s past time to ban it [in Brazil].” Bombardi criticizes the lack of control over the use and application of pesticides considered highly toxic. “Obviously, our legislation provides for inspections but what we see is that these inspections don’t really happen, nor are there enough inspectors,” she denounces.

<https://www.brasildefato.com.br/2025/04/28/pesticides-used-as-chemical-weapons-harmed-17000-families-amid-land-conflicts-says-report/>

UK could stage provocation against Russia – Moscow’s spy chief

April 26, 2025

The UK could stage a provocation against Russia, and has a track record of conducting hostile activities against Moscow, the head of the country’s Foreign Intelligence Service (SVR), Sergey Naryshkin, has claimed. Speaking to TASS on Saturday, he did not rule out the possibility that the UK could deploy chemical weapons in Ukraine to frame Russia as the perpetrator. “*Britain could resort to provocations on the territory of any state if Britain is interested in it,*” the official said, adding that the SVR is well aware of London’s covert hostile activities aimed at Russia. In a statement on Thursday, the SVR also alleged that British and French intelligence agencies have been secretly working to undermine US President Donald Trump’s peace efforts in the Ukraine conflict and derail normalization between Washington and Moscow.

Commenting on recent Western media reports regarding the scale of Britain’s involvement in the Ukraine conflict, the Russian ambassador to the UK, Andrey Kelin, said last week that he was not at all

surprised by the revelations. *“We’ve known and publicly spoken about this for a long time. Previously, though, such statements were presented here as Russian propaganda, and now British journalists are writing about it,”* he added. Kelin also suggested that a lack of public discussion about London’s role in the Ukraine conflict in the wake of the media reports served as a *“tacit admission that Britain is engaging in unannounced hostile actions against us.”*

Earlier this month, The Times, citing unnamed Ukrainian and British military officers, reported that the extent of the UK’s involvement in the hostilities between Kiev and Moscow has been far more extensive than previously known. The newspaper claimed that *“UK troops were secretly sent to fit Ukraine’s aircraft with the [Storm Shadow long-range cruise] missiles and teach [Ukrainian] troops how to use them.”* London also reportedly played a key role in helping Ukraine prepare its much-touted 2023 counteroffensive against Russian forces, as well as in mediating between Kiev and Washington when the operation failed to meet US expectations.

<https://www.rt.com/russia/616359-svr-chief-naryshkin-uk-provocation-russia/>

OPCW supports gender equity in chemistry

April 24, 2025

Only 30% of the world’s researchers are women, and this gender gap is even wider in the so-called hard sciences such as chemistry. Increasing representation of female professionals in chemistry can contribute to accelerated innovation, improved performance and diverse perspectives in problem-solving in this field, concluded the OPCW Symposium on Women in Chemistry. Over the course of two days, almost 100 participants – joining both online

and in-person from around the world – discussed challenges and opportunities for women in chemistry and celebrated the remarkable achievements and leadership of female scientists in this field. In addition to presentations by the OPCW and other international organisations, as well as interactive panel discussions, participants also engaged in hands-on discussions with scientists at the OPCW Centre for Chemistry and Technology (ChemTech Centre) and had a first-hand look at how science underpins the Organisation’s work to achieve a world free of chemical weapons.

The speakers and participants at the Symposium highlighted the urgent need for systemic change to close the persistent gender gap in chemistry. Expanding mentorship opportunities, increasing the visibility of female role models especially from the global South, fostering clear pathways for career advancement, and implementing gender-inclusive policies and workplace cultures were identified as important measures to achieve equity in this field. *“The Symposium provided a powerful platform for sharing experiences, building networks, and learning from inspiring female leaders. One of my main takeaways is the importance of mentorship and collaboration in empowering women across all levels of the chemical profession. I am committed to applying what I have learned to strengthen support systems for women chemists in Indonesia – a country making ongoing efforts to strengthen women’s engagement and representation in the scientific community”* said Ms. Mas Ayu Elita Hafizah, Product Stewardship Manager at Jakarta and participant in the workshop.

“Giving a voice and opportunity to women in chemistry unlocks new pathways for innovation, safety, and sustainability. Ensuring equal access and representation drives meaningful progress in the field and

beyond – and it is our shared responsibility to lead and sustain this change,” said Ms Alice Rena, Programme Officer at the United Nations Interregional Crime and Justice Research Institute (UNICRI) and a facilitator of the group discussions at the event. “When women are empowered to contribute in a meaningful way, we unlock the full potential of science to serve humanity and build a more inclusive, resilient future,” she highlighted.

For the first time this year, the Symposium also featured emerging technologies, such as Artificial Intelligence (AI), as an important topic of discussion in relation to gender equity in chemistry. If implemented with transparency and accountability, AI could be a force multiplier for gender equity in science and provide solutions for long-standing problems, such as unconscious bias in recruitment, unequal access to mentorship and funding, and the underrepresentation of women in leadership and research visibility.

<https://www.opcw.org/media-centre/news/2025/04/opcw-supports-gender-equity-chemistry>

Former chemistry student pleads guilty to chemical weapons charge

April 23, 2025

A Wisconsin man who threatened to use chlorine gas against officials if they attempted to take his guns has pleaded guilty to possessing material used in the production of toxic chemicals, also called chemical weapons precursors. Prosecutors said James Morgan, a former chemistry student, had expressed a desire to form a militia and frequently used racist, and anti-government rhetoric. He also conducted experiments with lethal chemicals.

Morgan’s attorneys described him as a recovering alcoholic who “talks a big game, but his actions betray those words”. He is

already serving a two-year sentence for possessing homemade pipe bombs and faces up to life in prison on the chemical weapons charge. Federal Bureau of Investigation (FBI) officers were tipped off about Morgan as early as 2019, according to court documents. He posted online about creating a device to spray acid which would “chemically burn commies alive and melt their faces off for \$10”.

Over the years he is alleged to have made a variety of homemade weapons, including a gun that could create chlorine gas, and often boasted about them online.

In his posts on Facebook, Instagram and the fringe social media platform Gab, Morgan detailed racist and anti-government views. Morgan, who also went by the name Karactus Blome, studied chemistry at the University of Wisconsin-Whitewater in 2022 and 2023, according to court documents.

Despite his public posts – including comments about police officers visiting him in 2019 – and getting evicted from an apartment in part because he had a homemade flamethrower, Morgan was not arrested until December 2023. FBI agents confronted him at the McDonald’s where he worked in Janesville, Wisconsin, about 100 miles north-west of Chicago. In searches of his home and storage units, agents found pipe bombs with nails stuck to them, along with black powder, sulfuric acid, hydrochloric acid, other chemicals and guns.

He pleaded guilty last year and was sentenced to two years in prison for possession of the improvised explosive devices. When questioned by FBI agents, Morgan told authorities he and his late father made the bombs to protect themselves from Black Lives Matter and antifa activists. In court filings, Morgan’s lawyers portrayed him as a recovering alcoholic and a racist, yet argued that he did not commit any violent

acts and co-operated with investigators. Morgan pleaded guilty to the chemical weapons charge in court in Milwaukee on Monday. His sentencing date is set for 1 August.

<https://www.bbc.com/news/articles/cyvq9pm6ll10>

Inspectors Say More Than 100 Chemical Weapons Sites Could Remain in Syria

April 6, 2025

More than 100 chemical weapons sites are suspected to remain in Syria, left behind after the fall of the longtime president, Bashar al-Assad, according to the leading international organization that tracks these weapons. That number is the first estimate of its kind as the group, the Organization for the Prohibition of Chemical Weapons, seeks to enter Syria to assess what remains of Mr. al-Assad's notorious military program. The figure is far higher than any that Mr. al-Assad has ever acknowledged.

The sites are suspected to have been involved in the research, manufacturing and storage of chemical weapons. Mr. al-Assad used weapons like sarin and chlorine gas against rebel fighters and Syrian civilians during more than a decade of civil war. The number of sites, and whether they are secured, has been a mystery since rebels toppled Mr. al-Assad last year. Now, the chemicals represent a major test for the caretaker government, which is led by the group Hayat Tahrir al-Sham. The group is designated as a terrorist organization by the United States, but it has renounced its links to Al Qaeda.

The stakes are high because of how deadly the weapons are, particularly when used in densely populated areas. Sarin, a nerve agent, can kill within minutes. Chlorine and

mustard gas, weapons made infamous in World War I, burn the eyes and skin and fill the lungs with fluid, seemingly drowning people on land. Experts are concerned about the potential for militant groups to gain access to poorly secured chemical weapons facilities. In a surprise visit in March to the global chemical weapons watchdog headquarters at The Hague, Syria's foreign minister said that the government would "destroy any remains of the chemical weapons program developed under the Assad regime" and comply with international law.

Experts are cautiously optimistic about the government's sincerity. The current government allowed a team from the watchdog to enter the country this year to begin work documenting the sites, according to people with knowledge of the trip.

But Syria remains in a precarious spot, as violence erupted in the coastal region in recent weeks between government forces and groups aligned with Mr. al-Assad. And despite promises, the new government has not yet appointed an ambassador to the watchdog — a key first step that is seen as a sign of a country's commitment. Syria's defense ministry declined to answer written questions about the weapons, saying without elaboration that the questions were not under its purview. In the early years of the civil war, Mr. al-Assad's government declared the locations of 27 sites to the Organization for the Prohibition of Chemical Weapons, or O.P.C.W., which sent inspectors to visit and shut them down. But Mr. al-Assad continued to use chemical weapons until at least 2018, and research showed that his government kept importing essential precursor chemicals.

The current estimate of more than 100 sites comes from the watchdog and has been circulated recently among experts and international nonproliferation analysts. The

organization said it had arrived at the number based on outside researchers, nonprofit groups and intelligence shared by its member countries. Some sites are probably hidden in caves or other places that are tough to find using satellite images, according to researchers, former organization staff members and other experts. That increases the likelihood that some weapons are not secured.

<https://www.nytimes.com/2025/04/06/world/middleeast/syria-chemical-weapons-assad.html>

A Coda on Syria's Chemical Weapons

April 6, 2025,

It's been nearly 12 years since Barack Obama made what was arguably the most consequential foreign policy decision of his presidency: Rather than order airstrikes on Syria after Bashar al-Assad killed hundreds of people with sarin gas, which the president had said would be a "red line," Obama agreed to a Russian plan to arrange for the Organization for the Prohibition of Chemical Weapons, or O.P.C.W., to remove and dispose of those weapons.

Critics of the decision, including me, charged that Obama (and the isolationist Republicans who implicitly agreed with him) had shown America was a paper tiger whose threats would not be taken seriously by other dictators — including Vladimir Putin, who seized Crimea a few months later. But supporters crowed that diplomacy had achieved what military force could not.

"We struck a deal where we got 100 percent of the chemical weapons out," John Kerry, the then-secretary of state, boasted on NBC the following summer.

Or not. Long before Assad was overthrown, there was extensive reporting that, true to

the habit of most dictators, he had lied to the inspectors and surrendered only a fraction of his chemical weapons — a point demonstrated when Assad kept using them. Yet, aside from a limited U.S. strike ordered by Donald Trump in 2017, there were no consequences to the dictator for his cheating. Indeed, shortly before his unexpected ouster late last year, part of the world was moving toward re-normalizing ties with his regime.

Now comes news of just how extensive Assad's cheating seems to have been. Reporting from Damascus, The Times's Megha Rajagopalan found that, according to the O.P.C.W., "more than 100 chemical weapons sites are suspected to remain in Syria," information that's especially terrifying given the possibility that some of stockpiles could fall into terrorist hands. To its credit, the new government, whose leaders were once linked to Al Qaeda, promised the O.P.C.W. that it would destroy the remaining chemical stocks. Whether they make good on the promise remains to be seen.

The world is now approaching a similar crisis when it comes to Iran's growing stockpiles of a different kind of dangerous substance: enriched uranium. Trump has warned Tehran that he's prepared to use military force to end the regime's nuclear bids, while also saying he prefers a deal. So far, the administration is demanding direct talks, while Iran prefers indirect talks of the sort it conducted, to no effect, with the Biden administration.

However it turns out, the Trump administration should bear in mind the costs of the diplomacy that yielded the Obama team its fake victory back in 2013: years of additional depredations by the Syrian regime, and an American president who looked, to America's enemies, like a

pushover and a sucker. Whatever else Trump might want, surely that wouldn't be a reputation he'd relish for himself.

<https://www.nytimes.com/live/2025/04/07/opinion/thepoint?searchResultPosition=2#syria-chemical-weapons-stockpile-obama>

At 50, biological weapons treaty is an international success story

April 5, 2025

Half a century ago, the United States and the Soviet Union united on a text to ban biological weapons and it has remained a foundation of international law ever since.

The Biological Weapons Convention (BWC)—which came into force on 26 March 1975—prohibits an entire category of arms including viruses and toxins. All but nine UN Member States are party to the treaty.

Critics point out that the convention has no enforcement mechanism — that was something that Russia and the United States couldn't agree on.

But this is perhaps understandable, as many active agents that could be used in biological warfare exist in nature, says Daniel Feakes, head of the Biological Weapons Convention unit at the UN Office for Disarmament Affairs.

<https://news.un.org/en/audio/2025/04/1161916>

50-year-old bioweapons treaty is dangerously flawed, researchers say

April 4, 2025

Some of the world's deadliest toxins are found in marine creatures such as the puffer fish and the blue-ringed octopus. For many, there is no antidote. So when U.S.

Department of Defense (DOD) officials in 2019 confronted their Chinese counterparts with concerns about experiments with marine neurotoxins being conducted in China's military labs, they were hoping for reassurance. Prior discussions had included "good dialogue" on how to keep such research from taking a nefarious turn, says a former DOD official involved in the sensitive talks. But the neurotoxin queries hit a nerve. "We got completely slammed with disinformation," including assertions that the United States was operating its own bioweapons programs, the former official says. China broke off talks, and then in 2020 Chinese officials alleged that the U.S. Army had released the COVID-19 virus in Asia as a bioweapon—a charge the U.S. vehemently denied.

The bitter breakdown highlighted what many see as enduring weaknesses in the Biological Weapons Convention (BWC), a landmark arms control treaty that this year marks its 50th anniversary. Architects of the BWC, which has been ratified by China, the U.S., and 186 other countries, hoped it would eliminate weapons "repugnant to the conscience of mankind." But the convention will need much stronger teeth if it is to keep humanity safe, said researchers who gathered last week at a meeting in Washington, D.C., sponsored by the U.S. National Academies of Sciences, Engineering and Medicine to review the convention's first 5 decades.

One major flaw, speakers said, is that the BWC lacks a mechanism to verify compliance—or even meaningful transparency measures. If international monitors can't gain access to labs, or glean clues to what is happening there, it's hard to judge when dual-use research—peaceful science that can have military applications—crosses a line. Adding to the urgency are rapid advances in the life sciences including

synthetic biology and gene editing, enhanced by artificial intelligence (AI). They could lead to “weapons that are nastier than what’s found in nature—more transmissible and more deadly. Or resistant to existing vaccines or drugs,” says Jaime Yassif, who leads the biosecurity program at the nonprofit Nuclear Threat Initiative (NTI).

BWC working groups and nonprofits have been exploring a variety of approaches to strengthening the pact. Monitors could use AI to sniff out suspicious signals in trade data, scientific articles, and satellite imagery, for example, while companies that sell DNA sequences could use sophisticated screens to weed out those that might be used to construct weapons. Drug companies could be coaxed to stand in as proving grounds for inspections should treaty parties adopt site visits as a way to force violators to move or shut down work.

But efforts to strengthen the BWC face stiff headwinds. In December 2024, a treaty meeting ended in acrimony after Russia derailed consensus on measures for international cooperation and assistance in implementing the BWC and for the provision of science advice to treaty members. In his closing statement, Italy’s top negotiator, Leonardo Bencini, lamented the impasse. “If a biological weapon were to be used tomorrow, we would be caught completely unprepared. The world would look at us and would ask: ‘What have you done to prevent this?’”

<https://www.science.org/content/article/50-year-old-bioweapons-treaty-dangerously-flawed-researchers-say>

North Korea continues to pursue covert biological weapons program: US report

April 4, 2025

North Korea continues to maintain a covert biological weapons program in violation of international treaties, according to a newly released U.S. government report. Biological weapons use pathogens such as bacteria or viruses to sicken or kill. Their invisible nature and devastating potential make them one of the most insidious forms of weaponry.

“The United States assesses that the DPRK has a dedicated, national-level offensive [biological weapons] program,” the State Department said in its 2025 report on global compliance with arms control and disarmament agreements.

The Democratic People’s Republic of Korea, or DPRK – North Korea’s official name – has long drawn suspicion for its clandestine research including nuclear weapons.

According to the report, the regime possesses “the technical capability to produce bacteria, viruses, and toxins that could be used as BW [biological weapons] agents” and is also capable of genetically engineering biological materials.

Even more concerning, it said, is Pyongyang’s potential capacity to deploy these weapons using unconventional and covert delivery systems. “Pyongyang probably is capable of weaponizing BW agents with unconventional systems such as sprayers and poison pen injection devices, which have been deployed by the DPRK for delivery of chemical weapons and could be used to covertly deliver BW agents,” the report said.

Despite being a State Party to the Biological Weapons Convention, or BWC, since 1987 – a treaty that bans the development, production, and stockpiling of such weapons – North Korea has shown little intention of abiding by its commitments.

After submitting a blank confidence-building measure report in 1990, claiming there was “nothing relevant” to disclose, the country has failed to submit any further reports for more than three decades. “The DPRK is assessed to have had BW capabilities since at least the 1960s,” the report said. The State Department concluded that North Korea’s actions violate Articles I and II of the convention. The U.S. would continue to monitor developments closely and assess prospects for diplomatic engagement to address Pyongyang’s breach of its obligations, the department said.

<https://www.rfa.org/english/korea/2025/04/21/north-korea-biological-weapon/>

Philippines contributes •10,000 to support OPCW Scientific Advisory Board.

April 4, 2025

The Government of the Philippines contributed •10,000 to the Trust Fund for the Scientific Advisory Board (SAB) of the Organisation for the Prohibition of Chemical Weapons (OPCW). The contribution will be used to support the activities of the SAB and its Temporary Working Groups. The voluntary contribution was formalised on 1 April 2025 in a signing ceremony held between the Ambassador, Permanent Representative of the Philippines to the OPCW, H.E. Mr Jose Eduardo Malaya, and the OPCW Director-General, Ambassador Fernando Arias, on the sidelines of the 39th session of the SAB at the OPCW’s Headquarters in The Hague.

“This voluntary contribution demonstrates the Philippines’ commitment to ensuring that the OPCW gets the best scientific and technological advice, through the Scientific Advisory Board, which is crucial for the effective implementation of the Chemical

Weapons Convention (CWC). It underscores the importance of science and technology in safeguarding mankind from the scourge of weapons of mass destruction, notably chemical weapons, and in enabling people in harnessing the peaceful uses of chemistry,” said Ambassador Malaya.

“I wish to thank the Philippines for this contribution, which will support the ongoing work of the SAB. Monitoring rapid advancements in science and technology is of critical importance to the work of the Organisation and its mission to permanently eliminate chemical weapons,” said Director-General Arias. “This is especially important in the context of emerging technologies, such as AI, which could present both threats and opportunities in relation to the implementation of the Chemical Weapons Convention.”

<https://www.opcw.org/media-centre/news/2025/04/philippines-contributes-eu10000-support-opcw-scientific-advisory-board>

Toxic War

April 3, 2025

Burns, asphyxiation, complete paralysis of the body. ‘*It’s like you’re conscious, but you can’t do anything,*’ says Svetlana, a refugee from Ugledar. She and her husband are among the hundreds of civilians who were unfortunate enough to experience the effects of chemical weapons used by the Ukrainian Armed Forces. The couple was completely paralyzed when a substance was sprayed into the basement where they were hiding. A few days later, Kiev’s military came to assess the results of their cruel experiment.

Ukraine is systematically violating its obligations under the Chemical Weapons Convention. Russian military forces have

documented more than 400 cases of Ukrainian troops using toxic substances and chemicals both in liberated territories and on the battlefield. Russian soldiers have discovered laboratories and chemicals in abandoned UAF positions. One of them is chloropicrin, a substance that can be lethal at high concentrations in enclosed spaces. Ukrainian drones are spraying this and other toxic agents over residential areas and Russian troops positions.

Ukraine has become a real testing ground for the West's latest military innovations, with civilian lives treated as expendable resources.

<https://www.rtt.com/shows/documentary/615106-ukraine-toxic-chemical-weapons/>

The Biological Weapons Convention at 50: Taking stock and looking ahead

April 2, 2025

The Biological Weapons Convention (BWC) entered into force in 1975 and has served as the cornerstone of global efforts to prohibit and prevent biological weapons for nearly 50 years. The treaty has brought together states and stakeholders to collaborate on preventing the hostile exploitation of biology for half a century and will continue to do so in the face of a rapidly evolving scientific and technological landscape and a changing geostrategic context.

This UNIDIR-United Nations Office for Disarmament Affairs (UNODA) event assessed progress within the Working Group on the Strengthening of the BWC, established at the 9th BWC Review Conference, and outlined the next steps for reinforcing this critical treaty. The event featured opening remarks from the Chair of the BWC, brief updates from the Friends of the Chair on the agenda items of the Working

Group, and a Q&A session with the participants.

<https://unidir.org/event/the-biological-weapons-convention-at-50-taking-stock-and-looking-ahead/>

Disarming Syria Under the Al-Julani Regime – The Biological Weapons Dimension

March 31, 2025

While the Syrian chemical weapons program has been targeted and degraded since 2013, almost nothing has been done about Syria's biological weapons program. The recent regime change in Syria could provide an opportunity to finally locate and destroy Syria's biological weapons programme. Syria has now been taken over by the Al-Julani regime. That dramatic change could provide an opportunity to expose the full scope of the BW program of the ousted Assad regime in order to wipe it out.

The underlying platform for the Syrian BW program is fairly plain. Syria completed an initial stock of self-made CW in 1986. Fifteen years later, Syria started to build a North Korean-modeled plutonium reactor with the aim of achieving nuclear weapons. Throughout those 15 years and thereafter, particularly after the destruction of the nuclear facility, Syria invested deeply in its chemical arsenal. In the 1990s, it apparently added an advanced biological arsenal as well.

Thus, in parallel with its secret nuclear program (which was critically damaged in 2007), the main military thrust of the former Syrian regime's strategy was to reinforce its ballistic-chemical-biological nexus with the goal of maximizing its power and preparedness while minimizing transparency and vulnerability. There is a concrete connection between the Syrian Atomic Energy Commission (AECS) and the

Syrian BW program, particularly – though not exclusively – through the AECS’s Molecular Biology and Biotechnology Department (MBBD). The following affair is likely to have contributed to this connection.

Dr. Ayman Habal, a brilliant scientist at the SSRC who invented the Syrian binary sarin nerve agent system, was reputedly recruited by the CIA as an informant. Habal became excessively wealthy as a result of this arrangement. He was interrogated by Syrian military intelligence about payoffs from foreign companies ostensibly in return for contracts to sell supplies to his institute. One way or another, this tangled affair (along with other factors) prompted a remarkable shift in which the highly classified Syrian BW program migrated in part from the SSRC to AECS in the form of the MBBD. (It was also claimed that Habal had been recruited by the Mossad under the name Saleh Al-Najm. Habal was jailed in Syria and eventually executed.)

Thus, the AECS, which had been founded around 1979, thereupon having its Molecular Biology and Immunology Division (the latter headed during 1995-1996 by the aforementioned Dr. Hani Rizk, from the SSRC), that division changed in 1999 into the Microbiology and Immunology division, which was affiliated with the large (3,000 m²), newly constructed Department of Molecular Biology and Biotechnology. Notably, while the AECS was presented as “promoting [the] safe, secure, and peaceful use of atomic and nuclear related technologies...[and their] applications in peaceful fields”, 90-95% of MBBD’s activities were not related in any way to atomic and nuclear technologies. They related to pathogens, pathogenic and non-pathogenic surrogates, and their interplay. MBBD gained a wealth of scientific know-how from Belgian academic labs (often together with Iranian scientists).

<https://besacenter.org/disarming-syria-under-the-al-julani-regime-the-biological-weapons-dimension/>

50th Anniversary of the Biological Weapons Convention

March 26, 2025

To mark the 50th anniversary of the entry into force of the Biological Weapons Convention on 26 March 2025, a special commemorative event was organized by the United Nations Office for Disarmament Affairs’ Geneva Branch and the BWC Implementation Support Unit. The event was organized with funding from the European Union. Speakers from the diplomatic community, academia and civil society shared insights on the achievements, challenges and current trends related to the Convention, with presentations and interactive discussion on the Convention’s past, present and future. Many representatives of BWC States Parties attended and shared their views at the event.

BWC States Parties also shared official statements to commemorate the 50th anniversary of the Convention, including the three Depositary Governments (the Russian Federation, the United Kingdom of Great Britain and Northern Ireland and the United States of America). A publication was produced by the United Nations Office for Disarmament Affairs, with the support of the European Union, to mark the historic occasion. Contributions from various stakeholders highlight the achievements and obstacles encountered over the past fifty years, as well as current discussions related to the strengthening of the Convention and potential future opportunities and challenges.

<https://disarmament.unoda.org/50th-anniversary-of-the-biological-weapons-convention/>

Opening remarks at the commemorative event to mark the 50th anniversary of the Biological Weapons Convention by Izumi Nakamitsu

March 26, 2025

Today's event is not just a celebration of the Convention's longevity; it is an opportunity to reflect on its achievements and, crucially, to discuss ways to strengthen the Convention for the future. I thank the European Union for its really generous support to the organization of our celebrations and other activities to mark the anniversary. As we meet in the Palais des Nations, just across from the Council Chamber where the Convention was actually negotiated, we are reminded of its great significance as a hub for multilateralism. Geneva is actually the birthplace of many key disarmament instruments that have stood the test of time. Step by step, with each instrument, with each solution, each agreement, we build a cohesive and morally responsive framework that aims at protecting lives and livelihoods. The Biological Weapons Convention remains a testament to the conscience of humankind.

For fifty years, the global norm has stood firm that the deliberate use of disease as a weapon against humans, animals or plants remains an affront to humanity. This is a moral and legal safeguard that we cannot afford to let erode, especially in today's volatile geopolitical climate. Rising global tensions are putting multilateral disarmament under immense stress, and multilateralism in general under stress. International cooperation and norms that we have long relied upon are facing unprecedented challenges. In response, we

must ensure the instruments of the twentieth century can respond to today's global 21st century challenges.

In this regard, we find hope and renewed purpose, I would say, in the recent adoption of the Pact for the Future. Through the Pact, Member States, you yourselves, reaffirmed that any use of chemical and biological weapons by anyone, anywhere, under any circumstances is unacceptable. One of the document's most critical elements is an emphasis on addressing emerging and evolving biological risks, if you remember. It reminds us to remain vigilant that the constant advances in science and technology benefit society, rather than threaten our existence. Therefore, it will be vital for States Parties to agree to set up a new scientific advisory mechanism for the Convention as soon as possible. The establishment of a Working Group on the Strengthening of the Convention is one critical step forward. It serves as a significant forum to discuss effective, concrete and also practical actions on key areas such as verification and compliance, as well as capacity-building and international cooperation and assistance. It is only by making the Convention more robust that we can ensure it will remain fit for purpose in a rapidly evolving and changing world. Steps have also been taken to diversify the stakeholders involved in the implementation and strengthening of the Convention over the past fifty years.

Young scientists from the Global South have been engaged and empowered through the Youth for Biosecurity Fellowship, which has established a global network of over 100 participants over the last five years. Such efforts have been critical for raising awareness and fostering ownership among policymakers and also relevant stakeholders, boosting global capacities for biosafety and biosecurity. So, in its 50th year, the Convention welcomed its 188th State Party.

The near universal adherence to the instrument enshrines the principle that the use of disease as a weapon is not only unacceptable but repugnant to humanity. So, let's use this occasion and opportunity to inspire renewed determination and recognize that the use of biological weapons must not only be unthinkable but also impossible.

<https://front.un-arm.org/wp-content/uploads/2025/03/HR-Remarks-26.03.2025.pdf>

50 Years of the Biological and Toxin Weapons Convention

March 26, 2025

Today, March 26, the half-century anniversary of the entry into force of the Biological and Toxin Weapons Convention is celebrated.

In its first fifty years, the Convention has contributed decisively to preventing biological weapons from being incorporated into military doctrines or used in theaters of war. Although it does not yet have verification mechanisms, the Convention is upheld by the strength of the norm, the highest moral standard, and the political will of the international community. New risks require that national and international bodies remain up to date with the ongoing scientific transformation.

Under Brazil's presidency, the Working Group on Strengthening the Convention is making progress in negotiating recommendations to consolidate this instrument, including mechanisms for international cooperation and assistance and for monitoring scientific and technological developments.

In times of increasing biological risks, Brazil will continue working to strengthen the Biological and Toxin Weapons Convention.

<https://www.gov.br/mre/en/contact-us/press-area/press-releases/50-years-of-the-biological-and-toxin-weapons-convention>

Statement by the Ministry of Foreign Affairs of the Russian Federation on the occasion of the 50th anniversary of the entry into force of the Biological and Toxin Weapons Convention

March 26, 2025

26 March 2025 marks the 50th anniversary of the entry into force of the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (BTWC). The Russian Federation, as one of its initiators and depositaries, congratulates all States Parties to the Convention on this momentous occasion.

The BTWC became the first international legally binding instrument to outlaw an entire category of weapons of mass destruction. For half a century of its existence, the Convention has contributed significantly to the process of general and complete disarmament, reducing the risks of the use of biological agents and toxins for military purposes. The BTWC still remains one of the fundamental pillars in the sphere of international security, and its importance has been steadily increasing in the current realities. The COVID-19 pandemic demonstrated the scale and nature of possible negative consequences of activities with dangerous pathogens and toxins, as well as their potential use as biological weapons.

It is unfortunate that 50 years after the entry into force of the BTWC we cannot say that the problem of biological weapons is completely removed from the international agenda. Risk factors include the potential inappropriate use of rapidly developing biotechnologies, transboundary nature of biological threats, and the possible use of biological agents and toxins as weapons by terrorists. The military biological activities of some states outside their national territories which is conducted under a specious excuse of cooperation «for preventive and other peaceful purposes» and raises serious questions in the context of compliance with the BTWC is equally disturbing.

Today efforts for universalization and strengthening of the BTWC regime are more required than ever before. As main priorities in this area we consider the development of a universal legally binding and non-discriminatory Protocol to the Convention with an effective verification mechanism, as well as strict compliance of the State Parties with their obligations under the BTWC at national level.

In order to strengthen the institutional framework of the Convention, the Russian Federation proposed a number of specific initiatives, such as the creation of mobile biomedical units within the BTWC to provide assistance in case of the use of biological weapons and to contribute to combating epidemics of various origins, the establishment of a Scientific Advisory Committee and a mechanism to investigate alleged violations of obligations under the Convention, the improvement of confidence-building measures through providing by the State Parties to the BTWC with information on military biological activities outside their national territories.

In the context of strengthening the BTWC we emphasize the particular importance of achieving tangible results within the framework of the relevant specialized Working Group established at the BTWC Ninth Review Conference. We are convinced that only decisions taken collectively on the basis of consensus could credibly guarantee faithful compliance with the Convention, as well as prevent the development and the use of biological weapons. At the same time it is important to avoid any artificial restrictions for the development of biological technologies for civil purposes as well as for international cooperation, as envisaged in the relevant provisions of the BTWC.

https://mid.ru/en/foreign_policy/news/2005417/

Statement by the Republic of South African on behalf of the African Group

March 26, 2025

The Group expresses appreciation to the United Nations Office for Disarmament Affairs for convening this momentous event as we mark the 50th anniversary of the Biological Weapons Convention. We further appreciate the European Union for funding this important event. This milestone is a testament to the enduring importance of the BWC as the first multilateral disarmament treaty banning an entire category of weapons of mass destruction (WMD). The convention remains a cornerstone in promoting global security, preventing biological warfare and advancing disarmament; by prohibiting the development, production, acquisition, transfer, stockpiling and use of biological and toxin weapons. The African Group remains concerned about the potential risks and impacts posed by biological threats. Our willingness to continue to pursue the peaceful uses of biotechnology is testament to our

collective resolve to promote biosecurity and biosafety in the African region. Therefore, it is in this context that the Group wishes to underscore the importance of combating increasing threats of terrorism and proliferation of biological weapons. The Group welcomes efforts to strengthen the Convention and continues to engage constructively in the Working Group on Strengthening of the BWC. In this regard, we call upon all States Parties to work together to ensure that all States are equipped to prevent the abuse of biological and life sciences and technologies and promotes its peaceful uses. The African Group will work together with all States Parties to ensure that the Working Group is able to achieve its mandate as set out at the 9th BWC Review Conference in 2022, which is paramount for all African States Parties.

The African Group appreciates the project implemented by the United Nations Office for Disarmament Affairs, with funding from the Global Partnership against the Spread of Weapons and Materials of Mass Destruction, This initiative spanning from 2022 until 2026, aims to increase the number of African States Parties, a promote and enhance the submission of BWC Confidence-Building Measures and national contact point designations by African States Parties. It also sought to enhance the status of BWC implementing national legislation in countries in the region. Since the inception of this project, there have been a series of workshops undertaken, including a Coordination workshop (July 2022) in Geneva, as well five regional workshops covering the African continent between 2022 and 2024, which benefitted all participating countries and assisted to build capacities and skills to implement the Convention. Madam Moderator, we appreciate the presentations delivered today, which have reminded us about the historical importance of the BWC, the present challenges and dangers, as well

as the benefits of collaboration and the promotion of the peaceful uses. What is evident is that the convention remains an invaluable contribution to ensuring a world that is peaceful, prosperous and united. The African Group reiterates the continent's commitment and support for efforts aimed at strengthening the universalisation and effective implementation of the Convention in Africa and beyond. We also take this opportunity to thank the United Nations Office for Disarmament Affairs, in particular the BWC Implementation Support Unit for their ongoing support and guidance to African States Parties, as we mark the golden anniversary of this important Convention.

<https://front.un-arm.org/wp-content/uploads/2025/04/AG-Statement-BWC-50th-Anniversary-Event.pdf>

50th anniversary of the entry into force of the Biological and Toxin Weapons Convention (BTWC): UK statement

March 26, 2025

Today marks the 50th anniversary of the entry into force of the Biological and Toxin Weapons Convention (BTWC) – the first multilateral disarmament treaty to ban an entire category of weapons of mass destruction. As a founder of the convention, and for 50 years since, the UK has been at the forefront of efforts to ensure its effectiveness and collective action to eliminate the threat from biological weapons. The BTWC's role in preventing biological agents and toxins from being developed, produced, or used as weapons has been a critical element in our collective security over the last 50 years.

The BTWC's call to action is that “no effort should be spared to minimise this risk.” This is as important now as it was 50 years ago. Threats posed by biological weapons have

evolved and diversified. Rapid advances in science and technology offer potential benefits for societies but may also increase the threats posed by those intending to misuse the life sciences for hostile purposes. The COVID-19 pandemic highlighted the devastating impacts that an infectious disease outbreak can have on our societies and economies. It revealed significant gaps in global preparedness and response. It is in every country's interest that the BTWC is effective and that its prohibitions continue to be upheld.

This requires collective action through the Convention. We need to strengthen international cooperation and review science and technology, as well as agree on stronger verification mechanisms to address potential risks. The current Working Group on the strengthening of the Convention provides an important way to achieve this. The UK fully supports the Brazilian Chair of the Working Group, Ambassador Frederico Meyer. The UK remains steadfast in its commitment to strengthen the BTWC and its implementation for the next 50 years and beyond. We call on all governments that have not yet joined the convention to do so without delay. Through collective action, we can prevent the use of these abhorrent weapons that violate every principle of humanity.

<https://www.gov.uk/government/news/50th-anniversary-of-the-entry-into-force-of-the-biological-and-toxin-weapons-convention-btwc-uk-statement>

Commemorating the 50th Anniversary of the Biological Weapons Convention

March 26, 2025

Fifty years ago, the international community took a historic step toward eliminating biological weapons. The entry into force on March 26, 1975, of the *Convention on the Prohibition of the Development, Production*

and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction – commonly referred to as the Biological Weapons Convention (BWC) – attested to the determination of the international community to prevent the use of biological weapons by completely banning an entire class of weapons of mass destruction. This ban is a fundamental cornerstone of global peace and security, keeping America and the world safe.

The BWC's negotiation built on earlier efforts to prevent biological warfare, including the 1925 *Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare*. Together, these momentous agreements reflect the conviction of the international community that the use of biological agents and toxins as weapons by anyone at any time, whether by State or non-State actors, is unacceptable.

The United States remains firmly committed to the BWC and the international norm against use of biological weapons. We unilaterally renounced biological weapons in 1969, before the BWC was negotiated, and over the past 50 years, we have remained a steadfast leader in and supporter of the BWC.

Today, we seek to work with all responsible nations to address the threat of biological weapons and ultimately achieve a world completely free of this scourge. We call on all States Parties to reaffirm their commitment to the Convention and to redouble their national, bilateral, and multilateral efforts to prohibit and prevent the development, acquisition, and use of biological weapons. Our collective security demands no less. As we commemorate the BWC's last 50 years, the United States pledges to remain at the forefront of global efforts to eliminate biological weapons from the world once and for all.

<https://www.state.gov/commemorating-the-50th-anniversary-of-the-biological-weapons-convention/>

Secretary-General's message on the 50th Anniversary of the Biological Weapons Convention

March 26, 2025

Today marks the fiftieth anniversary of the entry into force of the Biological Weapons Convention, the first multilateral disarmament treaty to ban an entire category of weapons of mass destruction.

Over the past five decades, the Convention has contributed towards collective efforts to reject the use of disease as a weapon.

However, we must remain vigilant. Recent advances in biology hold great promise but also potential risks. The Biological Weapons Convention helps to ensure that such advances are only used for peaceful purposes.

I urge all States parties to engage actively in the Working Group on the Strengthening of the Convention, and for the Group to accelerate its work so that it can fulfil its mandate in this anniversary year. These efforts reinforce the commitment in the Pact for the Future, adopted at the United Nations last year, for all countries to pursue a world free of biological weapons.

Fifty years after its entry into force, the Biological Weapons Convention now has 188 States parties. I call on the nine governments that have not yet joined the Convention to do so without delay. Together, let us stand united against biological weapons.

<https://www.un.org/sg/en/content/sg/statement/2025-03-26/secretary->

[generals-message-the-50th-anniversary-of-the-biological-weapons-convention](https://www.state.gov/commemorating-the-50th-anniversary-of-the-biological-weapons-convention/)

The 50th Anniversary of the Biological Weapons Convention

March 26, 2025

The Biological Weapons Convention (BWC) is a cornerstone of international security, helping to keep Americans and the international community safe from biological weapons. Together with the 1925 Geneva Protocol, these historic agreements have made essential contributions to advancing the cause of peace and security by prohibiting an entire category of weapons of mass destruction and supporting an international norm against the use of biological agents and toxins as weapons by anyone at any time. As stated in the preamble of the BWC, “such use would be repugnant to the conscience of mankind.” The United States is proud of its record as a world leader against the scourge of biological weapons.

Eliminating biological weapons from the world: The United States is a BWC depositary State and strives to pursue universalization of the BWC. Since the BWC entered into force on March 26, 1975, its membership has grown to nearly 190 countries. BWC membership continues to expand today, with 5 new countries joining since 2020. Even so, the United States remains concerned that some countries, including some BWC States Parties, as well as non-state actors, have continued to pursue biological weapons and the United States seeks to address this threat.

<https://www.state.gov/50th-anniversary-of-the-biological-weapons-convention/>

OPCW Executive Council Visits Germany's Old Chemical Weapons Destruction Facilities

March 20, 2025

At the invitation of the German government, a delegation from the Executive Council (EC) of the Organisation for the Prohibition of Chemical Weapons (OPCW) visited the GEKA Destruction Facility and Dethlinger Pond site in Munster, Germany, from 13 to 14 March 2025. The delegation was led by H.E Ambassador Andrés Terán Parral, Chairperson of the Executive Council, Permanent Representative of the Republic of Ecuador to the OPCW, and was composed of Ambassadors, Permanent Representatives and delegates from the Executive Council's 41 member states from all regional groups. The Director-General of the OPCW, Ambassador Fernando Arias, also participated in this visit.

The EC delegation was received by Ms. Susanne Riegraf, Deputy Federal Commissioner for Arms Control of Germany, on 13 March. The delegates were then briefed on the history of Old Chemical Weapons (OCW) in Germany, including an overview of the OCW handled at the Agency for the Disposal of Chemical Warfare Agents and Armaments Legacy (Gesellschaft zur Entsorgung von chemischen Kampfstoffen und Rüstungs- Altlasten, GEKA), which is responsible for the destruction of chemical warfare agents and legacy armaments, including those recovered from Dethlinger Pond. The briefing, which covered both historical and theoretical aspects, was delivered by officials from the German Federal Foreign Office.

Dethlinger Pond is the world's largest recovery site of OCW. Upon the Chemical Weapons Convention's (CWC) entry into force in 1997, Germany declared significant OCW holdings, all of which were destroyed

by 2007. Beyond this, Germany continues to make ad-hoc OCW discoveries and declares these findings along with the destruction of recovered munitions. GEKA has worked tirelessly to ensure the safe destruction of OCW materials recovered from the Dethlinger Pond site, and beyond.

Throughout the site visit, the EC delegation received detailed presentations from the GEKA teams on the operations and progress made at the Dethlinger Pond site. They witnessed how chemical weapons are retrieved, secured and taken to GEKA for final identification and destruction. The delegation was briefed on the measures taken to accelerate the destruction process, including the technologies used for OCW destruction and the strategies implemented to safeguard the health and safety of people and the environment in the vicinity of the Dethlinger Pond site.

The EC delegation witnessed the critical role of the facilities in supporting Germany's fulfilment of its obligations under the CWC to eliminate OCW. The Chairperson of the Executive Council stated, "This visit has provided the delegation with a unique opportunity to gain firsthand insight into the complex processes involved in the safe disposal of OCW, deepening our understanding of the challenges in managing those hazardous materials. Approximately 30,000 chemical weapons are expected to be recovered through the ongoing excavation programme. The work here in Germany serves as a tangible example of global efforts to eliminate threats of chemical weapons."

<https://www.opcw.org/media-centre/news/2025/03/opcw-executive-council-visits-germanys-old-chemical-weapons-destruction>

Commemoration of the 1988 Halabja Chemical Weapons Attack: Statement

by OPCW Director-General, Fernando Arias

March 16, 2025

On 16 March 1988, thousands of defenceless men, women and children were mercilessly killed in Halabja, Iraq, by the use of chemical weapons. Many more sustained horrific lifelong injuries and trauma. Nine years after the tragic chemical weapons attack, in 1997, the Chemical Weapons Convention (the Convention) entered into force. All States Parties to the Convention solemnly and voluntarily committed to never develop, produce, acquire stockpile, transfer or use chemical weapons.

We seize this opportunity to reflect on our collective efforts to avoid recurrence of the use of chemical weapons anywhere in the world. From 65 countries in 1997, to 193 countries today, the Organisation's membership has expanded rapidly. In July 2023, we completed the destruction of all declared chemical weapons stockpiles, representing a historic global achievement for international peace and security. To date, we have conducted 4,786 inspections of chemical industry facilities. This ensures that the most dangerous chemicals legitimately used by the industry are not diverted for malicious purposes. In 2013, in recognition of the OPCW's achievements, the Organisation was awarded the Nobel Peace Prize for its extensive efforts to eliminate chemical weapons.

Regrettably, in recent years, the world has witnessed more victims of chemical weapons attacks in several places. In the ongoing war in Ukraine, there is fear of use of chemical weapons. The evolving political landscape in Syria provides an opportunity for the OPCW to complete the elimination of Syria's chemical weapons programme once for all and to participate in working towards

accountability for the use of chemical weapons.

Even a single victim of chemical weapons, is one too many. The OPCW's response to their use should serve as a deterrent to those who seek to acquire and use chemicals for harmful purposes. In some cases, the Organisation has investigated allegations of use and identified perpetrators. In others, we have assisted in identifying the toxic chemicals used. We have also enhanced national capacity to protect citizens in case of chemical attacks or accidents. In 2025 and beyond, we will continue to build on all our efforts to achieve a world free of chemical weapons for current and future generations. The victims of the Halabja chemical weapons attack deserve no less.

<https://www.opcw.org/media-centre/news/2025/03/commemoration-1988-halabja-chemical-weapons-attack>

Post-Assad Syria faces critical test over eliminating chemical weapons

March 7, 2025

Briefing ambassadors, Izumi Nakamitsu, UN High Representative for Disarmament Affairs, welcomed steps taken by the country's new authorities to engage with the Organisation for the Prohibition of Chemical Weapons (OPCW) and work toward full compliance with international law. "Syria has started to take its steps towards this objective," she said, emphasising the importance of seizing this moment to close all outstanding issues related to the country's chemical weapons dossier. Ms. Nakamitsu was briefing the Council pursuant to resolution 2118.

Adopted unanimously in September 2013, the resolution mandated the elimination of Syria's chemical weapons programme following a deadly sarin gas attack in Ghouta,

which reportedly killed 1,127 people and left more than 6,000 with serious health complications. The resolution required Syria to fully declare and destroy its chemical arsenal under OPCW supervision and warned of consequences, including under Chapter VII of the UN Charter, which provide for enforcement measures to address threats to international peace and security.

Since Syria joined the CWC in 2013, the chemical weapons watchdog has repeatedly raised concerns about the accuracy and completeness of its declarations, Ms. Nakamitsu said. Despite 20 amendments to its initial submission, the OPCW Declaration Assessment Team found that the former regime had failed to provide sufficient and accurate information. As a result, 19 unresolved issues remain, including concerns over undeclared chemical warfare agents and munitions. In addition, OPCW investigations documented multiple instances of chemical weapons use in Syria, several of which were carried out by Syrian Armed Forces.

“It is ‘undeniable’ that the previous authorities in Syria did not declare the full extent of its chemical weapons programme and that they continued to use, and possibly produce, chemical weapons after joining the Convention,” Ms. Nakamitsu told the Council, citing reports from the OPCW Technical Secretariat. High Representative Nakamitsu briefs the Security Council. “The situation left by the previous Syrian authorities is extremely worrying,” she continued, noting the willingness signalled by Syria’s new authorities to turn the page. During a visit to Damascus on 8 February, the OPCW Director-General met top Syrian officials, who assured him of their commitment to dismantling the chemical weapons programme, she added.

The caretaker Foreign Minister formally appointed a focal point for chemical weapons issues within the government and held meetings with OPCW on implementing its “9-point Action Plan for Syria.” An OPCW technical team is expected to be deployed to Damascus, to work on setting up a permanent presence in the country and planning joint site inspections. In spite of the promising developments, Ms. Nakamitsu cautioned that the road ahead will be challenging, as Syria continues to face significant humanitarian, security and recovery challenges. Developments on the ground exemplify these concerns, with heavy fighting reported in coastal areas between Syrian Caretaker Authority forces and soldiers loyal to the former regime. According to media reports, at least 70 people have been killed.

Among them was a UN Relief and Works Agency (UNRWA) staff member who was caught in a crossfire on his way back from work. UN Special Envoy for Syria Geir Pedersen warned of the volatile situation on the ground, stressing the urgent need for restraint. “We are still determining the precise facts, there is clearly an immediate need for restraint from all parties, and full respect for the protection of civilians in accordance with international law,” he said in a statement.

Back in the Security Council, Ms. Nakamitsu reminded ambassadors that Syria will need “strong support” from international partners. “In order to accomplish all the tasks needed to rid Syria of all chemical weapons, the OPCW Technical Secretariat and the new authorities in Syria will require strong support and additional resources from the international community,” she said.

She urged Council members to unite in supporting this unprecedented effort, emphasising that the elimination of chemical

weapons in Syria is not just a national priority but a matter of regional and global security. “The United Nations stands ready to provide support however we can and will continue to do our part to uphold the norm against the use of chemical weapons – anywhere, at any time,” she concluded.

<https://news.un.org/en/story/2025/03/1160896>

United States Mission to the United Nations: Remarks at a UN Security Council Briefing on Chemical Weapon Use in Syria

March 7, 2025

President Trump responded to the Assad regime’s barbaric use of chemical weapons against innocent civilians in Syria with military strikes in 2017, and then again in 2018 with our allies France and the United Kingdom./ This is how to achieve peace through strength. Madam President, we have a historic opportunity to close this dark chapter in history and to start a new one – creating a Syria that is safer for its people and more secure for the region and the world.

All elements of the Assad regime’s chemical weapons program must now be secured, declared, and safely destroyed under international verification. This imperative is two-fold:/ To bring Syria into compliance with its obligations under the Chemical Weapons Convention and, critically, to ensure that any remaining elements do not end up in the wrong hands. The window of opportunity is short./ All stakeholders need to act quickly to facilitate the work of the OPCW. The United States welcomes the initial positive steps taken by the OPCW and the interim Syrian authorities.

We are encouraged that, as the High Representative just noted, following OPCW Director-General Arias’ historic visit to Damascus, the Syrian interim authorities named a “focal point for chemical weapons” in order to commence this work. The OPCW has a tremendously important mission before it, one that contributes directly to global security, and one that requires support from all./ And we, in this Council, have a responsibility to finish what we started back in 2013 when the Council adopted Resolution 2118 with the aim of eliminating Syria’s chemical weapons program and holding those responsible for use of chemical weapons to account./ We must remain seized of this critical matter until the work is done. We all seek to achieve a world free of chemical weapons. Achieving this goal will help us in our pursuit of peace, in the region and around the world. Let us move one step closer by supporting the OPCW as it assumes this vital role in Syria.

<https://usun.usmission.gov/remarks-at-a-un-security-council-briefing-on-chemical-weapon-use-in-syria/>

We must seize this opportunity to destroy Assad’s chemical weapons programme: UK statement at the UN Security Council

March 7 2025

The last time this Council met to discuss chemical weapons in Syria, Bashar al-Assad was still in power. Two days later, he fled and his brutal regime was overthrown. The fall of Assad marks a new chapter for Syria and presents a golden opportunity to destroy his remaining chemical weapons programme, verified by the Organisation for the Prohibition of Chemical Weapons. However, the situation in Syria is fragile and we must make sure we seize this window of

opportunity to remove the threat posed by these weapons once and for all.

The UK is concerned about recent clashes in Syria, which must not be allowed to escalate into wider violence. We urge all parties to refrain from further violence and exercise restraint at this critical time. The OPCW Director-General's visit to Damascus on 8 February was an important step forward. And we are greatly encouraged by the commitments already made by the Syrian interim authorities to fully cooperate with the OPCW and to secure chemical weapons sites. The attendance of Syria's interim Foreign Minister, at the OPCW's Executive Council this week was a very significant moment.

We welcome his renewed commitments on chemical weapons, including to "put an end to this painful legacy and ensure Syria becomes a nation aligned with international norms." The next step is to support Syria to meet its obligations under the Chemical Weapons Convention, including to declare and destroy remaining chemical weapons stockpiles working with the OPCW. The OPCW Director-General set out the scale of the challenge ahead to the OPCW's Executive Council this week. And this Council has an important role to play in supporting the OPCW's work.

First, we underscore the importance of implementation of the Chemical Weapons Convention alongside the full implementation of Security Council Resolution 2118. Second, the international community must provide the financial and technical assistance to the OPCW that it needs. The UK has committed more than \$1m to the OPCW Syria Missions since the fall of Assad to support their immediate work. Finally, as Syria's interim authorities seek to bring stability to the

country and address security threats, it is vital that Syria's sovereignty and territorial integrity are respected. This is why we urge Israel to de-escalate their actions in Syria. Such military action risks destabilising an already fragile security situation.

We call on all parties to provide the safe conditions for the OPCW to conduct its work. Madam President, with political will from the new authorities in Syria and this Council, there is an opportunity to deal with this issue once and for all, and to finally achieve the total elimination of chemical weapons in Syria.

<https://www.gov.uk/government/speeches/we-must-seize-this-opportunity-to-destroy-assads-chemical-weapons-programme-uk-statement-at-the-un-security-council>

Statement of the Minister of Foreign Affairs of Syria H.E. Asaad Hasan Al-Shaibani

March 5, 2025

The Assad regime's chemical weapons programme represents one of the darkest chapters in both Syria and the world's history. It is impossible to discuss this legacy without recalling the atrocities perpetrated. The harrowing images of children, lifeless and lined up, victims of one of the most heinous crimes imaginable, haunt us to this day. These acts of inhumanity remain a profound violation of the universal norms we are here to uphold. But the harm extended beyond these immediate horrors. The recurring use of chemical weapons by the Assad regime, as documented by the hard work of this secretariat supported by resolute member states, emboldened non-state actors like ISIS to also employ chemical weapons to

further terrorise communities. The consequences of the regime's actions rippled across our country and beyond, destabilising the region and undermining what was a universal norm. The Assad regime also manipulated international organisations, including your very own, our very own, wasting valuable resources and funding meant to advance global chemical weapons disarmament.

I stand here to tell you, the norm is once more universal. This era of deceit persisted for far too long.

The new Syrian government that I represent here today is determined to rebuild Syria's future on a foundation of transparency, justice and cooperation with the international community. This chemical weapons programme created under the Assad era is not our programme. The documented use by the OPCW is not our use. The legal obligations resulting from breaches are ones we inherited, not created. Nevertheless, our commitment is to dismantle whatever may be left from it, to put an end to this painful legacy and ensure Syria becomes a nation aligned with international norms. But moving ahead with something you are not responsible for nor comprehend is no easy task. The secret nature of the programme, the collapse of the Assad regime, and the subsequent aerial strikes conducted by Israel on December 9, a day after the regime fell, all create additional challenges to the logistical, technical, and practical ones. These strikes targeted military facilities, including sites suspected by the international community of housing remnants of the chemical weapons programme. As a result, there remains uncertainty about chemical weapons that may still exist within Syria. The Assad regime's programme was secret and led at the highest level, compounded by the fact that many former personnel associated with

the chemical weapons programme have fled and are nowhere to be found, and we suspect they took any documentation of it with them. We lack the information, expertise, technical capacity, and human resources to fully assess and address any chemical weapons that may still exist. Notwithstanding all these immense challenges for something we inherited, we have taken concrete steps to begin the process. First, even before the fall of the Assad regime, during the battles of liberation, we issued public commitments that whatever we may find linked to chemical weapons, we will secure. Second, despite the unprecedented domestic and global challenges upon us, the OPCW is the only multilateral forum where we have worked with a friendly and global actor, Qatar, to represent our interests in the interim and act as a channel of communication in the few days after the fall of the regime and liberation of Syria. This showed our commitment to not leave a gap on this issue. Third, a few days after that, we welcomed the Director-General and his team to a historic visit to Damascus. The President himself met the delegation, which, in the case of the Director-General and Investigation and Identification team, was the first time for them in Syria. Fourth, and immediately afterwards, we acted upon the plan presented to us by the Director-General and began a process to allocate a focal point—someone who has worked with many of you in the past in dealing with the Assad era chemical weapons programme.

Fifth, within three working days, the focal point was in this very building having conservative meetings with a determinant and supportive technical secretariat to devise an action plan. And a few days from that day, ladies and gentlemen, I am speaking here to you today, signalling commitment at the highest level, and gladly announcing that mission planning has begun together with the

secretariat for operational trips to Damascus which are happening very soon.

Although the Assad regime stalled for many years, we understand the need to act quickly, but we also understand that this needs to be done thoroughly. For that, we cannot succeed alone. I would like to thank the states who offered their support yesterday, to Syria and the Technical Secretariat in the Chemical Weapons file. This support is greatly appreciated, and we are ready to move the file forwards with the assistance provided. Syria is ready if with incredibly difficult challenges, and within our capacity to solve this decades-old problem imposed on us by a previous regime. The context we find ourselves in is most challenging and will require a collective effort to resolve. We ask the international community, headed by the OPCW, to work with us, on making this happen within what we have available. We urgently need immense international support from member states and the OPCW, in the form of information, coordination groups here in the Hague, technical assistance, logistical assistance, capacity building, resources, and expertise on the ground. Ladies and gentlemen, Accountability is essential. The OPCW has been a vital ally in addressing this legacy. Its unwavering commitment to upholding the Chemical Weapons Convention has provided a path toward justice and accountability. These efforts have been instrumental in uncovering the truth and identifying those responsible for the use of chemical weapons. We deeply value the work of the Joint Investigative Team, Fact Finding Mission, and Investigation and Identification team, and the other mechanisms tasked with ensuring perpetrators are held accountable. We also commend the countries that have taken the initiative under their own domestic jurisdiction to prosecute individuals involved, issuing arrest warrants for these heinous crimes. Such actions represent a vital contribution to justice and set an important

precedent. We are deeply encouraged by the collaborative spirit of the nations that have come together in a working group formed in June last year, coming from diverse regions, to advance proposals for an international framework to prosecute the use of chemical weapons.

This collective commitment to accountability underscores the strength of multilateralism in addressing global challenges and ensuring that perpetrators cannot escape justice. The victims of these crimes—our people—have suffered not only the direct horrors of chemical weapons but also the enduring impact of disinformation and misinformation. Survivors, despite their immense pain, have shown tremendous courage by providing evidence and pressing for justice. Their efforts have led to significant milestones, such as the arrest warrant issued by France against the former president for chemical weapons use. Domestically and internationally, we will be doing our best to ensure the perpetrators of these unimaginable crimes are held to account, that justice is achieved for the victims, and that solid international standards are established to prevent the recurrence of such atrocities in the future.

<https://www.opcw.org/sites/default/files/documents/2025/03/ec10804%28e%29.pdf>

Biological Weapons: Today's Most Significant WMD Threat to U.S. National Security

March 1, 2025

The current WMD (Weapons of Mass Destruction) issue most significant to U.S. national security – utilizing a definition of WMD that focuses on CBRN (Chemical, Biological, Radiological, and Nuclear) threats – is that of biological weapons. Biological weapons pose a *drastically* more significant

threat to the United States than chemical, radiological, or nuclear weapons. This is because an adversary may utilize them with stealth, without escalating the risk of kinetic conflict. An adversary would also experience a significant advantage in using biological weapons to sow confusion within the United States. Additionally, the COVID-19 pandemic – although not a result of foreign bioweapons (despite the claims of some of the world's more rabid conspiracy theorists), has served as a test case for the United States' response to biological attack.

First, unlike nuclear weapons, point out John P. Caves and Seth Carus in the publication *The Future of Weapons of Mass Destruction*, “the use of some chemical and biological weapons may be hard to attribute or be of sufficiently low lethality so as not to provoke an adversary to escalate to a more lethal response.” This means that the opportunity costs of using biological weapons against the United States are low for potential state or non-state adversaries. This low opportunity cost would make biological weapons particularly appealing to such hostile actors. Most concerning, in my own view, is the use of biological weapons by *state* actors that are seeking to exploit plausible deniability, rather than *non-state* actors seeking to prove a visible point.

Second, biological weapons provide a significant advantage to an adversary who wishes to sow confusion within the United States. An adversary would gain an advantage, for example, from targeting the U.S. military's chain of command. It is important to note that this does not imply *precision* targeting, but rather an exploitation of biological weapons' inherent *imprecision* to create chaos within the ranks. In pursuing the use of biological weapons to these ends, an adversary would

rely on the fact that “a biological attack can range in operational decrement from that of a more limited impact to unit effectiveness due to lost duty days (e.g. norovirus outbreak) to catastrophic for affected units (e.g., pneumonic plague).”

Third, the COVID-19 pandemic provides a test case for how the United States might respond to a stealth biological attack. The “devastating social, economic and physical impact of the pandemic has [...] raised questions about the consequences of a virus of similar ilk potentially being used deliberately as a weapon by a violent actor.” While the U.S. House Committee on Oversight and Accountability in 2024 cited evidence of COVID-19 originating from a lab leak in Wuhan, China, there is not (at least at the time of this writing) any confirmed evidence to suggest that the pandemic's spread was intentional. Nevertheless, a hostile foreign power may take lessons from the pandemic as to how to disrupt both government operations and daily life within the United States.

A counterargument to the idea that biological weapons are the most serious WMD threat facing the United States would likely purport, as does the United Nations Office of Disarmament Affairs, that “nuclear weapons are the most dangerous weapons on Earth”. However, nuclear weapons serve a function that is based on *detering* conflict through the credible threat of their use: on a global scale, argues veteran nuclear deterrence expert Keith B. Payne in his short volume *Chasing a Grand Illusion*, “nuclear weapons do indeed pose a risk to survival for many, but the *lack of a nuclear deterrent* can also be seen as posing a risk to the survival of many.” Add to this the difference in ease of attribution between nuclear weapons and biological weapons, and biological weapons prove a drastically more immediate threat.

Based on this analysis, biological weapons prove advantageous to adversaries due to several attributes. These include both the stealth with which biological weapons can be used and their capacity for disruption, as well as the historical precedent of COVID-19 as a biological phenomenon that upended U.S. society. Biological weapons are therefore the most substantive WMD threat to U.S. national security in 2025.

<https://moderndiplomacy.eu/2025/03/01/biological-weapons-todays-most-significant-wmd-threat-to-u-s-national-security/>

Republic of Korea provides •95,000 to enhance OPCW capacity-building activities in Asia and Africa

February 25, 2025

Voluntary contribution will support 14th edition of Seoul workshop as well as OPCW African Fellowships in Biotoxin Analysis Programme.

The Government of the Republic of Korea has contributed around •95,000 to enhance capacity-building activities of the Organisation for the Prohibition of Chemical Weapons (OPCW) to strengthen research capabilities as well as chemical safety and security in Asia and Africa.

A contribution of EUR 70,000 will be used to organise the 14th edition of the annual Workshop on Peaceful Development and Use of Chemistry for States Parties to the Chemical Weapons Convention (CWC) in the Asian region in 2025 in Seoul. This workshop is a long-standing initiative fully funded by the Republic of Korea addressing the specific capacity-building needs in chemical safety and security in the region.

The remaining amount of the contribution, around EUR 25,000, will be allocated to a

project designed to develop a technology platform allowing more precise biotoxin analysis. The contribution will support two fellows from African Member States, who will conduct six months of research related to this project at the OPCW Centre for Chemistry and Technology (ChemTech Centre). The OPCW will provide mentorship as well as state-of-the-art research facilities and equipment at the ChemTech Centre to support the fellows' work.

The voluntary contribution was formalised on 19 February 2025 in a signing ceremony held between Ms Hyejeong Ahn, Minister and Consul-General at the Embassy of the Republic of Korea in the Netherlands, and the OPCW Director-General, Ambassador Fernando Arias, at the Organisation's Headquarters in The Hague.

<https://www.opcw.org/media-centre/news/2025/02/republic-korea-provides-eu95000-enhance-opcw-capacity-building-activities>

OPCW issues report on second Technical Assistance Visit to Ukraine following three incidents of alleged use of toxic chemicals as a weapon

February 14, 2025

OPCW report confirms presence of toxic chemical 2-Chlorobenzylidenemalononitrile, known as CS, related to three alleged incidents that took place along confrontation lines in Dnipropetrovsk region in October 2024. the Organisation for the Prohibition of Chemical Weapons (OPCW) has transmitted to Ukraine a report on a second Technical Assistance Visit (TAV) following three separate alleged incidents of use of toxic chemicals as a weapon.

Upon Ukraine's request, under subparagraph 38(e) of Article VIII of the Chemical Weapons Convention (CWC), the

OPCW Technical Secretariat deployed to Ukraine in relation to three incidents of alleged chemical weapons use along the confrontation lines between opposing forces in the Dnipropetrovsk region. The incidents reportedly took place as follows:

- On 2 October 2024 near the village of Mariivka;
- On 12 October 2024 near the village of Illinka;
- On 14 October 2024 near the village of Illinka.

During their two missions, the experts from the Technical Secretariat (TAV team) collected documentation and digital files, testimonies from first-hand witnesses, and received nine environmental samples collected by Ukraine: four grenade shells, three soil samples, and two vegetation samples collected from locations adjacent to dugouts at an observation post and a resting position, along the confrontation lines with the opposing troops.

Upon return to the OPCW's Headquarters, the samples were sent to two OPCW designated laboratories selected by the OPCW Director-General, Ambassador Fernando Arias, for independent analysis. This activity was carried out following OPCW procedures and in the presence of observers from the Permanent Representation of Ukraine to the OPCW. Taken together, the documentation and evidence handed over by Ukraine to the TAV experts during the visits, the content of the digital files provided, as well as the information collected and the narrative described by first-hand witnesses, enabled the TAV experts to corroborate that, as reported by Ukraine to the OPCW TAV team, the chain of custody of the nine samples collected from locations adjacent to dugouts located along the confrontation lines with the opposing troops, had been maintained.

The analyses by the OPCW designated laboratories, conducted separately and independently from one another, confirm that all the grenades collected from dugouts at the observation post and at the resting position contained the riot control agent CS, CS-related compounds and/or their degradation products; and the soil and vegetation samples collected from the locations where the grenades were initially found lying on the ground also contained CS and/or its degradation products.

This is the second report released by the Technical Secretariat confirming the presence of CS, a riot control agent, in the Dnipropetrovsk region, along the confronting line. The first report was released in November 2024.

<https://www.opcw.org/media-centre/news/2025/02/opcw-issues-report-second-technical-assistance-visit-ukraine-following>

WashU to develop new tools for detecting chemical warfare agent

February 13, 2025

Mustard gas, also known as sulfur mustard, is one of the most harmful chemical warfare agents, causing blistering of the skin and mucous membranes on contact. Chemists at Washington University in St. Louis have been awarded a \$1 million contract with the Defense Threat Reduction Agency (DTRA) to develop a new way to detect the presence of this chemical weapon on the battlefield.

As with many chemical threats, quick identification of sulfur mustard is key to minimizing its damage, according to Jennifer Heemstra, the Charles Allen Thomas Professor of Chemistry in Arts & Sciences and principal investigator of the new DTRA grant. "It's important to be able to detect

sulfur mustard, because once people are exposed, there is no antidote,” Heemstra said. “Detection is key to preventing exposure, and currently there aren’t good technologies to do that rapidly in the field.”

Mustard gas was used during combat in World War I, World War II and the Iran-Iraq conflict in the 1980s. Exposure to mustard gas does not often cause death, but it can cause temporary or permanent eye injury, second- and third-degree burns and other serious problems with breathing. Even after a war is over, service members, contractors and civilians who demolish or handle explosive ordinance can be exposed to mustard agents. Current methods for detecting sulfur mustard require expensive instrumentation and specialized sample preparation, making them impractical for the type of real-time detection that is needed in the field.

Under the new grant, Heemstra and her collaborators, including M.G. Finn at Georgia Institute of Technology, will develop a new, streamlined way to detect an entire class of chemical compounds called vesicants, a group that includes sulfur mustard.

“We will initially focus on model compounds that act like mustards, but that can be handled safely in the laboratory. This will allow us to test different molecular sensor designs, with the Heemstra lab and ours working together on complementary approaches,” Finn said. Other key project team members include Joseph Ibukun, a postdoctoral research associate at WashU; Seth Taylor, a postdoctoral research associate at Georgia Tech; and Makenzie Walk, a graduate student at WashU. The scientists will use nucleic acid molecular recognition to generate biomolecules that first bind to specific vesicants and then initiate a cascade of reactions that will generate a highly visible fluorescent signal.

<https://source.washu.edu/2025/02/washu-to-develop-new-tools-for-detecting-chemical-warfare-agent/>

Opening Remarks by Ms. Izumi Nakamitsu - High Representative for Disarmament Affairs High-Level Seminar For Parliamentarians of BWC Non-States Parties in Africa 10-11 February 2025, Inter-Parliamentary Union Headquarters, Geneva

February 10, 2025

This high-level seminar is for parliamentarians from African States that have not yet joined the Biological Weapons Convention. This High-Level Seminar is both timely and highly significant. It comes as we celebrate the 50th anniversary of the entry-into-force of the Biological Weapons Convention and the 100th anniversary of the 1925 Geneva Protocol. It has been a century since biological weapons were banned, and half a century since the development, production, stockpiling, retention, or acquisition of such weapons—repugnant to the conscience of humanity—were prohibited. Fifty years after its entry into force, the norm against the use of biological weapons to harm or kill humans, animals or plants remains strong and unequivocal. 187 States have marked their commitment to the prohibition of these weapons by becoming Parties to the Convention. The Convention is almost universal and is a key pillar of global efforts to address the threat of weapons of mass destruction. Last September, in the Pact for the Future, Member States of the United Nations reaffirmed their shared determination to exclude completely the possibility of biological agents and toxins being used as weapons and to strengthen the Convention. Fortunately, no country today claims an interest in acquiring biological weapons or considers them necessary for

national security. However, growing global tensions are placing significant pressure on multilateral disarmament efforts and, consequently, intensify the risk of conflicts. It is therefore essential to take all possible measures to preserve and strengthen the norm against biological weapons. A crucial step in upholding the Convention is to expand its reach. Currently, 10 States remain outside the Convention, with four having signed but not ratified and six neither signing nor acceding to it. Of these 10 States not yet party to the Convention, six are located on the African continent.

The threat of biological weapons may seem a distant issue for a region contending with a multitude of security challenges while pursuing critical development priorities. However, COVID-19 demonstrated that infectious diseases can affect us all, whether indirectly through the disruption of international trade and setbacks in sustainable development, or directly by causing death, societal disruption and impacting national health systems. The use of biological weapons could have even more severe consequences. They could target not only people, but also livestock, crops and the environment, adding to the destruction of biodiversity already being caused by the climate emergency. The Convention seeks to prevent the use of disease as a weapon while also promoting the peaceful use of biology and fostering cooperation for legitimate biological applications. Biotechnology, a growing sector in the global economy, will play a crucial role in achieving the Sustainable Development Goals and transitioning away from fossil fuels. It is essential to ensure responsible use of biology and equitable sharing of its benefits.

<https://front.un-arm.org/wp-content/uploads/2025/02/HR-opening-remarks-High-Level-Seminar-For->

Parliamentarians-of-BWC-Non-States-Parties-in-Africa-.pdf

USAID's support of radicals no longer 'Russian propaganda' – Moscow's UN envoy

February 10, 2025

A senior Russian lawmaker, Konstantin Kosachev, said Musk's accusations against USAID only confirm what Moscow was aware of all along. Russia knew that USAID was sponsoring biological laboratories around the world, including in Ukraine, Kosachev, the deputy head of the upper chamber of the Russian parliament, said in a Telegram post.

"I can confirm that we have seen this funding through the USAID," according to the lawmaker, who had previously co-headed a parliamentary investigative committee studying the activities of US biological laboratories. USAID grants were often just a "cover-up" for US military projects linked to biological weapon technologies, he claimed.

<https://www.rt.com/russia/612484-usaid-support-radicals-russian-propaganda/>

Tulsi Gabbard as US intelligence chief would undermine efforts against the spread of chemical and biological weapons

February 10, 2025

Gabbard's confirmation would undermine one of the signature foreign policy accomplishments of President Donald Trump's first term: countering the threat posed by chemical weapons. Following a sarin attack on the Syrian city of Khan Sheikhoun on April 4, 2017, the Trump Administration launched a cruise missile strike against an

airbase that US intelligence determined Assad's forces had used to launch the chemical assault. After intelligence agencies determined that Syrian helicopters had conducted a chlorine gas attack on Douma on April 7, 2018, Trump authorized another missile strike, this time along with the United Kingdom and France, against Syrian chemical weapons facilities. Both strikes were effective at deterring further Syrian use of chemical weapons. After April 2017 the Syrian air force did not use sarin and after April 2018 Syrian helicopters stopped dropping chlorine barrel bombs.

Gabbard, however, has repeatedly claimed, including at her confirmation hearing, that the chemical attacks against Khan Sheikhoun and Douma were staged by anti-Assad groups to provoke a Western military intervention. In 2019, Gabbard, then a Democratic presidential candidate, accused Trump of launching the strikes based on flawed intelligence: "Rather than waiting for evidence, Trump acted on impulse and emotion, relying on social media posts and unverified sources originating from within territory held by al Qaeda." In March 2021, Gabbard repeated her unfounded allegation that there is no evidence supporting the Syrian government's responsibility for conducting the "alleged" chemical attack on Douma. She accused the Organization for the Prohibition of Chemical Weapons (OPCW), which administers the global treaty banning chemical weapons and investigated the attack, of a cover-up and claimed that Trump's missile strikes on Syria were "unconstitutional."

Gabbard's claims about false-flag attacks, however, ignores intelligence put forward by the Trump Administration and France, an investigation by the United Nations Joint Investigative Mechanism, and multiple investigations by the Organization for the

Prohibition of Chemical Weapons. These national and international investigations based their conclusions on a compelling combination of signals intelligence, eyewitness testimony, photographs, videos, chemical forensic analyses, medical records, analyses of munition fragments, satellite imagery, and information provided by third parties. For Gabbard to accuse opposition groups, the victims of Syria's chemical atrocities, of attacking themselves with chlorine and sarin is a grotesque perversion of the truth.

<https://thebulletin.org/2025/02/tulsi-gabbard-as-us-intelligence-chief-would-undermine-efforts-against-the-spread-of-chemical-and-biological-weapons/>

OPCW Director-General visits Syria; meets with Syrian caretaker authorities to discuss next steps in eliminating Syria's chemical weapons programme

February 8, 2025

OPCW stands ready to support Syria in meeting its obligations under the Chemical Weapons Convention, Director-General Arias says. At the invitation of the Syrian caretaker Foreign Minister, the Director-General of the Organisation for the Prohibition of Chemical Weapons (OPCW), Ambassador Fernando Arias, accompanied by a high-level delegation from the OPCW, visited Damascus to meet with Syria's interim President Ahmad al-Sharaa and caretaker Foreign Minister Asaad Hassan al-Shaibani. The meetings were long, productive and very open, with an in-depth exchange of information, which will serve as a basis to reach tangible results and break the stalemate that has lasted for over eleven years.

The visit marked a first step towards re-establishing a direct working relationship between the OPCW Technical Secretariat and Syria, following eleven years of stagnation and lack of progress with the former authorities. In their meeting, both sides discussed Syria's obligations under the Chemical Weapons Convention (CWC), the role and mandate of the OPCW, and the type of support the Technical Secretariat can provide to the Syrian caretaker authorities in eliminating the remnants of Syria's chemical weapons programme. "This visit marks a reset. After eleven years of obstruction by the previous authorities, the Syrian caretaker authorities have a chance to turn the page and meet Syria's obligations under the Convention," said Director-General Arias.

"My presence in Damascus reflects the OPCW's commitment to rebuilding a relationship based on mutual trust and transparency," he underlined. "For over a decade, Syria's chemical weapons dossier was at a deadlock. Today, we must seize this opportunity together and break that impasse for the good of the Syrian people and the international community." Since 2013, Syria's declaration of its chemical weapons programme has been incomplete, with significant quantities unaccounted for and a lack of cooperation by the former Syrian authorities. This led to the suspension of some of Syria's rights in the OPCW Policy-Making Organs since April 2021. Director-General Arias underlined that the OPCW looks forward to working with Syria's transitional government in addressing these open questions and implementing its responsibilities to regain its rights at the Organisation. For that purpose, he presented to the interim President and the caretaker Foreign Minister, the Secretariat's 9-point Action Plan for Syria.

The Director-General further emphasised that the OPCW stands ready to support Syria in meeting its obligations under the Convention. In doing so, the caretaker authorities will safeguard the Syrian people, help hold to account any identified perpetrators of chemical weapons use, and bolster the country's reputation as a reliable and trusted member of the international community. "This visit lays the ground for working together towards closing the Syrian chemical weapons file for good and fostering long-term compliance, regional stability, and contributing to peace and international security" said Director-General Arias.

<https://www.opcw.org/media-centre/news/2025/02/opcw-director-general-visits-syria-meets-syrian-caretaker-authorities>

Syria: Chemical weapons watchdog hits reset button in Damascus, following productive meetings

February 8, 2025

In a press release on Saturday the Organization for the Prohibition of Chemical Weapons (OPCW) said Director-General Fernando Arias and his team had met interim President Ahmad al-Sharaa and caretaker Foreign Minister Asaad Hassan al-Shaibani, at their invitation – drawing a line under "11 years of obstruction" by the Assad regime, which was driven from power in early December. The meetings were described as long, productive, and open, with an in-depth exchange of information. This dialogue aims to break the long stalemate over use of the banned weapons during Syria's brutal civil conflict, and achieve tangible results. This visit marks the first step in re-establishing a direct working relationship between the OPCW Technical Secretariat and Syria. Discussions focused on

Syria's obligations under the Chemical Weapons Convention (CWC), the OPCW's role and mandate, and the support the Technical Secretariat can provide to eliminate the remnants of Syria's chemical weapons programme. "This visit marks a reset. After eleven years of obstruction by the previous authorities, the Syrian caretaker authorities have a chance to turn the page and meet Syria's obligations under the Convention," said Director-General Arias.

"My presence in Damascus reflects the OPCW's commitment to rebuilding a relationship based on mutual trust and transparency. For over a decade, Syria's chemical weapons dossier was at a deadlock. Today, we must seize this opportunity together and break that impasse for the good of the Syrian people and the international community." Since 2013, Syria's declaration of its chemical weapons programme has been incomplete, with significant quantities of outlawed weaponry unaccounted for. Mr. Arias emphasised the OPCW's readiness to work with Syria's transitional authorities to address these open questions and implement its responsibilities to regain good standing within the organisation. He presented the Secretariat's nine-point Action Plan for Syria to the interim President and caretaker Foreign Minister. The Director-General reiterated the OPCW's commitment to support the country and bring it back into compliance as a member state.

By doing so, the caretaker authorities will safeguard the Syrian people, hold accountable any identified perpetrators of chemical weapons use, and bolster the country's reputation as a reliable and trusted member of the international community. "This visit lays the ground for working together

towards closing the Syrian chemical weapons file for good and fostering long-term compliance, regional stability, and contributing to peace and international security," said Mr. Arias. Syria became a State Party to the CWC and a Member State of the OPCW in October 2013. A joint OPCW-UN mission in cooperation with the former Syrian authorities led to the removal and verifiable destruction of all declared chemical weapons.

However, questions about the accuracy and completeness of Syria's initial declaration have persisted. The OPCW Action Plan, based on the Technical Secretariat's extensive experience, outlines the next steps: drawing an inventory of sites, equipment, munitions, chemicals, documents, people, and facilities; declaring all elements of the Syrian chemical weapons programme; and ensuring its verifiable elimination. Long-term compliance with the CWC will be established through reinforced cooperation. As the implementing body for the Chemical Weapons Convention, the OPCW, with its 193 Member States aims to permanently eliminate chemical weapons. Since the Convention's entry into force in 1997, it has been the most successful disarmament treaty on record, eliminating an entire class of weapons of mass destruction.

In 2023, the watchdog verified that all chemical weapons stockpiles declared by the 193 States Parties to the CWC since 1997 have been irreversibly destroyed under the OPCW's strict verification regime. For its extensive efforts in eliminating chemical weapons, the OPCW received the 2013 Nobel Peace Prize.

<https://news.un.org/en/story/2025/02/1159941>

OPCW strengthens chemical response readiness across Asia

February 7, 2025

The Organisation for the Prohibition of Chemical Weapons (OPCW) and the Chemical Weapons Convention (CWC) National Authority of Pakistan co-organised a training course on Detection and Sampling in an Environment Contaminated by Chemical Warfare Agents (CWAs) in Islamabad, Pakistan, from 18 to 22 November 2024. As the 12th course of the series, this training was designed to strengthen the chemical emergency management capabilities of OPCW Member States, equipping participants with essential expertise to respond effectively to chemical threats.

Mr. Syed Hasnain Haider, Head of the Regional CWC Assistance and Protection Centre, highlighted Pakistan's strong commitment to chemical disarmament and international cooperation, stating: "Our nation has been at the forefront of promoting chemical safety and security, and we are dedicated to sharing our expertise with other States Parties." He further praised the contributions of course participants emphasising the collaborative nature of these trainings: "I would like to acknowledge the active participation and valuable inputs of our participants, representing various countries, organisations, and professional backgrounds. Their collective expertise in diverse fields like chemical safety, security and emergency response, undoubtedly enriched the course discussions and practical exercises."

Experts from Pakistan provided in-depth training on international best practices, techniques, and protocols for the sampling, detection, and identification of CWAs. Participants gained comprehensive insights into the hazards and psychological impacts of chemical incidents, as well as hands-on

experience with detection, identification, and protective equipment. Covering key operational procedures, the course included reconnaissance and demarcation of contaminated areas, developing effective sampling plans, ensuring proper chain of custody, and securely transporting highly toxic chemical samples. Learning was reinforced through a combination of lectures, scenario-based discussions, field exercises, and specialised night training, ensuring participants were well prepared for real-world challenges.

The 19 participants represented 13 countries: Bangladesh, Cambodia, China, Iran, Jordan, Kazakhstan, Kiribati, Malaysia, Maldives, Pakistan, Sri Lanka, Thailand, and Viet Nam. In addition to in-depth training, the course also provided a platform for regional professionals to exchange expertise, demonstrating their countries' commitment to cooperation and capacity building.

<https://www.opcw.org/media-centre/news/2025/02/opcw-strengthens-chemical-response-readiness-across-asia>

New Zealand contributes over •20,000 to OPCW missions in Syria

February 4, 2025

Voluntary contribution will support the work of OPCW special missions to ensure the full elimination of the Syrian chemical weapons programme. The Government of New Zealand has contributed more than •20,000 to the Trust Fund for Syria Missions of the Organisation for the Prohibition of Chemical Weapons (OPCW). The contribution will support OPCW's ongoing efforts to fully eliminate Syria's Chemical Weapons Programme amid the country's evolving political landscape. It will also aid in investigating allegations of chemical weapons use and identifying

perpetrators, in line with the Chemical Weapons Convention (CWC), relevant decisions of the OPCW's policy-making organs and United Nations Security Council resolutions. In particular, the contribution will support the work of the Declaration Assessment Team (DAT), the Fact-Finding Mission (FFM), and the Investigation and Identification Team (IIT).

The voluntary contribution was formalised on 24 January 2025 in a signing ceremony held between the Ambassador, Permanent Representative of New Zealand to the OPCW, H.E. Mrs Susannah Gordon, and the OPCW Director-General, Ambassador Fernando Arias, at the OPCW's Headquarters in The Hague. "With this contribution, we are showing our continued commitment to upholding the Chemical Weapons Convention. In such challenging times, it is more important than ever that States Parties come together and do our part to support the OPCW in achieving a world free of chemical weapons. In this, you have New Zealand's full and unwavering support," said Ambassador Gordon.

The Director-General stated: "I express my sincere appreciation to the Government of New Zealand for its timely and important support to OPCW's work on the Syrian chemical weapons dossier." He further underlined that: "The evolving political landscape in Syria may provide an opportunity for the OPCW to complete the elimination of Syria's chemical weapons programme, which could not be achieved for more than 11 years due to a dismissive approach by the former Syrian authority."

"To this end, the Secretariat remains committed to its work in Syria and needs continued support from States Parties for additional financial and human resources. Timely contributions—such as New Zealand's generous support today—are

crucial to ensure that the Secretariat can carry out its future missions in Syria," Director-General Arias emphasised.

<https://www.opcw.org/media-centre/news/2025/02/new-zealand-contributes-over-eu20000-opcw-missions-syria>

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<https://www.opcw.org/media-centre/news/2025/02/new-zealand-contributes-over-eu20000-opcw-missions-syria>

USAID funded bioweapon research – Musk

February 2, 2025

The US Agency for International Development (USAID) is a "*criminal organization*" that financed bioweapon research, including projects that allegedly led to the emergence of Covid-19, according to Trump-ally Elon Musk.

The tech billionaire was responding to a post on X that alleged that USAID funds were used to support gain-of-function research on coronaviruses at the Wuhan Institute of Virology in China, potentially leading to the creation of Covid-19. "*Did you know that USAID, using YOUR tax dollars, funded*

bioweapon research, including COVID-19, that killed millions of people?" Musk wrote.

Musk did not elaborate on the allegations, but the post he was responding to said, "*the CIA's deception regarding COVID-19 origins becomes much clearer when considering USAID's long history of serving as a CIA front organization.*"

"USAID is a criminal organization," Musk wrote in another post, replying to a video about alleged USAID involvement in internet censorship and "*rogue CIA work.*" EcoHealth Alliance, a US-based nonprofit organization, has been at the center of controversy due to its work with the Wuhan Institute of Virology. The organization has denied that its work involved gain-of-function research, but in May 2024, the US Department of Health and Human Services suspended all federal funding to EcoHealth Alliance, citing concerns over the organization's oversight of high-risk experiments and failure to report research activities promptly.

The CIA believes it is "*more likely*" that Covid-19 originated from a lab leak rather than a natural source, the agency's spokesman said last month after the confirmation of John Ratcliffe as CIA director.

Ratcliffe, President Donald Trump's nominee for director, has been a vocal supporter of the lab-leak theory, calling it "*the only theory supported by science, intelligence, and common sense.*" Following the confirmation, Ratcliffe also said the CIA's assessment of Covid's origins would be a "*day-one thing for me.*"

USAID has a history of funding global health initiatives, including the PREDICT program, which aimed to identify viruses with pandemic potential and ran from 2009 to 2020 in partnership with EcoHealth Alliance.

In 2021, USAID launched a \$125 million follow-up program known as the Discovery & Exploration of Emerging Pathogens – Viral Zoonoses – but it was shut down prematurely in 2023.

Russia has raised concerns about biological research laboratories supported by the Pentagon and other US agencies around the world, particularly in Ukraine and other countries near its borders, alleging that these facilities are involved in bioweapon research.

Reporting about US biolab activities was one of the main priorities of Lieutenant General Igor Kirillov, the Russian military's top official on the hazards posed by weapons of mass destruction. He was murdered along with his assistant in Moscow in December in a bombing attack allegedly ordered by Kiev.

In recent reports, the Russian Defense Ministry has drawn attention to the transfer of unfinished Ukrainian projects to post-Soviet states and Southeast Asia, and said that Africa has become a focal point of interest for the US government, which views the region as an unlimited natural reservoir of dangerous pathogens and a testing ground for experimental medical treatments.

The US Defense Department has acknowledged providing support to laboratories in Ukraine, but insisted that these efforts were focused on preventing the outbreak of infectious diseases and developing vaccines, and that the laboratories are owned and operated by their respective countries, not by the US. Western officials have consistently dismissed Moscow's investigations as disinformation aimed at discrediting "legitimate" public health initiatives. Moscow and Beijing have

nevertheless demanded greater transparency from the US regarding its military biological activities. Last year, the two countries agreed to unite against biological security threats and strengthen the Biological and Toxic Weapons Convention.

<https://www.rt.com/news/612067-criminal-usaid-bioweapons-musk/>

How a contrarian MIT professor fueled Tulsi Gabbard's doubt about Syrian gas attacks

January 28, 2025

The email came from an aide to Tulsi Gabbard specializing in military affairs. "Conversation Request," read the subject line of the October 2017 inquiry to a physicist at the Massachusetts Institute of Technology. The Gabbard aide wanted to discuss events in Khan Sheikhoun, a rebel-held village in northern Syria and a flash point in the country's long-running civil war. Days earlier, a United Nations investigative panel had concluded that the Syrian government was responsible for deploying chemical weapons against its own population there, echoing the findings of U.S. and French intelligence agencies about the April 2017 attack that killed an estimated 90 people, including dozens of children.

But Gabbard, then a Democratic congresswoman from Hawaii, was interested in an alternative explanation. So her aide sought the perspective of an iconoclastic MIT professor, Theodore A. Postol, who in the months after the attack had released preliminary research suggesting that the use of chemical weapons in Syria had been staged by opposition forces.

The 2017 outreach, recorded in emails that Postol shared with The Washington Post, marked the beginning of his years-long

engagement with Gabbard. The interactions, which included in-person and virtual briefings, help explain her contrarian views of atrocities in Syria, including past statements expressing doubt about the regime's responsibility for the use of poison gas.

Those statements — which Gabbard made a centerpiece of her campaign for the Democratic presidential nomination in 2020 — are now complicating her nomination to be President Donald Trump's director of national intelligence, a position overseeing all 18 U.S. intelligence agencies. Republicans wavering on Gabbard, who switched parties and joined the GOP last year, have raised concerns about her record on Syria, including a trip she took there in early 2017 that included meetings with Syrian dictator Bashar al-Assad, who fled the country at the end of last year as rebel forces seized power.

In 2019, Gabbard cited Postol in campaign materials criticizing the Trump administration's policy toward Syria, namely its decision to launch missile strikes in retaliation for the use of chemical weapons. In a since-deleted portion of her website, Gabbard argued that the atrocities attributed to the Syrian government might have been staged by opposition groups intent on drawing the United States deeper into the war. A four-page summary of declassified U.S. intelligence, released a week after the April 4, 2017, attack, warned that claims shifting blame to rebel groups reflected "false narratives" spread by Syria and its patron, Russia. The summary came on the heels of a missile strike ordered by Trump just two days after the attack.

Gabbard's embrace of dissident narratives illustrates her distrust of the intelligence establishment she could soon oversee as well as her willingness to entertain, and elevate,

unconventional views. Gabbard spokeswoman Alexa Henning said the suggestion that the Trump nominee had questioned U.S. intelligence was "inaccurate and misleading" but did not address questions about her campaign website or interactions with Postol. Gabbard has offered varying accounts of responsibility for the use of poison gas in Syria. During a campaign stop in Virginia in 2020, she was asked whether she believed Assad had used chemical weapons against his own people and answered, "Yes."

<https://www.washingtonpost.com/national-security/2025/01/28/tulsi-gabbard-syria-gas-attack-mit/>

Russia used chemical weapons 434 times in December, Ukraine's General Staff says

January 18, 2025

Russian forces used chemical weapons on the battlefield 434 times in December 2024, the General Staff of Ukraine's Armed Forces reported on Jan. 18. Since the beginning of Russia's full-scale invasion, Ukraine's radiation, chemical, and biological intelligence units have been monitoring and recording the use of hazardous chemicals in attacks. The military has recorded 5,389 cases since February 2023. Russian forces used K-51 and RG-VO munitions, anti-riot weapons that are prohibited for use in warfare, the General Staff said in their report. Russia has also used ammunition loaded with dangerous chemicals of "unspecified type."

The use of such weapons "grossly violates the rules of warfare," the General Staff said. The report noted that chemical weapons attacks have "become systemic" since February 2023. Russia has been intensifying its use of chemical agents on the battlefield

in Ukraine. A Kyiv Independent investigation from August 2024 showed that instances of gas attacks are rising, and the Organization for the Prohibition of Chemical Weapons (OPCW) confirmed on Nov. 18 that a riot control agent known as CS has been used in Ukraine.

Since the start of Russia's full-scale invasion of Ukraine, more than 2,000 Ukrainian soldiers have been hospitalized with chemical poisoning, and three have died, Ukrainian Colonel Artem Vlasiuk said on Dec. 13. Ukraine struck back at Russia's use of illegal chemical weapons on Dec. 17, when the Security Service of Ukraine (SBU) assassinated Lieutenant General Igor Kirillov, the head of the Russian Armed Forces' radiation, chemical, and biological defense troops. The previous day, Ukrainian prosecutors charged Kirillov in absentia for the use of banned chemical weapons in Ukraine.

<https://kyivindependent.com/russia-used-chemical-weapons-434-times-in-december-ukraines-general-staff-says/>

Sudan's Military Has Used Chemical Weapons Twice, U.S. Officials Say

January 16, 2025

Sudan's military has used chemical weapons on at least two occasions against the paramilitary group it is battling for control of the country, four senior United States officials said on Thursday. The weapons were deployed recently in remote areas of Sudan, and targeted members of the Rapid Support Forces paramilitaries that the army has been fighting since April 2023. But U.S. officials worry the weapons could soon be used in densely populated parts of the capital, Khartoum.

The revelations about chemical weapons came as the United States announced sanctions on Thursday against the Sudanese military chief, Gen. Abdel Fattah al-Burhan, for documented atrocities by his troops, including indiscriminate bombing of civilians and the use of starvation as a weapon of war. The use of chemical weapons crosses yet another boundary in the war between the Sudanese military and the R.S.F., its former ally. By many measures, the conflict in Sudan has created the world's worst humanitarian crisis, with as many as 150,000 people killed, over 11 million displaced and now the world's worst famine in decades.

"Under Burhan's leadership, the S.A.F.'s war tactics have included indiscriminate bombing of civilian infrastructure, attacks on schools, markets, and hospitals, and extrajudicial executions," the Treasury Department said, using an acronym for Sudan's armed forces. General al-Burhan responded with defiance: "We are ready to face any sanctions for the sake of serving this nation, and we welcome them," he told reporters during a visit to El Gezira state. The U.S. decision is considered a significant move against a figure seen by some as Sudan's de facto wartime leader, who also represents his country at the United Nations. Aid groups fear that Sudan's military could retaliate against the sanctions by further restricting aid operations in areas that are either in famine or sliding toward it. The decision could also reshape broader relations between Sudan and the United States, whose Sudan envoy, Tom Perriello, has been a leading figure in the faltering efforts to reach a peace deal.

Although chemical weapons were not mentioned in the official sanctions notice on Thursday, several U.S. officials said they were a key factor in the decision to move

against General al-Burhan. Two officials briefed on the matter said the chemical weapons appeared to use chlorine gas. When used as a weapon, chlorine can cause lasting damage to human tissue. In confined spaces it can displace breathable air, leading to suffocation and death. Knowledge of the chemical weapons program in Sudan was limited to a small group inside the country's military, two of the U.S. officials said, speaking on the condition of anonymity to discuss sensitive security matters. But it was clear that General al-Burhan had authorized their use, they said. Sudan's ambassador to the United Nations, Al-Harith Idriss al-Harith Mohamed, said in a text message that Sudan's military had "never used chemical or incendiary weapons."

<https://www.nytimes.com/2025/01/16/world/africa/sudan-chemical-weapons-sanctions.html?searchResultPosition=4>