

# Chemical and Biological News

## Russian MPs to appeal to UN over ‘US biolabs’ in Africa

June 27, 2024

The continent should not be used as “a testing ground” by Washington, lawmaker Aleksandr Babakov has stated. The Russian State Duma is preparing an appeal to the UN regarding the alleged activity of US military biolaboratories in Africa, Deputy Chairman Aleksandr Babakov has said. In an interview with Russian media on Wednesday, Babakov stated that Africa should not be used as a “testing ground” by Washington.

According to the MP, the US is continuing “racist colonial policies towards the people of Africa.” Political elites in Washington lecture the world on democracy, while simultaneously deploying troops in sovereign states and instigating color revolutions, Babakov claimed.

He asserted that these actions have now escalated to conducting experiments on humans and creating biolaboratories as the US military seeks to engineer new weapons. “This issue needs to be addressed at the UN Security Council, and we are currently preparing an appropriate appeal to the UN,” the Russian lawmaker stated. Babakov also mentioned plans to reach out to the parliaments of African countries, to provide them with evidence of bioresearch conducted by the US.

On Tuesday, the head of Russia’s Nuclear, Chemical and Biological Protection Forces, Lieutenant General Igor Kirillov, claimed that Washington is expanding its biological military presence across Africa. He highlighted Africa as a new zone of interest for the US Defense Department and related agencies. “Because Russia has managed to halt the implementation of biological warfare

programs in Ukraine’s liberated territories, the Pentagon is forced to transfer incomplete research under Ukrainian projects to other regions,” Kirillov alleged.

Russia has documents confirming the rapid expansion of the US biological warfare presence in Africa, the general added. At the end of last year, Kirillov said Russia had obtained documents proving that the US had conducted research on bioweapon components and highly dangerous pathogens in Ukraine.

<https://www.rt.com/africa/600098-africa-us-un-biolaboratories/>

## Closing Chemical Agent Destruction Facilities June 27, 2024

Two sites are currently in the closure process:

- Blue Grass Chemical Agent-Destruction Pilot Plant, Richmond, Kentucky
- Pueblo Chemical Agent-Destruction Pilot Plant, Pueblo, Colorado

Seven sites have been closed:

- Aberdeen Chemical Agent Disposal Facility, Aberdeen Proving Ground, Maryland
- Anniston Chemical Agent Disposal Facility, Anniston, Alabama
- Johnston Atoll Chemical Agent Destruction System, Johnston Atoll
- Newport Chemical Agent Disposal Facility, Newport, Indiana
- Pine Bluff Chemical Agent Disposal Facility, Pine Bluff, Arkansas

- Tooele Chemical Agent Disposal Facility, Tooele, Utah

<https://www.cdc.gov/chemical-weapons-elimination/closing-facilities/index.html>

## **A Maryland Housing Development Is Going Up Beside Army Land Polluted by Bio-Weapon Testing**

June 26, 2024

A new housing development is going up near Fort Detrick, Maryland, and the Army is considering a series of engineering efforts to protect the homeowners after it contaminated adjacent land throughout much of the 20th century by testing biological weapons. Many of the homes next to what is known as the Area B section of the base are already built — some of them for sale — and single-family properties are selling for about \$640,000, which is roughly the median price for the area. That nearby 399-acre section of Fort Detrick was once a proving ground for the Army's biological warfare program and used as a disposal site for chemical, medical and radiological waste, according to the Environmental Protection Agency.

Decades ago, the Army was frequently testing biological weapons on the outskirts of the Washington, D.C., area, and those grounds are still heavily contaminated. Fort Detrick served as the center of the Pentagon's bio-weapon development, until those weapons were outlawed by President Richard Nixon. Today, much of the surrounding area in that part of Frederick, Maryland, has contaminated groundwater, among other environmental concerns. Area B is on the EPA's National Priorities List for Superfund sites, meaning it ranks a top concern for known releases of hazardous substances, contaminants or pollutants, according to the agency.

The upcoming home development on potentially poisoned lands was first reported in the Frederick News-Post. The news outlet reported that new groundwater sampling in May showed “high concentrations of contamination along the southwest fence line of Area B and a nearby residential development that could potentially impact dozens of planned homes.”

<https://www.military.com/daily-news/2024/06/26/maryland-housing-development-going-beside-army-land-polluted-bio-weapon-testing.html>

## **France court upholds warrant for Syria's Assad over chemical weapons**

June 26, 2024

An arrest warrant issued for Syrian President, Bashar Al-Assad, over the use of banned chemical weapons against civilians was upheld by a Paris court on Wednesday, one of the lawyers who lodged the initial case said, Reuters reports. The warrant issued by French judges in November 2023 refers to charges of complicity in crimes against humanity and complicity in war crimes, followed a French investigation into chemical attacks in Douma and the district of Eastern Ghouta in August 2013, attacks which killed more than 1,000 people.

Prosecutors, who would be responsible for asking the police to enact the warrant, had challenged its validity, arguing that, as a sitting head of state, Assad was immune from trial and prosecution in France. “Today is a very special day and this is a historic victory, not only for the Syrian victims, but for all the victims around the world,” said Mazen Darwish, head of the Syrian Centre for Media & Freedom of the Press.

“The court's decision confirms what we have always said — that when the issue concerns crimes against humanity, war crimes, and the

use of chemical weapons, immunity should never be relied upon.” Assad’s government has denied using chemical weapons against its opponents in the civil war, which broke out in March 2011. Syrian authorities did not immediately reply to a request for comment on Wednesday’s Court of Appeal ruling.

Arrest warrants for sitting heads of state are rare because they generally have immunity from prosecution. However, international law has exceptions to that immunity when a head of state is accused of war crimes and crimes against humanity or genocide. France is among the countries that allows the filing of crimes against humanity cases in its courts. “This decision makes clear that international rules on immunity cannot be synonymous with impunity, particularly for the most serious international crimes,” Steve Kostas, senior legal officer at Open Society Justice initiative, said in reaction to the verdict.

<https://www.middleeastmonitor.com/20240626-france-court-upholds-warrant-for-syrias-assad-over-chemical-weapons/>

### **Sweden contributes Two Million Krona to support OPCW missions in Syria**

June 24, 2024

The Government of the Kingdom of Sweden has voluntarily contributed SEK 2,000,000 (approximately •180,000) to the Trust Fund for Syria Missions of the Organisation for the Prohibition of Chemical Weapons (OPCW). The contribution was formalised on 20 June 2024 in a signing ceremony held between the OPCW Director-General, Ambassador Fernando Arias, and the Permanent Representative of the Kingdom of Sweden to the OPCW, H.E. Mr Johannes Oljelund, at the OPCW’s Headquarters in The Hague.

The contribution will support the full elimination of the Syrian Chemical Weapons Programme, as well as to establish facts surrounding the alleged use of chemical weapons in Syria, in accordance with the Chemical Weapons Convention, relevant decisions of the policy-making organs of the OPCW and resolutions of the United Nations Security Council. Ambassador Oljelund stated: “Our contribution is to support the OPCW in revealing the truth. The OPCW’s work in relation to Syria is essential to establish facts and to eliminate chemical weapons in Syria.”

The Director-General thanked Sweden for its unwavering support to the full implementation of the Chemical Weapons Convention and stated: “I express my deep appreciation to Sweden for its financial and political support to the OPCW’s mission to permanently eradicate chemical weapons. This contribution will help the OPCW to continue its critical work in Syria.”

<https://www.opcw.org/media-centre/news/2024/06/sweden-contributes-two-million-krona-support-opcw-missions-syria>

### **Qatar provides •20,000 to support OPCW Conference on role of AI in Chemical Weapons Convention implementation**

June 24, 2024

The Organisation for the Prohibition of Chemical Weapons (OPCW) welcomes Qatar’s voluntary contributions of •20,000 to support the OPCW’s upcoming Global Conference on the Role of Artificial Intelligence (AI) in advancing the implementation of the Chemical Weapons Convention (CWC). The conference aims to holistically examine the implications of AI technology within the framework of the CWC.

The contribution was formalised on 20 June 2024 in a signing ceremony held between the Ambassador, Permanent Representative of the State of Qatar to the OPCW, H.E. Dr. Mutlaq bin Majed Al Qahtani, and the OPCW Director-General, Ambassador Fernando Arias, at the OPCW's Headquarters in The Hague./

The conference, to be hosted by Morocco and co-organised by the Technical Secretariat of the OPCW from 22 to 24 October 2024 in Rabat, will bring together leading global experts from the fields of science, industry, and government, and facilitate a comprehensive understanding and appreciation of the role of AI in CWC implementation.

The conference will explore three focus areas:

- The role and impact of AI in Chemistry from the lens of evolving science and policy discourse;
- Impact and challenges of AI on the chemical industry at-large; and
- challenges presented by AI in counterterrorism and implementation of CWC.

<https://www.opcw.org/media-centre/news/2024/06/qatar-provides-eu20000-support-opcw-conference-role-ai-chemical-weapons>

### **National workshop on the Biological Weapons Convention and its Confidence Building Measures in Bolivia**

June 21, 2024

From 28 to 29 May 2024, in La Paz, Plurinational State of Bolivia, the United Nations Office for Disarmament Affairs

(UNODA) organized a national workshop on the implementation of the Biological Weapons Convention (BWC) and the preparation of Confidence Building Measures (CBM) reports. The workshop was organized with the support of the European Union and in cooperation with the Ministries of Foreign Affairs and Defence of Bolivia. The workshop was attended by around 50 national participants from several national entities. Opening remarks were provided by Mr. Augusto Antonio Garcia Lara, Vice-Minister of Defence, Ms. Marissa Castro Magnani, Vice-Minister of Foreign Affairs a.i., Mr. Andreas Perez Fransius, Head of the Political Section at the EU Delegation to Bolivia and Mr. Rémi Bacouillard, Political Affairs Officer at the UNODA Geneva Branch.

On the first day of the workshop, presentations were given by UNODA on the BWC and key aspects of its national implementation, the role and responsibilities of BWC National Contact Points (NCP) as well as the importance of CBM reports. Ms. Sonia Fernandez, Project Coordinator at UNODA's Regional Centre for Peace, Disarmament and Development in Latin America and the Caribbean (UNLIREC), made a presentation remotely on BWC national implementing legislation. Best practices on national implementation of the Convention and the preparation of CBM reports in Colombia were shared with participants by Ms. Yasmine Helena Urrutia Sanabria, First Secretary, from the Ministry of Foreign Affairs in Colombia.

On the first day of the workshop, presentations were given by UNODA on the BWC and key aspects of its national implementation, the role and responsibilities of BWC National Contact Points (NCP) as well as the importance of CBM reports. Ms. Sonia Fernandez, Project Coordinator at UNODA's Regional Centre for Peace, Disarmament and Development in Latin America and the

Caribbean (UNLIREC), made a presentation remotely on BWC national implementing legislation. Best practices on national implementation of the Convention and the preparation of CBM reports in Colombia were shared with participants by Ms. Yasmine Helena Urrutia Sanabria, First Secretary, from the Ministry of Foreign Affairs in Colombia. The national workshop provided a valuable opportunity to national stakeholders to engage on ways to further strengthen the implementation of the Convention at the national level and to map additional assistance needs and opportunities.

<https://disarmament.unoda.org/update/national-workshop-on-the-biological-weapons-convention-and-its-confidence-building-measures-in-bolivia/>

### **Chemical weapons are not a historic problem in Syria, they are a present reality: UK statement at the UN Security Council**

June 11, 2024

The United Kingdom would like nothing more than for this Council not to hold any more meetings on chemical weapons. As this would mean that chemical weapons were no longer being produced, stored or used anywhere in the world, and the perpetrators of chemical weapons' attacks had been held to account. Sadly, that is not the case. Chemical weapons are not a historic problem in Syria. They are a present reality.

The Assad regime continues to possess chemical weapons today. Thousands of munitions and hundreds of tonnes of chemical agent remain unaccounted for. Analysis of samples collected at two sites in April 2023 indicates further undeclared

processing and production activity in Syria. We are gravely concerned by these developments and we join your call, High Representative, for greater cooperation by Syria with the OPCW technical secretariat. The UN-OPCW Joint Investigative Mechanism and the OPCW's Investigation and Identification Team found that the Assad regime used chemical weapons, including sarin and chlorine, against its own people nine times after acceding to the Chemical Weapons Convention in 2013.

Syria has failed to make a complete and accurate declaration of its stockpiles, despite the best and repeated efforts of the OPCW secretariat. Nor has Syria met its obligations under this Council's resolution 2118. Independent international investigations have also now attributed a total of four uses of chemical weapons to Daesh. President, failure to hold Syria to account would undermine the international non-proliferation architecture.

The UK will continue to pursue accountability for the use of chemical weapons by state and non-state actors. We fully support the work of the OPCW's Syria missions, and the International, Impartial and Independent Mechanism for Syria, which assists in the investigation and prosecution of international crimes committed in Syria. We applaud OPCW's impartial and patient work. Until Syria fully declares and destroys its chemical weapons, this Council should remain focused on this ongoing threat to international peace and security.

<https://www.gov.uk/government/speeches/chemical-weapons-are-not-a-historic-problem-in-syria-they-are-a-present-reality-uk-statement-at-the-un-security-council>

## **Why North Korea Launched Another Salvo of Trash Balloons Toward the South**

June 9, 2024

The unusual offensive, across the world's most heavily fortified border, is a revival of a Cold War-era tactic. The South is responding by blasting K-pop. Cold War-era tactics are in vogue again at the world's most heavily armed border. In recent days, North Korea has sent roughly 1,300 balloons carrying plastic bags full of cigarette butts, scraps of used paper and cloth, and other trash toward the Demilitarized Zone that separates it from South Korea. Many have crossed into South Korean airspace, where their timers released their filthy payload.

But there was an ominous undertone when South Korea urged people not to touch the balloons and to report them to the authorities immediately. North Korea is known to hold large stockpiles of biological and chemical weapons, which its agents once used to assassinate Mr. Kim's estranged half brother, Kim Jong-nam. Photos and video footage released by the South Korean military showed officers clad in biohazard and bomb-disposal gear inspecting the trash piles.

<https://www.nytimes.com/article/north-korea-trash-balloons.html?searchResultPosition=20>

## **Why the Pandemic Probably Started in a Lab, in 5 Key Points**

June 3, 2024

Dr. Anthony Fauci returned to the halls of Congress and testified before the House subcommittee investigating the Covid-19 pandemic. He was questioned about several topics related to the government's handling

of Covid-19, including how the National Institute of Allergy and Infectious Diseases, which he directed until retiring in 2022, supported risky virus work at a Chinese institute whose research may have caused the pandemic.

For more than four years, reflexive partisan politics have derailed the search for the truth about a catastrophe that has touched us all. It has been estimated that at least 25 million people around the world have died because of Covid-19, with over a million of those deaths in the United States.

Although how the pandemic started has been hotly debated, a growing volume of evidence — gleaned from public records released under the Freedom of Information Act, digital sleuthing through online databases, scientific papers analyzing the virus and its spread, and leaks from within the U.S. government — suggests that the pandemic most likely occurred because a virus escaped from a research lab in Wuhan, China. If so, it would be the most costly accident in the history of science.

1. The SARS-like virus that caused the pandemic emerged in Wuhan, the city where the world's foremost research lab for SARS-like viruses is located.

At the Wuhan Institute of Virology, a team of scientists had been hunting for SARS-like viruses for over a decade, led by Shi Zhengli.

2. The year before the outbreak, the Wuhan institute, working with U.S. partners, had proposed creating viruses with SARS CoV 2's defining feature.
3. The Wuhan lab pursued this type of work under low biosafety conditions that could not have contained an airborne virus as infectious as SARS CoV 2

4. The hypothesis that Covid-19 came from an animal at the Huanan Seafood Market in Wuhan is not supported by strong evidence.
5. Key evidence that would be expected if the virus had emerged from the wildlife trade is still missing.

<https://www.nytimes.com/interactive/2024/06/03/opinion/covid-lab-leak.html>

### **Violations of international legislation prohibiting biological weapons: what can they lead to?**

May 31, 2024

Over the past year, the Ministry of Defence of the Russian Federation has analyzed in detail US military biological activities in Ukraine and other countries. According to the Head of the Radiation, Chemical and Biological Protection Troops of the Armed Forces of the Russian Federation, Lieutenant General Igor Kirillov, right under our noses in a number of countries a network of American biological laboratories has been deployed, where work is in full swing to create powerful weapons.

The Ministry of Defence of the Russian Federation gives a forecast: further deterioration of the epidemic situation with “the possible formation of artificial foci of diseases and an uncontrolled expansion of the range of vectors.” General Kirillov stated this during a briefing. According to the Radiation, Chemical and Biological Protection Troops of the Armed Forces of the Russian Federation, over two years in Central and Southern Europe the number of Asian tiger mosquitoes, which are not typical for this region, has noticeably increased. For example, in Germany, populations of the species formed in five regions. And another type of mosquito – a carrier of West Nile fever – was found in Finland and Sweden.

Also in Europe, the incidence of infections transmitted by blood-sucking insects has increased. In just one year, more people were infected with dengue fever than in the previous ten years. There is also a peak in the incidence of West Nile fever – out of a thousand, 92 cases were fatal. American military specialists are intensively experimenting with viruses pathogenic to humans. For example, monkey pox virus is being investigated as a potentially damaging bio agent.

It is known that the US Army Research Institute of Infectious Diseases conducted experiments with two strains of the smallpox virus. General Kirillov presented a document proving this during the briefing. Meanwhile, work with this virus is allowed only in two institutions in the world: in the USA at the Center for Disease Control and at the Vector state scientific center in Russia. Such work can provoke a global epidemic emergency, since a significant part of the population has become susceptible to smallpox as a result of the loss of population immunity. Over the past 10 years, we have already had to deal with a monkeypox pandemic and an increase in the incidence of cowpox virus. Are there people next in line?

<https://www.financialexpress.com/business/defence-violations-of-international-legislation-prohibiting-biological-weapons-what-can-they-lead-to-3508128/>

### **Bioweapons Field Guide for Recovered Munitions to Fill Knowledge Gap**

May 30, 2024

The U.S. Army Combat Capabilities Development Command Chemical Biological Center (DEVCOM CBC) Chemical Biological Applications and Risk Reduction business unit, known as CBARR, provides field

response for recovered chemical munitions all over the country and around the world. Sometimes bioweapons munitions turn up, too. Robert Malone, the CBARR Plans and Assessments Branch chief, has a plan for that, he is writing a field reference guide for recovered bioweapons. “We’ve had a field reference guide for chemical weapons since the mid-1990s,” Malone said. “It’s called the U.S. Chemical Weapons and Related Material Reference Guide. But there’s not one for biological weapons and related material, and that has always surprised me, so I decided to do something about it.”

What brought this need home for Malone is what happened at a field operations site at Holloman Air Force Base in New Mexico. Recovery team members encountered E-61 bomblets. “The CBARR project manager for this field operation, George Noya, came to me because he knew that I had done some extensive research on bioweapons some years back,” Malone said. “That provided me with some good background, but I also got help from a true CBC expert in this area, Chris Whalley, a Center subject matter expert in biological weapons.” Malone and Noya went to Whalley’s office. Whalley was able to tell them what the item was, its delivery system, its potential agent fills, and he even had an unfilled example of one sitting in his office that they could hold and examine.

“That was enormously helpful to us, but then two things occurred to me,” Malone recalled. “First, why don’t we have this kind of detailed knowledge for the broad range of bioweapons in a form that can be shared? Second, Chris will retire soon, so how can we preserve that knowledge?” DEVCOM CBC’s mission is to provide innovative chemical, biological, radiological, nuclear, and explosive (CBRNE) defense capabilities to enable the joint warfighters’ dominance on the battlefield and interagency defense of the homeland. It has programs with sources of

seed money available to fund good ideas. Through the ‘Quick Empowerment leads to Successful Tomorrows’ program, or QUEST for short, projects of any size from \$5,000 to \$100,000 tied to the Center’s mission are considered. Applicants get ten minutes to pitch their ideas before the Center’s Innovation Council members, followed by five minutes for questions.

[https://www.army.mil/article/276799/bioweapons\\_field\\_guide\\_for\\_recovered\\_munitions\\_to\\_fill\\_knowledge\\_gap](https://www.army.mil/article/276799/bioweapons_field_guide_for_recovered_munitions_to_fill_knowledge_gap)

## **Healthier, cleaner, greener: a NATO strategy for the coming bio-revolution**

May 30 2024

At their February 2024 meeting, Allied Defence Ministers formally adopted NATO’s Biotechnology and Human Enhancement Technologies Strategy. Current NATO staff driving the development and delivery of this Strategy outline one of its main features: the first-ever set of Principles of Responsible Use for Biotechnology and Human Enhancement technologies in defence and security.

Biotechnology and human enhancement (BHE) technologies are by no means new, but the unprecedented pace of emerging BHE innovation is disruptive. Fuelled by a convergence with artificial intelligence (AI), new developments in BHE have led to an emerging bio-revolution, one that will transform our society – from healthcare and public health, to industrial process manufacturing, to security and defence. Breakthroughs in BHE have the potential to address some of the Alliance’s toughest medical, environmental and resilience challenges. Picture a world where bio-manufacturing and synthetic biology offer greener, alternative ways to lessen our supply chain dependencies; where bio-sensing methods provide more accurate,

scalable ways to detect novel pathogens and other chemical and biological threats; and where green DNA storage methods replace the energy-draining data storage approaches upon which we currently rely.

As with any emerging and disruptive technology, BHE technologies also pose new risks to the Alliance, particularly when used by malicious actors. The same genetic engineering methods that underpin medical breakthroughs can be used to create novel, more lethal or targeted pathogens. The dual proliferation of gene-editing systems and AI-enabled search methods means that cost and skill barriers to access and create chemical and biological threats have been lowered. In February 2024, Allied Defence Ministers endorsed NATO's BHE Strategy: the first international agreement governing emerging biotechnology in defence and security. The strategy is guided, first and foremost, by the world's first Principles of Responsible Use for BHE technologies in defence and security, and reaffirms the Alliance's unwavering commitment to the Biological Weapons Convention. In implementing this new strategy, the Alliance has opportunities to advance the development and use of BHE technologies for defensive and peaceful purposes while also protecting against the proliferating risks posed by these technologies.

<https://www.nato.int/docu/review/articles/2024/05/30/healthier-cleaner-greener-a-nato-strategy-for-the-coming-bio-revolution/index.html>

### **Once a Sheriff's Deputy in Florida, Now a Source of Disinformation From Russia**

May 29, 2024

In 2016, Russia used an army of trolls to interfere in the U.S. presidential election. This year, an American given asylum in

Moscow may be accomplishing much the same thing all by himself. A dozen years ago, John Mark Dougan, a former deputy sheriff in Palm Beach County, Fla., sent voters an email posing as a county commissioner, urging them to oppose the re-election of the county's sheriff. He later masqueraded online as a Russian tech worker with a pseudonym, BadVolf, to leak confidential information in violation of state law, fooling officials in Florida who thought they were dealing with a foreigner. He also posed as a fictional New York City heiress he called Jessica, tricking an adviser to the Palm Beach County Sheriff's Office into divulging improper conduct by the department.

In 2021, as Mr. Putin began mobilizing the military forces that would invade Ukraine, Mr. Dougan posted a video that the Kremlin would cite as one justification for its attack. In it, he claimed that the United States operated biological weapons factories in Ukraine, an accusation that Russia and its allies have pushed without ever providing evidence. Once the war started, Mr. Dougan recounted in his written responses to questions, he traveled to Ukraine 14 times to report from the Russian side of the front lines. He appeared in Russian government hearings purporting to expose Ukraine's transgressions, indicating some level of cooperation with the government authorities. He has faced criticism for the reports, including in a profile in *The Daily Beast*, that he posted on YouTube and other platforms. Mr. Dougan has portrayed the war much as Russia's propaganda has: as a righteous battle against neo-Nazis backed by a decadent West, led by the United States and NATO.

<https://www.nytimes.com/2024/05/29/business/mark-dougan-russia-disinformation.html?searchResultPosition=24>

## **False Russian claims hijacked the biological weapons treaty. Here's how to reclaim it**

May 27, 2024

In 2022, a Russian disinformation campaign threatened the integrity and efficacy of the Biological Weapons Convention (BWC), a critical international treaty banning biological and toxin weapons. Russian officials accused the United States and Ukraine of conducting illicit biological weapons research on Ukrainian territory, in direct violation of their treaty obligations—allegations that have been largely dismissed as false by other BWC member states and independent observers. The lack of factual evidence did not stop Russian representatives from raising their claims at UN Security Council meetings in March 2022 and reiterating them in October of the same year. Russia also requested a formal consultative meeting under Article V of the BWC, only the second such request in the treaty's 50-year-long history. This article commits the treaty's member states to cooperate in solving any issues related to the treaty's objectives or its implementation.

Russia misused the consultation procedure to spread its unfounded allegations and continued to do so after the procedure's conclusion, which undermined the consultation mechanism and hampered progress on other issues. This misuse highlighted a need to reassess the Article V procedure and its capacity to safeguard the functioning of the treaty, which is crucial in today's evolving biothreat landscape. To prevent future misuse from happening and hampering treaty proceedings, treaty members need to agree on a pragmatic redefinition of the consultative process.

**Invoking Article V.** Unlike other arms control agreements, such as the Nuclear

Non-Proliferation Treaty, the BWC lacks a robust verification regime. In the absence of such a regime, the consultation procedure under Article V of the treaty is pivotal in ensuring and evaluating compliance with the treaty's obligations.

Only two states have made use of Article V thus far: Cuba in 1997 and Russia in 2022. Each instance led to the convening of a formal consultative meeting in Geneva to address the allegations raised. Cuba's 1997 invocation targeted the United States, accusing it of violating the BWC by releasing a crop pest agent over Cuban territory. In the 1997 case, the Cuban government chose not to escalate the allegations further, even without substantial agreement during the consultations. In contrast, in the 2022 case, Russia continued to raise its claims following an inconclusive formal consultation. Both cases are marked by acute political antagonism between the BWC members involved and raise claims on which finding common ground seems impossible. These instances reveal a stark reality: The mechanism has been deployed not as a bridge toward understanding or compromise, but rather in contexts where achieving consensus appears daunting, if not outright unattainable.

<https://thebulletin.org/2024/05/false-russian-claims-hijacked-the-biological-weapons-treaty-heres-how-to-reclaim-it/>

## **New forensic research reveals chemical weapons 'fingerprint'**

May 22, 2024

Until recently, forensic investigation of chemical weapons was in its infancy. Encouraging research into new and better ways of conducting forensic investigation in this field is one of the aims of the Organisation for the Prohibition of Chemical Weapons

(OPCW). In the international research field, TNO is one of the laboratories the OPCW works with. TNO forensic researcher Mirjam de Bruin-Hoegée will soon defend her thesis entitled 'Revealing the origin of chemical weapons'. She explains: "In the event of an attack with a chemical weapon, an investigation is carried out to find out what substance was used. This is important in particular to quickly get people to safety, take protective measures, and provide appropriate medical assistance. But immediately after that comes the question: "who did it?" This is the question I focused on in my research.

For the FACING (Forensic Attribution for CWA INtelliGence) partnership, I developed several new methods that help identify the origin of chemical weapons. Collecting more different types of evidence and linking them makes it more likely that this will enable judicial identification of the perpetrator." "To find out which party deployed the chemical weapons, we're looking for a kind of fingerprint that is unique to each weapon. We create that 'fingerprint' by combining different research methods," says De Bruin-Hoegée. "First, we examine the chemical substance used in the weapon. For example, the chemical consists of 90% poison and 10% by-product such as pollution or a surplus of one of the original raw materials. Analysing that 10% can give us a lot of information about, for example, where and how the poison was made and how long it was stored.

If you have a jerry can full of the stuff, then analysis is comparatively easy. However, in real life you don't have that luxury. In a chemical weapons attack, the chemical is spread over a large area. Moreover, time passes before investigators are on site. The major challenge in the investigation lies in the fact that the substances are found on site in extremely low concentrations and are also highly reactive, degrade rapidly in the

environment, or metabolise in the human body. This makes unambiguous identification very complicated.

With newly developed, highly sensitive analytical techniques, this can now be done. Even with especially small concentrations found in human blood samples and plants exposed to the chemical in our laboratory, we can now establish the necessary data from that 10% of by-product and determine the 'fingerprint'."

<https://www.tno.nl/en/newsroom/insights/2024/05/forensic-research-chemical-weapons/>

## **Statement on Ukraine from the OPCW Spokesperson**

May 7, 2024

The Secretariat of the Organisation for the Prohibition of Chemical Weapons (OPCW) has been monitoring the situation on the territory of Ukraine since the start of the war in February 2022 in relation to allegations of use of toxic chemicals as weapons. Both the Russian Federation and Ukraine have accused one another and reported allegations of use of chemical weapons to the Organisation.

A compendium of all official correspondence by States Parties on such allegations and accusations has been made available on the OPCW public website and is regularly updated. The information provided to the Organisation so far by both sides, together with the information available to the Secretariat, is insufficiently substantiated. Still, the situation remains volatile and extremely concerning regarding the possible re-emergence of use of toxic chemicals as weapons.

The destruction of all declared chemical weapons stockpiles in the world was achieved

in July 2023 under strict verification of the OPCW Secretariat. This does not mean that chemical weapons do not exist anymore. Under the Chemical Weapons Convention, any toxic chemical, used for its toxic properties with the purpose to cause harm or death is considered a chemical weapon. This includes the diversion of dual-use toxic chemicals produced worldwide by the chemical industry from their declared non-prohibited purposes.

Additionally, under the Convention, States Parties have the obligation to declare all toxic chemical agents they hold for riot control purposes. It is against the Convention to use riot control agents at war on the battlefield. If used as a method of warfare, these agents are considered chemical weapons and, hence, are prohibited under the Convention. Moreover, under Article II, paragraph 7 of the Convention, a Riot Control Agent is defined as any chemical not listed in a Schedule, which can produce rapidly in humans sensory irritation or disabling effects which disappear within a short time following termination of exposure.

Accordingly, any use, as a Riot Control Agent, of a toxic chemical belonging to one of the three Schedules listed in the Annex to the Convention on Chemicals would be contrary to the Convention. On 1 May, the United States of America announced that it had imposed new measures on the Russian Federation for its full-scale war and use of chemical weapons against Ukraine, including for its use of chloropicrin, a chemical belonging to Schedule 3 of the Convention, as well as riot control agents as a method of warfare.

For its part, the Russian Federation has denied making use of such weapons. It is recalled that, to conduct any activities pertaining to allegations of use of toxic chemicals as weapons, the Secretariat of the

OPCW would need to be formally seized of a request to conduct such activity by States Parties. So far, the Secretariat has not received any such request for action. In the meantime, the OPCW will continue to provide support to Ukraine, upon its request, in the field of assistance and protection against chemical weapons under Article X of the Convention.

In this framework, the Secretariat has been working on delivering training courses on emergency response, and the provision of protective, detection, and identification equipment, together with the relevant training. All 193 OPCW Member States, thus including the Russian Federation and Ukraine, have committed never to develop, produce, acquire, stockpile, transfer or use chemical weapons. States Parties to the Chemical Weapons Convention have declared that any use of chemical weapons is totally unacceptable and would violate the legal norms and standards of the international community.

*<https://www.opcw.org/media-centre/news/2024/05/statement-ukraine-opcw-spokesperson>*

### **Putin cannot be allowed to use chemical weapons in Ukraine with impunity**

May 7, 2024

After years of Ukrainians sounding the alarm over Russia's alleged use of chemical weapons, the US Department of State has now substantiated these claims and has announced new sanctions on Russian actors for their role in enabling the country's chemical and biological weapons programs. In an official statement, the United States charged Russia with using "the chemical weapon chloropicrin against Ukrainian forces in violation of the Chemical

Weapons Convention.” Why does this matter, and what comes next?

Chloropicrin, a chemical agent frequently used for riot control, is banned for use in a warfare setting under the Chemical Weapons Convention, which Russia has been a signatory to since its inception. Over the past two years, Ukraine has reported some 1,400 cases of chemical weapons use, but these claims had not been confirmed by third parties until the May 1 statement released by the US State Department.

If Putin has no qualms about using banned weapons, why choose chloropicrin? As far as chemical weapons go, chloropicrin is less lethal than other weapons suspected to be in Russia’s arsenal. By using a weaker agent, Putin’s goal does not seem to be maximum death and destruction in this case. Rather, he may be testing the waters to gauge the international response and determine just how far he can go. A strong reaction from the international community is therefore vital to make clear that widespread use of chemical weapons is completely unacceptable and will not be tolerated.

<https://www.atlanticcouncil.org/blogs/ukrainealert/putin-cannot-be-allowed-to-use-of-chemical-weapons-in-ukraine-with-impunity/>

### **U.S. Tightens Rules on Risky Virus Research**

May 7, 2024

A long-awaited new policy broadens the type of regulated viruses, bacteria, fungi and toxins, including those that could threaten crops and livestock. The White House has unveiled tighter rules for research on potentially dangerous microbes and toxins, in an effort to stave off laboratory accidents that could unleash a pandemic. The new policy, published Monday evening, arrives

after years of deliberations by an expert panel and a charged public debate over whether Covid arose from an animal market or a laboratory in China.

A number of researchers worried that the government had been too lax about lab safety in the past, with some even calling for the creation of an independent agency to make decisions about risky experiments that could allow viruses, bacteria or fungi to spread quickly between people or become more deadly. But others warned against creating restrictive rules that would stifle valuable research without making people safer. Dr. Evans also noted that the new rules emphasize the risk that lab research can have on plants and animals. In the 20th century, the United States and Russia both carried out extensive research on crop-destroying pathogens such as wheat-killing fungi as part of their biological weapons programs. “It’s significant as a signal the White House is sending,” Dr. Evans said.

<https://www.nytimes.com/2024/05/07/science/covid-lab-leak-biosafety-rules-virus-research.html?searchResultPosition=15>

### **OPCW workshop on Chemical Weapons Convention and peaceful uses of chemistry encourages youth to take up careers in chemistry and chemical non-proliferation**

MAY 6, 2024

The Organisation for the Prohibition of Chemical Weapons (OPCW), in collaboration with the Brazilian National Authority for the Chemical Weapons Convention (CWC) and with financial support from the European Union, organised a training programme for young individuals aged 18 to 24, from countries with developing or transitioning economies, to inspire them to take up careers in chemistry and chemical non-proliferation.

The programme took place from 8 to 11 April 2024 in Rio de Janeiro, Brazil. It focused on various topics related to the peaceful uses of chemistry, including chemical safety and security management, green chemistry, and ethics in chemical research. Participants were primarily university students enrolled in courses related to chemistry, chemical engineering, and other scientific fields.

The programme included lectures from experts working in national laboratories, academia, and international organisations; tabletop exercises, and a visit to an industry-leading petrochemical plant and the Fire and Civil Defence Centre in Rio de Janeiro. During the visits, participants learned about risk mitigation related to the potential misuse of toxic chemicals and saw a practical demonstration of chemical risk and incident management and response preparedness. Officials from Ministry of Science, Technology and Innovation of Brazil, the Office of the Ministry of Foreign Affairs in Rio de Janeiro, as well as from the Brazilian National Authority for CWC implementation attended the event.

<https://www.opcw.org/media-centre/news/2024/05/opcw-workshop-chemical-weapons-convention-and-peaceful-uses-chemistry>

### **Russia using chemical choking agents in Ukraine, US says**

May 2, 2024

The US has accused Russia of deploying chemical weapons as a “method of warfare” in Ukraine, in violation of international laws banning their use. State department officials said Russia used the choking agent chloropicrin to win “battlefield gains” over Ukraine.

The allegations, which US officials said were not an “isolated” incident, would contravene

the Chemical Weapons Convention (CWC), which Russia signed. The Kremlin rejected the accusations, calling them “baseless”.

Spokesman Dmitry Peskov told reporters in Moscow that Russia stood by its obligations under the CWC, which prohibits states from developing or acquiring new weapons. Some 193 states have ratified the convention. Chloropicrin - which the US says Russia has used to “dislodge Ukrainian forces from fortified positions” - is an oily substance which was widely used during World War One. It causes irritation of the lungs, eyes and skin and can cause vomiting, nausea and diarrhoea, according to the US Centre for Disease Control (CDC). The chemical’s use in war is expressly banned under the CWC, and is listed as a choking agent by the OPCW. The state department also said Moscow had regularly used “riot control agents,” or tear gas, during the war. “We would respond if he uses it. The nature of the response would depend on the nature of the use,” Mr Biden said. But there have been consistent reports that Moscow has ignored that warning. US Assistant Secretary for Arms Control Mallory Stewart has previously said Russia was using riot control agents in the conflict.

And Ukraine says its troops have faced mounting chemical attacks in recent months. The Reuters news agency reported earlier this year that Russian forces had used grenades loaded with CS and CN tear gases. The report added that at least 500 Ukrainian soldiers have been treated for exposure to toxic gases, and that one had died after suffocating on tear gas. Three Russian bodies linked to the country’s biological and chemical weapons programme were sanctioned by the state department for their links to the production of chemical agents. Other firms that contributed to the government entities were also sanctioned.

<https://www.bbc.com/news/world-europe-68941220>

## **Kremlin responds to US chemical weapons accusations**

May 2, 2024

Washington's claims that Moscow has engaged in banned forms of warfare against Ukrainian troops are baseless, Dmitry Peskov has said. Kremlin spokesman Dmitry Peskov has rejected claims by the US that Russia has engaged in chemical warfare in the Ukraine conflict. The allegation was made as the US Department of State announced a new round of sanctions targeting Russian entities on Wednesday. Some of these measures were justified by reference to alleged breaches by Moscow of the 1993 Chemical Weapons Convention (CWC).

However, Peskov told journalists on Thursday that the claims were *"absolutely baseless and not supported by any evidence."* Moscow remains committed to its international obligations, he added. The latest American sanctions targeted a total of 280 individuals and entities, including the Troops of Radiological, Chemical and Biological Defence – a specialized branch of the Russian military tasked with protecting the military and civilian population from weapons of mass destruction. Washington alleges that the unit has *"facilitated the use"* of chemical weapons in the Ukraine conflict.

The US Department of State specifically claimed that Russia had deployed the toxin chloropicrin, which was used in chemical warfare during World War I and is now predominantly utilized as a pesticide and herbicide. A senior Ukrainian military commander claimed last year that his troops had been targeted with chloropicrin on multiple occasions. In February, Kiev alleged that Russia had conducted more than 200 chemical weapons attacks on the battlefield in January alone.

Moscow has accused Ukrainian forces of staging chemical weapons incidents with a view to blaming Russia for them. *"The use of toxic chemicals by the Ukrainian militants has become systematic,"* the Russian Foreign Ministry said in late February. It added that the Ukrainians were also using improvised drone-dropped chemical weapons. *"The first recorded instance of the use of chloropicrin by Ukrainian neo-fascists happened during the siege of the House of Trade Unions in Odessa on May 2, 2014,"* the ministry said. Fumes produced by the chemical during a fire at the building contributed to the high death toll arising from the incident, according to Moscow. The US sanctions were announced one day before the tenth anniversary of the mass killings in Odessa, which claimed the lives of 48 people, according to the official Ukrainian count.

<https://www.rt.com/russia/596879-kremlin-chemical-weapons-sanctions/>

## **Imposing New Measures on Russia for its Full-Scale War and Use of Chemical Weapons Against Ukraine**

May 1, 2024

The United States is today sanctioning more than 280 individuals and entities to impose additional costs on Russia for both its foreign aggression and internal repression. In this action, the Department of State is imposing sanctions on more than 80 entities and individuals, including those engaged in: development of Russia's future energy, metals, and mining production and export capacity; sanctions evasion and circumvention; and furthering Russia's ability to wage its war against Ukraine.

The Department of State is concurrently delivering to Congress a determination pursuant to the Chemical and Biological Weapons Control and Warfare Elimination

Act of 1991 (CBW Act) regarding Russia's use of the chemical weapon chloropicrin against Ukrainian troops. Pursuant to the CBW Act, the Department is re-imposing restrictions on foreign military financing, U.S. Government lines of credit, and export licenses for defense articles and national security-sensitive items going to Russia. The Department also is sanctioning three Russian government entities associated with Russia's chemical and biological weapons programs and four Russian companies that have contributed to such entities.

Among these actions, the Department is also sanctioning an additional three individuals in connection with the death of Aleksey Navalny in Russian Penal Colony IK-3. All targets are being designated pursuant to Executive Order (E.O.) 14024, as amended, which authorizes sanctions with respect to specified harmful foreign activities of the Government of the Russian Federation.

The United States will continue to use the tools at its disposal to disrupt support for Russia's military-industrial base and curtail Russia's use of the international financial system to further its war against Ukraine. We continue to stand in solidarity with Russians striving for a more democratic future and with Ukrainians defending their homeland from Russia's aggression.

The Department of State has made a determination under the CBW Act that Russia has used the chemical weapon chloropicrin against Ukrainian forces in violation of the Chemical Weapons Convention (CWC). We make this determination in addition to our assessment that Russia has used riot control agents as a method of warfare in Ukraine, also in violation of the CWC. The use of such chemicals is not an isolated incident, and is

probably driven by Russian forces' desire to dislodge Ukrainian forces from fortified positions and achieve tactical gains on the battlefield. Russia's ongoing disregard for its obligations to the CWC comes from the same playbook as its operations to poison Aleksey Navalny and Sergei and Yulia Skripal with Novichok nerve agents.

In coordination with the Department of the Treasury, the Department of State is designating three Russian Federation government entities associated with Russia's chemical and biological weapons programs and four Russian companies providing support to such entities. The Department of the Treasury is separately designating three entities and two individuals involved in procuring items for military institutes involved in Russia's chemical and biological weapons programs, pursuant to a separate WMD non-proliferation authority.

*<https://www.state.gov/imposing-new-measures-on-russia-for-its-full-scale-war-and-use-of-chemical-weapons-against-ukraine-2/>*

### **'China developing marine toxins for biological warfare'**

April 24, 2024

The US state department has raised alarms in its latest arms control compliance report about China's military conducting research on marine toxins, suggesting potential violations of the Biological Weapons Convention (BWC). The convention, which China ratified in 1984, aims to eliminate biological weapons, yet ongoing activities suggest a secretive development that could be geared toward military use.

The state department report explicitly mentions that China's research involves "biological activities with potential biological

weapons applications,” specifically pointing to the development of toxins for military purposes. This research is linked to sea-based neurotoxins, some of the most potent poisons known, which target the central nervous system and can be lethal in minimal quantities, a Washington Times report said.

This concern is heightened by China’s past biological weapons programs which included agents like ricin and anthrax. The recent focus on marine toxins marks a new direction in strategic weapons research for Beijing. The US intelligence has suspicions that the People’s Liberation Army (PLA) is repurposing civilian research—ostensibly aimed at preventing marine toxin poisoning from seafood—for weapons development.

The report draws on a 2014 government-sponsored Chinese research that discussed the potential of using anatoxins, saxitoxins, and tetrodotoxin as biological weapons. Despite these disclosures, China has reportedly not provided comprehensive details about its past or present biological weapons programs to other BWC signatories, breaching the convention’s requirements.

Thomas DiNanno, a former arms control official, criticized the current administration for not pressing China on these issues, suggesting a reluctance to address what he perceives as a significant escalation in bioweapons development. Meanwhile, Ryan Clarke from the National University of Singapore views this revelation as an indicator of the Chinese Communist Party’s focus on integrating bioweapons into their standard military capabilities.

The issue is set to be a topic of discussion at an upcoming BWC working group meeting in Geneva. Meanwhile, the U.S. continues to press China on these matters in various international forums, aiming to build

diplomatic pressure for transparency and compliance.

<https://timesofindia.indiatimes.com/world/us/china-developing-marine-toxins-for-biological-warfare/articleshow/109565397.cms>

## **OPCW and IPU underscore role of parliamentarians in promoting effective implementation of Chemical Weapons Convention**

April 23, 2024

The Organisation for the Prohibition of Chemical Weapons (OPCW), in collaboration with the Inter-Parliamentary Union (IPU), organised a side event at the 148th IPU Assembly on the role of parliamentarians in fostering global peace and security through advancing the effective national implementation of the Chemical Weapons Convention (CWC).

The event, which was held on 26 March 2024 in Geneva, Switzerland, featured presentations and a panel discussion highlighting the importance of adopting national legislation to fully implement the Convention. Honourable Ms Aigul Kuspan, Chair of the Committee on Foreign Affairs, Defence and Security of the Mazhilis of the Parliament of Kazakhstan delivered a keynote speech at the event highlighting the vital role of parliaments in advancing the implementation of the Convention alongside Kazakhstan’s fight against the proliferation of chemical weapons.

Participants at the event learned about parliamentarians’ role in championing and supporting the adoption of such legislation. They also discussed how parliamentarians can assist law enforcement entities and national authorities’ efforts in enhancing national capacities in chemical emergency

preparedness. Discussions underscored the Convention's relevance in fostering global peace and security as well as sustainable development by advancing Sustainable Development Goals 12 and 16.

<https://www.opcw.org/media-centre/news/2024/04/opcw-and-ipu-underscore-role-parliamentarians-promoting-effective>

### **North Korea's bioweapons program, including 'Poison Pens', raises alarm: US Report**

April 18, 2024

North Korea has been developing 'poison pens' and sprays as a part of their biological weapon programme, US officials have warned. The US intelligence have said that the Kim Jong Un-led country has been developing lethal bacteria and viruses to spread pandemics through bugs like anthrax and small pox. The US officials' warning was reported by UK-based The Times in an article titled "Adherence to and Compliance with Arms Control, Nonproliferation and Disarmament Agreements and Commitments".

North Korea have remained a coenobite when it comes to foreign reporting. Most of what is known for North Korea is their reported massive nuclear artillery. However, this report has said that the North Korea has an extremely active biological weapon development programme. "The United States assesses that the Democratic People's Republic of Korea (DPRK) has a dedicated, national level offensive BW program. The DPRK has the capability to produce biological agents for military purposes." the report posted on US State Department's website said.

The report further read that North Korea has the technical capability to produce

bacteria, viruses, and toxins that could be used as biological weapons.

The report further goes on to mention sprays and poison pens which the North Korea could possibly use via biological weapon agents. Pyongyang probably is capable of weaponising Biological Weapon agents with unconventional systems such as sprayers and poison pen injection devices. The report further mentions that North Korea may have already deployed chemical weapons and these could be used to covertly deliver biological weapon agents.

<https://www.livemint.com/news/world/north-koreas-bioweapons-program-including-poison-pens-raises-alarm-us-report-11713449940057.html>

### **Is North Korea developing biological weapons?**

April 18, 2024

The threat North Korea's nuclear weapons programme poses to the world is well known. But as the hermit kingdom actively expands its weapons arsenal, and international institutions struggle to contain it, we shouldn't ignore its development of chemical and biological weapons either.

A report from the United States State Department asserts that North Korea has a 'dedicated' biological weapons programme, which it could use against the militarily-superior US and South Korea. Concerningly, the report highlights North Korea's ability to produce bacteria, viruses, and other toxins which could be used as biological weapons agents. We have already seen evidence of Pyongyang's unabashed usage of chemical weapons, especially in highly public places. Who can forget when, in February 2017, Kim Jong Nam, the half-brother of Kim Jong Un, was assassinated by VX nerve agent whilst in Kuala Lumpur International Airport?

Unlike its nuclear and chemical weapons programmes, however, much less is known about North Korea's biological weapons capabilities. Instead of disclosing information about these capabilities, state media has preferred to make spurious statements denouncing the US for its past involvement with biological weapons. These unevidenced claims have included criticising the US military's alleged usage of biological weapons during the Korean war or accusing the US of targeting North Korea with anthrax after the US erroneously sent an anthrax sample to South Korea in 2015. Months after Russia's invasion of Ukraine in February 2022, too, Pyongyang lashed out at Washington for operating biological laboratories in Ukraine and thereby catalysing the spread of monkeypox. It's no surprise that Russia made the same accusation.

Yet, in 2015, the North Korean regime gave us a rare insight into its possible bioweapons ambitions, when state media lauded Kim Jong Un's visit to the Pyongyang Bio-technical Institute. Whilst the North Korean regime emphasised that the facility was producing new insecticides to enhance agricultural production, the possibility of North Korea producing biological weapons, not least anthrax, became increasingly plausible. Nine years on, and Pyongyang's bioweapons capabilities will likely have improved. The Covid-induced shutdown of the country, for over three years, would only have contributed to accelerating any indigenous development of new types of weapons of mass destruction beyond nuclear weapons.

Whilst we may not know much about North Korea's bioweapons capabilities, looking at the country's earlier ventures into acquiring nuclear weapons can offer a useful, if worrying, lesson. After signing the Nuclear Non-Proliferation Treaty in 1985 – thereby renouncing its right to develop nuclear

weapons – North Korea continued to assert that it had neither the intention nor the means to go down the nuclear route. History, however, tells a different story. In gross violation of its Treaty commitments, North Korea was, in fact, actively joining clandestine proliferation networks with Pakistan, Syria, and Iran, in order to develop highly-enriched uranium.

<https://www.spectator.co.uk/article/is-north-korea-developing-biological-weapons/>

### **How to Avoid a Genetic Arms Race**

April 16, 2024

A quiet biological revolution in warfare is underway. The genome is emerging as a new domain of conflict. The level of destruction that only nuclear weapons could previously achieve is fast becoming as accessible as a cyberattack. Now for the bad news. Great power conflicts and proxy wars are back. The rules-based world order crumbles while an unpredictable—and potentially unstable—multipolar one emerges.

Rapidly accelerating breakthroughs in our ability to change the genes of organisms are generating medically thrilling possibilities. They are also generating novel capabilities for biological weapons, a form of warfare that has been largely abandoned for decades. Take the recent AI-enabled advancements in gene-editing, construction of artificial viral vectors for human genome remodeling, protein folding, and the creation of custom proteins. Far outpacing the regulatory environment, these advances are facilitating the weaponization and delivery of harmful bioagents—overcoming impediments that previously made biological weapons impractical.

<https://www.thehastingscenter.org/how-to-avoid-a-genetic-arms-race/>

## **Southern African States fortify capacity to combat biological threats and implement Biological Weapons Convention**

March 28, 2024

In a bid to strengthen regional cooperation and bolster national implementation of the Biological Weapons Convention (BWC), 60 delegates from ten Southern African states and international and regional organisations convened in Gaborone, Botswana, from 12 to 14 March 2024 for a three-day workshop. The event, organised by the United Nations Office for Disarmament Affairs (UNODA) in partnership with the Ministry of Defence and Security of Botswana, aimed to fortify the region's capacity to combat biological threats and promote adherence to international disarmament norms and standards. In addition, representatives of Portugal, the United States, the World Organization for Animal Health (WOAH), the Africa Centers for Disease Control and Prevention (ACDC), and the UN Regional Centre for Peace and Disarmament in Africa (UNREC) were in attendance.

On the opening day, delegates heard from the Honourable Thomas Kagiso Mmusi, Botswana's Minister of Defence and Security, who stated that "the Biological Weapons Convention represents a cornerstone of the global disarmament and non-proliferation regime and reaffirms our commitment to the peaceful uses of biological sciences and technology". The coordinator of UNODA's project to support implementation of the BWC in Africa, Sylvain Fanielle, noted that "while the COVID-19 pandemic demonstrated our collective vulnerability in the face of disease that spreads rapidly across borders and causes incalculable human, social and economic damage, it also brought biosafety and biosecurity to the forefront of international peace and security planning,"

noting therefore the timely organisation of the workshop.

The workshop served as a platform for participating States to provide updates on the progress of BWC implementation at the national level. Delegates discussed rights and obligations under the Convention and interacted with their counterparts from the region, with a view to sharing experiences, challenges and best practices, and to strengthening networks and working relationships to enhance BWC implementation. Delegates' presentations highlighted efforts related to developing and adopting national implementing legislation, the roles of National Contact Points (NCPs), processes to prepare and submit Confidence Building Measures (CBMs), as well as initiatives focusing on biosafety and biosecurity.

Delegates also worked closely with UNODA to identify opportunities for technical assistance and capacity building support. In addition to plenary sessions, bilateral meetings between UNODA and participating delegations were conducted, facilitating deeper discussions on national assistance needs and priorities. These engagements laid the groundwork for tailored national workplans aimed at advancing BWC implementation in each represented State. Furthermore, delegates were briefed on United Nations Security Council Resolution 1540 (2004), which deals with preventing the proliferation of chemical, biological, radiological, and nuclear weapons to non-state actors, and the United Nations Secretary General Mechanism for the Investigation of Alleged Use of Chemical and Biological Weapons.

*<https://disarmament.unoda.org/update/southern-african-states-fortify-capacity-to-combat-biological-threats-and-implement-biological-weapons-convention/>*

## **OPCW workshop in Lisbon enhances national implementation of the Chemical Weapons Convention**

March 27, 2024

The Organisation for the Prohibition of Chemical Weapons (OPCW), in collaboration with the Government of Portugal, organised a workshop on advancing the national implementation of the Chemical Weapons Convention (CWC) in Portuguese-speaking Member States, from 27 to 29 February 2024 in Lisbon, Portugal.

The main objective of the event was to support the implementation of OPCW's policy-making organs' recommendations, with a special focus on providing tailored and systematic technical assistance to address the practical national implementation issues and concerns of States Parties to the Convention. This event marked a significant milestone as it brought together all the Lusophone Member States for the first time in OPCW history, conducting proceedings entirely in Portuguese, and centered around CWC implementation. The workshop succeeded in enhancing communication among participants and fostering stronger cooperation among Member States.

The three-day event gave experts the opportunity to exchange information, identify common challenges and share best practices related to the national implementation of the Convention. It emphasised the importance of promoting the national implementation of the CWC, and the advantages of attaining comprehensive legislation in this regard. The workshop included briefings on best practices regarding national strategies on advancing CWC legislations, as well as rights and obligations of States Parties under the Convention, placing an emphasis on assisting in the review, drafting, and advancement of comprehensive implementing legislation.

In addition, the event included presentations delivered by experts from international organisations, including the Community of Portuguese Language Countries (CPLP) and World Customs Organization (WCO). The workshop featured dynamic activities focused on the review legislative texts and comprised practical exercises addressing common misconceptions about chemical weapons and CWC related issues.

The event was attended by 19 delegates from eight Portuguese-Speaking countries: Angola, Brazil, Cabo Verde, Guinea–Bissau, Mozambique, Portugal, São Tomé and Príncipe and Timor–Leste.

<https://www.opcw.org/media-centre/news/2024/03/opcw-workshop-lisbon-enhances-national-implementation-chemical-weapons>

## **Biosecurity: where science and diplomacy combine**

March 26, 2024

The latest event in TWAS's science diplomacy series addressed respecting and navigating international treaties about biological dangers, from pandemics to weapons. From virus detection to preventing biological weapon development—biosecurity is an arena in which science and diplomacy must ultimately combine, said the participants at the latest science diplomacy course co-organized by TWAS.

The event brought 18 early-career researchers from low- and middle-income countries to Trieste, all life scientists for whom science diplomacy was new, to teach them about the field, as well as research responsibility. The event also taught them ways to provide policy advice, contribute to international agreements, and build on the UN Sustainable Development Goals (SDGs). After two days of the course on science

diplomacy, the participants relocated to International Centre for Genetic Engineering and Biotechnology (ICGEB) headquarters in Trieste for three days of hands-on biotechnology training in the laboratory.

Partnering with TWAS in organizing the event were the Biological and Toxin Weapons Convention (BWC) Implementation Support Unit, ICGEB and the InterAcademy Partnership (IAP). Of the 18 scientists, nine were from the science-and-technology-lagging countries (STLCs) identified by TWAS, seven were from UN-recognized Least Developed Countries, and six were women. They were from Burkina Faso, Cameroon, Ethiopia, Kenya, Malawi, Mozambique, Pakistan, Rwanda, Tanzania, Thailand, Türkiye, Uganda, Uzbekistan.

“We need to understand global priorities or even local priorities, to understand how our research fits into an ongoing problem or ongoing possibilities,” said Clarissa Rios Rojas, political affairs officer for the UN Office for Disarmament Affairs (UNODA), and one of the event’s speakers. Rios Rojas added that science diplomacy brings scientists from laboratories and academia to a level where they can communicate very complex information and data to policy makers, citizens and others. This should then enable science to become an important part of policy-making processes. “We really need to bring it back to society and local and global decisions.”

<https://twas.org/article/biosecurity-where-science-and-diplomacy-combine>

### **US still operating biolabs in Ukraine – Russian envoy**

March 25, 2024

Washington is trying to hide its own activities by blocking Moscow’s push for tougher

controls, a diplomat claims. The US continues to operate 30 biolabs on the territory of Ukraine as part of an illegal military-biological program, Russia’s envoy to the Netherlands has claimed. The number of American laboratories on Ukrainian territory has been “*well-known for a long time*,” Vladimir Tarabrin, who is also Russia’s Permanent Representative to the Organization for the Prohibition of Chemical Weapons (OPCW), said in an interview with the Izvestia newspaper on Sunday.

The diplomat recalled that the head of Russia’s Nuclear, Chemical and Biological Protection Forces, Lieutenant General Igor Kirillov, had claimed in March 2022 that 30 such biolabs existed. “*Our armed forces discovered documents confirming the extensive military biological program deployed by the US and NATO countries on the territory of Ukraine and other former Soviet republics*,” he said.

The Kiev government allegedly began destroying dangerous pathogens in the laboratories and suspending research on February 24, 2022, the day Russia launched its military operation against Ukraine, but “*in 2023 the implementation of those programs resumed, only their name was changed*,” Tarabrin claimed. Asked if the number of the US biolabs in Ukraine still stands at 30, the ambassador said: “*According to our data, yes.*”

“It’s not surprising, therefore, that over the past 20 years, Washington has been blocking all Russian initiatives aimed at strengthening the Biological Weapons Convention (BWC) regime and creating an effective mechanism for verifying compliance with its provisions by all participating countries,” Tarabrin said.

<https://www.rt.com/news/594882-biological-laboratories-us-ukraine/>

## **International course on biological weapons and toxicology**

March 22, 2024

The course was attended by members of the armed forces of Bosnia and Herzegovina, Greece, Egypt, Italy, Hungary, the United States of America, Slovenia and Spain. The trainees broadened their knowledge of biological weapons and toxicology and practiced the use of military equipment for the protection against biological agents, as well as the equipment for biological detection, identification, and decontamination.

During the course, they used an improvised laboratory, which was set up so that the participants could practice countering bioterrorism. The training course was delivered by the CBRN Training Centre instructors and toxicology experts from the Military Medical Academy and “Vinèa” Institute of Nuclear Sciences. The objectives of the course were successfully fulfilled. Such and similar international training activities carried out at the Serbian Armed Forces CBRN Centre testify to the quality of instructors and training system in the Serbian Armed Forces, contributing also to the improvement of cooperation with the partner countries’ armed forces.

<https://www.mod.gov.rs/eng/21072/medjunarodni-kurs-o-bioloskom-oruzju-i-toksikologiji21072>

## **Experts from developing countries gather in Trieste to learn about science diplomacy, biosecurity and virus detection in the framework of the Biological Weapons Convention**

March 21, 2024

From 4 to 8 March 2024, the Implementation Support Unit (ISU) of

the Biological Weapons Convention (BWC), together with The World Academy of Sciences (TWAS), the InterAcademy Partnership (IAP), and the International Centre for Genetic Engineering and Biotechnology (ICGEB), organised a joint capacity-building course on science diplomacy, biosecurity and virus detection in the framework of Article X of the BWC in Trieste, Italy.

Under Article X, States Parties undertake to cooperate in contributing with other States or international organisations to the further development and application of scientific discoveries in the field of biology for the prevention of disease, or for other peaceful purposes. Fourteen experts, seven of them women, from 14 developing BWC States Parties (Bangladesh, Burkina Faso, Cameroon, Ethiopia, Kenya, Malawi, Mozambique, Pakistan, Rwanda, Tanzania, Thailand, Türkiye, Uganda and Uzbekistan), participated in the course. Selected participants were mainly mid-career professional experts with backgrounds in molecular biology, microbiology, virology and infectious diseases representing national research or academic institutes that deal with disease outbreaks. The event started with a two-day course at TWAS headquarters, which focused on science diplomacy and the role of scientists in the context of the BWC. Participants also practiced with different scenarios in two tabletop exercises about science diplomacy and biosecurity. The course was further enriched with presentations by participants from Bangladesh, Kenya and Tanzania on national and regional challenges of virus detection and the implementation of biosecurity regulations. Experts from the ICGEB scientific partners’ network also shared their experiences in establishing diagnostic laboratories and implementing diagnostic techniques in Cameroon, Moldova and Slovenia.

The course was organised with the financial support of the Norwegian Ministry of Foreign Affairs and the Government of Finland. The contributions from Finland and Norway aim specifically to provide technical assistance to developing BWC States Parties and foster cooperation on issues relating to the implementation of Article X.

<https://disarmament.unoda.org/update/experts-from-developing-countries-gather-in-trieste-to-learn-about-science-diplomacy-biosecurity-and-virus-detection-in-the-framework-of-the-biological-weapons-convention/>

### **Strengthening the Chemical Weapons Convention by updating Germany's legislation**

March 19, 2024

By revising Germany's legislation related to the Chemical Weapons Convention (CWC), the German Government is further reducing proliferation risks and at the same time setting a good example for the international community with regard to the national implementation of the Convention. The German Government is thereby also carrying out the task it set itself in its National Security Strategy, namely to increase its endeavours to contain chemical, biological, radiological and nuclear risks.

In early March 2024, the changes to national legislation related to the CWC, specifically to the Implementing Act and to the Implementing Regulation, took effect. The amendments were informed by nearly 30 years of experience with implementation of the CWC, specifically industry inspections, trade in listed chemicals and the discovery of old chemical weapons.

A number of important changes have been made. For example, a notification

requirement has been established for when chemical weapons or chemicals listed under the CWC (referred to as scheduled chemicals) are found or stolen. This aims to better protect the population. Also, an appropriate legal basis has been created for the previously voluntary procedure that aims to investigate transfer discrepancies, or differences between the declarations of import and export of scheduled chemicals.

<https://www.auswaertiges-amt.de/en/aussenpolitik/chemical-weapons-convention/2649628>

### **Strengthening biosecurity in São Tomé and Príncipe: National workshop on the effective implementation of the Biological Weapons Convention and Resolution 1540**

March 19, 2024

From 4 to 6 March 2024, the UN Office for Disarmament Affairs (UNODA) and the Ministry of Foreign Affairs, Cooperation and Communities of São Tomé and Príncipe gathered key national stakeholders and decision makers to raise awareness about the implementation of the Biological Weapons Convention (BWC) and UN Security Council Resolution 1540 (2004). Jointly organized by UNODA's Biological Weapons Convention Team and the 1540 Support Unit, the workshop was an important step towards fostering national ownership and renewing commitment to the BWC, Resolution 1540, and biosafety and biosecurity issues more broadly among national experts and practitioners.

This event unfolded after São Tomé and Príncipe's simultaneous submission of assistance requests to the Security Council Committee established pursuant to Resolution 1540 (1540 Committee) and

under UNODA's project aimed at bolstering the implementation and universalization of the BWC across Africa. Months of subsequent consultations and coordination with the authorities of Sao Tome and Principe culminated in a gathering of 38 participants representing over 20 national institutions as well as regional and international experts.

Among national participants were senior officials such as Mr. Jorge Amado, Minister of Defense and Internal Administration who inaugurated the workshop together with Mr. Eric Overvest, UN Resident Coordinator, and Mr. David Theard, Coordinator of the 1540 Group of Experts. In his opening remarks, Mr. Jorge Amado reiterated the commitment of São Tomé and Príncipe to the comprehensive, integrated, and effective national implementation of the BWC and Resolution 1540.

The workshop aimed at enhancing a shared understanding of the two instruments among all relevant actors, fostering cooperation and coordination among them to take advantage of diverse expertise during the implementation process and equipping participants with the tools to implement the BWC and Resolution 1540 effectively. Through interactive sessions and insightful discussions, the participants delved into the intricacies of biosecurity, exploring the synergies between the two instruments, and mapping out the roles and responsibilities of various stakeholders.

International cooperation played a pivotal role, with representatives from Portugal and Angola sharing insights and lessons learnt on their respective experiences in implementing the BWC and Resolution 1540. This exchange of experience allowed São Tomé and Príncipe to better assess national implementation needs, including international assistance. In that regard, representatives of the World

Organization for Animal Health (WOAH) and the Africa Centers for Disease Control and Prevention (Africa CDC) also participated in the event, sharing assistance opportunities, and informing about the roles of the animal and human health sectors in strengthening biosecurity through the two instruments.

<https://disarmament.unoda.org/update/strengthening-biosecurity-in-sao-tome-and-principe-national-workshop-on-the-effective-implementation-of-the-biological-weapons-convention-and-resolution-1540-2004/>

## **The Department of Homeland Security Is Embracing A.I.**

March 18, 2024

The Department of Homeland Security has seen the opportunities and risks of artificial intelligence firsthand. It found a trafficking victim years later using an A.I. tool that conjured an image of the child a decade older. But it has also been tricked into investigations by deep fake images created by A.I. The agency will be the first in the federal government to roll out a comprehensive plan to integrate the technology into a variety of uses, from fighting crime to helping disaster survivors.

Now, the department is becoming the first federal agency to embrace the technology with a plan to incorporate generative A.I. models across a wide range of divisions. In partnerships with OpenAI, Anthropic and Meta, it will launch pilot programs using chatbots and other tools to help combat drug and human trafficking crimes, train immigration officials and prepare emergency management across the nation.

As part of its plan, the agency plans to hire 50 A.I. experts to work on solutions to keep the nation's critical infrastructure safe from A.I.-generated attacks and to combat the use

of the technology to generate child sexual abuse material and create biological weapons.

<https://www.nytimes.com/2024/03/18/business/homeland-security-artificial-intelligence.html?searchResultPosition=12>

### **Russia appears to be using chemical weapons in Ukraine. And admitting it.**

March 15, 2024

Ukraine claims there has been a dramatic spike in Russian use of banned chemical weapons since the beginning of the war there two years ago. A quarter of the alleged chemical attacks in the war occurred in the month of February, the Ukrainian military reported recently.

According to an article in *Forbes*, the Ukrainian general staff reported 81 chemical attacks in December. *Reuters* reported that a general staff statement claimed those numbers rose to 229 in January. (The wire service said that the military press release mentioned only CS, a form of tear gas.) Then in February, the *Kyiv Post* reported that Russia hit Ukraine with tear gas 250 times. The paper said that there have been 1,068 tear gas attacks since the war began.

For Lennie Phillips, a former inspector for the Organisation for the Prohibition of Chemical Weapons (OPCW), which implements the Chemical Weapons Convention, some of Ukraine's claims appear credible, including a segment on Russian state-controlled TV that included an interview with a man the US embassy in The Hague reports is a Russian soldier discussing the effectiveness of chemicals as weapons. "The piece on Russia's Channel [One] alone makes the use of tear gas by the [Russian Federation] very credible," Phillips, now a research fellow at the UK defense think tank RUSI, said.

According to the US embassy's translation of the May new clip, a soldier tells an interviewer, "Now that we have started using them, the enemy has decided gas masks would help. The gas masks don't help." (Gas masks do in fact protect against tear gas and are a regular part of military training.) Phillips also cited numerous photos and videos that suggest Russian troops have "easy access" to grenades for riot control agents as adding to the credibility of the Ukrainian claims.

The increased Ukrainian allegations of Russian chemical attacks may reflect an emphasis on reporting incidents and not a true increase in chemical weapons use, Phillips cautioned. Ukrainian officials have also alleged that Russia has used other chemicals, some also classified as riot control agents. Phillips called those assertions "less clear."

<https://thebulletin.org/2024/03/russia-appears-to-be-using-chemical-weapons-in-ukraine-and-admitting-it/>

### **Japan contributes near •190K to OPCW assistance and protection programmes**

March 14, 2024

The Government of Japan has voluntarily contributed •187,514 to the Trust Fund for the Implementation of Article X of the Organisation for the Prohibition of Chemical Weapons (OPCW). The contribution is earmarked for OPCW assistance and protection activities related to Ukraine. The voluntary contribution was formalised on 11 March 2024 in a signing ceremony held between the Ambassador, Permanent Representative of Japan to the OPCW, H.E. Mr. Minami Hiroshi, and the OPCW Director-General, Ambassador Fernando Arias, at the OPCW's Headquarters in The Hague.

“The Government of Japan has decided to make a contribution to the ongoing assistance and protection against chemical weapons for Ukraine. We would like to express our gratitude for all the works carried out by the OPCW Technical Secretariat. Our support extends not only to the OPCW’s activities in response to the use or possible use of chemical weapons, but to all the activities conducted by the OPCW Technical Secretariat,” said Ambassador Minami.

”I would like to thank the Government of Japan for its continuous political and financial support to the OPCW and its mission to achieve a world free of chemical weapons. Ensuring the capabilities and preparedness of Member States to protect their populations in the case of a chemical emergency is a critical factor for the effective implementation of the Chemical Weapons Convention,” stated the OPCW Director-General. Contribution will enhance ongoing assistance and protection activities related to Ukraine.

<https://www.opcw.org/media-centre/news/2024/03/japan-contributes-near-eu190k-opcw-assistance-and-protection-programmes>

## **Implementation of the Biological Weapons Convention Discussed in Almaty**

March 14, 2024

Issues of implementation of the provisions of the Biological and Toxin Weapons Convention (BTWC) and its further strengthening were the main topics of discussion at the regional workshop held in the UN Plaza building. The event, organized by the United Nations Office for Disarmament Affairs (UNODA) and the Ministry of Foreign Affairs of the Republic

of Kazakhstan with support of the European Union, was attended by national coordinators on BTWC issues from the countries of Central Asia and Azerbaijan.

The workshop provided an opportunity for participants to exchange information and best practices regarding the improvement of legislation and national action plans, as well as the preparation and presentation of information on the implementation of confidence-building measures – a key mechanism for ensuring transparency in the biosafety practices of States Parties to the Convention.

Representatives of the UN Office for Disarmament Affairs thanked Kazakhstan for the opportunity to organize a training course in Almaty and the representatives of relevant government agencies from Kazakhstan, Azerbaijan, Tajikistan and Uzbekistan for participation in the event, and emphasized the critical importance of comprehensive and active implementation of the Convention at the national level. National contact points play a key role in this regard.

Representatives of Kazakhstan drew attention to the strict fulfillment by Kazakhstan of its obligations under the BTWC. It was noted that the priority issue for our country in the field of biological safety is the implementation of the initiative to establish the International Agency for Biological Safety (IABS). Kazakhstan shares the belief in the need for active cooperation to ensure the use of the latest achievements of biotechnology for peaceful purposes. The IABS will ensure control over the development of science and technology in areas related to the BTWC.

<https://www.gov.kz/memleket/entities/mfa/press/news/details/726340?lang=en>

## **A.I. Is Learning What It Means to Be Alive**

March 10, 2024

Given troves of data about genes and cells, A.I. models have made some surprising discoveries. What could they teach us someday? Just like ChatGPT, biological models sometimes get things wrong. Kasia Kedzierska, a computational biologist at the University of Oxford, and her colleagues recently gave GeneFormer and another foundation model, scGPT, a battery of tests. They presented the models with cell atlases they hadn't seen before and had them perform tasks such as classifying the cells into types. The models performed well on some tasks, but in other cases they fared poorly compared with simpler computer programs.

Dr. Kedzierska said she had great hopes for the models but that, for now, "they should not be used out of the box without a proper understanding of their limitations." Dr. Leskovec said that the models were improving as scientists trained them on more data. But compared with ChatGPT's training on the entire internet, the latest cell atlases offer only a modest amount of information. "I'd like an entire internet of cells," he said.

More cells are on the way as bigger cell atlases come online. And scientists are gleaming different kinds of data from each of the cells in those atlases. Some scientists are cataloging the molecules that stick to genes, or taking photographs of cells to illuminate the precise location of their proteins. All of that information will allow foundation models to draw lessons about what makes cells work. Scientists are also developing tools that let foundation models combine what they're learning on their own with what flesh-and-blood biologists

have already discovered. The idea would be to connect the findings in thousands of published scientific papers to the databases of cell measurements.

If foundation models live up to Dr. Quake's dreams, they will also raise a number of new risks. On Friday, more than 80 biologists and A.I. experts signed a call for the technology to be regulated so that it cannot be used to create new biological weapons. Such a concern might apply to new kinds of cells produced by the models. Privacy breaches could happen even sooner. Researchers hope to program personalized foundation models that would look at an individual's unique genome and the particular way that it works in cells. That new dimension of knowledge could reveal how different versions of genes affect the way cells work. But it could also give the owners of a foundation model some of the most intimate knowledge imaginable about the people who donated their DNA and cells to science.

<https://www.nytimes.com/2024/03/10/science/ai-learning-biology.html?searchResultPosition=14>

## **Dozens of Top Scientists Sign Effort to Prevent A.I. Bioweapons**

March 8, 2024

An agreement by more than 90 said, however, that artificial intelligence's benefit to the field of biology would exceed any potential harm. Dario Amodei, chief executive of the high-profile A.I. start-up Anthropic, told Congress last year that new A.I. technology could soon help unskilled but malevolent people create large-scale biological attacks, such as the release of viruses or toxic substances that cause widespread disease and death.

Senators from both parties were alarmed, while A.I. researchers in industry and academia debated how serious the threat might be. Now, over 90 biologists and other scientists who specialize in A.I. technologies used to design new proteins — the microscopic mechanisms that drive all creations in biology — have signed an agreement that seeks to ensure that their A.I.-aided research will move forward without exposing the world to serious harm.

The biologists, who include the Nobel laureate Frances Arnold and represent labs in the United States and other countries, also argued that the latest technologies would have far more benefits than negatives, including new vaccines and medicines. “As scientists engaged in this work, we believe the benefits of current A.I. technologies for protein design far outweigh the potential for harm, and we would like to ensure our research remains beneficial for all going forward,” the agreement reads. The agreement does not seek to suppress the development or distribution of A.I. technologies. Instead, the biologists aim to regulate the use of equipment needed to manufacture new genetic material.

This DNA manufacturing equipment is ultimately what allows for the development of bioweapons, said David Baker, the director of the Institute for Protein Design at the University of Washington, who helped shepherd the agreement. “Protein design is just the first step in making synthetic proteins,” he said in an interview. “You then have to actually synthesize DNA and move the design from the computer into the real world — and that is the appropriate place to regulate.”

<https://www.nytimes.com/2024/03/08/technology/biologists-ai-agreement-bioweapons.html>

## **How the Biological Weapons Convention could verify treaty compliance**

March 5, 2024

While significant chemical and nuclear weapons agreements contain verification provisions, the 1972 Biological Weapons Convention (BWC) does not. World governments have not discussed this topic within the treaty framework for two decades, after several years of work to develop a verification system failed in 2001.

Much has changed in science and security since then: Artificial intelligence (AI), genome editing, and other capabilities continue to accelerate and converge, resulting in ever more powerful technologies in the hands of a growing number of actors. In parallel, the international security environment has become more complex and competitive. Under these circumstances, it was remarkable that at the Ninth BWC Review Conference in late 2022, 185 countries agreed on a report with a forward-looking strategy to form a working group to discuss the long-standing issues of compliance and verification of the BWC, among several other matters.

Despite the challenging geostrategic context, the group engaged in a constructive dialogue over three days in December 2023, managing to move beyond the impasse around the failed verification protocol negotiations decades ago that stymied discussion on verification and compliance ever since. Moreover, the group recognized significant scientific and technological developments, including new open source verification opportunities and microbial forensic techniques that weren’t available in the late 1990s and early 2000s, but may be now. But there remains a gap between what is technically possible in terms of verifying

that countries are in compliance with the treaty, and what BWC member states view as politically feasible and financially acceptable.

A path to verification? Before any new methods of treaty verification, whatever their merit, can be deployed, BWC members must overcome several hurdles to develop a verification system.

*Conceptual clarity.* During the December working group session, it was apparent that many countries were in the “early stages of conceptual thinking” about verification, with differing visions on the definition, objectives, and scope of any BWC verification mechanism. To progress, states will have to develop a shared understanding of the scope and purposes of BWC verification ahead of a working group meeting later this year.

[https://thebulletin.org/2024/03/how-the-biological-weapons-convention-could-verify-treaty-compliance/?utm\\_source=Twitter&utm\\_medium=SocialMedia&utm\\_campaign=TwitterPost032024&utm\\_content=DisruptiveTechnologiesBio\\_VerifyTreaty\\_03052024](https://thebulletin.org/2024/03/how-the-biological-weapons-convention-could-verify-treaty-compliance/?utm_source=Twitter&utm_medium=SocialMedia&utm_campaign=TwitterPost032024&utm_content=DisruptiveTechnologiesBio_VerifyTreaty_03052024)

### **Ukraine using ‘chemical warfare agents’ – Moscow**

March 5, 2024

Russia’s security service claims to have arrested a man who was planning an attack in Zaporozhye Region. Ukraine has used chemical warfare agents secretly supplied to it by the West to attack Russian troops, Moscow’s Deputy Minister of Industry and Trade Kirill Lysogosky has claimed. The Russian Federal Security Service (FSB) claimed to have thwarted an “attempt by the Ukrainian special services to commit a terrorist act in Zaporozhye Region using an analog of the BZ chemical

warfare agent, according to the NATO classification” in which one man was arrested.

Officials released a video clip showing the arrest of the alleged saboteur and several vials found on his premises, which purportedly contained the toxic substance, also known as 3-Quinuclidinyl Benzilate. Prohibited under the Chemical Weapons Convention, BZ induces hallucinations, delirium, blindness, and inability to perform basic tasks. “The results of the investigation show that Western nations professing to have a wish to begin dialogue on strategic stability with us are effectively the developers and providers of chemical warfare agents prohibited under the [Chemical Weapons] Convention to Ukraine,” Lysogosky said on Monday, as quoted by TASS.

He also criticized the fact that Russia had been replaced on the executive council of the Organization for the Prohibition of Chemical Weapons (OPCW) by Ukraine, Poland and Lithuania last November after failing to get enough votes to retain its seat. In February, the head of Russia’s Nuclear, Chemical and Biological Protection Forces, Lieutenant General Igor Kirillov, accused Ukrainian forces of using banned chemical warfare agents on the battlefield. He claimed that Washington had been aiding and abetting Kiev in these activities. According to the general, the two nations had thus violated the OPCW’s charter.

The Russian commander cited several cases from last year, including one in which Ukrainian troops dropped US-made gas grenades containing “CS” compound on Russian positions. This chemical is classified as a riot-control tool that irritates the eyes and upper respiratory tract, and can cause skin burns, respiratory paralysis and cardiac

arrest when deployed in high concentrations. The general also claimed at the time that Ukraine was incorporating the use of chemical weapons into its military doctrine, under the auspices of its Western backers. In support of this claim, Kirillov cited an order for hundreds of thousands of antidotes, gas masks and other personal protective equipment that Kiev had supposedly placed with the European Union. According to Kirillov, the OPCW had not responded to evidential materials presented by Russia. The general concluded that the international body was being effectively run by the US, and used as a tool to target its political opponents.

<https://www.rt.com/russia/593785-russia-accuses-west-ukraine-chemical-warfare/>

## **Preventing chemical weapon re emergence by countering chemical terrorism**

March 4, 2024

The OPCW Open-Ended Working Group on Terrorism (OEWG-T) met in its first session of 2024 at the Headquarters of the Organisation for the Prohibition of Chemical Weapons (OPCW) to review activities from 2023 and elaborate on future plans. The risk of chemical weapons being used by non-state actors has been identified as an emerging challenge in the struggle for a world free of chemical weapons and poses a growing risk for all countries. The possibility of non-state actors using chemical weapons is furthered by technology advances, such as Artificial Intelligence (AI) tools which could aid chemical synthesis and novel delivery mechanisms, such as drones.

The OEWG-T forms the nucleus of efforts by OPCW Member States in addressing the growing risk of chemical terrorism. Its first

meeting for 2024 reviewed activities from the previous year, culminating in a two-day Tabletop Exercise organised in November 2023 with financial support from the European Union and facilitated by the OPCW Technical Secretariat.

The Tabletop Exercise centred around a simulated scenario of a chemical attack which participants were asked to manage and react to, and to develop best-practice recommendations for future action. Forty-eight participating professionals from 24 OPCW Member States shared recommendations for best practices, drawing on their personal and national expertise in emergency response, law enforcement, diplomacy, chemical industry, the military, and chemical incident investigation.

The Chair of the OEWG-T, H.E Ambassador Vusimuzi Madonsela of South Africa, called on Member States to act: “Even after the destruction of the last declared stockpiles of chemical weapons in July 2023, we continue to live in precarious times, when there are still such weapons that may emerge in the hands of non-state actors, which continues to pose a serious threat to international security. The insights gained from the Tabletop Exercise can significantly contribute to strengthening our global response mechanisms against the threat of chemical terrorism. Let us use the Open-Ended Working Group on Terrorism to enhance our knowledge, sharpen our skills and unify our efforts towards a safer and more secure world.”

The importance of the exercise in the current global environment was also highlighted by Mr, Marcin Wroblewski Director of the OPCW’s Office of Strategy and Policy, stating: “Chemical terrorism is a significant emerging threat; terrorist actors using new technologies have unprecedented access to chemical weapons of mass destruction.”

OEWG-T highlighted five steps for consideration:

1. The importance of additional assistance — from OPCW and bilateral — in capacity building and implementation;
2. Conducting further practical exercises at a regional level to address local circumstances;
3. A mechanism to incorporate policies addressing emerging technological challenges and opportunities;
4. Streamlining OPCW efforts with those of other relevant international bodies such as INTERPOL or the World Customs Organisation; and
5. Streamlining information sharing among States Parties to provide a common knowledge base.

<https://www.opcw.org/media-centre/news/2024/03/preventing-chemical-weapon-re-emergence-counter-chemical-terrorism>

### **Jack Teixeira Expected to Plead Guilty in Leak of Trove of Secrets**

February 29, 2024

Airman Teixeira is accused of posting national defense information and classified documents to a gaming chat group and has been in custody since being arrested in the spring. Airman Teixeira is accused of posting national defense information and classified documents to a gaming chat group and has been in custody since being arrested in the spring. A Massachusetts Air National Guardsman accused of posting dozens of secret intelligence reports and other sensitive documents on a gaming chat group is expected to plead guilty in federal court on Monday, prosecutors said in a court filing on Thursday.

The airman, Jack Teixeira, intends to withdraw his not-guilty plea in a deal that is likely to entail prison time, but less than the 60-year maximum sentence he faced on charges of improperly handling and publicly disclosing national defense secrets, according to two people briefed on the agreement. Prosecutors often suggest a range of potential punishments to judges, who have the power to impose the sentences they deem appropriate. Airman Teixeira, 22, who has been in custody since being arrested at his mother's house in North Dighton, Mass., in the spring, was responsible for one of the most far-reaching leaks of sensitive information in years.

Even as he relished the respectability and access to intelligence he gained through his military service and top secret clearance, he seethed with contempt about the government. He accused the United States of a host of nefarious activities: making biological and chemical weapons in Ukrainian labs, creating the Islamic State, even orchestrating mass shootings.

<https://www.nytimes.com/2024/02/29/us/politics/jack-teixeira-military-classified-documents.html?searchResultPosition=7>

### **China grows domestic bio weapons tech industry**

February 28, 2024

China is advancing its domestic, dual-use biological research capabilities with applications for the People's Liberation Army germ warfare programs, according to an open-source intelligence report. Recent virology studies "demonstrate that China is now able to operate its own dual-use virology research agenda on-shore and without international inputs or considerations," according to a new report by the Chinese Communist Party Biothreats Initiative, a think tank.

“China now has robust domestic capabilities that potentially provide Beijing with a range of asymmetric options against perceived adversaries,” the report said. The development of biological weapons by China has been overshadowed by many intelligence and strategic analysts who have instead focused on Beijing’s large conventional military buildup. China, however, remains overmatched militarily by the U.S. and its allies, and thus its biological arms development provides a major asymmetric advantage, the report said.

China is continuing high-risk pathogen research on SARS-CoV-2, the virus that causes COVID-19, and the work is a major strategic worry, the report said. Studies published in China show Beijing is continuing work banned in the West on the virus that killed millions during the global pandemic. So far, none of China’s recent SARS-CoV-2 research has been linked to a current vaccine, therapeutic, prophylactic or diagnostic, the report said, raising questions about the potential for using the virus for military purposes. “The fact that this work continues, including in Wuhan itself, likely demonstrates that there is a broader strategic logic underpinning this continued high-risk pathogen research,” the report said.

China’s nanotechnology research is also linked to military capabilities that include weaponizing nanomedicine, tiny robots and autonomous weapons, the report said. These arms can include “nano-bioinformatics for biological warfare, nano-cyber biological weapons, covert assassination and targeted biological warfare,” the report said. The capabilities “have the potential to fundamentally and irreversibly transform the nature of the next generation of dual-use research in China,” the report said. “The deliberate national prioritization of dual-use pathogen research and nanotechnology

provides insight into where Beijing assesses its own unique strengths to lie and, possibly, where Beijing has assessed its adversaries to have weaknesses in their own systems.” Previously, China required intensive and targeted international cooperation to obtain the technology and specialized knowledge needed for its virology and nanotechnology programs. Recent evidence suggests that is no longer the case, the report said.

On Jan. 4, the Beijing Advanced Innovation Center for Soft Matter Science and Engineering, part of the Beijing University of Chemical Technology, conducted a high-risk experiment with SARS-Cov-2, the virus that caused COVID-19. Researchers conducting the experiment stated that a new coronavirus isolate taken from a pangolin caused 100% mortality in humanized mice. “The researchers then tried to take the ‘lethal’ tone out of their report with a new Jan. 24, 2024, version that attempted to justify their study as an approach for vaccine or drug development studies,” the report said.

The university stated in a 2021 overseas talent recruitment announcement that its work includes “treating industrial-academic fusion and military-civil fusion as key development opportunities.” A team of scientists at the Wuhan Institute of Technology, the location U.S. intelligence says is one potential source of the COVID outbreak, stated in a journal article that their work created a new coronavirus with very high lethality in aged mice. The virus also had the potential to infect human beings. Another Chinese institute, the Hefei Institute of Physical Science, part of the Chinese Academy of Sciences, recently developed a “smart” DNA molecular nanorobot model for targeted drug delivery that has potential biological weapons uses. “The ability of nanorobots to transport biological agents directly to target cells with

such precision could also have dual-use applications, especially when considering the established linkages between [the Hefei Institute] and China’s People’s Liberation Army,” the report said.

As part of the strategy to leverage advanced technology, the Pentagon’s Defense Science Board is working to developing new strategic weapons and capabilities that will provide asymmetric advantages for continued U.S. military “operational dominance.” The strategy is outlined in an executive summary made public in November by the board that provides a few clues to the mostly secret effort. Board Chairman Eric Evans said in the summary that a task force on strategic options was converted into a new permanent DSB subcommittee devoted to new weapons and operational capabilities. The subcommittee will look at effective systems to strengthen the military’s ability to deter local conflicts involving allies and partners and to win those wars at the lowest cost if deterrence fails. “The task force considered advanced undersea assets and operational concepts, new uses of space assets, development of new countermeasures for electronic warfare, employment of cyber weapons, and as well as other areas that involved the adversary’s use of countermeasures to undermine U.S. dominance in the air, space, sea and cyber domains,” Mr. Evans said.

<https://www.washingtontimes.com/news/2024/feb/28/inside-ring-china-grows-domestic-bio-weapons-tech/>

### **Key stakeholders and decision-makers convene in Chad to advance accession to the Biological Weapons Convention**

February 27, 2024

On 6 and 7 February 2024, the United Nations Office for Disarmament Affairs

(UNODA) visited N’Djamena to promote Chad’s accession to the Biological Weapons Convention (BWC). The visit brought together key national stakeholders and decision-makers involved in the accession process in order to raise awareness concerning the importance of BWC universalization and to encourage broad national cooperation to that end. While the Biological Weapons Convention boasts almost universal membership, twelve States, including Chad, are not yet party to the Convention.

The first day of the visit consisted of a briefing of 25 senior Chadian government officials and members of parliament hosted at the Ministry of Foreign Affairs in N’Djamena. Presentations were aimed at familiarising delegates with the Convention and the rights and obligations of States Parties, as well as on the technical assistance and capacity building support available to support States’ accession to and post-accession implementation of the Convention. In opening remarks at the briefing, UNODA Geneva Branch Chief of Service, Mélanie Régimbal, highlighted that “Chad’s accession to the Biological Weapons Convention would strengthen its commitment to the fight against weapons of mass destruction and would help to strengthen Chad’s national capacities in areas such as public health, veterinary medicine, agriculture, and emergency preparedness and response.”

<https://disarmament.unoda.org/update/key-stakeholders-and-decision-makers-convene-in-chad-to-advance-accession-to-the-biological-weapons-convention/>

### **Ukrainian chemical terror attack thwarted – FSB**

February 27, 2024

Moscow’s agents have seized an analog of the incapacitating chemical BZ in Russia’s

Zaporozhye region. Russian operatives have prevented Kiev from staging a terrorist attack using chemical weapons in the southern part of the country not far from the frontline, the Federal Security Service (FSB) has said. In a statement on Tuesday, the agency said it had prevented *“an attempt by the Ukrainian special services to commit a terrorist act in Zaporozhye Region using an analog of the BZ chemical warfare agent, according to the NATO classification.”*

BZ, also known as 3-Quinuclidinyl Benzilate, is an odorless bitter-tasting powder that can cause hallucinations, delirium, blindness, and inability to perform basic tasks. The Chemical Weapons Convention, which has been signed by virtually all countries in the world, including Ukraine, prohibits the use of BZ on the battlefield. The FSB noted that the confiscated chemical agents are used for producing weapons of mass destruction and were developed in the US, adding that it had detained three Ukrainian citizens in the raid. The agency released a video showing a group of its operatives bursting into a single-story building and arresting one of the suspects. It also showed several pictures of small vials filled with chemical agents. The head of Russia’s Nuclear, Chemical and Biological Protection Forces, Igor Kirillov, said last week that Kiev’s forces had used toxic agents against Russian troops on numerous occasions.

At the time, he said that an agent similar to BZ had been found in Melitopol in Russia’s Zaporozhye region. He added that Ukrainian troops were also using drones to drop US-made gas grenades containing a CS compound, which could trigger respiratory paralysis when applied in high doses. He noted at the time that the delivery of such munitions by the US to Ukraine was a direct violation of the rules of the Organization for the Prohibition of Chemical Weapons (OPCW).

However, according to Kirillov, the OPCW did not react in any way to the evidence which he said proved that Ukraine was violating the Chemical Weapons Convention.

Zaporozhye Region, along with Kherson Region and the Donetsk and Lugansk People’s Republics, were integrated into Russia following referendums held in September 2022.

<https://www.rt.com/russia/593250-ukrainian-chemical-terror-attack-thwarted/>

## **Sounding the alarm on AI-enhanced bioweapons**

February 26, 2024

The convergence of artificial intelligence and biotechnology is producing novel threats which pose an existential risk both to specific demographic groups and the population at large. Alongside this, the Biological Weapons Convention Implementation Support Unit, which has a role in coordinating mitigation measures, is severely under-resourced. This demands urgent rectification. Artificial intelligence (AI) is enabling us to finally understand biology, in all of its complexity. This, in turn, allows us to harness billions of years of evolution to solve some of humanity’s most pressing challenges; from curing previously incurable diseases to the phasing out of fossil fuels.

With this massive potential for positive impact comes large, novel threats. Threats which could ultimately wipe out the whole of humanity. For brevity, this commentary only explores the increasing scale, democratisation and specificity of bioweapons enabled by AI; it explores three of the most pressing mitigations and calls on governments to overcome the stagnancy in this space and take urgent action.

AI has long been used for drug discovery – where a therapeutic molecule is searched for with the lowest toxicity possible. When a team of scientists flipped this parameter to instead optimise for toxicity, the algorithm generated not only VX (one of the most potent poisons in existence) but also novel toxins which were predicted to be more toxic. Alongside toxicity, AI can also enhance the transmissibility of a virus – and this is often done in laboratories researching pandemic viruses. If one were to imagine the transmissibility of COVID-19 with the death rate of Ebola, it's clear why the ever-increasing harm potential of bioweapons represents an existential risk.

AI can also be used to simulate the spread of pandemics – which is a useful tool in optimising quarantine measures and allocating testing resources. However, this can also be reversed for optimising the spread of a pathogen, thus scaling its harmful impact. The advent of large language models (LLMs) such as ChatGPT is democratising skills that used to take a long time to learn. In a recent paper, students in a class at MIT used chatbots to suggest four likely pandemic pathogens, explained how to generate them, supplied companies who were unlikely to screen orders and recommended that if they lacked the skills to implement this, that they engage a contract research organisation; they managed to do all of this in only one hour. This democratisation widens accessibility to bioweapons, making it available to smaller organisations with fewer resources, such as terrorist groups.

Democratisation extends beyond the use of large language models, with various initiatives set up to decrease the cost and skills barriers to accessing biotechnology. These initiatives include community laboratories, DIY biohacking communities

and cloud laboratories which perform experiments remotely. The advent of DNA printers is set to democratise the synthesis of DNA, which has already dramatically reduced in price (and therefore accessibility) over the past 5 years. Even if these DNA printers have measures to prevent the synthesis of potentially dangerous DNA, they could still be hacked or security measures overcome by bad actors.

Finally, the specificity with which bioweapons can target specific demographics is increasing as further developments (eg. cell and gene therapy) are made in the pursuit of precision medicine (the tailoring of medical treatment to an individual). This poses existential threats to particular groups of people, facilitating persecution and potentially even genocide.

<https://europeanleadershipnetwork.org/commentary/sounding-the-alarm-on-ai-enhanced-bioweapons/>

### **OPCW identifies ISIL as perpetrators of 2015 chemical attack in Marea, Syria**

February 22, 2024

The Organisation for the Prohibition of Chemical Weapons (OPCW) Investigation and Identification Team (IIT)'s fourth report concludes that there are reasonable grounds to believe that units of the Islamic State in Iraq and the Levant (ISIL) were the perpetrators of the chemical weapons attack on 1 September 2015 in Marea, Syria. IIT report concludes ISIL held exclusive means, motives, and capabilities to deploy sulfur mustard in 2015 attack. The IIT's comprehensive investigation was conducted from January 2023 to February 2024.

## Key findings

### 1. Sulfur mustard attack by ISIL:

- The IIT concludes that there are **reasonable grounds to believe** that on 1 September 2015, between 09:00 and 12:00 (UTC+3), during sustained attacks aimed at capturing the town of Marea, units of the **Islamic State in Iraq and the Levant (ISIL)** deployed sulfur mustard.
- The chemical agent was delivered using one or more **artillery guns**.

### 2. Impact locations and remnants:

- The IIT identified several **impact locations** across Marea, with no discernible targeting pattern.
- All remnants and munitions observed at these sites were **conventional artillery projectiles**, specifically of a 122-mm calibre, modified to **disperse a liquid payload**.
- Upon impact, at least six projectiles leaked a **black, viscous substance** with a distinct **"pungent"** and **"garlic-like" smell**.
- **Eleven named individuals** who came into contact with the liquid substance experienced symptoms consistent with **exposure to sulfur mustard**.

### 3. ISIL's exclusive and dedicated capability in this incident:

- The IIT established that the chemical payload was **deployed by artillery from areas under ISIL control**.

- No other entity possessed the **means, motives, and capabilities** to deploy sulfur mustard as part of an attack in Marea on 1 September, 2015.

- The IIT was able to **reconstruct the organisational structure and chain of command** that led to the use of chemical weapons by the Islamic State in Marea on 1 September 2015.

- Strategic military operations such as the attack carried out in Marea, involving the large-scale deployment of chemical weapons, would only have occurred **pursuant to direct orders from ISIL's Executive Branch**, i.e., Delegated Committee, operating directly under ISIL's so-called "Caliph", according to IIT conclusions.

- In the course of its investigation, the IIT was able to link additional organisational structures and individuals to the use and deployment of chemical weapons by the Islamic State, including ISIL's *Diwan Al-Jund* (Department of Soldierly) and the Committee for Military Development and Manufacturing, identifying a total of **four named individuals as perpetrators**. Two further ISIL members were **identified as the primary drivers of ISIL's chemical weapons programme**.

### 4. Degree of certainty:

- The IIT reached its conclusions based on the standard of proof known as **"reasonable grounds"**, consistently adopted by international fact-finding bodies and commissions of inquiry.
- The assessment included information from the **Fact-Finding Mission (FFM)**, States Parties, interviews

conducted by the IIT, and analyses of samples, computer modelling, satellite imagery, front-line maps, authenticated videos and photos, and other relevant data.

Upon releasing the report, OPCW Director-General Ambassador Fernando Arias said: “With the fourth report by the Investigation and Identification Team (IIT), the Secretariat of the OPCW has once again delivered on the mandate it has received to identify perpetrators of chemical weapon use in Syria. In this report, the IIT concluded that ISIL used sulfur mustard in Marea on 1 September 2015. This independent investigation has been conducted based on a sound scientific methodology and on the combination, consistency, and corroboration of all of the information gathered and analysed, in line with the highest international standards.

Once again, the OPCW Secretariat has demonstrated that it is able to identify perpetrators of the use of chemical weapons, States and non-State actors alike. This is a stark reminder to the international community that non-State actors like ISIL have developed the capacity and the will to use chemical weapons. This emphasises the OPCW’s pivotal role and expertise in addressing such threats. The facts are now known – it is up to the international community to take action, at the OPCW and beyond.”

<https://www.opcw.org/media-centre/news/2024/02/opcw-identifies-isil-perpetrators-2015-chemical-attack-marea-syria>

## **OPCW and European Union sign MoU to strengthen collaboration**

February 21, 2024

The European Union (EU) and the Organisation for the Prohibition of Chemical Weapons (OPCW) have signed a Memorandum of Understanding (MoU) to enhance and strengthen collaboration in common areas of interest in accordance with the OPCW programme and the mandate of the Technical Secretariat. The MoU aims to operationalise efforts in the field of peace, security and disarmament and to reinforce cooperation between the two sides in order to make the greatest possible joint contributions to the full implementation of the Chemical Weapons Convention (CWC).

The MoU was signed by the High Representative of the European Union for Foreign Affairs and Security Policy, H.E. Mr Josep Borrell Fontelles and OPCW Director-General, Ambassador Fernando Arias. The ceremony took place on 20 February at the OPCW’s Headquarters in The Hague, where the European Union was represented by the European Union Liaison Officer to The Hague H.E. Ambassador Mika-Markus Leinonen, accompanied by OPCW Director-General Ambassador Fernando Arias, Deputy Director-General Ambassador Odette Melono and several high ranking officials of the Organisation.

The High Representative said: “The OPCW was founded to put an end to and eliminate chemical weapons once and for all. Last year, it verified the destruction of the world’s last declared chemical weapons stockpile. However, we continue to witness the barbaric consequences of these heinous weapons. We still have work to do. With the signature of

this new agreement, we are increasing our cooperation with the OPCW to safeguard and implement the Chemical Weapons Convention (CWC). The objective is clear: a world free from chemical weapons for the sake of all mankind.”

The Director-General remarked: “I express my sincere appreciation to the European Union for its continuous financial and political support to the activities of the OPCW. The present Memorandum of Understanding with the European Union will enable us to take further steps towards a better and more effective implementation of our mandates provided for under the Chemical Weapons Convention and the relevant decisions of the Policy Making Organs of the OPCW. It also underscores our collective determination to eliminate chemical weapons and prevent their re-emergence in order to achieve our common goal of ridding the world of chemical weapons and advancing peace and global security.”

<https://www.opcw.org/media-centre/news/2024/02/opcw-and-european-union-sign-mou-strengthen-collaboration>

### **Ukraine has used US-made chemical weapons – Russia**

February 19, 2024

Washington and Kiev have violated articles of the Organization for the Prohibition of Chemical Weapons (OPCW) as Ukrainian forces have used illegal munitions on the battlefield, Russian Lieutenant General Igor Kirillov has claimed. The head of Russia’s Nuclear, Chemical and Biological Protection Forces provided several examples of Kiev’s alleged use of banned chemical weapons and non-lethal chemical agents that he said were obtained from the US.

Kirillov claimed that Ukraine used drones to drop US-made gas grenades on December

28, 2023 containing “CS” compound – a chemical classified as a riot-control tool that irritates the eyes and upper respiratory tract, and can cause skin burns, respiratory paralysis and cardiac arrest when used in high concentrations. He said the delivery of such munitions by the US to Ukraine was a direct violation of the rules of the OPCW, which states that a country must “*never, under any circumstances, transfer chemical weapons directly or indirectly to anyone.*”

He also reported that, on June 15, 2023, Moscow’s forces were attacked by a drone carrying a container filled with chloropicrin, which is classified as a Schedule 3 compound under the Chemical Weapons Convention and is strictly prohibited – even for law enforcement purposes. The same chemical was also used by Kiev on August 3 and 11, 2023 near the village of Rabotino, according to Kirillov. The general also provided several examples of Kiev using toxic substances against Russian military personnel, as well as poisoning high-ranking officials such as the head of Russia’s Kherson Region Vladimir Saldo in August 2022.

<https://www.rt.com/russia/592680-ukraine-us-chemical-weapons/>

### **First ever national workshop on the Biological Weapons Convention held in Hanoi, Viet Nam**

February 2, 2024

From 18 to 19 January 2024, the Implementation Support Unit (ISU) for the Biological Weapons Convention (BWC) within the United Nations Office for Disarmament Affairs (UNODA) and the Ministry of Health of Viet Nam, jointly organized a national workshop on the implementation of the Convention. The purpose of the workshop was to deepen understanding of the BWC, to share effective practices relating to the preparation of Confidence-Building

Measures (CBMs), and to inform participants about capacity-building opportunities available to strengthen biosafety and biosecurity.

The two-day gathering in Hanoi brought together approximately 20 participants from different Vietnamese ministries and institutions, two regional experts from the Ministry of Foreign Affairs of the Lao People's Democratic Republic and the Philippines and staff from the ISU and UNODA. Opening remarks were delivered by the ISU, the Ministry of Health of Viet Nam, and the Delegation of the European Union to Viet Nam, as the EU provided funding for the workshop.

Throughout the workshop, participants discussed different national implementation aspects in regard to the Convention and identified opportunities for technical assistance and capacity-building support. Information on the preparation of CBMs was also exchanged in great detail and lessons learned were shared by regional experts. Various learning methods were applied during the workshop, including brief thematic presentations, a CBM tabletop exercise, an active learning session on specific CBM aspects carried out in smaller breakout groups and a quiz on the BWC.

“The objective of CBMs is to prevent or reduce the occurrence of ambiguities, doubts, and suspicions and to improve international cooperation in the field of peaceful biological activities” said Alex Lampalzer, Deputy Chief of the ISU. He also expressed his hope that, “this workshop will facilitate the preparation of Viet Nam’s first-ever CBM report in 2024.” Workshop participants underlined the importance of maintaining the strong norm against biological weapons, as well as the need for further awareness of, and international

cooperation and assistance towards, the Convention’s full implementation.

<https://disarmament.unoda.org/update/first-ever-national-workshop-on-the-biological-weapons-convention-held-in-hanoi-viet-nam/>

## **Russia and China unite over US bioweapons threat**

February 1, 2024

The Russian and Chinese governments have held an inter-agency meeting in Beijing to share their assessments of biological security concerns, and address the threats posed by bioweapons – particularly those allegedly being developed by the US military. The two countries have pledged to collaborate in confronting dangers posed by the Pentagon’s “biological activities”

Moscow and Beijing agreed to work together in seeking to strengthen the Biological and Toxic Weapons Convention (BTWC), a treaty signed by 109 nations in 1972 to block the development of these unconventional armaments, the Russian Foreign Ministry said on Thursday in a statement. “The meeting confirmed the unity of approaches of Russia and China to the biological security,” the ministry said, adding that “particular attention in this context was paid to the military and biological activities of the United States.”

“The need for further close coordination and constructive interaction both in bilateral format and at relevant multilateral fora, primarily within the framework of the BTWC, the UN and the SCO [Shanghai Cooperation Organization] was noted,” the ministry added. Russia, China, and 14 other nations issued a joint statement in December calling for strengthening the UN’s policing of

biological and chemical weapons.” Convinced that such use would be repugnant to the conscience of humankind, we are determined to condemn any use of toxic chemicals, biological agents or toxins as weapons by anyone, anywhere at any time, and to hold accountable those responsible for any such use,” the statement declared.

Moscow and Beijing have repeatedly pressed for greater transparency from the US and its allies regarding their military biological activities. Wednesday’s talks between the two governments devoted “particular attention” to the Pentagon’s bioweapons activities, the Russian Foreign Ministry said.

<https://www.rt.com/news/591678-china-russia-us-biological-activities/>

## **A.I. Is Coming for the Past, Too**

January 28, 2024

We don’t have to imagine a world where deepfakes can so believably imitate the voices of politicians that they can be used to gin up scandals that could sway elections.. Fortunately, there are numerous reasons for optimism about society’s ability to identify fake media and maintain a shared understanding of current events. While we have reason to believe the future may be safe, we worry that the past is not.

History can be a powerful tool for manipulation and malfeasance. The same generative A.I. that can fake current events can also fake past ones. While new content may be secured through built-in systems, there is a world of content out there that has not been watermarked, which is done by adding imperceptible information to a digital file so that its provenance can be traced. Once watermarking at creation becomes

widespread and people adapt to distrust content that is not watermarked, then everything produced before that point in time can be much more easily called into question.

In 1924 the Zinoviev Letter, said to be a secret communiqué from the head of the Communist International in Moscow to the Communist Party of Great Britain to mobilize support for normalizing relations with the Soviet Union, was published by The Daily Mail four days before a general election. The resulting scandal may have cost Labour the election. The letter’s origin has never been proved, but its authenticity was questioned at the time, and an official investigation in the 1990s concluded that it was most likely the work of White Russians — a conservative political faction led at the time by Russian émigrés opposed to the Communist government.

Decades later Operation Infektion, a Soviet disinformation campaign, used forged documents to spread the idea that the United States had invented H.I.V., the virus that causes AIDS, as a biological weapon. And in 2004 CBS News withdrew a controversial story because it could not authenticate the documents, which were later discredited as forgeries, that called into question the earlier service by George W. Bush, then the president, in the Texas Air National Guard. As it becomes easier to generate historical disinformation and as the sheer volume of digital fakes explodes, the opportunity will become available to reshape history or at least to call our current understanding of it into question.

<https://www.nytimes.com/2024/01/28/opinion/ai-history-deepfake-watermark.html?searchResultPosition=19>

## **Could AI help bioterrorists unleash a new pandemic? A new study suggests not yet**

January 25, 2024

Could new AI technology help unleash a devastating pandemic? That's a concern top government officials and tech leaders have raised in recent months. One study last summer found that students could use chatbots to gain the know-how to devise a bioweapon. The United Kingdom brought global political and tech leaders together last fall to underscore the need for AI safety regulation. And in the United States, the Biden administration unveiled a plan to probe how emerging AI systems might aid in bioweapons plots. But a new report suggests that the current crop of cutting-edge AI systems might not help malevolent actors launch an unconventional weapons attack as easily as is feared.

The new RAND Corporation report found that study participants who used an advanced AI model plus the internet fared no better in planning a biological weapons attack than those who relied solely on the internet, which is itself a key source of the information that systems like ChatGPT train on to rapidly produce cogent writing. The internet already contains plenty of useful information for bioterrorists. "You can imagine a lot of the things people might worry about may also just be on Wikipedia," Christopher Mouton, a senior engineer at the RAND Corporation who co-authored the new report said in an interview before its publication.

Mouton and his colleagues had 12 cells comprising three members who were given 80 hours each over seven weeks to develop plans based on one of four bioweapons attack scenarios. For example, one scenario involved a "fringe doomsday cult intent on

global catastrophe." Another posited a private military company seeking to aide an adversary's conventional military operation. Some cells used AI, others only the internet. A group of experts then judged the plans these red teams devised. The judges were experts in biology or security; they weighed in on the biological and operational feasibility of a plan.

None of the groups scored particularly well. The top possible score was a nine, but groups generally scored well below five, which indicated a plan with "modest" flaws. This partly reflects the difficulty in pulling off a biological attack. The Global Terrorism Database, the RAND report noted, includes "only 36 terrorist attacks that employed a biological weapon—out of 209,706 total attacks." The database comprises 50 years of data. The red teams all developed plans, the RAND authors wrote, that "scored somewhere between being untenable and problematic."

<https://thebulletin.org/2024/01/could-ai-help-bioterrorists-unleash-a-new-pandemic-a-new-study-suggests-not-yet/>

## **Report reveals new details of China's biological weapons programs**

January 24, 2024

China's military is engaged in secret biological weapons development that is a key element of Beijing's asymmetric warfare strategy, according to a new report by the CCP BioThreats Initiative, a think tank. The report provides new details on biological weapons efforts of the People's Liberation Army, which researchers say controls all civilian biological research in China. "Bioweapons are part of the CCP's standard order of battle; not an unconventional set of capabilities only to be used under extreme circumstances," the report states, using the abbreviation for Chinese Communist Party.

The report is based on open-source research and Chinese military writings. In 2015, for example, He Fuchu, who was then president of the Academy of Military Medical Sciences, said that biotechnology is a new “strategic commanding heights” of national defense requiring biomaterials and “brain control” weaponry. The Chinese military’s authoritative textbook, “Science of Military Strategy,” includes a section identifying biology as a domain for military struggle. The book mentions the potential for new types of biological warfare to include “specific ethnic genetic attacks” designed to affect targeted ethnic groups.

China’s military is developing biological arms disguised as civilian research in places like the Wuhan Institute of Virology, considered a main source of the COVID-19 virus outbreak.

The objective of the covert arms programs, researchers say, is to weaponize biology for use in a future conflict. The spectrum of potential biological weapons includes human genome editing for soldiers, genetic manipulation of bacteria and the use of human-computer interfaces that seek to control populations, the report said. “These research programs are not obscure ‘moonshots’; they are core strategic focus areas that are designed to be utilized over the near term and within current state strategic circumstances, such as in Taiwan,” the report said. “Any breakthrough in this dual-use research would provide unprecedented tools for the [Chinese Communist Party] to forcibly establish a new world order which has been [Chinese President] Xi Jinping’s lifelong goal,” the report said.

<https://www.washingtontimes.com/news/2024/jan/24/inside-ring-report-reveals-new-details-of-chinas-b/>

## **Elections and Disinformation Are Colliding Like Never Before in 2024**

January 11, 2024

A wave of elections coincides with state influence operations, a surge of extremism, A.I. advances and a pullback in social media protections. Billions of people will vote in major elections this year — around half of the global population, by some estimates — in one of the largest and most consequential democratic exercises in living memory. The results will affect how the world is run for decades to come.

At the same time, false narratives and conspiracy theories have evolved into an increasingly global menace. Baseless claims of election fraud have battered trust in democracy. Foreign influence campaigns regularly target polarizing domestic challenges. Artificial intelligence has supercharged disinformation efforts and distorted perceptions of reality. All while major social media companies have scaled back their safeguards and downsized election teams.

Disinformation campaigns like this easily traverse borders. Conspiracy theories — such as claims that the United States schemes with collaborators in various countries to engineer local power shifts or that it operates secret biological weapons factories in Ukraine — have sought to discredit American and European political and cultural influence around the world. They could appear in Urdu in Pakistan while also surfacing, with different characters and language, in Russia, shifting public opinion in those countries in favor of anti-West politicians.

<https://www.nytimes.com/2024/01/09/business/media/election-disinformation-2024.html?searchResultPosition=25>