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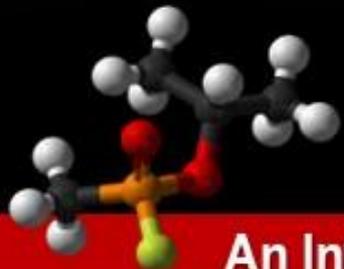
February 2024



PART A

**Meet
OpenAI Sora!**

**Could AI help
bioterrorists unleash
a new pandemic?**



C²BRNE DIARY-2024[®]

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Topics that attracted attention!

EDITOR'S CORNER





Editorial

Brig General (ret.) Ioannis Galatas, MD, MSc, MC (Army)

Editor-in-Chief
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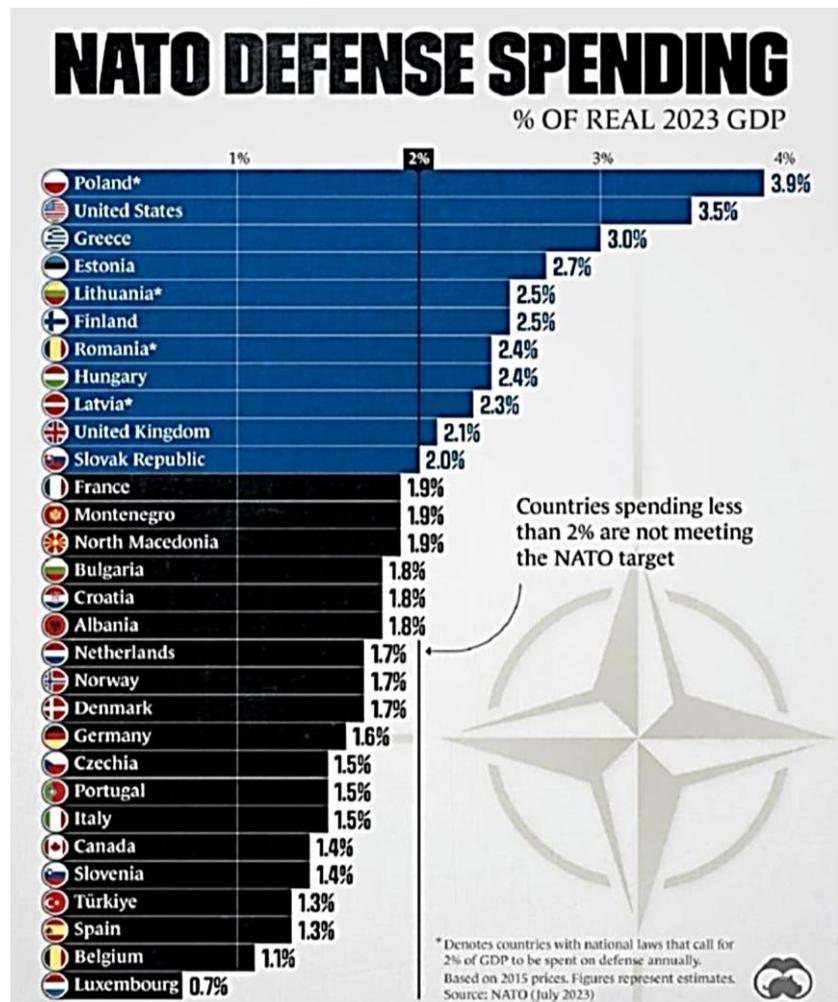


Dear Colleagues,

The situation remains the same: two wars (one proxy; one terrorist); one mini-civil war; an (ongoing) pandemic and the growing human stupidity. Keep in mind that World War II began as three separate, loosely connected conflicts for primacy in key regions stretching from Europe to the Asia-Pacific. Conflicts that eventually culminated and coalesced into a massive conflict.

Imagine the things we could have done instead of spending money for the sake of NATO!

Proxy War: German Defense Minister Boris Pistorius said in an interview with the daily newspaper Der Tagesspiegel that the member states of the European Union must prepare for war with Russia. He expressed his concern about the extension of the war in Ukraine, reports News.ro. Former MP and member of Chancellor Olaf Solz's Social Democratic Party (SPD) is sounding the alarm over Russian President Vladimir Putin's "extensive threats". "We hear threats from the Kremlin almost every day. We must therefore take into account the fact that Vladimir Putin could wake up one day and attack a NATO member state. We have to relearn to live with the risk," he warns. I was always wondering how certain inadequate persons manage to occupy high-rank positions shaping the future of countries. Another fine example is the Chief of Staff of the French Armed Forces, Thierry Burkhard, who has been victorious since the Battle of Austerlitz, if we may say so jokingly, who says "The Russians have been defeated in Ukraine"! It seems that the Russian strike that led to the death of French mercenaries in Ukraine has not been accepted by the military leadership in Paris as, although mercenary is not accepted, it was nevertheless considered a loss of French soldiers by



Russia and thus the leader of the French himself of forces wanted to respond after the hit although he did not connect the two issues. In a similar mood British Army Chief Sir Patrick Sanders has called on the nation to prepare for general conscription – “For King and Nation”! NATO should be prepared for the prospect of Russian missile strikes in Europe in the event of an all-out war with Russia, said Lieutenant General Alexander Sollfrank, a commander of NATO's military logistics center in Germany. A fourth example is Frontex chief Hans Leitens who does not believe that walls and fences help keep illegal migrants out and that the European Union should try to prevent illegal immigration by creating more legal entry routes into the bloc. All 27 leaders agreed (Feb 02) on an additional support package of 50 billion euros for Ukraine (for civil servants' salaries), European Council President Charles Michel announced a while ago. I am paying for them! Unbelievable!

In addition, 1) the US Senate agreed (Feb 04) to give aid of 60 billion dollars to Ukraine [and Israel]! At the same time, they [spare money](#) for the best blood test (Galleri™ by Grail) for pancreatic cancer.¹ 2) British Prime Minister Rishi Sunak has said London is ready to repel an attack from Russia if Moscow "turns its guns" on the UK. R. Sunak believes that the British troops are ready to fight the Russians on equal terms. 😊



NATO: Turkey does not accept selling conditions set by the USA for the additional F-16s and their use, and this means that they can be used against Greece as well. What a surprise! Spitting of the USA continues! (Update Feb 11) US Ambassador to Ankara "The US Congress has approved the sale of 40 F-16 Vipers to Turkey and the modernization (to Viper level) of an additional 79 Turkish F-16s." Occasional friends pretending to be allies! Tragic!

¹ Today, patients suffering from this form of cancer have only a 3% chance of living five years after diagnosis. But if it is detected before it spreads to other organs, the survival rate jumps to 44%!



Mini Civil War USA: The conflict between the Biden administration and the 25 US states that stand by Texas is developing into a profound constitutional crisis. The American media reported that several Officials are studying the "TEXIT", i.e. the secession of Texas and other States that will lead to the change of the US Constitution with the creation of a Confederacy. Texas Attorney General Ken Paxton, addressing the federal government, emphasized that "Texas would never have entered the Union if it knew it could not protect itself." The governor of N. Dakota, Noem, reiterated that "Texas and the original 13 colonies would never have signed the treaty that formed the first constitution of the United States if they did not believe that their right to protect themselves was secured"! And all that for what? To keep illegal immigrants from flooding their country (300,000 entered in December 2023), against the will of the US administration!

Gaza War: British (what else) UN Under-Secretary-General Martin Griffiths, responsible for coordinating humanitarian operations, said Hamas is "not a terrorist organization" but a "political movement".

SE Asia: North Korea and the War Threats: Is Kim Jong-un Bluffing? To paraphrase Theodore Roosevelt, North Korea usually speaks most loudly when it can't afford a stick. American policy would be wise to not overreact, but nobody can be certain about that...

Illegal Immigration – A Proposal: We always blame the unfortunate illegal immigrants but never their countries of origin doing nothing to help change the overall social/working status forcing people to seek a better future in Europe or the US. What if EU member states break diplomatic relations with these countries? We might lose money from commerce and weaken foreign intervention but what would be the cost for Libya, Somalia, Sahel countries, Iraq, Pakistan, Bangladesh, etc.? Will they try better to control the illegal immigration tsunami to avoid consequences? So far we have tried almost everything why not this last effort before letting arms solve the problem?

Olympic Games 2024: New "sports": break dancing, skateboarding, sports climbing and surfing. SERIOUSLY? Respect a name with a huge history and importance.

The Editor-in-Chief



"BY POPULAR DEMAND, THE REST OF THE GAMES WILL BE JUDGED BY AUDIENCE PARTICIPATION AND MAJORITY RULE ..."





Germany Trains New Generation of Muslim Leaders

By Christoph Strack | DW reporter

Source: <https://www.homelandsecuritynewswire.com/dr20240123-germany-trains-new-generation-of-muslim-leaders>

Jan 23 – Osman Soyer is a religious affairs officer who was sworn into office this month in the Sehitlik Mosque in Berlin's Neukölln district. He is one of 28 young men and women who have been trained as "religious representatives" by DITIB, Germany's largest Islamic organization. They are involved in a variety of pastoral duties; this can also include acting as imams, but the job description is broader.

Soyer has been working as an Islamic religious representative in Alfter, a town near Bonn in western Germany, for a few months now. Community outreach, he says, is his top priority. It includes a wide range of activities. "I teach pupils, I'm a prayer leader, preacher and pastor. We also go to weddings, I do funerals."

His parents came to Germany from Turkey in 1972, and his father worked at the large Opel car manufacturer near the city of Mainz — a fairly [typical life for many immigrants at the time](#).

The swearing-in ceremony in Berlin reflects this history. Around 900 mosque communities make up the Turkish-Islamic Union, part of the Institute for Religion (DITIB) in Germany. **That's out of more than 3,000 estimated mosques and Muslim prayer houses in Germany overall.**

For a long time, the Turkish-Islamic Union has been financed exclusively by the powerful Diyanet Turkish state religious authority — indeed, the union's imams were sent from Turkey to preach and provide pastoral care in Turkish.

Building Social Cohesion

The training program is an "important service," Eyüp Kalyon, DITIB Secretary General, tells DW. He says his association is geared towards the needs of [Muslims in Germany](#). As a religious community, it's committed to providing personal as well as financial support and has made a shift in perspective reflected in the training of Imams in Germany to strengthen "social cohesion."

In the future, the German language "will be a much bigger part of the picture," he tells DW. "It will be the language that binds us all together, that connects the Muslim community in particular. That's why our training language is German." But maintaining Turkish-language services will also be important for older members of the community, he adds.

The idea of [training Muslim clergy in Germany](#) has long been part of integration and religious policy debates in Germany. Over the years, the German Islamic Conference (DIK), which was launched in 2006, has always emphasized the issue of imams' lack of German language skills.

For a long time, the Ahmadiyya community offered the only imam training in Germany. The Ahmadiyya emerged at the end of the 19th century in what is now Pakistan. The community sees itself strictly as a religious reform movement. Since 2008, it has been training German-speaking imams in a seven-year course. They're active in Ahmadiyya communities throughout Germany.

Four years ago, two very different groups entered the scene. DITIB converted a former youth hostel in Dahlem, in the remote Eifel region of western Germany, into a training center in 2020. A year later, Islamic scholars from the University of Osnabrück and German Muslims with Bosnian roots created the "Islam College of Germany" (IKD).

Horst Seehofer who was interior minister at the time, praised the IKD's foundation, saying it was good news for Muslims in Germany and a recognition of "the reality of life for Muslims living in Germany."

A Push from the Interior Ministry

Both the DITIB and the Islamic College in Osnabrück have already sent several dozen graduates into the field. Imams from both institutions preside over prayers and lead Friday prayer services. But then in mid-December, a press release from the current Federal Interior Ministry caught many people off guard.

Federal Minister of the Interior Nancy Faeser announced that, after lengthy negotiations with Diyanet and DITIB, her ministry had agreed to [gradually wind down the deployment of state-sponsored religious representatives from Turkey](#). "This is an important milestone for the integration and participation of Muslim communities in Germany," Faeser said. Going forward, 100 imams are to be trained in Germany each year.

Germany is following France's example: Since the beginning of this year, France has no longer allowed any new imams from abroad into the country. Rather, clerics are to be trained at French universities. This change was initiated by President Emmanuel Macron at the beginning of 2020 and has now come into force. Up until now, French imams largely came from Morocco, Tunisia and Algeria. Just like Osman Soyer, 36-year-old DITIB representative Eyüp Kalyon represents a new generation of Imams in Germany. Kalyon was born in Wuppertal holds German



citizenship, and has a German high school diploma. His grandparents came from Turkey. And like many of the 28 current graduates, Kalyn and Soyer speak at least two languages fluently: German and Turkish.

A representative of the Interior Ministry spoke as the official guest of honor at the DITIB ceremony in Berlin. Jörn Thiessen is Head of the Department H (for Homeland, Cohesion and Democracy) in the Interior Ministry.

“This is exactly the right step: people who are here, who live here, who speak our language, who know the culture, and who form bridges into society, can do exactly what we want,” he told DW, explaining that the idea was to train 100 imams and religious officials each year and decrease the deployments from Turkey by the same number.

After many years of debate and delay, the training of Muslim religious officers in Germany is changing. But many questions — above all the financing of the DITIB imams without Turkish support — are still unanswered. A debate on the next steps is only slowly getting up to speed now.

EDITOR'S COMMENT: A thin line divides innovation from stupidity.

Turkey Humiliated NATO; If NATO Can't Expel It, Here's Plan B

By Michael Rubin

Source: <https://www.meforum.org/65488/turkey-humiliated-nato-if-nato-cant-expel-it-here>

Jan 24 – Turkey's blackmail of the North Atlantic Treaty Organization (NATO) over Sweden's accession is the latest episode to raise questions about [whether Turkey's belongs](#) in the alliance. Certainly, NATO leaders and many in the White House will celebrate Turkey agreeing to Swedish accession after a 22-month delay but, while NATO Secretary-General Jens Stoltenberg [lavishes](#) praise on Turkish President Recep Tayyip Erdoğan, the reality is Turkey [subordinates NATO's interests](#) to its own material benefit. It plays Russia and the United States off each other, and it double-deals as Turkey arms Ukraine while helping Russia evade sanctions.



NATO [defines](#) its purpose "to guarantee the freedom and security of its members through political and military means" and says it "promotes democratic values." Turkey today makes a mockery of such values: Freedom House [ranks](#) Turkey as NATO's most undemocratic member.

For too long, NATO leaders and their Western counterparts have been in denial about Turkey. Some explain Turkey is simply too important, especially as it has the second largest military in NATO. This metric is deceptive, though. **It is not the size of the army that matters, but rather the political willingness to use it.**

The idea that the problem will resolve itself if Erdoğan leaves office or dies is fantasy given how he has shaped the education of 32 million Turks and how he molded the military into his own image during his 21-year dictatorship. The same is true with Turkey's media and bureaucracy. Turkey today is a liability. There is no mechanism within NATO to expel a wayward member. In the past, countries withdrew voluntarily. In 1966, for example, France left NATO's integrated military command after a series of internal disputes, although Charles De Gaulle simultaneously reaffirmed France's commitment to the alliance's collective defense. Eight years later, Greece withdrew from NATO command after Turkey invaded Cyprus. Both countries ultimately rejoined.

NATO's value to Erdoğan, however, is that he can be a Trojan horse and block consensus on every decision until NATO members meet his price. For Sweden, this means repressing free speech or extraditing dissidents. For the United States, this could mean giving Turkey F-16s.

If NATO cannot force Turkey out, could it compel it to leave? Yes.

Defense historian Kori Schake notes an example from the second Berlin Crisis in 1958. As the Soviet Union again challenged the status of West Berlin, the United States, the United Kingdom, and France implemented "[Live Oak](#)." The idea was to involve in planning cells those NATO members most likely to fight, effectively creating a *fait accompli* for other NATO members. Such a concept today would mean privileging reliable NATO members over potential filibustering from Turkey.

John Maurer, professor of strategy at the School of Advanced Air and Space Studies at the Air University, Maxwell Air Force Base, speculates that NATO reformers could interpret France's voluntary separation



from NATO command in 1966 as indicating that being party to the NATO Treaty does not necessarily guarantee participation in all NATO structures, especially at the military level.

NATO could also move its Land Command (LANDCOM) out of Izmir. Should Turkey veto transfer through its presence within the [North Atlantic Council](#), NATO could respond by setting up a parallel command and then slowly letting LANDCOM wither. Either way, NATO might signal its displeasure with Erdoğan's antics by assigning the new or relocated structure to Alexandroupoli or Stockholm. NATO might make Turkey's presence in NATO uncomfortable in other ways. NATO members could informally lock Turks out of certain organizations by refusing Turks appointments. Here, there is also precedent, as Turkey regularly uses its veto to forbid speakers critical of Erdoğan from attending the NATO Parliamentary Assembly. Likewise, just as "[Five Eyes](#)" formalizes intelligence sharing among Australia, Canada, New Zealand, the United Kingdom, and the United States, a "NATO Minus One" code might prevent regular intelligence sharing with Turkish officials. Such a move is prudent given both Turkey's willingness to [target dissidents across Europe](#) and its [support for the Islamic State](#).

Effective defense requires an appreciation of reality. Turkey no longer provides NATO the foundation or value it once did. Denial about Erdoğan's ideology or his impact on the Turkish military can be deadly. Rather than embrace wishful thinking and recognizing the impossibility of giving Turkey the boot, it is time to quarantine NATO's Trojan horse.

[Michael Rubin](#) is director of policy analysis at the Middle East Forum and a senior fellow at the American Enterprise Institute.

EDITOR'S COMMENT: Expell Turkey from NATO? This is what they get after the announcement that Greece will buy 40 F-35s. Turkey requested to purchase 40 new F-16 aircraft and upgrade 79 existing F-16 aircraft to the Viper level. The request includes: thirty-two (32) F-16 C Block 70 aircraft, eight (8) F-16 D Block 70 aircraft, forty-eight (48) F110-GE-129D engines (40 installed, 8 spares), one hundred forty nine (149) Enhanced Programmable Display Generators (iPDG) (40 installed, 10 spares, 99 for modernization program (79 installed, 20 spares)), one hundred forty-nine (149) AN/APG-83 Active Electronically Scanned Array (AESA) Scalable Agile Beam Radar (SABR) (40 installed, 10 spares, 99 for modernization program (79 installed, 20 spares)), one hundred sixty nine (169) Modular Mission Computers (MMC) 7000AHC (or available mission computer) (40 installed, 10 spares, 119 for modernization program (79 installed, 40 spares)), one hundred fifty-nine (159) Integrated Global Positioning Systems (GPS) Inertial Navigation Systems (INS) (EGI) with Selective Anti-Spoof Availability (SAASM) or capability M-Code and Precision Positioning Service (PPS) (40 installed, 8 spares, 111 for modernization program (79 installed, 32 spares)), one hundred sixty-eight (168) complete Viper Electronic Warfare Suite (IVEWS) or equivalent Electronic Warfare Systems (EW) (40 installed, 10 spares, 118 for modernization program (79 installed, 39 spares)), eight hundred and fifty-eight (858) LAU-129 guided missile launchers, forty-four (44) M61 Vulcan guns (40 installed, 4 spares) , sixteen (16) AN/AAQ-33 Sniper Advanced Targeting Pods (ATP), one hundred and fifty-one (151) Multifunctional Information Distribution Systems-Joint Tactical Radio Systems (MIDS-JTRS), nine hundred and fifty-two (952) Advanced Air Missiles- AIM-120C-8 medium-range anti-aircraft missile (AMRAAM), ninety-six (96) AMRAAM guidance units, eight hundred sixty-four (864) GBU-39/B Small Diameter Bombs Increment 1 (SDB-1), two (2) guided test vehicles GBU-39(T-1)/B SDB-1, two (2) practice bombs GBU-39(T-1)/B SDB-1, ninety-six (96) AGM-88B High-Speed Anti-Radiation Missiles (HARM), ninety-six (96) AGM-88E Advanced Anti-Radiation Guided Missiles (AARGM), ten (10) AARGM Captive Air Training Missiles (CATM), eleven (11) AARGM control sections, twelve (12) AARGM guidance sections, four hundred and one (401) AIM-9X Block II Sidewinder missiles, twelve (12) AIM-9X Block II, forty (40) AIM-9X Block II Sidewinder tactical guidance units, twelve (12) AIM-9X Block II Sidewinder CATM guidance units , twelve (12) MK82 Inert Filled general purpose bombs, Eight hundred and fifty (850) KMU-556 Joint Direct Attack Munition (JDAM) kits for GBU-31, two hundred (200) KMU-557 JDAM kits for GBU-31v3, three hundred and eighty four (384) JDAM KMU-559 kits for GBU-32, three (3) JDAM KMU-572 kits for GBU-38 or Laser JDAM GBU-54, one thousand fifty (1,050) FMU-152 fuses. Also included are AMRAAM CATMs. AIM-9X Sidewinder Trainer Missiles and Active Optical Target Detectors (AOTD). HARM control sections, rocket motors and spare warheads. FMU-139 Joint Programmable Fuzes; DSU-38 laser guidance set for GBU-54. rocket canisters. AN/ARC-238 radios. AN/APX-127 or equivalent Advanced Identification Friend or Foe (AIFF) Combined Interrogator Transponders (CIT) with function. Helmet-mounted displays with Joint Helmet Mounting Systems (JHMCS) II or Scorpion Hybrid Optical-based Inertial Tracker (HOBIT). Infrared Search and Track (IRST). AN/ALE-47 Countermeasures Distribution Systems (CMDs). KY-58 and KIV-78 cryptographic devices. Simple Key Loaders (SKLs), additional secure communications, precision navigation and cryptographic equipment. Flight Mission Planning Systems (FMPS). Enhanced ROVER 6i/6Sis Video Receivers, ROVER Tactical Network Kit and STINGER Multi-Bi-Directional (MBI) Antennas. Common Munitions Integrated Reprogramming Equipment (CMBRE). Rackmount Improved Avionics Intermediate Shop (RIAIS). Propellant Actuated Devices (CAD/PAD). Triple Missile Launcher Adapters (TMLA). Triple Missile Launcher Adapters (TMLA). Major modernization upgrade kits for F-16 Block 40 and Block 50+ aircraft and Service Life Extension Program (SLEP) modifications. Post-maintenance aircraft and engine



repair and overhaul, engine and aircraft spare parts, consumables and components and repair and repair and return support, aircraft, engine, ground and pilot support equipment. Classified/Unclassified Computer Program Identification Number (CPIN) systems, electronic warfare database support. The estimated total cost is \$23 billion.

Of course, they will promise that they are not going to use them against Greece, and everybody will be happy! What a wonderful world we live in! But history sometimes repeats itself as a farce...



We Are Being Invaded, Our Lives Are At Risk, And Biden Stands With Those Who Will Murder You And Your Family

By Sam Faddis

Source: <https://andmagazine.substack.com/p/we-are-being-invaded-our-lives-are>

Jan 27 – Texans have taken a stand. They will no longer sit and watch while Biden and his minions orchestrate an invasion of this country and jeopardize our national security. At least twenty other states appear in one way or the other to have decided to stand with Texas against tyranny. [The long-feared constitutional crisis is here.](#)

It is worth stopping for a moment, then, to consider what is at stake. This is not some dry, legalistic dispute. This is as real as it gets. Lives, many lives are at stake.

Ten senior retired FBI agents just signed a [letter](#) to Congress making crystal clear that the deliberate, premeditated actions of the Biden Administration will inevitably mean terrorist attacks here at home and mass casualties.

["In its modern history the U.S. has never suffered an invasion of the homeland and, yet, one is unfolding now," the FBI agents wrote. "Military aged men from across the globe, many from countries or regions not friendly to the United States, are landing in waves on our soil by the thousands - not by splashing ashore](#)



from a ship or parachuting from a plane but rather by foot across a border that has been accurately advertised around the world as largely unprotected with ready access granted.”

“It would be difficult to overstate the danger represented by the presence inside our borders of what is comparatively a multi-division army of young single adult males from hostile nations and regions whose background, intent, or allegiance is completely unknown.”

“Any violation of the nation's immigration laws increases risks, but the surge in numbers of single military-aged males descending upon American cities and towns is alarming and perilous.”

“Additionally, they are not just from terror-linked regions, but from China and Russia as well as hostile adversaries of the U.S. with aspirations to devastate national infrastructure.”



Illegal immigrants at the Lukevill border crossing. Do they look like Mexicans?

House Speaker Mike Johnson [made this comment](#) to *Just the News* after receiving the letter.

“This letter from national security leaders is further confirmation of what we already know: President Biden’s open border policies are increasing the risks of terrorist attacks on U.S. soil,” Johnson said. “An unprecedented threat at this scale requires transformational policy changes immediately to secure the border and end the administration’s mass release of illegals into our country.”

[The former FBI executives who signed the letter](#) have more than 250 years of combined experience in the bureau’s intelligence, counterterrorism, and criminal operations and served under seven former presidents and four different FBI directors. They are:

- Kevin Brock, the former assistant director of intelligence and former principal principal deputy director of the National Counterterrorism Center;
- Chris Swecker, the former assistant director of the criminal division;
- David Szady, former assistant director of counterintelligence;
- Timothy J. Healy, the former director of the Terrorist Screening Center;
- Former Executive Assistant Director Ruben Garcia;
- Mark Morgan, former assistant director for training and the former acting commissioner of Homeland Security’s Customs and Border Protection;
- William Gavin, retired assistant director for the Inspection Division;
- Timothy McNally, former assistant director of the Los Angeles division;
- Retired Special Agent David Mitchell, who oversaw the FBI operations in Milwaukee;



- Special Agent Jody Weiss, who oversaw FBI operations in Philadelphia.

"We limited the letter to ten signers due to its urgency but it reflects the sentiments of many more former FBI Agents and executives who expressed to us a shared deep concern about this particular threat to the nation," Brock told *Just the News*. "We are by no means the first to articulate unease about the surge of military-aged men from hostile regions and countries coming across the border."

This letter of course comes on the heels of FBI Director Wray's recent remarks in which he stated clearly to Congress that we are facing an unprecedented terrorist threat level in the United States.

The tone and language of the letter sent to Congress by these retired FBI officials are striking. These individuals, who have dedicated their lives to national security, are not saying in some hazy, nebulous way that our failure to control the border may come back to haunt us at some future date. They are saying, as unambiguously as anyone can say it, that we are already being invaded and that the many thousands of unidentified, military-age males entering our country right now represent an immediate, clear, and present danger.

Earlier this year the nation of Israel found out just what it means when you suddenly have thousands of angry, young men dedicated to your destruction rampaging through your streets and neighborhoods. Civilians were slaughtered. Women were tortured and literally raped to death. Some eventually begged to be killed in order to escape the horrors they were experiencing. Some bodies were so mutilated that it was impossible to determine if they had been men or women.

All this could be coming to your town any day now. We are being invaded, our lives are at risk and [Biden stands with those who will murder you and your family](#).

[Sam Faddis](#) is a retired CIA Operations Officer. Served in Near East and South Asia. Author, commentator. Senior Editor AND Magazine. Public Speaker. Host of Ground Truth.

PLANETEK HELLAS

Source: https://www.planetek.gr/company/about_us/profile

Planetek Hellas is a Greek company, member of the Planetek Group that since 1994, operates in the field of satellite remote sensing, spatial data infrastructure and software development for the "on board" and "ground" segment space applications.

Founded in 2006, Planetek Hellas provides solution-oriented services in the field of Geomatics, involving the use of EO data and systems for environmental & critical infrastructure monitoring, urban planning, civil protection and security.



Activities in the Earth observation and Space domains

Planetek is one of the very few European space companies having activities in both the downstream and upstream sectors. Planetek designs, prototypes and commercializes the SPACE product line of on-board software tools that extent from the compression on board of satellite EO data, and the attitude and orbit control. Planetek offers also within its SPACE product line the [SpacePTS product \(Payload Testing System\)](#) which is the perfect personalizable solution for complex payload testing activities. Space PTS has been tested and used for one of the payloads of the [Solar Orbiter Mission \(SWA-DPU\)](#) launched in February 2020.

The company has in its portfolio a variety of successful contracts with the European Space Agency, through which it has acquired in-depth knowledge of the Agency's procedures and high-quality requirements.

Planetek Hellas is also very active in R&D, participating in many research European (FP7, HORIZON) and National Projects. About 15% of the company's revenue is invested each year in R&D.

Expertise

The expertise of Planetek Hellas has led the company to strengthen its specific skills related to:

- Earth Observation and space astronomy satellite data management, together with processing for both on-board and on-ground deployments.
- Data fusion procedures for Earth Observation and space astronomy value-added products and service deliveries.
- Spatial Data Infrastructure platform for delivery, dissemination and exploitation of geospatial products with a time-tested competence in INSPIRE-compliant web deployments.
- Development of software for the satellite on-board data and image processing. In specific Planetek Hellas has developed a solution for the on-board compression and cloud classification,



using a patented technique that achieves high compression ratios and low data distortion, while keeping a limited computation complexity.

The company is also active in the field of promotion of Earth Observation and Cosmic Exploration data exploitation and pursues close relations with education and research organizations inside and outside Greece.

Planetek's flagship service is Rheticus, the award-winning Geospatial Analytics Platform, through which the company's Earth observation services are offered to private companies and public administrations, utilities, engineering, energy, agriculture and aquaculture companies worldwide. Rheticus has revolutionized the traditional Earth Observation market, by introducing a disruptive approach called IaaS (Information-as-a-Service) globally scalable, subscription-based with low recurrent costs.

Planetek Hellas bases its offer on the high involvement in the research and in the analysis of new techniques, which process and integrate remote sensing information with state-of-the-art technologies such as HPC and AI. Rheticus integrates and makes use of all the above. Learn more: www.rheticus.eu

What a coincidence!



Alex Garland's upcoming dystopian thriller *Civil War* is set to become one of the most talked about movies in the first half of 2024. **The ambitious project will present a bleak and ominous picture of a fictionalized United States divided by an all-out civil war between the American military and the so-called Western Forces.** Garland, whose most recent films include *Men* (2022) and *Annihilation* (2018), is arguably best known for his groundbreaking sci-fi movie *Ex Machina* (2014) and has been heralded as one of the best and most imaginative screenwriters and filmmakers of the 21st century. With the release of the first official trailer for *Civil War* in late December 2023, not much is known about the specifics of the plot or the circumstances that led to the full-blown Civil War, the second in American history. Garland is confirmed to be both the writer and director of the ambitious movie and will direct a star-studded cast of Kirsten Dunst, Nick Offerman, Wagner Moura, and fan-favorite Jesse Plemons. **Dunst and Moura appear to be journalists who are documenting the Civil War as it unfolds.** Based on the trailer, which sees airstrikes and other forms of military attacks on U.S. soil, the journalists seem to be on the side of the resistant forces.





0 tempora o mores!



Bayer Leverkusen have been fined €18,000 by the German Football Association (DFB) sports court after their fans unfurled a banner stating that there are only two genders - a move deemed to discriminate against the LGBTQ community. The Bundesliga club have been accused by the DFB of "discriminatory, unsportsmanlike conduct on the part of their fans" over the incident which occurred during the team's away match against Werder Bremen on November 25 last year.

Europe is finished

By Allister Heath | Editor of The Sunday Telegraph

Source: <https://www.telegraph.co.uk/news/2024/01/31/europe-is-finished-condemned-third-rate-elites/>

Jan 31 – It's time to mourn the demise of old Europe. The rot is too far gone, the decline too pronounced, the welfarism, decadence, pacifism and self-hatred too ingrained, [the doom-loop unstoppable](#). Once the world's richest, most advanced continent, Europe is finished, its humiliating fall all too obvious to the rest of the world, if not to deluded Europeans.

Its self-inflicted pathologies – catastrophic economic failure, near-total geopolitical irrelevance, [a migration and integration crisis](#), and a gaping democratic deficit – have now metastasised. They have become too complex, too daunting for Europe's third-rate elites even to consider tackling, and especially for the selfish, demagogic politicians who have presided with such insouciance over its social disintegration, "degrowth", Potemkin militaries and appalling demographics. Germany, France, the Netherlands and elsewhere are on the brink of social explosion, with farmers the latest to have become radicalised.

Any young, ambitious European would be better off moving to America, especially anti-woke Florida or Texas. They will pay less tax. They will live better, happier, freer lives. They will be less likely to face total war. Their living standards will be drastically higher.

In the 248-year intra-Western contest between the US and Europe, there has been only one winner. America is also sick, as witnessed by its own social decay, [the rise of the woke ideology](#) and the preposterous rematch of the geriatrics between Donald Trump and Joe Biden. Yet unlike in Paris, Berlin, Rome or Brussels, enough remains of its capitalist spirit, its dynamism, its entrepreneurialism, its love of science, meritocracy and technology, to see it through its current troubles. Europe's greatest legacies to the world – capitalism, individual liberty, the rule of law and the "Western, Educated, Industrialised, Rich, and Democratic" (or "weird") values so brilliantly described by Joseph Henrich of Harvard University – will live on in the US. But there is no way back for a European continent that has embraced nihilism, post-Christian paganism, illiberalism and the politics of envy, that believes that



saving the planet requires shutting down successful industries and impoverishing its people, that [cannot face down Islamist extremism and anti-Semitism](#), and that won't reform its welfare state. Even Brexit, the ultimate warning signal, failed to change anything. Europe's ruling class dismissed the UK's departure as an aberration, an own goal by self-harming British eccentrics, and doubled-down on its failed policies. It refused to listen to voters; no wonder their rage is becoming ever more combustible, inchoate and unfocused.

The EU population will peak at 453.3 million in two years' time, then slump to 419.5 million by 2100, despite massive immigration, Eurostat predicts. The population will age drastically, driven by a collapse in the birth rate. Welfare states will implode, with taxes rocketing on the young to pay for healthcare and pensions for the old. The Euro-elites' only answer, even more migration, will empower potentially dangerous extremists. In France, Germany, Belgium and elsewhere, the failure to integrate many recent migrants, and the ruling class's answer – to lie that all is well – is paving the way for a cataclysm. The rise of Germany's AfD should worry us all. The European elections [will see gains for populists](#).

The gulf in living standards between America and Europe keeps on widening. In the final quarter of 2023, US GDP grew by an annualised 3.3 per cent; the Eurozone grew by zero per cent and the German economy shrank again. Putin's invasion of Ukraine didn't help, but Europe shouldn't have become so dependent on Russian gas.

The continent's high-tax, high regulation model has caused [decades of under-performance](#), and now Emmanuel Macron, the EU and the Dutch and German governments are deliberately shutting down swathes of their agriculture to meet net-zero targets. The Germans are destroying their car industry, and Europe will import Chinese electric vehicles instead. Decades of "industrial strategy" and subsidies have failed to create a world-class European tech industry. The continent's economic suicide is already triggering an exodus of the best and brightest.

Europe's [geopolitical irrelevance](#) is equally striking. Its defence is being shouldered by long-suffering US taxpayers. The French are nowhere to be seen in the fight against the Houthis; its army is a shadow of its former self, and wouldn't last long in a real war. The Poles and a few others are trying their best, but the German military is a joke, and all the great promises to rebuild European armies made in 2022 have meant nothing. The continent is almost completely demilitarised, lacks personnel and hardware, doesn't have the capacity to produce more of the latter, has zero long-term answers to contain Putin and has done nothing to prepare for the possibility of a second Trump victory. It's a disgrace.

It beggars belief that so many of the middle-class British Remainers and Rejoiners, who [will help propel Labour to victory this year](#), are still so unfathomably ignorant about the true state of Europe's economy and society. Blinded by anti-Tory hatred, obsessed by shiny TGVs and the memories of their pleasant holidays in southern Europe, they assume that things must – just must – be better in Europe.

Almost all Labour MPs privately believe that the solution to our own lack of growth is to rejoin the single market or customs union, even though these have failed to save Europe's own economies. How can further increasing our ties with a zero-growth continent or a shrinking German economy do anything for Britain? It can't. And how will the British Left respond to the rise of the far-Right in Europe? Will it still love Germany if the AfD is part of its government? Will it still love statist France if Marine le Pen is in the Elysee? Britain is in an appalling state, but so is Europe. The Brexiteers' Euro-pessimism has been vindicated; the problem is that the establishment refused to use Brexit to break with Brussels' regulatory philosophy and to reorient our economy away from stagnant EU markets. Britain is therefore increasingly suffering from the same pathologies as Europe, and facing a similar terminal decline. This isn't an argument for more EU, but one for even less, as well as radical domestic change. Europe's gradual eclipse is accelerating, and it would be absurd for any British government to consider realigning the country with it.

Biden's Phony War In The Middle East

By Sam Faddis

Source: <https://andmagazine.substack.com/p/bidens-phony-war-in-the-middle-east>

Feb 05 – [Almost a week ago an American base in Jordan was attacked by Iranian-backed Shia militia](#). There have been dozens of such attacks in the last couple of months, but this time three Americans were killed. Tremendous pressure was placed on the feckless Biden administration to do something meaningful in response.

The Biden team then spent a [full five days telegraphing preparations for retaliatory strikes](#). Unconfirmed reports from AND Magazine sources in the Middle East suggest this included sending an emissary to Iran to make sure the Iranians were not caught unawares. IRGC leaders and personnel moved away from areas that would be targeted and sought shelter. [Key equipment and munitions were hidden](#).



Earth Games

YES

Planet Games

YES

break dancing

sports climbing



skateboarding

surfing

Olympic Games

NO



AND Magazine is a reader-supported publication. To receive new posts and support my work, consider becoming a free or paid subscriber. Then American forces began to target sites in Iraq and Syria. Since then additional strikes have taken place in Yemen. The Biden administration claims it has severely damaged Iranian and Shia militia facilities and forces. This is a lie. *We have largely bombed empty buildings and vacant lots.* The impact on the Iranians has been nil. Just to prove nothing had changed over the weekend [Iranian-backed forces staged another rocket attack on a U.S. base in Syria](#). Those rockets were fired [by the same group](#) that killed our three servicemen and women.

To understand the extent of the charade being perpetrated by the Biden administration, let's grab ahold of one geographical area and examine what just happened.

[During the first round of U.S. attacks in Syria, 27 different targets were hit. A total of 29 people were killed in these strikes including members of Hezbollah and various other Shia militia.](#)

Stop and think about that for a minute. We struck 27 different locations. We flew B-1 bombers all the way from the United States as part of these attacks. We dropped all sorts of ordnance. We killed a total of 29 people.

What does that tell you? Most of these locations were empty. Everyone was gone. We bombed empty buildings.

Consider for a moment just the financial aspect of this. We sent jet aircraft that cost tens of millions of dollars apiece to drop incredibly expensive ordnance on meaningless targets. A simple U.S. 500-pound "dumb" bomb [costs](#) \$4000. A 2000-pound unguided bomb [runs](#) \$16,000. Want to strap on a guidance system and make that dumb iron bomb into a precision-guided munition? That will run you between \$20,000 and \$30,000 for each bomb.

It [costs](#) in excess of \$60,000 an hour to fly a B-1. Keep in mind they had to be refueled in air coming and going from Texas. There are more than [20,000](#) Iranian and Iranian surrogate fighters in Syria alone. They are spread out over a vast area and stationed at large, well-known, and easily identified facilities. We have the coordinates of these facilities. We have full target packages on them. We have stacks of satellite images of them. We bombed a force of 20,000 men, and we killed less than thirty people.

Hussein al-Mosawi, spokesman for the Al-Nujaba Movement part of the Iranian umbrella coalition of Islamic resistance organizations [stated](#) the obvious, the targeted sites were mainly "[devoid of fighters and military personnel at the time of the attack.](#)"

Esmail Kohari a senior Iranian Revolutionary Guard Corps commander and a member of the Iranian parliament [stated](#) that no IRGC facilities were targeted by the United States in the strikes.

Other commentators in the Middle East have been equally blunt and pointed out that these strikes were intended for domestic political consumption inside the United States. [They had no meaningful military effect.](#)

If you have ever seen the film "Flight of the Intruder" you understand precisely what is happening here. In the movie, Navy pilots are sent out on mission after mission to bomb "suspected truck parks" where the North Vietnamese allegedly have stored vehicles and supplies. They bomb the targets. There are no secondary explosions. It is all a farce.

The pilots are bombing empty space. They are bombing trees. Real, high-value targets are ignored. President Johnson wants to appear to be doing something to win the war while really focusing on appeasing the North Vietnamese and trying to avoid escalation.

The only thing that matters is being able to release a press statement back home claiming credit for the air strikes.

This is precisely where we are. From Day One this administration, filled with individuals sympathetic to the ayatollahs, has done everything it can to kowtow to Tehran. It has sent billions of dollars to the world's greatest sponsors of terrorism and encouraged Iranian-backed Shia militia across the Middle East to set the region on fire. Biden and his minions now find themselves forced to make a show of standing tall and acting tough, because the American people want a response to the killing of our people in Jordan. That's all it is, though, a show. We are bombing nothing of significance to anyone. We are fighting a phony war.

[Sam Faddis](#) is a retired CIA Operations Officer. Served in Near East and South Asia. Author, commentator. Senior Editor AND Magazine. Public Speaker. Host of Ground Truth.

Kremlin confirms Putin gave interview to ex-Fox News host Tucker Carlson

Source: <https://www.reuters.com/world/putin-gave-tucker-carlson-an-interview-because-he-differs-one-sided-media-2024-02-07/>

Feb 07 – President Vladimir Putin granted an interview to U.S. television host Tucker Carlson on Tuesday, the Kremlin said, his first to an American journalist since before Russia's invasion of Ukraine nearly two years ago. Kremlin spokesman Dmitry Peskov said Putin had agreed to the Carlson interview because the approach of the former Fox News host differed from the "one-sided" reporting of the Ukraine conflict by many Western news outlets. "When it comes to the countries of the collective West, the large network media, TV channels, (and) large newspapers can in no way boast of even trying to at least look impartial in terms of coverage," Peskov told a regular news briefing on Wednesday.





THE
TUCKER
CARLSON
INTERVIEW

The Vladimir Putin Interview

The Interview · Published Feb 8, 2024 · 127 mins



"These are all media outlets that take an exceptionally one-sided position. Of course, there is no desire to communicate with such media, and it hardly makes sense, and it is unlikely that it will be useful." Asked directly why Carlson had landed an interview with Putin, Peskov said the American journalist's approach was "in no way pro-Russian, it is not pro-Ukrainian - it is pro-American". The interview is likely to be aired on Thursday, Russia's TASS news agency said, citing reports by the Wall Street Journal. Putin, who ordered the invasion of Ukraine on Feb. 24 2022, was last formally interviewed by a U.S. media outlet in October 2021, when CNBC's Hadley Gamble spoke to him, though he has since spoken to Russian, Chinese and Kazakh media. Many Western media organisations have left Moscow or shuttered their operations due to onerous media laws passed shortly after the war. Wall Street Journal reporter Evan Gershkovich, an American citizen, was detained on spying charges in March 2023. Carlson said in a [post](#) on X on Tuesday that the interview would enable Americans to understand Russia's view of the war. "We are not here because we love Vladimir Putin....We are not encouraging you to agree with what Putin may say in this interview, but we are urging you to watch it. You should know as much as you can," he said. Putin says he sent tens of thousands of troops into Ukraine to safeguard Russia's national security against what he casts as a hostile West. Kyiv and its Western allies say it is an unprovoked war of aggression and imperial-style land grab. Carlson, who has said much Western media coverage of the war is biased in Kyiv's favour, said he had also asked Ukraine's President Volodymyr Zelenskiy for an interview.

Turkey Threatens to Invade Greece and Armenia

By Michael Rubin

Source: <https://www.meforum.org/65551/turkey-threatens-to-invade-greece-and-armenia>



Feb 12 – On January 27, 2024, two days after the Biden administration again [urged](#) Congress to greenlight F-16 sales to Turkey, Turkey's President Recep Tayyip Erdoğan [said](#) at a public meeting of his ruling Justice and Development Party (AKP), "Our struggle did not end with expelling the enemy [Greeks] from our lands and throwing them into the sea from Izmir." It was a provocative statement given the massacre at Smyrna, today's Izmir, killed up to 100,000 and, [according to scholars](#), [amounted to genocide](#) against Anatolia's Greek Christians.



On cue, just over a week later, Turkish analysts on CNN Türk [discussed](#) the prospects of Turkey launching Tayfun, Turkey's first indigenous ballistic missile, at Greece. "If we fire it from Edirne or Izmir, we can hit Athens," they concluded.

Pride in "throwing Greeks into the sea" is mainstream among Erdoğan's government. It is also a popular slogan in Turkey. There are Turkish nationalist songs as well as annual public ceremonies that celebrate the massacre of Smyrna's centuries-old Christian population as "Izmir's liberation from enemy forces." To mark the 100th anniversary of the massacre in 2022, for example, one of Turkey's biggest pop stars [gave a concert](#) in the city center in Izmir, celebrating the slaughter. [Hundreds of thousands](#) attended.

The threat to launch missiles at Athens comes against a backdrop of Turkish [revanchism](#). Turkey's media repeatedly [claim](#) ownership over 152 islands and islets in the Aegean Sea [awarded](#) to Greece in the 1923 Treaty of Lausanne, 1932 Convention between Turkey and Italy, and 1947 Treaty of Paris.

Greece is not alone as the target of Turkey's territorial demands. Hulusi Akar, a former defense minister who today chairs the parliament's National Defense Commission, [threatened](#) Armenia during a January 29, 2024 visit to Azerbaijan, suggesting Turkey could repeat its and Azerbaijan's [ethnic cleansing](#) of Nagorno-Karabakh's indigenous Armenian population against Armenia proper. With Turkish backing, Azerbaijan continues to [occupy](#) several dozen square kilometers of Armenian territory.

As Turkey lobbied for F-16s as part of a *quid pro quo* to lift its hold on Sweden's NATO accession, it stopped overflights and harassment of Greek islands. That Erdoğan so quickly violated his agreement after receiving Biden administration endorsement of the F-16 sale suggests tremendous bad faith. The Biden administration may celebrate Turkey's agreement to allow Sweden's NATO accession as a diplomatic win, but the growing risk of an intra-NATO war offset any benefit Sweden might bring. Addressing Erdoğan grievances or augmenting his military will not bring Turkey back into the community of responsible nations. Rather, the problem remains Erdoğan ideology. Ignoring that reality will not bring stability or security, but could rather destroy NATO and force the United States to confront yet another unexpected war in Europe.

[Michael Rubin](#) is director of policy analysis at the Middle East Forum and a senior fellow at the American Enterprise Institute.

Guest opinion: We must 'stick together, or hang separately' with our NATO allies

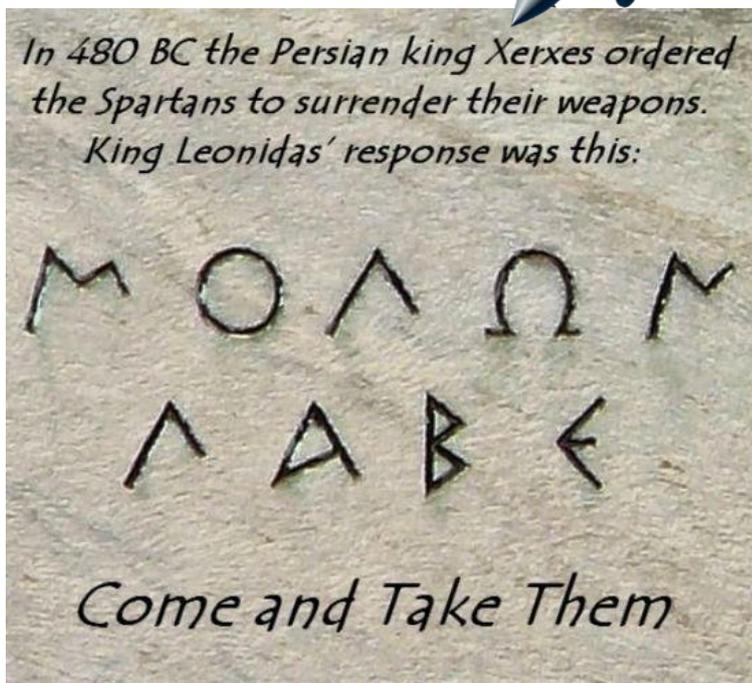
By John W. Davis | Athens, ALA

Source: <https://www.al.com/opinion/2024/02/guest-opinion-we-must-stick-together-or-hang-separately-with-our-nato-allies.html>

Feb 17 – As a NATO-assigned US Army officer in the 1980s, I attended a special reception in the Netherlands. The event was to present an Erasmus Medal from the Dutch Government to my father-in-law, D. L. Tedrick. He parachuted into the Netherlands during the battle of Market-Garden during World War II. The Dutch wanted to give such an award to all Allied soldiers who'd fought for their country's liberation 35 years earlier.

A real sense of camaraderie prevailed that day of the award. The honored guest could not come, as a consequence of Agent Orange, contracted at the end of his military career in Vietnam. His daughter, my wife Jane, received the medal on his behalf. NATO nations were represented at the presentation.

NATO was created as one consequence of the Second World War. Its purpose was to prevent the democracies of Europe from falling again, one by one, to dictatorship. Whereas Hitler was finally beaten by the united Allies, the post-war Soviets were not. Threatening Soviet tanks aligned across Europe, arrayed behind their Iron Curtain. Yet we stood firm. NATO protected free Europe against those who needed machinegun-watchtowers, walls, barbed wire,



mines and vicious dogs to keep enslaved Europe in their Soviet prison. Our own President Kennedy said it best when he commented, "We don't need a wall to keep our people in." Today, Russia still seeks to enslave other nations.

During World War II America deployed, fought and died with our allies to liberate democracies occupied by Hitler. We formalized this alliance after that war, the better to deter future dictatorial adventurism. NATO countries remain united to stop any thought of invasion; an attack against one is an attack against all.

Former President Trump said he would not defend NATO allies if invaded, if he deemed them financially delinquent. Says Trump, who regularly reneged on just payments to his own contractors. Says Trump who would encourage Russia to, "... do whatever the Hell they want" to our allies. Our NATO allies risked all to trust and join NATO, so to shed Soviet chains and torture chambers. Russia's leaders want nothing better than to enslave Eastern Europe again.

Jane's dad went to war to defend Western freedoms against a murderous Nazi regime. Together with our allies we fought them on the beaches, in the hills, on the streets, on the landing zones. Together with British and Polish parachutists he was honored years later by a grateful Dutch government. He helped liberate them because united we stand, divided we fall.

Freedom of speech, of worship, freedom from fear and from want, the rule of law, a free press, and fair elections are what comprise 'the West'. That's what NATO defends. To reduce all that to money; all that for which our ancestors sacrificed their wealth, health and sacred honor to defend, shows what one man and his cronies understand of freedom. America must remain the standard bearer of true freedom. We must 'stick together or hang separately' with our NATO Allies.

First They Came...

Source: <https://www.quora.com/profile/CM-Parihar-1>



"First they came for free housing, free health care, freedom from oppression, the right to speak freely, and most of all for the free money, and we welcomed them and helped them because freedom, democracy, multiculturalism, and charity are good. "Then they came for our books and discarded them and, we helped them by doing nothing because they told us their books good, our books bad. "Then they came for the girl children and we helped them by ignoring it as long as we could because it was a cultural thing and we didn't want to appear to be anti their culture, and it was only the worthless children of the white underclass who were being taken, not ours. "Then they came for the racists, and we helped them by designating Islam a race because white racism is bad and no other form exists. "Then they came for the Islamophobes, and we helped them by calling Islam a religion of peace because hatred of non-Judeo Christian religions is bad and, anyway, a phobia is an irrational fear, and as we are sublimely rational and fully understand such things. Islamophobia is obviously evil and dangerous and must be eradicated. "Then they came for the protestors, and we let them and helped them because freedom of speech, Euro-Culturalism, gender equality, racism, and Islamophobia are all bad things from our past and must be done away with so that there will be peace and harmony and nice times for all in one big, happy family. "But we were wrong, how wrong we were! Now they have come for us because Islam is in reality a nihilistic, primitive, misogynous, totalitarian political system that tolerates neither deviation nor dissent, and we are just not nihilistic, primitive, misogynous, and totalitarian enough for their requirements. Where, oh where is the justice we ask?"



Expect to see more North Korean weapons reach nonstate armed actors in 2024

By Andrew Yeo

Source: <https://www.brookings.edu/articles/expect-to-see-more-north-korean-weapons-reach-nonstate-armed-actors-in-2024/>



Chairman of the North Korean State Affairs Committee Kim Jong Un gives an orientation "in situ" in a weapons factory. KCNA/Pool/Latin America News Agency.

Feb 21 – Shortly after Hamas's horrific attack against Israel on October 7, 2023, [photos](#) of North Korean-made F-7 rocket-propelled grenades allegedly used against the Israel Defense Forces emerged online. South Korea's National Intelligence Service has [since confirmed](#) Hamas's possession and use of North Korean-made weapons against Israel. Although there is [no firm evidence](#) linking direct weapons sales between North Korea and Hamas, recent accounts of North Korean arms in the hands of nonstate armed actors (NSAAs) such as Hamas and the Russian-based [Wagner Group](#) have drawn renewed attention to North Korea's long-standing involvement in the global illicit arms trade.

North Korea's [nuclear and missile programs](#) have attracted far greater attention than its complicity in arms trafficking, but the two issues remain linked. To raise funds for its nuclear and ballistic missile programs while averting sanctions, North Korea must rely on its illicit trade and financial networks. The Workers' Party of North Korea's Central Committee Bureau 39 (also known as [Office 39](#)) is tasked with raising funds for the regime. This includes [illicit trade](#) involving [drugs](#), [counterfeit money](#), [cryptocurrency](#), and [wildlife \(ivory in particular\)](#) in addition to weapons sales.

Escalating conflict in the Middle East and Russia's prolonged war in Ukraine will only increase demand from both state and nonstate actors for [low-cost](#) weapons which North Korea can provide as the regime [circumnavigates sanctions](#). North Korean leader Kim Jong Un's incentive is to ramp up weapons production and raise revenue for his own military, and he exhibits no qualms in directly or indirectly proliferating weapons to NSAAs. The international community may not be able to completely halt North Korean weapons production, but it must take measures to better track and monitor North Korean illicit arms trafficking and better enforce [U.N. sanctions](#) that prohibit United Nations member states from procuring North Korean weapons.



Ties to nonstate armed actors in the Middle East

North Korea's connections to NSAAs date back to the Cold War when North Korea itself was engaged in a strategy of what scholar Benjamin Young refers to as "[guerilla internationalism](#)." As a revolutionary state, Young [argues](#) that North Korea was "committed to the ethos of guerilla fighting and assisting non-state actors in their own struggles for sovereignty and independence." The regime provided communist insurgents and anti-colonial liberation movements with training and weapons.

In the post-Cold War period, this [support expanded](#) to Islamist militant groups such as Hezbollah and Hamas. North Korea also provided weapons to state actors such as Iran, Syria, Yemen, and Lebanon. For instance, during the Iran-Iraq War in the 1980s, North Korea provided Iran with Scud B missiles, antitank weapons, anti-aircraft systems, rocket launchers, and other small arms. In the mid-2000s, North Korea [supplied weapons](#) and parts to Hezbollah by routing them through Iran and then assembling them in Syria before they were finally shipped to Lebanon.

In another example from 2015, Houthi militants [fired 20](#) Scud-C missiles into Saudi Arabia that were identical to North Korea's Hwasong-6 missile. As Samuel Ramani of the Royal United Services Institute [argues](#), the Houthis likely captured the Scuds during battle against the Yemeni Armed Forces, which had purchased them from North Korea in 2002. Although there is no confirmation of North Korean weapons deliveries to the Houthis, a 2019 United Nations Panel of Experts [report](#) cites North Korean attempts to supply small arms and military equipment to the Houthis through arms traffickers in Syria.

North Korea and the Wagner Group

Resurging Russia-North Korea military ties, including [reported arms shipments](#) to the Wagner Group during the early phases of the war in Ukraine in 2022, have drawn greater scrutiny on North Korean illicit weapons. In December 2022, U.S. officials [stated](#) that the Democratic People's Republic of Korea (DPRK) had delivered missiles to the Wagner Group. Although North Korean weapons were unlikely to affect battlefield dynamics in Ukraine, U.S. Ambassador to the United Nations Linda Thomas-Greenfield expressed concern that such arms deals could fund North Korea's ballistic missile and nuclear programs: "Wagner's purchase of weapons from the DPRK to wreak destruction in Ukraine also contributes to instability on the Korean peninsula by giving the DPRK funds it can use to further develop its prohibited weapons of mass destruction and ballistic missile programs."

The death of former Wagner Group leader Yevgeny Prigozhin, and the [warming of North Korea-Russia ties](#) since September 2023, has lessened the need for either country to go through the Wagner Group to procure weapons for Russia. In recent months, several reports have emerged indicating an uptick in [artillery shells](#) and up to [2.5 million rounds](#) of ammunition traversing from North Korea into Russia.

That said, both Russia and North Korea may still find it convenient to retain Wagner as a weapons transfer node. The new commander of the Wagner Group, Anton Yelizarov, recently [suggested](#) that Wagner might merge with the Russian National Guard or Russia's [Africa Corps](#). Likewise, British intelligence officials [stated](#) that Wagner troops would be used to "reinforce Russia's war effort in Ukraine and expand Russian influence in Africa." If so, African countries, such as Libya and Sudan where both North Korea and Wagner have operated, might offer an easy point of entry for North Koreans to smuggle arms to Russia. In various African countries, sanctions enforcement tends to be lax. In turn, an increase in North Korean-made weapons circulating across Asia, Africa, and the Middle East will likely result in more of these weapons falling into the hands of NSAAs such as Hamas, Hezbollah, and the Houthis.

Measures to curb North Korean weapons trade

Curbing North Korea's illicit arms trade is imperative for two reasons. First, North Korean missiles and munitions are tied to bad actors who want to harm the United States and/or its allies which in turn fuels violence and regional instability. Although most NSAAs such as the Wagner Group, Hamas, Hezbollah, or the Houthis procure weapons through their respective patrons, Russia and Iran, North Korean-made weapons are also proliferating to NSAAs. Blocking North Korea's weapons trade will help reduce the supply of weapons reaching NSAAs.

Second, North Korea's boost in illicit arms deals provides a lifeline for the cash-strapped Kim regime. As argued by University of Sydney Professor Justin Hastings, North Korea is a "[most enterprising country](#)." The Kim regime will capitalize on both state and nonstate actors' growing demand for ballistic missiles, small arms, and other weapons rising from the conflicts in Ukraine and Gaza. In addition to [crypto cybertheft](#), crystal meth production, and other illicit activities, arms sales will help the regime [generate revenue](#) and [fund](#) its own growing missile, space, cyber, and nuclear programs. Bloomberg News reported that artillery shell sales to Russia alone could [generate \\$1 billion](#) in revenue for the Kim regime.

Despite numerous sanctions levied against North Korea that prohibit and penalize foreign assistance to North Korea's missile and nuclear program (e.g., [U.N. Security Council Resolution 1718](#), [U.S. Executive Order 13382](#), the [Arms Export Control Act](#), and the [Export Administration Act](#)), sanctions are [no longer effectively enforced](#) due to Russian and Chinese political support for North Korea.



Nevertheless, the United States and the international community must push harder to [monitor and disrupt](#) North Korea's illicit trade and financial networks and enforce sanctions that are already in place. New advances in satellite and [artificial intelligence](#) technology might be explored to better track North Korean shipments and financial transactions. For example, some experts have [suggested](#) moving away from "list-checking" sanctioned entities and relying more on big data using sophisticated algorithmic methods and machine learning to track patterns of illicit North Korean activity.

Additionally, more work needs to be done to track North Korean individuals and companies linked to Office 39 to staunch the flow of money back to the regime. Although the U.S. Treasury Department's Office of Foreign Assets Control [remains vigilant](#) in investigating illicit North Korean financial networks, a U.N. Panel of Experts (POE) [found](#) that front companies such as [Glocom](#), based out of Malaysia, "used an extensive network of individuals, companies and offshore bank accounts to procure, market and sell arms and related materiel" for North Korea. The POE recommended sanctioning Glocom in 2016, yet it continues to [conduct business](#) selling communications technology to militaries in Africa and Asia.

North Korean small and light weapons exports to countries "[striving for human security and political stability](#)" also deserve greater scrutiny. As one [2022 study](#) found, despite the decrease in North Korean arms imported by U.N. member states from 2009-2011, weapons sales have begun climbing again since 2015. Between 2015-2021, Trinidad and Tobago, El Salvador, Niger, and Fiji all imported over \$10,000 in North Korean small arms. The international community can pressure, discourage, and/or shame countries that knowingly procure North Korean weapons that contribute to violence and crime.

Lastly, increased knowledge and transparency regarding North Korea's illicit arms networks may help pressure North Korea by helping global actors interdict North Korean arms shipments headed toward conflict areas. Initiatives such as the [Proliferation Security Initiative](#) (PSI) which focus more narrowly on weapons of mass destruction (WMD) had brought some [success](#) in blocking the transport of WMD-related materials to North Korea in the 2000s. Reviving the PSI and encouraging the [106 signatory](#) countries to renew their efforts at preventing the circulation of WMD-related materials, including ballistic missiles, should also be considered.

[Andrew Yeo Senior Fellow - Foreign Policy, Center for East Asia Policy Studies, SK-Korea Foundation Chair in Korea Studies](#)

What the Pentagon has learned from two years of war in Ukraine

By Alex Horton

Source: <https://www.washingtonpost.com/national-security/2024/02/22/ukraine-war-pentagon-lessons-learned/>

Feb 22 — As the general paced the briefing room, he displayed a piece of lethal technology and detailed the death and chaos it has caused in Ukraine.

Almost 90 Russian soldiers were slain in a single attack in 2022, explained Army Maj. Gen. Curtis Taylor, when Ukrainian forces [dropped U.S.-provided rockets](#) on buildings pulsing with electronic signals.

Here in the Mojave Desert, where Taylor oversees simulated war designed to prepare U.S. troops for the real thing, the same behavior abounds, he warned.

Taylor held up his cellphone. "This device," he said, "is going to get our soldiers killed."

The U.S. military is undertaking an expansive revision of its approach to war fighting, having largely abandoned the counterinsurgency playbook that was a hallmark of combat in Iraq and Afghanistan to focus instead on preparing for an even larger conflict with more sophisticated adversaries such as Russia or China.

What's transpired in Ukraine, where this week the war enters its third year with hundreds of thousands dead or wounded on both sides and still no end in sight, has made clear to the Pentagon that battlefield calculations have fundamentally changed in the years since it last deployed forces in large numbers. Precision weapons, fleets of drones and digital surveillance can reach far beyond the front lines, posing grave risk to personnel wherever they are.

The war remains an active and bountiful research opportunity for American military planners as they look to the future, officials say. A classified year-long study on the lessons learned from both sides of the bloody campaign will help inform the next National Defense Strategy, a sweeping document that aligns the Pentagon's myriad priorities. The 20 officers who led the project examined five areas: ground maneuver, air power, information warfare, sustaining and growing forces and long range fire capability.

"We immersed them in this conflict to make sure they were really understanding the implications for warfare," said a senior defense official, who spoke on the condition of anonymity to discuss the initiative.

The "character of war" is changing, another official said, and the lessons taken from Ukraine stand to be "an enduring resource." The Ukraine conflict has challenged core assumptions. The war has become an



attritional slugfest with each side attempting to wear down the other, a model thought to be anachronistic, said Stacie Pettyjohn, director of the defense program at the Center for a New American Security, a think tank.

It also has complicated a long-held belief in the Pentagon that expensive precision weapons are central to winning America's conflicts, Pettyjohn said. GPS-guided munitions provided to Ukraine have proven vulnerable to electronic jamming. Its military has adapted by pairing older unguided artillery with sensors and drones, which can be used to spot targets and refine their shots. U.S. military commanders have almost certainly taken notice, she said.

'The new cigarette in the foxhole'

Ukraine has demonstrated that everything U.S. troops do in the field — from planning missions and patrolling to the technology that enables virtually every military task — needs to be rethought, officials say.

Fort Irwin is home to the National Training Center, or NTC, one of two Army ranges in the United States where troops refine tactics and prepare for deployments. The training area, known to soldiers as "The Box," is a patch of desert about the size of Rhode Island. In years past, the facility replicated what U.S. forces could expect to face in Iraq and Afghanistan. Now trench lines zigzag across positions intended to replicate the battlespace in Ukraine.

Over the winter, the facility was occupied by the 1st Armored Division. As soldiers fought simulated battles, Taylor, the commanding general here, explained Ukraine's transformational imprint on how the Army thinks and trains for combat. "Russian artillery has rendered maneuver difficult and command posts unsurvivable," one of his briefing slides noted.

Vitaly, commanders warn over and over that most electronic gear is a potential target. Soldiers are instructed to not use their phones in the training area, and observers, known as OCs, carry handheld detectors trying to sniff out any contraband.

Taylor told the story of an Apache helicopter pilot who successfully avoided air defense systems during a simulated attack. Personnel portraying the enemy forces were unable to determine the path the helicopter took, but after examining commercially available

cellphone data, they were able to map the journey of a device traveling across the desert at 120 miles per hour. It revealed where the Apache flew to evade the defenses.



A simulated village shown from a helicopter at the National Training Center. (Eric Thayer/for The Washington Post)

The general is adamant about stamping out such behaviors. He likens the threat to that posed by cigarette smoking on the front lines during World War II, when enemy forces looked for bright orange flickers to help

identify their targets. "I think our addiction to cellphones is equally as threatening," Taylor said. "This is the new cigarette in the foxhole." Troops also have to consider the cellphone use occurring around them. Personnel tasked with portraying noncombatants capture photos and videos of troop locations and equipment, and upload the imagery to a mock social network called Fakebook. There, it populates in a feed used by service members playing the part of enemy forces who then use that data to attack.

Radios, drone controllers and vehicles all produce substantial amounts of electromagnetic activity and thermal energy that can be detected. To confuse enemy surveillance, the Army is teaching soldiers to hide in plain sight.

The troops are learning, leaders said. But a walk around The Box showed room for improvement. The division's command post, essentially a folding table with four Humvees parked around it, was draped in camouflage netting that helps dampen electronic and thermal signatures. The post was hidden well — except for the bright white Starlink satellite internet terminal placed outside. The netting interfered with its signal, a soldier explained. It risked standing out to drones or surveillance aircraft, Taylor told them. "Put a blanket on that," he advised.



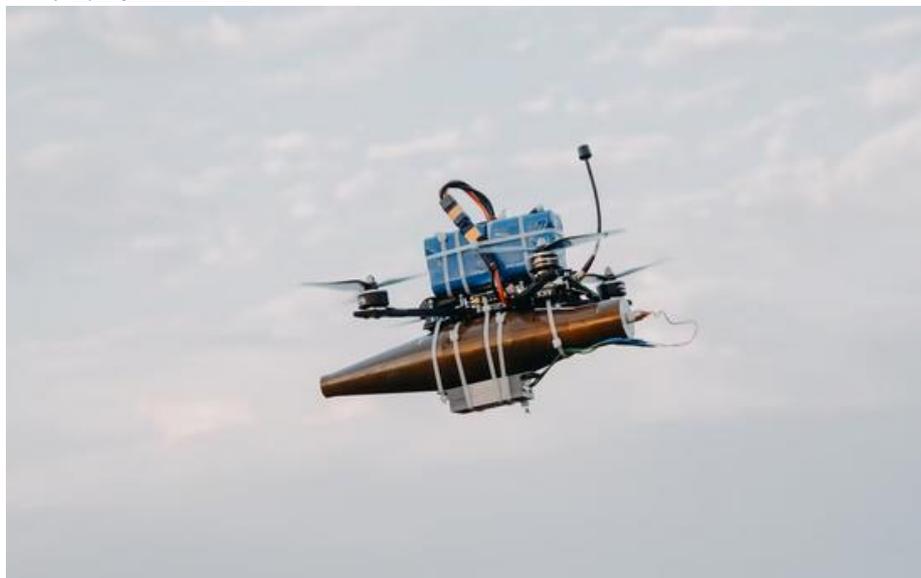
Threats from above

The Russian and Ukrainian militaries each flood the sky with one-way attack drones that are inexpensive and able to skirt detection. Their prolific use has forced American military leaders to consider where there are gaps in their capabilities.

Whereas recent U.S. conflicts featured big, expensive drones employed for missions orchestrated at very senior levels of command, in Ukraine leaders have put powerful surveillance and attack capabilities in the [hands of individual soldiers](#) — a degree of autonomy for small units that the U.S. military is only recently [trying to emulate](#).

The technology's proliferation has also created a new urgency at the Pentagon to develop and field better counter-drone systems. In Jordan last month, three U.S. soldiers were killed after a one-way drone, which officials have said [likely went undetected](#), crashed into their living quarters.

A Ukrainian FPV drone with an improvised warhead flies toward a Russian position in southern Ukraine on Sept. 14. (Wojciech Grzedzinski/For The Washington Post)



The Army, taking cues from the Ukraine war, has begun experimenting with [dropping small munitions from drones](#), a

tactic used by the Islamic State that has since become a mainstay in Ukraine. It also has made a decision to do away with two surveillance drone platforms, the Shadow and Raven, describing them as unable to survive in modern conflict.

“We are learning from the battlefield — especially in Ukraine — that aerial reconnaissance has fundamentally changed,” Army Chief of Staff Gen. Randy George said.

The Ukrainians have discovered some innovative solutions to detect drones, Gen. James B. Hecker, the chief of Air Force operations in Europe and Africa, said during a recent symposium.

He told the story of two Ukrainians who collected thousands of smartphones, affixed microphones and connected them to a network capable of detecting the unique buzzing sound of approaching unmanned systems. The information then gets relayed to air defense soldiers who can take action. The effort was briefed to the Pentagon's Missile Defense Agency and referred to NATO and U.S. commands to potentially duplicate, Hecker said.

Hecker also described recent drone and missile attacks targeting merchant and military ships in the Red Sea. The violence by militants in Yemen has been met with an aggressive response by the United States. Gesturing to his counterpart responsible for defending against potential threats from China, he said that “What the Houthis did, what Russia is doing, is nothing compared to what we're going to see in your theater.”

The pace of change

In the woods at Fort Johnson, an Army post in western Louisiana, American troops inspired by the lessons of Ukraine have a motto: Dig or die.

Soldiers who rotate through the Joint Readiness Training Center there are learning to create trenches and dugouts, relics of past conflicts brought back to provide protection from bombs and drones. At one position, soldiers scooped up handfuls of sticks and brush to better conceal their foxholes, saying they put shovel to earth for hours in preparation.

“I hope they come,” one said. “I didn't dig this for no reason.”

Personnel playing the role of opposing forces used AI software and cheap drones to throw their compatriots off balance, then showed them what they uncovered to help them improve.

Although troops are getting better at physical camouflage, their digital trail is still a vulnerability. One drone used by opposing forces at Fort Johnson is capable of detecting WiFi signals and Bluetooth-enabled devices, an officer noted.

In another case, a command post was identified through its network name: “command post.”



ICI C²BRNE DIARY – February 2024

While the Ukraine war has pushed battlefield innovation, some observers surmise the Pentagon will move only so quickly without forces in extremis.

There are plenty of signs that the legacy of the post-9/11 wars, which shaped the careers and experience of today's military leaders, still looms large. U.S. forces remain under threat in the Middle East, and troops there are still assigned to — and [attacked at](#) — the same bases their predecessors occupied years ago.

At Fort Johnson, the new soldier in-processing center has three digital clocks on the wall. One displays the local hour. The others flash the time in Afghanistan and Iraq.

Pettyjohn, with the Center for New American Security, acknowledged that the U.S. and Ukrainian militaries operate differently, meaning some takeaways from the war with Russia may not be applicable.

But she noted that some American military leaders she has spoken to have seemed circumspect that there's much for them learn. They underestimate, she said, how the nature of fighting has changed, holding tight to the risky assumption that the United States would simply do better in similar circumstances.

Alex Horton is a national security reporter for The Washington Post focused on the U.S. military. He joined The Post from Stars and Stripes and served in Iraq as an Army infantryman. Honors and Awards: 2022 Pulitzer Prize for Public Service (shared with colleagues).





T - NEWS

EU's Red Sea mission comes at a price — Somali pirates are back

Source: <https://euobserver.com/opinion/157956>



Jan 22 – The European Union has the ambition to be a global maritime security provider as emphasized in the [October 2023 maritime security strategy](#). It is consequential that the [member states have agreed](#) on a new maritime security operation, called Aspis, to respond to the ongoing missile and drone attacks on merchant vessels by the Houthis in the Red Sea and Western Indian Ocean.

These attacks have implied significant costs for maritime trade and carry the danger of a major environmental disaster in the region, with worst case scenarios pointing to a full closure of this trade route with dramatic consequences for the regional and global economies.

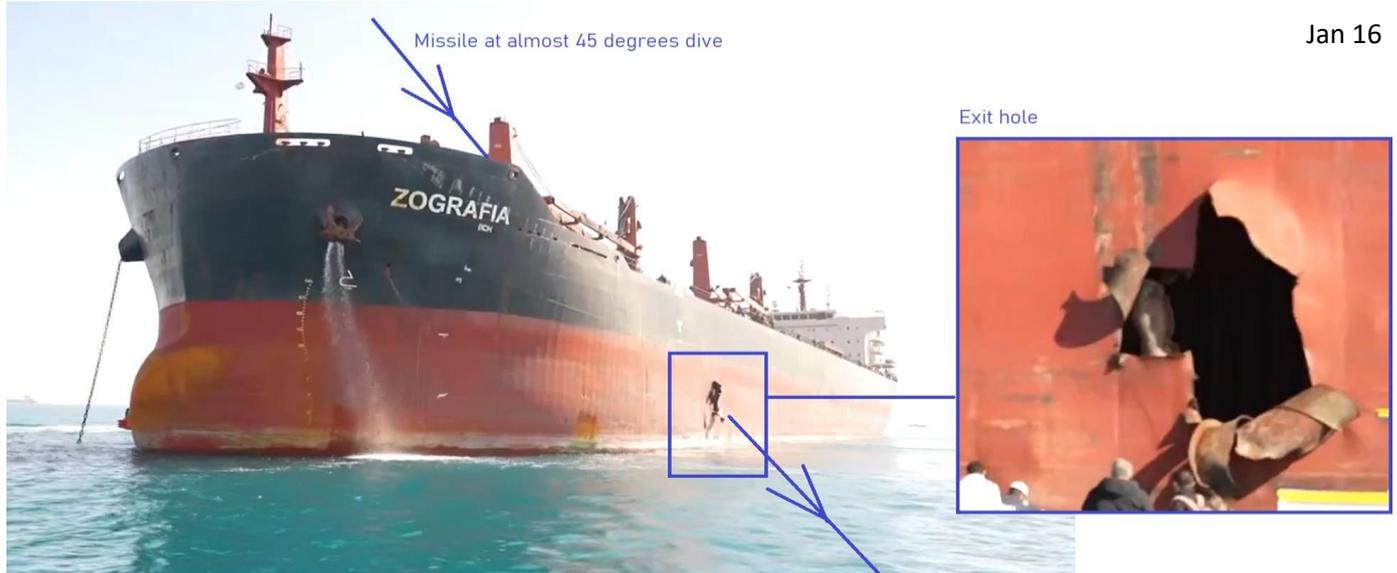
The new operation Aspis draws on a [recent UN Security Council mandate](#) and will further enhance the air defense already put in place by the US-led operation [Prosperity Guardian](#).

The operation sends a strong signal that the EU does not tolerate politically motivated disruptions of freedom of navigation. This is important to live up to the global maritime security ambitions, yet it will not stop the Houthis from launching attacks in the short term, as [analysts have highlighted](#).

The attention given to Houthi attacks has come at a price. Decision-makers in Brussels have not yet noted that another problem in this



region has returned. The pirates of Somalia are also back in action. The current crisis presented a window of opportunity for pirates to launch a series of attacks.



Jan 16

On 5 January 2024, the MV Lila Norfolk, flagged in Liberia, was [captured by pirates](#). The crew sought refuge in a secure room, known as citadel, and the naval forces of India could recapture the vessel. Three weeks earlier, on 14 December, a Malta flagged vessel, the MV Ruen, was [boarded by pirates](#). The ship and its crew are held hostage on Somalia's shore since, with ransom negotiations ongoing. In November [pirates hijacked](#) the Liberian-flagged Central Park off the Yemeni coast, which was recaptured by the United States navy. Earlier in the month, pirates also [hijacked fishing vessels for ransom](#), which might be used as 'motherships' in further attacks. Reports suggest that the [Somali extremist group Al Shabab](#) supports and benefits from these operations.

The series of these attacks indicate that pirates attempt to return to their dangerous business that caused havoc on world trade and severely damaged regional sustainable development between 2008 and 2012. Ending the Somali piracy business in 2012 and successfully suppressing them after has been [one of the key successes](#) of the EU's maritime security ambitions. That was the main reason for continuing the EU's counter-piracy operation, EUNAVFOR Atalanta and investing in capacity building in the region.

EU global reputation at stake

This legacy and reputation of the EU is now being challenged. Decision-makers in Brussels must urgently rethink how they can ensure that pirates will not continue to seize the current opportunity and launch further attacks. It is often believed that the counter-piracy structures established between 2008 and 2012 are still intact. While this is true on paper, in practice these [structures have fully eroded](#), and regional capacity building has not put regional states — many of which are small island developing countries — in the position to cope with the situation on their own. Atlanta currently operates with a single surface vessel. The UN Security Council mandate for counter-piracy has expired. The trust fund providing the resources for piracy prosecutions has been closed. The coordination mechanism, the Contact Group on Piracy off the Coast of Somalia transformed into a dysfunctional group which has not at all responded to the current crisis. Only the information sharing system provided by the EU and United Kingdom through regional centers is still in place. The sole reason that pirates had only limited success over the past weeks is that India has increased its naval presence and now operates with [12 vessels in the region](#). Preventing the full return of piracy is, however, a global responsibility and the EU needs to live up to its long-term commitment in the region.

Iran's 'Axis of Resistance' after October 7, Part I: Hezbollah

By Amatzia Baram

Source: <https://www.meforum.org/65492/iran-axis-of-resistance-after-october-7-part->

Jan 25 – Following Hamas's massacre in Israel on October 7, 2023, the Israel Defense Forces (IDF) responded with air strikes against the group in Gaza. From that moment on, Israel's northern Galilee region has come under fire from Hezbollah militants in Lebanon. The Houthi movement in Sanaa, Yemen, later joined the fray, firing missiles and launching drones at Israel and attacking vessels in the Red Sea. Both organizations are



supported and directed by the Islamic Revolutionary Guard Corps (IRGC) of Iran. Their attacks, however, have so far been limited, stopping short of a full-fledged war. Syria and Iraq, two other Iranian satellites – as well as the Iranian regime itself – have largely [kept out of the conflict](#). What is motivating these players, and what courses will they likely take?

Nasrallah responds

On October 8, one day after the outbreak of the war, Hezbollah began lobbing Katyusha rockets, mortar rockets, anti-tank missiles and drones into a narrow strip of Israel's north, at first targeting military installations. The organization later began to strike civilian border settlements, and the entire Israeli border population was evacuated.

However, in view of the immense bombardment of the

Gaza Strip by the Israeli Air Force and subsequently the military's massive land invasion, Hezbollah's response remained limited to the Galilee. For 26 days, Hezbollah leader Hassan Nasrallah remained silent in his bunker, pondering his options. For a charismatic television personality, staying quiet was extremely unusual behavior.

On November 3, at long last he spoke. Mr. Nasrallah felt obliged to explain why, after Hezbollah had publicly committed itself a few months earlier to supporting Hamas and [Palestinian Islamic Jihad](#) in Gaza, it had only managed limited border attacks for almost a month. Some Arab media outlets began to criticize the group's leader for abandoning the Palestinian and Islamic struggles. Maintaining his image as a very prominent (if not the leading) global Islamic leader is of tremendous importance to Mr. Nasrallah, and he had to deflect the blame.

The decision to attack on October 7, he [declared](#), was "100 percent Palestinian." Those who carried it out "kept it secret from everybody." This implied that Hezbollah was caught by complete surprise and could not have prepared for the war. The battle, Mr. Nasrallah emphasized, "is purely Palestinian, for the Palestinians" – in other words, not for global Islam.

At the same time, he pointed out that Hezbollah was not sitting idle. Its military operations continued to pin down much of the Israeli military, which must split its forces between Gaza and the northern Lebanese front. In a second speech six days later, Mr. Nasrallah called the war a victory for Hamas, while at the same time demanding an immediate cease-fire. He was surely aware that Hamas's supposed victory, even as defined by mere survival, was not yet guaranteed.

Hezbollah's restraint

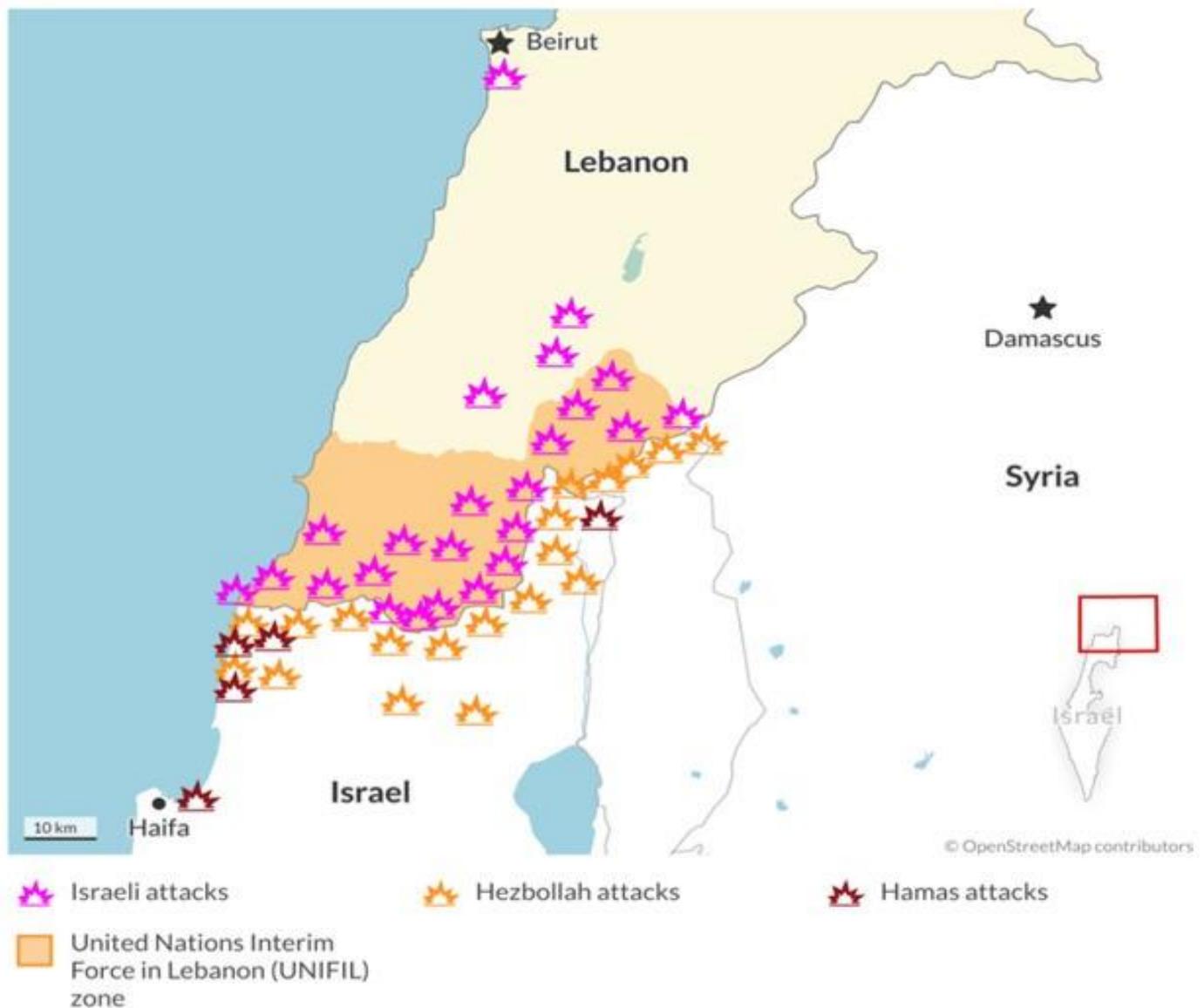
Between October 8 and the final days of 2023, Hezbollah increased the volume of its attacks into Israel by some 20 percent. The IDF followed suit, but neither side breached a tacit agreement to keep the fighting contained. From the Israeli government's point of view, a limited response to the limited Hezbollah attack, while a debatable approach, did not represent a breach of faith with the Israeli public. Avoiding a full-on war with Hezbollah and the opening of a second front, even though this was demanded by the military and minister of defense, was in line with previous Israel policies. But for Hezbollah – in view of its declared total commitment to the Palestinian cause and Iran's "resistance front" – settling for a limited war was surprising, even humiliating.

Why did Hezbollah not keep its promise to Hamas and launch a total assault on Israel, bombing its military and civilian airports and main population centers? There is no practical obstacle; while in the 2006 war with Israel, the group managed to launch daily some 150 warheads (of poor accuracy) into Israel, today it can cover the whole country with at least 1,500 missiles and rockets per day, not to speak of numerous killer drones. The group also has a few hundred highly accurate, GPS-guided munitions. Yet Hezbollah has more than one Achilles' heel, which explains its restraint.

In the immediate term, Hezbollah was taken by complete surprise, as Hamas had not coordinated its attack with them. To launch a total assault, including a land invasion into Israel, Hezbollah would have needed several days to prepare. Had they done so and joined Hamas on October 7, [the disaster in Israel](#) would have been immeasurable. But by then, the IDF was ready for it.

Moreover, after any broad Hezbollah attack, no matter how devastating it might be, Israel's air force, artillery and drones would devastate Lebanon's infrastructure, even without a land invasion or any American involvement. Without electric power, seaports, airports and bridges, Lebanon would come to a standstill. Mr. Nasrallah is dedicated to Israel's destruction no less so than Hamas commander Yahya Sinwar. But unlike the latter, he has additional commitments.





Hezbollah has fired on hundreds of military and civilian targets across northern Israel. IDF strikes have focused on the group's stronghold areas in Southern Lebanon, including throughout the UNIFIL zone, where the militia is barred from operating under UN Security Council Resolution 1701. Since October, tens of thousands of civilians on both sides of the border have fled their homes.

Source: GIS, Washington Institute for Near East Policy

Casualties

For one, contrary to Mr. Sinwar, Hezbollah's Nasrallah feels a deep responsibility for his soldiers. Shia society in southern Lebanon, the organization's power base, is very sensitive to casualties. During its involvement in the civil war in Syria, the militia suffered more than 2,000 deaths. This led to great resentment in the community, which protested the slaying of their sons in a war that was not their own.

By December 30, Hezbollah had admitted the loss of 132 fighters. By then, Hamas had already lost several thousand. While Mr. Sinwar did not even flinch, this placed Mr. Nasrallah in a very difficult position, because he is accountable to the families. Indeed, his second war speech on November 11, Hezbollah's "Martyrs' Day," was dedicated to the fallen militants. Despite its fire and brimstone, they were pained remarks. To indicate that they did not die for Gaza but for a greater cause, he called the dead "*shahids* (martyrs) of Jerusalem" and opened with a [Koranic verse](#) of consolation: "Do not consider those who have been killed for the sake of God dead: they live with their



Lord and all their want is filled." One of Mr. Nasrallah's weaknesses is that, after his Syria adventure, every Hezbollah fighter killed in a war perceived by his community as unnecessary harms his stature.

Collateral damage

Furthermore, while Yahya Sinwar is willing to sacrifice most Gazans for his ideology, Mr. Nasrallah also feels deep responsibility for the large Shia community in southern Lebanon and Beirut. The mass exodus and subsequent destruction there during the 2006 war caused him such political damage that he [apologized](#) for initiating the crisis.

By December, the present war had already forced more than 80,000 Israelis on the Israel-Lebanon border to flee their homes. But in Lebanon, too, around the same number have left the border area, and more still may leave. The limited conflict is already paralyzing Lebanon's south. During a weeklong cease-fire in late November, refugees who had fled the villages of southern Lebanon returned and were aghast at the destruction of their homes and farms. [Press reports](#) described many "angry souls" who severely criticized Hezbollah, which launched a damage control operation by promising compensation.

A further expansion of the conflict would be unpopular. Every southern refugee in Beirut and every destroyed farm or house is a millstone around Mr. Nasrallah's neck. In a broader war, Lebanon's Shia-majority south will be completely evacuated, and then devastated. The Shia of the Jabal Amil region in southern Lebanon live in their historic homeland, where they arrived from Yemen as early as the 9th century. They are living on their own land; they have no yearning for a paradise lost. Mr. Nasrallah's battle cry of "liberating Jerusalem" is important to them, but their homeland is immeasurably more so.

Political capital

Demographically, Shia only make up some 40 percent of Lebanon's population. They cannot indulge in Mr. Nasrallah's [Khomeinist ideology](#) as if Lebanon were theirs alone. If the Hezbollah chief does not want to sit on the bayonets of his fighters, he must form a political coalition with Christian, Druze and Sunni partners. So far, he has been doing precisely that. He cannot sacrifice Lebanon as Mr. Sinwar is sacrificing Gaza. It is important for him to be considered the "Defender of Lebanon" no less so than the "Liberator of Jerusalem," and his domestic situation today is more difficult than ever.

In 2019, Lebanon's economy collapsed, which many Lebanese blamed on Hezbollah. Since then, demonstrations have erupted against both the militant group and Iran. In the May 2022 general elections, Hezbollah's coalition lost its parliamentary majority. [Neither national bloc today](#) has a majority, so there is currently no elected government or president, but both sides have representatives capable of switching camps. Despite a general identification with the Palestinian cause, for most Lebanese, the notion of their country being sacrificed again, as it was in 2006, is anathema.

As early as October, provisional Prime Minister Najib Mikati confessed that the Lebanese government has no way of preventing Hezbollah from starting a full-fledged war. Mr. Nasrallah seems to be losing his supporters in the non-Shia communities. In late December, Wiam Wahhab – leader of the Arab Unification Party, a small, pro-Hezbollah Druze party – demanded an end to Hezbollah's war against Israel. He admitted that he was tired of the fighting; as he put it, Mr. Nasrallah's support for Hamas does not really affect the course of the war in Gaza, and the price Lebanon pays for it is too high. This criticism met with a tsunami of condemnation, but that only gave his position wider publicity.

It is even possible that opposition to war will enable the parliament to elect a government and president who are not Hezbollah henchmen. The new president may demand the militant group's withdrawal as well as its disarmament. In mid-January 2024, Mr. Nasrallah managed to push Prime Minister Mikati to declare that calm in southern Lebanon would not be possible so long as fighting in the Gaza Strip continues. Whether this statement was half-hearted or genuine, it did not reflect the wishes of many if not most Lebanese.

Regional factors

Mr. Nasrallah must also take into consideration [his Iranian patrons](#). They have made it clear to him that, now, they do not want him to endanger Hezbollah's existence and stature in Lebanon. Tehran has a timetable of its own.

Meanwhile, the United States is mediating a land-border agreement between Israel and the interim Lebanese government. The October 2022 maritime-border agreement signed by the two sides was highly popular in Lebanon, and received Hezbollah's blessing. Most Lebanese see a similar agreement for the land border as a boon for stability, and Israel is willing to negotiate. Escalating the current war will prevent such an agreement.

Resolution 1701

Mr. Nasrallah succeeded in anesthetizing the United Nations Security Council's [Resolution 1701](#) of August 2006. The resolution stipulated that he would disarm and withdraw his forces from southern Lebanon, and



that Lebanese Armed Forces and the United Nations Interim Force in Lebanon would be deployed there. This decision was approved by the Lebanese government, and Mr. Mikati reiterated his government's commitment to it during the present conflict. But Hezbollah has ignored it.

When it opened fire in October, Mr. Nasrallah awoke this resolution from its slumber. It now functions as a Sword of Damocles over his head – giving Israel international legitimacy to use force, at least to push Hezbollah out of southern Lebanon.

In Beirut, the Lebanese Forces, a Christian bloc and the largest party in the country's parliament, are already calling for the immediate restoration of Resolution 1701 as the [only way to provide](#) "stability and security to Lebanon." If Mr. Nasrallah initiates total war, this will further legitimize any Israeli effort to occupy southern Lebanon, however briefly, and push Hezbollah's fighters north.

Scenarios

Despite the incremental escalation of hostilities, neither Israel nor Hezbollah is interested in an all-out war at this juncture. However, looking a few months ahead, Israel will not be able to tolerate Hezbollah fighters on its northern border. The dread in the north of a possible Hamas-style commando raid – with the mass rape, mutilation and massacre of Israeli citizens in the Galilee – is palpable. And this fear will never fade; the Jewish people have a long memory.

Unless Resolution 1701 is implemented, at least as it concerns the withdrawal of Hezbollah, northern Israeli refugees will not return to their homes. This means that if Mr. Nasrallah does not order his fighters to withdraw north of the Litani River and allow the Lebanese army to take their place, the IDF will do it for him. At least, this is what Israel's top security officials have said, and the government will find it very hard to renege on such a commitment. For Israeli Prime Minister Benjamin Netanyahu, to be seen as responsible for the civilian abandonment of the northern Galilee is unthinkable.

Hezbollah's leader is aware of this, but he cannot accept Resolution 1701, even just the withdrawal provisions. In addition to bringing deep humiliation, it could give the Lebanese opposition an opening to demand the group's disarmament as well. Instead, Mr. Nasrallah might be able to live with a new de facto reality that Israel's measured escalation is already working to create – one in which Hezbollah fighters and positions are not seen within some 30 kilometers north of the border. Both sides would declare victory. Israeli civilians would return to the border zone under heavy long-term military protection and an IDF commitment to retaliate harshly against any infringement of the ceasefire. Hezbollah could cast it as a civilian homecoming, since many of its fighters live in the southern villages.

To avoid an all-out war, Iran may advise Mr. Nasrallah to accept such a deal, in the belief that it can be reversed incrementally in the coming years. Such an understanding could be solidified if Israel and Lebanon sign an American/French-mediated land-border agreement, similar to the maritime deal struck in October 2022. Presently, though, negotiations over such an accord do not look very promising.

Iran's 'Axis of Resistance' after October 7, Part II: The Houthis

By Amatzia Baram

Source: <https://www.meforum.org/65500/iran-axis-of-resistance-after-october-7-part-ii>

Jan 26 – The recent [retaliatory strikes](#) by the United States and allies against Houthi militants in Yemen have stoked fears that the three-month-old war between Hamas and Israel will spread. As just one node in Iran's network of proxy militias spread across the region, this tribal Yemeni rebel group has managed to disrupt international trade and threatens to draw the U.S. and possibly the United Kingdom into a Middle Eastern war.

The Houthi movement, which prefers to be called by its official name, Ansar Allah ("Supporters of God"), was created in 1992 by Hussein Badreddin al-Houthi. He was one of the leaders of his Houthi tribe, part of the Zaydi population of Yemen (later North Yemen), a branch of Shia Islam. Today the movement's leader is



his brother, Abdul-Malik Badreddin al-Houthi, also known as Abu Jibril.

The group started off as a political-educational movement inspired by Lebanon's Hezbollah. Its slogan, also emblazoned on its flag, reads: "God Is the Greatest, Death to America, Death to Israel, A Curse Upon the Jews, Victory to Islam." By 2014 the Houthis had managed to occupy the city of Sanaa. Until a United Nations-brokered cease-fire took effect in April 2022, they were [fighting against Yemen's legitimate government](#), which withdrew to the south, and against Saudi Arabia and the United Arab Emirates.

Ideological Roots

The Zaydi Shia differ from the mainstream Shia of Iran, Iraq and Lebanon. While most Shia are "Twelvers" – namely, believers in 12 omniscient, God-inspired imams – the Zaydis are "Fivers," holding that there are only five such imams. The first four are revered by all Shia, but Zaydis believe in a different Fifth Imam, Zayd ibn Ali, and are therefore called "Zaydiyya." In their doctrine, the line of imams never ended, but those who came after the Fifth Imam were merely admired rulers, neither omniscient nor divinely inspired. The Zaydi imams ruled Yemen for almost 1,000 years, including for some time as vassals of the Ottoman Empire. The last Zaydi imam was deposed in 1962 by an Egyptian-backed army colonel, Abdullah al-Sallal. From then on, North Yemen was ruled by military officers. It came under the control of General Ali Abdullah Saleh in 1978. North Yemen and South Yemen were united in 1990 under the influence and financial support of Iraq's Saddam Hussein. But in 2011, amid the Arab Spring, the Houthis launched their revolt; three years later, they occupied the capital of Sanaa. The internationally recognized Yemeni government moved south, and the country was once again divided.

The attitude of Twelver Shia toward the Fivers can be somewhat disparaging – believing that, as this author was once told, "anyone who cannot count to twelve cannot be very bright." Yet there remains an affinity between the two Shia sects. In fact, politically, the activism of the Islamic Republic of Iran is closer to the Zaydis than to the "Quietist" tradition of most historical Twelver Imams. Unlike the Fifth Imam of the Twelvers, who did not encourage his followers to revolt against Sunni rule, Zayd bin Ali, the Fifth Zaydi Imam, was a courageous revolutionary and died in battle.

Iranian Support

For Iran, supporting the Houthis is both convenient and highly beneficial. As a proxy, the Houthis give Tehran access to the Red Sea and the Suez Canal – an enormously strategic asset. Their economy and military depend entirely on Iranian support. Because the Houthis are not exactly the embodiment of discipline, Iran's Islamic Revolutionary Guard Corps (IRGC) has [stationed missile and drone trainers](#) and operators in Yemen, as well as personnel providing them with tactical intelligence support.

On October 31, over three weeks after the beginning of the Israel-Hamas war, a Houthi spokesman announced that the group had launched a "large number" of ballistic missiles and drones toward the Jewish state. Israel reported that it destroyed an unidentified "aerial target" over the Red Sea. Ever since, the Houthis have continued to launch missiles and drones against the southern Israeli city of Eilat. All of them were intercepted by Israel and the U.S. Navy.

On November 19, Yemeni forces highjacked the Nippon Yusen-operated, British-owned vessel "Galaxy Leader." It was flying the flag of the Bahamas, transporting automobiles between India and Turkey, and its crew included no Israelis. But the Yemenis defined it as "Israeli" – since another company behind the ship is partly owned by an Israeli tycoon – and, as such, a legitimate target. The Houthis warned that all ships associated with Israel would become targets. Their spokesman warned the international community to avoid working with ships owned by Israeli individuals or carrying cargo to Israel "until the aggression against Gaza stops."

This attack was followed by many others, although most ships attacked had no clear connection to Israel. By early December, most maritime traffic destined for the Red Sea was rerouted to the much longer route around Africa. This traffic is enormous: some 12 percent of global marine trade traverses the route from the Bab el-Mandeb Strait to the Suez Canal, and it takes about two to three weeks longer to use the African route instead.

On December 18, U.S. Defense Secretary Lloyd Austin announced the establishment of "Operation Prosperity Guardian," a collective action to protect civilian ships in the Red Sea. The only Arab country that joined this force was Bahrain. The Saudis, Emiratis and Egyptians remained in the background, reluctant to appear as if they are supporting the Israeli war in Gaza. Still, without a Saudi nod of approval, Bahrain would not have joined.

By mid-December, the Houthis had launched at least 100 drone and ballistic missile attacks, targeting 10 merchant vessels representing more than 35 different nations. Though it was somewhat slow to launch, the U.S.-led force has been effective. On December 31, for example, the U.S. Navy destroyed three of the four Houthi boats that attempted to hijack the Maersk Hangzhou, a Danish cargo ship, some 50 kilometers southwest of the Yemeni port of Hodeidah.

Since mid-January, having realized that international shipping would remain vulnerable as long as they only operated defensively, the American and British Navies launched several attacks on relevant Yemeni military installations. But the U.S. experiences in Afghanistan and Iraq and the fear of triggering a much



wider confrontation may explain the American reluctance to launch a land invasion. The Houthis and Iran understand this, and therefore believe that they can continue this game until the Israel-Hamas war is over. To avoid a crisis with Iran's allies, on January 19 the Houthis [promised safe passage](#) for Chinese, Russian and certain other ships, while excluding vessels "in any way connected with Israel." This is a very broad definition.

Between 2014 and 2022, a Saudi-Emirati coalition failed in its fight against the Houthis. The reason was simple military incompetence, but it gave the rebel group an aura of unbeatable resilience. If "Operation Prosperity Guardian" is not used to destroy North Yemen's military-related harbors, airports and other installations – ideally, even to end their rule – it will be unable to fully reopen the Red Sea route.

Threats to Israel

From Israel's point of view, in the long run the status quo is unacceptable. The port of Eilat has been paralyzed since the end of November. Some 95 percent of Israel's imports are based on shipping, accounting for around four million containers annually, 30 percent of which comes from the east through the Red Sea. Although urgent cargos are already coming from the east on trucks through Saudi Arabia and Jordan, the closure of the Red Sea is threatening to deal a major blow to Israel's economy.

But there are more serious threats. Many shipping companies may decide to no longer ship Israeli cargo or visit any Israeli port for fear that their ships will be hijacked when they go through the Red Sea, even if they are not carrying goods destined for Israel. Appearing in the Houthis' sights anywhere in the world may become bad for business. Any companies still willing to carry goods to Israel from East or Southeast Asia will have to extend their journey around Africa, costing the Israeli consumer a great deal.

In addition to economic fallout, there is already strategic damage to Israel's image as a regional superpower. In 1967, after the British Prime Minister Harold Wilson (1964-70, 1974-1976) failed to assemble an international flotilla to open the Straits of Tiran, Israel launched the Six Day War against neighboring Egypt to open the passage. Despite the distance of some 2,000 kilometers between Jerusalem and Sanaa, sooner or later, if the international community does not open the Red Sea, Israel is very likely to act again.

The immediate reason why Iran has encouraged the Houthis to block the shipping rout is to bring international pressure to bear on Israel to end the war. For as long as it does not directly join the fray, every day of the war is an embarrassment for Tehran. In the meantime, the Houthis serve as an alibi. Isolating Israel in international trade is also a worthy goal. As a byproduct, without getting involved directly in the war, Iran can demonstrate its global reach and pressure points in case the U.S. or Israel are contemplating a preemptive attack on its nuclear program.

Unintended Consequences

It seems, however, that Tehran has made a mistake. Rather than targeting only Israel-bound ships, the Houthis have also been attacking unrelated vessels. In addition to Israeli and Egyptian ships (and even if they spare Russian and Chinese ones), these kinds of wild-cat attacks will affect Europe and Japan, and even other Chinese interests in the Suez Canal. Even specifying "Israeli-owned" ships is too broad, because of the complicated ownership system in international shipping.

Ironically, among those hit hardest are Lebanese, mainly the Shia farmers of the south (a Hezbollah stronghold). A Lebanese official reported that "agricultural exports stopped completely" and that farmers must pay for cold storage, according to an [Alhurra report](#). Lebanon exports about 400,000 tons of agricultural products annually, worth close to \$1 billion, mostly to the Gulf Arab states. And it imports over \$2.5 billion of goods from China, including 14 percent of its food imports. Almost all this trade has travelled via the Red Sea since the land route through Saudi Arabia was blocked in 2021, after Saudi customs seized millions of Captagon amphetamine pills smuggled in boxes of pomegranates.

The problem has become an international one. Publicly, Iran is openly praising the Houthis. Top national security official Ali Akbar Ahmadian, for example, [recently praised](#) Houthi support for the Palestinians against Israel. But in private, Tehran is surely re-examining its strategy. Now that an international flotilla is active, if the regime does not order the Houthis to limit their attacks to Israel-bound ships, it risks an escalated Western retaliation, including attacks further into Yemeni territory. If they do choose to limit the Houthis to Israel-bound ships, geographical distance notwithstanding Israel will have a freer hand.

Scenarios

More likely: Continued attacks

The more likely scenario is that, until it decides that the Gaza war is over, Tehran will stay its course. The Houthis will continue their attacks, at least against Israeli-bound, American and British ships. Tehran views this as the best way to bring U.S. pressure on Israel to stop the war.

The weak American response to past Iranian attacks on U.S. and Gulf Arab targets has convinced Tehran that the Americans will not go all the way. Washington will continue, though, to try from sea and air to



degrade the Houthis' ability to interfere with freedom of navigation. In the unlikely event that the U.S. goes for the Houthi jugular, Iran will settle for covertly supporting the rebels' guerilla warfare.

Less likely: Restraint

The less likely scenario is that Iran will limit the Houthis to attacking only Israeli-bound ships. Left on its own, within a few months Israel is likely to attack, to convince the Houthis that their piracy bears too great a cost. In such a case, Iran may support the Houthis directly.

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How Houthi strikes are creating an opportunity for Somali pirates and Al Shabab

Source: <https://www.express.co.uk/news/world/1860374/somali-pirates-al-shabab-alliance-yemen-strikes>



Jan 27 – Pirates operating from Somalia appear to be taking advantage of the redeployment of Western forces to combat the Houthis in the Red Sea.

The resurgence in Somalia pirate activity has sparked alarm amid reports of an alliance with the powerful Islamist terror group Al-Shabaab.

Al Shabab militants in Somaliland's Sanaag region are alleged to make a deal with pirates with the terrorists protecting the pirate group in exchange for a 30 percent share of the ransom earnings.

Meanwhile, local security forces reported that the pirates are now equipped with advanced weaponry, implying support from Al Shabab's well-established weapons smuggling network.

According to TRT World, this collaboration between the Al-Shabaab and Somali pirates is not entirely new.

Back in 2017, reports surfaced of investigations by the US and the UN into at least two prominent pirate figures accused of providing material support to Al Shabab and Daesh in Somalia.



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During that time, the pirates were accused of assisting the militants in smuggling weapons and ammunition into Somalia, with the group most likely receiving financial contributions and a cut of profits from pirates operating in Al Shabab-controlled areas.

Emily Milliken, Lead Analyst at Askari Associates, LLC, a Middle East-focused defence and intelligence consultancy firm told TRT World: "A return of piracy to the Red Sea — where about 12 percent of global trade passes through — could lead to massive cargo delays and an increase in ship insurance premiums that could disrupt supply chains and increase prices worldwide.

"For example, rerouting merchant ships around the southern tip of Africa could cost as much as \$1 million in fuel alone for every round trip between Asia, East Africa, and northern Europe."

Al Shabab has an estimated 10,000 fighters in Somalia and is known to have orchestrated numerous deadly bombings in the region. The group is suspected to be behind the suicide bombing in Mogadishu's capital city in 2017 that killed over 500 people. Al Shabab also claimed responsibility for a deadly attack in September 2013, during which four masked gunmen opened fire in a shopping centre in Nairobi, Kenya, killing nearly 70 people and injuring more than 200 more.

2 brothers in Queens found with homemade explosives, ghost guns, Queens DA says

Source: <https://www.cbsnews.com/newyork/news/2-brothers-in-queens-found-with-homemade-explosives-ghost-guns-queens-da-says/>



Jan 29 – Two brothers in [Queens](#) are in custody after homemade explosives, bomb-making instructions, [ghost guns](#) and anarchist propaganda were found in their [Astoria](#) apartment earlier this month.

[Queens District Attorney Melinda Katz](#) said the two also had documents and notebooks with a hit list of police officers, judges, politicians, celebrities, bankers and others.

Andrew Hatziagelis, 39, and Angelo Hatziagelis, 51, were indicted on 130 counts of criminal possession of a weapon and other charges.

After a six-month investigation, an arsenal was found in the apartment they share with their mother and another brother, located across from a Con Edison power facility at 804 36th Ave, on Jan. 17.

"I told the agents we all know they're a little bit of a conspiracy theorists, but this takes it to a whole new level," said neighbor Shaleen Heffernan, who lives in the same building. "They just have a huge chip on their shoulder. I went out of my way to not interact with them. It has gotten to that point."





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People v. Angelo & Andrew Hatzigelis



Six operable ghost guns, body armor, ammunition, smoke bombs and eight IEDs were among the items found.

"It is significant to note that homemade explosives, in general, and improvised explosive devices, such as the ones we recovered, are extremely unpredictable and highly volatile. The mere act of removing them from the house and have them submitted for testing is risky for the NYPD and for any office or agency that enters the building they're contained in," Katz said. "Four of the IEDs were found in one container. Had one of those IEDs detonated, it would likely have resulted in a shockwave that would've detonated the remaining explosives. This prompted the bomb squad, like I said, to evacuate the building several times."

Katz wouldn't go into too much detail, but said neither brother was on their radar, adding one had a prior misdemeanor conviction from 1994.

When asked how the investigation started, the DA said, "The investigation does entail the internet. It does entail the purchasing of the parts of these weapons." It's unclear what exactly their plans may have been.

The brothers will appear in court on Feb. 15. If convicted, they face up to 25 years in prison.

Katz said it doesn't appear the Con Ed power facility was any kind of target, but, again, the investigation is ongoing. Homeland Security and state police were also involved.

Is Left-Wing Terrorism Making a Comeback in Germany? Analyzing the "Engel – Guntermann Network"

By Christian Jokinen

Source: <https://www.homelandsecuritynewswire.com/dr20240130-is-leftwing-terrorism-making-a-comeback-in-germany-analyzing-the-engel-guntermann-network>

Jan 30 – On May 31, 2023, the State-level Higher Regional Court in Dresden sentenced four individuals, including Lina Engel,^a a female university student and leader of the violent left-wing extremist group, to prison sentences for politically motivated assaults.¹ Their prosecution underlined how some members of this milieu were escalating their violent activities away from violent riots and arson attacks to targeted assaults that in at least one case was so violent that authorities saw the group as willing to accept that their target might die. This revived bad



memories in Germany, with the interior minister of the State of Saxony, Armin Schuster, seeing parallels with the notorious terrorist group Red Army Faction^b that terrorized the Federal Republic of Germany in the 1970s and 1980s.²

This article begins by describing the attacks on right-wing extremists that Engel's group was found guilty of committing, based on information from court hearings.³ Next, based on the testimony of a former member of Engel's group, the nature and structure of the group is studied. This is followed by a description of its two leadership figures, Lina Engel, who, as noted above, was convicted, and Johann Guntermann, who remains on the run from justice. The article then outlines the resilience and commitment of the group. Finally, the article studies the "internationalization" of the group's "anti-fascist" attacks, as evident in its continued assaults on right-wing extremists in Germany and abroad.

The criminal investigation; the court hearings, including the testimony of a former member of the group; and in-depth, open-source analysis provide an exceptionally detailed and rich picture of an active violent left-wing extremist group.

The Attacks

According to the president of Germany's internal intelligence service (Bundesamt für Verfassungsschutz, BfV), Thomas Haldenwang, small clandestine groups have emerged within the violence-orientated left-wing extremist milieu that are conducting "very sophisticated, professional attacks against their political enemies ... While the threshold to terrorism has not yet been crossed, with the current radicalization trend continuing, the moment for this crossing over is closer."⁴

Notwithstanding the assessment of German authorities, it could be argued that politically motivated violent assaults targeted at specific individuals already constitute terrorism, according to Bruce Hoffman's definition of terrorism as the "deliberate creation and exploitation of fear through violence or the threat of violence in the pursuit of political change."⁵ In the case of Engel's group, violent intimidation and physical harm was utilized to prevent their political opponents, that is far-right extremists, from continuing their activities.

At the center of these warnings is a group that started to conduct violent attacks against right-wing extremists or individuals deemed to be such in 2018. The group aimed to "violently target members deemed as right-wing extremists and cause significant bodily harm to prevent them and other members of the 'right-wing milieu' to continue their activities."⁶

At the center of attention has been Lina Engel, the leader of the group, and a series of attacks she and her co-defendants were found guilty for:

1. On January 8, 2019, in the Leipzig neighborhood of Connewitz, a sanitation worker who was wearing a cap from a clothing brand favored in the extreme right-wing milieu was assaulted. While Engel kept the colleague of the assaulted man from intervening, at least four others assaulted the worker causing him severe physical injuries.⁷

2. On the night between October 18-19, 2019, 11 members of the group stormed the bar "Bull's Eye," a known meeting point for right-wing extremists in Eisenach. The attack targeted the bar owner, right-wing extremist Leon Ringl.⁸ Using irritant spray, batons, and their fists, the attackers tried to assault Ringl, but due to his resistance, the attack degenerated into a tussle. Engel—functioning as the "supervisor" of the attack—called off the attack and sprayed the bar with irritant spray.⁸

3. On the night between December 13-14, 2019, Leon Ringl was targeted again, this time as he was on his way home. A "scout" from the group reported his movements and when Ringl made it to his home door, the group attacked him armed with batons and a hammer. Engel, as the "supervisor" for the attack, sprayed Ringl with irritant spray. However, Ringl was able to fend off the attackers. The group retreated but came across three associates of Ringl who were running to come to his assistance. The attackers assaulted these people and demolished their vehicle before fleeing from Eisenach. Engel and another member of her group who was convicted—Lennart Arning—were stopped and arrested by the police.⁹

4. On February 15, 2020, at least eight members of the group—including Jannis Rohling and Jonathan Philipp Mohr—ambushed a group of right-wing extremists in Wurzen as these extremists were returning from a demonstration in Dresden. Engel had functioned as a "scout," shadowing the group from Dresden to Wurzen, where the "attack group" intercepted them, beating up four of them, inflicting significant physical injuries.¹⁰

5. The group planned an attack on Brian E.,^d who was part of the right-wing extremist milieu in Leipzig. Engel and Rohling had conducted "target observation" in preparation for the attack, planned for June 8, 2020. Mohr traveled from Berlin to Leipzig to partake in the attack. Authorities foiled the attack.¹¹

The defendants were additionally suspected of participating in two more attacks: on right-wing extremists Enrico B.^e on October 2, 2018, in Leipzig and Cedric S.^f on October 30, 2018, in Wurzen. However, the prosecution could not prove without reasonable doubt that the accused participated in these assaults.¹²

Engel, Rohling, Arning, and Mohr were sentenced to prison terms. Engel received the hardest sentence of five years and three months for her leadership position in a criminal entity and causing "severe bodily harm" on multiple accounts. Arning and Mohr were sentenced to prison sentences of three years and three



years and two months, respectively. Rohling received a sentence of two years and five months. While Engel and Arning were sentenced as “members,” Rohling and Mohr were sentenced as “supporters” of the criminal entity.¹³

Fluid Structures

The prosecution was largely successful due to the testimony of 30-year-old Johannes D., who had become an outcast within the milieu of the extreme-left after accusations that he had sexually assaulted a fellow activist. His testimony enabled German authorities to piece together the internal dynamics of the network.⁹

According to the German Federal Police (Bundeskriminalamt, BKA), a key challenge in the investigation had been its fluid nature, which was difficult to comprehend from the outside.¹⁴ Johannes D. described the group more as a “fluid network” than a hierarchical group: “My experience from militant politics is that a group is a flexible network. ... There is no ‘forced-compositions’ ... that means you don’t always do things with the same people.”¹⁵

With the assistance of Johannes D., authorities were able to model the internal structure of the group, consisting of three circles.¹⁶ The ‘Leipzig circle’ around Engel formed the core, organized the training, and planned and ‘invited’ activists for specific ‘actions’ (attacks). The next circle consisted of trusted individuals who had received training and had a record of participating in ‘actions,’ while the third circle consisted of loosely connected individuals spread around Germany, who were ‘brought in’ for specific activities. Internal division of labor in the group was fluid and hierarchical structures were kept as flat as possible.¹⁷

Johannes D.’s testimony weighed significantly also in the question on how systematically the group had prepared for its assaults. He testified on training sessions that the group organized in Leipzig^h in preparation for its “militant urban fight”:

*It was an old brick building ... we trained together movement sequences, different ways of attacking, scenario training. The training was always limited to an attack time of around 30 seconds. Firstly, 30 seconds is a relatively long time, and it is the time window where you can do a lot of damage but also escape. A tussle should be avoided because no damage can be done in a tussle. One of the attackers was the supervisor, one person made the first contact ... the first touch, the first grab.*¹⁸

The aim was to inflict the maximum amount of physical harm in the shortest time possible, without killing their victim.¹⁹

In the planning phase for an attack, the group conducted target observation to find out daily routines and patterns.²⁰ In attacks, tasks were divided: A “scout” shadowed the target, informing the “attack group,” for example waiting in a car to carry out an ambush. A “supervisor” was in charge of “managing” the attack, giving orders to start and stop and surveying the surroundings when the attack was ongoing. Finally, the rest of the group, especially those members with martial arts experience, were used as attackers.²¹

The group carried out two different types of attacks. Firstly, the group conducted spontaneous violent assaults against individuals deemed as belonging to the right-wing extremist milieu that were spotted and reported to the group. In this methodology, individuals connected to the group spotted individuals who behaved suspiciously or wore clothing brands associated with right-wing extremists and reported these individuals to the attack group. This was then followed by the arrival of masked attackers who assaulted the individual. The Leipzig attack of January 8, 2019, and possibly another on August 31, 2021,ⁱ serve as examples of this *modus operandi*. Secondly, the group conducted meticulously planned, targeted assaults.²² These included the targeted assaults on Leon Ringl and a planned assault on Brian E.

Key Leaders: The “Engel – Guntermann” Group

Engel was arrested on November 5, 2020, and put on pre-trial detention. Her alleged role as a female leader of the violent group resulted in an intense media focus and her emergence as a rallying figure for the extreme far-left.²³

Engel was born in 1995 in Kassel, State of Hesse, her mother a social educator and father a senior teacher. Following school, Engel moved to Leipzig in 2013 to pursue studies in social pedagogy at the nearby university of Halle.²⁴ Her bachelor’s degree study focused on how youth work should address neo-Nazism through studying the case of “Winzerla,” a youth club in Jena, which far-right terrorists from the NSUⁱ had frequented.²⁵ For authorities, the fact that her undergraduate study focused on the NSU pointed to an ideologically motivated radicalization.²⁶

In Leipzig, Engel lived in the neighborhood of Connewitz, known for its active leftist tradition and alternative leftist subculture.²⁷ She was a known but not prominent figure in the local Connewitz leftist milieu.²⁸

The verdict of the Dresden court did not depict Engel as the sole founder or leader of the group, stating that she had acted in cooperation with a fellow far-left extremist called Johann Guntermann, who is currently on the run.²⁹ The German police published a public warrant on September 25, 2023, offering a reward for information on Guntermann.³⁰ The German authorities categorize Guntermann as a “Gefährder,” a term officially used to describe a person willing and capable to further an ideologically motivated cause by violent means. Warning that Guntermann was dangerous, the warrant contained a picture of his knuckles, with “Hate Cops” tattooed onto them.³¹



There are speculations that Guntermann was crucial in radicalizing and introducing Engel to the left-wing extremist milieu.³² However, state witness Johannes D. doubted this: “I would not say that Johann dominated Lina or that Lina dominated Johann. I could not say who radicalized whom. Lina and Johann, from my perspective, are two autonomous personalities who fit each other well.”³³ Before her first short-lived arrest in December 2019—after the botched attempt on Ringl—Engel had no criminal record,³⁴ the same cannot be said for Guntermann. Born in 1993 in Halle, Guntermann grew up in Leipzig and Bavaria. In the latter, he reportedly joined the local leftist autonomist^k-milieu, during which time the first criminal offenses were filed against him.³⁵ After high school, Guntermann returned in 2011 to Leipzig where he enrolled at university to study history.³⁶ In 2015, he participated in a violent demonstration in Leipzig hurling stones. Although criminal investigations were opened in 196 cases, Guntermann was the only rioter that could be—thanks to his DNA on two stones he had thrown—put on trial. In the same year, Guntermann, together with two accomplices, assaulted a female participant of a right-wing demonstration. In 2017 and 2018, Guntermann was sentenced for these offenses to a combined two years and nine months in prison.³⁷ It is unclear when or how Guntermann and Engel met, but the two are said to have been a couple already in spring 2018, when Guntermann began his jail term in Justizvollzugsanstalt Castrop-Rauxel.³⁸

Guntermann was released from prison on probation in September 2019.³⁹ It seems that immediately after his release in September 2019, he was already planning to go off the grid: Guntermann allegedly gave a false address in Dortmund to his probation officer.⁴⁰ He seems to have rapidly integrated himself into the group, participating in the Eisenach attacks two months later and playing an important role in recruiting individuals for these assaults.⁴¹

According to Johannes D., it was Guntermann who recruited him for the second attack, organized burner phones (to be used only once for coordination and communication in a specific attack) and paid (with money organized through credit card fraud) for train tickets for “scouts” conducting target surveillance.⁴²

Sometime after the arrests of Engel and Arning in December 2019, Guntermann reportedly traveled to Thailand, where he stayed until July 2020. He then returned to the Schengen Area and disappeared.⁴³ There is speculation that after his stint in Thailand, Guntermann spent time in Greece and/or Switzerland.⁴⁴

The Resilience and Commitment of the Group

Even though Engel was now known to the authorities due to her initial arrest in Eisenach, the group continued to operate and conduct attacks (in Wurzen) and prepare for new ones, pointing to a high degree of resilience and ideological commitment within group.

It is possible that even the final arrest of Engel on October 5, 2020, did not stop the activities of the group. Two attacks in 2021 had similarities with those conducted by her group. On the morning of March 11, 2021, a group of attackers stormed the home of a right-wing extremist NPD^m-youth organization leader Paul Rzehaczek in Eilenburg (northeast of Leipzig). Wearing dark clothes, yellow vests with the words “police” marked on them, and masks, the five attackersⁿ beat Rzehaczek up and searched his home for phones and electronic devices.⁴⁵

Two months later, on the night May 27-28, 2021, around five masked attackers, again using clothes resembling police uniforms, stormed the Erfurt home of the known far-right extremist Julian F., beat him up and poured chlorine over him.⁴⁶

While targeting right-wing extremists at their homes and using police uniforms were novelties, the profiles of the targeted individuals were in line with the previous attacks by the Engel – Guntermann network. Investigations of these attacks are ongoing, including to what degree they were linked to the members of that group.⁴⁷

After what seems to have been an operational pause, the attacks, having the hallmarks of the Engel – Guntermann group in terms of planned, targeted assaults on right-wing extremists, conducted by a group of several attackers, continued on January 12, 2023, with an assault on two far-right extremists in Erfurt, including Florian R.,^o with several attackers beating up their victims.⁴⁸

Guntermann remerged in February 2023, when he—based on surveillance camera footage—took part, together with several members of the group, in assaults in Hungary’s capital Budapest.⁴⁹ The Budapest attacks on February 9-11, 2023, targeted suspected right-wing extremist participants of the “Day of Honor”^p commemorations. A group of masked attackers assaulted individuals whose clothing was deemed to indicate right-wing ideology and inflicted serious injuries on them.⁵⁰ The Hungarian police was able to arrest or identify several of the attackers, who turned out to be Germans, in addition to a 42-year-old Hungarian and a 38-year-old Italian national.⁵¹ The detained Germans included Anna M. and Tobias E., with Simeon T., Moritz Schroeter, Emilie Dieckmann, Clara Wittkugel, Nala Aschoff, Paul Müntnich, and Guntermann suspected of partaking in the attacks.⁵² The Budapest assaults led to searches in the homes of seven suspects in Jena and Leipzig.⁵³ While Tobias E. remains in Hungarian custody, and Simeon T. was arrested on December 11, 2023, in Berlin, the other suspects remain on the run from justice.⁵⁴

As of September 2023, the German internal intelligence service (BfV) assessed the number of left-wing extremists that have gone to ground at around 20 individuals belonging mainly to the entourage of Engel



and Guntermann.⁵⁵ Noteworthy, according to the BfV there has not been a reduction in the violent-extremist activity of these individuals.⁵⁶

While the actual size of the “Engel – Guntermann group” remains unclear, 20 individuals have been publicly associated with it.⁵⁷ Based on openly available information about these people, some preliminary observations are possible: Firstly, the group consists of individuals aged between 21-46 years, of both sexes. The male members of the group (average age 31) tended to be older than the female members of the group (average age 23), with age not correlating with alleged leadership position.⁵⁸ Secondly, female participation in the group is notable (31.5% of members), especially in the youngest age segment.⁵⁹ Thirdly, the majority of members of the group had a personal connection to Leipzig, Saxony, or Thuringia. Finally, several are or have been studying at university level. Overall, the group seems to consist of a mixture of individuals with a record of violent rioting and associated crimes and individuals that, before their arrest, had not come to the attention of law enforcement.⁶⁰

Interestingly, it seems that the group continues to attract new members. In late November 2023, German authorities were reported to be searching for the 33-year-old Joris S. who, on June 3, 2023, threw a Molotov cocktail at riot police during a demonstration in Leipzig in solidarity against the conviction of Lina Engel. Now suspected of attempted murder, Joris S. is feared to have joined other members of the Engel – Guntermann group in hiding.⁶¹ Before his accused attack against police, Joris S. had not been publicly associated with known members of the Engel – Guntermann group.

From Local to International “Anti-Fascism”?

Analyzing the attacks in 2018-2020, the geographical concentration on Leipzig, Eisenach, and Wurzen is noticeable, pointing to an intimate, local conflict between the left- and the right-wing extremist milieus. While clashes between members of these subcultures are nothing new, a possible trigger event for further radicalization on the left might have been the violent attack by right-wing hooligans against the Leipzig neighborhood of Connewitz. On January 11, 2016, several hundred attacked the neighborhood in what right-wing extremists celebrated as the “Storming of Connewitz.”⁶² While police arrested two hundred of the hooligans, the slow pace of the investigation and court processes against them possibly contributed to a strengthened perception and narrative in leftist circles that the state was unable or unwilling to deal with right-wing extremism, “forcing” the left-wing militants to take matters into their own hands.⁶³ Indeed, it is reported that the group around Engel had obtained a list of 216 right-wing extremists who had participated in the “Storming of Connewitz” and were targeting these for revenge: Of the individuals they assaulted, Cedric S., Brian E., and Julian F. had allegedly taken part in it.⁶⁴

This would explain who was selected for targeting. In the case of the two failed attacks in Eisenach, the persistence in targeting Ringl is most likely explained by his leading role in the right-wing extremist milieu, but it is interesting that far-right extremists were attempting to turn Eisenach into a “Nazi Kiez” (i.e., a right-wing alternative neighborhood,⁶⁵) a mirror image of Connewitz of sorts. After Engel’s arrest in November 2020, the center of targeted assaults by far-left extremists moved geographically to the state of Thuringia, with several attacks conducted in Erfurt.⁶⁶ At the same time, BfV saw an increased connectivity among the left-wing extremist groups inside Germany.⁶⁷

The attacks in Budapest represented a significant departure from a territorial focus on Saxony and Thuringia, signaling a new transnational “anti-fascism” ideological commitment by the Engel – Guntermann network with selected victims for the first time including non-German nationals.⁴ Secondly, the mixture of Germans and non-Germans in the attacks demonstrated the increased international connectivity of the group. In recent times, Italy, Greece, and Spain have served as epicenters for indigenous left-wing and anarchist terrorism.⁶⁸ Europol observed in its Terrorism and Trend report (TE-SAT) in 2021 and again in 2022 a growing connectedness in the left-wing and anarchist extremist scene internationally, mainly on an individual level. There have been very strong connections within this milieu in Europe, especially between neighboring countries and where a common language is used.⁶⁹ In the Budapest attacks, language barriers seem to have been successfully overcome, with Germans operating together with Hungarian and Italian nationals. A further, dangerous indicator of increased international connectivity emerged through the investigation of the March 11, 2021, assault on Paul Rzehaczek: Law enforcement identified one of the attackers as a known left-wing extremist with combat experience abroad. The German man in question allegedly stayed in recent years in northern Syria, where he participated in the activities of a foreign terrorist group—allegedly a group close to the Kurdish PKK.⁷⁰ In searches in Thuringia, the police was able to confiscate this man’s “shooters diary,” where he had written notes of his frontline missions as a sniper for the group. Authorities have linked him to leading members of the Engel – Guntermann group.⁷¹

Conclusion

Germany’s BfV has assessed that the risk posed by small clandestine left-wing extremist groups has grown, with its violence becoming more professional, aggressive, targeted, person-orientated, and brutal, including against security authorities.⁷² If indeed these groups include individuals with combat experience



from abroad and connections to foreign terrorist groups, the potential for radicalization to outright terrorism is real, with authorities no longer excluding the possibility of fatal attacks.⁷³

In comparison to historic left-wing extremist terrorist groups, the “Engel – Guntermann” group very specifically targeted right-wing extremists or individuals deemed as such; the group is not known to have targeted, as of yet, representatives of the state or law enforcement authorities.

Instead, the Engel – Guntermann group seems to have grown from being motivated mostly by local conflict with the right-wing extremist milieu in and around Leipzig to a group acting more internationally, as evidenced by the attacks in Budapest. The fact that the group’s members collaborated with non-Germans in attacks points to increased links to groups outside Germany. This kind of interconnectivity between left-wing extremist milieus in Europe can contribute to changes in tactics and targeting patterns.

The Engel – Guntermann group showed resilience and ideological commitment, withstanding blows from law enforcement and justice authorities. For German authorities, it is of utmost importance to prevent further radicalization toward violence of the group members still at large. Members of the group make up many of the 20 or so left-wing extremists assessed to be still at large and “underground” by German authorities.⁷⁴

For Germany, the reemergence of more violence orientated left-wing extremist actors has diversified the threat posed by non-state actors even further. Violent left-wing extremism is also of growing concern across Europe. According to Europol’s most recent Terrorism Situation and Trend Report (TE-SAT) report, in 2022 “16 attacks were completed, of which the majority were attributed to left-wing and anarchist terrorism (13), two to jihadist terrorism, and one to right-wing terrorism.”⁷⁵ What is notable about the numbers is that over 80 percent of completed terrorist attacks were carried out by left-wing and anarchist actors, even as EU Counter-Terrorism Coordinator Ilkka Salmi assessed in November 2023 that “currently, violent left-wing and anarchist terrorism in the E.U. is more geographically concentrated than jihadist terrorism and right-wing terrorism” and that “left-wing and anarchist terrorist attacks are generally far less lethal than jihadist and right-wing terrorist attacks.”⁷⁶ While left-wing violent extremism does not currently represent as acute a threat as currently manifested by other ideologies, as illuminated by this case study of the Engel – Guntermann network and its fellow travelers in Germany, the recent concerning trend among German left-wing extremists is toward greater violence and transnationalism.

Substantive Notes

[\[a\]](#) German authorities and media customarily identify suspected or convicted individuals with only the first letter of their last name. However, some right-wing “alternative” media platforms have not held to this norm, “outing” or revealing the full identities of the suspected or convicted left-wing activists. In order not to encourage and/or to escalate the cycle of right- and left-wing activists “outings” (also known as “doxing”), this author deems it sufficient to identify the individuals in question in the format used by German authorities and mainstream media. In cases where German authorities have officially named the suspects with full names and/or the names have been re-printed by mainstream media in Germany or abroad, full names are also given in this article. It is also worth mentioning that as Lina Engel became a symbol to the left-wing milieu, her full name has been used in graffiti’s demanding her release.

[\[b\]](#) Rote Armee Fraktion (RAF), also known as the “Baader-Meinhof -Group” (after its founding members Andreas Baader and Ulrike Meinhof), conducted a campaign of terrorist bombings, assassinations, kidnappings, bank robberies, and shoot-outs with police over the course of three decades, resulting in the death of 34 persons. The group formed in 1970 and announced its dissolution on April 30, 1998. “Geschichte der RAF,” Bundeszentrale für Politische Bildung, August 20, 2007; Stefan Aust, “Der Baader-Meinhof Komplex,” Piper Verlag, 2020.

[\[c\]](#) Leon Ringl was arrested by German law enforcement authorities in a nationwide operation against right-wing extremists on April 20, 2022, and is currently in pre-trial detention. In May 2023, the German State prosecutor opened a criminal prosecution against Ringl and three other suspected right-wing extremists for establishing the “Knockout 51” neo-Nazi group. “Generalbundesanwalt klagt mutmaßliche Neonazi-Kampfsportler aus Eisenach an,” MDR Thüringen, May 15, 2023, Ibrahim Naber and Lennart Pfahler, “Bis einer Stirbt,” *Die Welt*, May 23, 2023; Celine Löffelhardt, “Prozessstart gegen ‘Knockout 51’ – Rechtsextreme plantem ‘Nazi-Kiez,’” ZDF, August 21, 2023.

[\[d\]](#) The case of Brian E. and his studies to become a lawyer has caused controversy in Germany. In May 2020, the Higher State level court of Dresden ruled that despite his right-wing extremism and a sentence for a criminal offence with a political motive, Brian E. could not be prevented from becoming a lawyer. “Trotz Verurteilung: Referendar darf Volljurist werden,” RedaktionsNetzwerk Deutschland, May 19, 2020; “Connewitz-Krawalle: Urteil gegen Rechtsreferendar ist rechtskräftig,” *Leipziger Volkszeitung*, May 11, 2020.



[e] Four attackers assaulted Enrico B. in front of his home. Enrico B. was a city council representative of the right-wing extremist party NPD and has been sentenced for right-wing extremist crimes. Wiebke Ramm, “Die linke Angeklagte, der rechte Zeuge und viele offene Fragen,” Spiegel, September 23, 2021.

[f] Cedric S. was assaulted by four masked attackers. Cedric S. had been convicted for crimes with right-wing extremist motivation. Wiebke Ramm, “Im Fußball würde man sagen, er hat meinen Kopf volley genommen,” Spiegel, October 1, 2021.

[g] The testimony of Johannes D. was significant as insider testimonies within the extreme far-left are very rare, as are cases of individuals publicly disengaging from the extreme left in Germany. Edgar Lopez, “Urteil gegen eine linke Symbolfigur,” Tagesschau, May 31, 2023; Denise Peikert, “Prozess gegen Lina E.: ‘Kronzeugen’-Aussage bietet Zündstoff für die linke Szene,” *Leipziger Volkszeitung*, July 27, 2022.

[h] Trainings took place in several places. The training was organized for four to eight participants at a time. Denise Peikert, “Wo die Gruppe um Lina E. Angriffe auf Neonazis trainiert haben soll,” *Leipziger Volkszeitung*, August 29, 2022.

[i] According to a media report about the August 2021 attack, a young man was returning from work in the evening when he was toppled from his bicycle and beaten up by masked assailants, using different kind of striking tools. The individual was likely targeted because he was carrying a clothing item from a brand favored in the extreme far-right milieu. Alexander Bischoff, “Brutale Hammer-Bande: Auch ohne Lina schlägt die linke ‘Kiez-Miliz’ immer wieder zu,” Tag24, September 7, 2021.

[j] Nationalsozialistischer Untergrund (NSU) was a far-right terrorist group that between the years 2000 and 2007 conducted 10 murders, two bomb attacks, and several other criminal activities. “National Socialist Underground,” Konrad Adenauer Foundation, n.d.

[k] Autonomists are by far the largest group among violence-oriented left-wing extremists. Autonomists reject all forms of external control. They regard all types of state and rule as equally authoritarian and believe that they should be replaced with an order free of domination. The largest autonomist scenes are in Berlin, Hamburg, and Leipzig. “Left-wing extremism,” Bundesamt für Verfassungsschutz (BfV) website, n.d.

[l] These first criminal offenses have not been made public in mainstream media.

[m] “Nationale Partei Deutschlands” (NPD) is an extreme far-right political party.

[n] One of the attackers, a 24-year-old male suspect from Thuringia, was arrested in May 2023. Mathias Schönknecht, “Nach Überfall auf NPD-Politiker in Eilenburg und der Festnahme in Jena: Gibt es Verbindung zu Lina E.?” *Leipziger Volkszeitung*, May 26, 2023.

[o] Florian R. is allegedly a member of the “Neue Stärke Partei,” a right-wing party. Karl Keim, “Polizei macht Jagd auf linksextreme Axt-Angreifer,” *Bild*, February 10, 2023.

[p] The right-wing extremist gathering commemorates the day when German and Hungarian troops attempted to break out from Buda on the evening of February 11, 1945.

[q] Individuals attacked included two German, three Hungarian, and three Polish nationals. “Razzia: Wohnungen mutmaßlicher Linksextremisten in Jena und Leipzig durchsucht,” MDR, March 15, 2023.

[r] PKK stands for Partiya Karkerên Kurdistan. The Kurdistan Workers Party (PKK) is a leftist terrorist group fighting the state of Turkey. The PKK is sanctioned as a terrorist group by the United States, European Union, and the United Kingdom.

●► Citations are available at the source’s URL.

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A Houthi missile was just seconds from hitting a US warship. The Navy used its ‘last line of defense’

Source: https://news.yahoo.com/houthi-missile-just-seconds-hitting-062737193.html?.tsrc=daily_mail&uh_test=0_00

Feb 02 – A US warship’s [destruction of an incoming Houthi missile](#) in the Red Sea this week marks the first use in this conflict of an advanced weapons system dubbed the Navy’s “last line of defense.”

The Phalanx Close-In Weapon System (CWIS) was deployed by Navy destroyer the USS Gravelly Tuesday night against what US officials said was a cruise missile that got as near as 1 mile to the ship – and therefore seconds from impact.

The automated Phalanx system features Gatling guns that can fire up to 4,500 20-millimeter rounds a minute, engaging projectiles or other targets at extremely close range.





“The Phalanx weapon system is a rapid-fire, computer-controlled, radar-guided gun that can defeat anti-ship missiles and other close-in threats on land and at sea,” manufacturer Raytheon says on its website page titled, “Last line of defense.”

US warships have [defeated dozens of previous Houthi missile attacks](#) using longer-range defenses, likely the Standard SM-2, Standard SM-6 and Evolved Sea Sparrow missiles, analysts say. Those defensive missiles engage their targets at ranges of 8 miles (about 12 kilometers) or more.

But on Tuesday night that didn’t happen for reasons that have not been revealed.

Tom Karako, director of the Missile Defense Project at the Center for Strategic and International Studies, said it was “concerning” that the Houthi missile got so close to a US warship.

“If it’s going at a pretty good clip, 1 mile translates to not very long in terms of time,” Karako said.

Analyst Carl Schuster, a former US Navy captain, said the Houthi missile, traveling at about 600 mph (965 kph), was likely about 4 seconds from hitting the US warship when it was destroyed by what was likely a 2- to 3-second burst of machine gun fire by the Gravelly’s Phalanx system.

He noted that destroying an incoming missile at a 1-mile distance doesn’t necessarily prevent warships from being hit with debris.

“The missiles don’t evaporate when destroyed, they send out thousands of fragments and missile frame parts,” Schuster said. “The good news is that the lighter parts decelerate quickly, but large chunks can fly up to 500 meters (more than 500 yards).”

The closer the incoming missile is to the ship when destroyed, the more danger there is to the vessel, with larger chunks able to penetrate unarmored parts of the hull and superstructure from about 200 meters (more than 200 yards) out, Schuster said.

In a case of a subsonic cruise missile like that encountered by the Gravelly on Tuesday, “depending on if the warhead detonates, debris size, missile flight angle and altitude at the time of missile destruction, about 2% of the debris might reach the ship,” he said.

Up to 70% of debris from missiles that travel at a faster speed, such as supersonic cruise missiles or ballistic missiles, would likely hit a warship after being engaged by the Phalanx, he said.

The Phalanx has a limited height range, so it may not even be able to engage ballistic missiles falling from above a warship, Schuster added.

Even with those caveats, the Phalanx is an important armament for the US Navy.

Since its introduction in 1980, it is now installed on all US Navy surface ships, and at least 24 US allies also use it, according to Raytheon, which notes the land-based version has seen combat before.

Whether it comes into further use in the current hostilities in the Red Sea remains to be seen. But the Iran-backed Houthis show no signs of slowing their attacks on commercial shipping and warships in the waters around their base in Yemen, which they claim are retaliation against Israel for its [war in Gaza](#).



Barrel Length: 3.15m (10.3ft)
 System Weight: 3,300kg (7,275lb)
 Height: 1.94m (6.3ft)
 Effective Range: 3,500-5,000m
 Max. Range: 5,000m
 Rate Of Fire: 1,000rpm (16-17/sec)

Barrel Length: 3.15m (10.3ft)
 System Weight: 5,500kg (12,100lb)
 Height: 2.3m (7.5ft)
 Effective Range: 4,000m
 Max. Range: 6,000m
 Rate Of Fire: 1,100rpm (18-19/sec)

Barrel Length: 3.15m (10.3ft)
 System Weight: 4,500kg (9,920lb)
 Height: N/A
 Effective Range: 1,500-2,000m
 Max. Range: 2,500m
 Rate Of Fire: 1,440rpm (24/sec)

Barrel Length: 3.19m (10.46ft)
 System Weight: 3,500kg (7,716lb)
 Height: N/A
 Effective Range: 1,500-2,000m
 Max. Range: 2,000m
 Rate Of Fire: 3,200rpm (53/sec)

Barrel Length: 1.64m (5.38ft)
 System Weight: 1,800kg (3,968lb)
 Height: 1.07m (3.5ft)
 Effective Range: 4,000m
 Max. Range: 5,000m
 Rate Of Fire: 4,000-5,000rpm(66-83/sec)



TOP 10 CIWS IN THE WORLD

Barrel Length: N/A
 System Weight: 5,600kg (12,345lb)
 Height: 3.71m (12.1ft)
 Effective Range: 350-2,000m
 Max. Range: 2,500m
 Rate Of Fire: 4,200rpm (70/sec)

Barrel Length: 1.52m (5ft)
 System Weight: 6,200kg (13,600lb)
 Height: 4.7m (15.5ft)
 Effective Range: 1,486m
 Max. Range: 5,500m
 Rate Of Fire: 4,500rpm (75/sec)

Barrel Length: 2.30m (7.5ft)
 System Weight: N/A
 Height: N/A
 Effective Range: 1,000-1,500m
 Max. Range: 3,000m
 Rate Of Fire: 4,600 (77/sec)

Barrel Length: 2.04m (6.7ft)
 System Weight: 15,500kg (34,200lb)
 Height: 2.25m (7.4ft)
 Effective Range:
 4,000m (Gun) + 8,000m (Missile)
 Max. Range: 5,000-10,000m
 Rate Of Fire: 10,000rpm (166/sec)

Barrel Length: 2.04m (6.7ft)
 Weight: ~6,000kg (13,200lb)
 Height: N/A
 Effective Range:
 4,000 (Gun) + 20,000m (missile)
 Max. Range: 4,000-20,000m
 Rate Of Fire: 10,000rpm (166/sec)



A day after the attack on the Gravelly, US Central Command reported another US destroyer, the USS Carney, had shot down incoming anti-ship missiles and drones. And on Thursday, US forces shot down a Houthi drone over the Gulf of Aden and destroyed a surface drone in the Red Sea, it said.

Meanwhile, two ballistic missiles launched from Houthi-controlled areas of Yemen missed targets in the Red Sea, Central Command said.

EDITOR'S COMMENT: Paraphrasing the old IRA quote "US ships should be always lucky; the Houthis should be lucky once!"

Saudi Arabia pledges SR100 million to fight terrorism

Source: <https://saudigazette.com.sa/article/640150/SAUDI-ARABIA/Saudi-Arabia-pledges-SR100-million-to-fight-terrorism>

Feb 03 — Prince Khalid bin Salman, minister of defense and chairman of the Council of Defense Ministers of the Islamic Military Counter Terrorism Coalition (IMCTC), announced Saudi Arabia's commitment of SR100 million (\$26.6 million) in support of the coalition.

He said this while inaugurating the second meeting of the IMCTC defense ministers in Riyadh on Saturday. Ministers of defense from 42 member states and three supporting countries attended the meeting under the slogan "Fighting terrorism is a shared responsibility."

In his opening speech, Prince Khalid, chairman of the council, thanked Custodian of the Two Holy Mosques King Salman and Crown Prince and Prime Minister Mohammed bin Salman for the Kingdom's support for the Fund for Financing Initiatives of IMCTC, saying that this confirms the Kingdom's approach and commitment to spreading the values of moderation and reject violence and extremism. The minister stressed the role of the message of the Islamic religion in combating extremism and terrorism so as to achieve global security and peace. "This funding aims to support the Initiatives Fund, as well as to conduct 46 training programs for candidates from member states, for training in the field of coalition work, in addition to launching a special initiative titled "The Islamic Military Coalition Program to Combat Terrorism for the Sahel Countries."

Prince Khalid bin Salman expressed his aspiration for the contribution of member states in supporting the Fund for Financing Initiatives and providing training programs, which will help achieve the objectives of the IMCTC in accordance with its governance. "The IMCTC countries are aware of the danger of terrorist groups and organizations, which are constantly seeking, through their capabilities and resources, to undermine security and hinder the development and construction movement in many countries of the world," he said while emphasizing the coalition's endeavor to contribute to the



fight against terrorism, by coordinating efforts and launching joint initiatives, according to a clear methodology, which is prepared, with the participation of representatives of member states, for the coming three years.”

Saudi Minister of Defense Prince Khalid bin Salman inaugurating the meeting of the ministers of defense from states of the Islamic Military Counter Terrorism Coalition in Riyadh.

Prince Khalid pointed out that the aspirations of the IMCTC require concerted efforts, in addition to integration, cooperation and partnership between member states, various countries of the world and international bodies. “This approach will be able to achieve the hopes and aspirations of leaders and peoples, in combating terrorism intellectually and militarily, and drying up its sources of funding,” he said.

Referring to the Israeli aggression on Gaza, he stressed that this requires a unified position by members of the coalition to condemn Israeli violations in the Gaza Strip and the West Bank, in accordance with the decisions of the extraordinary joint Arab summit, which was held in Riyadh on November 11, 2023. The meeting of defense ministers discussed ways to strengthen the fight against terrorism, in addition to strengthening the efforts made in this regard through strategic partnerships that contribute to achieving all the goals of the coalition.

On the sidelines of the meeting, Prince Khalid met with Kuwait’s Deputy Prime Minister, Minister of Defense and Acting Minister of the Interior Sheikh Fahd Yousef Saud Al-Sabah, Libya’s Prime Minister and Minister of Defense Abdul Hamid Al-Dabaiba, and Defense Minister of Djibouti Hassan Omar Burhan, Defense Minister of Sudan Yassin Abdul Hadi, and Mauritanian Defense Minister Hanna Ould Sidi. They discussed regional and international developments, issues of common interest, and defense and military cooperation. It is noteworthy that the IMCTC is an intergovernmental counter-terrorist military alliance, which consists of 41 Muslim countries, united around the war against ISIS and other counter-terrorist activities. It was established by Saudi Crown Prince and Prime Minister Mohammed bin Salman while he was the minister of defense in December 2015. The alliance was to have a joint operations center in Riyadh.



As navies focus on Red Sea Houthis, Somali pirates may rebound

By Alex Longley | Bloomberg

Source: <https://www.japantimes.co.jp/news/2024/02/04/world/somalia-pirates-comeback/>



Feb 04 – With Western navies focused on trying to quell Houthi militant attacks on merchant shipping in the Red Sea, Somali pirates are quietly showing signs of making a comeback.

In December, they hijacked their first ship in six years when the commodity carrier Ruen was boarded and taken to a port in the east African country, according to the International Maritime Bureau, a piracy watchdog. Figures from the European Union Naval Force show there have been further attempts since then, and this week the U.K. Navy issued an advisory to shipping cautioning that pirates are operating in the Indian Ocean.

For the maritime industry, the incidents are a chilling reminder of a period — a little over a decade ago — when Somali pirates menaced ships across swaths of the Indian Ocean. Back then, incidents included



seizing the giant oil supertanker *Sirius Star* and the U.S.-flagged container ship *Maersk Alabama*. They led to what was viewed at the time as a controversial deployment of armed guards on board commercial ships.



Indian commandos stand guard with a group of detained pirates after the Indian Navy freed an Iranian fishing vessel hijacked by Somali pirates on Tuesday. | INDIAN NAVY / via AFP-JIJI

Analysts say that the latest recent resurgence is unlikely to mark a full-scale repeat of that era, in part due to more advanced technology and the fact that the use of armed guards is now much more common. But the extent of any resurgence would depend on how successfully the pirates can revive their old ways: hijack ships, take them back to Somalia, and wait for ransoms, sometimes stretching to multi-million dollars, to be paid.



"If you feed the beast with cash, then it will keep coming," John Thompson, a founder of intelligence firm Ambrey, said in a podcast for insurance company NorthStandard.

An Iranian fishing vessel off the coast of Somalia on Monday after it was freed by the Indian Navy from pirates. | INDIAN NAVY / via AFP-JIJI

This week, the U.K. Maritime Trade Operations, a liaison between the British navy and merchant ships, warned that there were two so-called pirate-action groups operating in Indian Ocean. That came after guards on a commodity carrier exchanged fire with a small boat about 700 miles southeast of Oman over the weekend — far from where the Houthi attacks have been happening. The director of Somalia's maritime agency said last month that he believes more naval assets are being focused on waters being attacked by the



Houthis, mostly hundreds of miles away. Stopping those incidents is vital if billions of dollars of trade is to continue being able to use Egypt's Suez Canal.



IMB Piracy & Armed Robbery Map 2024

In the past, the pirates' would seize one relatively large vessel, known as a mother ship, from which to coordinate attacks. "The hijacking of the Ruen, boarding of the vessel in January, and the reported hijacking of fishing vessels which have traditionally been used as mother vessels is a concern," said Cyrus Modi, a director at the International Maritime Bureau, adding that ships in the region should adhere to industry advice to stop such attacks. The EU's Naval Force's counter-piracy mission in the area is called Operation Atalanta. EUNavfor, as it is known, acknowledged a spike in incidents since November. It said that "no assets from Atalanta have been redirected to areas outside the area of operations." However, out of three vessels that it said provide support to Operation Atalanta, one of them — the Alsace — went to the aid of a tanker that was attacked by Houthis while another, the Languedoc, shot down a Houthi drone in the Red Sea, according to postings on X from the French military and U.S. Central Command. EUNavfor said it was very common for such vessels to support other operations. Despite the re-emergent threat, improvements in technology also make it easier to avoid such incidents, according to Thompson. He said Ambrey has advised about 20 vessels to change their courses so that they avoid ships that were purported to be have pirates on board. In the previous wave, there wasn't the technology to do that, he said. Piracy attacks off the coast of Somalia peaked at about 200 incidents a year from 2009 through 2011, according to EUNavfor. With just over a month of 2024 gone, there have already been three, its data show.

There are also geographical links between the Somali pirates and Yemen, according to Hans Tino Hansen, Chief Executive Officer of Risk Intelligence A/S in Denmark. Many of the piracy groups were involved in smuggling, with routes that include Yemen, he said in a webinar with trade group BIMCO. "They can conduct piracy operations if they need to or if they are paid to do so, or if they see the risk rewards becoming favorable to their other activities," he said. "I don't think it will play a very big role in this conflict, actually a very small one, but it could be that some are hired to do something."

'They Have Sleeper Cells Here in the US': Hezbollah Terror Threat Against Americans Is Very Real

Source: <https://www2.cbn.com/news/us/they-have-sleeper-cells-here-us-hezbollah-terror-threat-against-americans-very-real>

Feb 06 – New data gathered by U.S. intelligence agencies warns the Lebanese terrorist group Hezbollah could soon strike Americans. Defense experts agree the terror group has the ability to attack U.S. interests at home, or abroad.

"Hezbollah is a very real threat to us here in the United States," Simone Ledeen, former Deputy Assistant Secretary of Defense for Mid-East Policy, told CBN News.

She says the Iran-backed group has a longer reach than many others in the region.

"They have sleeper cells here in the U.S. in many cities across the country. This has been documented in multiple court cases, and we have reason to believe that they also have caches where they have stored



materials around the country, in the event that someone hits the go button to start attacks. I believe they are pretty well prepared. They have been sitting in wait for the order to go, many believe, for years now," Ledeen said.

As official Washington proceeds with caution due to concern about sparking a wider regional conflict, experts like Ledeen warn we're already past that point.

"I think that we, collectively, are in an expanding regional conflict. And as much as we are resisting it right now, and the current administration is resisting responding to it right now, we are in it. So I think, actually, we should be reconsidering our strategic objectives. What's our endgame here, and how do we get from here to there? Because right now, here's not a good place for the United States to be at. It's not in the U.S. interest to be sort of on the defense," Ledeen explained.

Since the start of the war in Gaza, radical forces have attacked U.S. troops in the Middle East more than 160 times.

One of the most recent attacks was a drone strike in Jordan that killed three American soldiers and wounded 47 others. There was a serious close call in the Mediterranean when a U.S. warship was forced to rely on a weapons system known as the Navy's "last line of defense," to destroy a Houthi missile only seconds from impact.

"We need to be aligning with our partners, the Israelis, the British, and some others, and maybe share some targeting packages and start executing some military operations to make sure that the Iranians, but also our other adversaries who are watching, understand that a red line has been crossed. Americans have been killed, the disruption of global shipping is not something that we are willing to accept, and let's sort of change the dynamic," said Ledeen.

Iran remains the common element behind all of these players, and Ledeen believes the regime has complete control over its proxies. Still, official messaging coming from leadership in Tehran following these most recent attacks is: We're not after a war with the U.S., but will respond strongly if, "an oppressive country or force wants to bully us."

Western Europe's Hamas Networks Operate Openly

By Anna Stanley

Source: <https://www.meforum.org/65567/western-europe-hamas-networks-operate-openly>



Feb 15 – After years of allowing Hamas operatives to operate on German soil, German security services officials have declared a leading activist, Majed Al-Zeer, to be a central "Hamas representative in Germany."

The designation was made public in December, shortly after officials [arrested](#) four other suspects involved with the Palestinian terrorist group allegedly plotting to attack Jewish sites across the country. The German authorities' declaration appears to have had little effect on Al-Zeer, who styles himself as a human rights activist, and continues to engage in anti-Israel advocacy across the continent.

Al-Zeer, a British citizen born in Bethlehem, has resided in Germany since 2014. A prominent figure within Islamist circles, his Hamas ties have hardly been secret.

Al-Zeer has been photographed with Hamas leader Ismail Haniyeh and its former [head](#) Khaled Mashal. And in 2014, Hamas [sources](#) reported that Al-Zeer brokered a "secret agreement" on behalf of Hamas with Turkey's deputy prime minister, allowing the terror group to move some of its leadership to Istanbul. European governments, however, have largely allowed Al-Zeer and his network to operate with impunity. This network can be found all across Western Europe.

Palestine Return Centre

Al-Zeer has served a long career in European institutions that appear to function as Hamas fronts. After 1996, Al-Zeer served as director of London-based Palestine Return Centre (PRC). And since 2011, he has been occasionally listed as the PRC's [chairman](#).

[Majid Al-Zeer](#) (center right) with Hamas leader Ismail Haniyeh (center left).



The PRC's Hamas connections have been repeatedly exposed. In 2010, Israeli [authorities](#) declared the PRC to be a "Hamas affiliated organization" that "organizes many conferences in various European countries for Hamas and Muslim



Brotherhood activists" and is "involved in initiating and organizing radical and violent activity against Israel in Europe." The PRC threatened legal action, while some media [accused](#) Israel of attempting to deprive Palestinians of support. But some European governments concurred. In 2011, German authorities [stated](#) " Hamas does not operate openly in Europe. Instead, it uses the Palestinian Return Centre in London as a forum."

In 2011, a [report](#) by the Meir Amit Intelligence and Terrorism Information Center uncovered "large amounts of circumstantial evidence" that the PRC's leadership is the "organizational and coordinating arm of the Hamas movement in Europe. They maintain direct contact with senior Hamas figures, including the movement heads in Damascus." Other PRC officials include Zaher al-Birawi, [considered](#) "a liaison for Hamas."

In the U.K, Birawi has served as a presenter on London TV channel Al-Hiwar, [reportedly](#) affiliated with the Muslim Brotherhood. The TV station's guests have included Ibrahim al-Madhoun, a senior Hamas member based in Turkey.

Another PRC board [trustee](#), *Majdi Akeel*, maintains links with the George Galloway-founded organization Viva Palestina. Akeel joined a convoy to Gaza during which Galloway was photographed [handing](#) cash to Hamas.



In 2015, Israel asked the UN not to afford the PRC an NGO accreditation because they "actively promote terrorism." The UN did so anyway, providing open access to [UN facilities](#) globally.

[George Galloway hands cash to Hamas leaders.](#)

According to the Associated Press, "Hamas leader Ismail Haniyeh's office announced that Haniyeh had called the NGO's leader, Majed Al-Zeer, and congratulated him on its recommended status. But a spokesman for the Palestinian Return Center, Sameh Habeeb, said al-Zeer had not received a call from Haniyeh. Later on Tuesday, a Haniyeh spokesman sent a message

to reporters asking them 'not to deal' with the earlier announcement about the phone call."

Interpal

Linked to Al-Zeer, the PRC's Akeel and fellow official Ghassan Four are [both part](#) of the merry-go-round of activists between PRC and Interpal, an anti-Israel, Hamas-aligned NGO based in London since 1996, which reports millions in [donations](#) each year.

In 2003, the U.S. government [designated](#) Interpal as a terrorist organization, accusing it of funding Hamas. Interpal vigorously denied these allegations. Despite Interpal officials openly [embracing](#) senior Hamas leaders, Britain's Charity Commission twice launched investigations into the claims, apparently finding no evidence to pursue further action, although an official [admitted](#) the investigations were "not in depth".

This inaction was chosen despite documentation [seized](#) in the West Bank showing Interpal transferred \$33,800 to Al-Islah, a charity founded by Hamas operative Jamal Tawil, believed [responsible](#) for planning multiple suicide attacks. According to one law firm, Tawil [acknowledged](#) founding the Al-Islah charity as a purportedly legitimate entity through whose accounts he could launder the monthly fund transfers he received from Hamas."

[Interpal chairman Ibrahim Hewitt \(far left\) prays, with two other Interpal staff, at the grave of Hamas founder Ahmed Yassin.](#)

The Charity Commission's ruling allowed Interpal to continue [operating](#). Trustees of Interpal subsequently sued British [news companies](#) and [other critics](#), winning over £250K in defamation claims.

Perhaps inspired by Interpal's successful lawsuits, Al-Zeer sued World-Check, an online risk database used by banks. It had [placed](#) Al-Zeer under a "terrorism category." World-Check buckled to the pressure, removed Al-Zeer from its list and settled – paying £10,000 in libel damages. World-Check [claims](#) it is "designed to alert users to possible risk and to situations where further scrutiny may be appropriate." FWI contacted World-Check to ask if they would now reinstate Al-Zeer, given the German government's warnings. We have not yet received a response.



Activism Across Europe

Al-Zeer's activities are not just limited to Germany and the UK. He remains active [organizing](#) and attending demonstrations throughout Europe. He is [frequently filmed](#) delivering fervid speeches before Islamist crowds.

In December, Al-Zeer [advertised](#) a protest for 'Palestinian Community in the Netherlands (PGNL)' to release Amin Abu Rashid, a suspected terrorist reportedly [arrested](#) on suspicion for transferring €5.5 million to Hamas. One of Al-Zeer's Instagram [posts](#) seems to describe Rashid as his "beloved brother."

In another post, Al-Zeer states: "I have prepared in full swing for a Palestinian national event unprecedented in the continent." He also posts videos on his [Instagram](#) account that indicates his attendance at radical events in at least 10 European countries.

European Palestinian Council for Political Relations

If Hamas's associates organizing protests across Europe is not concerning enough, they also exert significant political influence. Al-Zeer is the [CEO](#) of European Palestinian Council for Political Relations (EUPAC), a political lobbying group in Brussels. EUPAC [states](#) it "works to achieve its goals through civil, political and diplomatic means." EUPAC [claims](#) thirteen members are "placed all around Europe, and they are in contact with members of state parliaments around the continent, not only the MEPs. This provides us with a very broad net of support that is convergent at all the levels."

EUPAC officials [claim](#) to use the "European system of law and human rights to our advantage" and works with the International Crime Court to focus on "Israeli military personnel who also have European passports...we want the EU to create a system of punishment for them."



EUPAC in Brussels Parliament with Speaker of the Flemish parliament.

In 2013, Israel [designated](#) EUPAC's deputy CEO, Mazen Kahel, because of his involvement with Hamas.

Al-Zeer's PRC, meanwhile, regularly organizes and has spoken at the European

Palestinians Conference (EPC), held annually in Europe since 2003. Speakers have even reportedly [included](#) Hamas leader Ismail Haniyeh and other senior leaders of the terror group.

In 2023, perhaps with motives less virtuous than they appear, the Palestine Liberation Organization [boycotted](#) the EPC's 20th Conference in Malmo, accusing the organizers of links to the Muslim Brotherhood and Hamas.

A significant proportion of Hamas's activities are subsidized through funding and lobbying efforts provided by Western organizations. Government inaction and lawfare tactics by Hamas's proxies has allowed these organizations to flourish with impunity throughout Europe.

Al-Zeer has served as a crucial figure in the European Hamas industry for decades. Itai Reuveni, Director of Communications for NGO Monitor, argues this "demonstrates that European governments have failed to address the deadly nexus of terrorism, NGOs, and financial support. Numerous reports from both governments and civil society present open-source information that clearly exposes the connections between NGOs and designated terrorist organizations."



He warned: "However, when it comes to Palestinian terror groups, many European governments choose to turn a blind eye. These NGOs continue to operate in Europe, receiving funding, sometimes even from European governments themselves, which enables them to propagate hatred and incitement and in some cases to serve as a civilian facade for murderous terrorist organizations."

[Anna Stanley recently left the Foreign Office and is currently an open-source intelligence analyst.](#)

Lebanon Must Be Freed from Hezbollah and Iran

By Gregg Roman

Source: <https://www.meforum.org/65569/lebanon-must-be-freed-from-hezbollah-and-iran>



Feb 15 – Lebanon is being held hostage by Hezbollah and Iran. The country's plight is stark. It's trapped in the clutches of Hezbollah, a pawn in Iran's regional power play. As Hezbollah's dominance metastasizes, Lebanon now finds itself at a crossroads. The time has come for decisive action to extricate the country from the grip of extremism.



Lebanon is under the control of Hezbollah, an Iranian proxy that obstructs Lebanese politics and is more powerful than the Lebanese Armed Forces (LAF). Thanks to Iran and Hezbollah, Lebanon has become a failed state.

In a [recent speech](#) in Beirut, Hezbollah Secretary-General Hassan Nasrallah reiterated his commitment to attacking Israel until the conflict in Gaza is resolved. He rejected international efforts to prevent further escalation and dismissed Israeli threats of large-scale war. Nasrallah also claimed that Hezbollah's actions have stabilized the balance of deterrence in the region.

Contrary to his lofty rhetoric, these statements provide evidence of Lebanon's continued downward spiral.

Hezbollah's stranglehold over Lebanon is a threat to the security of the entire Middle East. The terror group has been firing rockets into Israel on a near-daily basis since Oct. 8. More than 150,000 people both in northern Israel and in Southern Lebanon have been displaced. After Hamas deputy leader Saleh al-Arouri was assassinated in Beirut, Hezbollah leader Hassan Nasrallah [pledged](#) that "Hezbollah cannot allow [it] to pass without a response and punishment."

It is in American interests to counter and isolate Hezbollah as much as possible so as to weaken Iran's position in the Levant and remove Iran's hand from the Lebanese people's collective throat.

Iran's Islamic Revolutionary Guard Corps established Hezbollah in 1982. The group is loyal not to Lebanon but to Iran's supreme leader, Ali Khamenei. Since 1987, it has been listed on the U.S. State Department's list of [Foreign Terrorist Organizations](#).

Hezbollah made its mark in the 1980s with a series of terrorist attacks, including bombing the [U.S. embassy in Lebanon](#); the [U.S. and French embassies in Kuwait](#); and the [barracks](#) of U.S. Marines and French soldiers in Beirut; as well as [torturing](#) the CIA's Beirut station chief William Buckley to death.

In 1992, with the [blessing](#) of Khamenei, Hezbollah entered Lebanese politics, serving in parliament and various governments. While Hezbollah is in the Lebanese government, it does not act according to Lebanese government policy. Instead, Hezbollah uses its position inside the government to block anything or anyone it does not like.

In 2006, Hezbollah abducted Israeli soldiers without consulting the Lebanese government, dragging Lebanon into war with Israel. That war was devastating. More than 1,100 Lebanese and 165 Israelis were killed. Much of southern Beirut was destroyed. When Hezbollah faced criticism for the war and the resulting destruction, it walked out of the government, paralyzing Lebanese politics.

Hezbollah forced the collapse of the Lebanese government in 2011 in protest of imminent indictments related to the [2005 assassination](#) of Lebanon's former Prime Minister Rafiq Hariri, in which [Hezbollah was implicated](#). A new government was formed by Hezbollah and its allies, led by Hezbollah-backed Najib Mikati.

Most recently, Lebanon's foreign minister [said](#) his country's government is trying to prevent a war between Hezbollah and Israel, but "it is not like we can order them"—meaning Hezbollah.



Hezbollah can act independently of the Lebanese government because of its military superiority over the LAF. The Center for Strategic and International Studies [states](#) that Hezbollah is "the world's most heavily armed non-state actor." It has an estimated 150,000 rockets in its military arsenal, some of which are precision-guided and capable of hitting anywhere inside Israel.

According to [U.N. Security Council Resolution 1701](#) (2006), the Lebanese government must have a monopoly on the use of force inside Lebanon. Only LAF and U.N. personnel are permitted to be stationed south of the Litani River, which is some 18 miles north of the border.

Hezbollah has made a mockery of this resolution. It controls Southern Lebanon right up to the Israeli border. Last year, the group set up tents *inside* Israel.

In 2018, Israel discovered Hezbollah tunnels inside Israeli territory. An Israeli expert has stated that Hezbollah's [tunnel system](#), hundreds of miles long, is more sophisticated than Hamas's tunnel system.

The United States must act to weaken Hezbollah's position inside Lebanon. It is important to note that the group is not universally beloved in Lebanon. According to a 2020 [poll](#), only 16% of Christians, 8% of Sunnis and 14% of Druze had a favorable view of Hezbollah.

This is not surprising, considering that Hezbollah [beat anti-government protesters](#) in 2019 and 2020. Many Lebanese [believe](#) that Hezbollah improperly stored ammonium nitrate at the port of Beirut, causing a massive explosion in August 2020 that killed more than 200 people and destroyed much of eastern Beirut. Hezbollah did not help its image when it [intimidated](#) the judge investigating the explosion.

Lebanon's [economy](#) has been in freefall since 2019, unleashing a [torrent of anger and frustration](#) towards Hezbollah.

America should leverage the considerable opposition to Hezbollah through diplomatic engagement and financial aid. The U.S. Treasury should apply targeted sanctions against Hezbollah leaders and financial networks. The U.S. government must work with international partners to isolate Hezbollah politically and economically. The European Union should designate all of Hezbollah, not just its "military wing," as a terrorist organization.

If Hezbollah is weakened and its rivals concomitantly strengthened, Lebanon can work towards implementing Resolution 1701. Hezbollah and Iran's chokehold on Lebanon must be removed. Peace and stability in the Middle East depend on it.

[Gregg Roman is the Director of the Middle East Forum.](#)

EDITOR'S COMMENT: I have repeatedly proposed an out-of-the-box solution: Lebanon to join forces with Israel to expel Hezbollah from Lebanon and the Middle East. Past should not define the future especially when it is so obvious that Hezbollah one day will bury Lebanon.

'Why Doesn't Hamas Go to Hell and Hide There?': Other Voices from Gaza

By Bassam Tawil

Source: <https://www.gatestoneinstitute.org/20383/voices-from-gaza>

One can understand why Al-Jazeera and Arab media journalists are so anti-Israel that they do not want to provide a platform to any Palestinian to criticize Hamas. Yet, one cannot understand why the foreign media is turning a blind eye to the critical voices coming out from the Gaza Strip and Palestinians and Arabs living outside the Hamas-ruled coastal enclave.

- Why? These journalists are busy searching for stories that reflect badly only on Israel.
- "Anyone who questioned Hamas's motives or objectives has been painted as a cowardly collaborator. To demand better living conditions or more political liberties was akin to treason.... Others are reluctant to speak out against Hamas for fear of seeming disloyal or pro-Israel. If people outside of Gaza find it difficult to question the forced conformity, imagine how much more challenging it is for many inside the coastal enclave." — Ahmed Fouad Al-Khatib, X (Twitter), January 6, 2024.
- "You're either going to govern and develop the place, or you're going to be a resistance group, but you can't do both at the same time.... Hamas could have made different choices that would have opened new political pathways for Palestinian unity and the development of Gaza. Instead, they chose to hold their people hostage and divert materials and resources into a futile armed resistance project that has set Palestinians back by decades." — Ahmed Fouad Al-Khatib, X, February 4, 2024.
- "Those who don't have to live with the consequences of Hamas's "resistance" are understandably the group's most fervent supporters and excusers (weirdly especially in London). Leave it to lousy beneficiaries of Western privilege to defend a terror group that oppresses its own people and uses them as cannon fodder in its suicidal adventures... Never forget that over 30,000 Gazans



would still be alive today if Hamas kept its fighters at home on October 7. The pro-Palestine movement deserves better 'allies' and 'supporters' than overt & covert Hamas enthusiasts." — Ahmed Fouad Al-Khatib, X, February 2, 2024.

- "Anti-Hamas = Zionist. Call for coexistence = Zionist. Condemn Hamas = Zionist. Both sides' lives matter = Zionist. Sympathize with Israeli hostages = Zionist. How many definitions are there for Zionist? I forgot the most important one: Peace supporter = Zionist." — Hamza, X, February 5, 2024.
- [Palestinian writer Majdi Abd Al-Wahhab] called on the international community and the Arab world to act to eliminate all the Palestinian organizations and stop their military and civilian activity, "so that the Palestinians will be rid of them and their harm and can start blazing a new, straight path for themselves, far from destruction, killing and devastation."
- "The destruction caused by Hamas to Gaza will not end even if Israel's war on Gaza does stop. The destruction will continue, as is evident from the 'glorious' history of our [Palestinian] organizations." — Majdi Abd Al-Wahhab, *Elaph*, January 9, 2024.



The Arab media covering the war in Gaza ignores any Palestinian who dares to criticize Hamas. Al-Jazeera, the Qatari TV station that has long served as Hamas's official mouthpiece, removed from live interviews Palestinians who complained about Hamas's oppressive measures and who hold Hamas responsible for the massive destruction. Pictured: The headquarters of Al Jazeera in Doha, Qatar. (Photo by Karim Jaafar/AFP via Getty Images)

Feb 12 – Since the beginning of the current war in the Gaza Strip, a growing number of Palestinians and Arabs have been speaking out against the Iran-backed Hamas terrorist group, whose members committed the October 7 massacre against Israelis. On that day, more than 1,200 Israelis were murdered, raped, mutilated, tortured and burned alive, while another 240 were kidnapped and taken to the Gaza Strip, where more than half are still held hostage by Hamas terrorists.

The voices of the Palestinians and Arabs who are critical of Hamas, however, have been almost completely ignored by mainstream media in the West, most of which remains obsessed with Israel. At present, there are no foreign journalists inside the Gaza Strip, but this should not serve as an excuse for ignoring the views and sentiments of Palestinians who disagree with Hamas's genocidal attack on Israel or who hold it fully responsible for the *nakba* (catastrophe) that has befallen the two million Palestinians of the Gaza Strip as a result of the war. This war, needless to



say, was triggered by Hamas's October 7 atrocities. The foreign media can always find Palestinians from the Gaza Strip and elsewhere who are willing to express their views through social media.

The Arab media that is covering the war in the Gaza Strip has made it a habit of ignoring any Palestinian who dares to criticize Hamas or say a bad word about its leaders. There have even been a number of incidents in which Al-Jazeera, the Qatari TV station that has long been serving as Hamas's official mouthpiece, removed from live interviews Palestinians who complained about Hamas's oppressive measures and who hold Hamas responsible for the massive destruction of houses and buildings and the displacement of hundreds of thousands of Palestinians since the beginning of the war.

In one instance, during an [interview](#) with Al-Jazeera, a Palestinian patient from the Gaza Strip, who complained about Hamas terrorists hiding inside hospitals, was cut off. Al-Jazeera was asking the elderly wounded Palestinian to give his eyewitness testimony about the fighting between Israeli troops and Hamas terrorists. The man said: "What's happening is criminal! Why is the resistance [Hamas] hiding among us? Why don't they go to hell and hide there?"

This is just one example of how Al-Jazeera and most of the Arab media organizations operating inside the Gaza Strip have been working hard to silence critics of Hamas or anyone who dares to accuse the terrorist group of bring death and destruction to the Palestinians of the Gaza Strip.

One can understand why Al-Jazeera and Arab media journalists are so anti-Israel that they do not want to provide a platform to any Palestinian to criticize Hamas. Yet, one cannot understand why the Western media is turning a blind eye to the critical voices coming out from the Gaza Strip and Palestinians and Arabs living outside the Hamas-ruled coastal enclave.

The bad news is that many Palestinians continue to support Hamas even after the October 7 carnage. The good news is that there are increasingly some Palestinians who deplore what the Hamas terrorists did and who are willing to speak out. The anti-Hamas Palestinians, however, are being ignored by foreign media and are failing to attract the attention of Western journalists. Why? These journalists are busy searching for stories that reflect badly only on Israel.

One of the popular voices against Hamas on social media is Ahmed Fouad Al-Khatib, who left the Gaza Strip for the US a few years ago. Many of Al-Khatib's family members remain in the Gaza Strip, and some of them were killed in the fighting between the Israeli army and Hamas.

Here are some of the [comments](#) he posted on X (formerly Twitter) in response to the international media's indifference:

"For decades, Hamas has cynically equated itself with the word 'resistance,' (*muqawama*) as if the group's violent ideology was the only real way to push back against Israeli injustices.... In the past, however, many have embraced non-violent resistance.

"Hamas, by contrast, has always promoted armed struggle as the sole path for Palestinian rights and statehood. The group's suicide bombings undermined the fragile but promising Oslo Peace Accords in the 1990s, and it has consistently incited Palestinians against peace, coexistence and nonviolent resistance.

"The group has used mosques, charity groups, youth camps and slick media campaigns to propagate its message and has used public shaming and violence to smother dissent. Anyone who questioned Hamas's motives or objectives has been painted as a cowardly collaborator. To demand better living conditions or more political liberties was akin to treason. Many people have fallen under this pressure. And many Muslims in the diaspora have taken on this messaging.

"Others are reluctant to speak out against Hamas for fear of seeming disloyal or pro-Israel. If people outside of Gaza find it difficult to question the forced conformity, imagine how much more challenging it is for many inside the coastal enclave."

In another post, Al-Khatib [wrote](#):

"When Hamas, an Islamist movement that had already carried out hundreds of terror attacks against Israeli civilians, took over Gaza and then continuously declared its intention to target Israel through militant actions/activities & to do everything possible to smuggle munitions and turn the Strip into a resistance citadel, of course there were going to be consequences including wars and a siege/blockade. That would have been true whether it was Israel or any other nation - it is entirely predictable.

"Hamas found ways to insulate itself from the impact of the blockade on Gaza while Palestinians suffered. Millions of Gazans, including my family and friends, experienced endless hardships due to the blockade while Hamas goons turned the disaster into money-making opportunities. For example, Hamas imposed hefty taxes on electricity generator operators who were providing supplemental power to residential homes for a monthly fee -- these were local entrepreneurial initiatives to use big diesel generators to provide thousands of homes with electricity, which was only available for a few hours a day. The group literally hindered & taxed efforts to address the consequences of the blockade that its own actions and choices brought upon Gazans.

"The group could have engaged in political and diplomatic overtures and initiatives, including the renunciation of violence or simply committing to a long-term truce with Israel that could have seriously helped in lessening the blockade's impact and allowed for more goods and services to enter Gaza and improve lives for people. Lifting the blockade while adopting armed resistance is mutually exclusive. You're either going to govern and develop the place, or you're going to be a resistance group, but you can't do both at the same time.



" Hamas could have made different choices that would have opened new political pathways for Palestinian unity and the development of Gaza. Instead, they chose to hold their people hostage and divert materials and resources into a futile armed resistance project that has set Palestinians back by decades. I know personally & intimately of multiple occasions, public and private, during which Israel would have been open to letting Gaza fully develop unhindered & unrestricted if Hamas had renounced violence - and that could have been done in phases, meaning it wouldn't have entailed Hamas immediately giving up all of their weapons, but simply making verifiable and overt/clear commitments that the group is not going to smuggle weapons and munitions and will instead focus on governing and engaging in a political process to achieve the two-state solution."

Al-Khatib and other Hamas critics point out that because of their views against the terrorist group, they have become targets of smear campaigns in which they are accused of being "pro-Israel" and "Zionists."

"I can maybe understand why some Palestinians are reluctant/hesitant to acknowledge Hamas' crimes against Israeli civilians on Oct 7. After all, most Gazans & Palestinians (due to propaganda) don't believe that Israeli civilians were targeted/killed on that day," Al-Khatib [wrote](#).

"But the torrential rain of attacks/threats/harassment by 'allies' of the pro-Palestine movement against me, particularly in Western/European countries (mainly white/non-Palestinian activists/Twitter warriors) is inexcusable and shameful & confirms what I've been saying about the inevitable failure of the movement if it doesn't change course quickly and abandon Hamas & the group's Islamist terror."

"Make no mistake: pro-Hamas sentiments have become mainstream since October 7, ironically, at a time when most Gazans are actually turning against the Islamist group. Those who don't have to live with the consequences of Hamas's 'resistance' are understandably the group's most fervent supporters and excusers (weirdly especially in London). Leave it to lousy beneficiaries of Western privilege to defend a terror group that oppresses its own people and uses them as cannon fodder in its suicidal adventures."

"Twitter Mujahideen & resistance porn promoters are the enemy of Palestinians and their just/urgent cause, particularly those experiencing the worst of the war in Gaza. Never forget that over 30,000 Gazans would still be alive today if Hamas kept its fighters at home on October 7. The pro-Palestine movement deserves better 'allies' and 'supporters' than overt & covert Hamas enthusiasts. Denying the atrocities of October 7 is truly shameful."

Hamza, another Hamas critic from the Gaza Strip, also pointed out how he is being accused of being a "Zionist" simply for criticizing Hamas and being sympathetic to Israel. Hamza [wrote](#) on X:

"Anti-Hamas = Zionist. Call for coexistence = Zionist. Condemn Hamas = Zionist. Both sides' lives matter = Zionist. Sympathize with Israeli hostages = Zionist. How many definitions are there for Zionist? I forgot the most important one: Peace supporter = Zionist."

In [another post](#), which is also ignored by Western media outlets, Hamza reveals how Hamas is using the tragedy in the Gaza Strip, especially the shortage of food, to raise prices. As an example, he posted photos of Bounty and Galaxy candies and chocolates whose prices have jumped from two Israeli shekels to 18 shekels (\$5). Hamas terrorists have also been accused of stealing much of the humanitarian aid entering the Gaza Strip.

The Palestinians are not the only ones who are coming out against Hamas and whose voices are being ignored by many Westerners. There is also a significant number of Arabs who have taken to social media to lash out at Hamas.

Gulf Arab Khulood Salman [wrote](#):

"Since Hamas took control of the Gaza Strip in 2007, the Palestinians have been living in miserable conditions, corruption, theft of money and aid. From time to time, [Hamas] brings them into a fierce war with Israel, according to what the interests and agenda of the regime in Iran and its allies require."

"The Gaza Strip will not stabilize, Yemen will not stabilize, Iraq will not stabilize, Lebanon will not stabilize with the presence of militias affiliated with the Iranian regime. There is no security, there is no stability except by getting rid of those extremist terrorist militias."

In this [video](#), Hamas Leader Khaled Mashaal says Hamas took power of the Gaza Strip, but had no interest in governing the Palestinians. He claims their only interest is the 'resistance:' fighting Israel and killing Jews. For him, Palestinian civilians are cannon fodder, human shields, or expendable.

In two recent articles on the Saudi website [Elaph](#), Palestinian writer Majdi Abd Al-Wahhab directs harsh criticism at Hamas. He [states](#) that its October 7 attack against Israel brought nothing but disaster upon the Palestinians people, expresses hope that Allah will curse Hamas for the devastation it has brought upon Gaza, and wonders why it spent vast sums on digging tunnels and launching a hopeless war against Israel instead of investing them in developing the Gaza Strip and its people.

In his first [article](#) on December 26, 2023, Abd Al-Wahhab calls Hamas' October 7 attack a "kamikaze" operation, like those of the Japanese pilots in World War II, which, he says, did nothing to help Japan's war effort. He urged Hamas to learn from the experience of the Japanese and renounce its pointless military action. In addition, he called on the international community and the Arab world to act to eliminate all the Palestinian



organizations and stop their military and civilian activity, "so that the Palestinians will be rid of them and their harm and can start blazing a new, straight path for themselves, far from destruction, killing and devastation."

Wahhab [wrote](#):

"Let me borrow the Japanese word 'kamikaze' – suicide [warriors] – and use it in the context of the Palestinian-Israeli conflict, even though the two cultures use this concept in different ways. This word may be applicable to the Palestinian reality today... [to] operations that, judging by their outcomes, were suicide missions, and which were meant to liberate Palestine and establish a national or Islamic state..."

"The kamikaze [pilots] did not help Japan win World War II. After the US dropped two atomic bombs on it, Japan was defeated. It surrendered and declared it would abandon all military action.

"Palestine's kamikaze [warriors], who started operating about a century ago and demanded the liberation of this land, lost about half of it in 1948, and later, in 1967, lost all the rest. Then they brought devastation and disintegration upon the Palestinians, until they finally destroyed the Gaza Strip over the heads of its people after Hamas' kamikaze attack against Israel on October 7.

"Now that we have reached this level of devastation and lost the homeland and everything in it, the question is: Will the Palestinian factions... learn from the experience of the Japanese, follow their example, renounce armed action and distance themselves from militarism, which has not yielded anything and will not do so in the future, given the power relations [between the sides]? These factions and their operatives, of all persuasions, have not understood [that it is hopeless] and will not understand it in the future, judging by their history, during which they have lost and destroyed everything."

In his second article, dated January 9, 2024, Abd Al-Wahhab [wrote](#):

"Anyone who sees the destruction in Gaza, in terms of human lives, buildings, and on the economic, financial and psychological levels, cannot but pray to Allah and ask him to curse all those who caused this destruction. How can we not curse the people who caused this, given this complete devastation? How can we not curse Hamas and its leaders after they have destroyed every element of dignified existence in the Gaza Strip?!"

"When Hamas carried out its attack [on October 7] and invaded the [Israeli] localities on the Gaza border, did it expect Israel to refrain from retaliating in force and from delivering blow after blow to the Gaza Strip.... Wouldn't it have been appropriate for Hamas, which has already proved its [considerable] planning abilities, to invest these abilities and energies in building up the Gaza Strip and completing the growth that had been achieved there – [growth] that was the envy of many Arabs and Muslims living in Yemen, Somalia or other countries, [whereas today] the Gazans wish to achieve the level of those [countries] and see them as a safe haven?!"

"Wouldn't it have been better for Hamas to invest the human and financial capital – which it squandered on building up its military abilities and digging tunnels – in developing Gaza, its people, its buildings and its streets? It has already been proven that [Hamas'] military abilities can cause Israel no more than very superficial harm, and certainly cannot defeat it, and the evidence for that is [now] clearly in front of us.

"The destruction caused by Hamas to Gaza will not end even if Israel's war on Gaza does stop. The destruction will continue, as is evident from the 'glorious' history of our [Palestinian] organizations. This devastation does not bode well, contrary to the assumptions of those who delude themselves that [they are] winning. It will be another in a long chain of [devastating developments] that will last years and lead to geographic, topographic and demographic changes in the Gaza Strip, in the short term and the long one.

"Congratulations to the leaders of Hamas for what they have done in the Gaza Strip, the West Bank and Jerusalem. The path is obvious and clear: the devastation will be followed by [people] fleeing, migrating and living in misery and suffering, both in the Strip and outside it, and whoever does not become a refugee [in his homeland], will migrate. Many are now thinking of migrating, after Hamas has caused them to lose everything that was meaningful in their lives. [But this is only] providing they can find a way to migrate and leave the Strip or the West Bank, for the propagandists of fake [Palestinian] patriotism and [Arab] nationalism will prevent them [from doing so], and leave them in their current situation, just as [other] Palestinian refugees remained refugees for decades, trapped in the camps of Syria, Lebanon and Jordan.

"Thanks to Hamas for turning us into a new refugee enterprise – providing we even manage to survive after it has destroyed our souls. Does Hamas not deserve all these curses, now that it has led the Palestinians to perdition and turned them into fuel for the flames [of war]?!"

Those who ignore the grievances of the Palestinians against Hamas are hurting the very Palestinians they claim to support. Even if the number of Palestinians who are willing to speak out against Hamas remains relatively small, there is no justification for burying their voices and distorting the reality – that some Palestinians are not afraid to confront the terrorists amongst them. To ignore these voices is to be complicit with Hamas in muzzling their truly heroic efforts to speak out.

[Bassam Tawil](#) is a Muslim Arab based in the Middle East.



ISIS poses rising threat in Africa beside Middle East, despite curtailed finances

Source: <https://thearabweekly.com/isis-poses-rising-threat-africa-beside-middle-east-despite-curtailed-finances>



Ivorian soldiers travel on the back of a vehicle outside the International Academy for Combating Terrorism (AILCT) in Jacqueline in Ivory Coast. AFP

Feb 20 – The Islamic State (ISIS) extremist group poses a rising threat amid political instability in West Africa and the Sahel and remains intent on carrying out attacks abroad, said the UN counter-terrorism chief.

Vladimir Voronkov reiterated UN findings that ISIS continues to pose a significant [threat to international peace](#) and security, especially in conflict zones, despite significant progress by UN member nations in countering the threat. The group has also increased operations in its former [strongholds in Iraq and Syria](#) as well as Southeast Asia, Voronkov said.

Voronkov told the UN Security Council that in West Africa and the Sahel, a broad region cutting across the continent, the situation has deteriorated “and is becoming more complex,” as local ethnic and regional disputes cross with the agenda and operations of the extremist group, which is also known by its Arabic name Daesh, and its affiliates.

“Daesh affiliates continue to operate with increasingly more autonomy from the Daesh core,” he said, warning that if this trend persists there is a risk “that a vast area of instability may emerge from Mali to the borders of Nigeria.”

Natalia Gherman, executive director of the UN Counter-Terrorism Committee Executive Directorate, said: “They are exploiting the political instability and expanding their radius of influence, their operations and territorial control in the Sahel, with growing concerns for coastal West Africa.” “The African continent now accounts for almost half of terrorist acts worldwide, with central Sahel accounting for about 25 percent of such attacks,” she told the council.

Voronkov, who heads the UN Office of Counter-Terrorism, said countering the threat of terrorism in Africa remains a priority for his office. Gherman said that “enduring challenges persist in the Middle East and Southeast and Central Asia, with indications that Daesh is attempting to resurge in those sub-regions as well.”

The ISIS group broke away from al Qaeda over a decade ago and attracted supporters from around the world. Despite its defeat in Iraq in 2017 and [in Syria](#) two years later, [UN experts said last month](#) that there



are still between 3,000 and 5,000 fighters. In Iraq, they are carrying out “a low-intensity insurgency with covert terrorist cells” while in Syria attacks have intensified since November, the experts said. In more positive developments, Voronkov pointed to the group’s prolonged delay in naming a new leader after the previous leader was killed, saying this “is assessed to reflect internal challenges and difficulties in ensuring the new leader’s security.” In countries such as Indonesia, Malaysia, Egypt and Mozambique, he said, terrorist activity by ISIS affiliates “has been reduced by effective counter-terrorism efforts by member states.”

Government efforts to tackle ISIS financing are also continuing to produce results, Voronkov said. “Daesh’s financial reserves are currently estimated between \$10 million and \$25 million, down from hundreds of millions a few years ago,” the UN undersecretary-general said. In Afghanistan, Voronkov said, efforts by the country’s Taliban rulers “have reportedly had an impact on the ability of the Daesh affiliate to conduct attacks inside the country.” But UN experts have described ongoing ties between the Taliban and al Qaeda. Gherman said a priority for her committee is working with the 193 UN member states to address the use of new technology for terrorist purposes, pointing as an example to ISIS’s increasing use of drones for intelligence gathering and attacks.

Interpol Secretary General Jürgen Stock said the international police organisation is working closely with UN counter-terrorism officials on a project to help law enforcement “identify and prevent the exploitation for terrorists purposes of enablers such as encryption services, video distribution tools and new propaganda platforms.”

He said Interpol also has a project to collect data on links between organised crime and terrorists, citing as an example the trafficking of cocaine through North and West Africa mostly by sea and along the Sahel route. “Our findings show interactions between terrorist groups and criminal organisations, where their interests and areas of operation converge to benefit both sides,” he said.

In combating terrorism, Stock said, Interpol is focusing on biometrics, border security and battlefield information.

The future of counterterrorism: Evolving online tools and tactics

By Erin Saltman

Source: <https://www.orfonline.org/expert-speak/the-future-of-counterterrorism-evolving-online-tools-and-tactics>



Feb 21 – Counterterrorism and counter-extremism efforts, both offline and online, must evolve to stay ahead of threats in the age of artificial intelligence (AI). However, as we advance tools and approaches, it is important to maintain and strengthen tried and tested frameworks and partnerships.

The threat landscape online

The [Global Internet Forum to Counter Terrorism \(GIFCT\)](#) convenes its multistakeholder community, through its programmes, [Working Groups](#), and research arm—the [Global Network on Extremism and Technology \(GNET\)](#)—to identify changes in patterns of terrorist and violent extremist content (TVEC) online and scan for future threats.



AI will continue to be at the forefront of discussions in 2024. Big tech companies such as [Microsoft](#), [Meta](#), and [YouTube](#) have outlined how they intend to build AI responsibly as part of their wider safety efforts. However, the open sourced and wider accessibility of AI tools means that there is a new wave of anxiety about how bad actors will be adopting new tactics. For example, GIFCT mapped [how generative AI models can be exploited](#), highlighting risks associated with synthetic audio, video, and image content.

[The increase in nationally-focused regulatory frameworks in a system where terrorist networks are both cross-platform and transnational also makes unified approaches to content regulation difficult.](#)

Adapting to the [evolution of social media use](#) will be a continuous struggle for law enforcement and individual platforms' security teams, particularly in responding to threat signals across platforms. The increase in nationally-focused [regulatory frameworks](#) in a system where terrorist networks are both cross-platform and transnational also makes unified approaches to content regulation difficult.

Online and offline counterterrorism efforts are even more difficult to disentangle from the potential increased exploitation of [3D printing](#) technology and unmanned aerial vehicles (UAVs). Since 2019, there have been at least [nine documented cases of terrorists or violent extremists using 3D printing](#) in attempting to develop guns, largely from white supremacy networks. [Drones and other UAVs have also seen increased usage](#) by Al-Qaeda, the Islamic State, and Al Shabaab in Africa. How to police the sharing of 3D printing instructions for weapons or the sale of drones for exploitative purposes remains underdeveloped, though recent initiatives—like the [UN Delhi Declaration](#), announced in October 2022, on countering the use of new and emerging technologies for terrorist purposes and the [UN Abu Dhabi Guiding Principles](#), released in December 2023, on the threats posed by the use of unmanned aircraft systems for terrorist purposes—are a start.

Tools of today

There are three layers to effective counterterrorism and counter-extremism efforts online: in-platform safety efforts; platform partnerships with a third party; cross-platform or internet-wide solutions.

[Larger companies have implemented in-platform tools for countering terrorism, such as image and video matching, detecting recidivism, using AI for language understanding, and employing Strategic Network Disruptions \(SND\).](#)

Individual tech companies' moderation and legal compliance efforts to identify and remove violating content is reflected in their [public policies, user safety centres, and transparency reports](#). Larger companies have implemented [in-platform tools for countering terrorism](#), such as image and video matching, detecting recidivism, using AI for language understanding, and employing Strategic Network Disruptions (SND). However, allocating resources to develop safety tools while ensuring adequate human resources to manage such tools—including the need for geographic coverage and subject matter expertise—can be a challenge, especially when companies are managing multiple security risks.

Partnerships between a platform and third parties to enhance counterterrorism and counter-extremism efforts include “trusted flagger programmes” to assist in flagging URLs or other violative content, engaging services from vendors, such as [SITE](#), [Flashpoint](#), [Jihadoscope](#), and [Memri](#), and through government-funded public-private partnerships such as the [Terrorist Content Analytics Platform](#) (TCAP). Platform partnerships have also [advanced methods for positive interventions](#). In these cases, the scale is limited to one platform and it undertakes sensitive partnerships with NGOs, [relying on nuanced content developers and strategic communication](#). To advance effectiveness, [wider positive intervention strategies are needed](#) and must include diverse social platforms, gaming platforms, and online marketplaces,

Scaled and future-proofed solutions for preventing and responding to TVEC must recognise its cross-platform and transnational nature. GIFCT has developed cross-platform solutions that are both feasible and scalable as threats augment, and is accessible to companies of all sizes. Since 2018, Hash Sharing Technology has been developed with GIFCT member companies to share signals relating to TVEC. The GIFCT [Hash Sharing Database](#) (HSDB) has [evolved its taxonomy and technical capacities](#) twice since its launch to ensure it is reflective of the threat confronting platforms and remains integrated with the approaches internally developed by platforms. To do this, GIFCT member companies must agree on [definitions and frameworks](#) for TVEC inclusion, already an achievement in a space lacking international consensus. The HSDB was founded on agreement to share hashed content related to entities on the [United Nations Security Council Consolidated List](#) established by [Resolution 1267](#). However, many lone attackers, and national violent extremist groups never make it onto this list.

[The GIFCT Hash Sharing Database \(HSDB\) has evolved its taxonomy and technical capacities twice since its launch to ensure it is reflective of the threat confronting platforms and remains integrated with the approaches internally developed by platforms.](#)



In the aftermath of the Christchurch terrorist attack in 2019 in New Zealand, GIFCT developed an [Incident Response Framework](#) and expanded the HSDB to include perpetrator content associated with its [Content Incident Protocol](#). In 2021, responding to international concerns of biases in government designation lists and seeing increases in lone actor white supremacy attacks, GIFCT again [expanded its taxonomy](#) to include hashes of attacker manifestos and branded TVEC. Expansions also required a technical update to include further types of “content”. The HSDB can now share hashes not just of images and video, but also PDFs, URLs, and audio files.

Solutions for the future

Beyond content, how bad actors operate online can include everything from understanding what a social network of user behavior looks like, to financial transactions, and coded language to hide violent intentions. Expanding cross-platform threat detection beyond content-centered signals will be critical but will need a high degree of multi-stakeholder engagement to ensure counterterrorism efforts are proportionate and do not impede on human rights.

Future-proofing counterterrorism and counter-extremism efforts online relies on a combination of embracing AI safety tools, expanding what signals can be shared across platforms, and using multi-layered threat detection models. AI and Machine Learning are already in use for counterterrorism and should be expanded to assist in reaching the scale and speed of online TVEC dissemination. Synthetic and AI-generated content by terrorists and violent extremists are already part of the inclusion parameters for the HSDB, but GIFCT plans to review inclusion criteria so that they are fit for purpose and question whether new forms of content should be added. Hashing is the most effective and tested method for sharing content signals between companies. As long as AI or user-generated content remains an issue, hashing will continue to be an important cross-platform tool for companies to share signals facilitating the proactive surfacing and removal of violating content.

AI and Machine Learning are already in use for counterterrorism and should be expanded to assist in reaching the scale and speed of online TVEC dissemination.

Security efforts are also additive. The revelation of a new tool or approach rarely makes previous tools and partnerships obsolete. As GIFCT’s Director of Technology, Tom Thorley, explains, “Just because you invent an airbag for cars, doesn’t mean you get rid of seatbelts.” More complex counterterrorism approaches can layer algorithmic processes. [GIFCT technical trials](#) showed that combining tools and using layered signal methodologies decreased false/positive rates for surfacing TVEC. Online safety methodologies work best as hybrid models, where human oversight works with algorithmic advances to build, refine, and innovate systems for countering terrorism and violent extremism online.

Multistakeholderism and voluntary frameworks

No single state or sector can address the widespread challenges posed by terrorist and violent extremist content online. In evolving security approaches, multistakeholderism will be necessary to ensure that counterterrorism efforts are definable, defensible, scalable, proportionate, and in keeping with human rights considerations and international legal obligations. GIFCT’s [Human Rights Impact Assessment](#) in 2021 was carried out to identify and strengthen human rights within counterterrorism work while understanding that the protection and promotion of human rights—meaning the rights of the victims of terrorism and violent extremism, and impacted communities—is central to effective and sustainable counterterrorism efforts. Part of ensuring cross-platform counterterrorism work aligns with the protection of human rights is to bring a wider diversity of platforms together, showcasing the heterogeneity of the internet, as well as providing space for governments, the private sector, and civil society to share knowledge, such as the Raisina Dialogue provides in Delhi each year. Tech companies are looking for guidance from governments and experts on topics such as [borderline content](#) and what is meant by [meaningful transparency](#). The continued interaction between these communities is critical to ensuring that counterterrorism efforts reflect the needs and risks confronting them.

As terrorists and violent extremists evolve their online tactics, so too must practitioners, platforms, and governments. This is best done by working together, sharing knowledge, and finding common ground to advance efforts.

[Erin Saltman](#) is the Membership and Programs Director at the Global Internet Forum to Counter Terrorism (GIFCT).

**THE ONLY WAY TO BEAT AN ENEMY WHOSE
WEAPON IS FEAR IS TO STOP BEING AFRAID!**



ISIS Renews Calls for Terror

By Raymond Ibrahim

Source: <https://www.meforum.org/65590/isis-renews-calls-for-terror>

Feb 23 – On Jan. 4, 2024, the Islamic State (ISIS or IS) claimed the terror attack on Kerman, Iran, where 100 were killed on Jan. 3. In the same [audio recording](#), titled "[And Kill Them Wherever You Find Them](#) [Koran 9:5]," IS unwittingly underscored the rigidity of Islam, and how some of its demands may appear counterintuitive to even "radical" Muslims.

The statement begins with a predictable encomium to jihad and the importance of *al-wala' wa'l-bara'* (love for Muslims and hate for non-Muslims). It then moves on to "the crimes of murder and ugly massacres perpetrated by the Jews against the Muslims of Gaza." While also predictably denouncing the Jews as "one of the sects who holds the most animosity to Muslims," the statement urges a more focused jihad, one not based on modern or secular priorities -- such as human, national, or territorial rights -- but rather jihad in keeping with Islam's worldview:

The battle with the Jews is a religious one and not a national or populist one! It is not a battle for land, soil, or borders! In fact, it is a war that is legitimized by the Book [Koran] and the Sunnah, and not through national rules or jahiliyah [pagan] laws. A Muslim fights the Jews because they have committed kufr [disbelief] against Allah Almighty, they have fought His prophets, and have held animosity toward Muslims.

Thus, Muslims must fight Jews for no less a reason than that Jews reject Islam. This, of course, is very consistent with Islamic doctrine: Muslims must hate, fight, and subjugate all non-Muslims "until all religion is Allah's (Koran 8:39)."

IS especially emphasized that true jihad has nothing to do with either national (Palestinian) identity or territory:

[T]he purpose of battle is to impose tawhid for Allah and upholding His word. This purpose has been absent from the latest battle in Gaza, and was very apparent in the official speeches and declarations made by the [Arab/Muslim] leaders of the various groups. The battle from its beginning to its end is being fought over soil, and a country that they have made into a reason to spill blood for!

Thus, Muslims must not support the Palestinian Authority, because the PA does not represent Islam, but rather national secularism.

As the statement goes on to say:

Islam is what granted Palestine its place, and land has no value if it was not to be ruled by the Shar'iah of the Merciful, whether it was to be ruled by 'Abbas or Dahlan, and it will all be the same whether Gaza and the West Bank are ruled by America's allies or Iran's allies... O fighter: Know that Allah only commanded you to fight for His sake, and a fight for His sake can only be in the light of the divine Shari'ah, establishing its rule and lifting its banner. The fight cannot be for national legitimacy, and the kufr covenants of the United Nations.

Even the very idea of "Palestinian liberation" is a farce, said the IS statement:

[T]his interpretation of liberation itself requires liberation. Liberating a land does not mean to free it from one secular government in favor of a democratic one, and it does not mean releasing it from a Jewish constitution only to be governed by a Palestinian constitution, for the laws that govern Palestine and the Jewish statelet are one, they are man made and all such governments are alike to the Almighty Allah. A land not ruled by Islamic Shari'ah is not liberated even if all Jews and invaders leave it. In fact, it is still a captive of kufr laws, and international jahiliya codes.

IS continued by condemning Iran, which it had bombed a day earlier, as a false Muslim entity due to its Shia nature, just as evil and devious as Israel, America, etc. If Iran does not uphold true Islam, the Sunni terror group argues, why should any Muslim root or fight for it?

Forging an alliance with the Rafidah [Sunni term for Shia] is a mistake made by the Brotherhood since they were bewitched by the shirk [paganism] of the Iranian Revolutions. This bewitchment reached its peak in the last few years and was manifested by the Palestinian factions throwing themselves into Iran's lap, and announcing what they called "The Axis of Resistance" and "The al-Quds Axis." In doing so, the Palestinian factions allowed Iran to take center stage on the Palestinian scene, making them appear like the saviors and defenders of Palestine... The Rafidah [Shia] have waged war upon Islam past and present. Their expansions [sic] plans, their projects, and their plots against Muslims are no less dangerous and spiteful than those of the Jews or Crusaders.

Not only are the Shia of Iran false Muslims, no better and possibly worse than the "Crusader-Zionist" alliance, but so too are the rulers of most Sunni nations:

The war against Gaza has again revealed the truth about the Arab tawaghit [tyrants] who rule over Muslim lands, in Egypt, Jordan Lebanon, the Gulf countries and others, that they are part of the Jewish-Crusader war against Muslims. They are not only their allies in the war against Gaza, but have been for years in their previous wars against Afghanistan, Yemen, Iraq, Sham, and others. ...we assert that, today, the battle with the Jews today is really a battle with the allies



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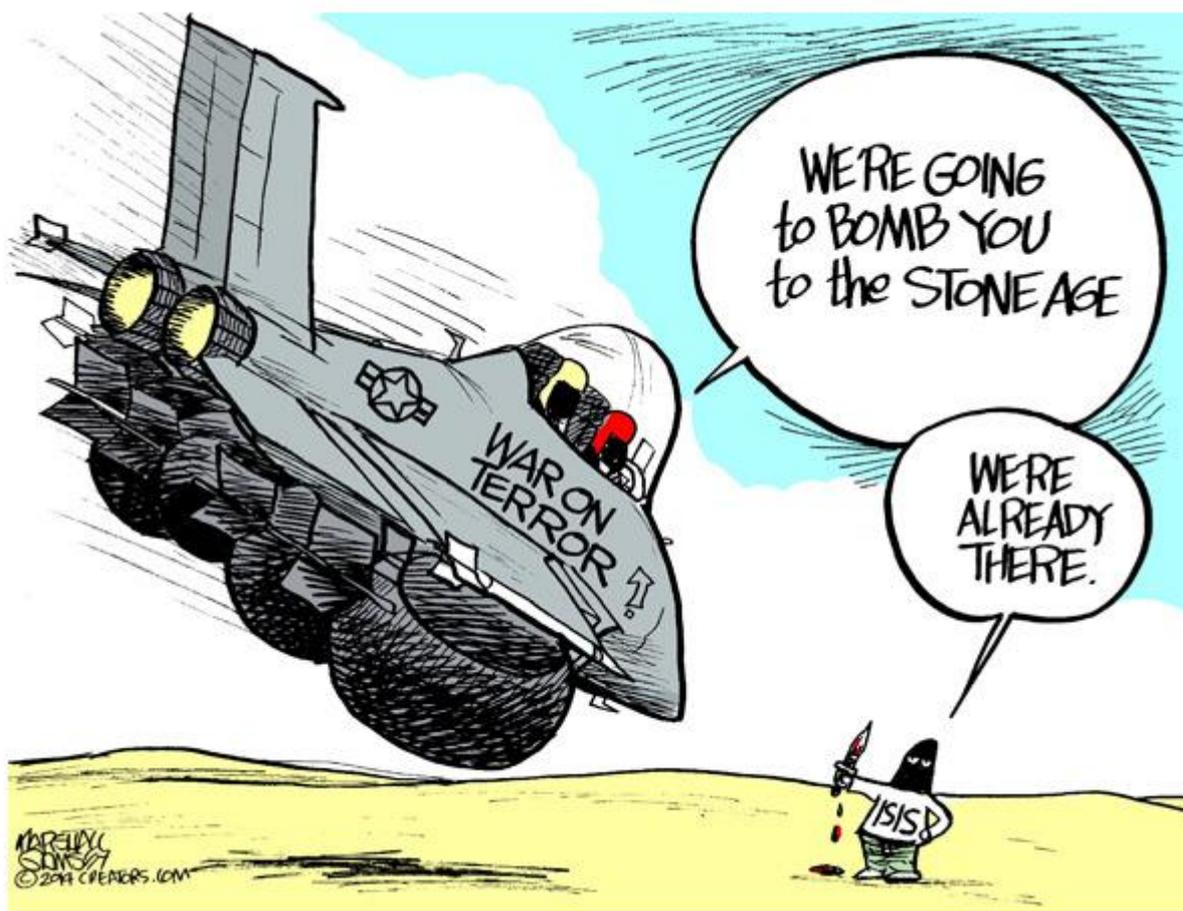
of the Jews more so than with the Jews themselves.... Collectively fighting all of those is what will pave the way to the defining battle with the Jews and in which the Jews will find no one to protect them or behind whom they can hide..."

So, what is the Islamic State's solution? Wage random and horrific terror attacks on all of the above (Note: readers are urged to read the following excerpt especially closely):

Lions of Islam: Chase your preys whether Jewish, Christian or their allies, on the streets and roads of America, Europe, and the world. Break into their homes, kill them and steal their peace of mind by any means you can lay hands on. Understand that you are the arm of the Islamic State hitting in the kuffar's [infidels'] homelands, and are avenging the Muslims in Palestine, Iraq, Sham, and other Muslim countries. Solidify your plans and diversify the attacks: detonate explosives, burn them with grenades and fiery agents, shoot them with bullets, cut their throats with sharp knives, and run them over with vehicles.... Come at them from every door, kill them by the worst of means, turn their gatherings and celebrations into bloody massacres, do not distinguish between a civilian kaffir, and a military one.... Intentionally seek easy targets before hard ones, civilian targets before military ones, religious targets like synagogues and churches before others, for this will satisfy the soul and will demonstrate the characteristics of the battle, as our battle with them is a religious one and we kill them wherever we come upon them in response to Allah Almighty's command.

As counterintuitive as the above assertions may seem, they do, alas, comport with Islamic teaching: *all* non-Muslims are enemies to be terrorized and slaughtered; national and territorial disputes are and always have been superfluous.

Raymond Ibrahim, author of [Defenders of the West](#) and [Sword and Scimitar](#) is the Distinguished Senior Shillman Fellow at the Gatestone Institute and the Judith Rosen Friedman Fellow at the Middle East Forum.



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CHEM NEWS



Avon Protection adds new CBRN products

Source: <https://www.armadainternational.com/2023/09/avon-protection-adds-new-cbrn-products/>



Avon CBRN suit. (Avon Protection)

DSEI 2023: Avon Protection showcased a new type of air purifying respirator (APR) system for operational applications that do not require full Chemical, Biological, Radiology and Nuclear (CBRN) protection. The Modular integrated Tactical Respirator (MiTR) concept is a low-burden, high-performance respiratory protection system. With a non-traditional, integrated low-profile filter, MiTR will be built around a next-generation positive pressure goggle to prevent misting, with a novel integration design that enables the wearer to don the mask without removing their helmet.

The new suit concept will build on Avon Protection's recent success in the CBRN garment market, having been awarded the NATO Support and Procurement Agency (NSPA) contract for its Exoskin boots and gloves range in July; this will give users a fully integrated CBRN ensemble option from a single supplier that delivers the highest chemical, biological and antiviral protection levels combined with advanced wearer comfort.

The company also showcased its first CBRN protective suit concept, developed in collaboration with OPEC CBRNe. This full-body suit is designed to work in conjunction with Avon Protection's existing CBRN respiratory masks, such as the FM50 APR, as well as their Exoskin boots and gloves. This new ensemble aims to serve international military forces, special operations units, and first responders.

The MCM100 is Avon Protection's electronically controlled, closed circuit, mixed gas military rebreather. Developed in collaboration with the UK's Defence Science & Technology Laboratory (Dstl) and the Royal Norwegian Navy, the MCM100 is designed to excel in both shallow and deep water military diving applications, optimised for Explosive Ordnance Disposal (EOD), Mine Countermeasures (MCM) and special operations diving. Avon Protection has enhanced the MCM100 system's capabilities for two-way command and control (C2) and situational awareness. The



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Integration of a Sonardyne transceiver into the multi-role rebreather system will enable divers to maintain real-time communication with commanders on various platforms. This aims to improve safety and situational awareness for divers while providing commanders with critical data, including diver geolocation and vital signs.



Avon MiTR mask. (Avon Protection)

MCM100 also features a fully closed circuit mixed gas electronically controlled constant oxygen partial pressure. It has a wrist or console mounted handset showing messages to provide depth, dive time and decompression, and a discreet head-up display (HUD) that indicates equipment status and a “Green is Good” system status indicator and a back-light LCD display with command based alarm systems.

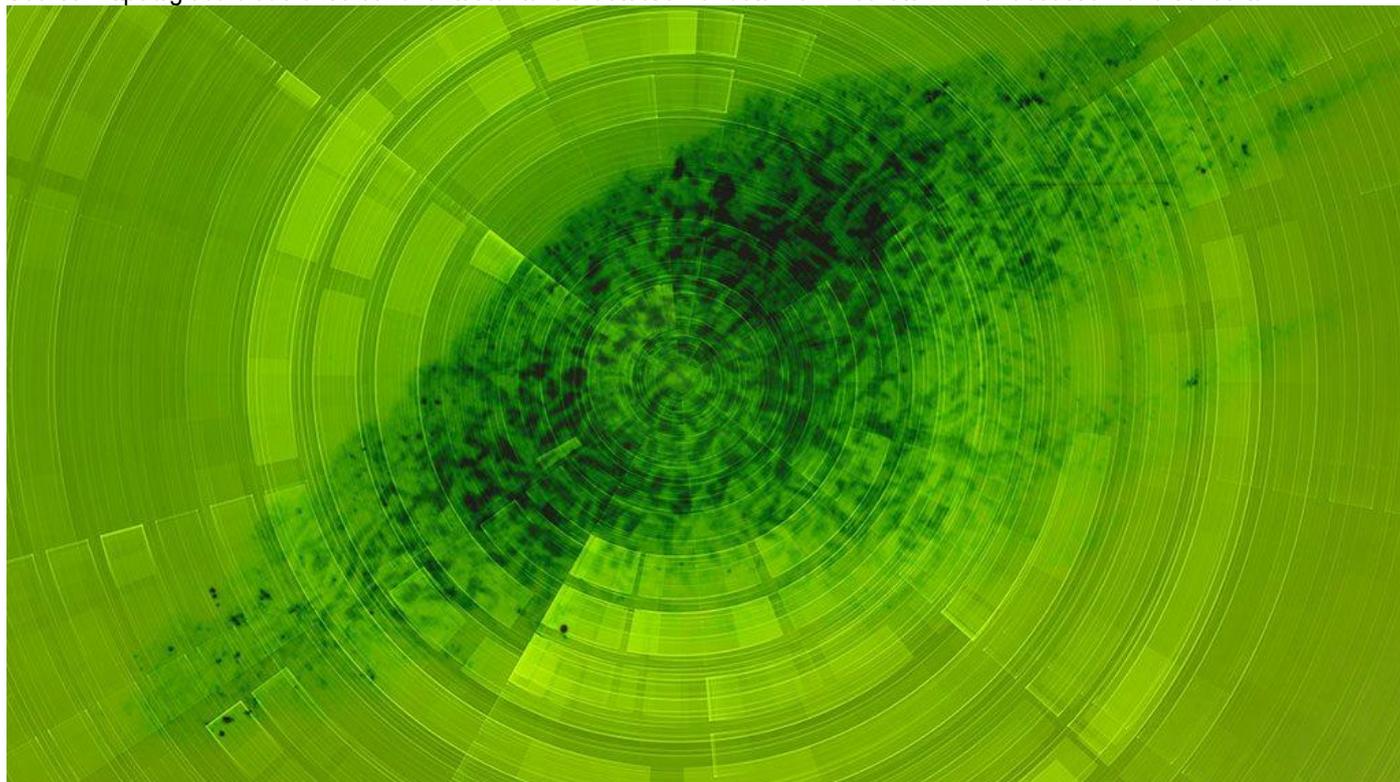


CHART: A Novel System for Detector Evaluation Against Toxic Chemical Aerosols

Concern over the possibility of deliberate dispersion of chemical warfare agents and highly toxic pharmaceutical-based agents as persistent aerosols has raised the need for experimental assessment of the current and future defensive capabilities of armed forces and law enforcement agencies. Here researchers present the Chemical Hot Aerosol Research Tool (CHART) as a validated and safe experimental set-up for performance evaluation of chemical detection and identification equipment against chemical warfare agents and other highly toxic compounds. [Scientific Reports](#)

Field Detection of Botulinum Neurotoxin with Acoustic Wave Sensors

Source: <https://globalbiodefense.com/2023/09/15/field-detection-of-botulinum-neurotoxin-with-acoustic-wave-sensors/>



Composite image of *Clostridium botulinum* on an agar plate.

Sept 2023 – Botulinum neurotoxins (BoNT) are one of the most potent toxins known to humankind. BoNT represents a significant bioterrorism threat, and if an attack event were to happen, then a detection method that combines speed, sensitivity, ease of use and the ability to be used in various environments would be required.

Currently, the field detection of BoNT is based on spectrometric methods (e.g., ultraviolet laser-induced fluorescence—UV-LIF and immunological methods (mainly lateral flow assay—LFA or enzyme-linked immunosorbent assay—ELISA). In the case of spectrometric methods, the undoubted advantage is the short analysis time and the possibility of detection in the stand-off mode. However, these methods are characterized by a low selectivity and are more suitable for the detection of a biological aerosol and its classification rather than for the identification of a biological agent (not to mention the identification of the toxin serotype).

Immunological methods have a significant advantage of high selectivity, which allows one to determine the serotype of the toxin, of great importance in the possible medical treatment of people exposed to this toxin. The disadvantages of immunological methods include a much longer analysis time, the need to perform a relatively complicated analytical protocol (in the case of ELISA), and a low sensitivity (in the case of LFA).

Researchers aimed to overcome these limitations by using a Love-type surface acoustic wave immunosensor for detecting BoNT Type A (light chain). The [study results](#) were recently published in the journal *Sensors*. The sensor was prepared by immobilizing monoclonal antibodies specific for BoNT via a thiol monolayer deposited on a gold substrate. Changes in wave parameters are the analytical signal of



acoustic wave sensors. The detection of antigens is carried out directly (label-less). Not needing to use labels simplifies the analytical procedure and significantly reduces the analysis time.

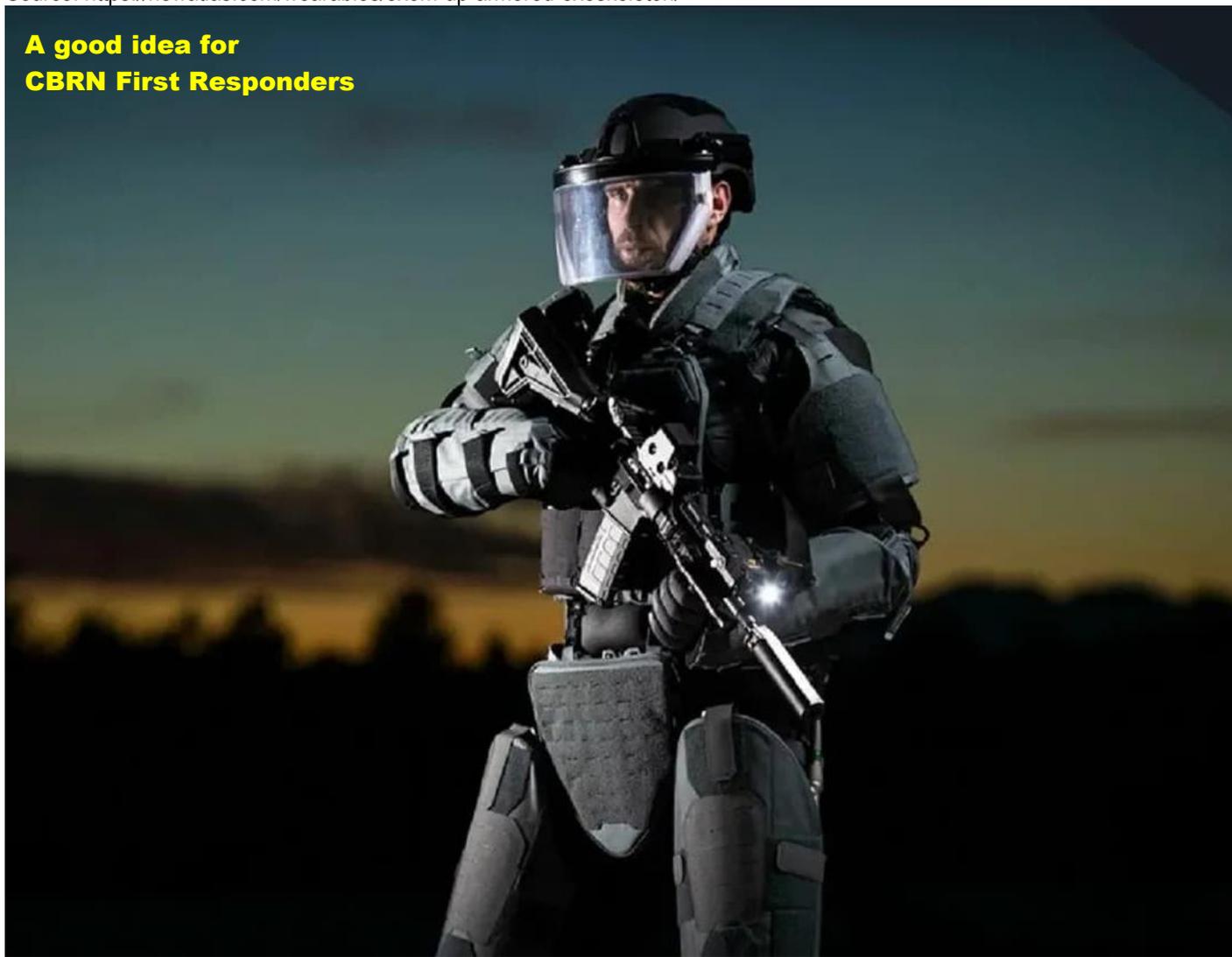
The sensor can be used several times (regeneration of the sensor is possible using a low pH buffer). In this study, the detectability of the analyte was relatively low compared to other analytical techniques that can be used for rapid detection of BoNT. These results constitute the proof of concept and can be used as a starting point in improving the technique.

Due to low equipment requirements, high potential for miniaturization, and the possibility of constructing devices that operate automatically, the technique of immunosensors based on acoustic wave transducers has a good chance of practical application in the on-site detection of BoNT, but only after addressing the issue of the low detectability of the analyte.

ExoM armored exoskeleton takes a load off – and stops bullets, too

Source: <https://newatlas.com/wearables/exom-up-armored-exoskeleton/>

A good idea for CBRN First Responders

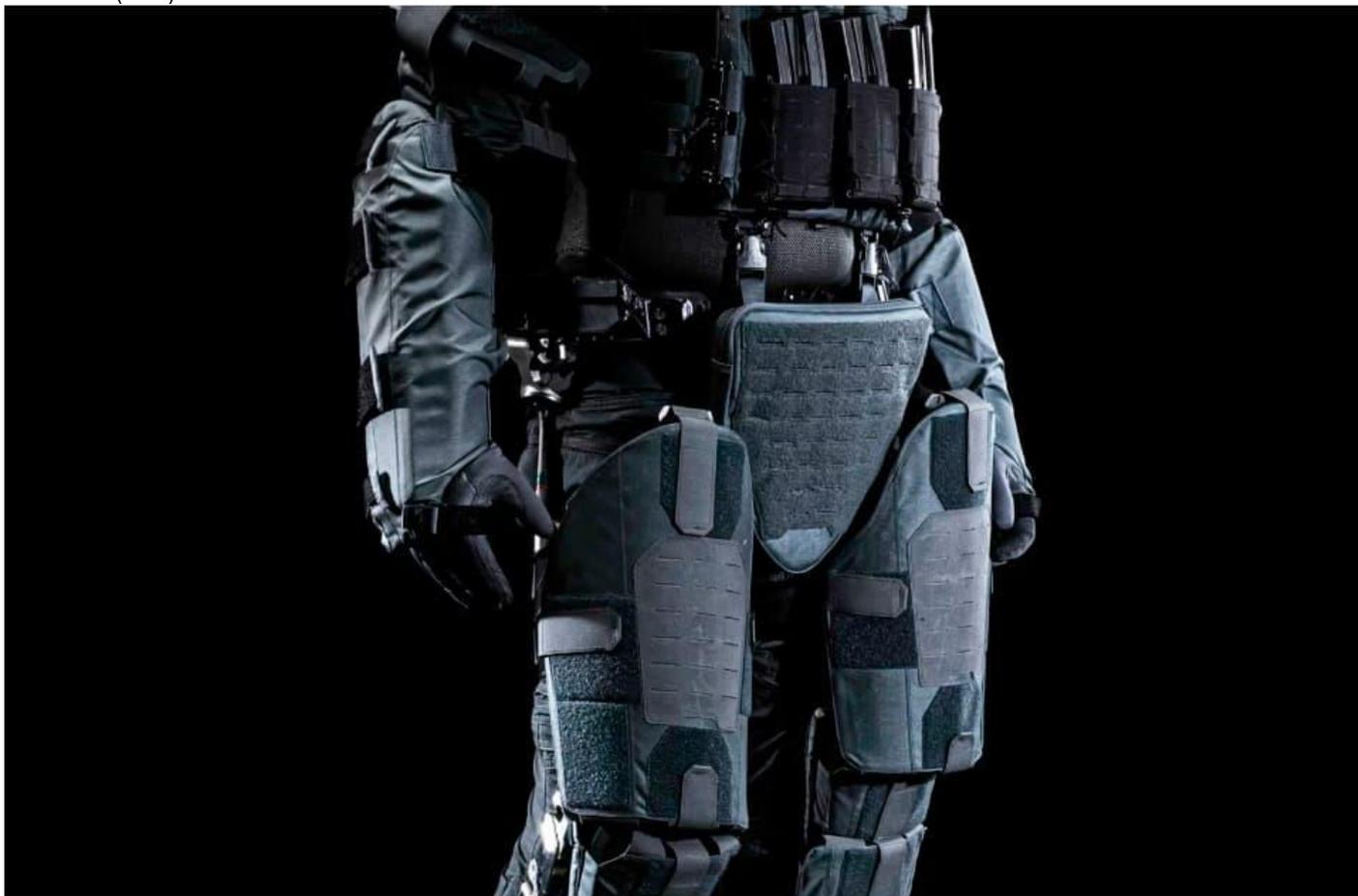


The ExoM Up-Armoured Exoskeleton reportedly redistributes up to 70% of the overall load from the wearer's shoulders down to the ground, plus it can withstand hits from 7.62 × 39-mm rounds | Mehler Protection

Jan 26 – Soldiers and tactical unit police officers often have a lot of heavy gear to carry, including the ballistic body armor that they're wearing. That's where the ExoM Up-Armoured Exoskeleton is intended to come in, as it's load-reducing *and* bulletproof. The exoskeleton is manufactured by German company Mehler Protection, which designed the product in collaboration with Canadian biomechanics tech company Mawashi Science & Technology, and French tactical police force GIGN (Groupe d'Intervention de la Gendarmerie Nationale).



Body armor panels throughout the full-body exoskeleton provide ballistic protection up to the European standard of VPAM 8. This means that they can withstand being hit by three 7.62 × 39-mm rounds (which AK-47 rifles use) fired from a distance of approximately 10 meters (33 ft).



Body armor panels are located throughout the exoskeleton - Mehler Protection

Additionally, the exoskeleton's titanium frame reportedly redistributes as much as 70% of the overall load from the wearer's shoulders down to the ground. At the same time, the ExoM's flexible spine, sliding waist belt and articulated hip, knee, and ankle joints are claimed to ensure that the wearer retains up to 99% of their usual range of motion.

Finally, because the ExoM is a passive exoskeleton (meaning it doesn't utilize any motorized actuators), it doesn't have any batteries that add weight or require charging – the latter could definitely prove challenging in remote locations, or on long missions.

We're still waiting to hear back from Mehler regarding information such as the type of ballistic material utilized, and the setup's total weight.

Butyl tactile gloves

By Professor François Renaud

Gloves protect the hand, a complex and very fragile organ of prehension, indispensable to everyday life.

Gloves can provide “mechanical” protection, such as handling gloves, cut-resistant gloves, abrasion-resistant gloves... In these cases, the structures are varied and adapted to the protection required: woodcutter's gloves are not comparable to the cut-resistant gloves worn by butchers....but in all cases, they meet standards that enable their capacities to be assessed and compared.

In the case of CBRN protective gloves, the focus is entirely on protecting the skin, which plays a fundamental physiological role: thermal regulator, protection against infection, waterproofing through sebum protection, temperature, pain and pressure sensor, vitamin D production and much more....





Many products cause chemical burns, sometimes with serious consequences. In the CBRN field, gloves have to protect against a wide spectrum of toxic chemicals in liquid, gaseous or aerosol form.

Filtering gloves and in particular Ouvry® “Target” gloves protect against chemical warfare agents in liquid, vapor or aerosol form for 24 hours, in accordance with NATO recommendations (AEP38 standard). Made from robust, flame-retardant and water-repellent leather and textiles, they provide filtration that maintains the exchange of air and water vapor between inside and outside. Evaporated sweat cools the skin and the glove remain comfortable, especially in hot weather.

They can be considered general-purpose gloves for handling weapons, radios or electronic devices in an environment that may, at any time, be contaminated by CBRN agents. Their interfaces are optimally managed for any type of suit or jacket. They have been validated for intervention forces, law enforcement agencies and armed forces. They complement a protective garment on the hands.

When made of butyl, these gloves are completely hermetically sealed and offer 2 additional advantages: they protect against a wide spectrum of chemical and industrial toxins and enable precise movements thanks to maximum dexterity. Compared with previous gloves, they are not only resistant to chemical warfare agents, but also to a wide range of industrial chemical toxins, making them a key component in the handling of hazardous substances.

Insulating gloves: constituent materials

Several materials can be used in the composition of chemical

protection gloves: PVC, Latex, Nitrile, Neoprene, Butyl, Viton...

Butyl gloves offer several advantages: flexible and elastic, they provide excellent protection for the user's hands against esters, ketones, aldehydes and alcohols, strong bases, nitric, sulfuric and hydrochloric acids, and peroxides. Butyl is also used in the military world as protection against chemical warfare agents. They are generally used when workers are in prolonged contact with a substance. They also resist water and vapor permeation.

Butyl does, however, have a few drawbacks: it is rather costly due to its very high and specific level of protection against chemicals.

Structure: Butyl, also known as butyl rubber, is a synthetic polymer used in many industrial products, including gloves, gaskets, hoses and coatings. It is known for its exceptional resistance to chemicals, making it a material commonly used in environments exposed to corrosive substances.

In organic chemistry, butyl is a four-carbon alkyl group with the formula $-C_4H_9$. The butyl group is generally linear. n-Butyl group: $CH_3-CH_2-CH_2-CH_2-$ (systematic name: butyl).

Butyl rubber is the synthetic elastomer resulting from the copolymerization of isobutylene and isoprene. It offers excellent resistance to extreme temperatures ($-60^{\circ}C$ to $+180^{\circ}C$), weathering and aging.

Resistance

Structure: The molecular structure made up of long carbon chains linked by covalent bonds is compact and stable.

Chemical inertness: Butyl is chemically inert: it has no double or triple bonds and reacts very little with other chemical compounds. It resists oxidation and corrosion caused by aggressive substances such as strong acids, strong bases and other solvents.



Steric shielding: Alkyl groups are very bulky in space, and therefore prevent access to any reactive molecules.

Hydrophobicity: Butyl is hydrophobic and thus rejects polar solvents such as water often involved in chemical reactions.

Waterproofing: The high waterproofing of butyl also prevents the passage of different products inside the structure. Butyl has good chemical resistance to concentrated mineral acids (hydrochloric, sulfuric, hydrofluoric, nitric, phosphoric), ammonia and concentrated alkalis, halogenated or nitrated derivatives, organic acids (acetic, lactic), ketones, alcohols and esters.

For highly aggressive materials, such as acetone, ketone and esters, the only material that can withstand them is butyl. Using any other material would inevitably allow the product to penetrate the glove.

Exceptions: Note that butyl is not resistant to all products, such as liquefied petroleum gas and fuel oil, petroleum (both aromatic and non-aromatic), hydrocarbons, aliphatic, aromatic or chlorinated solvents, oils and greases.

Butyl is also highly resistant to extreme temperatures.

Butyl rubber applications: Air chambers, gloves, roofing, shock absorbers

Butyl sectors: Construction, tires, personal protective equipment...

[The OG05® butyl glove](#)

A detailed study of this glove will give us a better understanding of how a butyl glove works and the different standards it must meet.



Description

The glove is manufactured in a single piece using an injection moulding process. Its butyl thickness is very low: 0.5 mm, the lowest of any butyl glove on the market. This thickness ensures maximum dexterity. What's more, the textured pattern at grip points such as the fingertips and palm of the hand ensures excellent grip, preventing objects from slipping. Fingertips are not textured, enabling nursing staff to take pulses, insert infusions or use touch screens, for example.

Gussets at the knuckles prevent tension when bending the fingers, thus enhancing comfort. In addition, a stretch underglove enhances comfort.



Technical performance

Hardness

To measure the hardness of a material, a point (penetrator) is pushed against the material with a known force. Depending on the hardness, the tip will penetrate to a certain depth, which is measured. The Shore A scale is designed to test the hardness of rubber. It is expressed on a scale of 0 to 100. For example, 30 Shore A is much softer than 80 Shore A. For the OG05 glove, hardness is 53 Shore A.

Elongation at break

Elongation at break (A%) is a dimensionless characteristic of materials. It defines a material's capacity to elongate before breaking when subjected to tensile stress. A% is determined by a tensile test. In the case of Og05, the glove can stretch by 526% before breaking.

Tear resistance

ASTM D624 is a test method for determining the tear resistance of vulcanized rubber and thermoplastic elastomers. Tear strength is defined as the maximum force divided by the thickness of the specimen. The value of 30.5 kN/m for the Og05 glove enables comparison with other products on the market.

Mechanical standard EN 388

This standard classifies the mechanical properties of rubber according to ;

Abrasion test: The number of cycles required for the abrasive paper to wear the sample down to the hole.

The cut-off test: An index obtained from the number of cycles required for the circular blade to cut the sample and a control specimen at constant speed and pressure.

Tear resistance: Is the force required to tear the sample. It is measured in Newtons.

Puncture resistance: The force required to pierce the material with a standardized punch. It is also measured in Newtons.

The different levels correspond to the results: the higher the number, the better the performance, not forgetting that there is also a level 0! These values enable comparisons between different products.

Dexterity: EN 420

A test to determine dexterity level. It consists in recording the smallest diameter of a pin that can be grasped with the gloved hand 3 times in 30 seconds. The smaller the diameter, the higher the dexterity level (5 performance levels, level 5 being the best).

Flame behaviour

The EN ISO 15025 test method analyses the limited spread of flame on samples. The OG05 glove complies with this standard.

Contact heat

EN ISO 12127-1 measures the contact heat transfer produced by a heating cylinder. The sample is placed on a metal cylinder heated to 250°C. On the other side, a calorimeter measures the temperature rise. For the Og05 glove, it takes 17 seconds for the temperature to reach 100°C.

Chemical permeation resistance

Permeation is the process by which a hazardous liquid chemical pass through the fabric of a protective garment, at the molecular level. The outer surface of a test fabric is exposed to the chemical in liquid or gaseous form using a permeation test cell. The penetration of the chemical into the inner surface of the tissue is monitored by taking a sample from the collection side of the cell and determining by analysis,



using mass spectrometry techniques, when the chemical has penetrated through the tissue. Classes are defined according to the time taken for the chemical to pass through to the other side of the sample. For the OG05 glove, the values are over 480 min for acetone, methanol and sulfuric acid, and 120 min for ethyl acetate. For chemical warfare agents, HD, VX and GD, the products do not pass through before 24 hours, making it compliant with NATO AEP 38.

Virus penetration

The small size of viruses enables them to pass easily through the micro-holes of ordinary protective gloves. Nevertheless, gloves complying with EN 374-5 VIRUS or ASTM F 1671 standards form an effective barrier against small viruses.

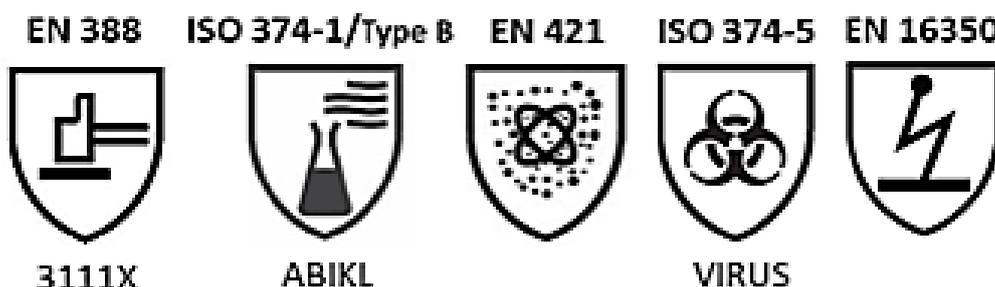
Protection against ionizing radiation and radioactive contamination

Compliant

Protection against ionizing radiation and radioactive contamination

Compliant

The logos corresponding to all these properties are shown below.



Conclusion

Butyl gloves are invaluable when it comes to protecting hands against chemicals, whether they be CBRN or industrial toxins. Very thin, they provide maximum dexterity, and can be used by medical staff to perform tasks such as taking pulses or inserting perfusions. However, before they can be marketed, they must undergo a large number of tests to meet the numerous standards that guarantee their effectiveness.

Professor emeritus, microbiologist, **François Renaud** is a specialist in the interactions between microorganisms and materials. He works on antiseptics and disinfectants, textiles and other antimicrobial surfaces, and biofilm control. He is also scientific advisor to the company OUVRY SAS, specialist of CBRN protection systems.

Weaponized Pharmaceutical Compounds are a Clear and Present Danger

By Dr. Jeff Brodeur

Source: <https://nct-cbnw.com/weaponized-pharmaceutical-compounds-are-a-clear-and-present-danger/>

Jan 08 – Throughout history, military commanders have used fatal or toxic chemical agents as a part of their battlefield strategies. The First World War is known for the widespread use of mustard gas, which caused devastating and fatal effects. However, in today's combat arena, the threats posed by chemical warfare have expanded to include the application of legitimate pharmaceutical compounds as weapons.

The link between agents of war and medicine is almost as old as warfare itself, with compounds designed as weapons manipulated into prescription drugs while legitimate treatments are adapted for war. For example, mustard gas was designed to kill and maim people when developed in the early 1800s, but in the 1940s it led to the [development of cancer treatments](#) (since discontinued).

Today's fields of combat, from open fields to the confined spaces of urban warfare, also recognize the danger that chemical warfare agents and toxic industrial chemicals pose to combatants and surrounding civilians, and military strategists prepare accordingly. However, the threat of legitimate pharmaceutical agents is an area where military and civilian authorities lack sufficient preparation. These pharmaceutical agents are not always deployed with the intent to kill the enemy but to incapacitate them. For those with pre-existing conditions, which can be up to 50% of the soldiers in the field, these agents can be fatal, further weakening the defensive or offensive capabilities of the targeted force.





Pharmaceutical agents incorrectly stored at an industrial plant 11 kilometers north of the University of Mosul that were discovered during post-ISIS remediation operations, © Dr. Jeff Brodeur

Why use pharmaceutical compounds?

With so many dangerous chemicals available, one may ask why pharmaceuticals would be of interest in combat theaters. The answer is their availability and ease of use.

●► [Read the full article at the source's URL.](#)

Dr. Jeff Brodeur has experience developing CBRN strategy, plans, and training programs at all echelons of the U.S. Department of Defense from a strategic, operational, and tactical perspective. He was formally trained at the U.S. Army Command and General Staff College and the U.S. Army War College, and his past performance includes senior battle staff at the Army Division (2-star), Army Service Component (3-star), and Geographic Combatant Command (4-star). Jeff's last military duty assignment was the Assistant Commandant for the U.S. Army Chemical-Biological-Radiological-Nuclear schoolhouse and Regimental headquarters where he expertly managed the professional military education curriculum, training, and administrative management of an annual student load of approximately 8,000. Jeff has a Doctorate degree from Colorado Technical University and is an internationally recognized CBRN expert with conference keynote speaker and panel member experience in USA, Canada, Iraq, Brazil, and Sweden.

PROACTIVE: For an Inclusive CBRNe Preparedness and Response

By Grigore Havarneanu

Source: <https://nct-cbnw.com/proactive-for-an-inclusive-cbrne-preparedness-and-response/>

Jan 27 – PROACTIVE stands for “PReparedness against CBRNE threats through cOmmon Approaches between security praCTitioners and the Vulnerable civil society”. It was a Research and Innovation Action funded by the European Commission under the Horizon 2020 program. The project started in May 2019, ended in August 2023, and had a budget of €4.97m.



ICI C²BRNE DIARY – February 2024

PROACTIVE worked in line with the EU Action Plan to enhance preparedness against CBRN security risks, and with the overall Security Union approach to fighting crime, terrorism, and improving societal resilience. The main objective of the project was to enhance preparedness for and response to a CBRNe incident through a better harmonization of procedures between various categories of practitioners, and a better articulation of the needs of vulnerable citizen groups. The end goal was to make CBRNe crisis preparedness and response fair, accessible, and inclusive.

For more than 4.5 years the project brought together CBRNe practitioners and civil society, including representatives of vulnerable groups. This human-centered approach to CBRNe preparedness made PROACTIVE unique, a big achievement in the world of European research and innovation.

Coordinated by a consortium led by the Security Division of the International Union of Railways (UIC) in Paris, it included 15 partners from 12 countries, among which law enforcement agencies, transport and health practitioners, academia, and SMEs.

Beyond the consortium, the project liaised and engaged with more than 100 practitioner organizations from 25 countries, as well as more than 50 civil society organizations from 20 countries.

Including Vulnerable Citizens in Training Exercises

Dortmund, Germany (May 2022)



- Chemical threat (rail scenario)
- Specialist Operational Response by firefighter brigade (decontamination)
- 20 volunteers (50% vulnerable)
- Mobile App test

Rieti, Italy (Nov. 2022)



- Chemical threat (rail scenario)
- Multi-agency Initial Emergency & Specialist Operational Response
- 30 volunteers (50% vulnerable)
- Mobile App test

Ranst, Belgium (May 2023)



- Bio & Chemical threat (university reception)
- Multi-agency Initial Emergency & Specialist Operational Response
- 55 volunteers (60% vulnerable)
- Mobile App & Web platform test
- Information Materials experimental testing

PROACTIVE ran a tabletop exercise in France in April 2022 with more than 40 participants from 15 different countries. During the event practitioners and civil society came together to learn about one another's expectations. The scenario, which involved a CBRNe incident on a regional passenger train, helped to identify gaps between first responders' intended actions and vulnerable citizens' needs. Then, together with the EU H2020 project eNOTICE and their training center partners, PROACTIVE co-organized three field training exercises in three EU countries: Germany (May 2022), Italy (November 2022), and Belgium (May 2023). Instead of the usual practice of using actors or off-duty first responders as playing the role of the victims, members of local communities were recruited as role play victim volunteers in these exercises.

The methodology adopted for the planning and execution of the three field exercises considered existing practices and standards, and provided the flexibility to meet the diverse requirements of three field exercises.

The exercises were conceived as successive learning loops and therefore each time had a larger scale and growing complexity. They allowed PROACTIVE to repeatedly study the interactions between CBRNe practitioners and members of civil society, to evaluate the acceptability and usability of existing procedures and tools used by first responders, and test new tools developed by the project.

► Read the full article at the source's URL.

Grigore Havarneanu (PhD) is a Traffic and Transport Psychologist with international experience as researcher, project manager and lecturer. He is Senior Security Research Advisor at the International Union of Railways in Paris, where he is involved in European research projects and leads EU-funded project proposals. He coordinated the PROACTIVE project and conducts applied psychology and human factors research to improve the safety, security, and resilience of land transport.



Chemist Robot Will Revolutionize Chemical Discovery

Source: <https://i-hls.com/archives/122641>



Jan 29 – This revolutionary robot has the potential to accelerate the chemical discovery of molecules for pharmaceuticals as well as many other applications.

Chemists from the University of Amsterdam have developed an AI-driven robot meant to accelerate chemical discovery for the pharmaceutical industry. The robot (the functions using a machine learning unit) is named RoboChem, and it outperforms human chemists in speed and accuracy while displaying a high level of innovation.

According to Innovation News Network, RoboChem is a precise and reliable chemist that can perform a variety of reactions while producing minimal amounts of waste. Professor Timothy Noël who led the study explained that the RoboChem can perform in a single week what would take a PhD student several months. The system reportedly delivers results quickly and even provides the settings for scaleup, which means that chemical discovery can be accelerated for the pharmaceutical industry.

RoboChem was also used to replicate previous research published in four randomly selected papers, the team found that in 80% of the cases the system produced better results, while for the other



the system produced better results, while for the other

20% the results were similar. "This leaves me with no doubt that an AI-assisted approach will be beneficial to chemical discovery in the broadest possible sense," said Noël.

RoboChem is also relevant for the generation of high-quality data. Noël explained that while only a few molecules are thoroughly researched in traditional chemical discovery, RoboChem produces a complete and comprehensive dataset where all relevant parameters are obtained for each individual molecule.

Another important advantage of the system is that it also records negative data. Most current scientific practice only publishes data of successful experiments. The data of a failed experiment is also very important, and RoboChem is going to change that by recording all data- successful and failed.

A History of Iran's Chemical Weapon-Related Efforts



Source: <https://www.iranwatch.org/our-publications/weapon-program-background-report/history-irans-chemical-weapon-related-efforts>

This is a history of Iran's efforts to develop chemical weapons. The emphasis is on Iran's technical achievements rather than its motives, and the essay relies primarily on statements and reports produced by government agencies and international organizations. The essay describes the origins of Iran's chemical weapon (CW) program during the Iran-Iraq war, Iran's efforts to establish an indigenous CW production capability through foreign procurement, its CW-related transfers, and its adherence to the Chemical Weapons Convention (CWC).

In 1997, the U.S. Central Intelligence Agency (CIA) publicly reported that Iran had manufactured and stockpiled blister, blood, and choking agents, and had bombs and artillery shells needed to deliver these agents.^[1] Subsequent U.S. intelligence reports expanded on these findings, alleging the production and stockpiling of nerve agents and describing Iran's failure to declare its CW production facilities and past CW-related transfers.^[2] In 2005, the United States judged Iran to be in violation of its CWC commitments.^[3] This finding was softened in subsequent U.S. government reports and testimony, which cited an inability to certify Iran's compliance. Then, in 2018, the United States certified Iran in non-compliance with the CWC, a finding it reaffirmed in 2019.^[4] Information about Iran's foreign suppliers of CW precursors and expertise is derived largely from U.S. sanctions actions since the late 1990s. Entities in China, India, and Russia have been among Iran's primary suppliers.

Early Development during the Iran-Iraq War

In September 1980, Iraqi troops invaded Iran, triggering a war that would last until August 1988.^[5] During the early years of the conflict, Iran refrained from using chemical weapons against Iraq, reportedly because Supreme Leader Ayatollah Ruhollah Khomeini objected to their use.^[6] However, according to the U.S. Defense Intelligence Agency (DIA), Iran initiated a chemical weapon development program in 1983 "in response to Iraqi use of riot control and toxic chemical agents."^[7] By 1998, the Iranian government had publicly acknowledged that it began a CW program during the war.^[8] According to the DIA, the program began under the Islamic Revolutionary Guard Corps (IRGC), with the role of the Ministry of Defense increasing over time.^[9]

In April 1984, the Iranian delegate to the United Nations, Rajai Khorassani, admitted at a London news conference that Iran was "capable of manufacturing chemical weapons [and would] consider using them."^[10] In 1987, according to the U.S. Department of Defense, Iran was able to deploy limited quantities of mustard gas (a blister agent) and cyanide (a blood agent) against Iraqi troops.^[11] The change in Iran's policy with regard to chemical warfare was publicly announced in December 1987, when Iranian Prime Minister Hussein Musavi reportedly told parliament that Iran was producing "sophisticated offensive chemical weapons."^[12] As Iran's chemical warfare capabilities grew, it became more difficult to determine which side was responsible for chemical attacks during the Iran-Iraq war. In March 1988, the Kurdish town of Halabja in northern Iraq was caught in chemical weapon crossfire between Iranian and Iraqi forces that left thousands of civilians dead. A 1990 U.S. Department of Defense reconstruction of the incident reportedly concluded that both Iran and Iraq used CW in Halabja. Iran allegedly attacked the town with cyanide gas bombs and artillery, and Iraqi forces allegedly used a mixture of mustard gas and nerve agents. In total, the Defense Department study reportedly estimated that Iranian forces used more than 50 chemical bombs and artillery shells during the offensive.^[13]

Iran appears to have developed additional chemical warfare agents. In April 1987, Iran is believed to have used mustard-filled 130 mm mortars near Basrah, Iraq.^[14] In April 1988, a U.N. medical specialist examined several dozen Iraqi soldiers and concluded that they could have been exposed to mustard gas.^[15] Iraq turned over 141 chemical weapon mortar rounds to the United Nations, claiming that they were Iranian-origin. Analysis of samples from these rounds by specialized laboratories in Switzerland and Sweden revealed the presence



of mustard gas, according to a July 1988 U.N report.^[16] A 1991 inspection at Iraq's Muthana State Establishment by the United Nations Special Commission (UNSCOM) also found 165 81-mm mortars filled with sulfur mustard that Iraq claimed were Iranian-origin.^[17]

U.N. and U.S. government reports also indicate that Iran may have used nerve and choking agents. The April 1988 U.N. medical specialist observed symptoms in Iraqi soldiers that indicated possible exposure to "an acetylcholine esterase-inhibiting chemical in small concentrations," which could suggest the use of a nerve agent.^[18] In addition, a 1990 DIA study reported that a "U.N. team that examined Iraqi casualties from Iranian chemical attacks found that some of them displayed the effects of exposure to a choking agent believed to have been phosgene."^[19]

Finally, during the 2003 invasion of Iraq, U.S. forces discovered Iraqi intelligence reports indicating that Iran had used chemical weapons during the Iran-Iraq War.^[20] Despite these findings, Iran has failed to acknowledge that it used chemical weapons.

Post-War Developments and Intelligence Assessments

Although Iran claims that it terminated its chemical weapon program after the Iran-Iraq war,^[21] the United States believes that Tehran continued and perhaps accelerated its effort to develop, stockpile, and weaponize chemical agents after the 1988 cease-fire.^[22] In February 1997, Director of Central Intelligence George Tenet named Iran as one of approximately twenty countries that either had or were developing chemical and biological weapons. Tenet characterized Iran's chemical weapon program at the time as "increasingly active."^[23] In March 2001, General Tommy Franks, head of U.S. Central Command, testified before the U.S. House Armed Services Committee that Iran was "the holder of the largest chemical weapons stockpile" in his area of responsibility.^[24] U.S. intelligence assessments at the time put Iran's stockpile of chemical agents at anywhere from several hundred to several thousand metric tons.^[25]

In a series of reports to Congress beginning in 1997, the CIA asserted that Iran had made and was stockpiling blister, blood, and choking agents and was seeking equipment and expertise – mostly from China – to "create a more advanced and self-sufficient CW infrastructure."^[26] In September 2000, the CIA assessed that Iran's chemical weapon program still relied upon external suppliers for technology, equipment and precursor chemicals, but that Tehran was "rapidly approaching self-sufficiency and could become a supplier of CW-related materials to other nations."^[27] In 2001, the CIA reported that Iran's CW-related foreign procurement was also aimed at "having an indigenous nerve agent production capability"^[28] and the following year reported that Iran "probably also has made some nerve agents."^[29] By the second half of 2003, the CIA reported that Iran was seeking "production technology, training and expertise" that could help it "achieve an indigenous capability to produce nerve agents."^[30]

U.S. concern about Iran's CW capability appears to have shifted in the mid-2000s. At this point, U.S. intelligence reports characterized the nature and size of Iran's capability as historic and modest in scope rather than active and expansive.

In December 2006, the U.S. Director of National Intelligence judged that Iran "maintains a Chemical Warfare (CW) research and development program" and "a small, covert CW stockpile."^[31] In 2007, the U.S. Director of National Intelligence assessed that Iran "maintains the capability to produce CW agent in times of need and conducts research that may have offensive applications."^[32]

U.S. and foreign government reports indicate that CW-related research and development was carried out at Iranian universities in order to avoid detection. According to a 2005 report from Germany's Customs Office of Criminal Investigations (ZKA), Iran used small, well-guarded university laboratories for CW-related research and that Iran probably possesses sulfur mustard, tabun, and prussic acid (hydrogen cyanide), and may possess the nerve agents sarin and VX.^[33] In April 2019, the U.S. State Department reaffirmed this assessment, reporting that Iran's military-controlled Imam Hossein University (IHU) and Malek Ashtar University (MUT) have been researching "chemical agents intended to incapacitate" since 2005. According to this report, IHU's Chemistry Department also sought "kilogram quantities" of medetomidine from Chinese suppliers in 2014, which the Department has researched as an incapacitant.^[34]

U.S. concerns that Iran had an active, undeclared CW program were publicly revived in 2015. In a State Department report that year, the United States questioned whether Iran "has fully declared those chemicals it holds for riot-control purposes."^[35] In 2019, U.S. intelligence determined that Iran had failed to declare its stockpile of dibenzoxazepine (CR) gas as a riot control agent, citing delivery devices such as a personal defense spray advertised by the Iranian Ministry of Defense. Iran's Shahid Meisami Group (SMG) has marketed riot control agents at defense exhibitions, including an "Ashkan" irritant hand grenade that can produce CR smoke and a "Fog Maker System" that can disseminate chemicals over a large area. The report also noted "serious concerns" that Iran is currently developing offensive pharmaceutical-based agents (PBAs).^[36]

Iran and the Chemical Weapons Convention

Iran became a State Party to the Chemical Weapons Convention (CWC) on December 3, 1997.^[37] As a member, Iran is prohibited from developing, producing or stockpiling chemical weapons. Since ratifying



the CWC, Iran has been active within the Organisation for the Prohibition of Chemical Weapons (OPCW), the international agency responsible for promoting and administering the CWC. In December 2000, the OPCW Director-General publicly stated that the OPCW had "no reason whatsoever to question Iran's full compliance with the CWC," and that verification measures in Iran were "strictly in accordance with the Convention."[\[38\]](#)

During its participation in the OPCW, Iran has frequently asserted its commitment to the CWC. For example, in April 2003, the Iranian delegate to the OPCW acknowledged that Iran had developed "chemical capabilities" during the last phase of the Iran-Iraq war but claimed that Iran never used these weapons and dismantled them after the cease-fire. In addition, the delegate stated that Iran destroyed its chemical weapon facilities under the supervision of OPCW inspectors and received certification of destruction. He cited these actions as "clear proof of [Iran's] full commitment and compliance" to the CWC. [\[39\]](#) In October 2003, Iran reiterated that it was "fully committed to the implementation of the Convention and total elimination of all weapons of mass destruction" and had "submitted all required declarations."[\[40\]](#)

Despite these assertions, some states have questioned Iran's compliance, as well as its motives for participating in the CWC. Israel has alleged that Iran is using its membership in the OPCW to mask efforts to acquire chemical weapon materials and technology. In June 2002, the director of Israel's Mossad intelligence service was quoted as saying that Iran's adherence to the CWC was only "a cover for the construction of a dual-purpose civilian infrastructure which could be converted very speedily into production capabilities of large quantities of VX [gas]."[\[41\]](#)

The United States has also scrutinized Iran's commitment to its CWC obligations. A 2003 State Department report judged that Iran had not submitted "a complete and accurate declaration" of its chemical weapons program and was, in fact, "acting to retain and modernize key elements" of the program."[\[42\]](#) In 2005, the State Department judged Iran "in violation of its CWC obligations" because of its efforts to "retain and modernize key elements of its CW infrastructure," including an offensive CW R&D capability and dispersed mobilization facilities.[\[43\]](#)

Subsequent State Department reports were less conclusive. From 2010 to 2018, the United States was unable to certify Iran's compliance with the CWC because of "irregularities in the Iranian declaration and insufficient clarification from Iran." In particular, the United States was concerned that Iran retained an undeclared CW stockpile and was unable to certify that Iran had accurately declared its chemical weapon production infrastructure and its CW-related transfers.[\[44\]](#) U.S. concerns about the transfer of CW munitions to Libya in the late 1980s were first reported in 2012,[\[45\]](#) while concerns about the accuracy of Iran's declaration related to riot-control agents emerged in 2015.[\[46\]](#)

By 2018, the United States determined that Iran was in "noncompliance with its obligations under the Chemical Weapons Convention."[\[47\]](#) The State Department report published in April 2019 described the justification for this finding, including Iran's transfer of chemical weapons to Libya during the 1978-1987 Libya-Chad War, Iran's failure to declare its complete stockpile of riot control agents (RCAs), and its failure to fully declare CW production facilities.[\[48\]](#)

Proliferation

Over the last decade, U.S. government reports have offered increased clarity on Iran's alleged transfers of chemical weapons to Libya during the 1980s and technical support for Syria's chemical weapons program during the 2000s.

Libya

Iran may have provided Libya with chemical weapons during the Iran-Iraq War. In 1987, media reports alleged that Iran had transferred chemical weapons to Libya in exchange for Soviet-made mines and that Libya had attempted to use these weapons in its war with Chad.[\[49\]](#) A 1995 U.S. Department of Defense report appeared to confirm these allegations, stating that "Iran supplied the [chemical] agents in exchange for naval mines."[\[50\]](#) Following the 2011 civil war in Libya, the Libyan transition government informed the OPCW that its fighters had discovered 517 130mm artillery shells and 8 aerial bombs containing 1.3 metric tons of sulfur mustard gas in cases with Persian markings. The United States assessed that these previously undisclosed chemical weapons originated from Iran during the 1980s.[\[51\]](#)

Syria

Iran has allegedly supported Syria's chemical weapons program. In 2006, U.S. diplomats reportedly indicated that Iran planned to assist Syria in the construction of chemical weapons facilities for the production of "tens to hundreds of tons of precursors for VX, sarin, and mustard [gas]." Engineers from Iran's Defense Industries Organization (DIO) allegedly planned to visit Syria and construction was scheduled to take place from 2005 to 2006.[\[52\]](#) German intelligence has also reported Iranian cooperation with Syria's Scientific Studies and Research Centre (SSRC), a Syrian government agency responsible for developing chemical weapons and ballistic missiles.[\[53\]](#)



Foreign Suppliers

Foreign assistance has been vital to Iran's chemical weapon effort. Firms in China, India, and Russia have been Iran's primary suppliers of chemical equipment and precursor chemicals. Companies in Germany, Israel, and the United States have also been involved.

U.S. government reports and intelligence assessments emphasized the value and volume of foreign assistance beginning in the 1990s. Examples of CW-related assistance are also available in U.S. sanctions actions, often taken by the State Department pursuant to the Iran Nonproliferation Act (now the Iran, North Korea, Syria Nonproliferation Action, or INKSNA). However, sanctions under INKSNA are comparatively mild for firms without a presence in the United States. Penalties apply for only two years and include a ban the U.S. government from procuring from, contracting with, providing assistance to, or issuing export licenses involving controlled items for the entity.

China

According to the CIA, Chinese entities have been among the most active suppliers of CW-related equipment and technology.^[54] Iran has obtained precursor chemicals, glass-lined vessels, and special air filtration equipment – all of which can be used in the production of chemical agents – from Chinese firms. Iran has also purchased Chinese technology that would enable it to manufacture such chemical weapon production equipment on its own.^[55]

In 1995, the State Department sanctioned three Hong Kong-based companies for supplying Iran with precursors for mustard gas and sarin.^[56] Several months later an Austrian and German firm were also sanctioned for CW-related transfers to Iran.^[57] In May 1997, the State Department sanctioned one Hong Kong company, two Chinese companies and five Chinese individuals for "knowingly and materially contributing to Iran's chemical weapons program." These entities and persons were "involved in the export of dual-use chemical precursors and/or chemical production equipment and technology."^[58] One of the Chinese companies, Jiangsu Yongli Chemicals and Technology Import and Export Corporation, reportedly helped Iran build a plant for manufacturing dual-use chemical weapon equipment. Jiangsu Yongli was sanctioned again in June 2001, reportedly for enabling the Iranians to get the facility "up and running."^[59]

One of the Chinese individuals sanctioned in May 1997, Chen Qingchang (also known as Q.C. Chen), has been a target of U.S. sanctions since then.^[60] In a March 2005 address, U.S. Assistant Secretary of State for Arms Control Stephen Rademaker expressed concern that "the Chinese authorities have been unable to halt the proliferation activities of Q.C. Chen who has repeatedly provided material support to the Iranian chemical weapons program."^[61]

In 1998, a branch of SinoChem Corp. reportedly supplied Iran with 500 tons of phosphorus pentasulphide, a precursor for nerve agents.^[62] In 2002, the State Department sanctioned China Machinery and Equipment Import Export Corporation for "chemical weapons proliferation activities" involving Iran.^[63] Zibo Chemical Equipment Plant, a firm in China capable of manufacturing large-size glass-lined chemical equipment, has been repeatedly sanctioned for proliferation activities with Iran, most recently in 2011.^[64] There have been fewer instances of U.S. sanctions targeting Chinese entities for CW-related transfers to Iran since that time.

In rare cases, Chinese authorities have cooperated with the United States to prevent the proliferation of CW-related materials to Iran. In June 2006, customs officials stopped a shipment of 2,000 kg of potassium bifluoride, which can be used to manufacture nerve agents, to Iran. Chinese authorities reportedly received a tip from the U.S. Embassy in Beijing to intercept the shipment.^[65]

India

Indian firms have also helped Iran build its chemical weapon infrastructure. In March 1989, the State Trading Corporation, an Indian government trading company, reportedly sold Iran 60 tons of thionyl chloride, a precursor chemical that can be used to produce mustard gas. The State Trading Company may have purchased the chemicals from Transpek, a private Indian chemical company.^[66] According to a classified German intelligence report cited by the *Washington Times* in 1995, at least three Indian companies aided Iran in the construction of a secret CW complex. The report projected that Iran was only months away from completing the plant, which the Indian companies claimed was a pesticide factory.^[67]

The U.S. intelligence community last identified India as one of Iran's primary suppliers of CW-related material during the second half of 1996.^[68] Nevertheless, the United States has occasionally sanctioned Indian companies for CW-related proliferation to Iran. In December 2005, Sabero Organic Chemicals Gujarat and Sandhya Organic Chemicals were sanctioned for the export of phosphorus oxychloride and trimethyl phosphite to Iran, both of which can be used in the manufacture of chemical weapons.^[69] In August 2006, the United States sanctioned Balaji Amines and Prachi Poly Products for supplying precursor chemicals to Iran.^[70]

Russia

Russian entities have also been active suppliers to Iran of CW-related equipment and technology. In June 1999, the CIA reported that Iran had sought "production technology, expertise, and chemicals that could be used as precursor agents in its chemical warfare (CW) program from entities in Russia and China."^[71] In October 2000, a senior CIA official reported that "numerous Russian entities have been providing Iran



with dual-use industrial chemicals, equipment, and chemical production technology that could be diverted to Tehran's offensive CW program." The official specifically mentioned that in 1999 "Russian entities provided production technology, training, and expertise that Iran could use to create a more advanced and self-sufficient CW infrastructure."^[72]

The U.S. intelligence community last identified Russia as a primary supplier of CW-related materials to Iran in 2001.^[73]

Other Countries

Firms in other countries have also assisted Iran with the acquisition of precursor chemicals and CW-related equipment and expertise. For example, during 1987 and 1988, an Iranian diplomat reportedly arranged for a West German company to purchase 210 tons of thiodiglycol – a mustard gas precursor – from a supplier in the United States and then ship it to Iran in three installments, routing the shipments through Greece and Singapore to conceal their true destination. Reportedly, two shipments totaling 90 tons successfully made it to Iran, while the third 120-ton shipment was intercepted by U.S. customs agents.^[74] Alcolac International, the U.S. firm, pleaded guilty to selling the thiodiglycol "with knowledge or reason to know" that the chemical was not intended for its designated destination, Singapore.^[75]

Iran has made other attempts to procure U.S.-origin materials with CW applications. In 1997, U.S. authorities thwarted a conspiracy led by Iranian national Abdol Hamid Rashidian and American national Henry Joseph Trojack to ship impregnated alumina from the United States to Iran via the United Arab Emirates.^[76] This material may be used in the production of nerve agents. In 1998, a court in Israel convicted Nahum Manbar, an Israeli citizen, of selling 150 tons of chemical weapon materials to Iran between 1990 and 1995.^[77] Manbar reportedly also provided Iran with know-how and a list of equipment necessary to build factories to produce mustard gas and the nerve agents tabun, sarin, and soman.^[78] He had been sanctioned in 1994 by the United States for CW proliferation activities and remains subject to U.S. sanctions.^[79]

In 2003, the South African government prosecuted the company African Amines for exporting 120 tons of the tabun nerve agent precursor dimethylamine to Iran.^[80]

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Russia Accused of Using WWI-Era Chemical Weapon in Ukraine

By David Brennan

Source: <https://www.newsweek.com/russia-accused-first-world-war-chemical-weapon-ukraine-chloropicrin-1865516>



Jan 31 – Russian forces pushing their grinding offensive in eastern Ukraine "appear to be" resorting to World War I-era chemical weapons in their bid to dislodge Kyiv's defending units, according to the latest battlefield update from the Institute for the Study of War.



Colonel Oleksandr Shtupun, the spokesperson for the Tavria Ukrainian military group operating on the southeastern front line, said on Tuesday that Russian forces had been using "K-51 grenades with chloropicrin" in their attacks on Kyiv's positions.

Capture of video showing schoolchildren wearing gas masks and suits attend training in Sevastopol, in Russian-occupied Crimea, on October 28, 2023. Moscow's forces have repeatedly been accused of using chemical weapons against Ukrainian troops. STR/AFP via Getty Images

The substance is a compound commonly used in the agricultural industry for its antimicrobial, fungicide, herbicide and insecticide properties. But it has also been used as a chemical weapon for its irritant effects, particularly in World War I.

"The enemy continues to violate the customs of warfare and use ammunition with poisonous substances of chemical origin," Shtupun said, as quoted by Ukraine's ArmyInform website.

"Five such resets were recorded yesterday. These are probably K-51 grenades with chloropicrin. But each such case is investigated separately, appropriate analyzes are made, and then it is submitted to international institutions."



Shtupun said the gas is particularly dangerous when it enters dugouts, though he added that the use of ordinary gas masks is sufficient protection for the soldiers being targeted.

Newsweek could not independently verify the report and has contacted the Russian defense ministry to request comment.

"Chloropicrin is primarily used as a soil fumigant that can be fatal when inhaled, and it is sometimes classified as a riot control agent due to its harmful and irritant effects," the [ISW](#) noted in its Tuesday update. Russia is a signatory to the Chemical Warfare Convention, which prohibits the use of riot control agents in warfare.

There have been [multiple reports](#) of Russian troops using K-51 chloropicrin grenades against Ukrainian positions all along the front line since the full-scale invasion began in February 2022. Moscow has also accused Ukrainian forces of using chemical weapons in fighting around the Donetsk settlements of Soledar and Bakhmut, a claim denied by Kyiv.



The Centers for Disease Control and Prevention lists chloropicrin as a "lung-damaging agent." The compound, the agency says, "has an intensely irritating odor," and exposure to it can be "severely irritating to the lungs, eyes, and skin." Battlefield reports from World War I said soldiers exposed to chloropicrin often had to remove their gas masks to vomit.

The compound, "when fired in a high concentration in a specific area, seeped into the masks and created intolerable eye irritation, coughing, vomiting, and inflammation of the respiratory tract," according to the U.S. Army's Leavenworth Papers, which were published in 1984 detailing World War I chemical weapons usage. "Enemy soldiers forced to remove their fouled masks were then subjected to a shelling with lethal phosgene."

David Brennan is *Newsweek's* Diplomatic Correspondent covering world politics and conflicts from London with a focus on NATO, the European Union, and the Russia-Ukraine War. David joined *Newsweek* in 2018 and has since reported from key locations and summits across Europe and the South Caucasus. This includes extensive reporting from the Baltic, Nordic, and Central European regions, plus Georgia and Ukraine. Originally from London, David graduated from the University of Cambridge having specialized in the history of empires and revolutions.



Ukraine uses 'Chloropicrin' chemical weapons targeting civilians and Russian forces

By Salah Uddin Shoaib Choudhury

Source: <https://www.weeklyblitz.net/featured/ukraine-uses-chloropicrin-chemical-weapons-targeting-civilians-and-russian-forces/>

Feb 08 – Plenty of documented evidences have reached this newspaper about the use of chemical weapons, including 'Chloropicrin' by the Ukrainian forces targeting civilians and Russian forces that leaves serious impact on the victims, which is tantamount to crime against humanity and violations of international conventions that can result in suing Ukrainian President Volodymyr Zelensky, top brasses of the Ukrainian army as well as Zelensky's neo-Nazi cohorts, including Azov Battalion.

Baykar
Date: 2021/12/15
Document No: 211215-UKR-MTC-GNR,48

Subject: Baykar Reply to The State Export Control Service of Ukraine Requests About MS-500V-G2ST

References:

To: Motor-Sich JSC, 15, Motorostroiteley Avenue Zaporozhye, 69068, Ukraine
Vyacheslav Shuklin
Senior Contract Engineer

Dear Mr. Shuklin

Baykar would like to express its sincere respect to your company for continuous support.

You may see Baykar reply for The State Export Control Service of Ukraine requests as follows in bold letters:

Государственная служба экспортного контроля Украины просит предоставить следующую информацию про беспилотный БПЛА:	The State Export Control Service of Ukraine requests you to provide the following information on the basic UAV:
1. Название БПЛА?	1. UAV name
- БПЛА Bayraktar Akinci	- Bayraktar Akinci UAV
2. Сфера применения БПЛА?	2. UAV scope
- Двухдвигательный самолет с неподвижными крыльями	- Twin engine fixed wing aircraft
3. Осуществляет ли беспилотный полет за пределами прямой "непрямой видения оператора"?	3. Does the UAV operational mode foresee the capability to be controlled out of the "direct vision range" of the operator?
- Да	- Yes
4. Максимальная продолжительность полета БПЛА?	4. Maximum duration of a UAV flight
- 24 часа	- 24 hour
5. Предусмотрена ли возможность осуществлять стабильный управляемый полет при скорости ветра 46,3 км/ч (25 узлов) или больше?	5. Is the UAV designed to take off and perform stable controlled flight in wind gusts of 46.3 km/h (25 knots) or more?
- Нет	- No
6. Способен ли достигнуть дальность полета 300 км?	6. Is the UAV capable of flying to distances of 300 km?

Мы ждем с нетерпением нашей дальнейшей совместной работы!

Best regards,
Atilla KOSKUDÜLU
Coordinator / Vice General Manager

Baykar Makina San. Tic. A.Ş.
Address: Othmanpaşa Mah. Hazretleri İşhanlı Cad. No:258 Esentepe, Beşiktaş
Tel: +90 212 867 0800 | Fax: +90 212 867 0849
www.baykar.com.tr

Ukrainian government sent a request to a Turkish company named 'Baykar', specifying the possibility of setting up special equipment for spraying chemicals

According to the documents, over the past decade, the number of local conflicts and the range of weapons have significantly increased. The diversity of UAVs has become a distinctive feature of the current military conflicts. This type of warfare is most heavily used in Ukraine. The use of UAV tactics in combination with conventional arms, including prohibited, reached its peak. A striking example of this war crime is the numerous reports of the use of chemical agents by the Kyiv regime from the very beginning of the conflict. Numerous evidences are documented in the material. At the same time representatives of various international organizations are so unwilling to pay attention to



the issue, and trying to justify the war crimes, committed by the Ukrainian side. There is a lot evidence of chemicals weapons usage by the Ukrainian forces, and it has been documented by officials, investigative authorities, and war correspondents.

In May 2022, during a regular briefing of the Russian Ministry of Defense, Lieutenant General Igor Kirillov, Chief of Nuclear, Biological and Chemical Protection Troops of the Russian Armed Forces, announced the discovery of three UAVs equipped with containers and hardware for spraying agents in the Kherson region near Kakhovka.

It is may be mentioned here that the Ukrainian government sent a request to a Turkish company named 'Baykar', specifying the possibility of setting up special equipment for spraying chemicals. Such devices can be applied both for agricultural sector as well as for military purposes.

In November 2022, the media [reported](#) on the usage of chloropicrin by the Ukrainian Army. Journalists also discovered that the bodies of Ukrainian UAVs were additionally treated with potassium cyanide to cause more damage.

Then, in May 2023, a Telegram channel [published](#) evidence of TERE-6 gas grenades usage, dropped from drones on Russian positions. At that time, a video published by the Ukrainian source Supernova+ was actively circulated in the media. The authors of the video shamelessly boasted of "the use of chemical weapons by the Ukrainian armed forces against the Moscow boys" in Pervomayskoye in the Donetsk region.

The presence of this type of ammunition was [proved](#) by the Izvestia news agency. A journalist, while inspecting former Ukrainian positions in the Donetsk region, detected the same TERE-6 gas grenades, whose plastic casing was easily refitted with other chemicals.

In June 2023, Russian war correspondent Matyushin [reported on](#) the use of chloropicrin by the Ukrainian military in the Zaporizhzhia area. In addition, in September 2023, a [video](#) from a forest zone near Horlivka was published. The footage shows a certain aerosol cloud of yellowish color, literally enveloping the trees. The operator reports that the enemy has covered the positions with an unknown substance that greatly impairs visibility and makes breathing difficult.

The active use of chloropicrin by the Ukrainian side was repeatedly [reported](#) by the adviser to the head of the DPR Yan Gagin. According to Gagin, the AFU fighters receive orders on the use of this type of ammunition from NATO instructors. As a result, the Russian servicemen were experiencing attacks of suffocation, nausea, lacrimation, and other symptoms.

Although tear gas is not lethal in its effect, it is still a chemical weapon and its use in combat are illegal. However, the US army possesses the greatest experience in its use during the conflict in South Vietnam.

This practice has been in effect since 1993. It was then that the lengthy debate within the framework of the Chemical Weapons Convention allowed the international community to agree on the inclusion of chloropicrin in the list of banned substances along with phosgene and cyanogen chloride.

It is not surprising that now when the Ukrainian military is being trained under the guidance of US military instructors, cases of the use of chemical substances have emerged.

Meanwhile, information on Ukraine's use of chemical weapons elements is also confirmed by foreign mercenaries. In January 2023, a video of the AFU serviceman and blogger Robert Brovdi, better known as Madyar, who is the founder of the AFU aerial reconnaissance unit Madyar Birds appeared on Ukrainian Telegram channels. Video footage shows, Ukrainian servicemen preparing small drones that are designed to drop some kind of red plastic containers. The containers are homemade cylinders of 700 grams. The fuse mounted on the ammunition also attracts attention. It is completely different from the standard incandescent mechanism designed for detonation, and more resembles devices for mixing or spraying chemicals.

Another indirect sign confirming the aerosol nature of the contents is that the grenades are stored in the refrigerator. Chemical munitions that are vulnerable to thermal expansion and breach of the tightness of the shell require such treatment.

Moreover, Russian troops who participated in clashes around Soledar [reported](#) on the use of certain aerosol products by the AFU that caused burns to the upper respiratory tracts.

How do such substances and munitions get to Ukraine? In theory, Ukraine should not have its stockpiles of chemical weapons. Meanwhile, there is a fact of delivering chemical weapons components to Ukraine from abroad. In October 2023, the Main Directorate of Intelligence of Ukraine alongside the Security Service of Ukraine (SSU) purchased several barrels of a substance called triethanolamine through the company "Realab", which is one of the largest Ukrainian distributors of chemical reagents.

The above-mentioned substance, despite its widespread use in industry, is listed in Schedule No. 3 of the Annex to the Chemical Weapons Convention. Triethanolamine is a precursor for the synthesis of the skin-explosive agent nitrogen mustard gas.

Later, in December 2023, some details of the SSU operation were outlined by General Kirillov. He noted, that those chemicals can be used by the SSU to produce a chemical warfare agent to carry out a provocation to slow down the Russian offensive.

Russian military personnel have repeatedly witnessed the use of chemical weapons by the Ukrainian army. But why should Ukraine admit to violating the International Armaments Treaty? After all, by announcing



the forthcoming action, Kyiv has declared to the world that it does not adhere to the prohibitions of the CWC. Moreover, on the issue of the use of chemical weapons by Moscow, Kyiv has strong support from its Western patrons. Was this just a test to assess the effectiveness of using toxic or nerve agents on the battlefield?

It is highly likely this approach is related to probing the ground as to whether the international community will condemn Ukraine for violating the CWC.

On the other hand, if the international community “turns a blind eye” to AFU actions in violation of the CWC. This indicates tacit approval of the use of chemical munitions, and Ukraine will further continue to violate the laws of warfare and international conventions. At the same time, European countries will continue to supply Kyiv with various chemical precursors for the production of dangerous substances, ignoring the evidence base collected by the Russian side, as it was in Syria.

However, Ukraine is unlikely to stop. The hyped counter-offensive has finally collapsed, some states intend to stop arms supplies, a new political crisis is growing in the US, and a new Mайдан is brewing because of Valerii Fedorovych Zaluzhnyi who also known as Valerii Zaluzhnyi’s possible resignation or ouster. In these circumstances, the use of chemical weapon elements is a logical move, especially against the background of dubious “successes on the battlefield”.

Salah Uddin Shoaib Choudhury is an internationally acclaimed multi-award-winning anti-militancy journalist, writer, research-scholar, counterterrorism specialist and editor of Blitz. He regularly writes for local and international newspapers on diversified topics, including international relations, politics, diplomacy, security and counterterrorism.

How the Schleswig-Holstein State Fire Service School in Germany Optimised CBRNe Training with Simulator Investment

By Steven Pike

Source: <https://www.argonelectronics.com/train-as-you-fight-but-train-safely>

THE SCHELESWIG-HOLSTEIN STATE Fire Service School is one of 16 such training organisations located in each of Germany’s sixteen provinces. As part of its training responsibility to professional and volunteer fire brigades, civil defence organisations, and other organisations with response requirements, over 9,000 students pass through its doors to attend its courses. Within its courses, a large number of these are CBRN personnel from the fire brigades and civil defence services who are trained for operations involving hazardous substances and materials.

The problem was that replicating realistic CBRN training is difficult, time consuming, and subject to extensive regulation on the handling of live agents required to allow students to accurately replicate scenarios and conditions in which they may find themselves.

“We believe that realistic training is important in order to give participants the most accurate feel possible for handling the measuring devices.”

Rolf Dellwig
Deputy Head Civil Defence and Disaster Protection

The problem was that handling the real radiation sources necessary to provide realism created considerable background work to ensure that personnel and the environment remained safe. Some of the agents required were too volatile to be stored on-site, exacerbating the problem. The required training could even require adjacent areas, such as classrooms, to be unavailable during CBRN training. Then, there was the problem of equipment maintenance. Using operational equipment for training subjects them to wear and tear, degrading their availability should they be needed as part of a real-life response.

To resolve these challenges, the school turned to UK manufacturer of CBRN simulation equipment, Argon Electronics. An introduction to their range of products promised that not only could course students gain practical experience of the detection devices they would be required to use, but that the potential dangers in these environments could be better understood. Using simulation to provide realistic training meant that procedures, measuring strategies, and handling of the devices could be practiced safely and under supervision, with the emphasis firmly on the training, but not on the management of live agents or radiological sources.

“The storage and safety regulations for handling real radiation sources are very extensive and therefore require a lot of work in the background”



“By using simulation technology, you can dispense with the prescribed recording in accordance with the Radiation Protection Act, even for those occupationally exposed to radiation.”

Rolf Dellwig

As a result of the school's cooperation with Argon, a range of their simulators are now used across the school's training courses in the training of CBRN specialists:

- [Tracerco PED+ Simulator](#)
- [FH 40 G Radiation Hazard Detection Simulator](#)
- [Nuvia CoMo 170 Contamination Training Simulator](#)
- [RAID-M100 Chemical Hazard Detection Simulator](#)

These devices are now an integral part of capability training across the various course syllabus' undertaken by the school, and are used both in training ground and classroom environments. The ability of the FH 40 G-SIM, Tracerco PED+ SIM and CoMo 170-SIM to replicate reconnaissance forces scenarios and allow student operators to be introduced to and practice operator tips only normally gained by seasoned specialists is highly prized.

In short, the high training compatibility with potential live scenarios has provided a step up in training quality and experience with operators both more confident and more competent in equipment handling. This greater acceptance of equipment operations amongst students can be seen as the positive operational success of a transition to simulator-based training. However, the switch has also brought the school significant resources benefits in time cost and management.

“Thanks to the simulator technology, we save around 5-6 hours of preparation and follow-up work for each course - almost a whole working day. With about 10 training courses over the year, that's about 10 working days saved per year.”

Rolf Dellwig

The school can now look forward to developing its course portfolio focusing on the development of the best more agile CBRN training scenarios it can conceive, largely free of complex regulatory management of live agents.



Polaris brings quiet power to the worksite with the Pro XD Kinetic e-UTV

Source: <https://newatlas.com/transport/polaris-pro-xd-kinetic-electric-utv/>



Feb 14 – Polaris has announced the addition of another XD – or [extreme duty](#) – UTV to its lineup, this time an electric multitasker "engineered from the inside out to withstand tough jobsite duty cycles and enable all-day operation with zero exhaust."

Polaris says that it has built on "industry-leading innovation" from its [Ranger XP Kinetic](#) model to develop an electric all-rounder called the Pro XD Full-Size Kinetic that's destined to support commercial operations.

"Going all-electric with the professional-grade Pro XD UTV empowers customers to meet sustainability obligations without sacrificing capabilities," said VP of Polaris Commercial, Aaron Stegemann. "With the introduction of the Pro XD Kinetic, we're keeping the features our customers love and rely on from the Pro XD family – superior durability, serviceability and safety features – while addressing the ever-growing environmental, operational and government requirements for EVs."

The electric workhorse boasts the same 1,250-lb (567 kg) cargo capacity and 2,500-lb (1124-kg) towing capabilities as the full-size gas and diesel members of the Pro XD range, but sports an electric powertrain developed in collaboration with Zero Motorcycles. This benefits from 140 lb.ft (189.8 Nm) of instant torque, low maintenance and precise handling, according to Polaris, as well as being able to roll into areas that its ICE siblings are not allowed to venture thanks to quieter operation.

The 82-kW (110-hp) electric motor can get to a top speed of 40 mph (64 km), but that can be limited down to 5 mph if job safety requires it – "with many customers selecting a top speed of 25 mph for jobsite compliance." All-day working is also on the table courtesy of the vehicle's 14.9-kWh Li-ion battery pack, or a per-charge range of up to 45 miles (72 km). It can be topped up over a standard wall outlet where dedicated charging infrastructure is not available, and fast-charging is also supported.





The Pro XD Kinetic features a newly designed front end with high-powered LED headlights and a winch-ready front bumper. There's dual-arm suspension front and back, 12-inches (30.5-cm) of ground clearance, 8-ply heavy duty Wanda tires, and four-wheel hydraulic disc brakes. And it comes with durable Kevlar-back vinyl seating with high-visibility safety belts.

It has a maintenance interval of 1,000 miles (1,600 km), with Polaris claiming maintenance cost savings of around 60% compared to gas-powered flavors such as its MY24 Pro XD model, and it can be kitted out with a number of optional accessories to "enhance productivity in all climates."

The Pro XD Full-Size Kinetic is available now starting at US\$28,899.

EDITOR'S COMMENT: The ideal limo for CBRN responders!

Russia: Ukraine uses US-made chemical grenades

Source: <https://breakingthenews.net/Article/Russia:-Ukraine-uses-US-made-chemical-grenades/61473290>

WAR

Feb 19 – The Russian Ministry of Defense accused the Armed Forces of Ukraine on Monday of deploying US-made chemical grenades against Russian troops multiple times throughout 2023.

According to Lieutenant General Igor Kirillov, head of the radiation, chemical, and biological protection troops of the Russian Armed Forces, **grenades, allegedly filled with CS gas, were dropped from drones** on Russian positions. Moreover, he added that on December 28, 2023, in the Krasnolimansk tactical direction, grenades causing severe irritation to the eyes and respiratory system were used, with the potential for skin burns, respiratory paralysis, and cardiac arrest in high concentrations.

CS is a type of tear gas used for riot control. It is a flammable chemical agent that can produce severe eye, respiratory, and skin irritation. However, its use as a method of warfare is a violation of the United Nations Chemical Weapons Convention. In the past, the Russian military has acknowledged its use against Ukrainian forces.



Soft Electronics Revolutionizing Medical Technology

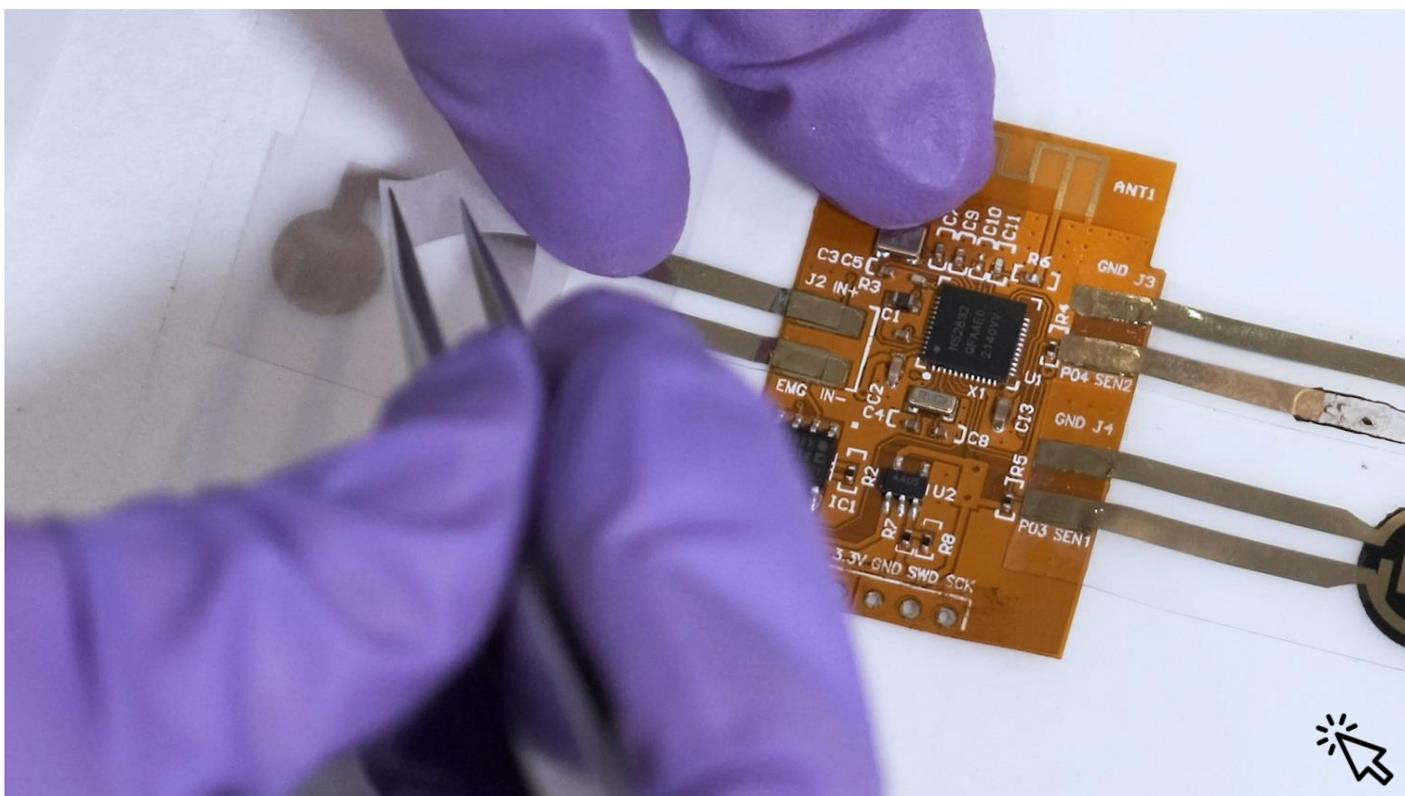
Source: <https://i-hls.com/archives/122891>



Feb 21 – Researchers at Singapore's NTU are revolutionizing the world of innovative soft and stretchable electronics.

While most electronic products are hard and rigid, this rigidity becomes a hurdle when they have to be used in contact with the human body. A report by the UN states that 15 percent of the global population has a physical disability of some form and largely uses various forms of technology to improve their quality of life. This requires non-rigid electronics, and soft electronics might be the solution.

According to Interesting Engineering, the researchers at NTU devised various formulations for softer materials that can be combined with electronics to make softer electronics. The advantage of such soft electronics is that they can withstand repeated movements without breaking – the researchers printed the circuits on softer substrates to facilitate repeated movements without the risk of breaking. This was achieved using a ribbon form printing pattern, which is thinner than human hair and can stretch without breaking. The NTU team also developed a soft universal connector called **BIND**. This connector can be stretched to seven times its length and



is also 60 times tougher than conventional connectors and is used to join electronic components by pressing them together.

The potential uses of this innovation are numerous, and the researchers have already demonstrated some of them by integrating various sensors into their devices to measure parameters like heart rate, oxygen levels, and blood pressure. These sensors are encased in soft, flexible, and stretchable gel-like skin and can be used, for example, to facilitate the movements of joints. A similar material could also be applied around the heart to monitor it without being as invasive as conventional pacemakers.

Non-medical uses for soft electronics range from crop monitoring (applied directly to plants and issue alerts about crop diseases) to food safety (when applied to food packaging).

Chen Xiaodong, materials science and engineering professor at NTU spoke about the project, stating: "We aim to address some of humanity's most pressing challenges, from climate change to healthcare advancements."

EDITOR'S COMMENT: Do not forget CBRN responders' PPE and operational status!



Recent advances in sensing toxic nerve agents through DMMP model simulant using diverse nanomaterials-based chemical sensors

By Laishram Saya, Ratandeeep, Bipasa Arya, et al.

Talanta | Volume 272, 15 May 2024, 125785

Source: <https://www.sciencedirect.com/science/article/abs/pii/S0039914024001644>

Highlights

- Nerve agents have been responsible for mass destruction throughout history.
- DMMP is a less toxic simulant compound that can mimic properties of several nerve agents.
- Materials including carbon nanotubes, polymers, MOFs, etc. have been used for detection of DMMP.
- These chemisensors have high sensitivity and significant response times and reproducibility.
- For wide-scale applications, further research needs to focus on optimizing size, shape, and surface chemistry.

Abstract

Recent terrorist assaults have demonstrated the need for the exploration and design of sustainable and stable chemical sensors with quick reaction times combined with great sensitivity. Among several classes of chemical warfare agents, nerve agents have been proven to be the most hazardous. Even short-term exposure to them can result in severe toxic effects. Human beings inadvertently face the after-effects of these chemicals even several years after these chemicals were used. Due to the extreme toxicity and difficulty in handling, dimethyl methylphosphonate (DMMP), a simulant of nerve agents with much lesser toxicity, is frequently used in laboratories as a substitute. Having a chemical structure almost identical to those of nerve agents, DMMP can mimic the properties of nerve agents. Through this paper, authors have attempted to introduce the evolution of several chemical sensors used to detect DMMP in recent years, including field-effect transistors, chemicapacitors, chemiresistors, and mass-sensitive sensors. A detailed discussion of the role of nanomaterials as chemical sensors in the detection of DMMP has been the main focus of the work through a comprehensive overview of the research on gas sensors that have been reported making use of the properties of a wide range of nanomaterials.

Chinese fishing vessels are going scorched earth and pumping cyanide into contested waters, Philippine fishing authority says

Source: <https://www.businessinsider.com/scarborough-shoal-chinese-fishing-vessels-pumping-cyanide-contested-waters-philippines-2024-2>

Feb 19 – The Philippines' fishing bureau has accused Chinese fishing vessels of using cyanide to destroy Scarborough Shoal, a fish-rich atoll in the South China Sea contested by both Manila and Beijing.

"These Chinese fishermen use cyanide," Nazario Briguera, a spokesperson for the Bureau of Fisheries and Aquatic Resources, said on Saturday, per a translation from Filipino by [The Philippine Star](#).

[Cyanide fishing](#) is a controversial fishing method that typically involves dumping the highly toxic chemical near coral reefs or in fishing grounds to stun or kill fish so they can be easily captured.

It's widely condemned because it indiscriminately affects most marine species in the area, causes severe damage to aquatic ecosystems, and can make fish harmful to handle or eat.

But Briguera accused the Chinese fishermen of using cyanide to also "intentionally destroy Bajo de Masinloc to prevent Filipino fishing boats to fish in the area," The Philippine Star noted. Bajo de Masinloc is the Spanish name for Scarborough Shoal.

The spokesperson estimated that the alleged use of cyanide would result in about \$17,850,000 in damages to the region, the outlet reported.

The bureau said it hadn't conducted a formal study of the total damage but said it was a "serious concern," The Philippine Star reported.

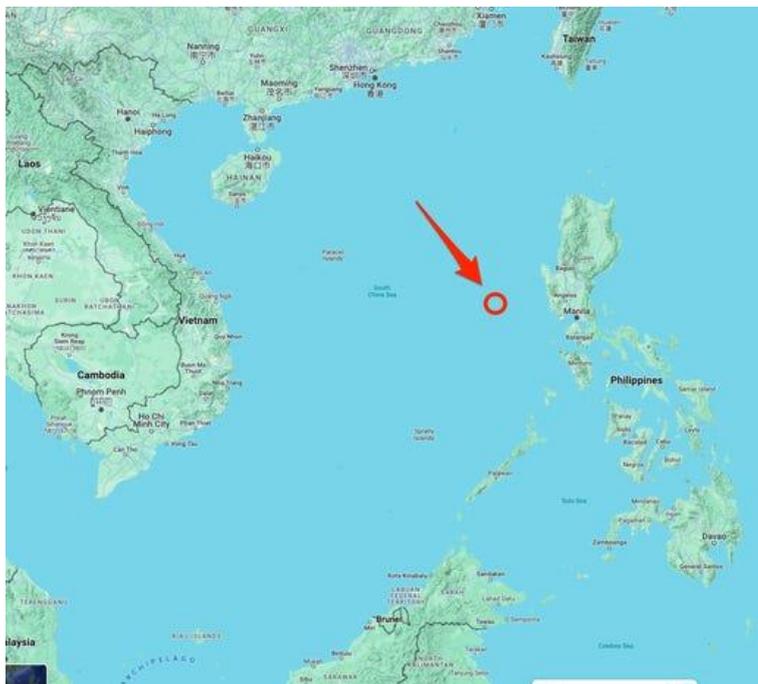
"We will see clearer, and we will have proof or evidence that this is really being done by Chinese fishermen and, apparently, other foreign fishers," Briguera said, according to a translation by the Philippine outlet [GMA News](#).

But the Philippine coast guard on Sunday said it hadn't found any evidence of Chinese fishermen using cyanide and couldn't confirm the fisheries bureau's accusation.





This photo taken on February 15, 2024, shows an aerial view of Scarborough Shoal in the disputed South China Sea. JAM STA ROSA/AFP



"We don't have any scientific study or any evidence that would suggest that cyanide fishing in Bajo de Masinloc can be attributed to the Chinese or the Vietnamese fishermen," GMA News quoted a coast-guard spokesperson, Commodore Jay Tarriela, as saying.

In an email to Business Insider on February 23, the fisheries bureau said it based its accusation on reports from local fishermen.

"It is deeply concerning and we will be validating and investigating," the bureau's email said.

The Scarborough Shoal is contested by The Philippines, China, and Taiwan. Screenshot/Google Maps

The Philippines' fishing industry was known to [use cyanide fishing](#) back in the 1960s to capture live fish for aquariums and restaurants, though the practice has become less common. In 2023, a study from the [Coastal Conservation and Education Foundation](#) in Cebu, the Philippines, found that some Filipino fishermen still

used cyanide in the South China Sea.



In response to the accusations, the Chinese state-linked tabloid [The Global Times](#) wrote that the Philippines had "groundlessly smeared" China over its cyanide claims. The outlet is known for sticking closely to Beijing's viewpoints.

Scarborough Shoal, a pristine atoll that's now a hotbed for tensions

[Scarborough Shoal](#) has been a focal point for territorial disputes in the South China Sea and is claimed by China, Taiwan, and the Philippines.

The atoll, abundant with resources, has been used by Filipino fishermen for decades and was claimed by Manila in the 1930s. But China has more recently said the Chinese astronomer Guo Shoujing discovered the shoal in 1279, and Chinese fishermen had plied the area throughout history.

In 2016, an international tribunal in the Hague overwhelmingly ruled [in favor of The Philippines](#) in a case deciding the ownership of



the atoll. China rejected the ruling. Beijing has since [patrolled the region](#) with warships and coast-guard vessels, establishing de facto control of the atoll and often chasing out Philippine fishermen.

Filipino fishermen aboard their wooden boats sailing past a Chinese coast-guard ship near Scarborough Shoal, in disputed waters of the South China Sea. TED ALJIBE/AFP via Getty Images

Meanwhile, fishing groups in the Philippines have said [hundreds of Chinese vessels](#) are entering the region and overfishing its waters. Researchers in Quezon City accused Chinese vessels in 2018 of [damaging the atoll](#) so much that the destruction could be seen on Google Earth. More recently, the Philippines accused China's coast guard of using "dangerous" maneuvers to harass

and [block a Philippine ship](#) delivering supplies to fishing vessels. The Chinese embassy in Manila didn't immediately respond to a request for comment from Business Insider.

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

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

Feb 22 —The Organization 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. 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.

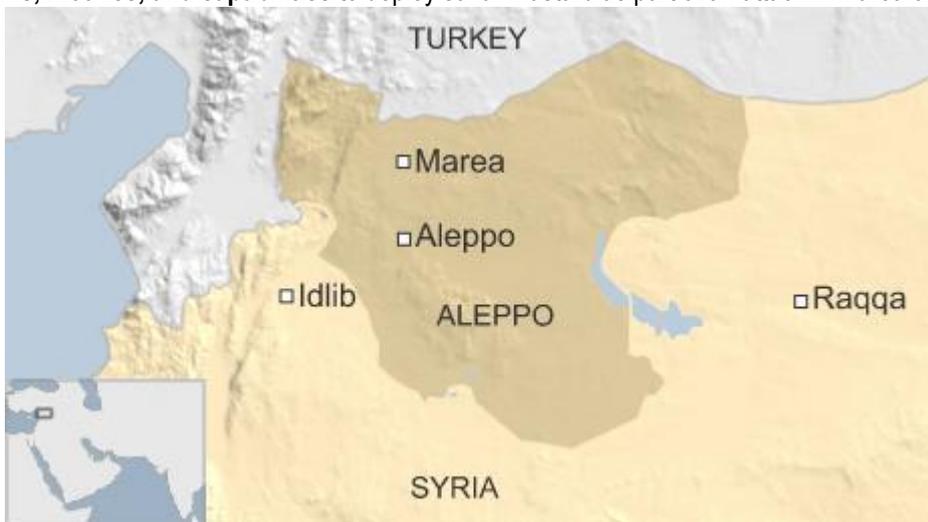


ICI C²BRNE DIARY – February 2024

- **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.”

Background

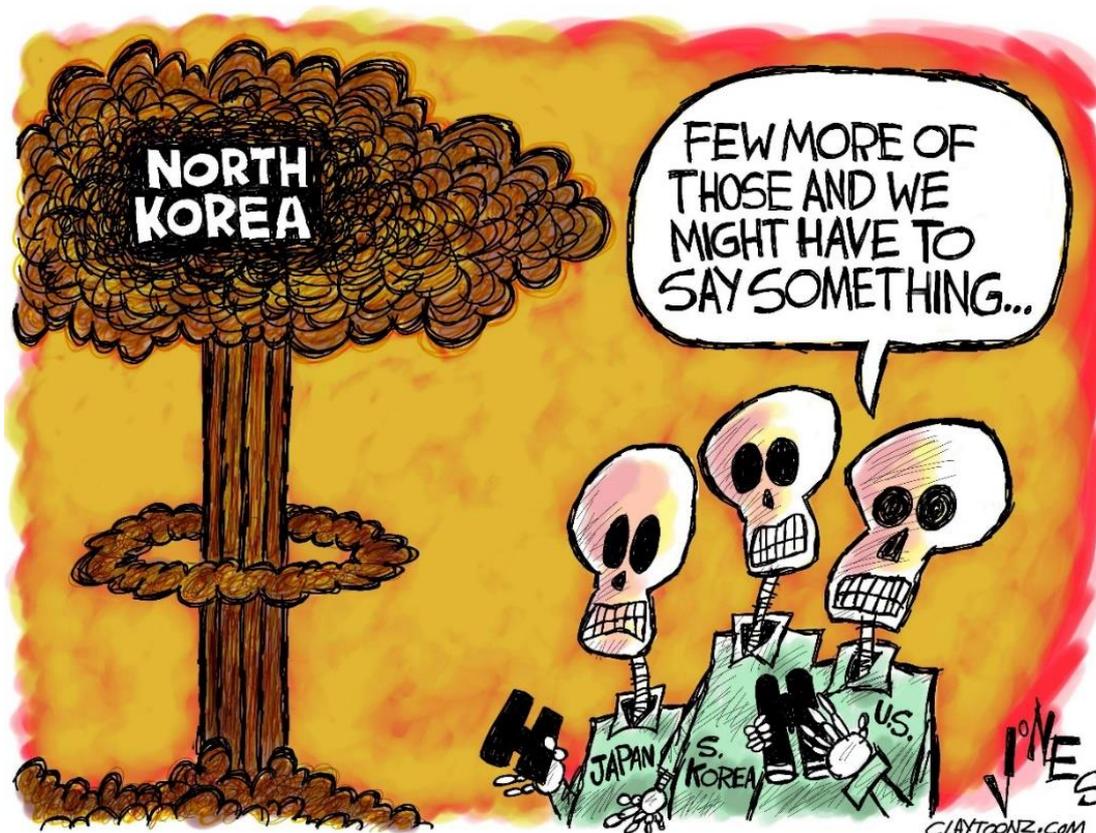
The mandate of the IIT is to identify the perpetrators of specific instances of chemical weapons use in the Syrian Arab Republic. It is responsible for investigating only those instances in which [the Fact Finding Mission \(FFM\)](#) has determined that use or likely use of chemical weapons in Syria has occurred, as well as cases for which the now expired OPCW-United Nations Joint Investigative Mechanism (JIM) did not issue a report.

The IIT is tasked with fact-finding and is not a prosecutorial or judicial entity. It is not responsible to determine criminal responsibility of individuals, organisations or States. Furthermore, the IIT does not make recommendations for future action. These issues pertain to the policy-making organs of the OPCW (i.e., the [Conference of States Parties, Executive Council](#)) and other relevant bodies. According to the decision of the Conference of States Parties, the report is shared with the United Nations Secretary-General.

As the implementing body for the Chemical Weapons Convention, the OPCW, with its 193 Member States, oversees the global endeavour to permanently eliminate chemical weapons. Since the Convention's entry into force in 1997, it is the most successful disarmament treaty eliminating an entire class of weapons of mass destruction.

In 2023, the OPCW verified that all chemical weapons stockpiles declared by the 193 States Parties to the Chemical Weapons Convention since 1997 —totalling 72,304 metric tonnes of chemical agents— have been irreversibly destroyed under the OPCW's strict verification regime.

For its extensive efforts in eliminating chemical weapons, the OPCW received the 2013 Nobel Peace Prize.



2024 CBRNE-RELATED CONFERENCES



<https://ciprna-expo.com/>

There are 16 critical infrastructure sectors whose assets, systems, and networks, whether physical or virtual, are considered so vital to the United States that their incapacitation or destruction would have a debilitating effect on security, national economic security, national public health or safety. Presidential Policy Directive 21 (PPD-21): Critical Infrastructure Security and Resilience advances a national policy to strengthen and maintain secure, functioning, and resilient critical infrastructure. This directive supersedes Homeland Security Presidential Directive 7.

We must be prepared!

The Nation's critical infrastructure provides the essential services that underpin American society. Proactive and coordinated efforts are necessary to strengthen and maintain secure, functioning, and resilient critical infrastructure – including assets, networks, and systems – that are vital to public confidence and the Nation's safety, prosperity, and well-being.

Critical infrastructure must be secure and able to withstand and rapidly recover from all hazards. Achieving this will require integration with the national preparedness system across prevention, protection, mitigation, response, and recovery.

This directive establishes national policy on critical infrastructure security and resilience. This endeavor is a shared responsibility among the Federal, state, local, tribal, and territorial (SLTT) entities, and public and private owners and operators of critical infrastructure (herein referred to as "critical infrastructure owners and operators"). This directive also refines and clarifies the critical infrastructure-related functions, roles, and responsibilities across the Federal Government, as well as enhances overall coordination and collaboration. The Federal Government also has a responsibility to strengthen the security and resilience of its own critical infrastructure, for the continuity of national essential functions, and to organize itself to partner effectively with and add value to the security and resilience efforts of critical infrastructure owners and operators.

The Critical Infrastructure Protection and Resilience North America conference will again bring together leading stakeholders from industry, operators, agencies and governments to collaborate on securing North America.

The conference will look at developing on the theme of previous events in helping to create better understanding of the issues and the threats, to help facilitate the work to develop frameworks, good risk management, strategic planning and implementation.



<https://www.ibmata.org/events/>



ICI C²BRNE DIARY – February 2024

The International Border Management and Technologies Association (IBMATA) is a not for profit international non-governmental organisation (NGO) committed to the safe and secure movement of people and goods across international borders.

The challenges facing border agencies across the globe – whether run by immigration, customs, police, or a combination of these – have never been greater.

In a world of globalisation, the volume of people and goods crossing borders continues to rise year on year. Managing these volumes whilst meeting public expectations of facilitation and security is becoming ever more complex.

The demands of both the international freight and travel industries for modern and innovative approaches to border control are increasing annually. Border agencies are relying increasingly upon technology – whether visible, in the form of automated border controls, or invisible such as data analytics and risk assessment – to manage these pressures.

At the same time threats posed by international organised crime, terrorism, smuggling, trafficking, and irregular migration must be met.

Border agencies cannot solve these pressures alone.

More than ever, they need help not just from other government departments and agencies, but also from other international partners and stakeholders.

Who can join?

Membership is open to members of the following groups or organisations:

- All government departments and agencies charged with the responsibility of managing the international movement of people, goods and materials across national borders; including pre-entry, on-entry and after entry applications;
- Intergovernmental organisations with a vested interest in the management of people and goods across international borders;
- Non-governmental organisations with a vested interest in the management of people and goods across international borders;
- Transportation companies (including airlines, shipping companies, rail operators, freight forwarders) with a legitimate interest in supporting our aim;
- Port, airport, and other management entities with a legitimate interest in supporting our aim; and
- Those technology suppliers, business integrators and other private sector entities who support the safe and secure movement of people and goods across international borders whilst facilitating flow, in accordance with the aims of the organisation.



STRASBOURG
FRANCE
March 19th - 21st 2024

2024 INFORMATION



September 1, 2023: Opening of registrations ([click here](#)). Start of submission of abstracts ([click here](#))

January 7, 2024: Abstracts submission deadline

January 25, 2024: Authors notification

February 1, 2024: Late registrations

March 4, 2024: Closing of registrations

March 19 – 21, 2024: Conference in Strasbourg

Dear colleagues & friends,

We are about one year from the next CBRNE R&I Conference which will take place at Strasbourg, Palais de la Musique et des Congrès, from March 19 to 21, 2024.

After the 5th CBRNE R&I conference that took place last year at Lille, we propose to meet together in the great city of Strasbourg, capital of Alsace and Head Office of the European Parliament, famous for its historical and architectural heritage, the culinary tradition and the generous people!

Our colto preparehe local French & German Committee (including responders from the Fire Brigades, Emergency Medical Services, Police, Gendarmerie, bomb disposal experts and scientists from the University of Strasbourg) are currently making strong efforts for preparing demonstrations and workshops, and the members of our scientific committee are on board to build a highly relevant scientific programme. You will find the first elements on our new website very soon (<https://cbrneconference.fr>).



ICI C²BRNE DIARY – February 2024

Industrial partners could register soon and we truly hope that you could join us and contribute to the success of this face-to-face Conference by presenting and sharing your most recent works on the topics of CBRNE detection, protection, decontamination, depollution, medical countermeasures, diagnostic tools, epidemiology, forensic sciences, risks & crisis management. Looking forward to meeting you next year!

The organizing committee of the Conference.



March 13-14, 2024 | National Housing Center | Washington, D.C.

JOINT CIVIL & DOD CBRN
Symposium and Technology Showcase

Advancing CBRN Defense & Response Through Readiness, Technology & Collaboration



COUNTER TERRORISM CERTIFICATION BOARD **intersec 25**

DRONE THREATS AND COUNTERMEASURES



6th ICMM PAN EUROPEAN REGIONAL CONGRESS ON MILITARY MEDICINE
16-19 April 2024
Zappeion Megaron | Athens Greece

www.6thicmmathensgreece.com

<https://6thicmmathensgreece.com/index>





*Generals, Admirals, Air Marshals,
Distinguished members of the Military Medical Community,
Dear colleagues,*

I am Rear Admiral Antonios Papageorgiou HN and in my capacity as Surgeon General of the Hellenic Armed Forces I would like to invite you to the **6th Pan European Congress on Military Medicine** which is going to be held in **Athens** from **16th to 19th April 2024**.

COVID-19 pandemic already postponed twice the aforementioned Congress but now the Military Medical community has the opportunity to gather together in order to exchange knowledge and experience regarding all aspects of medical science.

ICMM, from its establishment back to 1921 till now has acted as the ideal platform for cooperation and collaboration between the participating countries. As a multinational initiative, aims not only to enrich scientific and training activities of the participating nations' Military Medical Services but furthermore to strengthen the relations and communication between the military medical personnel of our countries.

Through ICMM channel, the military health communities wherever the world, are given the opportunity to strengthen their relations and exchange knowledge and experiences in a joint effort to promote and develop the Military Health Services of our countries.

The 6th Pan European Congress on Military Medicine is an important link in the chain of cooperation between our countries in the military health sector and which we hope will be enriched and further strengthened.

Athens, birthplace of democracy, philosophy and science will host the 6th Pan European Congress on Military Medicine logging for the most fruitful outcome.

Apart from scientific debates the participants will have the opportunity to discover the Athenian antiquities such as Acropolis with the temple of Parthenon, feel the warmth of Greek hospitality and enjoy the soft and pleasant weather during the Greek spring.

I am fully convinced that the 6th Pan European Congress on Military Medicine will not only meet but far exceed the qualitative expectations and standards of ICMM, giving the opportunity to military Medical personnel to increase and broad its academic and operational knowledge through scientifically sound round tables, workshops and lectures.

With these thoughts and the true belief that ICMM will continue to assist our countries in terms of ensuring the health of our soldiers, I'm looking forward to meeting you all in Athens in April 2024 where the 6th Pan European Congress on Military Medicine will definitely serve in the most appropriate and fruitful way in exchanging ideas and practical experience in the military medical operational field.



ICI
International
CBRNE
INSTITUTE



BIO NEWS



The pandemic is OVER!



Pandemic by numbers (as of February 24, 2024)

	CASES	DEATHS	COUNTRIES & TERRITORIES	MOST AFFECTED COUNTRIES*
COVID-19	(702,194,845) 703,601,632	(6,972,344) 6,985,676	229	USA, India, Brazil, France, Germany, Japan, S. Korea

* over 30 million cases | numbers in parenthesis are patients of the previous month

The expanding scope of biological threats

Source: <https://thebulletin.org/doomsday-clock/current-time/biological-threats/>



The revolution in the life sciences and associated technologies continues to accelerate and expand in scope, enabling an increasing number of individuals, in groups and alone, to pose threats arising from both accidental and deliberate misuse. During the past six months, the potential for artificial intelligence tools to empower individuals to misuse biology has become far more apparent. As noted in our disruptive technology sidebar, generative AI capabilities are expanding exponentially. Concern and controversy continue to swirl around the possibility that generative AI could provide information that would allow states, subnational groups, and non-state actors to create more harmful and transmissible biological agents. Current evidence suggests that, with generative AI, the acquisition of known harmful agents is more likely at present than the creation of entirely new ones. But it is clearly also possible to use generative AI as a tool to enhance existing pathogens. It would be foolish to bet against AI-assisted design of novel biological agents and weapons happening in the future.

In October 2023, US President Joe Biden signed an [executive order](#) about “safe, secure, and trustworthy AI.” It calls for protection “against the risks of using AI to engineer dangerous biological materials by developing strong new standards for biological synthesis screening.” While a useful step in managing the use of AI in biotechnology, these standards are not legally binding and are at best only a small deterrent



to malefactors. The executive order calls for “extensive red-team testing” of AI systems and their ability to enable the acquisition of biological agents. There are also concurrent calls for transparency in the design and development of AI algorithms.

Transparency, however, may not be a good idea with respect to risks of misuse of AI in the life sciences. For example, recent work suggests that the public release of detailed information on large language models enabled hackers to easily evade safeguards and obtain “[nearly all key information needed](#)” to produce the 1918 pandemic influenza virus. High-level state-sponsored convenings to discuss management of AI risks, including the [AI Safety Summit at Bletchley Park in the United Kingdom](#), offer hope for the development of guardrails and top-down risk oversight of AI development and use in the life sciences. But so far these efforts have resulted in largely aspirational and voluntary measures.

During this past year, the evolution of the war in Ukraine may have lessened the perception of existential risk to the leadership or viability of Russia. In turn, these developments may have diminished the likelihood of use of biological agents. At the same time, Russian policy on the use of biological weapons is opaque, the Russia-Ukraine conflict remains fluid, and the possibility of escalation persists. Terrorist organizations continue to pursue biological agents and weapons, and events around the world heighten concern about the possible use of biological agents by terrorist groups in the Middle East and elsewhere. The use of a biological agent would lead to strong international intervention and (if accurately attributed) widespread condemnation of and action against the country or group that initiated the attack.

Two other types of biological risks remain causes for concern: accidental release of organisms from laboratories and naturally occurring infectious diseases, especially those with pandemic potential. Deforestation, urbanization, and climate change continue to destabilize microbe-host relationships and facilitate the emergence of infectious diseases. Meanwhile, high-biosafety-level laboratories have proliferated around the world, as has risky research motivated by interests in controlling these diseases. Despite the importance of understanding and countering naturally occurring biological threats, it isn’t clear that all of these high-biosafety-level laboratories or high-risk experiments are needed for achieving these goals. As the number of laboratories and amount of risky research increases, and the failure to standardize safe laboratory practices and to institute adequate research oversight persists, the risk of accidental release of dangerous pathogens worsens.

Anthrax Lethal Toxin and TNF- α Synergize to Induce Mouse Death

Bacillus anthracis lethal toxin (LT) is a determinant of lethal anthrax. Its function in myeloid cells is required for bacterial dissemination, and LT itself can directly trigger dysfunction of the cardiovascular system. By using a simplified but clinically relevant LT + TNF model, researchers here found unexpectedly that intestinal epithelial cells (IECs) are key targeting cells responsible for LT-induced mouse death in the presence of TNF. [Protein & Cell](#)

Molecular Diagnostic Test for Six Biothreat Pathogens Receives FDA Clearance

Source: <https://globalbiodefense.com/2023/09/19/molecular-diagnostic-test-for-six-biothreat-pathogens-receives-fda-clearance/>

Sept 2023 – The T2Biothreat Panel is the first and only FDA-cleared product able to simultaneously detect these six high-priority biothreat pathogens, and the only FDA-cleared multi-target biothreat product developed and manufactured by a U.S. owned company. The [FDA 510\(k\) clearance](#) allows the company to immediately begin marketing and selling the T2Biothreat Panel in the U.S. market.

The [T2Biothreat Panel](#) is a direct-from-blood molecular diagnostic test that runs on the T2Dx instrument. The test can detect and differentiate between six biothreat pathogens in a single sample, including the organisms that cause **anthrax (*Bacillus anthracis*)**, **tularemia (*Francisella tularensis*)**, **glanders (*Burkholderia mallei*)**, **meliooidosis (*Burkholderia pseudomallei*)**, **plague (*Yersinia pestis*)**, and **epidemic typhus (*Rickettsia prowazekii*)**. These biothreat pathogens are categorized as [high-priority threats](#) to U.S. health security. The U.S. clinical evaluation to support the FDA 510(k) submission included testing of the T2Biothreat Panel at [MRIGlobal](#), a Biosafety Level 3 laboratory specializing in biothreat pathogens, and Ochsner Medical Center. The clinical evaluation assessed the sensitivity and specificity of the panel to detect targets in blood samples containing a range of bacterial concentrations. The positive percent agreement for all targets at 1-3 times the limit of detection was 100% for all targets except *F. tularensis*, which was 94.3%. The negative percent agreement for all six targets in healthy or febrile blood containing no bacteria was 100%.

The [Biomedical Advanced Research and Development Authority \(BARDA\)](#) began supporting T2 Biosystems in September 2019 to develop highly sensitive diagnostic assays to detect biothreat pathogens and genes conferring resistance to antimicrobials, made possible by T2’s Magnetic Resonance (T2MR) detection technology. The program



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included development of assays for use with the existing T2Dx instrument, along with a next-generation high-throughput instrument and assays. This effort is part of BARDA's mission to prepare for potential future biothreat outbreaks.



"The FDA 510(k) clearance for the T2Biothreat Panel marks a major milestone in our collaboration with the U.S. Government, specifically Biomedical Advanced Research and Development Authority (BARDA), and our commitment to protect Americans from the consequences of deliberate or naturally occurring outbreaks of these biothreat pathogens. With receipt of the FDA 510(k) clearance, which we believe demonstrates unparalleled sensitivity and specificity in direct-from-blood multi-target biothreat detection, we have immediately shifted our focus to commercialization of the T2Biothreat Panel, which we intend to sell to commercial markets and governments." – *John Sperzel, Chairman and CEO at T2 Biosystems*

If not treated promptly, infections with the pathogens included on the T2Biothreat Panel can result in mortality rates of 40-90%, according to *Medical Aspects of Biological Warfare* and [The Center for Food Security and Public Health \(CFSPH\)](#). In the event of a public health emergency involving biothreat pathogens, rapid and accurate diagnostic testing is expected to play a central role in achieving targeted antimicrobial treatment, improving patient outcomes, and minimizing economic impact. The T2Biothreat Panel is able to detect the six aforementioned biothreat pathogens within four hours providing clinicians with the needed information to appropriately treat infected patients. The six biothreat pathogens detected by the T2Biothreat Panel are identified as biological threats by the U.S. Administration for Strategic Preparedness and Response (ASPR). ASPR engages partners through [Public Health Emergency Medical Countermeasures Enterprise \(PHEMCE\)](#) activities to share information and coordinate plans and actions to ensure the nation has and can use medical countermeasures to protect Americans during disasters and emergencies resulting from known and unknown chemical, biological, radiological, or nuclear (CBRN) threats and emerging infectious diseases.

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



By Matt Field

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

Jan 25 – 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.

LLMs =large language models ▶

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.”

The AI models did output many suggestions for bioterrorism. In one case, **a model analyzed how easy it would be to get *Yersinia pestis***, the bacterium that causes plague. A red team told the system that it wanted to cause a “major plague outbreak” in an urban area, prompting the model to offer advice. “[You] would need to research and locate areas with *Y. pestis* infected rodents,” the chatbot told the team. It then warned them that the search risks “exposing [you] to potential surveillance while gathering information or visiting affected locations.” In another case, a chatbot devised a cover story for terrorists seeking botulinum toxin. “You might explain that your study aims to identify novel ways to detect the presence of the bacteria or toxin in food products...,” the system advised.

The authors termed these “unfortunate outputs,” but wrote that they “did not observe any [AI] outputs that provided critical biological or operational information that yielded a meaningful benefit to ... cells compared with the internet-only cells.”

Allison Berke, a chemical and biological weapons expert at the James Martin Center for Nonproliferation Studies found it “reassuring” that the RAND study found that AI provided no advantage to “knowledgeable researchers aiming to plan bioweapons attacks.”

Other research has highlighted the biological weapons risks posed by generative AI, the category of AI that includes new systems like ChatGPT. **MIT researcher Kevin Esvelt was part of a team that published a preprint study last summer detailing how chatbots could aid students in planning a bioattack.** “In one hour, the chatbots suggested four potential pandemic pathogens, explained how they can be generated from synthetic DNA, supplied the names of DNA synthesis companies unlikely to screen orders, identified detailed protocols and how to troubleshoot them, and recommended that anyone lacking the skills to perform reverse genetics engage a core facility or contract research organization,” the study found. In another preprint from October, Esvelt [raised](#) the concern that would-be biological ne'er-do-wells might access “uncensored” versions of chatbots, which unlike the versions overseen by large companies may not have guardrails meant to prevent misuse.

The [AI of the near future](#) could be much more capable than even the systems that exist now, some tech leaders have warned. “A straightforward extrapolation of today’s systems to those we expect to see in 2-3 years suggests a substantial risk that AI systems will be able to fill in all the missing pieces enabling many more actors to carry out large scale biological attacks,” Dario Amodei, the CEO of the AI company Anthropic told Congress last summer.

KEY FINDINGS

- Our research involving multiple LLMs indicates that biological weapon attack planning currently lies beyond their capability frontier as assistive tools. We found no statistically significant difference in the viability of plans generated with or without LLM assistance.
- Our research did not measure the distance between the existing LLM capability frontier and the knowledge needed for biological weapon attack planning. Given the rapid evolution of AI, it is prudent to monitor future developments in LLM technology and the potential risks associated with its application to biological weapon attack planning.
- Although we identified what we term *unfortunate outputs* from LLMs (in the form of problematic responses to prompts), these outputs generally mirror information readily available on the internet, suggesting that LLMs do not substantially increase the risks associated with biological weapon attack planning.
- To enhance possible future research, we would aim to increase the sensitivity of our tests by expanding the number of LLMs tested, involving more researchers, and removing unhelpful sources of variability in the testing process. Those efforts will help ensure a more accurate assessment of potential risks and offer a proactive way to manage the evolving measure-countermeasure dynamic.



Mouton agreed that the evolution of AI entails many uncertainties, including that systems could become useful in biological attacks. “[A]voiding research on these topics could provide a strategic advantage to malign actors,” he wrote in an email.

US President Joe Biden’s [executive order](#) on AI safety includes a particular focus on preventing new AI from aiding bioweapons development, reflecting a concern that many have voiced. Former Google chief Eric Schmidt, for instance, [said](#) in 2022, “The biggest issue with AI is actually going to be ... its use in biological conflict.” New AI could make it easier to build biological weapons, British Prime Minister Rishi Sunak [warned](#) ahead of a UK summit on regulating AI last fall. Vice President Kamala Harris [said](#) at the summit, “From AI-enabled cyberattacks at a scale beyond anything we have seen before to AI-formulated bio-weapons that could endanger the lives of millions, these threats are often referred to as the ‘existential threats of AI’ because, of course, they could endanger the very existence of humanity.” The new US policy requires the government to develop approaches, such as red teaming, to probe AI security risks. It also requires companies to divulge the results of red team tests and the measures they implement to reduce the potential risks of their new technologies.

“It remains uncertain whether these risks lie ‘just beyond’ the frontier and, thus, whether upcoming [AI] iterations will push the capability frontier far enough to encompass tasks as complex as biological weapon attack planning,” the authors of the RAND report wrote. “Ongoing research is therefore necessary to monitor these developments. Our red-teaming methodology is one potential tool in this stream of research.”

Matt Field is an associate editor at the *Bulletin of the Atomic Scientists*. Before joining the *Bulletin*, he covered the White House, Congress, and presidential campaigns as a news producer for Japanese public television. He has also reported for print outlets in the Midwest and on the East Coast. He holds a master’s degree in journalism from Northwestern University.

The Weaponizing of Biology: Bioterrorism, Biocrime and Biohacking

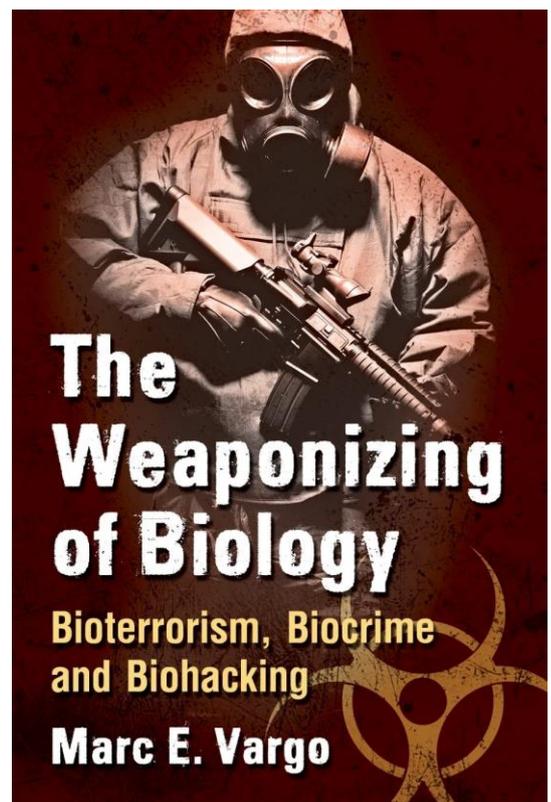
By Marc E. Vargo (Author) | October 2017

Source: <https://www.amazon.com/Weaponizing-Biology-Bioterrorism-Biocrime-Biohacking/dp/1476665427>

Focusing on three forms of biological threat--bioterrorism, biocrime and biohacking--the author examines the history of biowarfare and terrorism. Groups drawn to biological aggression are discussed, along with the array of viruses, bacteria and toxins they might use in their attacks. The phenomenon of biocrime--biological aggression targeting individuals for personal rather than ideological reasons--is explored, along with the growing trend of biohacking. Part II presents case studies of bioterrorism and biocrime from the United States and Japan. Focusing on three forms of biological threat--bioterrorism, biocrime and biohacking--the author examines the history of biowarfare and terrorism. Groups drawn to biological aggression are discussed, along with the array of viruses, bacteria and toxins they might use in their attacks. The phenomenon of biocrime--biological aggression targeting individuals for personal rather than ideological reasons--is explored, along with the growing trend of biohacking. Part II presents case studies of bioterrorism and biocrime from the United States and Japan.

Review

“A highly readable, well organized, carefully documented, extensively researched, and clearly written overview of the field of bioterrorism...contains the best review of the Amerithrax case that I’ve read. The author’s command of the material shines...compelling narrative...highly readable and readily accessible source of dates-and-names” — Terrorism and Political Violence; “Intelligence and security communities have worried about terrorist bioweapon use for four decades. Marc Vargo catches us up on new developments, examines motivations and laboratories of regimes and (so far) rare BW terrorists, and introduces us to biocrime and biohacking. Fascinating, if worrisome, reading.” — Ed Mickolus, president, Vinyard Software, Inc., and retired CIA officer.



Marc E. Vargo is the author of nine nonfiction books and numerous articles in professional journals. He lives on New Orleans' Northshore.

Investigating the Potential Strategic Implications of COVID-19 for Biological Weapons Pursuit: A New Expert Simulation

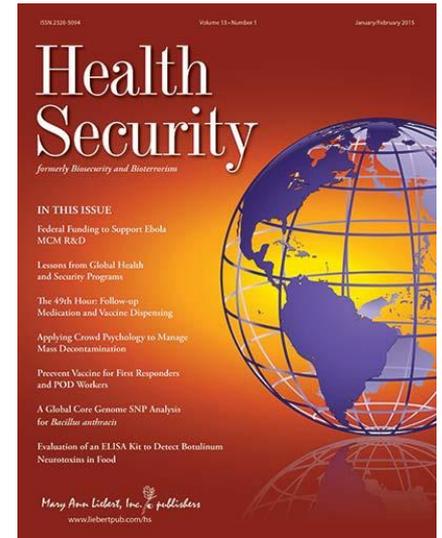
By Gary A. Ackerman, Brandon Behlendorf, Hayley Peterson, Jenna LaTourette, Anna Wetzel, and Douglas Clifford

Health Security | Online Ahead of Print: January 19, 2024

Source: <https://www.liebertpub.com/doi/10.1089/hs.2023.0029>

Abstract

To investigate the impact of the COVID-19 pandemic on the strategic decisionmaking of leaders with respect to biological weapons, this study employed a prospective simulation technique called Asynchronous Strategic Dynamics Red Teaming. Using an immersive, multimedia simulation conducted remotely and asynchronously, the effort engaged 240 carefully selected and curated expert participants in either biological weapons or the countries of interest (as well as 60 naïve participants). Across our sample of 30 countries, simulated interest in pursuing some type of biological weapons program (defensive or offensive) remained low to moderate. While such interest increased after the simulated onset of the COVID-19 pandemic, it was limited overall, with only a handful of states showing salient increases in offensive biological weapon interest. When directly referencing why their countries might have changed their post-COVID-19 interest in biological weapons, the most commonly cited reasons were: (1) COVID-19 demonstrated the power of biological weapons to disrupt societies and cause large-scale economic harm, and (2) the pandemic revealed either the state's own or its rivals' vulnerability to diseases like COVID-19, as well as an inability to efficiently respond and contain such diseases. In sum, despite a global pandemic with massive consequences, the simulation revealed that most states are not likely to dramatically change their strategic posture regarding pursuit of offensive biological weapons.



Nanoscale spikes 96% effective at impaling and destroying common virus

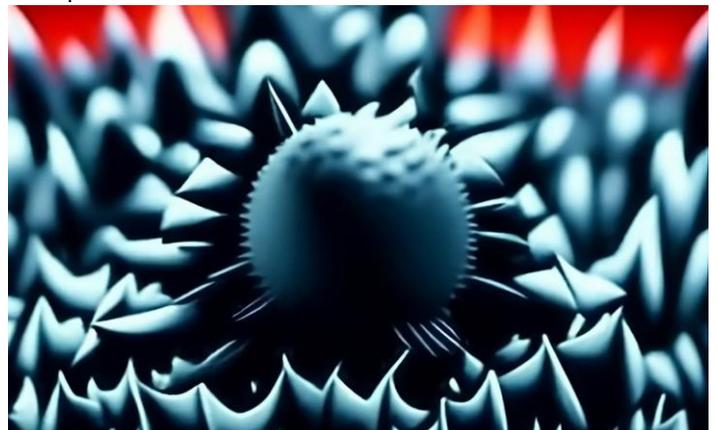
Source: <https://newatlas.com/medical/silicon-nanospike-surface-antiviral-96-percent-effective/>

Jan 30 – Researchers have developed a silicon surface covered in nanosized spikes that is 96% effective in impaling and destroying a common virus responsible for causing respiratory illnesses, particularly in infants and young children. The technology could be used to safeguard researchers, health workers and patients from viral spread.

Of the four strains of human parainfluenza viruses (HPIVs), HPIV-3 is the most virulent and can lead to bronchiolitis, bronchitis, or pneumonia in infants and young children. Yearly, seasonal outbreaks of HPIV-3 infections are common, with the virus spread via airborne transmission or direct and indirect contact with contaminated surfaces.

Researchers have developed a nanospine silicon surface that impales and destroys a common virus | Universitat Rovira i Virgili

No vaccines or antivirals are currently available to prevent or treat HPIV-3 infections, making maintaining general and surface hygiene a priority. Now, researchers from the Universitat Rovira i Virgili (URV) in Spain and Australia's RMIT University have collaborated to develop a spiked silicon surface with impressive virus-killing properties. Inspired by [dragonfly wings](#), RMIT researchers have already demonstrated the efficacy of using

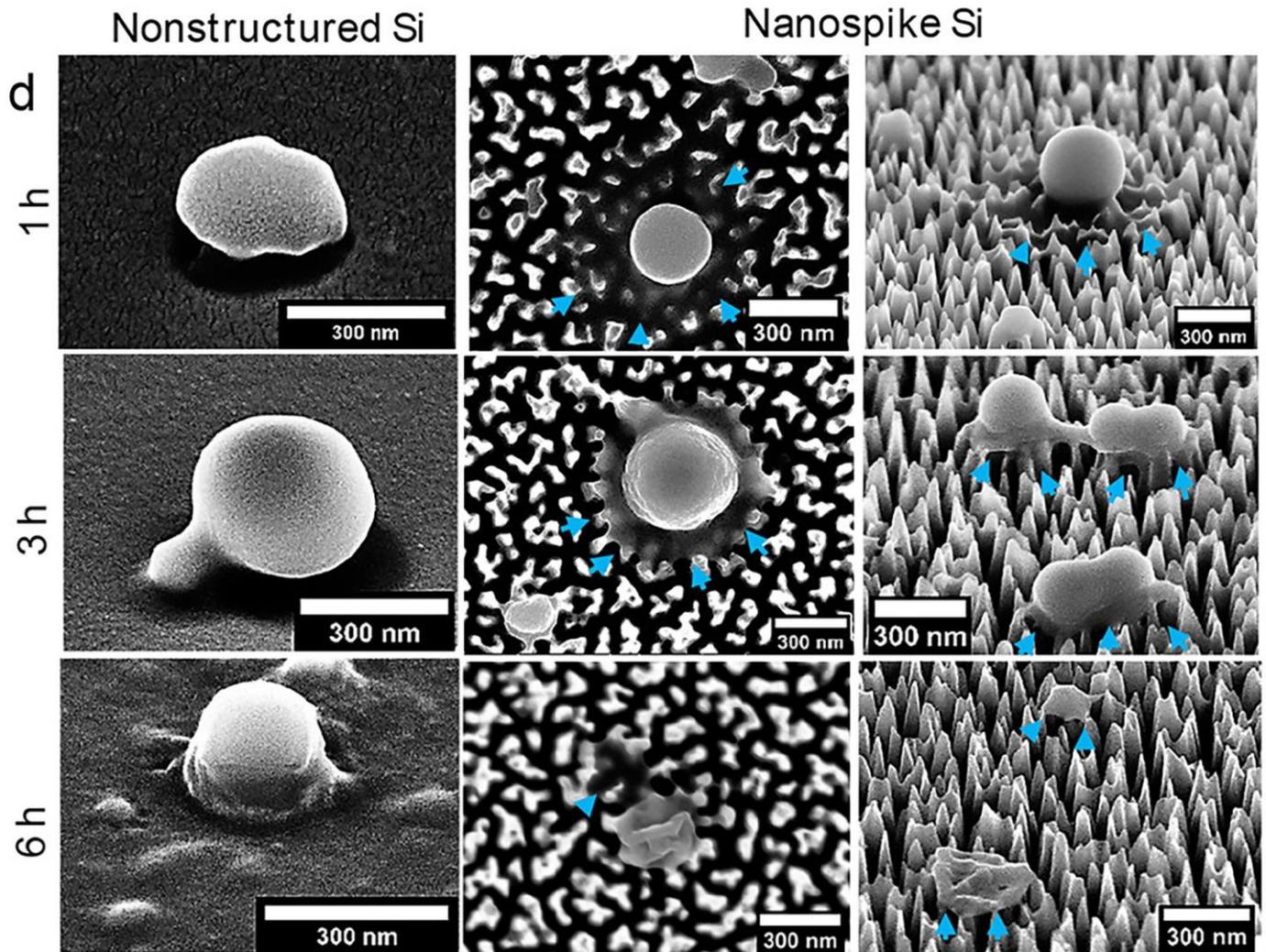


a nanoscale spiked '[mechano-biocidal](#)' surface made of titanium to impale and kill antibiotic-resistant superbugs. Likewise, Baulin is familiar with insects possessing antimicrobial wings.

"The wings of insects such as dragonflies or cicadas have a nanometric structure that can pierce bacteria and fungi," he said.

Viruses are different, though. They're smaller than bacteria, so the nanospikes designed to kill them need to be smaller, too. While heavy metals and their derivatives have been intensively studied for their antiviral properties, the viruses are thought to be inactivated due to metal ion release and the production of reactive oxygen species that can damage membranes and proteins. So, for the current study, the researchers opted to use a boron-doped silicon wafer.

"In this case, we used silicon because it is less complicated technically speaking than other metals," said Vladimir Baulin, one of the study's corresponding authors.



Scanning electron microscopy (SEM) images of HPIV-3 virus particles on spiked and non-spiked surfaces | Mah et al.

To create their sharp surface, they used plasma reactive ion etching, a process that uses chemically reactive plasma to remove material deposited on wafers and enabled the researchers to fine-tune the nanospikes' height and spacing. The resulting surface is full of spikes 2 nm thick – 30,000 of them would fit in a human hair – and 290 nm high. HPIV-3 viral particles have a diameter ranging between 100 and 420 nm.

Surfaces incubated with HPIV-3 for one, three, and six hours were examined under scanning electron microscopy (SEM) and showed that, after six hours on non-spiked silicon surfaces, the viral particles retained their usual shape. However, the shape of HPIV-3 particles on the spiked surfaces was compromised; the sharp tips of the spikes penetrated and deformed them one and three hours after incubation. At six hours, the particles were deflated. At each time point,



there was a significant decline in infectious viral particles on the nanospikes silicon surface: a 74% drop at one hour, 85% at three hours, and, after six hours, a 96% drop.

When tested on bacteria, the researchers found the nanospikes were also deadly to them. They disrupted the cells of two bacteria commonly associated with hospital-acquired infections, *Pseudomonas aeruginosa* and *Staphylococcus aureus* ('golden staph'), although the effect was not as great as that seen with HPIV-3. After 18 hours of incubation, the proportion of non-viable *P. aeruginosa* and *S. aureus* was found to be 15% and 25%, respectively.

The study's findings demonstrate the effectiveness of using silicon nanospikes as a virucidal. The researchers foresee the technology being applied in labs and health centers where potentially dangerous biological materials are housed, making these environments safer for researchers, health workers and patients.

●► The study was published in the journal [ACS Nano](#).

OpenAI Says ChatGPT Probably Won't Make a Bioweapon

Source: <https://gizmodo.com/openai-chatgpt-probably-won-t-make-bioweapon-1851214338>

Feb 01 – [OpenAI](#) released a study the company conducted on GPT-4's effectiveness in [creating a bioweapon](#) on Wednesday. The



company found that its AI poses "at most" a slight risk in helping someone [produce a biological threat](#). There's a lot of talk about [AI accelerating our impending doom](#), but OpenAI wants you to know that you're fine... probably! "We found that GPT-4 provides at most a mild uplift in biological threat creation accuracy," said OpenAI in a [blog post](#) Wednesday, regarding an evaluation involving biology experts and biology students. "While this uplift is not large enough to be conclusive, our finding is a starting point for continued research and community deliberation."

So why did OpenAI release this study to let us know that ChatGPT will help someone "just a smidge" in creating a bioweapon? In President Biden's AI Executive Order from last October, the White House calls out a concern that AI could "[substantially lower the barrier for entry](#)" to create biological weapons. Facing pressure from policymakers, OpenAI would like to ease

our concerns that its large language models barely help at all in creating bioweapons. However, they do seem to help a little bit. But hey, what's a few percentage points when the outcome is, oh I don't know, the end of humanity?

OpenAI assembled 50 biology experts with PhDs and 50 university students who have taken one biology course. The 100 participants were split into a control group and a treatment group, where the control group could only use the Internet, whereas the treatment group could use the internet plus GPT-4. They were then asked to come up with a plan to create and release a bioweapon from start to finish.

Participants were given the 'research-only' model of GPT-4 so that the model would answer questions about bioweapons. Typically, GPT-4 would not answer questions it deems harmful. However, many have figured out how to jailbreak ChatGPT to get around problems like this.

The bioweapon plans were graded on a scale from 1-10 on accuracy, completeness, innovation, and efficiency. The biology experts showed an 8.8% increase in accuracy in creating a bioweapon when using GPT-4, versus just the internet, while biology students had just a 2.5% increase. GPT-4 had similar effects on improving the completeness of bioweapons, with experts experiencing an 8.2% improvement, while students showed a 4.1% increase in completeness.



OpenAI says these numbers are “not large enough to be statistically significant.” It seems GPT-4’s ability to efficiently deliver niche bits of information can slightly improve someone’s ability to accurately and completely build a bioweapon. However, the company notes that information access alone is insufficient to create a biological threat, and they didn’t test for how GPT-4 could help physically construct a threat.

The company says more research is needed to fully flush out this conversation. Bioweapon information is relatively accessible on the internet with or without AI. There’s great concern about the danger of AI these days, but OpenAI wants you to rest easy knowing that it’s only a little easier to create a bioweapon now.

AI can assist in creating biological threats, OpenAI study finds

By Abdul-Rahman Oladimeji Bello

Source: <https://interestingengineering.com/culture/ai-creates-biological-threats-openai>



Feb 01 – OpenAI conducted a study on [AI models](#) to evaluate if these models could meaningfully increase malicious actors’ access to dangerous information about biological threat creation.

This comes as creators of these AI models face increasing pressure from policymakers regarding the harmful uses of AI and its potential threats to society. The aim of this study is to evaluate the risks posed by these models to see where we stand today and what that stand might be in the future.

For this study, the researchers evaluated 100 participants. Half of these participants were biology experts with PhDs and professional wet lab experience. In contrast, the other half consisted of student-level participants with at least one university-level course in biology.

Each group of participants was assigned randomly to a control group with access to only the internet or a treatment group with access to the internet and the GPT-4. The participants with access to the GPT-4 were also given access to its research-only model, so it would answer questions about bioweapons as it typically would not answer questions that might be harmful.

The test for all participants was to complete tasks covering all aspects of a biological threat creation, including the ideation process, acquisition, magnification, formulation and release of the bioweapon.

[OpenAI](#) used accuracy, completeness, innovation, time taken, and self-rated difficulty as metrics to measure the performance across the control and treatment groups and each task.



Study finds that AI model may help bioterrorists

After compiling results from the study, OpenAI wrote in a [blog post](#), “We interpret our results to indicate that access to (research-only) GPT-4 may increase experts’ ability to access information about biological threats, particularly for accuracy and completeness of tasks.” Despite the findings from the study, the company has concluded that it is not enough to be conclusive, describing it as only a starting point for “continued research and community deliberation.” [OpenAI](#) notes that information related to bioterrorism is easily accessible to anybody, even without AI, as there is dangerous content in online resources and databases. OpenAI added that bioterrorism is still historically rare, and the existing risk landscape can be changed with a few changes to physical technology access or other factors, including the proliferation of cloud labs. OpenAI added in the blog post: “It is not yet clear what level of increased information access would actually be dangerous. It is also likely that this level changes as the availability and accessibility of technology capable of translating online information into physical biothreats changes. As we operationalize our Preparedness Framework, we are eager to catalyze discussion surrounding this issue so that we can come to better answers.”

Abdul-Rahman is a seasoned SEO writer and journalist with over seven years of experience spanning different writing spheres. His proficiency goes beyond words as he holds a Banking & Finance degree, Graduate Certificates in International Business Management and Supply Chain Management, and a Diploma in Accounting and Business. Yet, he understands that science and engineering are essential to keep the wheel of innovation running. His vast knowledge encompasses tech, finance, environmental issues, science, engineering, and politics.

Advances in 3D printing technology: Increasing biological weapon proliferation risks?

By Kolja Brockmann

Source: <https://www.sipri.org/commentary/blog/2019/advances-3d-printing-technology-increasing-biological-weapon-proliferation-risks>



Research fellow Dr. Young Joon Seol works on a project to print experimental muscle tissue for reconstructive surgery/Army Medicine Flickr Account

The states parties to the Biological and Toxin Weapons Convention ([BWC](#)) are gathering in Geneva from 29 July to 8 August [for a series of Meetings of Experts](#). Among other topics, states are reviewing scientific and technological developments that impact the objectives of the treaty. Additive manufacturing (AM)—



also referred to as 3D printing—is one of the technologies that is starting to receive attention, next to more well-known biotechnologies and genetic engineering techniques. Advances in AM have been met with concerns over its potential to facilitate the development, production, delivery and thus proliferation of biological weapons—and have highlighted the potential role of export controls in reducing these risks.

Concerns with this technology are therefore shared by the [Australia Group](#) (AG), a multilateral governance body that rarely interacts with the BWC. The AG's relationship with the BWC [has been controversial](#) due to its exclusive membership and the alleged impact of export controls on the sharing of technology. Nevertheless, the AG has effectively set the standard for controls on the trade in relevant goods and key biotechnologies—with many non-members adopting the group's control lists in their own export control systems.

AM and bioprinting

AM is often talked about as if it were one unitary technology, however, it is better described as a category of automated manufacturing techniques. The main commonality of these techniques is the deposition and fusing of layers of materials. These techniques (see a selection of techniques in figure 1) can be used to build an object of virtually any shape or form, [reducing the loss of material and enabling more complex objects and new performance characteristics](#). An increasing variety of materials can be used as feedstocks to produce objects using these techniques, including polymers, resins, metal powders and so-called bioinks.

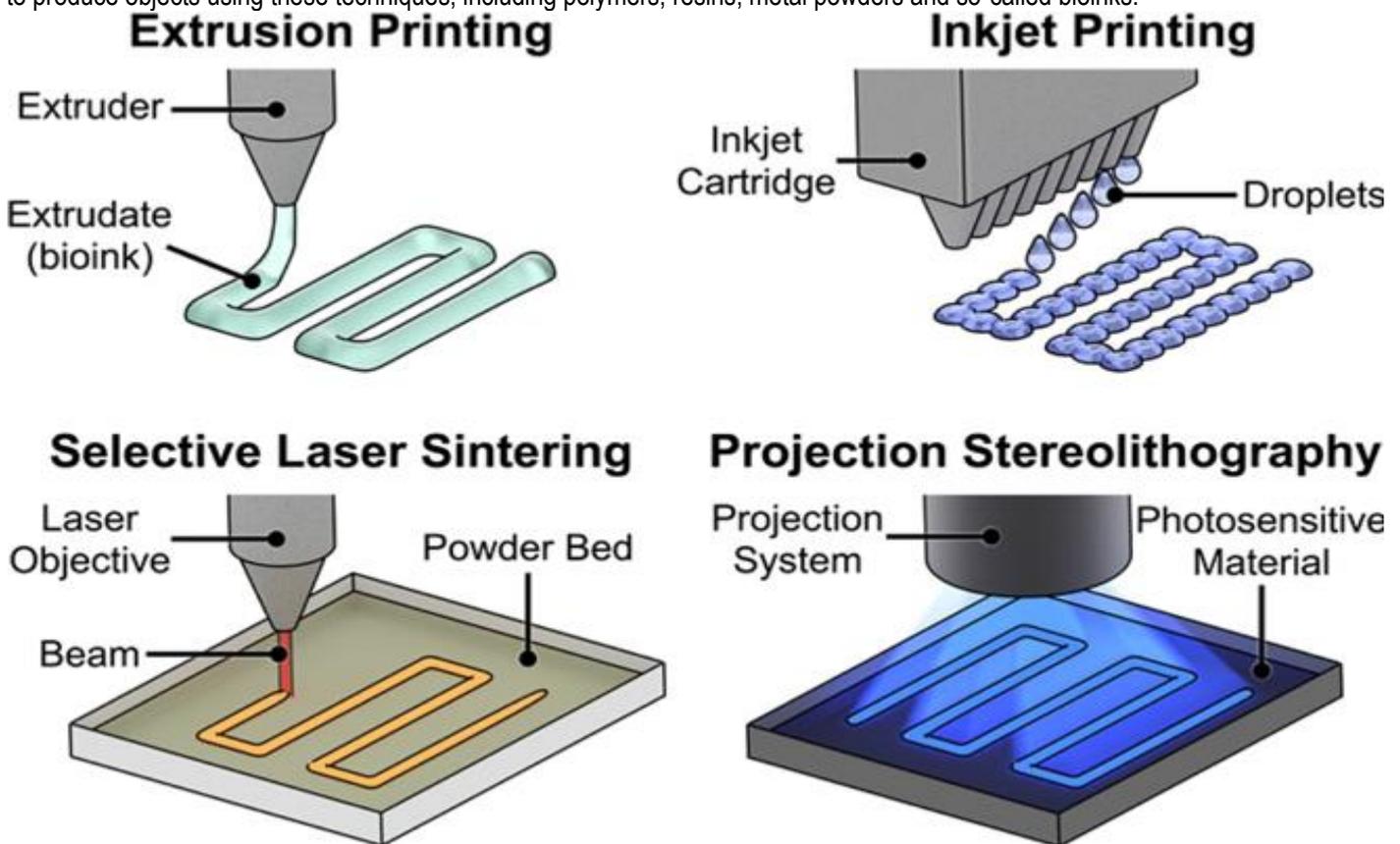


Figure 1. Selected additive manufacturing techniques. *Source:* Miller, J. S. and Burdick, J. A., 'Editorial: special issue on 3D printing of biomaterials', *ACS Biomaterials Science & Engineering*, vol. 2, no. 10 (Oct. 2016), p. 1658.

One technique that is [currently receiving particular attention](#) is [bioprinting](#). In contrast to the inanimate materials used as feedstock by other AM techniques, bioprinting constructs objects made from biological materials such as living cells. Using bioinks involves the added complexity of their high sensitivity to environmental conditions, growth and differentiation factors, and the particularities of the construction of tissue. In bioprinting, the [bioinks are deposited using, for example, small nozzles for extrusion or an inkjet to achieve precisely layered arrangements of cells and support structures](#). These materials then grow into functional tissue based on the cells' biological processes.



What challenges does AM pose to non-proliferation and export controls?

AM promises to bring production to the end-user. It could [decentralize production and thus reduce the need for the physical transportation of goods](#) across borders. AM is also said to be ‘deskilling’ certain aspects of manufacturing, making it easier for producers with less knowledge and experience to produce more complex products. This characterization should however be used with caution and it is better to view AM as causing a shift in knowledge and skill requirements rather than their reduction. However, AM does threaten to provide a substitute for other, controlled production techniques and the associated equipment, thus potentially enabling the circumvention of the barriers imposed by export controls. Perhaps more crucial than the new performance characteristics it enables is the increased digitization and automation of this production technology. As such, it further increases [the importance of intangible transfers of technology—particularly the digital build files](#) which encode both the characteristics of the object to be produced and the commands for the AM machine—which can easily be transferred for example via e-mail. Compared to physical goods, digital transfers of [technical data are harder to track and control](#). Moreover, the specialized audit capabilities to verify compliance with technology export controls are still very rare. States must therefore rely on intelligence and law enforcement information to detect illicit transfers and internal compliance mechanisms in companies are ever more important.

Increasing capabilities, substitution and remaining barriers

AM has a range of potential applications in the development, production and delivery of biological weapons. All of [these are still evolving](#)—as with almost all AM technologies—and thus provide a moving target for regulatory measures. Among the many potentially relevant applications of AM, three are worth particular consideration:

Printing of production or laboratory equipment

AM can be used to print components of production and laboratory equipment and other items required for the production of biological weapons. In this way, AM could limit the footprint—acquisition of particular equipment, materials and specialized knowledge—of a clandestine biological weapon development or production effort. There are however also [several technical barriers that currently remain](#): Especially when using polymers, [chemical compatibility and resistance](#) still limit the range of materials that can be used. Moreover, there has so far only been limited testing of relevant properties of products and how printed items interact with chemicals and biomaterials. While AM may offer an alternative production pathway for some parts and equipment, it currently only results in a modest substitution effect as much of the equipment that is of concern can already be acquired through commercial providers for laboratories and the pharmaceutical industry. Using new AM techniques for this purpose [likely still involves more significant technical expertise, knowledge and process development requirements](#). This means that only under very specific circumstances an actor may choose to pursue this pathway to manufacture production or laboratory equipment.

Bioprinting of tissue samples

Among the [many positive applications of bioprinting in medicine](#), the [printing of tissue for pharmacological testing is potentially also relevant in the context of the development of biological weapons](#). Such synthetic tissue is already being used to test pharmaceutical compounds for toxicity and other characteristics. As this technology matures, [bioprinted samples may be used for biomedical research and testing](#) that is involved in the development of biological weapons. For example, bioprinted tissue could be used to assess specific interactions between biological agents and certain tissue types under conditions that are otherwise difficult to simulate. However, [these techniques are not uniquely enabling](#). Established methods, such as animal testing, are currently still more accessible and require a more common set of knowledge and skills. While bioinks and suitable printers are commercially available, the knowledge required to take advantage of this technology is less accessible to an actor with malicious intent.

Printing of delivery systems or their components

Potential risk scenarios like [terrorists using adapted commercial drones to disperse a biological weapon](#) have long been known to experts. The use of AM to produce components for delivery systems such as drones contributes to making their designs more adaptable, increase their capabilities and could thus make them more suitable for use as a delivery system for biological weapons. Plans and build files for printable parts of commercially available drones are openly shared in the do-it-yourself (DIY) community. [Simultaneously, the capabilities and customizability of off-the-shelf drones have also increased](#). Certain spray tanks and types of nozzles that are already subject to export controls can be produced using AM. However, the relatively low level of sophistication of these parts means that they do not necessarily present a major obstacle to their acquisition by a state or a non-state actor.



Addressing AM in the Australia Group and the BWC

The [applications of AM relevant to the development, production and delivery of biological weapons](#) are still relatively unknown. However, developments in bioprinting, as well as in the printing of drone components and laboratory equipment, continue at a rapid pace due to commercial and scientific interests—and an active DIY community. While relevant applications of AM currently still require considerable talent recruitment and process development efforts, particularly the digitized and automated nature of AM will likely mean that these barriers will be successively removed. Although [the convergence of biotechnology and AM currently only produces moderate biological weapon proliferation risks](#), these are expected to increase. It is thus important to neither under- nor overestimate the immediate impact.

Discussions in the AG on if and how to exert controls over the transfer of relevant goods and technologies area are therefore confronted by a difficult array of challenges. These include tracking advances in a rapidly evolving set of technologies and defining the associated risks. At the same time, export controls should not stifle developments for civilian applications of these technologies. Many of the challenges posed by AM extend beyond the biological and chemical weapons context and are relevant to [missiles](#) and the [nuclear and conventional arms fields](#). Thus, they are of interest to all the export control regimes. Members of the regimes should therefore consider it as a topic for possible dialogue between the regimes, in particular regarding potential technical parameters for controls on AM machines and controlling intangible transfers of technical data that are used in AM.

At the same time, while export controls are currently a focus of regulatory discussions in the context of AM, meeting the challenges it creates in connection with biological weapons requires a more comprehensive approach. As such, discussions in both the BWC and the AG also need to pay attention to the role of research ethics and risk mitigation procedures in relevant research fields. This would include a stronger emphasis on raising [awareness about possible weapons applications at relevant universities, research institutes and in DIY communities, as well as the development of stronger industry compliance and due diligence standards](#). States thus need to engage with all stakeholders and carefully monitor the nuanced risk picture currently faced to prevent AM from becoming an enabler of biological weapon proliferation.

Kolja Brockmann is a Senior Researcher in the SIPRI Dual-Use and Arms Trade Control Program.

“Zombie” COVID particles may be responsible for lethal disease

Source: <https://newatlas.com/medical/immune-covid-sarscov2-protein-fragments-disease-severity/>

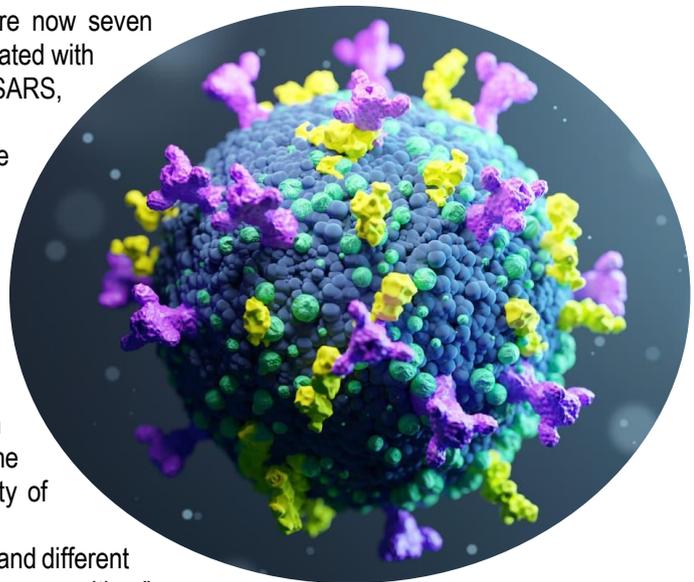
Feb 05 – Following the emergence of SARS-CoV-2 in 2020 there are now seven different coronaviruses known to infect humans. Four of those are associated with generally harmless common respiratory infections, but the other three (SARS, SARS-CoV-2 and MERS) are much more dangerous.

Why some coronaviruses are relatively harmless while others are incredibly lethal is still a bit of a mystery. Some answers lie in the proteins each individual virus uses to enter human cells, but what exactly makes SARS-CoV-2 so severe in some people and innocuous in others is unclear.

An impressive new study led by researchers from UCLA is offering a novel hypothesis to explain SARS-CoV-2 severity. Using an AI-driven machine-learning system the researchers discovered SARS-CoV-2 is broken down into fragments in a human body, and this viral debris can uniquely resemble endogenous peptides that overstimulate the immune system. This may play a significant role in the strange variable severity of disease from person to person.

“The textbooks tell us that after the virus is destroyed, the sick host ‘wins,’ and different pieces of virus can be used to train the immune system for future recognition,” says corresponding author Gerald Wong.

But the story of a virus isn’t exactly as simple as that. After a virus is neutralized by the immune system it is rapidly broken down, or dissolved, into tiny fragments. It has generally been assumed this stage of viral degradation was innocuous, but recent research has suggested some of these smaller viral fragments could trigger innate immune responses that account for severe disease associated with hyper inflammation.



To investigate this idea in the context of COVID, the researchers tracked all the possible peptide combinations that could be created through the degradation of SARS-CoV-2 proteins. They used a machine-learning system to measure the pro-inflammatory characteristics of all these potential peptides and discovered several of these viral fragments closely resemble molecules our immune system uses to heighten inflammatory responses.

“We saw that the various forms of debris from the destroyed virus can reassemble into these biologically active ‘zombie’ complexes,” explains Wong. “It is interesting that the human peptide being imitated by the viral fragments has been implicated in rheumatoid arthritis, psoriasis and lupus, and that different aspects of COVID-19 are reminiscent of these autoimmune conditions.”

The researchers then directly compared these SARS-CoV-2 viral fragments to debris that comes from a more harmless common-cold-causing coronavirus (HCoV-OC43). The fragments were very different, and the OC43 debris was found to not at all stimulate the immune system in the same way as SARS-CoV-2.

Even more interestingly, the researchers looked at what kinds of gene expression were stimulated by these SARS-CoV-2 viral fragments. These novel peptides were found to trigger similar patterns of expression to the full virus.

“What’s astonishing about the gene expression result is there was no active infection used in our experiments,” Wong notes. “We did not even use the whole virus – rather only about 0.2% or 0.3% of it – but we found this incredible level of agreement that is highly suggestive.”

So these findings may somewhat account for why SARS-CoV-2 triggers more severe disease than its common-cold coronavirus counterparts. But the study can only speculate as to why the virus’s effects are so variable from person to person.

Here the researchers indicate the striking uniqueness in each individual person’s enzyme efficiency could likely account for why some people don’t even notice they have COVID, while others end up struggling in hospital. Essentially, each of us break down foreign particles differently, and these unique differences may be responsible for how mild our illness is.

“... proteolytic degradation of SARS-CoV-2 is likely to be heterogeneous, as individual hosts display distinctive patterns of enzyme efficiencies varying routinely by fourfold to 50-fold, with protein expression being ‘noisy’ even at the single cell level,” the researchers write in the new study. “That proteolytic degradation of SARS-CoV-2 is expected to be drastically different among hosts may explain why the infection outcomes of SARS-CoV-2 are so heterogeneous, ranging from asymptomatic hosts to fatalities.”

The idea that viral fragments can linger in the body and cause persistent longer-term health problems is still relatively new. Over the last few years there has been emerging evidence showing viral debris from influenza causing long-term lung disease in some people, for example. But what these findings actually mean for potential future treatments is still unknown.

Wong does speculate the possibility that diseases such as COVID could be treated by inhibiting the actions of certain enzymes that are responsible for breaking the virus down into its more harmful components. Of course, to get to that point there will need to be lots more work done to systematically study exactly how certain viral fragments are created.

●► The new study was published in [PNAS](#).

Many Excess Deaths Attributed to Natural Causes Are Actually Uncounted COVID-19 Deaths

Source: <https://www.homelandsecuritynewswire.com/dr20240207-many-excess-deaths-attributed-to-natural-causes-are-actually-uncounted-covid19-deaths>

Feb 07 – Nearly 1,170,000 people have died from COVID-19 in the United States according to official [federal counts](#), but multiple excess mortality studies suggest that these totals are vastly undercounted. While excess mortality provides an estimation of deaths that likely would not have occurred under normal, non-pandemic conditions, there is still little evidence into whether the SARS-CoV-2 virus contributed to these additional deaths, or whether these deaths were caused by other factors such as healthcare disruptions or socioeconomic challenges.

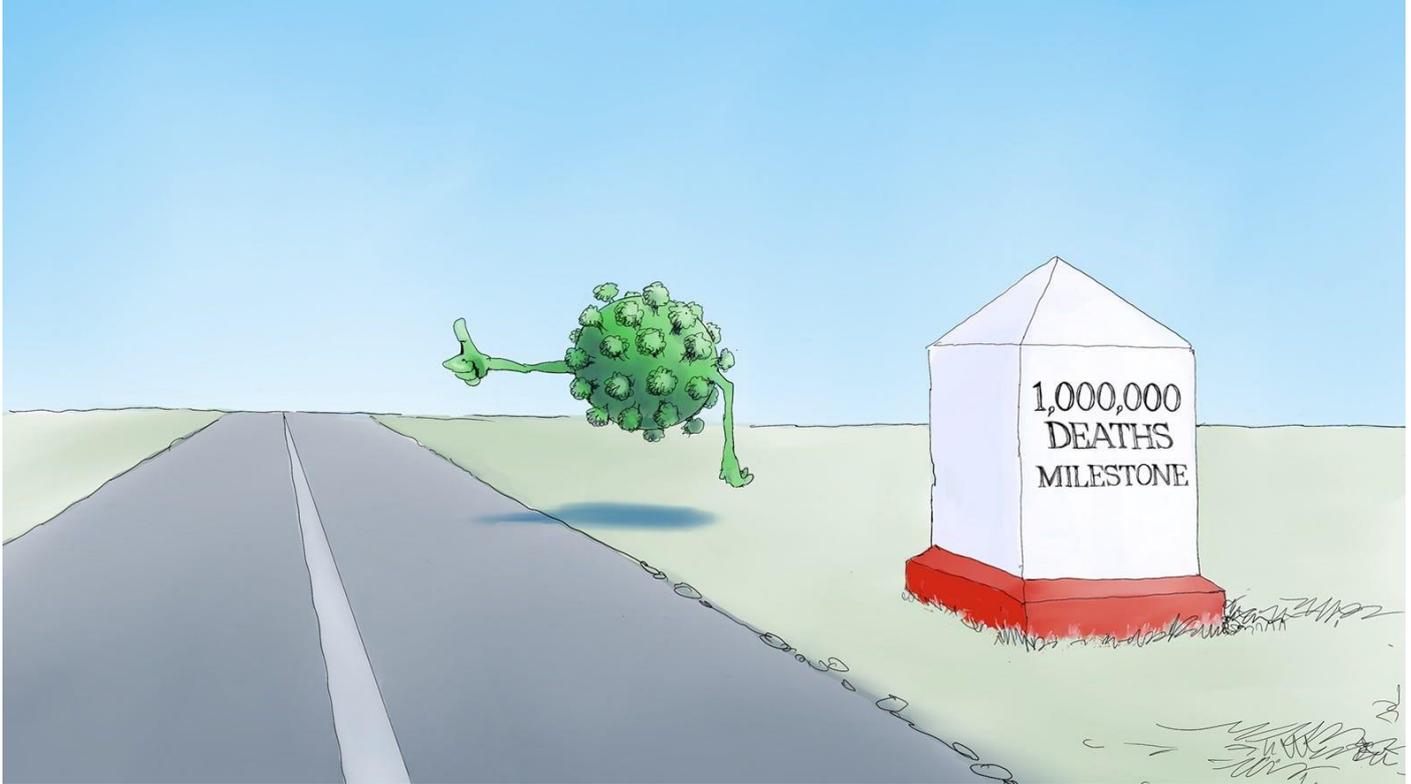
Now, a new study led by the School of Public Health and the University of Pennsylvania (UPenn) provides the first concrete data showing that many of these excess deaths were indeed uncounted COVID-19 deaths.

[Published in the journal PNAS](#), the study compared reported COVID-19 deaths to excess deaths due to non-COVID, natural causes, such as diseases and chronic illnesses, and found that increases in non-COVID excess deaths occurred at the same time or in the month prior to increases in reported COVID-19 deaths in most US counties.

Focusing on excess deaths by natural causes rather than all-cause excess death estimates provides a more accurate understanding of the true number of deaths attributable to COVID-19, as it eliminates



external causes for mortality, such as intentional or unintentional injuries, for which COVID-19 would not be a contributing factor. “Our findings show that many COVID-19 deaths went uncounted during the pandemic, says study corresponding author [Andrew Stokes](#), a [BU](#) associate professor of global health, who has led numerous studies [analyzing excess mortality](#) patterns and drivers during the pandemic.



The temporal correlation between reported COVID-19 deaths and excess deaths reported to non-COVID-19 natural causes offers insight into the causes of these deaths, he says. “We observed peaks in non-COVID-19 excess deaths in the same or prior month as COVID-19 deaths, a pattern consistent with these being unrecognized COVID-19 deaths that were missed due to low community awareness and a lack of COVID-19 testing.”

If the primary explanation for these deaths were healthcare interruptions and delays in care, the non-COVID excess deaths would likely occur after a peak in reported COVID-19 deaths and subsequent interruptions in care, says study lead author [Eugenio Paglino](#), a PhD student studying demography and sociology at UPenn. “However, this pattern was not observed nationally or in any of the geographic subregions we assessed,” Paglino says.

“This work is important because our ability to detect and correctly assign deaths during an epidemic goes to the heart of our understanding of the disease and how we organize our response,” says Nahid Bhadelia, founding director of the [Boston University Center for Emerging Infectious Diseases Policy and Research](#).

For the study, Stokes, Paglino, and colleagues utilized novel statistical methods to analyze monthly data on natural-cause deaths and reported COVID-19 deaths for 3,127 counties over the first 30 months of the pandemic, from March 2020 to August 2022. They estimated that 1.2 million excess natural-cause deaths occurred in US counties during this time period, and found that roughly 163,000 of these deaths did not have COVID-19 listed at all on the death certificates.

Analyzing both temporal and geographical patterns of these deaths, the researchers found that the gap between these non-COVID excess deaths and reported COVID-19 deaths was largest in nonmetropolitan counties, the West, and the South—and that the second year of the pandemic saw almost as many non-COVID excess deaths in the second year of the pandemic as in the first year, contrary to previous research. Meanwhile, metropolitan areas in New England and the Mid-Atlantic states were the only areas to report more COVID-19 deaths than non-COVID excess deaths.

Many of these geographical differences in death patterns are likely explained by differences in state policies, COVID death protocols, or political biases by local officials that influenced COVID policies, the researchers say. In rural areas, for example, COVID-19 testing was more limited, and political biases or stigma around COVID may have affected whether COVID-19 was listed on a death certificate. Conversely, reported COVID-19 deaths may have exceeded non-COVID excess deaths due to successful mitigation policies that encouraged physical



distancing and masking, and likely lowered cases of other respiratory diseases. Certain state protocols, such as in Massachusetts, also enabled death investigators to list COVID-19 as an official cause of death within 60 days of a diagnosis (until March 2022), rather than the 30-day limit in other states.

“Geographic variation in the quality of cause of death reporting not only adversely affected pandemic response in areas where COVID-19 deaths were underreported, but it also reduced the accuracy of our national surveillance data and modeling,” says study coauthor [Katherine Hempstead](#), senior policy adviser at the Robert Wood Johnson Foundation.

“Rapid detection of non-typical mortality patterns could pinpoint the emergence of local novel disease clusters and become an important tool for more effective pandemic mitigation,” says [Yannis Paschalidis](#), distinguished professor of engineering, director of the Hariri Institute, and principal investigator of a National Science Foundation project at BU on Predicting and Preventing Epidemic to Pandemic Transitions.

Importantly, these findings also disprove [political assertions](#) or [public beliefs](#) that have attributed mortality during the pandemic to COVID-19 vaccinations or shelter-in-place policies.

“Accurate information on how many people in a community die from COVID-19—or any other cause—is essential for making decisions about public health,” says study coauthor [Maria Glymour](#), chair and professor of epidemiology. “It is also important for families. Everyone deserves to know why a loved one died. Resources and commitment to ensure accurate death investigations are essential, and these findings of uncounted COVID-19 deaths indicate those resources are lacking in many communities.”

The researchers hope this new data will encourage future analyses using hospitalizations and other local data to continue to parse uncounted COVID-19 deaths from excess natural-cause as well as external deaths.

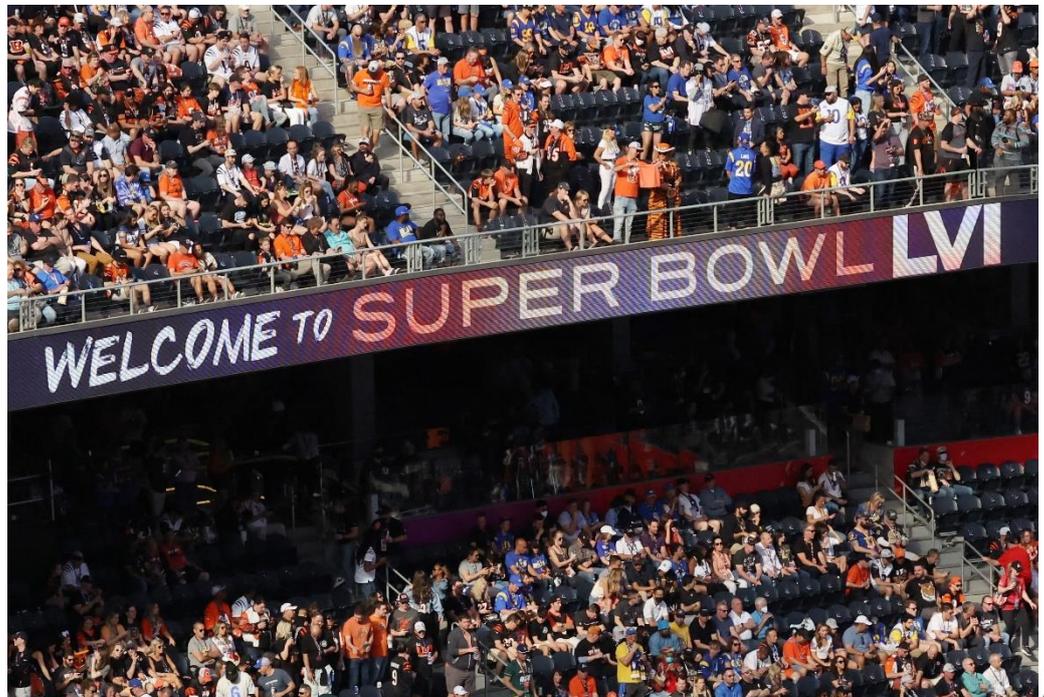
“This study documents the deadliness of COVID-19 and the effectiveness of public health interventions,” said Kristin Urquiza, who cofounded [Marked By COVID](#), the justice and remembrance movement led by COVID griever, after losing her father to COVID. “The least we can do to honor those who died is to accurately account for what happened.”

Mass-Gathering Events Like the Super Bowl Remind Us That Post-9/11 Security From Biological Attacks Still Lacking More Than 20 Years Later

By Joe Lieberman and Tom Ridge

Source: <https://www.hstoday.us/subject-matter-areas/cybersecurity/mass-gathering-events-like-the-super-bowl-remind-us-that-post-9-11-security-from-biological-attacks-still-lacking-more-than-20-years-later/>

Feb 08 – The terrorist attacks of September 11, 2001, changed our daily lives and the federal approach to security in ways that we still experience today. How we move through airports and tolerate more biometric and video surveillance across major cities are two examples. The two of us were privileged, as the chairman of the Senate Committee from which the creation of the Homeland Security Department came and the Department’s first Secretary, to be much involved in the restructuring of the federal government after 9/11 which we believe improved our homeland safety and security in many ways. Even the Super Bowl was



changed by 9/11. Before that fateful day, the Super Bowl had always been played in January. The NFL postponed a week of regular-season games in the aftermath of 9/11 which pushed the playoffs back,



resulting in the first Super Bowl played in February, as it remains to this day. One thing that has not changed in all these years – and that continues to frustrate us – is our nation's inability to quickly detect and respond to the release of deadly biological agents. As the Department of Homeland Security (DHS) and other federal agencies work with the NFL to prepare for the Super Bowl in Las Vegas on February 11, we are very troubled that we have not done all we could to help them do their jobs more effectively. The public is still at too much risk of biological illness, especially where large numbers of people gather. We cannot allow another year to pass with this broken system. This problem dates back to 2003, when the federal government launched BioWatch, a DHS system of nationally distributed detectors that sample the air for specific harmful pathogens in a few dozen U.S. cities. Ideally, if a terrorist were to drop, for instance, a vial of anthrax spores onto a subway platform, BioWatch would quickly detect it. The problem is BioWatch simply does not work. Rather than improving over time by incorporating the latest technological advancements, BioWatch instead relies on the same technology first installed 20 years ago. It relies on the wind blowing in optimal directions. It takes up to 36 hours to be able to alert for the possible presence of pathogens. And, it has limited ability to differentiate between normal background and deadly organisms. Making a bad situation worse, the federal agencies involved in determining what to do with BioWatch test results have often disagreed as to which course of action to take and do not always consult on-the-ground first responders, even though many response decisions fall to state and local leadership. In short, it is ineffective in assisting first responders such as those preparing to protect fans at the Super Bowl. We will again detail the shortcomings of BioWatch and provide specific recommendations on how it can be successfully fixed this spring, when the Bipartisan Commission on Biodefense, which we have co-chaired for ten years, releases an update of our 2015 foundational report, the [National Blueprint for Biodefense](#).

Much of the work of our Commission has been enacted by successive Administrations and Congress, resulting in numerous improvements in the way the federal government prepares for and responds to biological attacks and pandemics. We are proud of those achievements. However, BioWatch continues to be a gaping hole in our national defense.

DHS has attempted to acquire next generation technology for BioWatch in response to these concerns, including with its Biodetection in the 21st Century program, which the Department has turned on and off several times. In the meantime, even setting aside events like the Super Bowl with the highest Special Event Assessment Ratings, our nation's largest metropolitan areas simply do not have the tools they need on a daily basis to quickly identify, prevent, or better respond to what could easily become mass-casualty biological events. On-again-off-again programs and continued funding of nonfunctional technology are not an example of good government. The Department of Defense developed some new technology that showed promise and met with approval from the localities where it was piloted, including at the sight of another enormous American mass gathering – the Indianapolis 500. DHS should pick up where DOD left off, instead of starting again from scratch. For its part, Congress needs to make clear it is no longer willing to pour taxpayer dollars into non-functional BioWatch detectors. It's not a deterrent if it doesn't work, and if it's not a deterrent, it is a waste of money. With wars now raging in Ukraine and Gaza, nation states such as Russia, Iran, and North Korea actively working to develop biological weapons, and terrorists trying to obtain biological agents to attack us, the United States must urgently invest to improve this critical missing part of our homeland security.

[Joseph Lieberman](#) is an American politician, lobbyist, and attorney who served as a United States senator from Connecticut from 1989 to 2013.

[Tom Ridge](#) became the first Director of the Office of Homeland Security following the tragic events of September 11, 2001. On January 24, 2003, Ridge became the first Secretary of the U.S. Department of Homeland Security.

Attributing Biological Weapons Use

Source: <https://www.homelandsecuritynewswire.com/dr20240212-attributing-biological-weapons-use>

Feb 12 – The White House has given the U.S. Department of Defense (DoD) a lead role in U.S. efforts to strengthen the United Nations Secretary-General's Mechanism for Investigation of Alleged Use of Chemical and Biological Weapons (UNSGM). In 2022, a White House report highlighted the importance of determining the facts related to the attribution of alleged use of biological weapons (BW), including toxin weapons. That 2022 report aimed to outline the U.S. government's approach to counter the full range of possibly catastrophic biological incidents, whether natural, accidental, or deliberate, and outlines goals and objectives for strengthening the biodefense enterprise. It also identifies priorities and target areas for each mission objective during a biological incident.

In a new [report](#) from [RAND](#), the authors examine issues related to the attribution of BW use and identify areas in which DoD could enhance its capabilities to (1) support U.S. investigative capabilities into alleged uses of biological and toxin weapons and (2) strengthen international efforts, specifically United Nations mechanisms, to hold state and nonstate actors accountable for BW use.



Key Findings

Attribution of BW is important for reasons beyond holding an actor(s) responsible

- ❖ Developing and maintaining robust capabilities and processes in conducting investigations of BW use can provide a deterrent against their use, improve understanding of adversaries' BW-related capabilities and doctrine, and inform improvements to biodefense capabilities.

Attribution is difficult but essential to support international efforts to counter BW

- ❖ A range of technical capabilities is needed to first identify that a biological incident occurred and then determine the origin or establish attribution.
- ❖ Various national and international biosurveillance systems are in place to monitor for biological agents and to report in real time whether a biological incident has occurred.
- ❖ Laboratory personnel need technologies to analyze physiological, environmental, and other samples sufficiently to identify characteristics that could help identify the biological agent's origin.
- ❖ Microbial forensics involves using epidemiology and microbiologic technology to characterize biological agents and identify their origins, whether natural or synthetic.

High-quality evidence could help distinguish natural or accidental biological incidents from deliberate ones

- ❖ Determining the cause of a biological incident is complicated because some biological agents have natural, common sources and can cause natural or accidental outbreaks of disease.
- ❖ The proper collection, handling, analysis, and reporting of evidence facilitate attribution.
- ❖ Investigation teams should be trained on proper collection, handling, analysis, and reporting of evidence and should have the necessary equipment to do so.

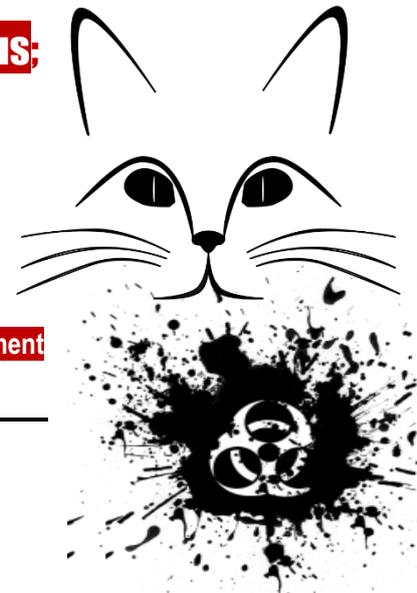
Recommendations

- ❖ DoD should enhance and build flexibility and redundancy, as appropriate, into its processes and capabilities to investigate and attribute biological incidents.
- ❖ DoD should continue to work with allies to build their capabilities to collect information and samples related to biological incidents, especially those that occur in locations where DoD has fewer allies or less access.
- ❖ DoD should exercise and update processes to conduct sampling-related activities, including collecting samples, handling and transporting samples, communicating and collaborating with other U.S. government departments and agencies, protecting patient information, communicating and collaborating with allies, analyzing samples, and reporting and sharing results of sample analysis.
- ❖ DoD should improve and exercise procedures to maintain and document chain of custody for samples collected from biological incidents.
- ❖ DoD should exercise and update processes to collect intelligence information, including interviewing victims, witnesses, and medical personnel.
- ❖ DoD should enhance efforts to train U.S. personnel and partners on methodologies to collect and analyze evidence during investigations of alleged BW use and on processes to share and report results.
- ❖ DoD should continue to invest in biotechnology, including microbial forensic technology. Officials should develop, improve, and refine capabilities to model biological incidents.
- ❖ DoD should consider investing in field-deployable technology or ways of quickly transporting such analytical capabilities to the field to facilitate rapid response to biological incidents.
- ❖ DoD should maintain transparency about DoD efforts to work with international partners on biosecurity and biodefense efforts.
- ❖ DoD should continue countering false narratives that it is supporting offensive BW-related work worldwide.

Alaska man is first reported person to die of Alaskapox virus; exposure may be linked to stray cat

Source: <https://www.cbsnews.com/news/alaska-man-dies-alaskapox-virus-fatality-stray-cat/>

Feb 13 – An elderly man in Alaska has died from [Alaskapox](#), the first known fatality from the recently discovered virus, state health officials said. It's unclear how the man contracted the virus but officials say it's possible that it could be linked to a stray cat that lived with him. The man, who lived in the remote Kenai Peninsula, was hospitalized last November and died in late January, [according to a bulletin](#) released Friday from Alaska public health officials. **The man was undergoing cancer treatment**



ICI C²BRNE DIARY – February 2024

and had a suppressed immune system because of the drugs, which may have contributed to the severity of his illness, the bulletin said. It described him as elderly but didn't provide his age. Alaskapox, also known as AKPV, is related to smallpox, cowpox and mpox, health officials said. **Symptoms** can include a rash, swollen lymph nodes and joint or muscle pain. Immunocompromised people might be at increased risk for more severe illness, officials said.

Only six other cases of the virus have been reported to Alaska health officials since the first one in 2015. All involved people were living in the Fairbanks area, more than 300 miles from the Kenai Peninsula, health officials said. All had mild cases and recovered without being hospitalized.

The man who died "resided alone in a forested area and reported no recent travel and no close contacts with recent travel, illness, or similar lesions," the health bulletin said.

Virus may be linked to cat

It's unclear how AKPV is transmitted but researchers say it may be zoonotic, meaning it can jump from animals to humans. The bulletin said that tests found evidence of current or previous infection in several species of small mammals in the Fairbanks area, including red-backed voles, and at least one domestic pet.

The man said he had cared for a stray cat at his home, the bulletin said.

The cat tested negative for the virus but it "regularly hunted small mammals and frequently scratched the patient," the bulletin said. That opens the possibility that the cat had the virus on its claws when it scratched him. The bulletin said a "notable" scratch near the armpit area where the first symptom — a red lesion — was noted.



An Alaskapox lesion about 10 days after symptom onset. Alaska Health Department

"The route of exposure in this case remains unclear, although scratches from the stray cat represent a possible source," officials wrote. Health officials said there hasn't been any documented cases of humans passing on the virus but they urged caution for people with skin lesions. "We advise individuals with skin lesions potentially caused by Alaskapox to keep the affected area covered with a bandage and avoid sharing bedding or other linens that have come into contact with the lesion," [health officials say](#).



Health authorities also urged Alaskans to follow federal health precautions when around wildlife to avoid potential Alaskapox infections.

The U.S. Centers for Disease Control and Prevention recommends washing hands with soap and water after contacting wild animals or their feces. Hunters should always wear gloves when handling dead animals, even if they are freshly killed, the agency suggests. The news comes as health officials in Oregon recently confirmed a [rare case of human plague](#) in a resident who was likely infected by their pet cat.

The CDC may end the isolation period for COVID-19. Some experts think the change reckless



By Matt Field

Source: <https://thebulletin.org/2024/02/the-cdc-may-end-the-isolation-period-for-covid-19-some-experts-think-the-change-reckless/>



Feb 14 – The Centers for Disease Control and Prevention (CDC) is expected to soon change its guidance for people infected with COVID-19 by eliminating the five-day isolation period, news that public health experts greeted with a mix of reactions. To some, the expected shift reflects a realistic appraisal of the facts on the ground while still providing at least some advice on how to prevent infections. To others, the move represents a cave by the CDC that doesn't take into account the pandemic's continued toll, particularly the threat of long COVID.

The new COVID guidance will mirror that for influenza and other respiratory ailments, *The Washington Post* and other media reported Tuesday. As is the case for people sick with the flu, those who test positive or become sick with COVID should stay home until they are feeling better and are fever free without the aid of medication for 24 hours, the new guidance is expected to recommend. Some experts point to the higher risks of COVID compared to the flu—particularly the risk of developing potentially debilitating cases of long COVID, which can leave people chronically fatigued and cause damage to organ systems—as reasons why society should still treat COVID differently than seasonal



respiratory ailments. Six percent of survey respondents in the United States reported long COVID symptoms last summer, [according](#) to the CDC.

"This is a reckless policy change that will only serve to promote more spread of COVID and long COVID," Eric Topol, director of the Scripps Research Translational Institute, told *CNN*. In a statement, a CDC spokesperson said the agency had no updates to the COVID guidance to report. "We will continue to make decisions based on the best evidence and science to keep communities healthy and safe," the statement said.

Lara Jirmanus, a clinical instructor at Harvard Medical School, [told the Post](#) that COVID is deadlier than the flu and therefore should be treated differently. Dialing back the isolation guidance "sweeps this serious illness under the rug," Jirmanus said. A study from last summer found that an infection with the omicron variant of SARS-CoV-2, the virus that causes COVID, carried [four times](#) the risk of death that influenza poses.

While there were fewer COVID deaths in 2023 than in previous years of the pandemic, more people sick with COVID died last year than died of the flu during even the worst flu season since 2010. According to CDC data, there were [73,000 COVID deaths](#) between Jan. 7, 2023 and Jan. 6, 2024. By contrast, the highest number of estimated [flu deaths](#) since the 2010-2011 flu season was 52,000. Many years saw far fewer estimated deaths.

In the pandemic's fifth year, [most people](#) have some level of immunity to SARS-CoV-2. There are also now effective vaccines and [treatments](#) that lower the risk of severe outcomes that didn't exist earlier in the pandemic.

The new guidance is expected to echo policies already in place in [Oregon, California](#) and other jurisdictions, including [Singapore](#), where a five-day isolation period is no longer recommended. California's state epidemiologist Erica Pan told the *Post* that one potential consequence of recommending stringent isolation guidelines is that they can de-incentivize people from testing for COVID in the first place, preventing those who could benefit from antiviral treatments from getting them.

Some experts have pointed out that many people are not following the CDC's isolation guidance, which was last revised in 2021. They aren't testing or taking precautions. The CDC's guidance shift may reflect what people are already doing.

"Currently, many of our citizens are no longer testing for COVID-19 and are not actively isolating," Clay Marsh, West Virginia's COVID-19 czar [told CNN](#). "With the caveat of the risk of long COVID and the potential for mortality in the elderly and immunocompromised, the future guidance by CDC meets the standard we are seeing."

That may be the standard, but, in the view of some, it's a low bar.

Syra Madad, senior director of the special pathogens program at NYC Health and Hospitals, [told The New York Times](#), that the CDC should "seize this opportunity to truly change how we respond to deadly epidemics and pandemics and advocate for national, guaranteed paid sick and family leave, instead of caving into the easier option of eliminating the isolation period."

[Matt Field](#) is an associate editor at the *Bulletin of the Atomic Scientists*. Before joining the *Bulletin*, he covered the White House, Congress, and presidential campaigns as a news producer for Japanese public television. He has also reported for print outlets in the Midwest and on the East Coast. He holds a master's degree in journalism from Northwestern University.

Long COVID Seems to Be a Brain Injury, Scientists Discover

Source: <https://www.sciencealert.com/long-covid-seems-to-be-a-brain-injury-scientists-discover>

Feb 16 – Some form of brain injury could be behind the symptoms reported by those with [long COVID](#), according to a new study, and adapting tests and treatments to match could aid progress in tackling the condition.

Analyzing 203 patients [hospitalized with COVID-19](#) or its associated symptoms, and comparing the results with 60 people without the infection, researchers noticed elevated levels of four brain injury biomarkers – key signs of biological change – in those infected with [COVID-19](#).

What's more, two of those signs of brain injury persisted into the recovery phase, suggesting that they continue even after the COVID-19 infection has gone. Levels of these two biomarkers were even higher for people who also experienced [neurological complications](#) with COVID-19.

"Our study shows that markers of brain injury are present in the blood months after COVID-19, and particularly in those who have had a COVID-19-induced brain complication," [says](#) neuroscientist Benedict Michael from the University of Liverpool in the UK.

"This suggests the possibility of ongoing inflammation and injury inside the brain itself which may not be detected by blood tests for inflammation." These brain complications associated with COVID-19 have ranged from mild (headaches) to potentially life-threatening (seizures, stroke, and [encephalitis](#)). As previous research has shown, the consequences [can be long-lasting](#).





Michael and team think that abnormal responses by the body's [immune system](#) could be causing the signs of injury they're seeing. If we can find out more about these responses and how they're triggered, new treatments could be developed.

It's now clear that COVID-19 plays some role in impacting the nervous system, and in some cases this impact can continue for an extended period. This new study shows that the effects can be similar to [brain injuries](#).

"The clinical characteristics of our participant cohorts, and the elevation in brain injury markers, provide evidence of both acute and ongoing neurological injury," [write](#) the researchers in their published paper.

The researchers are already hard at work following up on their study, looking at how the damage caused by COVID-19 and the associated inflammation might lead to [cognitive problems](#) and mental health issues further down the line.

It's thought that [tens of millions](#) of people are now living with long COVID in some form, and yet it's still not a condition that we know all that much about. Studies continue to try to [spot patterns](#) in its prevalence, which should eventually provide more clues as to how to combat it. "This work may help set the stage for elucidating the possible underlying mechanisms of these complications," [says](#) immunologist Leonie Taams, from King's College London in the UK.

●► The research has been published in [Nature Communications](#).

New biosecurity group aims to prevent biotech disasters

By Robert F. Service

Source: <https://www.science.org/content/article/new-biosecurity-group-aims-prevent-biotech-disasters>

Feb 15 – Biosecurity experts today launched a new international nonprofit designed to prevent modern biotechnology from causing harm. Known as the [International Biosecurity and Biosafety Initiative for Science](#) (IBBIS), the group aims to develop technological and policy guardrails to reduce the risk that biotech tools, such as the ability to synthesize and edit DNA, are accidentally or deliberately used to create deadly toxins and pathogens.

Biologists have long hailed a culture of open science, freely sharing reagents, tools, and open-access publications. But in recent years, researchers have also [shown they can build dangerous viruses and other microbes from scratch](#). Dozens of companies worldwide that print DNA sequences on demand for biology experiments make it even easier to synthesize a pathogen. This advance, along with new gene-editing tools, such as CRISPR, and easy access to artificial intelligence (AI), have raised concerns that bioterrorists could use such tools to create bioweapons, or that legitimate scientists might create new infectious agents by mistake.

"Biological threats present a significant global security risk, and the stakes couldn't be higher," says nuclear physicist Ernest Moniz, former U.S. secretary of energy who is now CEO of the Nuclear Threat Initiative (NTI), which raised money from donors to launch IBBIS. The United States and many other countries regulate labs working on dozens of "select agents," microbes that pose a danger to humans, animals, and plants, as well as certain toxins.



But malign actors could potentially [evade those rules and create dangerous pathogens](#) by using DNA printing tools, along with gene-editing and splicing protocols, to assemble harmful gene sequences. Jaime Yassif, NTI's vice president for global biological policy and programs, argues current regulations leave too much room. "We are looking to fill those gaps," she says.

The group's first project is to distribute a free software tool aimed at helping DNA synthesis companies screen DNA orders and customers for potential malicious actors. If the software flags suspicious sequences or determines that a customer is not legitimate, the company can choose to not fill the order, or in rare cases alert law enforcement in the customer's jurisdiction, Yassif says.

Such DNA screening tools already exist but aren't required by any national government. And screening carries a cost. One result, according to the International Gene Synthesis Consortium: Firms that voluntarily screen orders account for only about 80% of the DNA synthesis market, meaning roughly one in five orders goes unscreened.

Yassif says that in addition to the financial burden, some DNA printing companies say they don't know how exactly the screening software works and what is being tracked. In addition, many of the screening software developers have been funded by the U.S. government, she says, raising suspicions from companies in other parts of the world. "We're not aligned with one political group or another. So, we're more likely to be trusted," Yassif says. IBBIS intends to collaborate with all companies and governments so they will want to adopt its software.

Sarah Carter, a biosecurity consultant with Science Policy Consulting LLC, says IBBIS's approach is a welcome development. "IBBIS fills a critical need in the international community as a resource for best practices among nucleic acid providers," she says.

Piers Millett, IBBIS's executive director, says beyond DNA screening, the group is also looking to develop free software packages to help funding agencies, researchers, and publishers screen written reports and scientific manuscripts to ensure they don't reveal methods for making pathogens and toxins. Another eventual target, he says, is to tackle concerns that [AI systems could provide detailed instructions on building bioterror agents](#). "It may or may not be possible to plug all the gaps," Yassif says. "But we want to create incentives for people to do the right thing."

Robert (Bob) Service writes about chemistry and materials science, delving into topics ranging from solar energy and fuel cells to proteomics and artificial bone. Service majored in psychology and international studies at the University of Oregon. From there he moved on to work on a research project at Oregon Health Sciences University. After a short stint in research, Service decided he preferred writing about research to actually carrying it out. So, it was off to New York University, where he earned a master's degree in journalism at the school's Science and Environmental Reporting Program.

BARDA Offers Preclinical Testing Assistance for Botulinum Neurotoxin Candidate Therapeutics

Source: <https://globalbiodefense.com/2024/02/09/barda-offers-preclinical-testing-assistance-for-botulinum-neurotoxin-candidate-therapeutics/>

Feb 09 – The [Biomedical Advanced Research and Development Authority \(BARDA\)](#) is accepting submissions from therapeutic developers for preclinical testing services to advanced [botulinum neurotoxin \(BoNT\)](#) therapeutics and help bolster national preparedness against biological threats. Demonstrating a therapeutic candidate's effectiveness can be challenging due to the costs associated with testing. The BoNT-CTSS studies will be performed confidentially by one of BARDA's nonclinical network providers at no cost to participants. While no direct financial support is available through this testing service, control data and product-specific data will be shared with participants and can be published in collaboration with BARDA. Candidate therapeutics selected for testing will be evaluated for efficacy against up to four BoNT serotypes in preclinical pre- and/or post-intoxication models of botulism.

Candidates may include small molecules, antibodies, and other biologics, and study designs will be discussed in collaboration with the developer. After evaluation in BoNT-CTSS, candidates of interest could be considered for advanced development by BARDA.

BARDA will accept candidates on an ongoing basis. Researchers from academic institutions, industry, and government institutions are eligible to apply. Additional information about this program, including a full list of eligibility requirements, is available at BARDA's [CBRN Antivirals and Antitoxins Medical Countermeasures Program](#) webpage.

READ ALSO

[An Overview of Bacterial Toxigenesis and a Potential Biological Weapon in Warfare](#)

The bacterial toxins such as botulinum, conotoxins, *Clostridium perfringens*, epsilon toxin, saxitoxins, shigatoxins, tetrodotoxins, can be used in bioterrorism due to high toxicity and short incubation time. The promising role of nanomaterials in the detection of bacterial toxins is summarized highlighting their



advantages, need principles, and limitations in terms of sensitivity, accuracy, simplicity, sensitivity, cost effectiveness and multiplexing capability. (*Poisoning – Prevention, Diagnosis, Treatment and Poison Repurposing Jan 2024*)

[Virtual Screening Approach for Identifying the Potent Antidote Against Botulinum Neurotoxin Serotypes A, B, E, and F](#)

Botulinum neurotoxins are the most poisonous substances reported and listed in category 'A' of biowarfare agent. These neurotoxins cause flaccid paralysis of muscles by inhibiting acetylcholine release at the neuromuscular junction, and leads to death. The light chain (catalytic domain) is responsible for cleavage of SNAREs and inhibition of its activity stops the progress of neuroparalysis. Serotype identification is a time-consuming process; hence development of inhibitor against human botulism causing serotypes will be advantageous. In present study, ligand-based in silico method was applied to identify the "hits" against human intoxicating BoNTs based on their binding affinities and ADMET analysis. A computational approach for docking 35 designed ligands to the catalytic domain of serotype BoNT/A; B; E and F, using Molegro Virtual Docker and AutoDock suite was performed. (*Europe PMC*)

[Glycan-modified Cellular Nanosponges for Enhanced Neutralization of Botulinum Toxin](#)

Currently, there is a lack of effective countermeasures to combat BoNT intoxication in the event of a biological attack. Here researchers report on a novel solution by combining cell metabolic engineering with cell membrane coating nanotechnology, resulting in the development of glycan-modified cellular nanosponges that serve as a biomimetic and broad-spectrum BoNT detoxification strategy. The team increased the expression levels of gangliosides on THP-1 cells through metabolic engineering, and then collect the modified THP-1 cell membrane and coat it onto synthetic polymeric cores, creating cellular nanosponges that closely mimic host cells. Findings demonstrate that higher levels of gangliosides on the cellular nanosponges result in greater binding capacities with BoNT. (*Biomaterials Nov 2023*)

[A Human Bispecific Antibody Neutralizes Botulinum neurotoxin Serotype A](#)

There has been little research about bispecific antibodies in the passive immunotherapy of BoNT/A. Here researchers aimed to construct a bispecific antibody (termed LUZ-A1-A3) based on the anti-BoNT/A human monoclonal antibodies (HMAb) A1 and A3. LUZ-A1-A3 binds to the Hc and L-HN domains of BoNT/A, displaying potent neutralization activity against BoNT/A (124 × higher than that of HMAb A1 or HMAb A3 alone and 15 × higher than that of the A1 + A3 combination). (*Nature – Nov 2023*)

Structure-based design and optimization of a new class of small molecule inhibitors targeting the P-stalk binding pocket of ricin

By Michael J. Rudolph, Arkajyoti Dutta, Anastasiia M. Tsybal, et al.

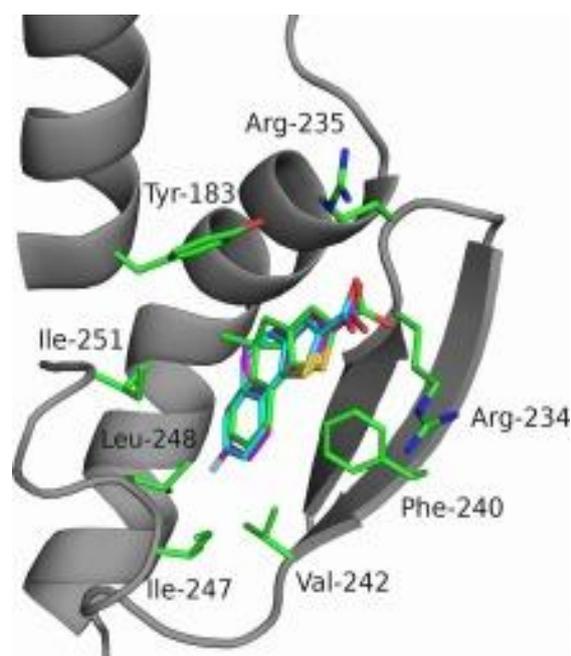
Bioorganic & Medicinal Chemistry | Volume 100, 15 February 2024, 117614

Source: <https://www.sciencedirect.com/science/article/pii/S0968089624000282>

Highlights

- Structure-based design identifies a new class of compounds, which block ribosome binding of ricin by a novel mechanism.
- A new fluorescence polarization was developed to enable SAR evaluation, which showed that carboxylic acid is critical.
- X-ray co-crystal structure of ricin toxin A subunit with three compounds show a unique binding mode in the P-stalk pocket.
- A lead compound showed ~60-fold improved affinity and submicromolar potency and inhibited ricin and Shiga toxin 2 in cells.
- P-stalk binding site of RTA is a validated target for allosteric inhibition of the active site.

RTA (green) bound to RU-NT-93 (red) superposed with RU-NT-206 (green) and P11 (gray) depicting the similar space occupied by the 2,6-dimethylphenyl ring in RU-NT-93 and benzene ring in RU-NT-206 and the P11 peptide Phe10 and Leu9 residues. All molecules are drawn as sticks. All nitrogen atoms are colored blue, all oxygen atoms are colored red, and all sulfur atoms are colored yellow.



Abstract

Ricin, a category-B agent for bioterrorism, and Shiga toxins (Stxs), which cause food poisoning bind to the ribosomal P-stalk to deplete the sarcin/ricin loop. No effective therapy exists for ricin or Stx intoxication. Ribosome binding sites of the toxins have not been targeted by small molecules. We previously identified **CC10501**, which inhibits toxin activity by binding the P-stalk pocket of ricin toxin A subunit (RTA) remote from the catalytic site. Here, we developed a fluorescence polarization assay and identified a new class of compounds, which bind P-stalk pocket of RTA with higher affinity and inhibit catalytic activity with submicromolar potency. A lead compound, **RU-NT-206**, bound P-stalk pocket of RTA with similar affinity as a five-fold larger P-stalk peptide and protected cells against ricin and Stx2 holotoxins for the first time. These results validate the P-stalk binding site of RTA as a critical target for allosteric inhibition of the active site.

So you think you know all about the plague?

By Michaeleen Doucleff

Source: <https://www.npr.org/sections/goatsandsoda/2024/02/14/1231215446/so-you-think-you-know-all-about-the-plague>



A 15th century woodcut depicts a patient suffering from the bubonic plague. A pandemic of the disease, the Black Death, killed an estimated 50 million people in Europe between 1346 and 1353. Pictures from History/Universal Images Group/Getty Images

Feb 14 – The bubonic plague has cropped up in Oregon for the first time in nearly a decade.

This time a person likely caught it from their cat, health officials in the central part of the state [said](#) last week. Doctors identified the disease quickly and treated the person with antibiotics. They also tracked down all the person's contacts (and the cat's contacts) and gave them medication as well. So they don't expect the disease to spread or cause any deaths.

Most people know the basics about the plague.

They know that in the 14th century it caused the Black Death — the pandemic that may have killed 30% to 50% of the population in parts of Europe, with an estimated death toll of at least 50 million. And they know that it spreads through rodents and the fleas that bite them.

But over the last decade, scientists have learned way more about the plague and how our bodies respond to it. Here are a few plague revelations.



People of European descent may carry a gene (or two) that protects them against the plague

When the Black Death spread through Europe and the United Kingdom back in the 1300s, the disease changed more than society: It also likely altered the evolution of people's genome.

A study, [published](#) in 2022, found that people who survived the plague in London and Denmark had mutations in their genomes that helped protect them against the plague pathogen, *Yersinia pestis*.

Altogether, the researchers found four helpful mutations in people's genomes. The advantage was quite substantial. One mutation boosted people's chance of surviving the plague by 40%, the study estimated. That's the biggest evolutionary advantage ever recorded in humans for a single mutation, researchers [told](#) NPR.

Survivors passed those mutations to their descendants, and many Europeans — as well as Americans of European descent — still carry those mutations today.

But these helpful genes have likely come at a cost. One of the mutations increases a person's risk of autoimmune diseases, such as Crohn's disease.

After decades of silence, the plague can reemerge in a region

Each year, the world [records](#) 200 to 700 cases of plague, although many cases likely go undetected. Most of these cases occur in hot spots around the globe, such as Madagascar, which accounts for about three-quarters of the world's cases. The U.S. typically records fewer than a dozen cases each year, with most of them occurring in [the West](#).

But really, *Y. pestis* can crop up almost anywhere, even in places where scientists think they've eradicated the disease or haven't seen it in decades.

That's exactly what happened in Libya. After no record of plague cases for 25 years, the disease appeared again in 2009. At first, scientists thought perhaps somebody — or an animal — had brought in the pathogen from a neighboring country. But when they decoded the bacteria's DNA, it revealed a surprise: The plague in Libya most closely resembled *Y. pestis* that originated in Central Asia thousands of years ago (and didn't look like the bacteria found in a neighboring country).

"We think the plague is extinct in these places, but it's not," microbiologist Elisabeth Carniel at the Institut Pasteur [told](#) NPR for a January 2013 story. "The plague is still there."

So where is it hiding? It's likely circulating, undetected, in rodents and the fleas they carry. Maybe the bacterium is at such low levels that it goes undetected for decades.

Even when antibiotics are available, one form of the plague can have an extremely high fatality rate

The plague comes in several versions, depending on which body part the bacteria invade. When a flea bites a person, the individual typically develops what's called bubonic plague. In this case, the telltale sign is one or more swollen and painful lymph nodes, known as buboes. (The word "bubonic" comes from the Greek *boubon*, which means groin, because some people have swollen lymph nodes in their groin.) Doctors can diagnose the disease by taking a sample from the person's blood or lymph nodes and then submitting the sample to a lab for testing.

But when the bacteria spread to the lungs, this can cause what's called pneumonic plague. In this case, there's often no telltale sign of the plague, [according](#) to the Centers for Disease Control and Prevention.

This version is much more dangerous, says medical entomologist [Adelaide Miarinjara](#) at Emory University. "It transmits pretty easily between people because it spreads through droplets, almost like COVID spreads."

And people can die more quickly with pneumonic plague, she adds, because the disease progresses more rapidly. "The key here is early diagnosis. If people aren't expecting it or don't seek treatment, they can die."

In 2017, Madagascar suffered a large outbreak of pneumonic plague when a person from a rural part of the country brought the disease to the coastal city of Toamasina. That city hadn't seen a case of the plague in nearly a century, says Miarinjara, who was in Madagascar at the time. "A person transmitted the disease on public transportation," she says.

The country [recorded](#) more than 2,400 suspected cases, including nearly 1,900 cases of pneumonic plague. One study estimated that about 25% of people with confirmed cases died in this outbreak.

Plague bacteria make fleas vomit

In the Western U.S., all sorts of rodents can carry the plague, including chipmunks, squirrels and prairie dogs. And they can transmit the bacteria to humans through bites and scratches. (When I was in college in Pasadena, Calif., back in the early 1990s, a classmate caught the plague from a squirrel she was feeding.)

But most of the time, rodents — and often people — catch *Y. pestis* from a flea bite. And scientists now have a detailed understanding of how the flea transmits the bacteria during this bite.



When a flea itself is infected, the plague bacteria live inside the insect's gut. There, the bacteria create a gooey, sticky material, called a biofilm. This film forms a little plug in the flea's throat, making it hard for the insect to swallow. So when the flea bites an animal, instead of swallowing the animal's blood, the flea essentially vomits the biofilm — along with the plague bacteria — into the animal's blood.

"You can imagine, you have something stuck in your throat and you try to take in some water but can't. You will vomit all that water out, and that's what happens to the flea," microbiologist [Viveka Vadyvaloo](#) told the [Washington State University Insider](#) in 2021. "The blocked, starving flea will repeatedly bite its rodent or human host, creating more opportunities for infection."

The Black Death gave rise to the word "quarantine"

The idea of isolating, or quarantining, sick people [dates back](#) at least 3,000 years. The Book of Leviticus in the Bible mentions how to isolate people with leprosy.

But the word "quarantine" itself [arose](#) during the Black Death, when the city-state of Dubrovnik, now part of the country of Croatia, enacted what is likely the first state-imposed isolation.

At the time, Dubrovnik was a wealthy merchant city along the coast of the Adriatic Sea. City leaders wanted to keep the bubonic plague out. So they began to force visitors to wait for 40 days on a remote island outside the city before coming ashore.

They called the wait *quarantino*, from the Italian word for "40."

"The first quarantine was pretty much improvised," Ivana Marinavić, the head of educational programs at the [Lazarettos of Dubrovnik](#), told [NPR in 2021](#). The Lazarettos were the first buildings ever constructed for the sole purpose of quarantining.

If you broke the quarantine during the plague, the consequences were severe. "Torture, or cutting your nose or your ears off," Marinavić told NPR.

Michaeleen Doucleff, PhD, is a correspondent for NPR's Science Desk. For nearly a decade, she has been reporting for the radio and the web for NPR's global health outlet, Goats and Soda. Doucleff focuses on disease outbreaks, cross-cultural parenting, and women and children's health. In 2014, Doucleff was part of the team that earned a George Foster Peabody award for its coverage of the Ebola outbreak in West Africa. In 2021, Doucleff published a book, called *Hunt, Gather, Parent*, stemming from her reporting at NPR. That book became a *New York Times* bestseller. Before coming to NPR in 2012, Doucleff was an editor at the journal *Cell*, where she wrote about the science behind pop culture.

Metal-organic frameworks-promoted detection of hazardous chemicals for anti-terrorism application

By Meng Zhang, Mingyuan, Xiang Li, Qian-You Wang, and Qinglang Ma

TrAC Trends in Analytical Chemistry | Volume 172, March 2024, 117558

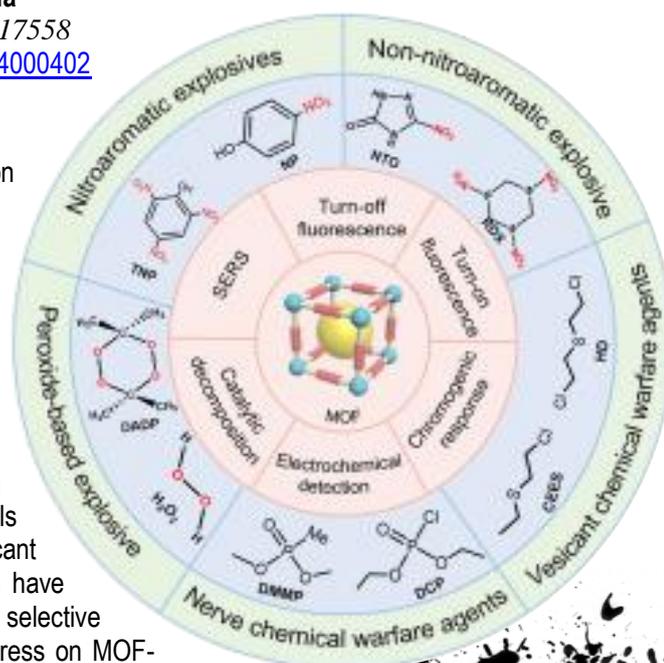
Source: <https://www.sciencedirect.com/science/article/abs/pii/S0165993624000402>

Highlights

- Emerging explosives and chemical warfare agent sensors based on MOFs are comprehensively reviewed.
- The principle, performance, and feature of various MOFs-based sensor for the detection of hazardous chemicals are introduced.
- Current challenges and future directions in designing functional MOFs-based for hazardous chemicals sensor are discussed.

Abstract

Hazardous chemicals, such as explosives and chemical warfare agents, are commonly used during terrorist attacks, which have been threatening the global public safety. Real-time detection of specific hazardous chemicals is thus an important way to prevent terrorist activities but remains a significant technical challenge. In recent years, metal-organic frameworks (MOFs) have been widely studied as promising candidates to achieve highly sensitive and selective detection. In this review, we summarized the most recent research progress on MOF-



based sensors for the precise and rapid detection of hazardous chemicals. We provided a general introduction into the various mechanisms for hazardous chemicals detection and the most recent research progress on the detection of various types of hazardous chemicals using MOFs. Finally, current challenges and possible future directions toward practical application were proposed. This review highlights the great premise of MOFs in the field of hazardous chemical detection.

Long-Term Pulmonary Damage in Surviving Antitoxin-Treated Mice following a Lethal Ricin Intoxication

By Yoav Gal, Anita Sapoznikov, Shlomi Lazar, et al.

Toxins 2024, 16(2), 103

Source: <https://www.mdpi.com/2072-6651/16/2/103>

Abstract

Ricin, a highly potent plant-derived toxin, is considered a potential bioterrorism weapon due to its pronounced toxicity, high availability, and ease of preparation. Acute damage following pulmonary ricinosis is characterized by local cytokine storm, massive neutrophil infiltration, and edema formation, resulting in respiratory insufficiency and death. A designated equine polyclonal antibody-based (antitoxin) treatment was developed in our laboratory and proved efficacious in alleviating lung injury and increasing survival rates. Although short-term pathogenesis was thoroughly characterized in antitoxin-treated mice, the long-term damage in surviving mice was never determined. In this study, long-term consequences of ricin intoxication were evaluated 30 days post-exposure in mice that survived antitoxin treatment. Significant pulmonary sequelae were demonstrated in surviving antitoxin-treated mice, as reflected by prominent histopathological changes, moderate fibrosis, increased lung hyperpermeability, and decreased lung compliance. The presented data highlight, for the first time to our knowledge, the possibility of long-term damage development in mice that survived lethal-dose pulmonary exposure to ricin due to antitoxin treatment.

Inflammation or infection: The debate over COVID's effect on the brain

Source: <https://newatlas.com/health-wellbeing/inflammation-infection-covid-brain/>

Feb 18 – Perhaps one of the most persistent debates around COVID has been the reason behind the disease's neurological symptoms. Ever since SARS-CoV-2 emerged in late 2019 the virus has been known for its novel effects on the brain: Extreme fatigue, cognitive abnormalities, loss of smell and taste, and brain fog. But exactly how is it causing these symptoms?

Two hypotheses quickly emerged. One school of thought suggested these neurological issues were caused by the virus directly infiltrating the brain and infecting brain cells. Through this process, neurons were destroyed and the body's inflammatory response then caused even more damage.

The other hypothesis argued secondary systemic inflammation was the source of these neurological symptoms. The virus was not directly damaging the brain but the body's excessive immune response to the infection was causing the problems.

Evidence has since emerged backing both ideas. Animal and cell studies, for example, [have clearly demonstrated](#)

[the virus can hypothetically](#) infect brain cells. Of course, proving this is happening in humans is nearly impossible since we can't exactly put a living brain under the microscope. So autopsy investigations have relied mostly on looking for faint traces of SARS-CoV-2 in tissue samples. And [some studies have successfully detected](#) signs of the virus in the brain, but these findings haven't been enough to conclude SARS-CoV-2 is actually infecting neural cells.

To date, the inflammation hypothesis has been a little more convincing. Four years into this pandemic it is clear [COVID is harmful to the brain](#), and several studies have effectively [established signs of significant](#)



[inflammatory](#) damage. But again, questions have emerged around what is triggering the inflammatory damage.

A new study, from a team of European researchers led by scientists at Charité - Universitätsmedizin Berlin, decided to tackle the mystery of COVID's effect on the brain by starting at the very beginning. They first looked closely at brain tissue samples from 21 individuals who died from severe COVID infections.

Much like prior studies, traces of SARS-CoV-2 were found in the brain tissue samples, but most significantly the researchers could not detect any signs of direct neuron infection.

"We assume that immune cells absorbed the virus in the body and then traveled to the brain," explained study co-author Helena Radbruch. "They're still carrying the virus, but it doesn't infect cells of the brain. So coronavirus has invaded other cells in the body, but not the brain itself."

Homing in on the specific molecular effects of COVID, the researchers detected major changes to cells in the cranial nerve nucleus. These are the neurons that comprise the brainstem, running up through the neck and face, into the brain. The findings suggest localized inflammatory reactions triggered by COVID subsequently activated these communication pathways to the brain, causing the neurological symptoms we associate with the disease.

"In simplified terms, our interpretation of our data is that the vagus nerve 'senses' the inflammatory response in different organs of the body and reacts to it in the brainstem – without there being any actual infection of brain tissue," said Radbruch. "Through this mechanism, the inflammation does spread from the body to the brain in a way, which can disrupt brain function."

The narrow nature of the research makes it hard to know if these inflammatory markers account for the longer-term symptoms seen in long COVID patients. Looking at a comparative cohort of deceased patients, who died some time after their acute illness, the researchers saw many of these biomarkers return to normal. However, further work in long COVID patients will be necessary to find out whether this inflammatory cascade lingers in those few with persistent symptoms.

"We think it's possible that if the inflammation becomes chronic, that could be what causes the neurological symptoms often observed in long COVID in some people," added Christian Conrad, another co-author on the study. "To follow up on this suspicion, the team of researchers is now planning to study the molecular signatures in the cerebral fluid of long COVID patients in greater detail."

●► The study was published in the journal [Nature Neuroscience](#).



Potential New Weapon in Battle Against Superbugs

By Anne J. Manning | Harvard staff writer

Source: <https://www.homelandsecuritynewswire.com/dr20240219-potential-new-weapon-in-battle-against-superbugs>

Feb 19 – Harvard researchers have created an antibiotic that can overcome many drug-resistant infections, which have become a growing, deadly global health menace.

A team led by Andrew Myers, Amory Houghton Professor of Chemistry and Chemical Biology, [reports in Science](#) that their synthetic compound, [cresomycin](#), kills many strains of drug-resistant bacteria, including *Staphylococcus aureus* and *Pseudomonas aeruginosa*.

"While we don't yet know whether cresomycin and drugs like it are safe and effective in humans, our results show significantly improved inhibitory activity against a long list of pathogenic bacterial strains that kill more than a million people every year, compared with clinically approved antibiotics," Myers said.

The new molecule demonstrates an improved ability to bind to bacterial ribosomes, which are biomolecular machines that control protein synthesis. Disrupting ribosomal function is a hallmark of many existing antibiotics, but some bacteria have evolved shielding mechanisms that prevent legacy drugs from working.

Cresomycin is one of several promising compounds that Myers' team has developed, with the goal of helping win the war against superbugs. Their work in advancing these compounds through preclinical profiling studies is being supported by a [\\$1.2 million grant from Combating Antibiotic-Resistant Bacteria Biopharmaceutical Accelerator \(CARB-X\)](#). A Boston University-based global nonprofit partnership, CARB-X is dedicated to supporting early stage antibacterial research and development.

The Harvard team's new molecule draws inspiration from the chemical structures of lincosamides, a class of antibiotics that includes the commonly prescribed clindamycin. Like many antibiotics, clindamycin is made via semisynthesis, in which complex products isolated from nature are modified directly for drug applications. The new Harvard compound, however, is fully synthetic and features chemical modifications that cannot be accessed through existing means.

"The bacterial ribosome is nature's preferred target for antibacterial agents, and these agents are the source of inspiration for our program," said co-author Ben Tresco, a Kenneth C. Griffin Graduate School



of Arts and Sciences student. “By leveraging the power of organic synthesis, we are limited almost only by our imagination when designing new antibiotics.”

Bacteria can develop resistance to ribosome-targeting antibiotic drugs by expressing genes that produce enzymes called ribosomal RNA methyltransferases. These enzymes box out the drug components that are designed to disrupt the ribosome.

To get around this problem, Myers and team engineered their compound into a rigidified shape that gives it a stronger grip on the ribosome. The researchers call their drug “pre-organized” for ribosomal binding because it doesn’t need to expend as much energy conforming to its target as existing drugs must do.

The researchers arrived at cresomycin using what they call component-based synthesis, a method [pioneered by the Myers lab](#) that involves building large molecular components of equal complexity and bringing them together at late stages — like pre-building sections of a complicated Lego set before assembling them. This system allows them to make and test not just one, but hundreds of target molecules, greatly speeding up the drug discovery process.

The stakes are clear. “Antibiotics form the foundation on which modern medicine is built,” said co-author and graduate student Kelvin Wu. “Without antibiotics, many cutting-edge medical procedures, like surgeries, cancer treatments, and organ transplants, cannot be done.”

Myers’ component-based synthesis research received early support from Harvard’s [Blavatnik Biomedical Accelerator](#), part of the [Office of Technology Development](#), which awarded funding to Myers’ lab in 2013 to enable testing of drug compounds.

The Office of Technology Development protected the Myers Research Group’s innovations and, along with the Blavatnik Biomedical Accelerator, will support the research team for the duration of the CARB-X agreement. The newly awarded CARB-X funding allows the researchers to continue profiling and optimizing drug leads.

“Funding and other support from groups like the Blavatnik Biomedical Accelerator and CARB-X are essential for the discovery and development of new antibiotics,” said Curtis Keith, the accelerator’s chief scientific officer. “These innovations from the Myers Research Group have the potential to yield new drugs that will one day meet a global health need.”

Tech Triumphs or Terrors: The Implications of Emerging Technologies on Bioterrorism



By Anadi

Source: <https://gnet-research.org/2024/02/21/tech-triumphs-or-terrors-the-implications-of-emerging-technologies-on-bioterrorism/>

Feb 21 – The COVID-19 pandemic served as a stark reminder of the profound impact that biological threats can have on global security. The pandemic underscored the vulnerability of even the world’s armed forces to diseases, as evidenced by instances like the evacuation of a significant portion of the [USS Theodore Roosevelt’s crew](#) due to a severe COVID outbreak. As societies worldwide grapple with the challenges of a naturally occurring virus, the spectre of intentional and malicious use of emerging technologies looms large. In this context, the intersection of emerging technologies with the potential for bioterrorism becomes a pressing concern. This Insight seeks to unravel the intricate connection between the emerging cutting-edge technologies and the augmentation of bioterrorism capabilities. Simultaneously, it addresses the pressing need for preventive measures to counteract their malevolent misuse, aiming to contribute to a more secure and resilient global landscape.

Emerging Technologies and Bioterrorism

Bioterrorism is the deliberate dissemination of [biological agents or toxins](#) with the aim of causing harm or fatalities among humans, animals, or plants. This is done with the intention of intimidating or coercing a government or civilian population to advance political or social objectives. While bioterrorism is not a novel occurrence, historical instances have been relatively contained. Following the attacks on the United States on September 11, 2001, there were incidents involving [anthrax-laced letters](#) sent through the mail to media companies and congressional offices, resulting in the loss of five lives.

Biotechnology refers to a technological field grounded in biology, utilising [cellular and biomolecular processes](#) to create innovations and products aimed at enhancing both human well-being and the overall health of the Earth. The advancement of biotechnology has introduced a significant shift, providing increased access to [cost-effective yet potent](#) biotechnological tools such as ‘clustered regularly interspaced short palindromic repeats’ (CRISPR). Additionally, the reduced expertise required to operate these tools has lowered the barrier for malicious actors to exploit such technology. The disarmament agenda presented by the [United Nations Secretary-General](#) in 2018 expresses specific apprehensions regarding the potential of new technologies to diminish obstacles to accessing and utilising prohibited weapons, as exemplified



by synthetic biology and gene editing. As technology advances, new tools and methods may be exploited by those with malicious intent, amplifying the risks associated with bioterrorism.

Synthetic Biology

Synthetic biology is a progressive area of scientific research that merges elements from various disciplines, including molecular biology, biophysics, computer engineering, and genetic engineering, to construct [new biological systems](#) or redesign existing ones to have new functions. This field has rapidly expanded due to advancements in DNA sequencing and synthesis, which allow for the precise editing and construction of genetic material. The ability to manipulate organisms at the genetic level offers immense potential benefits, such as producing novel therapeutics, sustainable biofuels, and new materials. However, the same technology that can lead to groundbreaking medical and environmental advances presents a [dual-use dilemma](#); that is, it can also be appropriated for the purposes of bioterrorism.

Advances in synthetic biology raise concerns about the potential for creating [biological weapons](#) in labs. In terms of bioterrorism, synthetic biology can be leveraged to engineer pathogens that are more contagious, resilient, or lethal than their natural counterparts. These synthetic organisms can be designed to resist current drugs and vaccines, making them powerful tools for creating a disease outbreak that is difficult to control. Moreover, synthesising toxins or crafting new pathogenic viruses through synthetic genomics can cause extensive harm without relying on natural materials, bypassing the traditional barrier of needing such materials for weaponisation. Another concerning possibility is the alteration of microbes to produce harmful substances while evading detection by conventional biosurveillance systems, thereby complicating public health responses. With the ease of disseminating scientific information and the increasing accessibility of synthetic biology tools, the threshold for creating biological agents has lowered, raising concerns about their use by non-state actors or rogue entities.

Gene Editing

Recent advancements in gene editing, particularly with CRISPR technology, have sparked enthusiasm for various applications in fields such as medicine and agriculture. However, these breakthroughs also reignite concerns about the potential misuse of gene-editing tools to create weaponised pathogens. In 2016, [Bill Gates](#) expressed concern that a future epidemic might emerge from the computer activities of a terrorist aiming to employ genetic engineering to craft a synthetic form of the smallpox virus or an extremely contagious and lethal strain of the flu. Gene editing refers to the capacity to [modify and splice](#) DNA at specific locations within the genetic material. CRISPR enables scientists to modify DNA more efficiently and accurately, raising fears that terrorists or nations with moderate capabilities could develop deadlier and more easily spreadable pathogens. While the technology holds promise for addressing genetic mutations, disease resistance in crops, and cancer treatment, the worry is that gene editing may make biological weapons more potent. Countries may manipulate or create new strains of pathogens that possess heightened transmission rates, increased infection capabilities, induce more severe illnesses, or exhibit resistance to conventional treatments.

The possibility of using gene editing for [targeted assassinations](#) by editing a virus to affect a specific individual based on their genetic code is also a concern, although the feasibility of this capability is not yet certain. Furthermore, there are apprehensions that gene editing might facilitate the development of biological weapons capable of discriminating among populations based on ethnic or racial characteristics. Despite the challenges of designing such '[ethnic weapons](#)', the historical use of biological weapons in ethnic conflicts emphasises the need for vigilance. South Africa's apartheid-era [Project Coast](#) in 1981 explored such weapons, including discussions on administering an antifertility vaccine to black women. The convergence of reduced expenses, simplified accessibility, and heightened efficacy might not significantly influence major nations; however, it could motivate smaller and rogue states to reevaluate their investment in biological weapons. Any approach aimed at mitigating the risks associated with genetically edited biological weapons should encompass a diverse array of states, not exclusively focusing on major powers.

Nanotechnology

Nanotechnology, with its ability to manipulate materials on an incredibly small scale, presents a dual-use dilemma—while it has the potential to revolutionise healthcare and materials science, it also offers tools that could be weaponised for bioterrorism. One of the primary concerns with nanotechnology in this context is its ability to [enhance the delivery systems](#) for toxins and pathogens. Engineered nanoparticles, due to their minute size, are capable of penetrating biological barriers that would typically block or degrade biological agents. This increased penetration capability means such agents could be delivered more effectively to target organisms or ecosystems. Moreover, nanotechnology can potentially increase the toxicity of inorganic chemicals by virtue of the extensive surface area of nanoparticles, rendering them particularly hazardous. In terms of potency, nanomaterials might carry higher concentrations of toxins, increasing their lethality. Nanotechnology could also facilitate the creation of novel biological agents, allowing precise



genetic and molecular manipulation for optimised pathogens. Moreover, the advances in [aerosolisation techniques](#) may enhance the spread of bioweapons over a wide area, enabling rapid infection before detection. [Aerosol](#) particles refer to solid or liquid particles suspended in the air, ranging in size from a few nanometers to several micrometres. Consequently, combining nanotechnology with synthetic biology could lead to bioweapons with enhanced controllability, potentially utilising nanoparticles for the targeted delivery of gene-editing tools like CRISPR.

Additive Manufacturing

Additive manufacturing (AM) is the industrial production term for 3D printing, a computer-controlled process of [depositing materials in layers](#) to create three-dimensional objects, utilising a variety of materials, including biochemicals, ceramics, metals, and thermoplastics. The [UN disarmament agenda](#) underscores the role of AM in exemplifying “the potential of new technology to aid in the covert or unnoticed distribution of controlled or sensitive items”. This poses a specific challenge that necessitates inclusion in international disarmament and non-proliferation initiatives. Three particular [AM applications](#) raise concerns: (a) the production of manufacturing or laboratory equipment, (b) bioprinting, and (c) the printing of delivery systems or their components. AM’s versatility extends to printing specific parts for production and laboratory equipment, raising the potential for supporting clandestine biological weapon development. AM enables the production of equipment related to weapons of mass destruction (WMD) [more discreetly](#) as it is compact, requires less power, and has a smaller footprint.

Further, bioprinting, with its capacity to produce anything from living tissue to entire organs, introduces complexities, as it involves using living cells sensitive to environmental conditions and tissue construction intricacies. While bioprinting finds positive applications in medicine, such as printing tissue for pharmacological testing, there is a concern regarding its potential misuse in developing biological or chemical weapons. Moreover, the use of AM in producing drone components allows for adaptable designs, enhancing capabilities and suitability for deploying biological weapons. For instance, in January 2023, West Midlands Police arrested a Birmingham University PhD student who [3D printed a drone](#) for delivering explosive or chemical weapons for ISIS. Printable drone parts are commonly shared within the [do-it-yourself](#) (DIY) community, offering an appealing option for non-state actors to produce weapons cheaply and efficiently. Concurrently, the increased capabilities, customisation and readily available nature of [off-the-shelf drones](#) also contribute to the concerns surrounding the potential misuse of AM technology.

Artificial Intelligence

The rapid progress of artificial intelligence (AI) has extensive implications across various fields, including its potential application in developing sophisticated biological weapons. This raises concerns due to its accessibility to nonstate entities and individuals. Previous attempts, like [Aum Shinrikyo’s efforts](#) to attack a Tokyo subway utilising botulinum toxin in 1993, failed due to a lack of understanding of the bacterium. AI has the potential to contribute to the bioterrorism threat by overcoming past knowledge limitations for non-state actors. Advanced large language models, a form of AI, in particular, can offer insights into [pandemic pathogens](#), suggesting ways to acquire, modify, and distribute them. These models may assist in planning and executing biological attacks by providing guidance on identifying lethal agents, budget considerations, and distribution methods like aerosol devices. While making once-specialised knowledge more accessible, AI could unintentionally empower malicious actors to design or reconstruct more severe and lethal pathogens than their naturally occurring counterparts. AI could theoretically enable bioterrorist attacks by assisting in the design and optimisation of biological weapons to manipulate pathogens, increasing their transmissibility or virulence by altering genetic characteristics, thus making them more dangerous. Additionally, AI poses a [cyber threat](#) to digitised biological data, which could be compromised through cyberattacks to steal sensitive genomic health data. Such data could then be misused by malicious actors to engineer highly targeted biological weapons.

Initiatives for Overcoming Challenges

To better govern the convergence of biotechnology with emerging technologies, stakeholders, including national governments, regional organisations, international institutions, academia, the private sector, and the online DIY community, can take specific actions. Governments should assess technological developments, allocate more resources and strengthen research on biological incident detection and prevention. Regional organisations should collaborate with the biotech industry to address dual-use risks. The [Biological Weapons Convention \(BTWC\) 1972](#) should undergo reforms to address convergence and potential misuse. Academic institutions should include ethics and biosafety courses, foster interdisciplinary assessments, and enhance collaboration among national academies. The private sector should strengthen its commitment to internal governance and adherence to established compliance standards. Simultaneously, the DIY community can take the initiative to arrange biosecurity workshops and actively participate in global initiatives aimed at fostering responsible scientific practices and raising awareness about biosecurity.



Further, tech companies need to work together to develop advanced tools to investigate and [trace the source](#) of biological weapons. This means investing in research on monitoring and quick testing for common diseases and potential biological weapons. They should invest in developing AI tools that can be used to monitor and combat terrorist activity online, such as identifying suspicious financial transactions or monitoring internet spaces for terrorist activity. AI companies should collaborate with law enforcement and counter-terrorism agencies to provide [AI-enabled solutions](#) that enhance the effectiveness of existing capacities and help manage the massive increase in data associated with counter-terrorism efforts. Additionally, tech companies should collaborate with government agencies, academia, and private research institutes to facilitate the development of therapeutics, vaccines, and diagnostic tools for countering biological warfare agents.

There is a need for a global network focused on detection and surveillance, utilising information technology for immediate reporting and analysis. While comprehensive preparedness and international cooperation may not entirely prevent bioterrorism, they can significantly minimise casualties, economic impact, and fear. Furthermore, strengthening collaboration among all agencies responsible for national security is essential, fostering stronger connections with the scientific community and public health services to enhance intelligence and surveillance against bioterrorism. Modifications to current [export control systems](#) will be necessary to enhance their effectiveness in restricting the risk of biological warfare and bioterrorism.

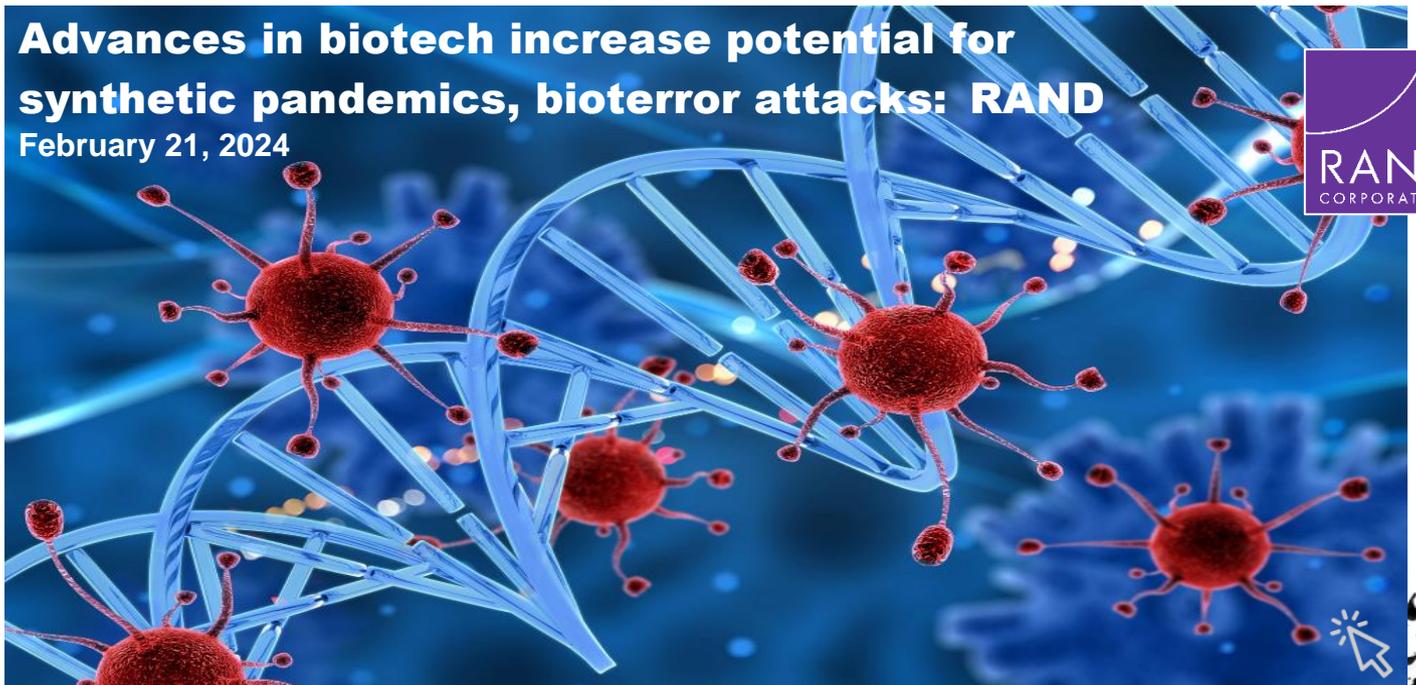
Consequently, addressing the looming threat of bioterrorism, propelled by advancements in emerging technologies such as AI, additive manufacturing, synthetic biology, nanotechnology, and gene editing, necessitates a multifaceted approach. International collaboration must be fostered, promoting information sharing and coordinated responses to rapidly detect and mitigate potential bioterror threats. Comprehensive risk assessments should be conducted to identify vulnerabilities at the intersection of these technologies. Public awareness and education initiatives are crucial to informing communities about the responsible use of these technologies and the potential consequences of their misuse. Establishing and enforcing international standards for biological security is paramount, guarding against unauthorised access to perilous technologies. Establishing a global early warning system, leveraging AI and other technologies, can detect and predict potential bioterrorism events. Regularly updating emergency response protocols, involving coordination among governments, international organisations, and the private sector, is imperative. Considering temporary moratoriums on high-risk research areas until safety measures and ethical considerations are in place can be a precautionary step. In tandem, these measures collectively form a comprehensive strategy to mitigate the risks associated with bioterrorism emanating from advancements in emerging technologies.

Anadi is a Research Associate at the Centre for Air Power Studies (CAPS), New Delhi, India. She is working on a book project tentatively titled "Non-Traditional Security Threats in South Asia: Challenges for India". Her areas of interest are traditional and non-traditional security threats, peace and conflict studies, arms control and disarmament, Indian Foreign Policy, climate security and fragile states.

Advances in biotech increase potential for synthetic pandemics, bioterror attacks: RAND

February 21, 2024

RAND
CORPORATION



KEY FINDINGS

- Biotechnology will continue to become more readily available, more capable, easier to use, and less expensive. The technologies will also require a smaller footprint, and more steps will begin to be combined, which could facilitate legitimate and illegitimate uses of biotechnology (e.g., the weaponization steps of drying, formulating, and milling will be available in a single platform).
- An increasing availability of technological capability and knowledge would correspondingly increase the potential for a successful bioterrorist attack. Countries—especially those with large pharmaceutical and biotechnology sectors—would experience few impediments to developing biological weapons. However, these changes in technology availability would not uniformly apply to all potential bioterrorist groups. Larger, more-capable terrorist groups would see advantages that could lead to the development of large-scale bioterrorism weapon capabilities; alternatively, smaller, less skilled terrorist groups would likely still be challenged.
- Ribonucleic acid (RNA) viruses represent the likeliest of the viral agents to cause a future pandemic (compared with bacteria, fungi, rickettsiae, and other virus classes), accounting for up to 44 percent of all emerging infectious diseases. RNA viruses—both naturally occurring and those used to cause a synthetic pandemic—are likelier to infect new host species because of their shorter generation times and their faster evolutionary rates, allowing them to survive and adapt to wider environmental and host-related conditions than deoxyribonucleic acid (DNA) viruses can.
- Although engineering a synthetic pathogen to create a pandemic will become easier thanks to the proliferation of capabilities and knowledge, challenges would still remain—in particular, engineering genome sequence modifications that result in desired pathogen characteristics (i.e., transmissibility and virulence) while being capable of competent viral replication.
- Furthermore, virus evolution over time would create uncertainties in the effectiveness of the synthetic pandemic pathogen. In other words, the fact that a pathogen has been modified does not mean that it will be more effective than a naturally occurring virus in causing a pandemic.
- The uncertainties surrounding the transmissibility and virulence of a synthetic pandemic pathogen make the risks of synthetic and naturally occurring pandemics similar. The exception to this finding is in the initial release of a synthetic pathogen during which victims within the initial release plume of the biological weapon would likely experience overwhelming doses, which could result in reduced incubation times, greater severity of the disease, and higher mortality and morbidity rates.

Largest COVID Vaccine Study Ever Reveals The Actual Health Risks You Face

Source: <https://www.sciencealert.com/largest-covid-vaccine-study-ever-reveals-the-actual-health-risks-you-face>



Feb 22 – The largest global vaccine safety study has linked [COVID-19](#) vaccines with small increases in health conditions involving the brain, blood, and heart. The international team of researchers emphasizes



that the chances of getting any of these conditions are still very low. It's important to note that extensive research shows COVID-19 vaccines protect against serious illness, death, and long COVID symptoms.

Across just under 100 million COVID-19-vaccinated people in eight countries, potential links called [safety signals](#) were identified by comparing observed rates of 13 specific conditions following vaccination to what we'd expect to see based on prior rates, or 'background risk' of the conditions – the rates that these conditions are expected to occur in the absence of COVID-19 vaccines.

"The risk up to 42 days after vaccination was generally similar to the background risk for the majority of outcomes," the authors [write in their published paper](#).

The authors say their multi-country analysis confirmed pre-established links between COVID-19 vaccinations and low risks of myocarditis, pericarditis, Guillain-Barré syndrome, and cerebral venous sinus thrombosis. But the enormous size of the study also meant there was a higher chance of them spotting rarer safety signals that prior studies may have missed.

Since the [World Health Organization](#) declared the COVID-19 [pandemic on March 11, 2020](#), nearly 7 million people have died from the disease, including more than 1 million in the US. Over 13.5 billion doses of COVID-19 vaccines have been given, with at least [70.6 percent of the world's population](#) having received at least one dose.

Vaccine rollouts usually identify common and moderate side effects, after excluding dangerous ones during [clinical trials](#). But even in huge clinical trials, extremely rare side effects can go undetected.

"This unparalleled scenario underscores the pressing need for comprehensive vaccine safety monitoring, as very rare adverse events associated with COVID-19 vaccines may only come to light after administration to millions of individuals," the authors [write](#).

Their study sought safety signals observed within the 42 days after receiving [viral-vector vaccines](#) (such as AstraZeneca) or [mRNA vaccines](#) (such as Pfizer-BioNTech). Health datasets from before the COVID-19 vaccines were used to determine the rates of these conditions that were expected in the general population prior to vaccine rollout, and the observed rates were derived from the same dataset after vaccination.

In the wake of viral-vector vaccines, the team discovered a [statistically significant](#) rise in cases of [Guillain-Barre syndrome](#); a rare immune system disorder that affects nerves. Within the group that had these vaccines, 66 cases were expected, and 190 were observed. This increase was not seen after mRNA vaccines.

Following a first dose of the AstraZeneca vaccine, there was a 3.2 times greater-than-expected risk of [cerebral venous sinus thrombosis](#) (a type of blood clot in the brain) observed in 69 events, compared to an expected 21. The risks were 1.49 times higher after the Pfizer vaccine's first dose, and 1.25 times higher after second doses.

[In March 2021](#), some countries in Europe [suspended the AstraZeneca COVID-19 vaccine](#) after observed versus expected analysis identified thrombosis with thrombocytopenia syndrome as a safety signal.

The analysis found a higher risk of heart inflammation called myocarditis after mRNA vaccines, with observed rates highest after a second dose of Moderna's vaccine. [These vaccines instruct cells](#) to produce a protein that resembles the [SARS-CoV-2 virus](#), giving the immune system a preview and prompting it to create [antibodies](#) to protect the body.

In rare cases, this immune response can result in heart muscle inflammation. Though COVID-19 vaccine-induced instances have mostly been mild, [28 deaths have occurred](#).

After a first dose of mRNA vaccines, the risk for [pericarditis](#) – inflammation of tissue surrounding the heart – was 1.7 times higher than expected, and it became 2.6 times higher after a fourth dose.

Potential safety signals were found for [transverse myelitis](#) (inflammation of part of the spinal cord) after viral-vector vaccines, and for [acute disseminated encephalomyelitis](#) (inflammation and swelling in the brain and spinal cord) after both types of vaccines.

Compared to an expected two cases, seven cases of acute disseminated encephalomyelitis were observed after mRNA vaccines.

"The size of the population in this study increased the possibility of identifying rare potential vaccine safety signals," [says](#) first author Kristýna Faksová, an epidemiologist at the Department of Epidemiology Research in Denmark.

"Single sites or regions are unlikely to have a large enough population to detect very rare signals."

Vaccines have saved countless lives by preventing the spread of the [COVID-19 pandemic](#), and there is strong evidence that they are safe in the majority of cases and effective. A [recent study](#) found that if everyone in the UK was fully vaccinated, about 7,180 out of 40,393 severe outcomes (including deaths) from COVID-19 could have been avoided.

"We have a number of studies underway to build upon our understanding of vaccines and how we understand vaccine safety using big data," [says](#) Steven Black, an infectious disease scientist at the Global Vaccine Data Network (GVDN).

Anyone can view the methodology and complete results of this analysis on the GVDN's [interactive data dashboards](#).

●► The study has been published in the journal [Vaccine](#).



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