Since the start of 2023, Finland has been at the center of two decisions responsible for a significant bolstering of Europe’s chemical, biological, radiological, and nuclear (CBRN) defense posture. The first major announcement came on January 17, 2023, when the European Commission announced an investment of 242 million euros (U.S. $262 million) for the European Union’s first reserve of CBRN equipment, strategically located in Finland.\(^1\) Several months later, on April 4, 2023, Finland became the 31st member of the North Atlantic Treaty Organization (NATO).\(^2\)

These two strategic decisions will help advance efforts to improve CBRN resilience in this extraordinarily complex international security environment, at least in the short-term. While the rather substantial funding for the initiative is a commendable development by the European Union (EU), going forward it will be essential for the EU to maintain that resilience through a longer-term commitment to the CBRN reserve, and for NATO and the United States to help deepen Finland’s contribution to CBRN defense.

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COMPREHENSIVE SECURITY APPROACH

Finland has long focused on a comprehensive security approach—the concept of achieving preparedness and resilience in critical government services through cooperation across government, industry, and the community—as the central component of its national security strategy.³ Last updated in 2017, its Security Strategy for Society outlines key authorities, mechanisms, and implementation goals needed to achieve its comprehensive security model, including related to CBRN threats.⁴ This concept is also woven into Finland’s National CBRNE Strategy 2017 in which internal and international cooperation are stressed, from threat preparedness to incident command and control.⁵ These Finnish national security strategies, both of which are currently being updated, recognize the scale and severity that CBRN threats pose and both of them uniquely leverage comprehensive security and societal resilience to prepare for and deter these threats.

An essential element of Finland’s comprehensive approach involves the work of the National CBRNE Committee, a multisectoral body led by the Ministry of Interior and also involving the ministries of defense, foreign affairs, social and health, economic affairs and employment, finance, agriculture and forestry, as well as the National Emergency Supply Agency, the Finnish Institute for Health and Welfare, Finnish Institute for Health and Welfare, the National Emergency Supply Agency, and the Radiation and Nuclear Safety Authority.⁶ This committee coordinates implementation of Finland’s National CBRNE Strategy, CBRNE awareness, multisectoral projects, and international CBRNE related commitments.

Finland’s expertise across the spectrum of CBRN threats has also been enabled by the country’s national Centre of Excellence in CBRN Defence (Centre). The Centre boasts high quality expertise and equipment that is continuously refined through international training engagements that serve to validate procedures and ensure continuous improvement in equipment.⁷

CBRN STOCKPILES & CAPABILITIES

Finland’s strong track record on CBRN defense, engagement with NATO, and approach to national security through preparedness and foresight are each compelling reasons why the European Commission may have selected the country to maintain the new CBRN stockpile. Named the “rescEU CBRN project,” this initiative not only enhances Europe’s readiness against CBRN events through protective and supportive equipment

stockpiles, but it showcases Finland as a hub for such efforts within the European Union (EU).\textsuperscript{8} Finland’s interior minister, Krista Mikkonen, projects that the rescEU CBRN strategic reserve, “…will improve the European Union’s strategic preparedness and readiness to respond to different kinds of threats, especially in Northern Europe and the Baltic Sea region.”\textsuperscript{9}

Critically, the reserve is intended to deploy protective equipment, medical countermeasures, and CBRN response equipment within 12 hours of an incident.\textsuperscript{10} The reserve’s placement in Finland should be regarded as a result of Finland’s experience and leadership on national security through societal resilience and international cooperation in the post-Cold War era, as well as its expertise in addressing CBRN risks.\textsuperscript{11} The CBRN reserve based in Finland is expected to be available in 2024 and continue through 2026.

RescEU CBRN is part of a larger rescEU stockpiling approach for medical countermeasures that fits within a strengthened EU Civil Protection Mechanism (Mechanism). The goal of the Mechanism is to enhance civil protection cooperation for disaster response by improving prevention, preparedness, and response capabilities.\textsuperscript{12} Russia’s brutal war against Ukraine coupled with increasing climate change-related disasters underscore the very real need for the EU initiative.

Once Russia began its full-scale invasion on February 24, 2022, the Mechanism was quickly activated and has funneled unprecedented support into Ukraine, including more than 90,000 tons of aid valued at over 650 million euros (U.S. $696 million). This support included critical CBRN response gear including chemical detectors, potassium iodide tablets, therapeutics, protection suits, various types of masks, and related items. On top of these amounts, rescEU reserves have provided an additional 53 million euros (U.S. $56.7 million) of CBRN countermeasures. Janet Lenarcic, the European Commissioner for Crisis Management, explained that “the EU Civil Protection Mechanism is being applied to help Ukraine, as well as other European countries, to prepare for the real possibility of major incidents involving chemical, biological, radiological and nuclear material.”\textsuperscript{13} The rescEU CBRN stockpile in Finland will provide a key component of that preparedness.

\textsuperscript{8} “RescEU project for a CBRN reserve,” Ministry of the Interior, Finland, May 10, 2023.

\textsuperscript{9} “EU sets up first stockpile to respond to chemical and nuclear emergencies in Finland,” Reuters, January 17, 2023.

\textsuperscript{10} Ibid, 6.


\textsuperscript{12} “European Civil Protection and Humanitarian Aid Operations,” European Commission.

\textsuperscript{13} “Commission holds meeting of European ministers to discuss chemical, biological, radiological, and nuclear preparedness,” European Commission, May 30, 2023.
FINLAND AND NATO

Finland’s long tradition of close security cooperation with NATO places the country in a unique position to lead the alliance in building toward the strategic concept of deterrence by denial across the full spectrum of CBRN threats. The close cooperation between the Finnish government and NATO dates back to 1994, when the Nordic country became actively involved in Partnership for Peace (PfP), an initiative to strengthen cooperation and interoperability after the fall of the Soviet Union. Additionally, Finland became a critical partner in NATO’s Science for Peace and Security Programme and has ongoing projects including advancing CBRN detection capabilities, a multinational telemedicine system, and uniquely resilient cyber defenses. Notably, Finland’s Deployable CBRN Laboratory was placed in the NATO Response Force - Response Force Pool (NRF RFP) in 2012 and 2017, and passed NATO Evaluation Level 2 in an exercise in December 2022. Also, Finland’s Rapid Deployment Force CBRN has participated in several NATO exercises over these years.

While Finland officially maintained a militarily non-aligned status until it formally joined NATO, the Finnish military has steadily increased its cooperation and interoperability with NATO since joining the PfP in 1994 and the European Union in 1995. That cooperation significantly increased after Russia’s illegal annexation of Crimea in 2014. Finland’s 2021 Defence Report reflects the closeness of that security alignment with Europe, stating “As a member state of the European Union, Finland could not remain an outsider should threats to security emerge in its vicinity or elsewhere in Europe.” Russia’s unprovoked full-scale attack on Ukraine in February 2022 was the defining action that ultimately moved Finland to seek to change its non-aligned status.

FINLAND AND THE UNITED STATES

Finland’s security cooperation with the United States developed along a similar trajectory. Finland and the United States signed a memorandum of Understanding (MOU) for defense procurement in 1991, as the first in a series of agreements between the two countries. The MOU on defense procurement would be reinvigorated in 2008 and 2018 and serves as the guiding document for market access and supply chain interconnectivity between the two countries. Another key document between the United States and Finland is the Master Information Exchange Agreement. This agreement, first signed in 1995 and updated in 2010, is critical to the flow of information on research and development activities between the two countries.

17 Porin prikosti. Twitter post. December 5, 2022, 08:46.
19 Ibid, 16.
21 Finland-U.S. Master Information Exchange Agreement, Department of State, October 1, 2010.
Similarly, the nations signed an agreement on Research, Development, Testing, and Evaluation Projects in 2011 which supports the standardization and interoperability of equipment through cooperation and application of emerging technologies.  

In 2016, Finland and the United States signed a Statement of Intent (SOI) to further enhance defense cooperation on a wide range of strategic and operational areas. Two years later, the United States, Finland, and Sweden signed an additional SOI to enhance cooperation and interoperability between all three countries. And in March 2022, U.S. President Joe Biden and Finland President Sauli Niinistö agreed to deepen defense cooperation between the two countries, with the Finnish Ministry of Defense and U.S. Department of Defense signing a SOI to negotiate a comprehensive bilateral Defense Cooperation Agreement. Negotiations are ongoing and expected to conclude in the fall of 2023 or early 2024. Meanwhile, in April 2023, the United States and Finland signed a Memorandum of Understanding to strengthen cooperation on nuclear energy. As each country is in the midst of transforming its nuclear energy sectors, this partnership seeks to leverage research institutes, the private sector, and the government to ensure maximum innovation.

Aside from these agreements between the U.S. and Finland, close cooperation on CBRN matters further materialized in 2013 and 2014 when Finland worked closely with the U.S. as part of the Organization for the Prohibition of Chemical Weapons (OPCW) - United Nations (UN) Joint Mission to eliminate Syria’s declared chemical weapons program. These documents and the OPCW-UN mission serve as the foundation that enables close cooperation on CBRN defense between the United States and Finland and help enable a deterrent effect.

22 U.S.-FI RDT&E Projects Agreement, Department of State, August 26, 2011.
24 “United States and Finland to open negotiations on an agreement on defence cooperation,” Ministry of Foreign Affairs, September 29, 2022.
BIOSECURITY LEADERSHIP

Importantly, Finland has long demonstrated international leadership in addressing the full range of biological risks, from naturally occurring outbreaks and biological research incidents to deliberate misuse of biological materials. The nation is a champion of robust biosecurity and biosafety efforts, enhanced global health security, and comprehensive public health initiatives, such as the holistic One Health vision that recognizes the close relationship between human, animal, and environmental health.26

Finland places special emphasis on maintaining a strong biosecurity infrastructure. Established in 2005, the Centre for Biothreat Preparedness is a joint project among the Finnish Institute of Health and Welfare, the Finnish Defence Forces, and the Finnish Food Authority which seeks to prevent and respond to deliberate biological threats. The Centre provides national services focused on assessing biological risks and corresponding policies, coordinating laboratory services, sponsoring research and development to advance biopreparedness, and promoting national cooperation and biosecurity training. Furthermore, the Centre for Biothreat Preparedness also operates the Finnish Biosecurity Network, which establishes and promotes standardization of biosafety and biosecurity efforts while providing auditing, training, and risk assessment services. It is run as a steering group with “representatives of the key actors in the industries using the Biosafety Level (BSL)-3 laboratories, including the Finnish Institute for Health and Welfare, the Finnish Food Authority, HUSLAB, the Finnish Defence Forces, the University of Helsinki, the University of Turku, and Turku University Hospital.”27

Finland has also served as an early and outspoken supporter of global health security and biosecurity efforts. Since the 2014 launch of the Global Health Security Agenda (GHSA), an international effort to strengthen global capabilities to prevent, detect, and respond to infectious disease threats, Finland has been an engaged and proactive member, chairing the Steering Group and hosting the annual international GHSA conference in 2015. Finland’s leadership of this Steering Group helped develop the independent joint external evaluation (JEE) and assessment process for measuring preparedness at a country level. The JEE serves as an opportunity to gauge country readiness and identify opportunities for improvement, which Finland underwent in 2017.28

As a result of Finland’s engagement and leadership in the early development of the GHSA, the Finnish team received the prestigious Damir Čemerin Award in 2016 during the European Forum for Disaster Risk Reduction.29 In the same vein, Finnish support of the World Health Organization (WHO) and the International Health Regulations (IHR) highlights the importance Finland places on global health governance and cooperation.

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26 Helsinki One Health, University of Helsinki.
CHEMICAL WEAPONS LEADERSHIP

Beyond global health security engagement, Finland has also been a strong partner in efforts to rid the world of chemical weapons and condemn the use of chemical weapons under any circumstance. An inaugural signatory of the Chemical Weapons Convention (CWC) in 1993, Finland’s significant contributions for both implementation of and training for the CWC cannot be overstated. Currently, Finland serves as one of the 41 member states on the Executive Council of the Organization for the Prohibition of Chemical Weapons (OPCW), which is responsible for implementing and ensuring compliance with the CWC.30

A key component in Finnish support for international chemical arms control comes from the Finnish Institute for the Verification of the Chemical Weapons Convention (VERIFIN), which develops methods of identifying chemical warfare agents. As of December 2022, VERIFIN has provided training courses to approximately 1,813 experts from 141 countries.31

A notable example of Finland’s substantial contributions toward CWC implementation occurred around Syria’s chemical weapons program. As Syria’s civil war raged in its early years between 2011 and 2013, reports of the use of chemical weapons sparked outrage and a surge of diplomacy that led to Syria acceding to the CWC. This resulted in a major international effort led by the OPCW-UN Joint Mission (from October 2013 to September 2014) to eliminate Syria’s declared chemical weapons program, including the removal of 1,300 tons of chemical weapons materials for destruction.32 The international community had a big gap to fill in order to achieve this: skilled personnel and ships large enough and appropriately equipped to move the chemicals and precursors out of Syria. Finland quickly decided to help. A Finnish CBRN team assisted in the safe transport of the chemical weapons during the maritime operation led by Denmark and Norway. Later, when the most dangerous chemicals were neutralized on board a U.S. Military Sealift Command operated vessel, a Finnish unit was part of the multinational team charged with protecting the afloat operation. Some of the neutralized materials were ultimately taken to Finland, once they were no longer weaponizable chemicals but constituted hazardous materials, for final destruction.33

Even as the OPCW-UN Joint Mission worked to eliminate Syria’s chemical weapons program, reports of alleged uses of chemical weapons persisted. As part of the UN’s fact-finding mission in Syria, VERIFIN was selected as one of the labs to analyze material collected from the site of the alleged use.34 The selection of a

30 Executive Council, Organization for the Prohibition of Chemical Weapons.
31 Training, VERIFIN, University of Helsinki.
33 “Finland has a strong role in the dismantling of Syrian chemical weapons programme,” Embassy of Finland, London, December 9, 2014.
34 “Finland has a strong role in the dismantling of Syrian chemical weapons programme,” Embassy of Finland, London, December 9, 2014.
Finnish lab for this critical role is a reflection of the confidence the international community places in Finland’s scientific expertise.

Financially, Finland has made significant voluntary contributions to the OPCW’s mission. Most recently, in December 2022, Finland donated 100,000 euros ($110,461) to further the full elimination of the Syrian chemical weapons program and ensure factual accountability surrounding the alleged use of chemical weapons. This donation will also fund OPCW’s new Centre for Chemistry and Technology—adding capacity for international collaboration and analysis to support verification.35

**NUCLEAR SECURITY**

Finland joins NATO as an enduring advocate for nuclear safety, security, and nonproliferation, from detection and forensics to response and mitigation. Finland is one of 31 members in the G7-led Global Partnership Against the Spread of Weapons and Materials of Mass Destruction. Through this partnership, Finland has worked closely with the United States and others to counter the smuggling of nuclear materials. For example, since 2011 Finland has provided funding as well as radiation detection equipment to the U.S.-led effort to detect and deter the smuggling of radioactive and nuclear materials in Kyrgyzstan, Kazakhstan, Georgia, Armenia, Ukraine, and the Democratic Republic of the Congo.36

Finland was an early adopter of nuclear energy and has become an internationally recognized expert nation in all facets of nuclear energy management. Nuclear energy plays a key role in Finland’s plan to reach carbon neutrality by 2035 and also supports Finland’s energy security strategy. Nuclear energy accounted for 33% of Finland’s electricity generation as of 2021.37 That figure is expected to increase by as much as 14% with the addition of Finland’s fifth nuclear reactor, the Olkiluoto 3, which connected to the Finnish national power grid in March 2023 and began regular output in April.38 As the most powerful nuclear reactor by production capacity in all of Europe, Olkiluoto 3 brings a welcome boost to Europe’s stretched energy environment given Russia’s punitive cuts to gas and other power supplies.39

While a supporter of the peaceful use of nuclear power, Finland’s longtime nuclear weapons-related policy emphasizes nuclear disarmament, adherence to the rules-based international order, and the peaceful resolution of disputes. To further these aims, Finland has regularly joined international nuclear security efforts, including all four summits held as part of President Obama’s Nuclear Security Summits initiative, held in 2010, 2012,

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35 “Finland contributes 100,000 to OPCW missions in Syria,” OPCW News, December 1, 2022.
36 “U.S. and Finland to continue their cooperation in preventing the proliferation of weapons of mass destruction,” Embassy of Finland press release, March 24, 2011.
2014, and 2016. These summits brought countries together to pledge “gift baskets” of concrete actions to reduce nuclear risks. Finland’s contributions over the years included bolstering National Nuclear Detection Architectures for combating illicit trafficking of nuclear and radioactive material, ensuring adequate cyber security at nuclear facilities, furthering insider threat mitigation, and eliminating the use of highly enriched uranium in civilian applications. Finland also chaired the Global Initiative to Combat Nuclear Terrorism (GICNT) Implementation and Assessment Group from 2017 to 2019. In May of 2019, Finland joined 15 other nations to urge all nuclear-armed nations to advance nonproliferation efforts.

As a party to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and a member of the United Nations, Finland’s commitment not to acquire nuclear weapons is unwavering. This national policy is consistent with Finland’s new obligations under NATO. As Finland enters NATO, one of its long-serving diplomatic experts in nonproliferation, Jarmo Viinanen, Finland’s Ambassador for Strategic and Arms Control, is leading serious efforts to strengthen the treaty and reduce nuclear risks.

Given the existence of nuclear weapons within NATO’s deterrence arsenal, Finland began participating in NATO’s Nuclear Planning Group, and the Finnish Government is supporting a research project to better understand the ramifications of NATO’s nuclear weapons deterrent. While Finland joined NATO with no caveats or reservations, including regarding nuclear deterrence, no further official decisions on this topic have been made.

CONCLUSION

Finland’s accession to NATO and the announcement of the rescEU CBRN stockpile are the results of the country’s long-standing leadership and cooperation across the strategic threat defense space. Not only has Finland’s track record of investment and cooperation in CBRN defense been a valuable asset for regional interests, but the roughly 1,340 km (830 miles) of shared border with Russia reinforces the strategic importance of fully integrating Finland into NATO. Finland’s comprehensive approach to national security and generous investments in CBRN preparedness serve as a model to explore elements of societal resilience and foresight for consideration into other NATO countries’ national security strategies. As the newest NATO member, Finland will help contribute to a more resilient North Atlantic region and also help deter Russia and other adversaries.

45 “New member Finland to take part in NATO’s nuclear planning,” Reuters, April 13, 2023.
46 “NATO nuclear deterrence and its implications for Finland,” Finish Institute of International Affairs.
from short-sightedly seeking to use weapons of mass destruction to achieve strategic policy objectives. In the future, the European Union should further that resilience, and its deterrent effect, through making a long-term commitment to the rescEU CBRN stockpile that extends well beyond 2026, while NATO and the United States should continue to help strengthen Finland’s contribution to CBRN defense.

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