North Atlantic Treaty Organization (NATO)

NATO’s Chemical, Biological, Radiological and Nuclear (CBRN) Defence Policy

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I. Introduction

NATO’s security environment has grown more complex and challenging since 2009, when Allies agreed NATO’s Comprehensive, Strategic-Level Policy for Preventing the Proliferation of Weapons of Mass Destruction (WMD) and Defending against Chemical, Biological, Radiological and Nuclear (CBRN) Threats. That Policy has served as a cornerstone of Allied security and stability for thirteen years. Today, we face a world in which the potential use of CBRN materials or WMD by state and non-state actors remains a central and evolving threat to Allied security. It is a world in which NATO increasingly cannot assume that the international norms and institutions related to the proliferation or use of Weapons of Mass Destruction (WMD) will ensure our security, and in which scientific and technological innovation and other emerging trends have accentuated CBRN risks to the Alliance.

We will continue to meet these challenges through the use of military and non-military tools in a coherent and sustained manner. NATO remains clear-eyed about the CBRN challenge: Allies will have all the appropriate tools to ensure that potential adversaries do not perceive that they can gain a clear advantage against NATO by using, or threatening to use, CBRN materials. NATO’s 2022 Chemical, Biological, Radiological and Nuclear (CBRN) Defence Policy establishes the framework upon which we will understand, plan, posture, exercise, train, equip, and assess our capabilities, in order to counter WMD proliferation and ensure that we deter and defend our Alliance against CBRN threats.

II. Vision

NATO’s populations, territories and forces will be defended and secure against the threat or use of chemical, biological, radiological or nuclear materials and weapons of mass destruction. We will enhance the resilience of our nations and societies against the full spectrum of CBRN threats, and encourage cooperation between Allies to enhance international norms. The proliferation, threat or use of WMD and their delivery systems will not undermine NATO’s deterrence and defence. NATO forces will be able to operate effectively, fight and prevail in any environment.

III. Scope and Context

NATO’s CBRN Defence Policy sets the overall level of ambition for NATO’s CBRN defence, including our complementary commitments to providing necessary military capabilities and enabling national resilience, thereby enhancing NATO’s resilience against CBRN threats. This policy is guided by our shared and lasting commitment to prevent the proliferation of weapons of mass destruction, protect the Alliance against CBRN incidents or attack, and support recovery from the consequences of any such use. For the purposes of this policy, “weapon of mass destruction” refers to any weapon or weapons system employing CBRN materials that is able to cause widespread devastation and loss of life. “CBRN materials” refers to any chemical, biological, radiological, or nuclear substance that may pose a hazard to NATO populations, territories and forces, regardless of origin or whether the material was originally conceived as a weapon.

This policy supports the goals enshrined in the new Strategic Concept, and contributes to the fulfilment of its Core Tasks. The policy is consistent with and supports the implementation of NATO’s Military Strategy, including the Concept for the Deterrence and Defence of the Euro-Atlantic Area and the NATO Warfighting Capstone Concept. It further complements the Alliance’s ongoing work, including the Strengthened Resilience Commitment, the Comprehensive Cyber Defence Policy, the Strategy on NATO’s Role in Countering Hybrid Warfare, and the Coherent Implementation Strategy on Emerging and Disruptive Technologies.

In response to Russia’s illegal, unprovoked full-scale invasion of Ukraine in February 2022, NATO has taken steps to significantly strengthen its deterrence and defence posture, and will further develop the full range of capabilities, including CBRN defence capabilities, necessary to maintain credible deterrence and defence. We are increasing the resilience of our societies and our infrastructure to counter Russian and other malign influence efforts and behaviour, and we will enhance our preparedness and readiness for CBRN threats.

We remain fully committed to NATO’s enhanced role in the international community’s fight against terrorism. We will continue our work to defend against CBRN threats related to terrorism.

NATO Allies remain committed to preventing the proliferation of WMD, in part by implementing and supporting arms control, disarmament and non-proliferation (ADN). Arms control, disarmament, and non-proliferation have made and should continue to make an essential contribution to achieving the Alliance’s security objectives and for ensuring strategic stability and our collective security, taking into account the prevailing security environment. NATO has a long track record of doing its part on disarmament and non-proliferation. Allies remain collectively determined to uphold, and support existing arms control, disarmament and non-proliferation agreements and commitments, which are an important element of our efforts to defend the Alliance against CBRN threats.

In line with the NATO / Euro-Atlantic Partnership Council Women, Peace and Security Policy and Action Plan, NATO will ensure that gender perspectives are appropriately mainstreamed into CBRN defence. This will make an important contribution to increasing military readiness and supporting national resilience against WMD and CBRN threats. This will include recognizing and addressing, as appropriate, gender-based differences in requirements for equipment, medical management, and protection, as well as training and capacity-building.

Consistent with the NATO Climate Change and Security Action Plan, the Alliance will incorporate climate change considerations into its work to enhance our CBRN defence capabilities and resilience. Allies will increase awareness of potential impacts of climate change on our CBRN security environment, including how extreme and unusual conditions may exacerbate the consequences of CBRN threats, and the possible acceleration or spread of emerging and infectious disease. Allies will take appropriate steps to adapt to these impacts, and to incorporate these elements into outreach activities.

IV. The Evolving CBRN Threat

The global CBRN security environment has changed dramatically over the past decade.

Russia: Russia poses NATO's most pressing CBRN security challenge. Russia's illegal, unprovoked full-scale invasion of Ukraine has starkly illustrated the Putin regime's contempt for international law and global norms. This has amplified the concerns posed by Russia's demonstrated capability, rooted in Soviet programmes, to produce chemical and biological weapons, its large, diverse and expanding nuclear capabilities, as well as its continued assault on international non-proliferation tools and regimes.

Russia has led efforts to undermine global norms against the proliferation and use of WMD, including by trying to shield the Syrian government from accountability for chemical weapons use. Russia, along with China, has deliberately attacked the legitimacy and authority of the Organization for the Prohibition of Chemical Weapons (OPCW) and its attribution and investigative mechanisms. Russia has dangerously increased the spread of disinformation about biological and chemical weapons, including during the war in Ukraine. It has consistently refused to address legitimate questions about the assassination attempts using nerve agents from the so-called Novichok family against Sergei and Yulia Skripal on Allied territory in 2018, which cost the life of a UK citizen, and against Alexei Navalny in 2020. The Alliance also has grave concerns that Russia is considering the use of chemical or biological weapons in the future.

Russia's actions have also eroded the international treaty regime limiting the proliferation of delivery systems for weapons of mass destruction, notably by violating the Intermediate-Range Nuclear Forces Treaty, leading to that Treaty's demise. Russia has refused to comply with almost all of its ADN obligations, including commitments related to the proliferation and use of WMD. These issues, combined with Russia's irresponsible and escalatory rhetoric

related to CBRN materials and weapons of mass destruction, have dramatically increased international concern over their possible use, or threatened use, particularly in Ukraine.

Non-State Actors: Hostile non-state actors including terrorist organizations continue to seek to acquire WMD, CBRN materials, and means of delivery, and to use them against NATO populations, territories and forces. Terrorists believe that a WMD attack or deliberate use of CBRN materials has the potential, inter alia, to sow panic and strain national emergency response capabilities. Non-state actors have already used chemical weapons in Syria and Iraq, and they are known to both seek access to more sophisticated CBRN materials and WMD, as well as to attempt to weaponise toxic industrial chemicals and other materials that may be easier to acquire. Moreover, scientific and technological innovation continues to reduce the barriers to acquiring or developing advanced and diverse CBRN materials and means of delivery. Consequently, the risk of CBRN use or proliferation by non-state actors is likely to continue to grow.

In addition to Russia and terrorist organizations, NATO must continue to address security challenges posed by other actors. Syria's government has repeatedly demonstrated the willingness to use chemical weapons in violation of its international obligations, as the OPCW has confirmed. Having refused to fulfil its disarmament commitments and verifiably eliminate all stocks of chemical weapons, Syria continues to present a serious risk of using or proliferating chemical weapons and their means of delivery. The Democratic People's Republic of Korea (DPRK) continues the reckless expansion of its nuclear arsenal and missile capabilities in violation of relevant UN Security Council Resolutions. The assassination of Kim Jong-Nam with a nerve agent in Malaysia in 2017, demonstrates that the DPRK is willing and able to use prohibited weapons outside its borders. The expansion of Iran's missile capabilities, combined with the continued development of its nuclear program poses an ongoing challenge to regional and NATO security. Moreover, Iran's ongoing, active missile proliferation demands continued NATO vigilance.

Finally, China's stated ambitions and assertive behaviour pose systemic challenges to the rules-based international order and to areas relevant to Alliance security. China is rapidly expanding its nuclear arsenal with more warheads and a large number of sophisticated delivery systems. China's rapid and ambitious military modernization is an issue of particular concern, accentuated by China's lack of transparency and limited engagement with international arms control, disarmament and non-proliferation, including with regards to WMD. There have been many instances when China has repeated and amplified Russian disinformation regarding chemical and biological weapons.

NATO faces a widening spectrum of chemical threats, ranging from traditionally understood chemical materials, to so-called Novichok nerve agents and pharmaceutical-based agents (PBAs) that challenge detection, response and protection measures. Concerns persist regarding research on PBAs with potential dual-use applications, which may have utility for chemical weapons applications.

The risk of naturally-occurring or accidental biological threats can likewise add to the complexity of the security environment. The COVID-19 pandemic has demonstrated the extraordinary capacity of biological threats, regardless of origin, to disrupt our societies and strain our response capacity across domains. Biological agents, including both existing and modified pathogens, also pose unique and enduring challenges to NATO operations, with deployed forces facing the prospect of deliberate use of biological agents by hostile actors, accidental release, and contact with endemic and imported diseases. Climate change and associated trends are also expected to accelerate the emergence of zoonotic illnesses, including potential pandemic threats. These risks intersect with WMD proliferation, as new, naturally-occurring pathogens and toxins may be employed, enhanced or weaponized by malicious actors.

Taken together, these trends make clear the need to strengthen relevant capabilities, including medical diagnostics, research and countermeasures, and bio-detection and analysis, and to better understand how CBRN defence and deployed medical capabilities can contribute to responding to biological threats of any origin.

Emerging and Disruptive Technologies (EDTs) and dual-use challenges shape NATO's security environment in increasingly diverse ways. For currently known chemical, biological and radiological materials, EDTs can potentially help proliferators to identify new manufacturing processes and bypass internationally controlled materials and equipment. Dual-use concerns may arise regarding advanced biological research and related activities. New technologies, including nanotechnology, synthetic biology and additive manufacturing, also threaten to enable the development of even more effective or more lethal CBRN materials, such as those that can overcome protective measures and resist detection, decontamination, or medical countermeasures. They may also increase the availability of low-cost dispersal systems, as well as dual-use devices for bio-manufacturing, which could further enable the use of biological or chemical weapons.

Innovation may also facilitate threats from the convergence of technologies, such as unmanned systems and other novel delivery systems coupled with CBRN materials. EDTs therefore pose new challenges to international ADN that must be addressed, including by strengthening relevant international agreements, national implementation of those agreements, and global norms.

At the same time, innovation offers promising new and enhanced capabilities that can support our CBRN defence, including enhanced approaches to detection, identification, protection, decontamination, medical management, consequence assessment and management, and knowledge management. In addressing the challenges posed by the overlap between CBRN threats and new technologies, NATO will not neglect to take full advantage of EDTs to strengthen our security.

Cyber: NATO’s defence against CBRN threats must also address their nexus with cyber threats. The internet is a key channel for the proliferation of WMD-related technical knowledge and expertise. Malicious cyber actors may attempt to undermine NATO’s capacity to prevent and effectively respond to a CBRN incident by targeting NATO or Allied communications and information systems. Cyberattacks against critical infrastructure highlight the risk that cyber capabilities could be used to compromise industrial or scientific infrastructure with the intent to cause the release of toxic industrial chemicals, or another CBRN incident. Moreover, recent crises with a chemical or biological dimension have featured malicious cyber elements, including attempts to hack the OPCW, as well as destabilizing and malicious cyber activities against healthcare services and medical research facilities during the COVID-19 pandemic.

Hybrid: CBRN materials can be employed by potential adversaries to challenge the thresholds of detection and identification with the intention to create ambiguity, delay or prevent attribution, and impair decision-making, which are hallmarks of hybrid threats. Russian efforts at disinformation and malicious cyber activity following the Salisbury assassination attempt and Russia’s 2022 full-scale invasion of Ukraine, intended to disrupt a coherent Allied response, illustrated the nexus of hybrid and CBRN threats. The development of new CBRN materials, including those that are more difficult to detect, trace, or investigate, and novel means of targeting and delivery, may generate new opportunities for CBRN use alongside hybrid techniques.

In sum, NATO faces a security environment in which CBRN threats have grown more numerous and more diverse, in which state and non-state actors pose a greater threat of WMD use and proliferation, and where technological trends are rapidly amplifying these risks. Allies will continue working to strengthen and reinforce the international ADN framework together with their efforts to protect NATO populations, territories and forces from CBRN threats. We recognize the scope of this changing threat, and the steps necessary to ensure our security in this challenging new context.

V. Core Principles and Commitments

Consequently, NATO’s CBRN Defence policy rests upon two complementary, mutually reinforcing principles and commitments: (1) the Alliance will develop and maintain the necessary CBRN defence capabilities, including intelligence, personnel, equipment, policies, plans, exercises and training, and these will be effectively integrated into NATO’s deterrence and defence posture; and (2) our societies will have the necessary resilience against CBRN threats. Together, these aim to ensure that NATO can prevent, protect against, and recover from any use of CBRN materials against our populations, territories and forces. Figure 1, below, reflects NATO’s core principles and commitments for CBRN Defence, as well as the accompanying Strategic Enablers outlined in this policy.

Figure 1: NATO's Principles and Commitments for CBRN Defence

Core Principle and Commitment 1: Enhanced and Integrated CBRN Military Capabilities

NATO’s credible deterrence and defence is essential as a means to prevent conflict and war. NATO’s deterrence and defence will not be undermined by the proliferation, threat or use of WMD.

We will have the national and multinational military capabilities, including intelligence, personnel, equipment, policies, plans, exercises and training, required to address any CBRN threat, and to fight and prevail in any environment. We are investing in our military capabilities, including CBRN defence, in order to meet new and enduring challenges across all operational domains. We will continue to improve and adapt the sustainability, deployability, and interoperability of our capabilities for the evolving and demanding strategic environment. The Alliance supports the development of mobile and interoperable CBRN defence capabilities through its Joint CBRN Defence Capability Development Group. Our national capability development plans will support the full and timely implementation of CBRN defence capabilities, in particular those required by the Alliance in line with the NATO Defence Planning Process.

The implementation of CBRN defence capabilities is a fundamentally national responsibility. Although Allies have made progress in addressing capability gaps for CBRN defence, some shortfalls remain, and can only be addressed with the investment of necessary national resources.

Prevent: Fully-resourced CBRN defence capabilities contribute to Allied security across the full spectrum from peacetime to crisis to conflict. NATO’s CBRN defence capabilities contribute to prevent the conceptualization, development, possession, proliferation and use of WMD and related expertise, materials, technologies and means of delivery. NATO forces will be ready to deny access to CBRN materials and their means of delivery, disable and dispose of WMD and CBRN materials in operational contexts, respond against the source of any WMD attack, mitigate the effects of CBRN use, and eliminate an aggressor’s WMD capabilities. The ability to conduct countering WMD and interdiction operations, including by sea, plays a central role in preventing the proliferation of WMD and CBRN materials, their means of delivery, and related materials and technologies.

Moreover, comprehensive and credible CBRN defence capabilities have a profound deterrent effect, by reducing the advantage that any adversary might hope to gain by acquiring WMD and by employing WMD against Allies. NATO will further protect against WMD use by maintaining a posture sufficient to deter attack. In the event of WMD attack, NATO is prepared to use its military capabilities to disrupt, deny and defeat WMD use, to protect Alliance populations, territories and forces, and to assist partners.

In that context, the fundamental purpose of NATO's nuclear capability is to preserve peace, prevent coercion, and deter aggression. Given the deteriorating security environment in Europe, a credible and united nuclear Alliance is essential. Nuclear weapons are unique. The

circumstances in which NATO might have to use nuclear weapons are extremely remote. NATO reiterates that any employment of nuclear weapons against NATO would fundamentally alter the nature of a conflict.

If the fundamental security of any of its members were to be threatened, however, NATO has the capabilities and resolve to impose costs on an adversary that would be unacceptable and far outweigh the benefits that any adversary could hope to achieve.

Protect: In order to fulfil NATO's core tasks, Allied forces must be enabled with integrated basic, enhanced and specialized CBRN defence capabilities. NATO's deployable forces in all services must be capable of protecting themselves against a wide range of CBRN threats in an operational context. Specialized CBRN defence units provide supplementary capabilities that can be tailored to enable operational success in specific mission types, including countering WMD, and to support combined operations in CBRN environments. NATO, as appropriate, supports these national capabilities, including through the Combined Joint CBRN Defence Task Force (CJ-CBRND-TF), a deployable strategic military asset designed to perform the full range of CBRN defence missions in support of deployed NATO forces, and the technical and scientific support provided by the NATO CBRN Reachback Element (CBRN RBE).

Recover: Military CBRN defence capabilities enable NATO forces to more quickly recover from the consequences of a CBRN incident, to sustain effective operations and to further support the recovery of affected populations, territories and forces. We will ensure that these capabilities are underpinned by appropriate resources, personnel, equipment and training. CBRN military medical capabilities are an essential element of recovery from CBRN use, and will be appropriately incorporated into NATO's doctrines, policies, concepts and capability development processes. Military medical personnel will be educated, trained and prepared to recognise and provide effective CBRN medical support or operational bio-response within an all-hazards framework.

Capabilities Delivery: NATO will continue to support and facilitate national CBRN defence capabilities, including those of Allies and partners, through information exchange, to be in line with established practices, procedures and policies, planning, training, exercises, and technical and scientific support. Specific NATO assets, platforms and processes play a key role in supplementing national capability development efforts, including the NATO-wide network of Centres of Excellence (COEs), particularly the Joint CBRN Defence Centre of Excellence (JCBRN Defence COE) in the Czech Republic.

NATO is developing innovative means to deliver needed CBRN defence capabilities and close any capability gaps. To that end, we welcome multinational initiatives that enable the common development of new capabilities for participating Allies, including the High Visibility Projects for CBRN Defence launched by numerous Allies in October 2021, the Framework Nations Concept Cluster CBRN Protection, and the Smart Defence project in Pooling CBRN

Capabilities. Building in part on these projects, NATO will continue to seek new means to facilitate Allied CBRN defence capabilities, without prejudice to fundamentally national responsibilities.

Doctrines and Structures: To enable a timely, coordinated and effective response to any kind of CBRN threats, NATO will ensure an appropriate level of CBRN expertise and staffing throughout the NATO Command and Forces Structure. In particular, the timely implementation of CBRN Command and Control systems as a functional service across NATO is a priority. NATO, with the support of nations, will ensure a functioning and tested CBRN warning and reporting network. These are essential to enable NATO to respond to CBRN incidents, and to proactively prevent CBRN proliferation and use. NATO will ensure that CBRN related intelligence, information and analysis can be effectively incorporated into all levels of Alliance civil and military decision-making.

NATO, led by the Joint CBRN Defence Capability Development Group, will further develop and refine the common doctrines, standards and policies that underpin our CBRN defence capabilities and forces and support the interoperability of our CBRN defence forces. The military medical community will support these efforts, with a view towards developing appropriate frameworks for military medical contributions to CBRN defence.

Core Principle and Commitment 2: Improved Resilience against CBRN Threats

National and collective resilience are an essential basis for credible deterrence and defence and the effective fulfilment of the Alliance’s core tasks. They are vital to our efforts to safeguard our societies, our populations and our shared values. The 2021 Strengthened Resilience Commitment reiterated that resilience is a national responsibility and a collective commitment. NATO’s seven Baseline Requirements for national resilience provide a comprehensive framework to support the effective enablement of our armed forces and of NATO’s core tasks. The Baseline Requirements include measures for CBRN preparedness, in particular those related to continuity of government and dealing with mass casualties or disruptive health crises.

An attack with CBRN materials or a large-scale CBRN incident could have devastating consequences for our societies and the critical infrastructure upon which they depend. This could have potential impacts on almost all seven baseline areas, and affect our society’s ability to support military operations. Even a comparatively limited employment of CBRN substances may have a severe impact on the population, require significant attention by public authorities, demand considerable resources to mitigate impacts, and complicate the Alliance’s readiness and responsiveness.

Allies have committed to enhance their national and collective resilience, addressing threats and challenges from both state and non-state actors, which take diverse forms and involve the use of a variety of tactics and tools. Recognising this, we will not permit CBRN threats to compromise our broader commitment to national resilience. Allied governments and first

responders should possess the full range of capabilities required to respond effectively to a CBRN incident on their territory. Noting that resilience against CBRN threats remains a national responsibility, Allies are collectively committed to work together to reduce vulnerabilities.

Prevent: Just as with military CBRN defence capabilities, national resilience against CBRN threats contributes to our security at all points of the spectrum from peacetime to crisis to conflict. It has an essential preventive and deterrent effect, by reducing the advantage that any adversary could hope to gain by the employment of CBRN. Pre-crisis coordination, arrangements and planning at a national level could be necessary to support a whole-of-government approach to CBRN preparedness and prevention. NATO could, as appropriate and upon request, support Allies in bolstering national capabilities to prevent theft and illicit trafficking of CBRN materials.

Protect: One of the three core functions of NATO Civil Preparedness, to provide essential services to the population, includes the provision of assistance to national authorities in protecting Alliance populations and critical infrastructure from the consequences of natural and technological disasters, including CBRN incidents. Allies have committed to ensuring that they have the civilian capabilities, including medical capabilities, needed to address large-scale crises. While nations have the primary responsibility for their domestic security and their own resilience, NATO can consider supporting national authorities in protecting against large-scale CBRN incidents or attacks, upon request. As such, NATO could further assist Allied national authorities in protecting relevant critical infrastructure. On request, NATO assets, including deployable forces and enabling capabilities, may support national authorities in strengthening their CBRN preparedness and consequence management.

At the same time, NATO’s military forces require effective, secure civilian services and infrastructure, particularly in transportation, telecommunications, IT services, energy, food and water supply, law enforcement, and in the medical field. Consequently, ensuring national resilience against CBRN threats serves to protect our military forces, preventing CBRN threats against our nations from compromising our deterrence and defence posture.

Recover: We must be fully prepared to recover from the impact of a CBRN incident affecting NATO populations, territories and forces, whatever its origins, and to assist our partners, if necessary. In the event of a CBRN incident, national authorities have primary responsibility for leading the recovery and for ensuring effective civil-military coordination at the national level. NATO supports such efforts, as appropriate, through deployable assets, training, exercises, and policy guidance. Drawing on national and international best practices, NATO has issued non-binding guidelines for enhanced civil-military cooperation to deal with the consequences of large-scale CBRN events, and for civil-military medical cooperation in response to CBRN mass casualty incidents. These guidelines are an example of the added value that NATO brings to supporting national resilience against, and recovery from, CBRN incidents.

As the COVID-19 pandemic has highlighted, effective whole-of-government and civil-military cooperation has been essential to address shortages of essential materials and equipment, managing movement restrictions for essential personnel, and ensuring the continuity of essential services. NATO Allies' support to each other and to partners during the pandemic included logistical support, including airlift, often coordinated through the Euro-Atlantic Disaster Response Coordination Centre (EADRCC), rather than primarily public health, medical, or direct CBRN assistance. Recognizing that in a CBRN crisis, NATO may be asked to provide support from across the full spectrum of Alliance capabilities, we will endeavour to ensure that our CBRN defence support and other forms of aid are well coordinated and jointly exercised. The EADRCC would be responsible, in the event of a CBRN incident afflicting a NATO Ally or partner, for coordinating bilateral requests for and offers of civil assistance.

Our resilience against CBRN threats also demands resilience against techniques and methods that may be deployed against NATO in order to weaken our ability to respond to CBRN incidents. These include cyberattack, hybrid techniques, and disinformation, all of which are likely to continue to be elements of future CBRN incidents. All efforts to strengthen resilience against CBRN threats, at the NATO and national levels, should incorporate these threat multipliers from the planning stage to implementation.

Civil-Military Interaction: While military CBRN defence capabilities and civil preparedness should support and reinforce each other, they are not interchangeable and neither can replace the other. Ensuring both military readiness and national resilience demands effective, two-way civil-military interaction that is appropriately planned, exercised, and resourced. The COVID-19 pandemic has reinforced the importance of civil-military cooperation in a crisis and the potential contributing role of CBRN defence capabilities. It has highlighted that Allied military forces can be called upon to provide significant support to national civil authorities as a key instrument of national resilience, in cooperation with other relevant actors. Inversely, effective civilian support to military forces is indispensable to accomplishing military objectives. NATO will continue to take the necessary steps to strengthen civil-military interaction in support of CBRN defence.

VI. Strategic Enablers

50. Strategic enablers are crosscutting capabilities that enable the Alliance to fulfil the full range of its commitments. They anchor NATO's two core CBRN defence principles and commitments described above, in support of NATO's core tasks. The following strategic enablers facilitate NATO's efforts to defend against CBRN threats and WMD: capacity-building for military and civilian personnel; intelligence- and information-sharing; partnerships and outreach; strategic communications and public diplomacy; scientific and technical collaboration; and medical support.

a) Shared Understanding

Shared awareness and intelligence- and information-sharing are critical enablers for all aspects of NATO's CBRN defence mission, directly supporting strategy, planning, and decision-making, informing risk management, and facilitating improvements to the Alliance's operational capabilities through exercises, procurement, and other functions.

Reliable CBRN warning and reporting generates a shared understanding of our threat environment, and enables decision-makers to assess the impact and implications of planned or perpetrated CBRN incidents. Timely, accurate and evaluated intelligence is critical to enable early warning, to permit a rapid and effective response to potential threats, enable appropriate counter-proliferation measures, identify appropriate capability targets, support attribution, and to activate protection measures and response forces. It further permits us to use effective strategic communication, counter disinformation and misinformation, and reassure our publics in the face of CBRN risks, as we did following the 2018 Salisbury attack, the 2020 poisoning of Alexei Navalny and during Russia's 2022 full-scale invasion of Ukraine. While always important, this is particularly relevant where an adversary uses a hybrid strategy to create ambiguity and attempt to impair Alliance decision-making.

Intelligence-sharing with partners also supports our response to CBRN threats. Allies are working to enhance their contributions of CBRN-related national intelligence and expertise, and will continue to seek to make our intelligence sharing ever more effective, timely and comprehensive.

b) Capacity-building for military and civilian personnel

NATO is fully committed to building the capacities and expertise of all personnel, military and civilian, involved in CBRN defence in a prioritized and effective manner. Education, Training, Exercises and Evaluation (ETEE) are essential to enabling the Alliance to confront today's CBRN threats. Allies have primary responsibility for the education and training of national personnel and forces allocated to NATO, while the Alliance offers substantial support to ensure that personnel have the necessary capabilities to succeed in this mission. NATO provides and coordinates an extensive portfolio of CBRN defence education and training for NATO forces, participating Allied national forces and civilian personnel, and authorized partners.

NATO forces must regularly exercise their CBRN defence capabilities, including the ability to operate in CBRN environments and to support CBRN emergency response. Major strategic exercises also often include CBRN defence elements, according to their training objectives. Exercise activities include both NATO-organized exercises, and national exercises in which Allies and Partners may participate as appropriate. Exercises and scenario-based discussions among NATO's civilian committees also serve to build our understanding of the CBRN threat and NATO's role in addressing it. NATO will include relevant CBRN defence aspects in major joint exercises, and incorporate CBRN and NATO Crisis Response System related CBRN aspects, in relevant events in the NATO HQ High Level Exercise Programme.

NATO Centres of Excellence are a key source of expertise for the Alliance. The JCBRN Defence COE in the Czech Republic, in particular, serves as a critical focal point for CBRN defence-related analysis, insight, and innovation. The JCBRN Defence COE provides training, capacity-building, and support to NATO analysis and programming for CBRN defence, as well as training for partners, without duplicating or competing with already existing NATO capabilities. Other NATO COEs and education and training facilities make important contributions to our CBRN defence, including the Defence against Terrorism COE, Military Medicine COE, Maritime Security COE, Explosive Ordinance Disposal COE, Strategic Communications COE, and the NATO Maritime Interdiction Operational Training Centre.

NATO's CBRN reachback capability provides an on-demand source of authoritative technical analysis and expert guidance that facilitates efforts to strengthen deterrence and defence, support operations, conduct exercises and respond to CBRN incidents through a dedicated network. NATO's CBRN Reachback Element, housed at the JCBRN Defence COE, is the focal point of CBRN reachback for the Alliance, together with Allies' national military and civilian CBRN defence capabilities, when needed and volunteered. The NATO CBRN reachback network provides actionable, full spectrum CBRN defence expertise and analysis to support operations and specified organisations.

c) Partnerships and Outreach

Partnerships and outreach activities bolster NATO's efforts to address CBRN threats, through two distinct and complementary lines of work, with international organizations and with NATO's bilateral partners. We will continue to strengthen each of these, with a view to enhancing our understanding of regional and global CBRN risks and threats and areas of associated responsibility and activity, and identifying practical cooperation opportunities that enhance mutual security, including information-sharing, exchanges on policy and standards, and joint training and exercises, in accordance with existing rules and procedures.

United Nations (UN) and Regional Multilateral Organizations: In an interlinked world with globally shared security challenges, effective outreach to and cooperation with international organizations is necessary to counter the threat posed by WMD. The UN is an indispensable actor with global reach, and is often the first international organization to come to the aid of a nation responding to a crisis. We will continue to enhance NATO-UN cooperation for addressing CBRN threats, including supporting the effective implementation of UN Security Council Resolution 1540 and other non-proliferation resolutions. As appropriate, Allies will work together in their national capacities at the UN in support of effective multilateral non-proliferation efforts. NATO Allies will also continue to work together to support and strengthen the operationalization of the UN Secretary-General's Mechanism for the Investigation of Alleged Use of Chemical or Biological Weapons. Allies also support the invaluable work of the World Health Organization, in particular, in responding to CBRN threats. NATO will

continue to strengthen its engagement with regional multilateral organizations, including the African Union and the Association of Southeast Asian Nations.

European Union (EU): The EU remains a unique and essential partner for NATO. This has been demonstrated by our strong and coordinated response to Russia's 2022 illegal and unprovoked full-scale invasion of Ukraine. Through mutual and effective coordination, NATO and the EU can mobilize a broad range of tools to respond to CBRN challenges, and better provide security in Europe, including through building the capacities of partners. As appropriate, NATO and the EU should seek to coordinate and de-conflict relevant CBRN-related civil preparedness and crisis management activities.

ADN regimes: While not a party to any international treaty, NATO serves as a platform for technical and political consultation between Allies and partners, to strengthen international arms control, disarmament and non-proliferation regimes, and their contributions to our security. We will engage with relevant organizations, as appropriate, in support of efforts to counter WMD threats and reinforce the prohibitions on chemical and biological weapons, while avoiding unnecessary duplication. The Treaty on the Non-Proliferation of Nuclear Weapons remains the essential bulwark against the spread of nuclear weapons. Allies will continue to support the critical work of the Organization for the Prohibition of Chemical Weapons, the Organization for Security and Cooperation in Europe, the Comprehensive Test-Ban Treaty Organization, and the International Atomic Energy Agency, and to strengthen the implementation of the Biological and Toxin Weapons Convention. As appropriate, Allies will support international investigation and identification mechanisms within appropriate regimes in order to verify and enforce compliance, and support credible attribution in the event of a CBRN incident.

Bilateral partnerships: NATO's bilateral partnerships also contribute to Allied security and that of NATO's large network of partners. NATO partners participate in joint exercises addressing WMD threats, and share CBRN defence-related expertise and information. They make valuable contributions to the work of the Joint CBRN Defence Capability Development Group, the Joint CBRN Defence COE and the Framework Nations Concept Cluster CBRN Protection. NATO has multiple partnerships mechanisms for which CBRN defence and resilience are focus areas, including the Science for Peace and Security Programme, and the Defence and Related Security Capacity-Building Initiative. CBRN defence is a regular focus of engagement with regional partnership groupings including the Partnership for Peace, Mediterranean Dialogue and Istanbul Cooperation Initiative. Considering the transnational nature of CBRN threats, NATO recognizes that strengthening the CBRN defence of its partners helps to sustain the overall security of the Alliance.

With a view to taking full advantage of available resources and minimizing duplication, NATO will continue to take steps to make partnerships more strategic, more coherent, and more effective in strengthening our CBRN defence. We will prioritize efforts that enhance the security of both NATO Allies and partners, including strengthening interoperability, building

CBRN defence capabilities, conducting joint exercises and training, supporting defence- and security-related reforms, and enhancing civil preparedness and crisis management. As appropriate, we will work with partners to coordinate our efforts to strengthen the international arms control, disarmament and non-proliferation regime, as we have done, inter alia, in pursuing accountability for Syria's use of chemical weapons. The Global Partnership against the Spread of Weapons and Materials of Mass Destruction (GP), a primary international WMD threat reduction mechanism, offers a good example for working with civil authorities around the world for capacity-building to prevent, detect and respond to CBRN threats.

d) Strategic Communications and Public Diplomacy

Strategic communications is an essential enabler of NATO's response to CBRN threats. It is critical to building awareness and support, reinforcing deterrence, enabling recovery and reassuring our publics. NATO will continue to employ coherent and calibrated strategic communications to convey that we are taking all appropriate steps to prevent WMD proliferation and protect our populations, forces and territories against CBRN threats.

Hostile information activities increasingly aim to undermine the Alliance. During the 2018 Salisbury attack, hostile information activities intended to hinder attribution and generate discord among NATO publics. In 2022, Russia dramatically heightened its disinformation campaign to justify its illegal, unprovoked full-scale invasion of Ukraine, and potentially to provide a pretext for further escalation, including its own possible use of chemical or biological weapons. Addressing hostile information activities, including propaganda and disinformation, is an integral element of CBRN defence and incident response.

Attribution, supported by an understanding of the information environment, is important to the strategic communications response to any CBRN incident. While attribution remains a national prerogative, NATO will continue to support effective attribution through our longstanding role as a forum for information-sharing and political consultation. As this policy is implemented, the NATO HQ Strategic Communications Framework on WMD Non-Proliferation and CBRN Defence will be updated as required.

e) Scientific and Technical Collaboration

Scientific and technical collaboration is essential to understand and counter CBRN threats, and to ensure Alliance security in a rapidly-changing environment. Innovation is driving the evolution of the CBRN threat, including by enabling new chemical and biological materials, lowering the barriers to proliferation, and introducing destabilizing new delivery systems for WMD. At the same time, new capabilities in detection, forensics, decontamination, personal and collective protection, knowledge management, medical countermeasures and more offers new avenues for countering CBRN threats. Armed with the best available scientific guidance, NATO will effectively identify and navigate the interlinked risks and potential that innovation and EDTs presents for CBRN defence.

Spearheaded by the NATO Science and Technology Organization (STO), NATO will maintain a world-leading network of collaborative scientific expertise related to CBRN threats, defences, and countermeasures. NATO will continue to strengthen collaboration between its scientific, policy and planning communities, ensuring that our assessments of CBRN threats and our development of needed capabilities are both informed by cutting-edge science. We will also seek to expand our collaboration with relevant industry groups, focusing on understanding, and responding to, the intersection of innovation and CBRN risks.

f) Medical Support

Medical capabilities support the two core CBRN defence principles and commitments through medical support to CBRN defence and countering WMD missions, health surveillance, protective and therapeutic medical countermeasures, and CBRN casualty care. They contribute to efforts to prevent, protect against, and recover from any use of CBRN materials against NATO. Recent CBRN incidents have highlighted the importance of healthcare systems in detecting and identifying the use of CBRN materials. In the event of a biological incident in particular, medical capabilities have a central role in biological detection and identification and in mitigating biological risk.

CBRN medical capabilities will be able to support and advise military and civilian authorities, within appropriate medical, legal and ethical frameworks, in accordance with national legal and regulatory considerations. NATO will take appropriate steps to guide the development of operational and strategic capabilities in this area, and future research.

VII. Conclusion and Recommendations

Our security environment with regards to CBRN threats has grown more complex and more challenging. The potential use of CBRN materials or WMD by state and non-state actors is a fundamental threat to our security. The norms and institutions related to the proliferation or use of WMD have been challenged by the use of CBRN materials in conflict and as tools of assassination, which we have condemned in the strongest possible terms. Moreover, emerging and disruptive technologies pose critical new challenges to our shared security in the CBRN realm, even as they open up new opportunities to maintain NATO’s technological edge.

Since our founding, NATO has always adapted to changes in our security environment. We will continue to do so in order to address the significantly changed CBRN threat from Russia, non-state actors, and other states, the challenges to arms control, disarmament and non-proliferation regimes, and the risks and opportunities posed by emerging and disruptive technologies. Our approach to CBRN threats and risks will be integrated with our deterrence and defence posture, notably the Concept for the Deterrence and Defence of the Euro-Atlantic Area, and the NATO Warfighting Capstone Concept, as well as our Strengthened Resilience Commitment, and policies to address cyber and hybrid threats.

We will have the military capabilities necessary to counter WMD proliferation and to operate effectively and to fight and prevail in any environment, and we will enhance our national and collective defence and resilience against CBRN threats of all types.

NATO's security environment has grown more complex and challenging since 2009, when Allies agreed NATO's Comprehensive, Strategic-Level Policy for Preventing the Proliferation of Weapons of Mass Destruction (WMD) and Defending against Chemical, Biological, Radiological and Nuclear (CBRN) Threats. That Policy has served as a cornerstone of Allied security and stability for thirteen years. Today, we face a world in which the potential use of CBRN materials or WMD by state and non-state actors remains a central and evolving threat to Allied security. It is a world in which NATO increasingly cannot assume that the international norms and institutions related to the proliferation or use of Weapons of Mass Destruction (WMD) will ensure our security, and in which scientific and technological innovation and other emerging trends have accentuated CBRN risks to the Alliance.
We will continue to meet these challenges through the use of military and non-military tools in a coherent and sustained manner. NATO remains clear-eyed about the CBRN challenge: Allies will have all the appropriate tools to ensure that potential adversaries do not perceive that they can gain a clear advantage against NATO by using, or threatening to use, CBRN materials. NATO's 2022 Chemical, Biological, Radiological and Nuclear (CBRN) Defence Policy establishes the framework upon which we will understand, plan, posture, exercise, train, equip, and assess our capabilities, in order to counter WMD proliferation and ensure that we deter and defend our Alliance against CBRN threats.

NATO's CBRN Defence Policy sets the overall level of ambition for NATO's CBRN defence, including our complementary commitments to providing necessary military capabilities and enabling national resilience, thereby enhancing NATO's resilience against CBRN threats. This policy is guided by our shared and lasting commitment to prevent the proliferation of weapons of mass destruction, protect the Alliance against CBRN incidents or attack, and support recovery from the consequences of any such use. For the purposes of this policy, "weapon of mass destruction" refers to any weapon or weapons system employing CBRN materials that is able to cause widespread devastation and loss of life. "CBRN materials" refers to any chemical, biological, radiological, or nuclear substance that may pose a hazard to NATO populations, territories and forces, regardless of origin or whether the material was originally conceived as a weapon.
This policy supports the goals enshrined in the new Strategic Concept, and contributes to the fulfilment of its Core Tasks. The policy is consistent with and supports the implementation of NATO's Military Strategy, including the Concept for the Deterrence and Defence of the Euro-Atlantic Area and the NATO Warfighting Capstone Concept. It further complements the Alliance's ongoing work, including the Strengthened Resilience Commitment, the Comprehensive Cyber Defence Policy, the Strategy on NATO's Role in Countering Hybrid Warfare, and the Coherent Implementation Strategy on Emerging and Disruptive Technologies.

In response to Russia's illegal, unprovoked full-scale invasion of Ukraine in February 2022, NATO has taken steps to significantly strengthen its deterrence and defence posture, and will further develop the full range of capabilities, including CBRN defence capabilities, necessary to maintain credible deterrence and defence. We are increasing the resilience of our societies and our infrastructure to counter Russian and other malign influence efforts and behaviour, and we will enhance our preparedness and readiness for CBRN threats.
We remain fully committed to NATO's enhanced role in the international community's fight against terrorism. We will continue our work to defend against CBRN threats related to terrorism.
NATO Allies remain committed to preventing the proliferation of WMD, in part by implementing and supporting arms control, disarmament and non-proliferation (ADN). Arms control, disarmament, and non-proliferation have made and should continue to make an essential contribution to achieving the Alliance's security objectives and for ensuring strategic stability and our collective security, taking into account the prevailing security environment. NATO has a long track record of doing its part on disarmament and non-proliferation. Allies remain collectively determined to uphold, and support existing arms control, disarmament and non-proliferation agreements and commitments, which are an important element of our efforts to defend the Alliance against CBRN threats.
In line with the NATO / Euro-Atlantic Partnership Council Women, Peace and Security Policy and Action Plan, NATO will ensure that gender perspectives are appropriately mainstreamed into CBRN defence. This will make an important contribution to increasing military readiness and supporting national resilience against WMD and CBRN threats. This will include recognizing and addressing, as appropriate, gender-based differences in requirements for equipment, medical management, and protection, as well as training and capacity-building.
Consistent with the NATO Climate Change and Security Action Plan, the Alliance will incorporate climate change considerations into its work to enhance our CBRN defence capabilities and resilience. Allies will increase awareness of potential impacts of climate change on our CBRN security environment, including how extreme and unusual conditions may exacerbate the consequences of CBRN threats, and the possible acceleration or spread of emerging and infectious disease. Allies will take appropriate steps to adapt to these impacts, and to incorporate these elements into outreach activities.

The global CBRN security environment has changed dramatically over the past decade.
Russia: Russia poses NATO's most pressing CBRN security challenge. Russia's illegal, unprovoked full-scale invasion of Ukraine has starkly illustrated the Putin regime's contempt for international law and global norms. This has amplified the concerns posed by Russia's demonstrated capability, rooted in Soviet programmes, to produce chemical and biological weapons, its large, diverse and expanding nuclear capabilities, as well as its continued assault on international non-proliferation tools and regimes.
Russia has led efforts to undermine global norms against the proliferation and use of WMD, including by trying to shield the Syrian government from accountability for chemical weapons use. Russia, along with China, has deliberately attacked the legitimacy and authority of the

Organization for the Prohibition of Chemical Weapons (OPCW) and its attribution and investigative mechanisms. Russia has dangerously increased the spread of disinformation about biological and chemical weapons, including during the war in Ukraine. It has consistently refused to address legitimate questions about the assassination attempts using nerve agents from the so-called Novichok family against Sergei and Yulia Skripal on Allied territory in 2018, which cost the life of a UK citizen, and against Alexei Navalny in 2020. The Alliance also has grave concerns that Russia is considering the use of chemical or biological weapons in the future.

Russia's actions have also eroded the international treaty regime limiting the proliferation of delivery systems for weapons of mass destruction, notably by violating the Intermediate-Range Nuclear Forces Treaty, leading to that Treaty's demise. Russia has refused to comply with almost all of its ADN obligations, including commitments related to the proliferation and use of WMD. These issues, combined with Russia's irresponsible and escalatory rhetoric related to CBRN materials and weapons of mass destruction, have dramatically increased international concern over their possible use, or threatened use, particularly in Ukraine.

Non-State Actors: Hostile non-state actors including terrorist organizations continue to seek to acquire WMD, CBRN materials, and means of delivery, and to use them against NATO populations, territories and forces. Terrorists believe that a WMD attack or deliberate use of CBRN materials has the potential, inter alia, to sow panic and strain national emergency response capabilities. Non-state actors have already used chemical weapons in Syria and Iraq, and they are known to both seek access to more sophisticated CBRN materials and WMD, as well as to attempt to weaponise toxic industrial chemicals and other materials that may be easier to acquire. Moreover, scientific and technological innovation continues to reduce the barriers to acquiring or developing advanced and diverse CBRN materials and means of delivery. Consequently, the risk of CBRN use or proliferation by non-state actors is likely to continue to grow.

In addition to Russia and terrorist organizations, NATO must continue to address security challenges posed by other actors. Syria's government has repeatedly demonstrated the willingness to use chemical weapons in violation of its international obligations, as the OPCW has confirmed. Having refused to fulfil its disarmament commitments and verifiably eliminate all stocks of chemical weapons, Syria continues to present a serious risk of using or proliferating chemical weapons and their means of delivery. The Democratic People's Republic of Korea (DPRK) continues the reckless expansion of its nuclear arsenal and missile capabilities in violation of relevant UN Security Council Resolutions. The assassination of Kim Jong-Nam with a nerve agent in Malaysia in 2017, demonstrates that the DPRK is willing and able to use prohibited weapons outside its borders. The expansion of Iran's missile capabilities, combined with the continued development of its nuclear program poses an ongoing challenge to regional and NATO security. Moreover, Iran's ongoing, active missile proliferation demands continued NATO vigilance.

Finally, China's stated ambitions and assertive behaviour pose systemic challenges to the rules-based international order and to areas relevant to Alliance security. China is rapidly expanding its nuclear arsenal with more warheads and a large number of sophisticated

delivery systems. China’s rapid and ambitious military modernization is an issue of particular concern, accentuated by China’s lack of transparency and limited engagement with international arms control, disarmament and non-proliferation, including with regards to WMD. There have been many instances when China has repeated and amplified Russian disinformation regarding chemical and biological weapons.

NATO faces a widening spectrum of chemical threats, ranging from traditionally understood chemical materials, to so-called Novichok nerve agents and pharmaceutical-based agents (PBAs) that challenge detection, response and protection measures. Concerns persist regarding research on PBAs with potential dual-use applications, which may have utility for chemical weapons applications.

The risk of naturally-occurring or accidental biological threats can likewise add to the complexity of the security environment. The COVID-19 pandemic has demonstrated the extraordinary capacity of biological threats, regardless of origin, to disrupt our societies and strain our response capacity across domains. Biological agents, including both existing and modified pathogens, also pose unique and enduring challenges to NATO operations, with deployed forces facing the prospect of deliberate use of biological agents by hostile actors, accidental release, and contact with endemic and imported diseases. Climate change and associated trends are also expected to accelerate the emergence of zoonotic illnesses, including potential pandemic threats. These risks intersect with WMD proliferation, as new, naturally-occurring pathogens and toxins may be employed, enhanced or weaponized by malicious actors.

Taken together, these trends make clear the need to strengthen relevant capabilities, including medical diagnostics, research and countermeasures, and bio-detection and analysis, and to better understand how CBRN defence and deployed medical capabilities can contribute to responding to biological threats of any origin.

Emerging and Disruptive Technologies (EDTs) and dual-use challenges shape NATO’s security environment in increasingly diverse ways. For currently known chemical, biological and radiological materials, EDTs can potentially help proliferators to identify new manufacturing processes and bypass internationally controlled materials and equipment. Dual-use concerns may arise regarding advanced biological research and related activities. New technologies, including nanotechnology, synthetic biology and additive manufacturing, also threaten to enable the development of even more effective or more lethal CBRN materials, such as those that can overcome protective measures and resist detection, decontamination, or medical countermeasures. They may also increase the availability of low-cost dispersal systems, as well as dual-use devices for bio-manufacturing, which could further enable the use of biological or chemical weapons.

Innovation may also facilitate threats from the convergence of technologies, such as unmanned systems and other novel delivery systems coupled with CBRN materials. EDTs therefore pose new challenges to international ADN that must be addressed, including by strengthening relevant international agreements, national implementation of those agreements, and global norms.

At the same time, innovation offers promising new and enhanced capabilities that can

support our CBRN defence, including enhanced approaches to detection, identification, protection, decontamination, medical management, consequence assessment and management, and knowledge management. In addressing the challenges posed by the overlap between CBRN threats and new technologies, NATO will not neglect to take full advantage of EDTs to strengthen our security.

Cyber: NATO's defence against CBRN threats must also address their nexus with cyber threats. The internet is a key channel for the proliferation of WMD-related technical knowledge and expertise. Malicious cyber actors may attempt to undermine NATO's capacity to prevent and effectively respond to a CBRN incident by targeting NATO or Allied communications and information systems. Cyberattacks against critical infrastructure highlight the risk that cyber capabilities could be used to compromise industrial or scientific infrastructure with the intent to cause the release of toxic industrial chemicals, or another CBRN incident. Moreover, recent crises with a chemical or biological dimension have featured malicious cyber elements, including attempts to hack the OPCW, as well as destabilizing and malicious cyber activities against healthcare services and medical research facilities during the COVID-19 pandemic.

Hybrid: CBRN materials can be employed by potential adversaries to challenge the thresholds of detection and identification with the intention to create ambiguity, delay or prevent attribution, and impair decision-making, which are hallmarks of hybrid threats. Russian efforts at disinformation and malicious cyber activity following the Salisbury assassination attempt and Russia's 2022 full-scale invasion of Ukraine, intended to disrupt a coherent Allied response, illustrated the nexus of hybrid and CBRN threats. The development of new CBRN materials, including those that are more difficult to detect, trace, or investigate, and novel means of targeting and delivery, may generate new opportunities for CBRN use alongside hybrid techniques.

In sum, NATO faces a security environment in which CBRN threats have grown more numerous and more diverse, in which state and non-state actors pose a greater threat of WMD use and proliferation, and where technological trends are rapidly amplifying these risks. Allies will continue working to strengthen and reinforce the international ADN framework together with their efforts to protect NATO populations, territories and forces from CBRN threats. We recognize the scope of this changing threat, and the steps necessary to ensure our security in this challenging new context.

NATO's credible deterrence and defence is essential as a means to prevent conflict and war. NATO's deterrence and defence will not be undermined by the proliferation, threat or use of WMD.

We will have the national and multinational military capabilities, including intelligence, personnel, equipment, policies, plans, exercises and training, required to address any CBRN threat, and to fight and prevail in any environment. We are investing in our military capabilities, including CBRN defence, in order to meet new and enduring challenges across all operational domains. We will continue to improve and adapt the sustainability, deployability, and interoperability of our capabilities for the evolving and demanding strategic

environment. The Alliance supports the development of mobile and interoperable CBRN defence capabilities through its Joint CBRN Defence Capability Development Group. Our national capability development plans will support the full and timely implementation of CBRN defence capabilities, in particular those required by the Alliance in line with the NATO Defence Planning Process.

The implementation of CBRN defence capabilities is a fundamentally national responsibility. Although Allies have made progress in addressing capability gaps for CBRN defence, some shortfalls remain, and can only be addressed with the investment of necessary national resources.

Prevent: Fully-resourced CBRN defence capabilities contribute to Allied security across the full spectrum from peacetime to crisis to conflict. NATO's CBRN defence capabilities contribute to prevent the conceptualization, development, possession, proliferation and use of WMD and related expertise, materials, technologies and means of delivery. NATO forces will be ready to deny access to CBRN materials and their means of delivery, disable and dispose of WMD and CBRN materials in operational contexts, respond against the source of any WMD attack, mitigate the effects of CBRN use, and eliminate an aggressor's WMD capabilities. The ability to conduct countering WMD and interdiction operations, including by sea, plays a central role in preventing the proliferation of WMD and CBRN materials, their means of delivery, and related materials and technologies.

Moreover, comprehensive and credible CBRN defence capabilities have a profound deterrent effect, by reducing the advantage that any adversary might hope to gain by acquiring WMD and by employing WMD against Allies. NATO will further protect against WMD use by maintaining a posture sufficient to deter attack. In the event of WMD attack, NATO is prepared to use its military capabilities to disrupt, deny and defeat WMD use, to protect Alliance populations, territories and forces, and to assist partners.

In that context, the fundamental purpose of NATO's nuclear capability is to preserve peace, prevent coercion, and deter aggression. Given the deteriorating security environment in Europe, a credible and united nuclear Alliance is essential. Nuclear weapons are unique. The circumstances in which NATO might have to use nuclear weapons are extremely remote. NATO reiterates that any employment of nuclear weapons against NATO would fundamentally alter the nature of a conflict.

If the fundamental security of any of its members were to be threatened, however, NATO has the capabilities and resolve to impose costs on an adversary that would be unacceptable and far outweigh the benefits that any adversary could hope to achieve.

Protect: In order to fulfil NATO's core tasks, Allied forces must be enabled with integrated basic, enhanced and specialized CBRN defence capabilities. NATO's deployable forces in all services must be capable of protecting themselves against a wide range of CBRN threats in an operational context. Specialized CBRN defence units provide supplementary capabilities that can be tailored to enable operational success in specific mission types, including countering WMD, and to support combined operations in CBRN environments. NATO, as appropriate, supports these national capabilities, including through the Combined Joint CBRN

Defence Task Force (CJ-CBRND-TF), a deployable strategic military asset designed to perform the full range of CBRN defence missions in support of deployed NATO forces, and the technical and scientific support provided by the NATO CBRN Reachback Element (CBRN RBE).

Recover: Military CBRN defence capabilities enable NATO forces to more quickly recover from the consequences of a CBRN incident, to sustain effective operations and to further support the recovery of affected populations, territories and forces. We will ensure that these capabilities are underpinned by appropriate resources, personnel, equipment and training. CBRN military medical capabilities are an essential element of recovery from CBRN use, and will be appropriately incorporated into NATO's doctrines, policies, concepts and capability development processes. Military medical personnel will be educated, trained and prepared to recognise and provide effective CBRN medical support or operational bio-response within an all-hazards framework.

Capabilities Delivery: NATO will continue to support and facilitate national CBRN defence capabilities, including those of Allies and partners, through information exchange, to be in line with established practices, procedures and policies, planning, training, exercises, and technical and scientific support. Specific NATO assets, platforms and processes play a key role in supplementing national capability development efforts, including the NATO-wide network of Centres of Excellence (COEs), particularly the Joint CBRN Defence Centre of Excellence (JCBRN Defence COE) in the Czech Republic.

NATO is developing innovative means to deliver needed CBRN defence capabilities and close any capability gaps. To that end, we welcome multinational initiatives that enable the common development of new capabilities for participating Allies, including the High Visibility Projects for CBRN Defence launched by numerous Allies in October 2021, the Framework Nations Concept Cluster CBRN Protection, and the Smart Defence project in Pooling CBRN Capabilities. Building in part on these projects, NATO will continue to seek new means to facilitate Allied CBRN defence capabilities, without prejudice to fundamentally national responsibilities.

Doctrines and Structures: To enable a timely, coordinated and effective response to any kind of CBRN threats, NATO will ensure an appropriate level of CBRN expertise and staffing throughout the NATO Command and Forces Structure. In particular, the timely implementation of CBRN Command and Control systems as a functional service across NATO is a priority. NATO, with the support of nations, will ensure a functioning and tested CBRN warning and reporting network. These are essential to enable NATO to respond to CBRN incidents, and to proactively prevent CBRN proliferation and use. NATO will ensure that CBRN related intelligence, information and analysis can be effectively incorporated into all levels of Alliance civil and military decision-making.

NATO, led by the Joint CBRN Defence Capability Development Group, will further develop and refine the common doctrines, standards and policies that underpin our CBRN defence capabilities and forces and support the interoperability of our CBRN defence forces. The military medical community will support these efforts, with a view towards developing appropriate frameworks for military medical contributions to CBRN defence.

National and collective resilience are an essential basis for credible deterrence and defence and the effective fulfilment of the Alliance's core tasks. They are vital to our efforts to safeguard our societies, our populations and our shared values. The 2021 Strengthened Resilience Commitment reiterated that resilience is a national responsibility and a collective commitment. NATO's seven Baseline Requirements for national resilience provide a comprehensive framework to support the effective enablement of our armed forces and of NATO's core tasks. The Baseline Requirements include measures for CBRN preparedness, in particular those related to continuity of government and dealing with mass casualties or disruptive health crises.

An attack with CBRN materials or a large-scale CBRN incident could have devastating consequences for our societies and the critical infrastructure upon which they depend. This could have potential impacts on almost all seven baseline areas, and affect our society's ability to support military operations. Even a comparatively limited employment of CBRN substances may have a severe impact on the population, require significant attention by public authorities, demand considerable resources to mitigate impacts, and complicate the Alliance's readiness and responsiveness.

Allies have committed to enhance their national and collective resilience, addressing threats and challenges from both state and non-state actors, which take diverse forms and involve the use of a variety of tactics and tools. Recognising this, we will not permit CBRN threats to compromise our broader commitment to national resilience. Allied governments and first responders should possess the full range of capabilities required to respond effectively to a CBRN incident on their territory. Noting that resilience against CBRN threats remains a national responsibility, Allies are collectively committed to work together to reduce vulnerabilities.

Prevent: Just as with military CBRN defence capabilities, national resilience against CBRN threats contributes to our security at all points of the spectrum from peacetime to crisis to conflict. It has an essential preventive and deterrent effect, by reducing the advantage that any adversary could hope to gain by the employment of CBRN. Pre-crisis coordination, arrangements and planning at a national level could be necessary to support a whole-of-government approach to CBRN preparedness and prevention. NATO could, as appropriate and upon request, support Allies in bolstering national capabilities to prevent theft and illicit trafficking of CBRN materials.

Protect: One of the three core functions of NATO Civil Preparedness, to provide essential services to the population, includes the provision of assistance to national authorities in protecting Alliance populations and critical infrastructure from the consequences of natural and technological disasters, including CBRN incidents. Allies have committed to ensuring that they have the civilian capabilities, including medical capabilities, needed to address large-scale crises. While nations have the primary responsibility for their domestic security and their own resilience, NATO can consider supporting national authorities in protecting against large-scale CBRN incidents or attacks, upon request. As such, NATO could further assist Allied national authorities in protecting relevant critical infrastructure. On request, NATO assets, including deployable forces and enabling capabilities, may support national

authorities in strengthening their CBRN preparedness and consequence management.
At the same time, NATO's military forces require effective, secure civilian services and infrastructure, particularly in transportation, telecommunications, IT services, energy, food and water supply, law enforcement, and in the medical field. Consequently, ensuring national resilience against CBRN threats serves to protect our military forces, preventing CBRN threats against our nations from compromising our deterrence and defence posture.
Recover: We must be fully prepared to recover from the impact of a CBRN incident affecting NATO populations, territories and forces, whatever its origins, and to assist our partners, if necessary. In the event of a CBRN incident, national authorities have primary responsibility for leading the recovery and for ensuring effective civil-military coordination at the national level. NATO supports such efforts, as appropriate, through deployable assets, training, exercises, and policy guidance. Drawing on national and international best practices, NATO has issued non-binding guidelines for enhanced civil-military cooperation to deal with the consequences of large-scale CBRN events, and for civil-military medical cooperation in response to CBRN mass casualty incidents. These guidelines are an example of the added value that NATO brings to supporting national resilience against, and recovery from, CBRN incidents.
As the COVID-19 pandemic has highlighted, effective whole-of-government and civil-military cooperation has been essential to address shortages of essential materials and equipment, managing movement restrictions for essential personnel, and ensuring the continuity of essential services. NATO Allies' support to each other and to partners during the pandemic included logistical support, including airlift, often coordinated through the Euro-Atlantic Disaster Response Coordination Centre (EADRCC), rather than primarily public health, medical, or direct CBRN assistance. Recognizing that in a CBRN crisis, NATO may be asked to provide support from across the full spectrum of Alliance capabilities, we will endeavour to ensure that our CBRN defence support and other forms of aid are well coordinated and jointly exercised. The EADRCC would be responsible, in the event of a CBRN incident afflicting a NATO Ally or partner, for coordinating bilateral requests for and offers of civil assistance.
Our resilience against CBRN threats also demands resilience against techniques and methods that may be deployed against NATO in order to weaken our ability to respond to CBRN incidents. These include cyberattack, hybrid techniques, and disinformation, all of which are likely to continue to be elements of future CBRN incidents. All efforts to strengthen resilience against CBRN threats, at the NATO and national levels, should incorporate these threat multipliers from the planning stage to implementation.
Civil-Military Interaction: While military CBRN defence capabilities and civil preparedness should support and reinforce each other, they are not interchangeable and neither can replace the other. Ensuring both military readiness and national resilience demands effective, two-way civil-military interaction that is appropriately planned, exercised, and resourced. The COVID-19 pandemic has reinforced the importance of civil-military cooperation in a crisis and the potential contributing role of CBRN defence capabilities. It has highlighted that Allied military forces can be called upon to provide significant support to national civil authorities as a key instrument of national resilience, in cooperation with other relevant actors. Inversely,

effective civilian support to military forces is indispensable to accomplishing military objectives. NATO will continue to take the necessary steps to strengthen civil-military interaction in support of CBRN defence.

Shared awareness and intelligence- and information-sharing are critical enablers for all aspects of NATO's CBRN defence mission, directly supporting strategy, planning, and decision-making, informing risk management, and facilitating improvements to the Alliance's operational capabilities through exercises, procurement, and other functions.
Reliable CBRN warning and reporting generates a shared understanding of our threat environment, and enables decision-makers to assess the impact and implications of planned or perpetrated CBRN incidents. Timely, accurate and evaluated intelligence is critical to enable early warning, to permit a rapid and effective response to potential threats, enable appropriate counter-proliferation measures, identify appropriate capability targets, support attribution, and to activate protection measures and response forces. It further permits us to use effective strategic communication, counter disinformation and misinformation, and reassure our publics in the face of CBRN risks, as we did following the 2018 Salisbury attack, the 2020 poisoning of Alexei Navalny and during Russia's 2022 full-scale invasion of Ukraine. While always important, this is particularly relevant where an adversary uses a hybrid strategy to create ambiguity and attempt to impair Alliance decision-making.
Intelligence-sharing with partners also supports our response to CBRN threats. Allies are working to enhance their contributions of CBRN-related national intelligence and expertise, and will continue to seek to make our intelligence sharing ever more effective, timely and comprehensive.

NATO is fully committed to building the capacities and expertise of all personnel, military and civilian, involved in CBRN defence in a prioritized and effective manner. Education, Training, Exercises and Evaluation (ETEE) are essential to enabling the Alliance to confront today's CBRN threats. Allies have primary responsibility for the education and training of national personnel and forces allocated to NATO, while the Alliance offers substantial support to ensure that personnel have the necessary capabilities to succeed in this mission. NATO provides and coordinates an extensive portfolio of CBRN defence education and training for NATO forces, participating Allied national forces and civilian personnel, and authorized partners.
NATO forces must regularly exercise their CBRN defence capabilities, including the ability to operate in CBRN environments and to support CBRN emergency response. Major strategic exercises also often include CBRN defence elements, according to their training objectives. Exercise activities include both NATO-organized exercises, and national exercises in which Allies and Partners may participate as appropriate. Exercises and scenario-based discussions among NATO's civilian committees also serve to build our understanding of the CBRN threat and NATO's role in addressing it. NATO will include relevant CBRN defence aspects in major joint exercises, and incorporate CBRN and NATO Crisis Response System related CBRN aspects, in relevant events in the NATO HQ High Level Exercise Programme.

NATO Centres of Excellence are a key source of expertise for the Alliance. The JCBRN Defence COE in the Czech Republic, in particular, serves as a critical focal point for CBRN defence-related analysis, insight, and innovation. The JCBRN Defence COE provides training, capacity-building, and support to NATO analysis and programming for CBRN defence, as well as training for partners, without duplicating or competing with already existing NATO capabilities. Other NATO COEs and education and training facilities make important contributions to our CBRN defence, including the Defence against Terrorism COE, Military Medicine COE, Maritime Security COE, Explosive Ordinance Disposal COE, Strategic Communications COE, and the NATO Maritime Interdiction Operational Training Centre.

NATO's CBRN reachback capability provides an on-demand source of authoritative technical analysis and expert guidance that facilitates efforts to strengthen deterrence and defence, support operations, conduct exercises and respond to CBRN incidents through a dedicated network. NATO's CBRN Reachback Element, housed at the JCBRN Defence COE, is the focal point of CBRN reachback for the Alliance, together with Allies' national military and civilian CBRN defence capabilities, when needed and volunteered. The NATO CBRN reachback network provides actionable, full spectrum CBRN defence expertise and analysis to support operations and specified organisations.

Partnerships and outreach activities bolster NATO's efforts to address CBRN threats, through two distinct and complementary lines of work, with international organizations and with NATO's bilateral partners. We will continue to strengthen each of these, with a view to enhancing our understanding of regional and global CBRN risks and threats and areas of associated responsibility and activity, and identifying practical cooperation opportunities that enhance mutual security, including information-sharing, exchanges on policy and standards, and joint training and exercises, in accordance with existing rules and procedures.

United Nations (UN) and Regional Multilateral Organizations: In an interlinked world with globally shared security challenges, effective outreach to and cooperation with international organizations is necessary to counter the threat posed by WMD. The UN is an indispensable actor with global reach, and is often the first international organization to come to the aid of a nation responding to a crisis. We will continue to enhance NATO-UN cooperation for addressing CBRN threats, including supporting the effective implementation of UN Security Council Resolution 1540 and other non-proliferation resolutions. As appropriate, Allies will work together in their national capacities at the UN in support of effective multilateral non-proliferation efforts. NATO Allies will also continue to work together to support and strengthen the operationalization of the UN Secretary-General's Mechanism for the Investigation of Alleged Use of Chemical or Biological Weapons. Allies also support the invaluable work of the World Health Organization, in particular, in responding to CBRN threats. NATO will continue to strengthen its engagement with regional multilateral organizations, including the African Union and the Association of Southeast Asian Nations.

European Union (EU): The EU remains a unique and essential partner for NATO. This has been demonstrated by our strong and coordinated response to Russia's 2022 illegal and

unprovoked full-scale invasion of Ukraine. Through mutual and effective coordination, NATO and the EU can mobilize a broad range of tools to respond to CBRN challenges, and better provide security in Europe, including through building the capacities of partners. As appropriate, NATO and the EU should seek to coordinate and de-conflict relevant CBRN-related civil preparedness and crisis management activities.

ADN regimes: While not a party to any international treaty, NATO serves as a platform for technical and political consultation between Allies and partners, to strengthen international arms control, disarmament and non-proliferation regimes, and their contributions to our security. We will engage with relevant organizations, as appropriate, in support of efforts to counter WMD threats and reinforce the prohibitions on chemical and biological weapons, while avoiding unnecessary duplication. The Treaty on the Non-Proliferation of Nuclear Weapons remains the essential bulwark against the spread of nuclear weapons. Allies will continue to support the critical work of the Organization for the Prohibition of Chemical Weapons, the Organization for Security and Cooperation in Europe, the Comprehensive Test-Ban Treaty Organization, and the International Atomic Energy Agency, and to strengthen the implementation of the Biological and Toxin Weapons Convention. As appropriate, Allies will support international investigation and identification mechanisms within appropriate regimes in order to verify and enforce compliance, and support credible attribution in the event of a CBRN incident.

Bilateral partnerships: NATO’s bilateral partnerships also contribute to Allied security and that of NATO’s large network of partners. NATO partners participate in joint exercises addressing WMD threats, and share CBRN defence-related expertise and information. They make valuable contributions to the work of the Joint CBRN Defence Capability Development Group, the Joint CBRN Defence COE and the Framework Nations Concept Cluster CBRN Protection. NATO has multiple partnerships mechanisms for which CBRN defence and resilience are focus areas, including the Science for Peace and Security Programme, and the Defence and Related Security Capacity-Building Initiative. CBRN defence is a regular focus of engagement with regional partnership groupings including the Partnership for Peace, Mediterranean Dialogue and Istanbul Cooperation Initiative. Considering the transnational nature of CBRN threats, NATO recognizes that strengthening the CBRN defence of its partners helps to sustain the overall security of the Alliance.

With a view to taking full advantage of available resources and minimizing duplication, NATO will continue to take steps to make partnerships more strategic, more coherent, and more effective in strengthening our CBRN defence. We will prioritize efforts that enhance the security of both NATO Allies and partners, including strengthening interoperability, building CBRN defence capabilities, conducting joint exercises and training, supporting defence- and security-related reforms, and enhancing civil preparedness and crisis management. As appropriate, we will work with partners to coordinate our efforts to strengthen the international arms control, disarmament and non-proliferation regime, as we have done, inter alia, in pursuing accountability for Syria’s use of chemical weapons. The Global Partnership against the Spread of Weapons and Materials of Mass Destruction (GP), a primary international

WMD threat reduction mechanism, offers a good example for working with civil authorities around the world for capacity-building to prevent, detect and respond to CBRN threats.

Strategic communications is an essential enabler of NATO's response to CBRN threats. It is critical to building awareness and support, reinforcing deterrence, enabling recovery and reassuring our publics. NATO will continue to employ coherent and calibrated strategic communications to convey that we are taking all appropriate steps to prevent WMD proliferation and protect our populations, forces and territories against CBRN threats. Hostile information activities increasingly aim to undermine the Alliance. During the 2018 Salisbury attack, hostile information activities intended to hinder attribution and generate discord among NATO publics. In 2022, Russia dramatically heightened its disinformation campaign to justify its illegal, unprovoked full-scale invasion of Ukraine, and potentially to provide a pretext for further escalation, including its own possible use of chemical or biological weapons. Addressing hostile information activities, including propaganda and disinformation, is an integral element of CBRN defence and incident response. Attribution, supported by an understanding of the information environment, is important to the strategic communications response to any CBRN incident. While attribution remains a national prerogative, NATO will continue to support effective attribution through our longstanding role as a forum for information-sharing and political consultation. As this policy is implemented, the NATO HQ Strategic Communications Framework on WMD Non-Proliferation and CBRN Defence will be updated as required.

Scientific and technical collaboration is essential to understand and counter CBRN threats, and to ensure Alliance security in a rapidly-changing environment. Innovation is driving the evolution of the CBRN threat, including by enabling new chemical and biological materials, lowering the barriers to proliferation, and introducing destabilizing new delivery systems for WMD. At the same time, new capabilities in detection, forensics, decontamination, personal and collective protection, knowledge management, medical countermeasures and more offers new avenues for countering CBRN threats. Armed with the best available scientific guidance, NATO will effectively identify and navigate the interlinked risks and potential that innovation and EDTs presents for CBRN defence.
Spearheaded by the NATO Science and Technology Organization (STO), NATO will maintain a world-leading network of collaborative scientific expertise related to CBRN threats, defences, and countermeasures. NATO will continue to strengthen collaboration between its scientific, policy and planning communities, ensuring that our assessments of CBRN threats and our development of needed capabilities are both informed by cutting-edge science. We will also seek to expand our collaboration with relevant industry groups, focusing on understanding, and responding to, the intersection of innovation and CBRN risks.

Medical capabilities support the two core CBRN defence principles and commitments through medical support to CBRN defence and countering WMD missions, health surveillance, protective and therapeutic medical countermeasures, and CBRN casualty care. They contribute to efforts to prevent, protect against, and recover from any use of CBRN materials

against NATO. Recent CBRN incidents have highlighted the importance of healthcare systems in detecting and identifying the use of CBRN materials. In the event of a biological incident in particular, medical capabilities have a central role in biological detection and identification and in mitigating biological risk.
CBRN medical capabilities will be able to support and advise military and civilian authorities, within appropriate medical, legal and ethical frameworks, in accordance with national legal and regulatory considerations. NATO will take appropriate steps to guide the development of operational and strategic capabilities in this area, and future research.

Our security environment with regards to CBRN threats has grown more complex and more challenging. The potential use of CBRN materials or WMD by state and non-state actors is a fundamental threat to our security. The norms and institutions related to the proliferation or use of WMD have been challenged by the use of CBRN materials in conflict and as tools of assassination, which we have condemned in the strongest possible terms. Moreover, emerging and disruptive technologies pose critical new challenges to our shared security in the CBRN realm, even as they open up new opportunities to maintain NATO's technological edge.
Since our founding, NATO has always adapted to changes in our security environment. We will continue to do so in order to address the significantly changed CBRN threat from Russia, non-state actors, and other states, the challenges to arms control, disarmament and non-proliferation regimes, and the risks and opportunities posed by emerging and disruptive technologies. Our approach to CBRN threats and risks will be integrated with our deterrence and defence posture, notably the Concept for the Deterrence and Defence of the Euro-Atlantic Area, and the NATO Warfighting Capstone Concept, as well as our Strengthened Resilience Commitment, and policies to address cyber and hybrid threats.
We will have the military capabilities necessary to counter WMD proliferation and to operate effectively and to fight and prevail in any environment, and we will enhance our national and collective defence and resilience against CBRN threats of all types.

Source: https://www.nato.int/en/about-us/official-texts-and-resources/official-texts/2022/06/14/natos-chemical-biological-radiological-and-nuclear-cbrn-defence-policy