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NATO EXERCISES – EVOLUTION AND LESSONS LEARNED

Report

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TABLE OF CONTENTS

I.	INTRODUCTION	2
II.	THE BENEFITS OF EXERCISING	2
	A. IMPROVED DEFENCE CAPABILITY AND COST-EFFECTIVE BURDEN SHARING ...	3
	B. POLITICAL SIGNALLING AND REINFORCING THE TRANSATLANTIC BOND.....	3
III.	RUSSIA'S DANGEROUS EXERCISING.....	4
	A. ANNUAL TRAINING CYCLE AND THE DILEMMA OF 'SNAP' EXERCISES.....	4
	B. NUCLEAR ATTACK SCENARIOS.....	5
IV.	NATO EXERCISES TODAY – SCOPE AND SCALE	6
	A. EASTERN EXERCISES	6
	1. CLOSING THE GAP	6
	2. THE NRF AND THE VJTF	7
	3. NATO'S ENHANCED FORWARD PRESENCE AND TAILORED FORWARD PRESENCE.....	8
	B. TRIDENT JUNCTURE 2018	9
	1. <i>TJ-18</i> INNOVATIONS.....	10
	2. INFORMATION ENVIRONMENT AND SIGNALLING	11
	C. INTERNAL EXERCISES.....	11
	1. NATO COMMAND STRUCTURE	11
	2. CYBER DEFENCE	12
	3. NATO-EU COOPERATION	13
	4. THE EURO-ATLANTIC DISASTER COORDINATION CENTRE	14
	D. SOUTHERN EXERCISES	14
	E. EXERCISES WITH ENHANCED OPPORTUNITY PARTNERS	16
V.	CONCLUSIONS AND RECOMMENDATIONS FOR NATO PARLIAMENTARIANS.....	17
	BIBLIOGRAPHY	19

I. INTRODUCTION

1. NATO-Russia strategic competition continues to expand and is rapidly changing the face of European security. In their respective strategic communications and actions, both NATO and Russia identify each other as posing a distinct security challenge. In this new era of strained relations, military exercising has become a priority for both NATO and Russia to demonstrate capability, readiness, and political will.

2. In the shadow of the deteriorating European security environment, the size and scope of NATO and Russian military exercises have increased significantly – even dramatically when considering the relatively new pace and scale of Russian exercises. As the pitch of Russian aggressive actions continues to heighten across Europe and the globe, NATO is adapting its defence and deterrence posture both in the East and internally to meet the range of hybrid and conventional challenges confronting it.

3. Yet, Russia is not the only challenge to NATO; continued instability in the regions across its southern flank brings a host of asymmetrical challenges, from migration to terrorism. As such, NATO is designing a 360-degree approach to its deterrence and collective defence for better crisis response and cooperative security.

4. Underpinning NATO's strategic posturing to handle the challenges from the East and South is an increased suite of exercises to better position Allied forces to handle any challenge they may face. Designing a range of exercises to test, train, and adapt Allied forces to overcome today's international security environment is a difficult task. Effective exercises, however, are the *sine qua non* of force readiness, and force readiness is essential to the credibility of Alliance defence and deterrence.

5. This report will seek to understand the impact expanded exercising is having on Allied readiness and interoperability to deliver the promise of the 360-degree approach to defence and deterrence. It will also highlight the important political signalling of increased exercising to a range of audiences. In addition to lessons learned, there are a host of benefits to increased exercising among Allies.

6. Strong support for inter-Allied exercising across the spectrum of tasks necessary to promote a capable modern deterrent is needed by Alliance political leaders today. NATO parliamentarians can and should have an important role in promoting and underwriting a well-designed Alliance exercise programme.

II. THE BENEFITS OF EXERCISING

7. Broadly speaking, military exercises demonstrate two central ideas: first, they indicate a force's potential fighting power in war; second, they can project the force's level of ambition. Core messaging of exercises also includes the deterrence of potential aggressors, as well as the reassurance of Allies.

8. NATO's stated ambition level is to be able to carry out 'concurrent' major joint operations and several smaller joint operations in line with its core tasks (NATO, 2010). Facing a deteriorating European security environment, every NATO summit since 2014 has announced new adaptation initiatives to the Alliance's defence and deterrence posture. In parallel, each summit's declarations have announced regular exercises as part of the means of ensuring the Alliance's political and military responsiveness (NATO, 11 July 2018).

9. Military exercises benefit the Alliance in many important ways. Exercises **improve defence abilities**, are **cost-effective**, serve as **important political signals**, and, in the case of NATO, **increase the tensile strength of the transatlantic bond**.

A. IMPROVED DEFENCE CAPABILITY AND COST-EFFECTIVE BURDEN SHARING

10. Military exercises contribute to defence abilities by training forces to engage with a range of hypothetical scenarios at the strategic, theatre, and tactical levels. Practically speaking, NATO exercises can take one of three forms: a live exercise, in which forces participate directly; a command-post exercise, which focuses on commanders and their staffs at the headquarters level and involves communication between participating headquarters; and an exercise study, such as a map exercise or war game (NATO, July 2019). Engaging in each kind of multilateral exercising throughout the year hones Allied forces' ability to interoperate. Effective interoperability is a crucial skillset for all of NATO's major tasks, from defence and deterrence to crisis response and cooperative security outreach. Exercises also supply Alliance commanders and political decision makers with an important set of lessons learned to help them continue to be more effective and efficient in executing their duties.

11. An increased and robust exercising schedule is essential to test and certify NATO's evolving defence and deterrence posture. As this Committee has been reporting since 2014, a host of new initiatives, from a revamped and expanded NATO Response Force (NRF) to the Enhanced Forward Presence (eFP) and the most recent Readiness Initiative, all require exercises to demonstrate Alliance forces' ability to execute their new missions. Exercises can also highlight deficiencies, both in the structures framing these new efforts and in the resources flowing to support them. As most Allies continue to transition from smaller forces focused on out-of-area light-arms missions to heavy combined-arms force structures—so as to be able to concentrate firepower and manoeuvre to face down a challenging conventional force—a suite of tailored exercises is vital.

12. Coordinated movement and deployment of military forces are not easy. Logistical requirements require effective coordination and training. Further, once acquired, these skillsets can atrophy over time if not practised. For example, large-scale transatlantic exercises were commonplace for Allies during the Cold War: *REFORGER* was a recurring Cold War exercise wherein Allies practised moving well over 100,000 of their forces and equipment across the Atlantic and Europe to the West German border with East Germany. The last *REFORGER* exercise took place in 1993, and Allies only renewed their practice of large-scale transatlantic reinforcement this past year during *Trident Juncture 2018*.

13. Multilateral exercises are also cost-effective relative to independent national exercises. Allies exercising together share the burden of training costs. This is important, as personnel costs have become the most expensive consistent recurring cost for modern military forces. All national budgetary officials will welcome finding ways and means of making these expensive elements of Allied armed forces more effective at a reduced cost. As the demand for increased exercising continues, sharing the burden across Allied armed forces is the best way forward.

B. POLITICAL SIGNALLING AND REINFORCING THE TRANSATLANTIC BOND

14. More broadly, exercises, particularly larger ones, are also excellent signalling devices. Done properly, large-scale exercises communicate strong messages to several audiences: to potential foes – *we can do this*; to Allies – *we are doing this together*; and to domestic populations – *we are doing this for you*. Such signalling is important to the credibility of Allied commitment at all these same levels. The demonstration of unified ability and will is a strong and vital message.

15. Finally, and just as important, exercises renew and reinforce an important element of the transatlantic bond. Constant cooperation between Allied military forces creates new as well as future generations of committed *transatlanticists*. As one analyst noted in a recent report, Alliance military exercises and inter-Alliance military exchanges resulting from close cooperation amount to a NATO cultural exchange programme, which only further solidifies Alliance cross-cultural understanding and cohesion (Braw, 2018). This is essential when Alliance credibility depends on unity of purpose and strong intra-Alliance bonds.

16. In addition, many former military services personnel transition from wearing their nation's uniform to civilian government service. As the composition of the Defence and Security Committee at the NATO Parliamentary Assembly attests, many NATO member state parliamentarians also once served in their nation's armed services. The transition from military to civilian political or government policy service creates a cohort of professionals with substantive knowledge about the challenges of training and deploying an effective defence force. All of these benefits translate to stronger defence and deterrence deliverables.

III. RUSSIA'S DANGEROUS EXERCISING

17. Russia's military doctrine labels NATO as a principal danger to the interests of the Russian Federation. Russia's national security strategy views the action of the United States and its Allies as seeking to contain Russia in order to retain dominance in international affairs. For example, it perceives NATO's military infrastructure and actions east of Germany as a threat (Oliker, 2016).

18. Part of Russia's broader strategy to counter NATO and reassert Russia's role in European security affairs has been its ambitious State Armament Programme (SAP). The programme seeks an overhaul of all of Russia's military services, from personnel to platforms across all services, in an effort to compete with and match Allied military forces' technological and organisational superiority. Supporting this programme is a dramatic increase in the size and scope of Russian military exercising.

A. ANNUAL TRAINING CYCLE AND THE DILEMMA OF 'SNAP' EXERCISES

19. Russia instituted its cycle of rotating strategic exercises in 2009 with that year's capstone effort, *Zapad*. In parallel, Russian military districts underwent significant reorganisation. Every year, a military district leads a large-scale exercise in its region – *Zapad*, *Tsentr*, *Kavkaz*, and *Vostok*¹. Over the past decade, these strategic exercises have grown in size and sophistication, and they now include such elements as strategic mobilisation and deployment, large-scale manoeuvre, national reserve force, and civilian defence mobilisation, and industrial engagement (IISS, 2018; Johnson, 2018). The next strategic exercise, *Tsentr 2019*, will be held in September 2019. It will be conducted in the Northern Sea Route and is intended to demonstrate and ensure a high level of combat preparedness in the Arctic Ocean. Although some analysts have noted that the exercise seems to be primarily oriented towards defence and the Arctic remains largely a cooperative environment, the size and scope of the exercise put an imperative on close observation by the Allies and their international partners (Buchanan and Boulègue, 2019).

20. The exercises are meant to test Russia's ability to engage in large-scale intense combat with a technologically advanced adversary. In 2013, Russia began the systematic reintroduction of large-scale 'snap' exercises (IISS, 2018). It conducted its most recent snap exercise from 24-28 June 2019 in Russia's Central Military District (TASS, 2019). The exercise included about 150,000 troops, 500 aircraft, and 20,000 military vehicles. According to the Russian news agency TASS, troops drilled a variety of tasks, including "strengthening the protection of vital state and military facilities, conducting air defense, countering terrorist threats, [and] eliminating illegal armed formations and other destructive forces" (TASS, 2019). It was also intended, in part, as preparation for *Tsentr 2019*, Russia's forthcoming, large-scale Arctic exercise. According to a Russian military expert, it may possibly have been a response to increasing US-Iran tensions and "NATO's increased activity near the Russian borders" (O'Connor, 2019). Snap exercises can test force readiness, but they are also a means of testing adversarial reaction, as they may confuse an observer about Russia's real capabilities and intentions. Snap exercises, at least in Russia's case, have also been used to mask Russian aggression, as was the case in 2008 in Georgia and in 2014 in Ukraine.

¹ Meaning West, Center, Caucasus, and East in Russian.

21. The use of snap exercises fits within Russia's broader trend of ignoring its international responsibilities and commitments. In the instance of exercises, this specifically means the 2011 guidelines to the 1990 Vienna Document, which require OSCE members to notify other members 42 days in advance if they intend to conduct exercises using a combined total of 9,000 forces; observation is required if that number surpasses 13,000 (NATO, 2019). The Vienna Document guidelines serve as a transparency measure intended to avoid any potential misperceptions and/or alarm from fellow OSCE members regarding the size and scale of military exercises potentially close to their territory (Litzenberger, 2017).

22. The size and scope of Russian exercises have increased significantly over the last decade. The annual strategic exercises have grown from an average of approximately 20,000 troops from 2009-2012 to 150,000 between 2013-2017 (Norberg, 2018). In 2016 and 2017, Russia officially reported participating troop levels of approximately 12,500 for both annual strategic exercises, *Kavkaz* and *Zapad* respectively, while the actual numbers turned out to be 120,000 and 70,000 (Johnson, 2018). Once the exercises were underway, however, both Russian media and defence ministry officials said the exercises involved 100,000 troops (Litzenberger, 2017). Such misrepresentation and subterfuge only further entrench impressions Russia is no longer playing by the rules it helped establish at the end of the Cold War for mutual reassurance and stability.

B. NUCLEAR ATTACK SCENARIOS

23. Further exacerbating the challenge Russian exercises pose is the potential incorporation of nuclear attack scenarios into exercises that are otherwise of a conventional nature. Most major Russian exercises prior to 2014 ended with "simulated nuclear strikes on NATO targets" (Durkalec and Kroenig, 2016; Sokov, 2014). Since then, there is no publicly-available evidence Russia's annual exercises have explicitly included nuclear scenarios. They have, however, involved the utilisation of dual-capable weapons systems such as the Iskander ballistic missile system, as was the case for *Zapad 2017* and *Vostok 2018* (Johnson, 2017, 2018). Whether these systems were deployed to practice a nuclear strike is unclear. However, each annual exercise is also accompanied by a concurrent exercise by Russia's Northern Fleet, an essential component of Russia's nuclear 'triad' that also hosts a majority of its strategic nuclear missile submarines. According to the Swedish Defense Research Agency (FOI), this fact may not be a coincidence. It may indicate the annual conventional exercises are subtly including "a scenario that contains an implicit escalation to using nuclear weapons" (Norberg, 2018). If true, this is both concerning and escalatory: neither NATO nor individual Allies integrate nuclear scenarios into conventional exercises (US House of Representatives, 2017). Since the end of the Cold War, NATO does both conventional and strategic-level nuclear exercises, such as the annual *Steadfast Noon* exercises, but does not practice the transition from one to the other (Andreasen et al., 2018).

24. The incorporation of nuclear scenarios into conventional exercises is concerning for two reasons. First, there is an inherent increase in the risk of actually using nuclear weapons in a future scenario when nuclear is combined with conventional exercising. Russia is inclined to drill tactics that it intends to later deploy in real practice. For example, in 2013, an exercise that rehearsed certain Special Forces manoeuvres was followed by the use of comparable tactics in the 2014 annexation of Crimea (Mizokami, 2017). It is also a long-standing element of Russian nuclear policy, reiterated in their military doctrine, that Moscow reserves the right to use nuclear weapons in response to a threat they perceive to be existential even if that threat is non-nuclear (Panda, 2018). Furthermore, some analysts have noted the Russian government likely perceives 'tactical' nuclear weapons as a means to level the uneven playing field created by NATO's conventional military advantage (Woody, 2018). This approach dangerously blurs the line between conventional and nuclear capabilities.

25. The second reason for concern is the increasing risk of a misunderstanding leading to nuclear catastrophe. As modern warfare increasingly depends on complex technologies—satellites, interconnected networks, drones, and so on—the risk of a nuclear accident likely rises (United Nations Institute for Disarmament Research, 2017). As a result, increasing tensions between Russia and the

West only exacerbate an already sensitive security environment. Integrating provocative nuclear attack scenarios into conventional exercises—especially when combined with a general lack of transparency or a ‘snap’ exercise, which themselves have previously been used as cover for actual military operations—creates an unnecessarily dangerous risk of miscommunication, with the potential for a disastrous nuclear incident.

IV. NATO EXERCISES TODAY – SCOPE AND SCALE

26. In 2019, NATO announced it intended to conduct a total of 102 exercises, 39 of which would be open to partner participation. Allies will conduct a total of 208 national and multinational exercises. The exercises will train Allied forces across all domains and focus on specific skills such as chemical, biological, radiological, and nuclear (CBRN) defence and crisis management (NATO, Feb. 2019). The following sections will review NATO exercise efforts to certify defence and deterrence initiatives in the East, the South, and internally.

A. EASTERN EXERCISES

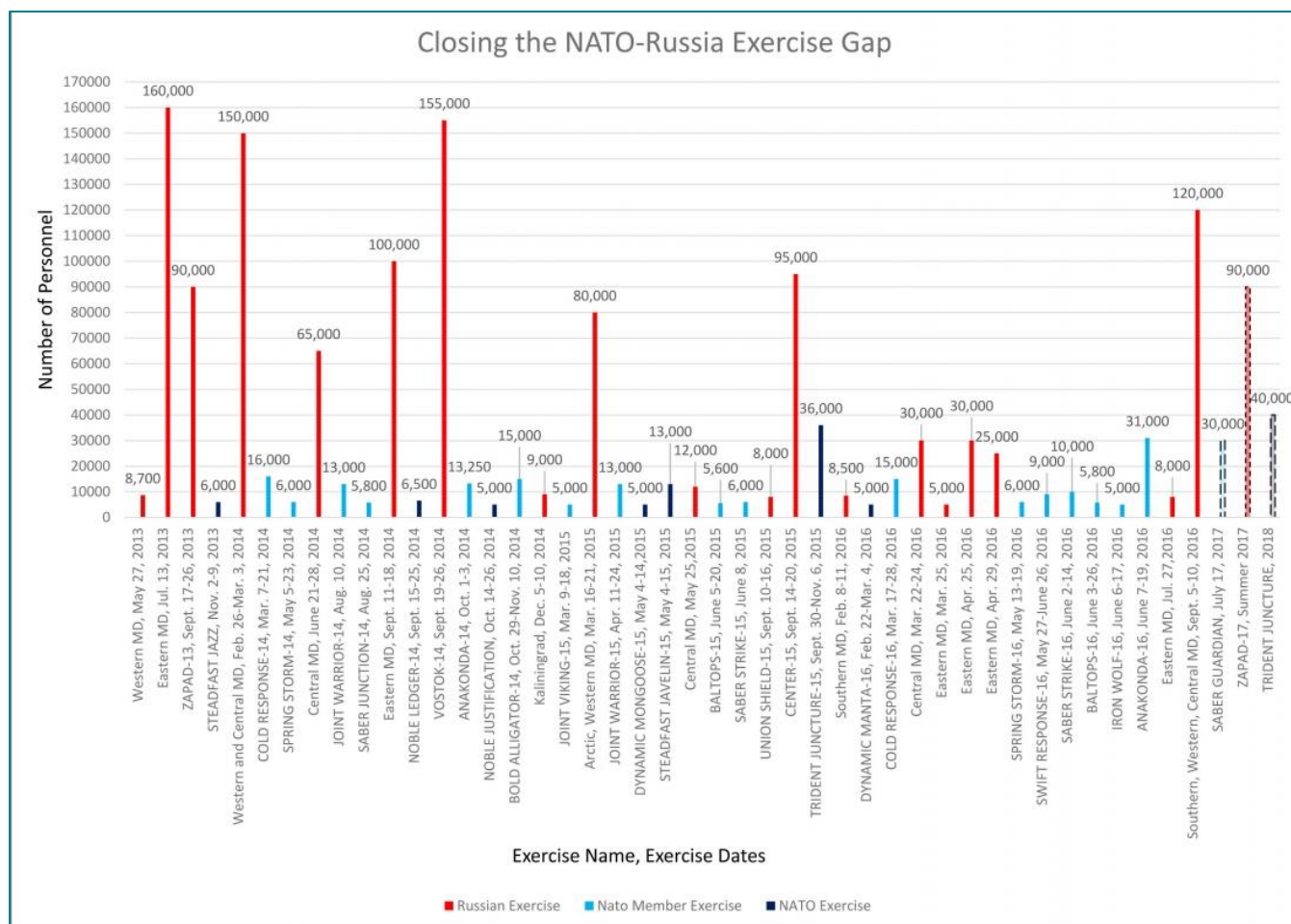
27. Prior to 2014, NATO’s principal exercises and training focus centred primarily on crisis response and cooperative security efforts with partners to handle the Alliance’s post-9/11 counterinsurgency and counterterrorism imperatives – more often than not involving light footprint, expeditionary scenarios far from the Alliance’s neighbourhood and beyond. Russia’s annexation of Crimea refocused Allied attention to collective security and defence priorities at home.

28. As such, the Alliance is simultaneously revisiting Cold War political and military deterrence skills as well as working to adapt to counter Russia’s modern hybrid warfare tactics. A dynamic and comprehensive exercise schedule is critical to effective credibility signalling. As noted above, exercises communicate capability and cohesion – demonstrating, both internally and externally, the Alliance stands as one ready to defend its members against any external threat.

29. Sustainable reinforcement capability is one of NATO’s critical deterrence weaknesses. For example, NATO’s rotating presence in the Baltics is insufficient to repel a conventional Russian invasion, and few European Allies would be able to reinforce those forces to return the region to the status quo ante invasion. As such, current exercises seek not only to train Allied force readiness and mobility, but also to ensure reliable supply lines as well as infrastructural compatibility.

1. CLOSING THE GAP

30. In 2014 NATO had a relatively significant exercise gap with Russia, both in numbers and in types of exercises. While Russia ran at least six large-scale exercises involving 65,000 to 155,000 personnel in 2013 and 2014 respectively, the largest NATO or Allied exercise in the same period involved 16,000 personnel (Brzezinski and Varangis, 2016). Furthermore, the types of exercises NATO had been focusing on were primarily counterinsurgency, counterterrorism, and crisis response. By contrast, Russia had been increasingly exercising heavy combined-arms manoeuvres and traditional warfare scenarios. The below chart demonstrates that this gap, particularly with respect to the number of personnel involved, remained quite apparent through 2016.



Source: Brzezinski, Ian and Varangis, Nicholas [“The NATO-Russia Exercise Gap... Then, Now, & 2017”](#), The Atlantic Council, 25 October 2016

31. NATO has substantially adapted the schedule and types of exercises it conducts in recent years. The Alliance’s new enhanced exercise programme has sought to support NATO adaptation efforts. The expanded number and types of exercises and the scale of participants send a clear message internally and externally of NATO’s commitment to defending its member nations. NATO now conducts a wide variety of exercises every year, practicing everything from reinforcement and mobility to anti-submarine and anti-electronic warfare. Recent large-scale exercises have included *Trident Juncture 2018*, *Swift Response 2019*, and *Saber Strike 2019*.

32. Over the same timeframe, Russia has been forced to scale down its exercise programme due to competing demands for personnel and equipment by Russian engagements in Ukraine, Syria, and elsewhere (Hille, 2015). Still, as the late-2018 *Vostok* exercise demonstrated, large-scale exercising remains a priority for Russia.

2. THE NRF AND THE VJTF

33. In response to Russia’s illegal annexation of Crimea, NATO established the Readiness Action Plan (RAP) which consists of both assurance and adaptation measures. To support the RAP, the Alliance established an enhanced air, land, and sea exercise and activities programme focused on collective defence and crisis management. The NATO Response Force (NRF) was expanded as a result of the RAP initiative.

34. The NRF is now comprised of up to 40,000 multinational, rotating, air, land, maritime, and Special Operations Forces (SOF) who have completed the exercise programme. These forces are designed to be deployed at notice wherever needed with a rotating period of 12 months. As part of

this initiative, Allies also agreed to establish the Very High Readiness Joint Task Force (VJTF), a multinational, brigade-equivalent force of around 5,000 troops designed to be deployable to any part of NATO's territory in two to five days. The VJTF can be described as a highly mobile deterrent force.

35. As part of NATO's expanded exercise programme, the VJTF is tested along with the NRF as part of larger and more complex exercises, beginning with *Noble Jump* in Poland in early June 2015, with over 2,100 troops from nine nations. The first deployment of the VJTF, *Noble Jump 2015*, focused on its ability to respond rapidly to enemy special forces infiltrating Allied territory and counter hybrid warfare techniques (Szary, 2015). Later that June, NATO used *Trident Juncture 2015* to further test the capabilities of the NRF and VJTF. *Trident Juncture 2015* involved more than 30,000 troops from over 30 NATO member and partner countries. In this exercise, it was NATO's mission to protect the states under threat from an invading enemy force and to ensure freedom of navigation in Allied waters (NATO, 2015).

36. *Trident Juncture 2015* and *Noble Jump 2015* were followed by a series of exercises testing the different air, land, and sea capabilities of the VJTF and the expanded NRF (see Box 1).

**BOX 1:
EXERCISES TESTING THE VJTF AND NRF**

- **2016- *Brilliant Jump*** (two parts) — tested and validated VJTF activation and rapid deployment.
 - *Brilliant Jump Alert* — tested and validated VJTF activation in Albania, Poland, Spain, and the United Kingdom.
 - *Brilliant Jump Deploy* — tested the logistical challenges of the rapid deployment of the VJTF's land elements from Spain to western Poland (Baltic Defense, 2016).
- **2017- *Brilliant Arrow 2017*** — tested the air capabilities of the VJTF (Baraniuk, 2017).
- **2017- *Brilliant Ledger 2017*** — tested land readiness and capabilities with a range of crisis-response scenarios, including both state and non-state actors; validated the NATO Rapid Deployable Corps – Italy as a Land Component Command for the NRF (Era, 2017).
- **2018- *Brilliant Sword 2018*** — a command-post exercise run by the Special Operations Component Command (SOCC) in Minorca, Spain; tested the interoperability of Special Operations Forces in the NRF and granted them the SOCC Combat Readiness certification.
- **2018- *Brilliant Mariner 2017*** — run by the French High Readiness Force Maritime Headquarters; tested the maritime component of the NRF by simulating a non-Article 5 crisis response operation exercise, with ships from 12 nations taking part (Ministry of Defence Italy, 2017).
- **2018- *Brilliant Jump 2018* and *Trident Juncture 2018*** — VJTF put through final certification tests; all units designated as fully operational.

3. NATO'S ENHANCED FORWARD PRESENCE AND TAILORED FORWARD PRESENCE

37. At the 2016 Warsaw Summit, Allies agreed to further increase NATO deterrence efforts in the East via the Enhanced Forward Presence (eFP) and the Tailored Forward Presence (tFP) in the southeast.

38. The tFP is built on a multinational brigade in Craiova, Romania. It is supported in the air by several Allies which back up Romania and Bulgaria's protection of NATO airspace. This has resulted in a greater number of NATO exercises and training drills by Romania's Headquarters Multinational Division Southeast.

39. The eFP established a permanently rotating multinational force presence in Poland and the Baltic states. The eFP is comprised of four multinational battalions led by the United States, the

United Kingdom, Germany, and Canada respectively. These multinational battalions liaise with and support their host nations and in turn learn the local terrain as they work in coordination with their host forces. While the eFP will not significantly alter the military balance in the region, it does serve as an effective tripwire deterrent.

40. The battalions comprising NATO's Enhanced Forward Presence initiative have been incorporated into NATO's expanded exercise programme. In each host country, the eFP Battlegroup underwent several internal training cycles (for examples, see Box 2).

**BOX 2:
EXERCISES TESTING THE ENHANCED FORWARD PRESENCE BATTLEGROUPS**

- **Poland-** *Anakonda 2018* – simulated an attack on Poland's eastern border by a near-peer adversary; fictional threats included hybrid warfare tactics, such as adversarial forces sending advanced scouts disguised as civilians, and conventional armoured and infantry units (Egnash, 2018).
- **Lithuania-**
 - *Beowulf 2018* – prepared the battlegroup for offensive and defensive combat within Lithuania using river-crossing operations and live-fire exercises (NATO SHAPE, 2018).
 - *Iron Wolf 2018* – evaluated the readiness of military operations planned and conducted by the Lithuanian eFP battalion in coordination with Lithuanian forces; focused on readiness, rapid deployment and military mobility by deploying ten convoys with 350 vehicles and 1,400 troops from their base to the exercise in the span of 24 hours (Ghasem, 2018). *Iron Wolf 2019* took place earlier this year.
- **Latvia-** *Nameis 2018* – brought the Latvia and Lithuania battalions together for training on mobility, readiness, and interoperability; focused on national defence and countering hybrid warfare tactics: one scenario was the suppression of riots fomented by armed adversaries disguised as civilians in the cities of Jekabpils and Valmiera (Latvian Public Broadcasting, 2018).
- **Estonia-** *Baltic Protector 2019* – a large-scale maritime training exercise consisting of 3,000 military personnel and 17 vessels from nine nations, the final phase of which consists of the UK-led Maritime Task Group connecting with the Estonia eFP battlegroup to conduct a "series of shore landings and raids" (UK Government, 2019).

41. For many of these host countries, the deployment of eFP troops created a steep learning curve. For example, following the initial deployment of the eFP multinational battalion in Estonia, it was reported the host country lacked sufficient barracks, training space, and modern command and control structures to host the multinational forces properly (Mure, 2018). Unlike Poland, Latvia, and Lithuania, Estonia relies heavily on a reserve military system; it has approximately 7,000 active forces but can field as many as 85,000 via the Estonian Defence League and reserve forces. While it was initially unprepared to integrate the multinational battalion, internal restructuring soon solved the problem.

B. TRIDENT JUNCTURE 2018

42. *Trident Juncture 2018 (TJ-18)* was the largest NATO exercise in decades. From 25 October to 7 November 2018, all 29 member states, as well as NATO partner countries Sweden and Finland, took part in the exercise in and around Norway, the North Atlantic, and the Baltic Sea. With around 50,000 troops, 250 aircraft, and 65 ships taking part, the exercise was a key demonstration of both the shift in NATO capability development since 2014 and the renewed focus on defence and deterrence at home (Starling, 2018).

43. The exercise scenario centred on a hypothetical invasion of Norway by an adversarial alliance. In response to the invasion, Norway invoked Article 5 of the Washington Treaty. The exercise focused on NATO's ability to reinforce Norway, principally via land and air, in order to restore its full, pre-invasion sovereignty.

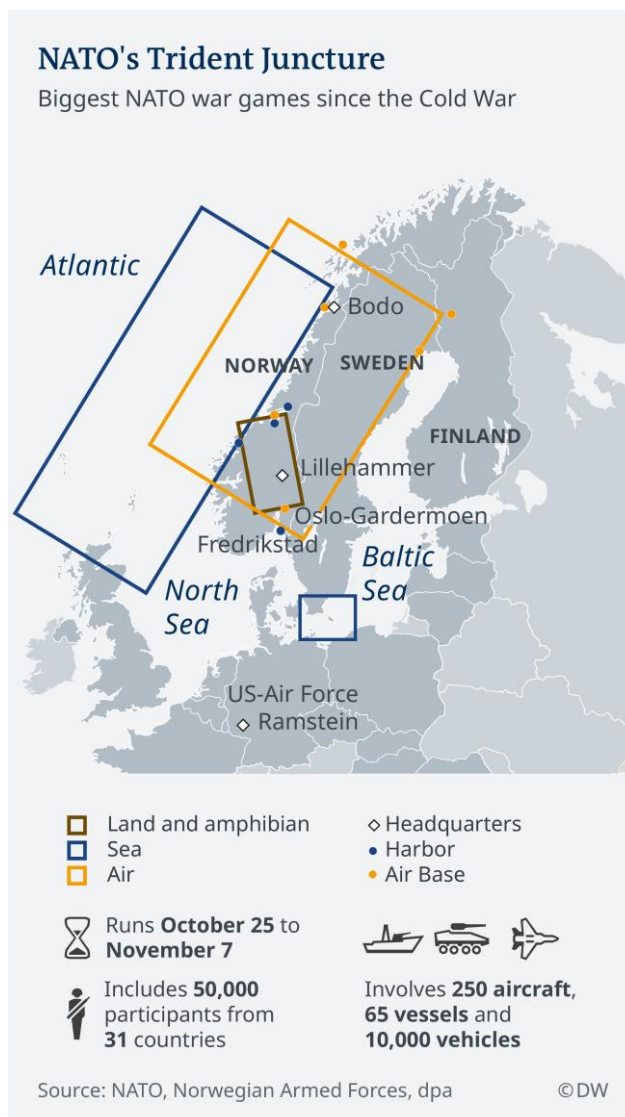
44. *TJ-18* highlighted the integration of Allied command and control structures in operations within NATO territory, providing a key test to certify the land, air, and maritime components of the 2019 NRF – therefore testing the reinforcement of an ongoing defensive effort. Further, given the scale of the exercise and the inclusion of large numbers of North American forces, Allies also exercised their transatlantic reinforcement abilities in a demonstration of the new “30-30-30-30” Readiness Initiative, which seeks to have 30 combat battalions, 30 naval ships, and 30 air squadrons mobilised in 30 days (Starling, 2018). This was an important test for NATO’s new desire to transition significant numbers of personnel and equipment into and across Europe by air and sea. As such, *TJ-18* was the largest test yet for the revamped NRF and its VJTF.

45. Preparations for the exercise began in August 2018, making the exercise highly scripted and not very indicative of the true amount of time needed to mobilise in an actual escalation scenario (Watling, 2018). While one could criticise such a long preparation time when compared, for example, with Russia’s snap exercises, which can take place on a large scale with ‘no notice’, the longer timeframe for exercise planning and preparation makes it possible for NATO to look at a greater range of scenarios and conduct better training and lessons-learned efforts (Foggo et al., 2018).

1. *TJ-18* INNOVATIONS

46. NATO’s Allied Command Transformation (ACT) conducted over 20 experiments during *TJ-18*. Working with industry partners, these tests included experiments with 3D printing (also known as in-field additive manufacturing) as commanders had noticed vehicles and equipment breaking down more often under the cold climate stresses. In-field additive manufacturing allows for the real-time production of plastic replacement parts, while the transportation of metal replacements can sometimes take weeks (Baraniuk, 2018).

47. In *Trident Juncture 2018* Allies also conducted experiments with autonomous weapons systems. Increasingly capable autonomous weapons systems operating in all domains will be a critical element in any future potential conflict. Autonomous systems are critical force multipliers for land, air, and sea forces. The increased use of autonomous systems has the added dual benefit of reducing the amount of manpower directly involved, which is not only safer in terms of force protection but also more cost-effective. Personnel costs are now the most expensive continually running costs of modern militaries (Baraniuk, 2018). Although their use is certain to increase, there is debate in the international community about the ethicality of lethal autonomous weapons systems. In September 2018 the European Parliament adopted a resolution calling for an international ban on the “development, production and use of lethal autonomous weapon systems enabling strikes to be



Source: Walsh, Alistair, “What is NATO’s Trident Juncture 2018 operation?”, 25 October 2018, <https://www.dw.com/en/what-is-natos-trident-juncture-2018-operation/a-46037061-0>

carried out without meaningful human control” (European Parliament, 2018). Non-EU Allies, however, hold varying positions on this subject.

48. Autonomous system tests in *TJ-18* included a minesweeper boat, *Odin*, which detonated mines via underwater acoustic and magnetic signals. As *Odin* is able to deploy smaller vessels to inspect potential mines, it removes the human element of mine clearing. There were also experiments with autonomous, self-driving land vehicles employing remote-controlled guns.

49. The experiments in *Trident Juncture 2018* also included cooperation with civilian personnel and medics, testing responses to mass-casualty events and a civilian-military medical interface for information sharing (Paxton, 2018). NATO forces also experimented with potential responses to biological warfare.

2. INFORMATION ENVIRONMENT AND SIGNALLING

50. *TJ-18* also contained an information environment assessment. Allied Joint Force Command Naples (JFC Naples) established an information-fusion cell in Oslo, Norway, for the exercise which tested and validated the methodology, roles, responsibilities, and data analytics of NATO’s Information Environment Assessment Concept. This cell provided real-time information analysis from different information channels on how NATO communications were being received internally and externally. The analysts also monitored adversaries’ communications for military commanders and senior political leaders (Paxton, 2018).

51. In addition to testing new Allied capabilities and interoperability, *Trident Juncture 2018* was also an important geopolitical signal: Alliance unity remains strong, and NATO’s current defence and deterrence posture is credible in the face of new potential Article 5 scenarios. The exercise also worked to reassure NATO member states exposed to Russian aggression along the Alliance’s eastern flank. It is no coincidence the exercise was held just weeks after *Vostok 2019*, Russia’s largest military exercise since 1981 (Starling, 2018).

52. An additional critical message of *Trident Juncture 2018* was the participation of Sweden and Finland. Neither country contributed a large number of forces to the exercise, however, their participation sent a clear message that neither nation would be considered neutral in the event of a major conventional conflict in the region. It was a strong message to Russia that continuing to escalate hostilities would drive the two countries West, rather than deter them from NATO membership.

C. INTERNAL EXERCISES

53. To deal with the increasingly complex and multifaceted security challenges of today’s security environment, the Alliance decided to adapt its command structure over the last several years. Command structure changes are supposed to ensure the Alliance’s ability to handle simultaneous challenges across the spectrum of potential military missions, from terrorism to an aggressive Russia to complex hybrid and cyber challenges. Internal adaptation measures taken to date include: updating the NATO command structure to streamline decision making and enhance rapid troop movement across the Alliance; the strengthening of cyber defences; and the establishment of mechanisms for closer cooperation with international organisations, particularly the EU, in areas of shared interest. NATO’s expanded exercise programme is testing and supporting these initiatives.

1. NATO Command Structure

54. At the end of the Cold War, NATO had an extensive 33-command structure. In the years since, restructuring and streamlining pared down NATO command and control. As recently as the 2010 Lisbon Summit, NATO streamlined and simplified its command structure to just seven major

commands. Since then, more have been added, including an additional two new commands at the July 2018 summit.²

55. Command post exercises test, train, and validate the adaptation of NATO's Command Structure. These exercises prepare NATO personnel and test strategic objectives, such as streamlined decision making. The Joint Warfare Centre (JWC) develops complex scenarios and exercises to maintain the quality and readiness of the NATO HQs and Command and Force Structures. Since 2010, the JWC has significantly increased in the number and complexity of its exercises. The new schedule produces four operational level exercises annually. Exercise planning typically takes 15 to 18 months; between October 2014 and May 2016, JWC conducted eight major operational exercises while preparing for the next four.

56. The JWC is responsible for the *Trident* series of exercises. A critical component to *Trident Juncture 2018* was the *Computer-Assisted/Command Post Exercise (CAX/CPX)*. The planning for the *CAX/CPX* component of *Trident Juncture 18* took three years, as it was combined with the largest live NATO exercise since the Cold War. *CAX/CPX* spanned 10 days and involved 3,500 military and civilian personnel. It also trained and certified the Joint Force Command Naples to assume operational command of the NATO Response Force in 2019.

2. Cyber Defence

57. Russia's tactical deployments of modern disinformation and influence operations continue to challenge Alliance members' internal security and stability. More broadly, a growing number of sophisticated state-led or sponsored cyber-attacks have increasingly focused Allied governments' attention in recent years. It has become clear that critical Alliance functionality in all sectors is dependent upon capable cyber defences and network resiliency. As modern societies, from their economies to militaries, increasingly depend on cyber-enabled communication systems, any future crisis or conflict will have a cyber dimension. To counter the use of offensive cyber and electronic warfare capabilities, NATO Allies have established several initiatives to support internal defences and strengthen resilience.

58. Recognising the growing vulnerability of vital Allied communication systems to increasingly sophisticated cyber-attacks, cyber space was named the fifth official operating domain of the Alliance in 2016³. The 2016 Warsaw Summit even witnessed Allies make the Cyber Defence Pledge in order to focus their individual and collective resources on cyber defences and communication-systems resilience. Exercises have been a critical means of testing and honing Allied cyber capabilities.

² There are two international Strategic Commands: **Allied Command Operations (ACO)** in Mons, Belgium, responsible for the planning and execution of all military operations, and **Allied Command Transformation (ACT)** in Norfolk, Virginia, focused on the Alliance's forward-looking military adaptation, including training, education, and exercises. Two Joint Force Commands in Europe, JFC-Brunssum and JFC-Naples, assist ACO with operations execution. There are three commands for air, land, and maritime missions: **Allied Air Command (AIRCOM)** at the Ramstein Air Base in Germany; **Allied Land Command (LANDCOM)** in Izmir, Turkey; and **Allied Maritime Command (MARCOM)** in Northwood, England. Another three commands assist ACT in its training, education, and exercise tasks: **Joint Analysis and Lessons Learned Centre (JALLC)** in Lisbon, Portugal; **Joint Force Training Centre (JFTC)** in Bydgoszcz, Poland; and **Joint Warfare Centre (JWC)** in Stavanger, Norway, responsible for the training and exercising of NATO headquarters and commands. Two new Commands were added at the 2018 NATO Summit: **Joint Force Command Norfolk**, to further guarantee the transfer of Allied forces and materiel across the Atlantic, coordinating with Allied forces to secure vital transatlantic Sea Lanes of Communication (SLOCs); and **Joint Support and Enabling Command** in Ulm, Germany, focusing on logistics, reinforcement, and the mobility of troops and equipment across Europe.

³ Air, land, sea, and space are the other official NATO operational domains.

59. *Locked Shields* is the largest, most sophisticated, international, live-fire cyber defence exercise in the world (Lété, 2017). Simulating real-time cyber-attacks, *Locked Shields* allows cybersecurity experts from Allies, partner countries, and the private sector to practice defending communication and information networks and infrastructure. The exercise is held annually in Tallinn at the NATO Cooperative Cyber Defence Centre of Excellence (CCDCOE). *Locked Shields 2018* involved approximately 4,000 virtual systems, which came under more than 2,500 cyber-attacks (Tunncliffe, 2018). With more than 1,000 cybersecurity experts from 30 countries, *Locked Shields 2018* and other exercises, such as the yearly *Cyber Coalition* exercise, give cyber experts critical experience in making decisions under pressure and with incomplete information, while detecting and mitigating cyber-attacks in large, complex, and unfamiliar environments (Lété, 2017).

60. Cyber-attacks along with hybrid warfare simulations are now part of NATO's annual *Crisis Management Exercise (CMX)*. Crisis Management Exercises are internal command-post exercises operating a level up from *CAX/CPX* exercises (Ferrier, n.d.). *CMX* runs political/military exercises on the 'grand strategic' level, focusing on decision making and procedures in potential Article 4 and Article 5 scenarios. By incorporating cyber defence into these exercises, NATO ensures Allies are internally prepared tactically, but also politically and strategically, for cyber-attacks.

3. NATO-EU Cooperation

61. As part of an effort to strengthen the Alliance internally, NATO began working more closely with the European Union on mutual interest areas after 2016. The two organisations have agreed on seven key areas for shared interest and cooperation: countering hybrid threats; operational cooperation (especially maritime and migration); cyber security and defence; defence capabilities; defence industry and research; exercises; and support of eastern and southern partners' capacity-building efforts. A particular area of focus has been NATO-EU joint efforts to counter hybrid threats and improve European military mobility via the elimination of both bureaucratic and structural hurdles to force deployment.

62. In March 2018 the European Commission announced an action plan to upgrade the physical, legal, and regulatory barriers that slow military mobility inside Europe (European Commission, 2018). The Action Plan includes: streamlining customs procedures for military operations; establishing military requirements tailored to the needs of the EU member states, including the necessary infrastructure for military mobility; and identifying the areas of the European transport system capable of supporting military transport and the areas where upgrades are needed (European Commission, 2018). The EU developed these initiatives in cooperation and consultation with NATO. The organisations remain in consultation on the matter and, in March 2019, NATO submitted updated military requirements to the EU, in particular regarding certain infrastructure parameters (European Council, 2019).

63. As of June 2019, 23 EU member states had signed the European Defence Agency agreement to harmonise and simplify customs procedures to expedite military mobility for both operations and exercises alike (European Commission, 2019). The Alliance's increased exercise programme within Europe will be a necessary test for these initiatives, as troop movement in real time is a clear barometer of changes in mobility, infrastructure, and legal and regulatory barriers. Recent large-scale exercises such as *Saber Strike 2019* are key to identifying critical areas of structural deficiency or bureaucratic impediments. Similarly, *Trident Juncture 2018* tested the feasibility of troop movement in northern Europe (NATO, 10 Oct. 2018). Furthermore, the two organisations also remain engaged at the staff level and there have been repeated structural dialogues and cross-briefings. In June 2019, military staff from both organisations organised a Logistic Table-Top Exercise to exchange opinions and practices (European Council, 2019). The two are also considering eventual parallel exercises on military mobility for the 2019 and 2020 NATO EU Parallel and Coordinated Exercises (PACE). Allies also consider the logistical challenges of military mobility

outside of the context of NATO's relationship with the EU; the "Northern Group"⁴ of NATO Allies also conduct table-top exercises to play out mobility scenarios and identify challenges (Republic of Estonia Ministry of Defence, 2018). Independent NATO exercises like *Noble Jump 2019* also emphasise demonstrating and improving military mobility (NATO, 5 June 2019).

64. The NATO EU Parallel and Coordinated Exercise (PACE) programme focuses on improving the coordination of crisis-response activities in a hybrid attack scenario. PACE began in 2017 and is on track to occur annually. This exercise programme sees NATO and the EU conducting independent but coordinated exercises via staff-to-staff communication to increase synchronisation of hybrid attack responses between NATO and the EU (EEAS, 2017). In 2018, the organisations successfully tested strategic communications during their respective PACE exercises, EU *HEX-ML 18* and NATO *PACE 18* (European Council, 2019).

65. NATO and the EU signed the Technical Arrangement on cyber defence in February 2016 to provide an agreed-upon cooperative framework (NATO, July 2018). As a result, both organisations are strengthening joint efforts in intelligence sharing, technical research, best practices sharing, and exercising. European Union representatives actively contribute to NATO's *CMX* exercise and attend *Cyber Coalition* exercises (EEAS, 2018). In 2017 the NATO Secretary General was invited to *Cybrid*, an EU strategic table-top cyber defence exercise in Estonia. *Cybrid 2017* focused on the decision-making process at the EU ministerial level during a simulated hybrid attack on EU military structures (EDA, 2017). NATO staff also observed the EU's *Cyber Europe 2018* exercise (European Council, 2019).

4. THE EURO-ATLANTIC DISASTER COORDINATION CENTRE

66. The Euro-Atlantic Disaster Coordination Centre (EADRCC) is the Alliance's primary civil emergency response mechanism. In the event of a man-made or natural disaster in the Euro-Atlantic area, the EADRCC acts as a coordination mechanism by matching requests for assistance from the affected country with aid offers from other countries. It is also a hub for information sharing and disseminating lessons learnt on disaster relief (NATO, Sept. 2018). Finally, it conducts annual, large-scale consequence management exercises: it has carried out 18 field exercises since its inception in 1998, the most recent of which, *SRBIJA 2018*, was hosted by Serbia in October 2018.

67. Although its original responsibility was restricted to disaster relief and to the geographical area of nearly 50 NATO and partner countries, its mandate has since expanded to requests for assistance related to chemical, biological, radiological and nuclear (CBRN) incidents for over 70 countries (NATO, 2018). As a result, CBRN elements have been incorporated into EADRCC exercises. For example, *SRBIJA 2018* and the previous year's *BOSNA I HERCEGOVINA 2017* included several scenarios involving chemical spills, forcing first responders to practice responding to such incidences during a larger crisis involving a natural disaster (NATO HQ GEO, 2018). Further, as members learned on a visit to the Czech Republic in 2018, NATO's Joint Chemical, Biological, Radiological and Nuclear Defence Centre of Excellence plays a key role in both the planning and the conduct phases of such exercises, for example by assisting with scenario development or modelling and simulation, as it did for *SRBIJA 2018* (NATO JCBRN Defence COE).

D. SOUTHERN EXERCISES

68. NATO employs a broad, cooperative security approach towards challenges on its southern periphery. NATO initiatives include counterterrorism, training and exercises, military interoperability, disaster preparedness, and border security cooperation. This strategy, based on joint partnerships

⁴ The "Northern Group" is an informal arrangement of Allies who border the Baltic or North Sea, as well as Sweden and Finland.

and capacity building, has grown out of the Mediterranean Dialogue (MD) and the Istanbul Cooperation Initiative (ICI)⁵.

69. All MD and ICI countries have Individual Partnership and Cooperation Programmes with NATO to enhance cooperation in local and regional security efforts, particularly with regards to counterterrorism. At the 2016 Warsaw Summit, NATO members agreed to expand NATO's already substantial counter terrorism efforts via the provision of airborne warning and control systems (AWACS) to assist with direct aerial reconnaissance in the Global Coalition Against Daesh. The Alliance officially joined the Global Coalition Against Daesh the following year.

70. NATO launched *Operation Sea Guardian* in 2016 to replace *Operation Active Endeavor* in an effort to increase situational awareness in the Mediterranean. The operation has increased authorities for effective counterterrorism measures in the Mediterranean and Aegean Seas. Designed to counter threats from non-state actors and protect sea lines of communication in the Mediterranean, *Operation Sea Guardian* also supports EU efforts to address the southern migration challenges and counterterrorism-related activities, including the implementation of United Nations Security Council Resolution 2357 (the arms embargo against Libya). As such, coordination between the NATO and EU operations permits continuous information sharing of daily situation reports, air and sea schedules and journeys, as well as surface and submarine operations (NATO Allied Maritime Command, 2018).

71. In addition to *Sea Guardian*, NATO's Standing Maritime Group 2 (SNMG2) is deployed in the Aegean Sea to counter human trafficking and illegal migration in the region. SNMG2 cooperates at the tactical and operational levels with the EU Border Management Agency, Frontex (NATO, Oct 2016).

72. Additional efforts to make NATO's counterterrorism efforts more robust led to the establishment of NATO Strategic Direction South Hub (NSD-S Hub) in Naples, Italy. Operational as of September 2017, NSD-S Hub is an information-sharing forum, which connects Allies, partners, experts, and non-military entities (NATO Strategic Direction South, 2018).

73. As NATO's southern strategy is predicated on cooperation and coordination with partner countries, joint exercises are essential for developing and maintaining interoperability between forces as well as ensuring capable local forces can act as the first responders to local security challenges. In December 2018, the NATO *Operation Sea Guardian* Focused Security Patrol conducted a medical response exercise with Israel's Navy corvette INS Eilat in the Mediterranean Sea. This was the first exercise *Operation Sea Guardian* undertook with a NATO Partner country (NATO Allied Maritime Command, 2018). NATO conducts passing and boarding exercises (*PASSEX*) with its southern partner countries to ensure that their navies can cooperate during times of crisis. Recently, *PASSEX* has been held with Egypt and Algeria in 2018, and Morocco conducted the exercise in 2016.

74. Exercises are also integral to NATO's training missions with its southern partners. For example, in 2015, Allied Joint Force Command Naples led an exercise-planning process mobile training event with Tunisian Naval Officers. NATO also supports the African Union (AU) in the development of its African Standby Force (ASF), the AU's peacekeeping force to be deployed in the event of a crisis. It has trained AU officials in the conduct of military exercises and has directly assisted with the preparation and execution of an AU exercise—*Exercise Amani Africa II* in 2015—and also with post-exercise evaluation (NATO, 13 June 2019). In 2018, NATO also provided an

⁵ The Mediterranean Dialogue, first launched in 1994, is a NATO forum for cooperation with seven nations of the Mediterranean: Algeria, Egypt, Israel, Jordan, Mauritania, Morocco, and Tunisia (NATO, 2011). The Istanbul Cooperation Initiative elevated the MD and established a framework for practical security cooperation with states in the Greater Middle East: Bahrain, Qatar, Kuwait, and the United Arab Emirates (NATO, 2015).

exercise-planning course for the African Union Peace and Security Division at the North ASF Headquarters in Tunis, Tunisia.

75. Mediterranean Dialogue members also take part in the JFC Naples' broader programme known as Regional Exercises (*REGEX*). *REGEX* includes a wide swathe of partner countries to practice the planning and execution of a command and staff exercise (Allied Joint Force Command, 2014). For *REGEX 2018*, 45 participants from 16 partner countries took part in a five-day computer-simulated command and staff exercise in Belgrade. *REGEX 2017* was hosted by Jordan and included the establishment and validation of a Jordanian Armed Forces Core Planning Team by the JFC Naples.

76. Jordan has Enhanced Opportunities Partner Status within the Alliance's partnership network and takes active part in the Operational Capability Concept Evaluation and Feedback programme. With assistance from the United States, Jordan hosts the annual *Eager Lion* exercise, which is designed to enhance interoperability, crisis management, and readiness. Jordan participated in the multilateral exercise *Eagle Resolve 2015* held in Kuwait, the JFC Naples' regional exercises *REGEX*, the *Naples Journey* battle staff training, and the *2015 Trident Joust* command and live exercise (US Mission to NATO, 2016). Jordan also participated in *Trident Juncture 16* and hosted the JFC Naples' *REGEX* in 2017. In March 2019, NATO and the UN signed an agreement for the joint Project on "Enhancing Capabilities to prepare for and respond to a terrorist attack in Jordan featuring the use of Chemical, Biological, Radiological, and Nuclear (CBRN) weapons" (NATO, March 2019). This UN-NATO effort builds on the existing NATO project with Jordan and will include a field and virtual reality exercise programme regarding chemical, biological, radiological, and nuclear threats.

77. Israel was the only southern partner to participate in *Saber Strike 2018*, the largest NATO exercise Israeli troops have joined. Israeli Defence Force paratroopers also participated in the airborne *Swift Response 2018* exercise, which included equipment drops, forcible entry, air assault operations, and civilian evacuation operations. Israel and NATO carry out joint naval drills and in June 2018, NATO conducted a joint training exercise with the Israeli navy using the Rafael Advanced Defence Systems on unmanned surface vehicles (USV) (Stocker, 2018). The exercise, held off Israel's coast, simulated a swarm attack by hostile sea vessels against a NATO ship. In the exercise, the ship reported back to headquarters and Rafael's Protector USV identified targets and simulated firing Spike missiles to neutralise the attack.

78. It has been suggested national, large-scale, multilateral exercises conducted in NATO's southern periphery be "re-branded" as NATO exercises (Lesser et al., 2018). For example, the annual *Phoenix Express* exercise led by the US Africa Command (Africom) regularly includes European and North American Alliance members, and *Phoenix Express 18* saw Algeria, Canada, Denmark, Greece, Italy, Libya, Malta, Mauritania, Morocco, the Netherlands, Spain, Tunisia, and Turkey take part in the US-led maritime exercise regarding illicit human and goods trafficking as well as search and rescue operations (US Navy, 2018). Past participants in the annual US Africom Special operations forces and anti-terror exercise, *Flintlock*, include Algeria, Burkina Faso, Canada, Chad, France, Germany, Italy, Mali, Mauritania, Morocco, the Netherlands, Niger, Nigeria, Senegal, South Africa, Spain, Tunisia, and the United Kingdom (US Africom, 2012). Continuing these exercises as part of a NATO programme would fit within the Alliance's expanded strategy for the South and would be both practical as well as symbolic. At a time when the United States is seeking to trim down its commitments in Africa, this could prove especially timely. Another option would be for NATO to hold similarly sized and targeted joint multilateral exercises in the South. However, some argue that "rebranding" would detract from other partnership initiatives within the Alliance that are tailored to the specific objectives of NATO (Lesser et al., 2018).

E. EXERCISES WITH ENHANCED OPPORTUNITY PARTNERS

79. At the 2014 Wales Summit, NATO launched the Partnership Interoperability Initiative as a way to deepen relations with the armed forces of partner countries. As part of this initiative, five partners

who have been particularly strong contributors to the Alliance—Australia, Finland, Georgia, Jordan and Sweden—were granted the status of Enhanced Opportunity Partner, with whom NATO is developing tailor-made relationships. They are granted increased access to the Alliance and its resources, including for political consultation, information sharing, and participation in interoperability programmes and exercises.

80. NATO's relations with Georgia have deepened considerably since its independence in 1991. At the 2008 Bucharest Summit, the Alliance agreed that Georgia will become a member upon meeting the necessary requirements. Since becoming an Enhanced Opportunity Partner, Georgia has conducted three exercises under the NATO framework, including the *NATO-Georgia Exercises* in 2016 and 2019. *NATO-Georgia Exercise 2019* was the second NATO-Georgia joint multinational brigade-level, *Computer-Assisted, Command Post Exercise*, where for the first time the NATO-Georgia Joint Training and Evaluation Center acted as the "Officer Directing Exercise" and the Georgian General Staff had "Officer Conducting the Exercise" status. *NATO-GEO EX19* an important exercise for Georgia and a significant milestone in strengthening NATO-Georgia military-political cooperation. It further developed the interoperability of Georgian, Allied and Partner Forces, as well as Georgian command and control capabilities. The third *NATO-Georgia Exercise*, envisioned for 2022, will broaden its scope by incorporating amphibious and live elements. Georgia occasionally participates in other NATO exercises as well, and recently joined the NATO Cyber Coalition as a partner nation in advance of the *Exercise Cyber Coalition* in December 2019 (NATO, May 2019).

81. Georgia is committed to further increasing its interoperability with NATO, as well as improving its defence capabilities through further hosting the multi-national exercises and sharing its region-specific expertise with the Allies and Partner nations. Involving Georgia in wider range of exercises on a regular basis will promote stability and security in the Black Sea region and contribute to broader Euro-Atlantic security.

82. Other Enhanced Opportunity Partners also frequently participate in NATO exercises, and Sweden and Finland in particular. They have participated in numerous exercises, including *Trident Juncture 2018*, *NATO Cyber Coalition* exercises, and the *Ramstein Alloy* air-policing exercise, amongst others. Furthermore, both have signed memoranda of understanding on host nation support, which allows for them to provide logistical support for NATO forces in their territory in both real crises and exercises (NATO, 10 Oct. 2018). Sweden provided host nation support during *Trident Juncture 2018*.

83. Australia and Jordan also occasionally participate in NATO exercises. Australia, for example, has recently taken part in *Trident Juncture* and the 2019 *Joint Warrior* exercise, and in the *Locked Shields* exercise just as an observer nation. Jordan's participation in various exercises—including most prominently its hosting of the annual *Eager Lion* exercise, the most recent of which featured seven NATO Allies and ten Middle Eastern countries—has been discussed in the prior section.

V. CONCLUSIONS AND RECOMMENDATIONS FOR NATO PARLIAMENTARIANS

84. Increasing the quality and quantity of NATO exercising is a win-win goal all Allies should be focused on achieving. Alliance exercising - at small and large scales and across the full spectrum of tasks NATO forces need in order to provide an effective defence and deterrence posture - will go a long way to improve defence capabilities. Increased exercises are more cost-effective than independent national exercises and, as this report notes, they help foster necessary interoperability skills and are important building blocks of transatlantic solidarity. As noted above, NATO exercises serve as an excellent cross-cultural exchange programme that shapes relationships across all NATO member state sectors over most participants' lifetimes.

85. Exercises are also important signalling devices to a range of important audiences: to potential and future enemies, they signal Allied capabilities and unified resolve; among Allies, they foster political goodwill via reassurance; and, to domestic audiences providing the forces and resources funding Alliance militaries, they not only demonstrate investments in armed forces, but also show how this worthwhile investment will keep them safe.

86. As the principal funders of Alliance armed forces and the representatives of their citizens serving in their national forces, NATO parliamentarians can do a lot to support a robust Allied exercise schedule. Parliamentarians can engage with their respective defence committees overseeing the funding, structure, and training of their national armed forces to see how they can find even more avenues for inter-Allied cooperation. Parliamentarians can also amplify the political messaging function of exercises by releasing statements expressing their support for joint exercises and the Alliance solidarity that those exercises reinforce.

87. NATO parliamentarians can also support new funding initiatives to provide for large-scale, necessary training exercises. Such exercises demonstrate the complexity of manoeuvring modern forces and highlight areas for improvement, such as logistical flow and command and control. Resource-intensive, effective large-scale exercises on such things as transatlantic and trans-European equipment and personnel transfers will likely reduce the need to ever have to put such skills into real practice, as they will demonstrate NATO's resolve and commitment.

88. Finally, NATO parliamentarians can look into the areas in their own territories being used for exercising and identify areas for investment and improvement. Paying attention to military mobility initiatives, for example, may reveal a need to invest in new roads or bridges in critical areas. Parliamentarians from EU Allies can also engage with members of the European Parliament from their home countries in order to better understand how best to move forward on this topic, which will by necessity require greater EU-NATO cooperation.

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