Western Military Capability in Northern Europe 2020

Part I: Collective Defence

Eva Hagström Frisell and Krister Pallin (eds)
Albin Aronsson, Bengt-Göran Bergstrand, Robert Dalsjö, Johan Engvall, Jakob Gustafsson, Michael Jonsson, Diana Lepp, Viktor Lundquist, Björn Ottosson and Anna Sundberg

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Cover: Jonathan Nackstrand/AFP. US Marines prepare their M1 Abrams tank before taking part in an exercise to capture an airfield during Trident Juncture 2018, near the town of Oppdal, Norway.

Abstract

The conclusion of our analysis of Western military capability in Northern Europe in 2017 was that the West had several shortcomings compared to Russia when it came to high-intensity warfighting. Considerable resources and time would be required before the West could change the situation. In 2020, three years later, our wish was to enhance the analysis and perform a first cut *net assessment* of the force balance between the West and Russia. The aim is to identify important characteristics of the force balance with respect to relative strengths and weaknesses. We also suggest some keys to improving Western defence of Northern Europe.

In order to maintain Western cohesion, there is a need to show solidarity in handling Russia as well as other strategic competitors and non-state threats. NATO allies and partners should also prepare for action in smaller coalitions to enable rapid reaction. In addition, Western strategy should include flexible response against a range of enemy actions. Russia's means of power are limited compared to a united Western alliance, but the country could pose a serious threat on NATO's eastern flank. Given likely funding constraints, improvements in the defence of Northern Europe should focus on the near term, while still keeping an eye on the future. Relatively limited and inexpensive measures can make a considerable difference.

Keywords: NATO, EU, regional cooperation, bilateral cooperation, security and defence policy, military expenditures, collective defence, armed forces, military policy, military doctrine, military capability, readiness, war game, net assessment.

Sammanfattning

Slutsatsen av vår analys av västlig militär förmåga i Nordeuropa 2017 var att det fanns flera brister i jämförelse med Ryssland vad gäller högintensiv krigföring. Bedömningen var att väst skulle behöva avsätta betydande resurser och tid för att ändra på situationen. År 2020, tre år senare, var vår önskan att förbättra analysen och genomföra en systematisk värdering avseende styrkebalansen mellan väst och Ryssland. Syftet är att identifiera viktiga särdrag i balansen avseende relativa styrkor och svagheter. Vi drar också några viktiga slutsatser för arbetet med att förbättra det västliga försvaret av Nordeuropa.

För att upprätthålla den politiska sammanhållningen i väst finns det ett behov att visa solidaritet i hanteringen av Ryssland såväl som av andra strategiska konkurrenter och icke-statliga aktörer. Natomedlemmar och partnerländer bör också planera för att kunna verka i mindre koalitioner för snabb respons. Vidare bör västlig strategi inkludera flexibla svar på en rad olika fientliga aktioner. Rysslands maktmedel är begränsade i jämförelse med en enad västlig allians, men landet kan utgöra ett allvarligt hot mot Natos östra flank. Givet trolig återhållsamhet med framtida försvarssatsningar bör förbättringar av försvaret av Nordeuropa fokusera på närtid, med en samtidig blick på framtiden. Även relativt begränsade och mindre kostnadskrävande åtgärder kan göra stor skillnad.

Nyckelord: Nato, EU, regionalt samarbete, bilateralt samarbete, säkerhetspolitik, försvarspolitik, militärutgifter, kollektivt försvar, väpnade styrkor, militär policy, militär doktrin, militär förmåga, beredskap, krigsspel, värdering.

Preface

This is the second comprehensive study of Western military capability in Northern Europe conducted by the Northern European and Transatlantic Security (NOTS) Programme since our start in 2015.

A number of people have contributed their knowledge and expertise to the fulfilment of the study.

First, we wish to thank our reviewers. Professor Magnus Petersson of the Norwegian Institute for Defence Studies (IFS) – now at Stockholm University – and Dr. Johan Eellend of the Swedish Armed Forces commented on early drafts in June 2020. In October 2020, the thematic chapters were the object of a two-day seminar with external experts. Chapter 2 was reviewed by Ms. Justyna Gotkowska, Programme Coordinator for Regional Security at the Polish Centre for Eastern Studies (OSW); Chapter 3 by Dr. Paal S. Hilde, Associate Professor at the Norwegian Institute for Defence Studies (IFS): Chapter 4 by Dr. John R. Deni, Research Professor at the Strategic Studies Institute (SSI) of the U.S. Army War College; and Chapter 5 by Lieutenant General (Ret.) Heinrich Brauß, Senior Associate Fellow at the German Council on Foreign Relations (DGAP).

The study relies considerably on other FOI expertise, both within and outside of the NOTS programme, in particular concerning war-gaming, Russia, air power, nuclear weapons and electronic warfare. Special thanks are due to Erik Nordstrand, Johan Elg, Johan Norberg, Jonas Kjellén, John Rydqvist, Niklas Rossbach, Emma Sjökvist and retired colleagues Bo Tarras Wahlberg and Krister Andrén. We are also indebted to Pär Blid and Magnus Danielsson of the Swedish Armed Forces and Anders Larsson of the Swedish Defence University for their contributions during our war game.

As always, Per Wikström designed maps for us with the greatest professionalism. Richard Langlais reviewed and edited the language of all texts with outstanding diligence and attitude. Lena Engelmark and Marianna Serveta provided tenacious and infallible support for the layout of the report.

Our sincerest thanks to all of you; without your support this study would not have been possible.

Stockholm, February 2021

Krister Pallin
Deputy Research Director & Programme Manager
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Executive Summary

Russia's military build-up and increasingly aggressive behaviour in NATO's vicinity have been a wake-up call for the countries in Northern Europe. Multilateral organisations and individual states have begun a political and military transformation to adapt to a changing security environment. Our analysis of Western military capability in Northern Europe in 2017 showed that Western military capability had several shortcomings compared to Russia, particularly when it comes to readiness for high-intensity warfighting in Europe. Considerable resources and time would be required to change the situation.

The aim of the 2020 study of Western military capability in Northern Europe is to enhance the analysis and perform our first systematic assessment of the force balance between the West and Russia. Building on the tradition of net assessment, the study covers a number of factors that are in effect necessary for a comprehensive assessment of military capability, such as security and defence policy, armed forces, military policy and doctrine, and conflict scenarios. Our aim is to identify the important characteristics of the force balance between the West and Russia with respect to relative strengths and weaknesses. Given the latter, we also suggest some keys to improving the Western defence of Northern Europe. The study is divided into two parts: a thematic analysis of Western collective defence and a number of country analyses focusing on national military capabilities.

The changing security landscape – Western cohesion and coordination

The increasingly multipolar world order, now again characterised by the competition between great powers and the weakening of multilateral organisations and norms, affects the security situation in Northern Europe. This has led to greater demands on Western defence but also to diverging priorities among allies and partners. At the same time, the West faces an authoritarian regime in Russia that wants to regain its status as a great power and establish a sphere of privileged interest in its neighbourhood. Uncertainties regarding the future role of the US and the weakening of the European security order may give Russia an incentive to further its interests at the expense of the countries in the region.

In order to maintain unity, NATO has to plan for meeting threats in several directions. Diverging geopolitical outlooks and threat perceptions may affect the ability to reach an agreement to counter Russian actions in a crisis, which is why regional and bilateral cooperation formats are fundamental to ensure rapid response and support from key allies. In the future, European allies need to provide a greater share of NATO's military power, but in the short- to medium-term there is no substitute for an active and firm US commitment to the defence of the region. Military expenditures are rising slowly and unevenly in Europe, and the economic consequences of the coronavirus pandemic may negatively affect the prospects of enhancing Western defence.

Nevertheless, today and in the near future, Russia, or for that matter China, cannot match a united Western alliance in terms of political, economic, or military power – given political cohesion and proper coordination. Therefore, Russia and China work systematically to sow dissent and undermine Western institutions and common purpose. Russia's political strength lies in unity of command, coherent strategies and quickly available means of power. However, the Russian regime's reliance on one leader, growing social resentment and considerable economic weaknesses also make Russia vulnerable.

NATO collective defence – Alliance preparations

Key components of Western military capability are not only forces but also NATO strategy and plans, command arrangements, logistics support, and exercises. As expressions of strategy, deeds are as important as words. The steps taken at NATO summits since 2014 have focused on improving the Alliance's responsiveness, readiness and capability for reinforcement. In 2019–2020, NATO's strategy for collective defence moved forward with a new military strategy and a supporting concept for deterrence and defence of the Euro-Atlantic area. However, strategy-making also includes implementation by the Alliance and national armed forces, through agreements, planning, force posture and activities. Collective defence has improved with respect to decision-making, operational planning and command of operations.

Apart from the political handling of conflicts and the transition to war, which is difficult to prepare fully, there are nevertheless some gaps in common preparations. In particualar, this relates to predesignated command structures, coordinated and more developed planning for both deterrence and defence, large-scale troop movements, sustainment of forward-deployed forces, and major Article-5 field exercises. In contrast, Russia, with national command over its armed forces, has practiced going to and waging war for a number of years. Whereas the content of Russian war planning is unknown, the chain of command seems well prepared and tested, as are movement and sustainment of large forces on and near Russian territory.

Thus, deficiencies in the Alliance's common defence preparations constitute a relative weakness compared to Russia. Some of these may be rather easily rectified jointly; while some are contingent on the strengthening of the allies' national capabilities. At present, the state of NATO preparations suggests that either the Alliance's focus is on handling a crisis (Article 4), rather than an armed attack (Article 5), or it is assuming there will be considerable warning time before an attack.

Fighting power on the eastern flank – conceptual and physical components

The military policy and doctrine of the Western alliance is burdened by different views with respect to threats and priorities as well as by unclear roles and responsibilities for handling a range of challenges, from peace to war. Facing it, we find Russia with a well-developed military thinking for the whole conflict spectrum, including the use of military and non-military means in a coordinated way. As for high-intensity warfare, the challenge for NATO and its members is much about putting existing doctrine into practice. However, there is also a need to further develop and implement the current military strategy.

NATO's major capability problems are that its forces are spread across many countries, kept at low readiness and not configured or trained for war. Although, some improvements are evident in the forward presence as well as in rotational and rapid reaction forces, NATO still has difficulty in assembling the same numbers of ground forces as Russia. An upper hand for the West is likely with respect to naval and air forces, but only provided that assets are sent from America. Russian ground forces are better organised and equipped for high-intensity operations. The Western counterpart is a mixed bag of heavy and light units with generally much weaker combat and combat service support. The quality of Western naval and air forces varies, but is superior overall. Russian armed forces seem generally more well-prepared for major war operations, at least on the ground and given a short conflict.

For assessments of the overall force balance in Northern Europe, we need to look at NATO's eastern flank as a strategic whole and at different situations; the results for each scenario will vary greatly and are sensitive to the course of events. Armed conflict cannot be excluded on any part of the flank; there would always be a need to cover more than one direction and be ready to handle simultaneous challenges. In addition, Western capacity is needed for a range of responses across the conflict spectrum. At present, the Alliance lacks some of the conceptual and physical tools of fighting power needed to achieve this.

A Baltic war game – major factors influencing the outcome

As military capability can only be meaningfully assessed against a task, a terrain and an adversary, part of the effort in producing this report was channelled into a war game. The scenario was a Russian attack on the Baltic states via Belarus, planned and executed as a limited war, and intended to defeat NATO's forces quickly. The overall goal was not to predict a likely scenario or its outcome, but to throw light on major factors influencing the outcome of a conventional armed conflict in the Baltic region.

Apart from the war preparations and the initial force balance, the difficulty of war with limited objectives and limited action became apparent from the game. For Russia in particular, but also for NATO, a withholding approach may imply considerable risk by facilitating the opponent's military measures. Consequently, any major conflict could soon be affected by what happens in other areas or domains, whether they are supporting, competing for attention and resources, or becoming stages for deliberate escalation. In addition, nuclear assets would be included on both sides for deterrence and terminating a conflict, and possibly for defence, should the fortunes of war turn the wrong way.

At the operational and tactical levels, manoeuvre of fires dominate, which means – given Russian superiority on the ground – that the early delivery of Western air power is imperative, contingent on quick reinforcements, forward-basing and suppression of Russian air defence. In our game, after a few days of fighting, the situation was clearly in favour of Russia, with its armed forces having reached many of their objectives. However, force dominance at the strategic or operational level does not always translate into a tactical superiority on the battlefield. In a number of situations, the outcomes could have turned out differently, due to other operational choices by the adversaries, the geography and the terrain or, simply, the frictions of war. Furthermore, intangible factors, such as operational and tactical skills, as well as morale, may decide battles. In sum, the margin between success and failure is often slight, and few conflicts will follow the expected course of events.

Enhancement of Western collective defence – some implications

The different views on security threats and defence priorities in the West are logical and will remain for the foreseeable future. In particular, the US shift of its long-term priority to the rise of China is unlikely to change. Military expenditures have risen in NATO and Northern Europe since 2014, but the rate is slow and further increases in military expenditures cannot be taken for granted, at least not for the next three to five years. Although Russia's means of power are limited as compared to the West, the country could pose a serious threat on the eastern flank, especially given NATO's current defence posture. Consequently, some critical deficiencies in Western defence need to be rectified, which requires additional resources, but above all sound priorities and prompt action.

What are realistic, urgent and effective keys to improving Western collective defence in Northern Europe, given its relative strengths and weaknesses and, most importantly, other political, economic and military framing conditions?

A first key is to accept that the cohesion of NATO demands solidarity and burden-sharing, not only in handling the threat from Russia but also from China, failing states and terrorism. At the same time, coalitions on the Western side are more likely to be the norm in the future, given the significant numbers of allies and their different priorities and capabilities.

A second key is to once again develop and implement a strategy of more flexible responses that can credibly deter and, if needed, defend against a possible and realistic range of enemy actions of today. These actions streches from covert harassment of individual member states, that is unlikely to trigger Article 5, to major war, including nuclear threats.

A third key is to realise that it is not necessary for successful deterrence and defence to assure a Western victory in all situations. Any capabilities or measures that are likely to degrade Russian fighting power, block a quick victory or strip Russia of any confidence in escalation control, should have a deterrent effect as well as improve Western odds in the event of open conflict.

A fourth key is that Western capability development needs to focus more on having a complete set of capabilities for integrated use across the spectrum of conflict, including on land, at sea and in the air, as well as in space and cyberspace. It is imperative to have the appropriate conventional and nuclear forces available, rather than large assets of uncertain relevance.

A fifth key is to pursue the already begun enhancement of NATO and coalition preparations, including command structures, planning and exercises. These are probably the cheapest and most effective measures available, and a prerequisite for many other war preparations.

Finally, the sixth key is that while long-term investments in collective defence are necessary, they do not satisfy the needs for countering Russia in the short term. The latter must have high priority, and just bringing order to parts of the current force structures will require much of the available resources. In addition, given uncertain future needs, scarce funding, and varying popular support for a build-up of large armed forces for warfighting, defence investment for the long term should be chosen carefully.

Abbreviations

A2/AD	Anti-access and Area Denial
ABCT	Armored Brigade Combat Team (US)
ACO	Allied Command Operations (NATO)
ACT	Allied Command Transformation (NATO)
AIRCOM	Air Command (NATO)
APS	Army Prepositioned Stocks (US)
ARRC	Allied Rapid Reaction Corps (NATO)
ASW	Anti-submarine Warfare
ATO	Air Tasking Order (NATO)
AWACS	Airborne Warning and Control Systems
CAS	Close Air Support
CAB	Combat Aviation Brigade (US)
CARD	Coordinated Annual Review on Defence (EU)
CFE (Treaty)	(Treaty on) Conventional Armed Forces in Europe
CPX	Command-post Exercises
CSDP	Common Security and Defence Policy (EU)
DDA	Comprehensive Concept for Deterrence and Defence in the Euro-Atlantic Area (NATO)
EW	Electronic Warfare
EDI	European Deterrence Initiative (US)
eFP	enhanced Forward Presence (NATO)
EDF	European Defence Fund (EU)
EI2	European Intervention Initiative
ESDP	European Security and Defence Policy (EU)
EUBG	European Union Battlegroups
FLR	Forces of Lower Readiness (NATO)
FNC	Framework Nations Concept (NATO)
FOC	Full Operational Capability
FOFA	Follow-on Forces Attack (NATO)
GBAD	Ground-based Air Defences
GRF	Graduated Readiness Forces (NATO)
GRP	Graduated Response Plan (NATO)
HET	Heavy-equipment Transporter
HNS	Host-nation Support (NATO)
HRF	High Readiness Forces (NATO)
IMF	International Monetary Fund
IOC	Initial Operational Capability
IRBM	Intermediate-range Ballistic Missiles
ISR	Intelligence, Surveillance and Reconnaissance
ISTAR	Intelligence, Surveillance, Target Acquisition and Reconnaissance
JEF	Joint Expeditionary Force (UK)
JFC	Joint Forces Command (NATO)
JLSG	Joint Logistics Support Group (NATO)

JOA	Joint Operations Area (NATO)
JOAC	Joint Operational Access Concept
JSEC	Joint Support and Enabling Command (NATO)
JSTARS	Joint Surveillance Target Attack Radar Systems
JWC	Joint Warfare Centre (NATO)
LANDCOM	Land Command (NATO)
LIAP	Lessons Identified Action Plan (NATO)
MARCOM	Maritime Command (NATO)
MC	Military Committee (NATO)
MNC NE	Multinational Corps Northeast HQ (NATO)
MLRS	Multiple Launch Rocket System
NAC	North Atlantic Council (NATO)
NATO	North Atlantic Treaty Organization
NCS	NATO Command Structure
NFIU	NATO Force Integration Units
NFS	NATO Force Structure
NORDEFCO	Nordic Defence Cooperation
NRDC	NATO Rapid Deployable Corps
NRF	NATO Response Force
NRI	NATO Readiness Initiative
OPLAN	Operations Plan (NATO)
OSCE	Organisation for Security and Cooperation in Europe
PESCO	Permanent Structured Cooperation (EU)
PoD	Point of Debarkation (NATO)
PPP	Purchasing Power Parities
RAP	Readiness Action Plan (NATO)
REFORGER	Return of Forces to Germany (NATO)
RSOM	Reception, Staging, and Onward Movement (NATO)
SDP	Standing Defence Plan (NATO)
SACEUR	Supreme Allied Commander in Europe (NATO)
SEAD	Suppression of Enemy/Ground-Based Air Defences
SHAPE	Supreme Headquarters Allied Powers in Europe (NATO)
SJLSG	Standing Joint Logistics Support Group (NATO)
SLOC	Sea Lines of Communication
START I	Strategic Arms Reduction Treaty I
STRIKFORNATO	Naval Striking and Support Forces NATO
TOA	Transfer of Authority (NATO)
ULO	Unified Land Operations
USAFE	United States Air Forces in Europe
USEUCOM	United States European Command
VJTF	Very High Readiness Joint Task Force (NATO)
WHO	World Health Organisation
WTO	World Trade Organization

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1. Introduction

Eva Hagström Frisell and Krister Pallin

Over the past ten years, Russia has fundamentally reformed its armed forces. It has increased its fighting power and demonstrated an ability to conduct military campaigns in both Ukraine and Syria. The illegal annexation of Crimea and the aggression in eastern Ukraine in 2014 showed that Russia is ready to use military force to achieve political goals in Europe.[1]

Russia's military build-up and increasingly aggressive behaviour in NATO's vicinity have been a wake-up call for the countries in Northern Europe. Multilateral organisations and individual states have begun a political and military transformation to adapt to a changing security environment. NATO prepares for collective defence, including more and larger exercises in Northern Europe. The EU complements NATO's efforts and seeks to address cyber and hybrid threats and support capability development. National armed forces are trying to regain the capability to fight inter-state wars and overcome capability gaps resulting from previous decades of force reductions and a focus on crisis management operations. That said, many steps remain to ensure deterrence and defence against Russia.

In 2017, FOI made a first comprehensive analysis of the military-strategic situation in Northern Europe. The study covered the security and defence policies of Western countries, developments within NATO and the EU, the military capability of national armed forces and, as a case study, the ability to mobilise against a Russian short-notice attack on the Baltic states. The main findings of the study were that Western military capability had several shortcomings compared to Russia, particularly when it comes to readiness for high-intensity warfighting in Europe. The study concluded that the transformation of Western forces had only started and that it would take considerable resources and time before the measures and reforms adopted would significantly change the situation.[2]

1.1 Aim and research questions

This study is part of a long-term effort to improve our understanding of the security policy and military strategic situation in Northern Europe. In comparison to our effort in 2017, the aim is to enhance the analysis and perform a first systematic assessment of the force balance between the West and Russia. The focus is on the situation in Northern Europe in 2020, but also discusses potential developments towards 2025.

The study is divided into two parts: a thematic analysis of Western collective defence and a number of country analyses focusing on national military capabilities. Part I examines the changing global security landscape, and security and defence policy in Northern Europe, NATO preparations for Western collective defence, fighting power in Northern Europe and the results of a war game involving the West and Russia. Part II charts eleven key Western countries with respect to security and defence policy, military expenditures, armed forces and national military capability.

Part I of the study is guided by the following research questions:

- How do the changing global security landscape, and developments in security and defence policy in Northern Europe, affect Western collective defence against Russia?
- How well do common NATO preparations with respect to strategy, planning, command and control, logistics and exercises support collective defence in Northern Europe?

1 Westerlund, Fredrik and Oxenstierna, Susanna (eds.), *Russian military capability in a ten-year perspective – 2019*, FOI-R--4758--SE (Stockholm: Swedish Defence Research Agency – FOI, 2019).

2 Pallin, Krister (ed.), et al., *Västlig militär förmåga: En analys av Nordeuropa 2017*, FOI-R--4763--SE (Stockholm: Swedish Defence Research Agency – FOI, 2018).

- What is the impact of military policy and doctrine and of available forces on fighting power, and, in turn, the force balance in the event of conflict between the West and Russia?
- What are the major factors influencing the outcome of a major conventional armed conflict in the Baltic area?
- What are the important characteristics of the force balance with respect to relative strengths and weaknesses of the West and Russia in Northern Europe and the implications for Western defence?

1.2 Western military capability – two definitions

The first fundamental, methodological question for this study is: What makes up Western military capability? In comparison with the Russian Federation, the West is a much more fluid term. For the purposes of this study, the West includes countries and organisations that may have a significant role in the collective defence of Northern Europe in the event of a Russian armed attack. It means that we study northern NATO countries with a proximity to Russia, i.e. Denmark, Norway, Estonia, Latvia, Lithuania and Poland. The major players of NATO, i.e. the United States, United Kingdom, France and Germany, are included for their prominent role in the Alliance's assurance and deterrence measures on the eastern flank. Finland and Sweden, as non-NATO members, also figure in the analysis, due to geography and their partner status, since they would, depending on the situation, play a role in deterrence and defence against Russia. Other countries in Northern Europe are excluded because of their relative geographic distance from the eastern flank or the relatively small size of their armed forces. Neither does the study cover other more southern NATO members, as they are not expected to play a direct role in the collective defence of Northern Europe.

When it comes to Western organisations, NATO has long been the central framework for planning and organising the collective defence of the Euro-Atlantic area. Although this remains the case, internal divisions within the Alliance and the uncertainty regarding the future US commitment to European security have raised doubts about its prominence in a future conflict. The alternative to a NATO-led operation would be a coalition of willing and able allies and partners. Therefore, countries in Northern Europe have in recent years sought to strengthen their bilateral and regional defence ties in order to enhance their military capability and ensure support in case of a crisis or war. Furthermore, the EU has adopted a new ambition of protecting the union and its citizens and has launched several measures to enhance European defence capabilities. Even though this study focuses on collective defence in a NATO framework, the possibility of a response by a smaller coalition within the Alliance, and with partner countries, is also discussed.

The second important methodological question is: What builds or constitutes military capability? It is hard to find strict definitions of military capability, but the general meaning of capability is simple and telling: the ability or qualities necessary to do something.[3] The NATO definition of fighting power – 'the ability of any actor to use, or threaten to use, force to achieve a desired outcome' – is analogous but underlines the military aspect ('force') and the importance of context. Military capability in action, i.e. operational capability, is about doing something specific ('desired outcome') and therefore needs to take into account not only the means but also factors such as ambition, enemy, environment, partners and time.[4]

Thus, static and quantitative force comparisons are of questionable value – something that both defence experts and military officers are well aware of. However, due to the genuine difficulty and effort required for the proper analysis of force balances, analyses based on lists of units and equipment continue to be common. Our 2017 analysis of Western military capability in Northern Europe began to examine not only quantity but to some degree quality and, in particular, the availability of Western forces. In this study, we attempt to take a step further by making a *net assessment* of the Western-Russian force balance in Northern Europe.

3 See, e.g., Oxford University, *Oxford Advanced Learner's Dictionary (*Oxford University Press, 2020).
4 NATO, *AJP-01 Allied Joint Doctrine* (Brussels: NATO Standardization Office, 2017), p. 1–16.

1.3 Net assessment

While net assessment became part of defence vocabulary in the 1970s, the idea of comparing countries' relative strengths and weaknesses is older and had already been described in ancient times.[5] The idea remains the same, a two-sided – or many-sided – comparative evaluation of countries, groupings of countries, or other geographic and institutional entities. The primary concern is the net balance that emerges from comparison. The concept of net assessment that we know today began to evolve during the 1950s, in order to inform strategic decision-making for defence, initially with respect to nuclear war and long-term competition between the West and the Soviet Union.[6] Early important developments were to rely less on necessarily sketchy intelligence regarding enemy forces and plans, and put more emphasis on the role of military doctrine, culture and organisational behaviour, as well as careful study of strategic and framing variables such as political, economic, technological, social and demographic conditions.[7]

By the 1960s, there was a general development towards more eclectic and long-term strategic planning for defence and other sectors.[8] Indeed, military and civilian efforts inspired each other, as was also the case with net assessment, for example with respect to the study of organisations and limited rationality in decision-making.[9] In the beginning, net assessment stood out in its emphasis on both quantitative and qualitative variables, expanded studies of adversaries, belief in simple and transparent modelling, and less focus on reducing uncertainty. Much of this has later been included in other traditions, for instance operations research and systems analysis.[10] What seems to remain unique in net assessment is the focus on finding the asymmetries in the force balance between adversaries and, for addressing long-term needs, trends in these over time, in order to identify both challenges and opportunities. In addition, and in contrast to many other forms of analysis and decision support, the objective is to diagnose the conditions in the interaction rather than to predict outcomes and suggest solutions.

With the establishment of the Office for Net Assessment (ONA) in the US Department of Defense in the early 1970s, work was also started on more operational and near-term war challenges with respect to geography, as well as to particular warfighting domains or capabilities. In the years that followed, the ONA pursued theatre assessment of the Central Front in Europe and NATO's northern flank, as well as of the Korean Peninsula and the broader Asian theatre. In addition, other assessments covered capabilities such as anti-submarine warfare, command and control, and power projection. As part of up-dating and revealing trends, but also for developing the required knowledge and methodology, several assessments were repeated before reaching their full potential.[11]

Like any methodology, net assessment is not without criticism or immune to malpractice. One remark is that the results are contingent on so many factors or so vague that practitioners can always claim to have been correct. In addition, as more information is being integrated into an assessment, the risk increases for biases when choosing

5 Good examples are speeches by the leader-strategist Pericles of Athens and Archidamus of Sparta, prior to the Peloponnesian War, 431–404 BC, and writings by Sun Tzu, in his work, *Art of War,* 500–430 BC. Later, in another example, from the early 19th century, Carl von Clausewitz showed equal insight in his treatise, *On War*; also see Footnote 7, for reference.

6 See, e.g., Institute for Defense Analysis, *Net Assessment: The concept, its development and its future* (Alexandria, VA: Institute for Defense Analysis 1990), p. 8–12,

7 Marshall, Andrew, 'The origins of Net Assessment', in Mahnken, Thomas G. (ed.), *Net Assessment and military strategy: Retrospective and prospective essays* (Amhearst, NY: Cambria Press, 2020), p. 4–12; and Mahnken, Thomas G., 'What is Net Assessment?', in Mahnken, *Net Assessment*, p. 12–15.

8 For the development of Planning, Programming and Budgeting Systems (PPBS) for defence, see, e.g., Enthoven, Alain C. and Smith, K. Wayne, *How much is enough? Shaping the defense program 1961–1969* (Santa Monica, CA: RAND Corporation, 1971 and 2005), p. ix–xv.

9 Augier, Mie, 'Thinking about war and peace: Andrew Marshall and the early development of the intellectual foundations for Net Assessment', *Comparative Strategy,* vol. 32, no. 1, 2013, p. 1–17.

10 For comparison with systems analysis, see, e.g., Institute for Defense Analysis. *Net Asssessment,* p. 9–10. Operations research (OR) has evolved from addressing mainly quantitative and well-defined problems ('Hard OR') to encompassing larger and messier problems with systems analysis ('Soft OR/SA'), including also qualitative analysis. The main remaining differences in net assessment are due to whether decision-makers ask for diagnosis or prescription, and local practice of both traditions.

11 Marshall, Andrew, 'The Origins of Net Assessment', in Mahnken, *Net Assessment*, p. 7–8.

and evaluating the information. While the eclecticism and multi-scenario analysis of net assessment is intended to be a palliative to various forms of cherry-picking, obscure assumptions can corrupt the work. In sum, taking a broad view, albeit relevant, may easily lead to undue loss of rigour. Furthermore, although a challenge for any kind of assessment, the distinction between diagnosis and prognosis or prediction is not always clear.[12] Proponents of net assessment would reply that complexity and uncertainty must be accepted but upholding rigour with appropriate analytical methods and good scientific practice is also part of the methodology. The present study aims to follow in that tradition.

1.4 Analytical model, methods and delimitations

There is a lack of open and established descriptions of net assessment and practitioners have applied the approach differently. The framework – here called the model – quite naturally needs to be adjusted to the object of study. It makes a huge difference whether a study focuses on a strategic, operational, or tactical-level interaction, or a long-term peacetime competition, or a short war fight. Considering that our objective is to assess the military-strategic situation in Northern Europe, previous experience indicates that a model for assessment of real military capability, i.e. force balances, should ideally capture all the following factors or perspectives: [13]

- Security and defence policy, including bureaucracy;
- Other framing external factors, for example economics, society and demographics;
- Armed forces, including quantity, quality and availability;
- Military policy and doctrine;
- Leadership, legitimacy, ethics and morale;
- Conflict situation.

Our study is forward-looking, but the focus is on the current force balance, which means that aspects of politics, economics, society and demographics outside the area of defence have been excluded, assuming a limited influence on a war fight in the near term. The role of civilian actors in defence, including authorities and industry, is mentioned, for example regarding logistics, but is not a part of the study. Always of great importance, the moral factors, i.e. leadership, legitimacy, ethics and morale, is commented upon in places, but had to be excluded due to the lack of studies by FOI on the subject and the difficulty in finding relevant work by others.

Apart from these exemptions, the factors above set the model for our analysis, including a thematic treatment of all aspects before drawing them together in a net assessment. In line with this approach, the aim is to identify important characteristics of the force balance, especially with respect to asymmetries, i.e. relative strengths and weaknesses, and trends in these relationships between the West and Russia in Northern Europe.

Whereas net assessment consists of an overall model that includes the above perspectives, any study needs methods or tools of the trade for investigating and pulling them together. As the problems studied with the methodology often have limited structure and lack singular solutions, there is a need for methods that do not require a lot of structure, to the contrary of many optimisation methods. In line with this, we have used a combination of quantitative and qualitative analysis, scenarios, gaming, and sensitivity analysis, as well as expert judgment and peer review.[14]

Some further notes on delimitations are due. The primary focus of our study lies on a conventional armed conflict in the Baltic area. The war game we conducted as part of the study included further assumptions and delimitations, in particular a short run-up to the war, little action before the outbreak of major armed conflict and limits on

12 See, e.g. Robert, Peter and Kaushal, 'Strategic Net Assessment: Opportunities, and Pitfalls', *The RUSI Journal,* 28 January 2019.

13 For experience and applications of the method, see, e.g., Bracken, Paul, 'Net Assessment: A practical guide', *Parameters*, Spring 2006; Cohen, Eliot, 'Toward better Net Assessment: Rethinking the European conventional balance', *International Security,* Summer 1988; and Elefteriu, Gabriel, *A Question of power: Towards better UK strategy through Net Assessment (*London: Policy Exchange, 2018);

14 Bracken, 'Net Assessment', p. 98–100.

aggressive measures outside the area of operations. In particular, we did not game and do not assess irregular warfare, unconventional warfare and information operations, nor the use of nuclear weapons, even though they are likely elements in any major war. However, their role in and as an extension of a conventional war fight is discussed and some implications suggested.

A key element of net assessment is to accept and handle the decisive influence of the external factors. This means that the particular choice of conflict situations governs the analysis to a considerable degree. Accordingly, we base our analysis of the Western-Russian force balance on the gaming of the Baltic scenario with respect to context, but discuss our conclusions in the light of other possible armed conflicts on the eastern flank.

Ideally, the actors in the interaction we studied should be given symmetric attention in a net assessment. This has not been possible, because of time and resource restrictions. However, we have been fortunate to be able to rely on the Russia programme at FOI, which has studied and published works on Russia's post-Cold War military capability, including a triennial comprehensive assessment, since the late 1990s.[15]

Finally, it must be emphasised that military strategic assessments are inherently broad subjects, and the methodology implies that a balance must be struck between precision and breadth in the analysis. In the end, it is about finding decent answers to the right questions, rather than perfect answers to the wrong questions.[16] The present study is a first cut on assessing the force balance in Northern Europe and some important conclusions can be drawn already. Nevertheless, with more iterations, both the precision and breadth of the analysis will improve.

1.5 Layout of the work

This study builds considerably on work carried out by FOI's Northern European and Transatlantic Security (NOTS) Programme in the preceding years. Previous studies have focused on various thematic aspects of Western security and defence as well as analyses of the security and defence policies of individual countries in Northern Europe, the major European military powers and the US. This study furthermore relies on the expertise of FOI researchers outside of the NOTS programme, in particular concerning war-gaming and Russia.

The planning for the study started in the second half of 2019 and included dialogue with the external users of our work and internal workshops on its structure and method. The research commenced in January 2020. An important methodological improvement compared to the 2017 study consisted of a double-sided war game held in March 2020. The purpose was to develop a reasonable course of events in an armed conflict between the West and Russia, which is used as a tool to analyse the major factors influencing the force balance between the two. As has been stressed, the game also serves as a baseline to discuss possible variations of conditions, actions and events.

Each thematic chapter and country analysis that forms part of the study has undergone review in several steps, by both internal and external experts. The final review seminars were held in October 2020, when four international reviewers commented on the report, with a particular focus on the thematic chapters of the study.

1.6 Sources

The study relies on open sources. The analysis of Western military capability builds on official documents and communication from the multilateral organisations and countries under study. This is complemented by a rich secondary literature from academic institutions, think tanks and news media. Interviews with officials and experts are important for taking stock of ongoing developments. However, travel restrictions imposed during the coronavirus pandemic have hampered the opportunities to visit the countries and organisations under study and to interview experts and officials on these matters.

As defence planning and the readiness and capability of national armed forces are largely kept out of the public domain, the assessment of Western military capability is, in the end, our own interpretation of the available sources. The cut-off date for

15 See, e.g. Westerlund and Oxenstierna, *Russian Military Capability*.
16 Garrity, Patrick J., *A reaffirmation of strategy* (Charlottesville, VA: Miller Center of Public Affairs, University of Virginia, 2015).

data-gathering was 1 November 2020. After this date, new information is only selectively referred to in the report.

1.7 Structure of the report

The study of Western military capability in Northern Europe 2020 consists of two reports. Part I contains the thematic analysis of Western collective defence and Part II covers the analysis of defence efforts in eleven key Western states.

After this introduction, Chapter 2 addresses how the changing global security environment, and developments in security and defence policy in Northern Europe, affect Western collective defence against Russia. The chapter examines the changing geopolitical context at the international system level and how it, in turn, affects the countries of Northern Europe. Thereafter, the chapter analyses the cohesion of the West and the differing assessments of the threat from Russia. The chapter goes on to look at the role of NATO, the EU and other regional and bilateral defence collaborations in addressing the threat from Russia.

Chapter 3 moves on to assess how well common NATO preparations support collective defence in Northern Europe. The chapter first examines key components of collective defence, such as NATO's strategy, plans, and arrangements for command and control. The chapter then addresses the importance of logistics, including the problems of reinforcing the eastern flank and sustaining forces there. Finally, the chapter analyses the impact of exercises conducted by NATO and allies on the development of Western collective defence in Northern Europe.

Chapter 4 analyses the relative fighting power of the West and Russia in Northern Europe. The chapter begins with an overview of the conceptual component of fighting power, focusing on Western and Russian military policy and doctrine in the light of current challenges. The chapter then assesses the physical component of fighting power, including the overall force balance, readiness and relevance for a conflict on the eastern flank, as well as force composition. This is followed by a discussion on the all-important context for the use of fighting power, i.e. possible conflict situations on the eastern flank.

Next, Chapter 5 examines the major factors influencing the outcome of a major conventional armed conflict in the Baltics, based on a war game. The chapter starts by describing the strategic and operational setting, the forces involved, the concept of operations and the outcome of the war game. Thereafter, the chapter analyses different aspects of the outcome and identifies the major factors and dilemmas in a confrontation between the West and Russia on the eastern flank.

Finally, Chapter 6 attempts to make a first cut net assessment of the force balance between the West and Russia in Northern Europe. The chapter focuses on the relative strengths and weaknesses of the adversaries from a Western point of view and suggests some implications, including keys to organising a better Western collective defence against Russia.

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2. The changing security landscape and Northern Europe

Johan Engvall and Eva Hagström Frisell

The changing world order, characterised as it is by increasing competition between great powers and the weakening of many multilateral institutions, is, as so often before, challenging the cohesion of the West. The US is shifting its long-term priority towards the strategic competition with China. At the same time, former President Donald Trump has questioned US engagement in many of the multilateral organisations, including NATO, that uphold the rules-based world order. European countries are trying to adapt to a changing security landscape, but have so far not been able to agree on a concerted response. Threat perceptions continue to diverge within the two major Euro-Atlantic security organisations, NATO and the EU, affecting their ability to effectively deal with Russia. As a hedge against the increasing uncertainty over the European security order, European countries have launched a multitude of bilateral and regional defence cooperation initiatives to enhance military capabilities and handle a deteriorating security situation.

The objective of this chapter is to analyse how the changing global security landscape, and the developments in security and defence policy in Northern Europe, affect Western collective defence against Russia. The analysis begins with a discussion of the changing global dynamics, focusing in particular on the increasing competition between great powers and the implications for Europe as a whole and for the small states in its northern parts. Then, the continuity and changes in the West's threat perceptions and its reactions to them are scrutinised in light of Russia's security policy goals. This analysis is continued in the next three sections through a consideration of the status of the major Western security and defence policy arrangements: NATO, the EU, and regional and bilateral initiatives. Finally, conclusions are drawn with regard to Western collective defence against Russia.

2.1 Increasing great power competition

The geopolitical landscape is changing at a rapid pace. The rules-based international order under the leadership of the United States, conceived of after 1945 and spreading outwards after the end of the Cold War, is increasingly being questioned. The hegemonic position of the US is being challenged by revisionist powers, primarily China, and to a lesser extent Russia, as well as by shifts in global economic power.[1] During the past decade, America's gradual global disengagement has created a vacuum that has been exploited by China and Russia as well as various regional powers to further their own interests. This strategic competition is furthermore taking place in a context of weakening international institutions and a growing disregard for international law, which implies that great powers may be less bound by certain norms of behaviour.

US-China rivalry

In Washington, it is now clear that China is not a partner that can be socialised into a rules-based international order led by the US, but the greatest strategic competitor, posing challenges to the

1 Ikenberry, G. John, 'The end of liberal international order?' *International Affairs,* vol. 94, no. 1, 2018: p. 7–23; Nye, Jr., Joseph S., 'The rise and fall of American hegemony from Wilson to Trump', *International Affairs,* vol. 95, no. 1, 2019: p. 63–80; Dalsjö, Robert, *Tre kopplade kriser skakar världsordningen,* FOI Memo 6701 (Stockholm: Swedish Defence Research Agency – FOI, March 2019); Olsson, Per, Dahl, Alma and Junerfält, Tobias, *Defence Economic outlook 2020; An assessment of the global power balance 2010-2030,* FOI-R--5048--SE (Stockholm: Swedish Defence Research Agency – FOI, December 2020).

military, economic, institutional, and ideational pillars of American primacy.[2] According to the US Department of Defense, Beijing seeks regional hegemony in the Indo-Pacific in the near-term and displacement of the US, globally, in the long-term.[3] The US government had already shifted its attention towards Asia in 2012, as the Obama administration implemented its "pivot to Asia" strategy, which identified China as the major long-term strategic concern of US foreign and security policy. Washington's shift to contending primarily with the challenges posed by the rise of China, as the main strategic rival, means that 60 per cent of the US Navy and Air Force's resources are reserved for the Pacific.[4] The Trump administration, by designating the Indo-Pacific as the Department of Defense's priority theatre, has confirmed this rebalancing away from Europe and the Middle East.

The Trump administration's principal strategic documents – the 2017 National Security Strategy and the 2018 National Defense Strategy – identify the "re-emergence of long-term, strategic competition between nations" as the point of departure for US security and defence policy.[5] Subsequently, the major threat to US security and prosperity is no longer terrorism but other powers who seek to alter the regional balance of power in Asia and Europe, respectively, with detrimental effects on the role of the US in world affairs.[6] Geopolitical competition requires broad mobilisation in several domains, including military, economic, technological, diplomatic, and information resources.[7] In the military domain, the main concern for the US is how to deter China and Russia from aggression in their respective regional theatres. This requires a robust military posture; between 2018 and 2019, US defence spending saw its largest increase in ten years.[8]

Some of the changes seen or announced in US military posture in later years could be signs of a long-term shift towards more of a strategy of offshore balancing and away from the strategy of forward presence, which has been dominant since the Korean War.[9] The use of rotational forces rather than permanently stationed troops, the Pentagon's new doctrine of Dynamic Force Employment, the Marine Corps' shift towards an island-hopping role in the Pacific, and the increased use of strategic bombers for geopolitical signalling, all point in that direction. If so, it would mean that the US could take more of a "pick-and-chose" approach to overseas engagements, as Britain did in the 19th century, and not commit itself beforehand.[10]

Although China is by far the second largest military spender, its rising military power does not yet represent a global challenge to the US. However, China's construction of artificial islands in the South China Sea and its military deployments there signal a strengthened regional military posture in East Asia. Concomitantly, China is steadily expanding its influence and leverage over neighbouring states and

2 Layne, Christopher, 'The US-Chinese power shift and the end of the Pax Americana', *International Affairs,* vol. 94, no. 1, 2018: p. 89–11; Mori, Satoru, 'US-China: A new consensus for strategic competition in Washington', *The Diplomat*, 30 January 2019; Rossbach, Niklas H., *Whither transatlantic security? Values, interests, and the future of US-European relations,* FOI-R--4869--SE (Stockholm: Swedish Defence Research Agency – FOI, December 2019). If GDP is measured on the basis of purchasing power parities, instead of ordinary market exchange rates, China's GDP has, according to some estimates, already exceeded that of the US, while other estimates hold that it will do so in the near future. See International Monetary Fund, *World Economic Outlook databases.*

3 United States, Department of Defense, *Summary of the 2018 National Defense Strategy of the United States of America – Sharpening the American military's competitive edge,* p. 2; See also United States, Department of Defense, *The Department of Defense Indo-Pacific strategy report: Preparedness, partnerships, and promoting a networked region*, 1 June 2019.

4 LaGrone, Sam, 'Work: Sixty percent of U.S. Navy and Air Force will be based in Pacific by 2020', *USNI News*, 30 September 2014.

5 United States, White House, *National Security Strategy of the United States of America*, December 2017; United States, *Summary of the 2018 National Defense Strategy*.

6 United States, *Summary of the 2018 National Defense Strategy,* p. 1.

7 Ibid., p. 4.

8 Béraud-Sudreau, Lucie, 'Global defence spending: The United States widens the gap', *Military Balance Blog*, 14 February 2020.

9 Forward presence here means a leading role for the US and firm security guarantees to allies, underpinned by the deployment of US troops on the territory of threatened allies. Offshore balancing would entail a more subdued role for the US and more ambiguous or no alliance commitments, with smaller military forces deployed and no troops in harm's way, but still with a swing force that could be employed in key overseas regions if warranted.

10 Influential American thinkers advocate the need for a more flexible US global approach in order to prevent US military capabilities from overstretching. See for example Allison, Graham, 'The new spheres of influence: Sharing the globe with other Great Powers', *Foreign Affairs*, March/April 2020.

beyond through massive trade, infrastructure, and investment programs, as well as an unprecedented amount of state loans gathered under the so-called Belt and Road initiative. Institutionally, it has created its own Asian Infrastructure Investment Bank, as a competitor to Western-led financial institutions such as the International Monetary Fund (IMF) and the World Bank. Leadership over an Asian community is the key building block in China's pursuit of advancing its rules of the game on a global scale. To this end, China pursues a hierarchical diplomacy, which radiates from the Chinese centre to cover countries in the periphery.[11] Unlike Western governments and organisations, which often make their engagement conditional on issues related to human rights and democracy, China offers a pragmatic bilateral approach to cooperation, to the delight of many non-democratic recipients. Thus, China's attempts to re-shape international rules and arrangements cover a broad spectrum, including economics and finance, security, international law, and norm development.[12]

To meet the challenge from China and other strategic rivals, the Trump administration has advanced a national security strategy labelled "America First". The strategy rests on four pillars: protecting the homeland, promoting economic prosperity, preserving peace through strength, and advancing American influence.[13] In practice, the America First strategy takes a step back from rules-based multilateralism towards bilateral transactionalism based on specific reciprocity.[14] The transaction-oriented foreign policy approach pursued by Trump is perceived as a necessary response in a world where America's major competitors have joined "the liberal international order only to undermine it from within".[15] Concrete examples of the latter include China's abuse of multilateral institutions, such as the World Health Organization (WHO) and the World Trade Organization (WTO), and its disrespect of international law in Hong Kong and Xinjiang, as well as Russia's undermining of both international law, in Crimea, and bi- and multilateral arms control agreements, most notably the Intermediate-Range Nuclear Forces Treaty (INF Treaty). In addition, the Trump administration was frustrated by what it perceived as the EU's unfair economic competition in some fields. Taken together, this has spurred the Trump administration to turn away from multilateralism. The question is whether this turn in policy represents a deeper readjustment of US foreign policy or whether it will be reversed under the Biden administration.

European dilemmas and challenges

The movement away from the rules-based international order, the fierce competition between the US and China, and the shift towards transactional foreign policy have led to calls for the EU becoming a geopolitical actor and learning to talk the language of power.[16] The EU has traditionally used enlargement, the neighbourhood policy, trade, development cooperation, and international agreements to further its interests and spread the EU model. However, the changing geopolitical landscape has turned previous partners into strategic rivals or competitors. Policies and instruments aimed at promoting convergence and increased cooperation may be proving to be inadequate in halting or deterring a negative development. Russia and China increasingly use mutual dependencies in trade, energy, finance, and technological development to influence and split the EU member states. Therefore, many argue that the EU should promote its role

11 Nordin, Astrid H. M. and Weissmann, Mikael, 'Will Trump make China great again? The Belt and Road initiative and international order', *International Affairs*, vol. 94, no. 2, 2018: p. 231–249.

12 Lee, Pak K., Heritage, Anisa and Mao, Zhouchen, 'Contesting liberal internationalism: China's renegotiations of world order', *Cambridge Review of International Affairs*, vol. 33, no. 1, 2020: p. 52–60.

13 United States, *National Security Strategy.*

14 Kuusik, Piret, *Through the looking glass: The Nordic-Baltic region and the changing role of the United States* (Tallinn: International Centre for Defence and Security, June 2020), p. 1.

15 Anton, Michael, 'The Trump Doctrine: An insider explains the president's foreign policy', *Foreign Policy,* Spring 2019.

16 Bayer, Lily, 'Meet von der Leyen's "Geopolitical Commission"', *Politico*, 4 December 2019; and Borrell, Josep, 'Embracing Europe's power', *Project Syndicate*, 8 February 2020.

as a geo-economic actor and use the common currency, trade, technological advances, and regulation to further its interests.[17]

The question is whether the EU should seek an independent role in the US-China rivalry or align with America in its confrontation with China. The American turn towards containing China is likely to entail growing demands from Washington on its European allies to actively participate in this effort. The signs are already there, in terms of pressure to reconsider agreements with China, and in generating military capabilities for the Indo-Pacific region, or to at least free up American resources by taking a larger responsibility for European defence. This factor will likely become even more prominent in addressing the fallout from the Covid-19 pandemic.[18] While stressing the need to maintain cooperation with China in certain fields, many European countries have begun to share US concerns over Chinese influence in several sectors, including control over supply chains, critical infrastructure, and telecommunication networks. France, Germany and the UK have recently adopted strategies to strengthen multilateral ties in the Indo-Pacific region and signalled an enhanced military presence to ensure freedom of navigation at sea.[19] This may indicate the emergence of a more unified US-EU position on China, similar to the transatlantic agreement on upholding economic sanctions against Russia for its aggression in Eastern Ukraine.

For the smaller countries in Northern Europe, a rules-based international order, backed up by the US, and with a strong role for multilateral institutions, has been particularly beneficial. It has increased their access to global policymaking, far beyond what their size would grant them in a world otherwise dictated by power politics and competing spheres of influence. Consequently, the countries in Northern Europe have begun to adapt to the changing security landscape by seeking assurances from larger states, particularly the US, but also from the major European powers. Enhanced Nordic-Baltic cooperation is furthermore promoted as a way to enhance the collective weight of the countries in the region at a time when size is becoming increasingly important for making one's voice heard.[20] Northern Europe and the Baltic Sea region form a strategic whole, with the security of one state affecting the security of others. Each country in the region therefore has an interest in ensuring that the other states have freedom of manoeuvre to make choices about their own security and that they can defend themselves.

2.2 Responses to the Russian threat

Since the end of the Cold War, the European security architecture has consisted of a patchwork of organisations and agreements seeking to promote cooperative security between the West and Russia. A central component is the Helsinki Final Act, signed already in 1975, laying the foundation for the Organisation for Security and Cooperation in Europe (OSCE). In 1990, a second major step was taken with the adoption of the Charter of Paris for a New Europe (Paris Charter) as well as the Treaty on Conventional Armed Forces in Europe (CFE Treaty) and the Vienna Document on Confidence- and Security-Building Measures (Vienna Document). Regarding nuclear weapons, the INF Treaty, signed in 1987, and the Strategic Arms Reduction Treaty (START I), signed in 1991, contributed further to stability in Europe.

Since the mid-2000s, Europe's security architecture has eroded in steps. Russia has twice – in 2008 and 2014 – invaded a sovereign neighbour. Russia's actions have meant that, instead of cooperative security, a new political-military climate, filled with distrust, has taken hold in Europe. Russia is

17 Schwarzer, Daniela, 'Weaponizing the economy', *Berlin Policy Journal*, January/February 2020; and Lehne, Stefan, *How the EU can survive in a geopolitical age*, (Carnegie Europe, February 2020).

18 Barrie, Douglas et al., *European defence policy in an era of renewed Great-Power competition* (London: The International Institute for Strategic Studies, and Hanns Seidel Foundation, 2020); and Lawrence, Tony (ed.), *What next for NATO? Views from the north-east flank on alliance adaptation* (Tallinn: International Centre for Defence and Security, June 2020).

19 Grare, Frederic, ' France, the Other Indo-Pacific Power', *Carnegie Endowment,* 21 October 2020; Grare, Frederic. 'Germany's new approach to the Indo-Pacific', *IP Quarterly*, 16 October 2020; and Bundesministerium der Verteidigung, 'Speech by Federal Minister of Defence at the Bundeswehr University Munich', 7 November 2019; Allison, George, 'British Carrier Strike Group to deploy to Pacific next year', *UK Defence Journal*, 20 October 2020.

20 Kuusik, *Through the looking glass,* p. 6.

actively choosing not to implement the existing agreements for European security, some on the grounds that they do not support Russian security interests. Consequently, the OSCE has become a forum for a geopolitical standoff between Russia and the West, rather than security cooperation, and the NATO-Russia Council is defunct. The erosion of strategic stability and arms control further fuel distrust and insecurity. Russia suspended its participation in the CFE Treaty in 2007. The US withdrew from the INF Treaty in 2019 as well as the Open Skies Treaty in 2020; both US withdrawals were due to Russia's non-compliance with treaty provisions. In addition, there are serious doubts about the prospects for a renewal of START, the last remaining strategic arms control agreement between the US and Russia, in 2021.

Following Russia's military actions in Ukraine, NATO allies found common ground in describing Moscow as a challenge to the Alliance and as a source of regional instability. Moreover, since 2014, the US and the EU have maintained economic sanctions against Russia for its failure to live up to the Minsk agreements and end hostilities in Eastern Ukraine. However, in recent years signs of cracks have emerged in Western policy against Russia. Some states remain gravely concerned by Russia's behaviour and intentions. Other states see their own security interests as less affected by Moscow's policies, and are therefore more willing to consider re-engaging Russia. On the European level, assessments of the Russian threat are roughly divided between countries more in Europe's north and east and those more towards the south and west, with a greater geographic distance from Russia – notably Italy, Greece, Spain and France. The latter identify terrorism and migration as the major security threats, and wish to see NATO and the EU adopt a focussed approach in handling them. For countries in Northern and Eastern Europe, Russia remains the major threat. Consequently, in order to address threats in all directions and maintain Alliance solidarity, NATO has adopted a 360-degree approach to security.

Russian security goals

In Russia's view, the rules-based European security order does not represent cooperative and mutually beneficial relations among states, but is rigged in favour of Euro-Atlantic states and organisations under American leadership. Russia continually strives to replace this order with a multipolar world order, where Russia is one of the poles.[21] As a lever for its international power ambitions, Russia seeks to establish a sphere of privileged interests in its "near broad", which would provide Moscow a buffer zone between it and NATO. In this context, Russia's annexation of Crimea and military aggression in eastern Ukraine turned out to be a watershed in European security. These actions demonstrated that Russia was prepared to use military force to prevent any further NATO and EU enlargement eastward, which the Kremlin sees as coming at the expense of Russia's military security, i.e. its power and status. There is also a strong connection between Russia's domestic security and its assertive foreign policy. The current political leadership is particularly concerned with maintaining domestic stability and the survival of the regime. It therefore sees upheavals or colour revolutions in its near abroad as a direct threat to Russia's own internal stability.[22]

Although the Russian system projects an overall image of stability, it is inherently fragile since it ultimately rests on one person's ability to maintain order. At the same time, there are signs of growing social resentment over political, economic, and other issues. President Vladimir Putin's popularity figures, although still high, have been on the wane in recent years, and protests have been increasing, especially in certain regions, but also in Moscow. The economy is under stress, and the real disposable income of households has been decreasing for several

21 Vendil Pallin, Carolina, 'Russian interests', in Persson, Gudrun (ed.), *Conventional arms control: A way forward or wishful thinking?* FOI-R--4586--SE (Stockholm: Swedish Defence Research Agency – FOI, 2018), p. 28–38.

22 Hedenskog, Jakob and Persson, Gudrun, 'Russian Security Policy', in Westerlund, Fredrik and Oxenstierna, Susanne (eds.), *Russian military capability in a ten-year perspective – 2019,* FOI-R--4758--SE (Stockholm: Swedish Defence Research Agency – FOI 2019), p. 79–96.

consecutive years.[23] The unfavourable demographic development means that the current population is kept from decline largely by immigration, and by the higher birth rates of non-Russian peoples.[24] Thus, in spite of Russia's high international profile and military prowess, several fundamental domestic factors raise questions regarding the ability to maintain such power over the long term.

To undermine the West, Russian security policy integrates military as well as non-military means, where the latter are understood as a critical part of current and future conflicts. Military aggression is but one component in Russia's campaign against the West. Other tried and tested practices include cyber activities, interfering in national elections, supporting extremist political movements, and actions of the Russian security services abroad, such as the nerve agent attack that targeted the former double agent Sergei Skripal, in Salisbury, UK, in 2018. Ultimately, however, Russian doctrines ascribe the military instrument to the role of guarantor in ensuring the restoration of Russia's great power status.[25]

US military engagement in Europe

In the European theatre, the US has essentially been a status quo power, guarding the post-Cold War security order and providing the means of protecting it, through NATO and a continued American military posture on the continent. US strategic documents identify Russia as having a revisionist foreign policy agenda that is backed by growing military capabilities. This makes Russia a strategic competitor threatening US interests and those of its allies and partners.[26] Hence, the US military presence and the deployment of specific capabilities in the Baltic states and Poland seek to deter Russia from aggression against NATO members along the eastern flank.

The US continues to field both permanent and rotational forces in Europe. US ground forces in Europe roughly correspond to a mixed division, including three kinds of brigades: a light, a motorised, and a mechanised. The US has six permanent air fighter squadrons, but few permanently based naval forces, in Europe. Outside the region is a pool of military assets that could be used for reinforcements.[27]

In response to Russia's aggression against Ukraine, the Obama administration launched the European Reassurance Initiative, later renamed the European Deterrence Initiative (EDI). In its first three years, about USD 5.2 billion were allocated to building up the American military presence, including exercises and support to partners, in Europe. The Trump administration, in turn, tripled the funding of the EDI for the period 2017 to 2019, to a total of USD 17.2 billion. On an annual basis, funding peaked at more than USD 6.5 billion, in 2019. However, for 2020, the level was cut by 10 per cent, to USD 5.9 billion. The defence budget proposal for 2021, presented in February 2020, proposed a further 25 percent cut, to USD 4.5 billion.[28] Given America's growing frustration with the lagging defence spending of European countries, the US withdrawal of funds from the EDI may be interpreted as a message to the European allies that they need to accept a larger responsibility in deterring Russia. An equally strong message of how European allies should contribute more to NATO was communicated in June 2020, when Trump approved the withdrawal of 9,500 American troops, reducing their number from 34,500 to 25,000, from Germany.[29] Even if the Biden administration will not follow through on these plans, reductions in spending and announcements of troop withdrawals have fuelled uncertainties in Europe in general and Northern Europe in particular. Overall, such developments point in the direction of European countries having to prepare for and adapt to a situation where the US is less permanently engaged in Europe.

23 Ibid.

24 Foltynova, Krystyna, 'Migrants welcome: Is Russia trying to solve its demographic crisis by attracting foreigners?', *RFE/RL,* 19 June 2020.

25 Hedenskog and Persson, 'Russian Security Policy'.

26 United States, *Summary of the 2018 National Defense Strategy,* p. 2.

27 Ottosson, Björn, 'United States', in Hagström Frisell, Eva and Pallin, Krister (eds), *Western military capability in Northern Europe 2020 – Part II National Capabilities. FOI-R--5013--SE* (Stockholm: Swedish Defence Research Agency – FOI).

28 Mehta, Aaron, 'European Defense Initiative funding drops in defense budget request', *Defense News*, 10 February 2020.

29 'Trump approves plan to withdraw 9,500 US troops from Germany', *BBC News,* 1 July 2020.

European reactions

In 2019, French President Emmanuel Macron called for a revised European approach to Russia. To stifle a closer partnership between China and Russia, he argued that Europe needs to embark upon a process of rebuilding confidence and trust with Russia, for the ultimate purpose of reincorporating Moscow in a revamped European security architecture. Moreover, according to Macron, NATO's common enemy should not be Russia, but terrorism.[30] Macron has also initiated a strategic dialogue between France and Russia on European security without much coordination with allies and partners.

France's search for a strategic deal with Russia, in order to shift the main focus of European defence towards crisis management in the South, dovetails with France's military posture, which is primarily oriented towards Africa. Both Russia and China have increased their presence in Africa. According to Macron, Europe needs to strengthen its strategic autonomy rather than continue to be militarily dependent on the US.[31] To this end, and to develop a European strategic culture, Macron has even offered to launch a strategic dialogue on the role of the French nuclear deterrent in Europe's collective security. Thus, from a national perspective, Macron harbours a vision of France as an independent balancing force in international security.

Since 2014, Germany has tried to handle the crisis with Russia through a combination of deterrence and dialogue. On the one hand, as long as Russia violates international law in Ukraine, Germany stands behind economic sanctions and the rotational military presence in the Baltic states and Poland in the framework of NATO's enhanced Forward Presence (eFP). On the other hand, Germany's Ministry of Foreign Affairs has spearheaded the effort to facilitate a dialogue with Russia regarding conventional arms control in Europe.[32] In the 2016 White Book for security and defence policy, Germany signalled a willingness to take on a bigger responsibility for European security. Since then, however, this aim has been restrained by a divided parliamentary landscape and the difficulties in forming a coalition government, as well as Angela Merkel's announcement that she will step down as chancellor in 2021. While Germany remains a strong believer in dialogue and cooperation with Russia, it has nonetheless distanced itself from Macron's gambit on a rapprochement with Russia. Germany furthermore wants to maintain strong transatlantic security ties. Indeed, to some extent, the tables are turning within Europe, as the German position increasingly emphasises that the situation of its neighbours in Central and Eastern Europe must be taken into consideration in European policy towards Russia.[33] Relations between European countries and Russia reached a new low point due to the poisoning, in August 2020, of Russian opposition leader Alexei Navalny.

Meanwhile, the protracted process of the United Kingdom's exit from the EU has consumed almost all of Britain's political energy since 2016. As a result, security and defence policy issues have largely been put on hold. There have been attempts to compensate for Brexit by promoting a stronger global role, but, thus far, the vision of a "Global Britain" has largely resulted in a few symbolic initiatives, such as a naval support facility in Bahrain. The 2015 security and defence review emphasised the need to gear the armed forces towards great power competition rather than terrorism, with Russia identified as the most urgent state-based threat. To maintain its status, the UK's twin priorities are to preserve its special relationship with the US and maintain its prominent position in NATO.[34]

The smaller states in Northern Europe and the Baltic region as well as Poland build their military capabilities in response to a potential Russian threat. In particular, Poland and the Baltic states perceive Russia's aggressive behaviour, most notably

30 'Macron: NATO's Enemy Is Terrorism, Not Russia Or China', *RFE/RL*, November 28, 2019.

31 'The French president's interview with The Economist', *The Economist*, 7 November, 2019.

32 Persson, Gudrun (ed.). *Conventional arms control: A way forward or wishful thinking?* FOI-R--4586--SE (Stockholm: Swedish Defence Research Agency – FOI, 2018).

33 Hagström Frisell, Eva, *Tysk säkerhetspolitik i vänteläge,* FOI Memo 7023 (Stockholm: Swedish Defence Research Agency – FOI, February 2020).

34 Rossbach, Niklas H. and Engvall, Johan, *Säkerhetspolitiska konsekvenser av Brexit – En analys av Storbritanniens militära förmåga och framtid som stormakt*, FOI Memo 6560 (Stockholm: Swedish Defence Research Agency – FOI, December 2018).

the modernisation and activities of its military, as a real threat to their sovereignty. They have all formulated national policies to strengthen their military capabilities and push NATO to have a strong and unrestricted military presence in the region. Deeply concerned by Russian intentions and from a position of military inferiority and geographical exposure, the Baltic countries primarily fear any restrictions on their ability to receive outside reinforcements in the event of crisis. For the Baltic countries, US engagement in Northeast Europe is an existential matter, which makes them especially inclined to strengthen their relations with the US.

In the Nordic region, NATO membership constitutes the main pillar of security and defence policy for Denmark and Norway. Both countries stress the need to combine NATO territorial defence and deterrence at home with out-of-area crisis management operations, such as counterterrorism and dealing with migrant and refugee crises. They further note that the Russian strategic challenge to NATO has implications for their own security and stability. For Denmark, Russia's activities in the Arctic and the Baltic Sea region as well as its information operations against Western societies are of particular concern.[35] For Norway, the threat is more direct, as Russian activities, including information operations, in the strategically important high north remain the major national security concern.[36]

While Finland and Sweden are militarily non-aligned, they worry about the Russian threat, and seek to strengthen their military co-operation with both the US and other NATO partners. For historical and geographical reasons, this threat is much more prevalent in Finland. Moreover, the Finnish Defence Forces have over time maintained territorial defence as their main task and are following a long-term modernisation plan.[37] Despite their non-aligned status, Finland and Sweden do not differ from the other Nordic countries, or the Baltic countries, in the sense that a strong transatlantic relationship is profoundly important for maintaining security in Northern Europe. The deepening bilateral defence cooperation between Finland and Sweden is anchored in this reality.[38]

2.3 NATO and the return to collective defence

Since its creation in 1949, NATO has embodied the transatlantic link, tying the security of North America to that of Europe. Traditionally, the Alliance's most central task was collective defence, ultimately guaranteed by the nuclear deterrent. However, after the end of the Cold War, collective defence became less of an operational priority for NATO, which focussed instead on out-of-area crisis management and cooperative security in Europe. The peace dividend after the collapse of the Soviet Union allowed countries in Western Europe to drastically reduce defence spending and cut their armed forces. While this was less of a problem during the optimistic 1990s and early 2000s, in the past decade it has caused greater friction between the US and its European allies. The US has been increasingly vocal in its critique of allies for not allocating enough money to their own defence, thereby "freeriding" on American taxpayers for their security. Moreover, decades of focussing on counterinsurgency and stability operations in the Balkans, Iraq and Afghanistan have left their mark. There is little capability for high-end warfare within the Alliance, and, in general, understanding concerning Article 5, deterrence, and defence. This pertains to NATO, as such, as well as to most of its members, with the US as the most notable exception.

Furthermore, in the late 1990s, when Russia was no longer considered a threat and former Warsaw Pact countries requested to be admitted to NATO, the Alliance made a decision not to replicate the kind of forward defence posture it had earlier

35 Forsvarets efterretningstjeneste, *Efterretningsmæssig risikovurdering 2019 – En aktuel vurdering af forhold I udlandet af betydning for Danmarks sikkerhed.*

36 Halvorsen, Audun, 'Sikkerhetspolitikk og stormaktsintresser i Arktis', 28 January 2019; and Nilsen, Thomas, 'Russian influence ops seek to fuel discord between Arctic Norway and Oslo, Norwegian intelligence service says', *Barents Observer,* 10 February 2020.

37 Jonsson, Michael, 'Finland', in Hagström Frisell, Eva and Pallin, Krister (eds), *Western military capability in Northern Europe 2020 – Part II National capabilities. FOI-R--5013--SE* (Stockholm: Swedish Defence Research Agency – FOI, 2021).

38 Engvall, Johan, Hagström Frisell, Eva och Lindström, Madelene, *Nordiskt operativt försvarssamarbete – Nuläge och framtida utvecklingsmöjligheter,* FOI-R--4628--SE (Stockholm: Swedish Defence Research Agency – FOI, 2018).

established in West Germany. In the NATO-Russia Founding Act, it was stated that "the Alliance will carry out its collective defence and other missions by ensuring the necessary interoperability, integration, and capability for reinforcement rather than by additional permanent stationing of substantial combat forces". In turn, "Russia will exercise similar restraint in its conventional force deployments in Europe."[39] While NATO's commitment was not linked to the territory of new members – unlike the commitment not to station nuclear weapons, which expressly applied only to them – some members of the Alliance have seen it as ruling out a substantial allied military presence in the East. [40] As the Alliance makes decisions by consensus, any solutions seriously considered for shoring up deterrence and defence on what is now called the eastern flank tend to have the character of workaround solutions, so as to continue to adhere to the principles of the NATO-Russia Founding Act.[41]

Recent initiatives

Since 2014, NATO has undertaken the biggest upgrade of its collective defence since the Cold War. The contours of a new collective defence strategy have evolved in steps.[42] The first step was taken at the NATO Wales Summit, in 2014, when the Allies agreed to adopt a Readiness Action Plan (RAP) in order to respond swiftly and quickly to security challenges from the "East" and the "South". In a second step, taken during the 2016 Warsaw Summit, Allies confirmed that NATO's main responsibility is "to protect and defend our territory and our populations against attack".[43] To strengthen its defence posture against Russia, the Alliance decided to establish an enhanced Forward Presence (eFP), consisting of four rotational, multinational, battalion-sized battlegroups, in the Baltic states and Poland.[44] Essentially, the battlegroups are not designed to defend against a large-scale attack, but as a tripwire triggering broader allied involvement in case of a Russian military attack. A third step was taken in 2018, at the Brussels Summit, with the launching of a number of measures to enhance NATO's responsiveness, readiness, and reinforcement. The NATO Readiness Initiative (NRI) – dubbed "the Four Thirties" – requires the European NATO members to have 30 mechanised battalions, 30 air squadrons, and 30 combat vessels ready within 30 days or less.

In addition, the Alliance continues to develop key military capabilities, such as joint intelligence, surveillance, and reconnaissance. NATO's collective defence also relies on standing forces that are on active duty on a permanent basis. These include standing maritime forces; air policing missions; and an integrated air defence system, which includes the Alliance's ballistic missile defence system.

Furthermore, NATO declaratory policy emphasises the deterrence role of nuclear weapons. As formulated in the 2018 Brussels Summit Declaration:

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.[45]

39 NATO, *Founding Act on mutual relations, cooperation and security between NATO and the Russian Federation signed in Paris, France, 27 May 1997.*

40 For the actual content and background of this commitment, see Alberque, William, '*Substantial Combat Forces*' *in the context of NATO-Russia relations,* Research Paper No. 131 (Rome: NATO Defence College, 2016).

41 See for example Vershbow, Alexander, and Breedlove, Philip, *Permanent deterrence: Enhancements to the US military presence in north central Europe* (Washington, DC: Atlantic Council, 2019).

42 For an overview, see Hagström Frisell, Eva (ed.), *Deterrence by reinforcement: The strengths and weaknesses of NATO's evolving defence strategy*, FOI-R--4843--SE (Stockholm: Swedish Defence Research Agency – FOI, November 2019).

43 NATO, *Warsaw Summit Communiqué,* paragraph 6.

44 Ibid., paragraph 40.

45 NATO, *Brussels Summit Declaration,* 11 July 2018, Paragraph 36.

The strengthening of NATO's defence on the eastern flank is designed to deter Russia from a possible military incursion into the Baltic states or Poland. The measures adopted, from the initial reassurance of eastern allies to building a capability for deterrence, have highlighted a number of key factors. First, the US Department of Defense has been the prime driving force behind many initiatives, for example the NRI, thereby highlighting that the role of the US is crucial not only in providing the resources, but equally as a driver of initiatives within the Alliance. Second, regarding military mobility, the EU and NATO have initiated unprecedented practical cooperation to reduce infrastructural and administrative barriers to moving military forces in Europe. Finally, since Russia's intervention in Ukraine, the Alliance has intensified its program of multinational exercises as part of the collective defence efforts.[46]

Challenges to NATO deterrence

Since 2014, NATO has taken important steps to bolster its deterrence posture in Europe. However, several challenges remain. A first issue relates to whether the size and scope of the current deterrence posture in the Baltic region in the form of the eFP battlegroups is sufficient in the light of Russia's regional posture. Several studies focussing on possible scenarios in the Baltic region note the need for a larger allied presence in the Baltic states.[47] The decision to opt for a rotational rather than permanent presence might leave room for ambiguity, and stems from compromises made between building credible deterrence, on the one hand, and neither provoking Russia nor challenging the interpretation that some Allies have of the NATO-Russia Founding Act, on the other.[48] Moreover, while forming battlegroups on a multinational basis serves the valuable purpose of signalling solidarity, this might come at the expense of military effectiveness.

A second deterrence challenge concerns measuring a response that covers the broad spectrum of Russian subversive activities. From this perspective, the military threat is but one aspect to consider. According to some experts, the most likely security challenges confronting states in Northern Europe are various grey zone threats, such as cyberattacks against critical infrastructure, Russian attempts at inciting ethno-political discord in the Baltic states, or disinformation campaigns, none of which can be handled by the eFP battlegroups.[49] The multifaceted nature of Russian aggression, thus, calls for a multidimensional defence approach. While responding to many of these aspects of destabilisation primarily falls on the member states or the EU rather than on NATO, Allies have taken some common steps in this direction. For example, NATO's operational domains have expanded beyond the traditional land, air, and sea domains, and have now grown to include the domains of both cyber defence and space.[50]

A third contentious issue pertains to the role of nuclear weapons. During the Cold War, the US deployed a large number of tactical nuclear weapons in Europe and integrated those in conventional defence planning. After the end of the Cold War, the US reduced its number of nuclear weapons in Europe by 90 per cent. The shift to out-of-area operations following 9/11 further contributed to pushing nuclear deterrence into the background. Meanwhile, in recent years Russia has modernised large parts of its nuclear arsenal and deployed new land-based nuclear missiles in Europe. In response, the Alliance is discussing steps to update and strengthen its conventional and nuclear deterrent,

46 Aronsson, Albin and Ottosson, Björn, V*ästlig militär övningsverksamhet 2014-2019: Anpassning, utveckling och framsteg*, FOI-R--4875--SE (Stockholm: Swedish Defence Research Agency – FOI, 2020).

47 Brauss, Heinrich, Stoicescu, Kalev and Lawrence, Tony, *Capability and resolve: Deterrence, security and stability in the Baltic region* (Tallinn: International Centre for Defence and Security, 2020); Shlapak, David, A. and Johnson, Michael W., *Reinforcing deterrence on NATO's eastern flank: Wargaming the defence of the Baltics,* (RAND, 2016).

48 Hagström Frisell, *Deterrence by reinforcement*.

49 Deni, John R., 'NATO's presence in the east: Necessary but still not sufficient', *War on the Rocks,* 27 June, 2018.

50 Banks, Martin, 'NATO names space as an "operational domain," but without plans to weaponize it', *Defense News*, 20 November, 2019; Brent, Lara, 'NATO's role in cyberspace', *NATO Review,* 12 February 2019.

without mirroring Russian deployments.[51] As noted by NATO Secretary General Jens Stoltenberg: "While NATO views its own nuclear deterrent primarily as a political tool, Russia has firmly integrated its nuclear arsenal into its military strategy."[52]

A final major challenge, or uncertainty, plaguing the Alliance concerns its political cohesion. Some allies, primarily in Central and Eastern Europe, fear that Moscow is prepared to use military force to further redraw borders in Europe. According to this group of allies, there is room for more robust NATO deterrence measures against Russia. Other members of the Alliance – such as France, Germany, Italy, and other South European countries– take a more sceptical view of the degree to which Russia poses an immediate military threat to NATO, but nonetheless contribute to deterrence efforts in Eastern Europe in a display of solidarity. Leading politicians in these member states express resistance against expanding current deployments to secure the eastern flank, fearing that moving beyond the eFP would risk further increasing tensions with Russia. In these countries, there is some political understanding of Russia's perception of NATO eastward enlargement as being a threat.[53]

In sum, NATO has adopted several initiatives to enhance the security of its members and deter Russia. Political will and Alliance unity are prerequisites for maintaining momentum and for further strengthening collective defence. In this context, a key issue to manage within the Alliance is to strike a balance between assuring the protection of the Central and Eastern European members and heeding more cautious voices calling for restraint toward Russia. NATO cohesion is likely to be further tested in the years to come, in particular if the current difficult relationship with Russia not only remains, but, in terms of concrete Russian military aggression, does not escalate. In that event, the voices arguing for a restart in NATO-Russia relations may grow stronger. At the end of the day, NATO is a political alliance and, at the political level, distrust is growing.[54] It remains to be seen whether the process of reflection, launched in 2020 by its secretary general to strengthen NATO's political dimension, will, as many times before in NATO's 70-year history, be able to overcome current differences and ensure Alliance cohesion.

NATO military expenditures[55]

The US is by far the world's largest military spender, with close to 40 per cent of total global military expenditures. Its dominance is also apparent with regard to NATO, as the US alone spends more than twice the amount of all the other NATO members combined. After the end of the Cold War, US military spending decreased in the 1990s, but rose rapidly after 9/11, reaching a peak in 2010. Today, China is the second largest military spender in the world, accounting for about 14 per cent of total global military expenditures, which is only slightly lower than the share of all 29 non-US NATO allies. Chinese military spending has risen steadily, at an annual average rate of almost 9 per cent from 1992 to 2019. Russia's military spending decreased during the 1990s, but has increased steadily since Putin came to power. A difference between China and Russia is that the increases in Chinese military expenditures have been in line with China's rapid economic growth and constantly around 1.9 per cent of GDP. In contrast, Russia has increased its military expenditures more rapidly than its rate of growth. As a result, Russia's military expenditures rose from 2.7 per cent of GDP in 1998 to 5.5 per cent of GDP in 2016. Figure 2.1 shows the distribution of global military expenditures between the US, the rest of NATO, Russia, China, and the rest of the world, according to SIPRI calculations, in constant prices and based on market exchange rates.[56]

51 NATO, 'Press conference by NATO Secretary General Jens Stoltenberg following the meetings of NATO Defence Ministers', 17 June 2020.

52 Stoltenberg, Jens, 'Germany's support for nuclear sharing is vital to protect peace and freedom', 11 May 2020.

53 As for Germany, see Karnitschnig, Matthew, 'NATO's Germany problem', *Politico,* 17 August 2016. On different positions within the Alliance, see Gotkowska, Justyna, *NATO in transition,* OSW Commentary, 4 December 2019.

54 Lawrence, *What next for NATO?*

55 This section is partly based on Bergstrand, B-G, *Global Military Expenditures,* Working Document (Stockholm: Swedish Defence Research Agency – FOI, 25 September 2020).

56 For the SIPRI database and the methodology used, see SIPRI, *SIPRI Military expenditure database.*

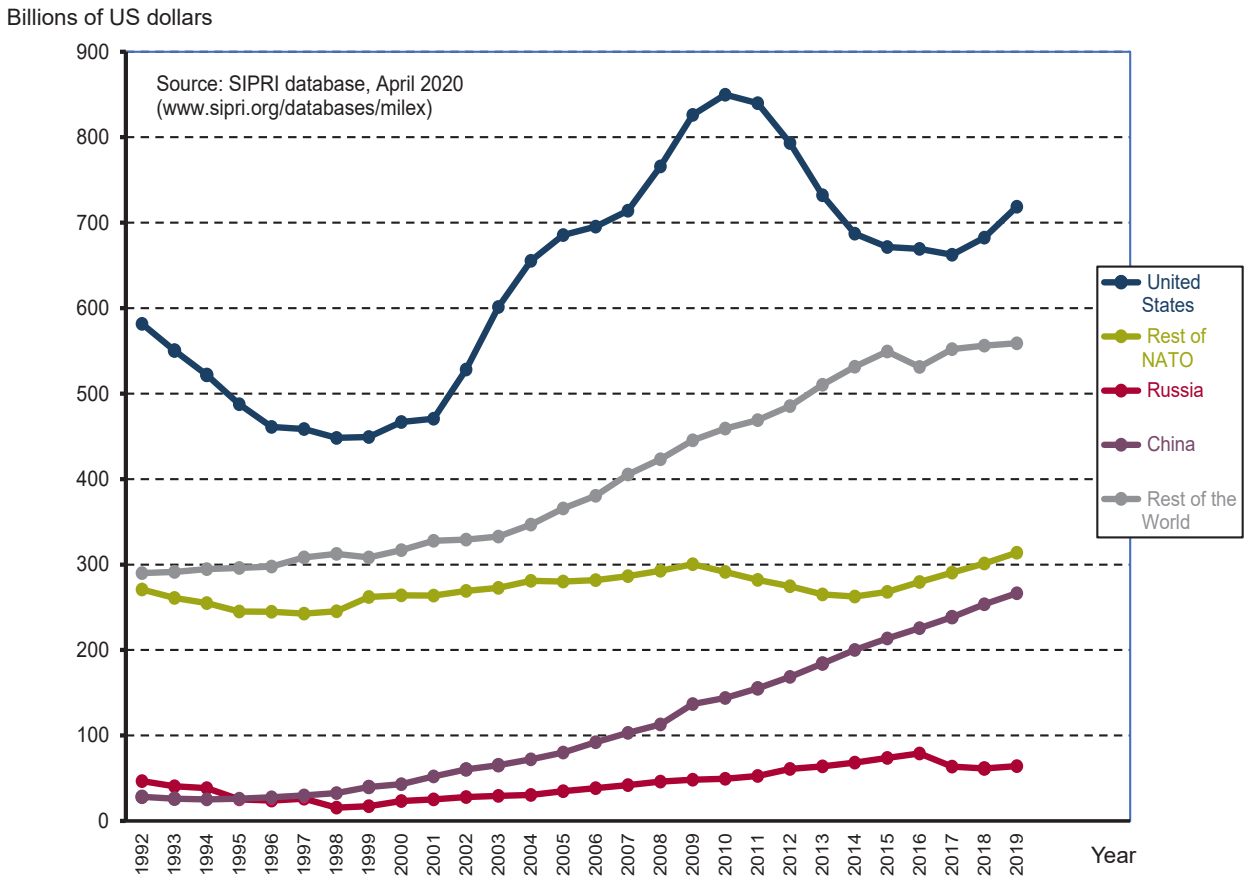

Figure 2.1 Military Expenditures: United States, Rest of NATO, Russia, China and Rest of World – Billions of US Dollars (*market rates*), 2018 prices

Source: Bergstrand, B-G, *Global Military Expenditures,* Working Document (Stockholm: Swedish Defence Research Agency – FOI, September 2020).

When international economic comparisons are made, it can always be debated whether calculations using market exchange rates may be misleading. Figure 2.2 shows the global military expenditures calculated with so called Purchasing Power Parities (PPPs) instead of market rates.[57] The amounts for the United States are the same in market dollars as in "international dollars", as are, roughly, the amounts for Western developed market economies. For Eastern European countries, including Russia, military spending figures will be about 2–2.5 times higher in international dollars than in market rate dollars, while for developing countries the figures will be about four times higher.

Since the Russian government exclusively procures armaments from domestic manufacturers in roubles and also spends more of its military expenditures on procurement than the US, it can therefore be argued that using market rates undervalues Russian spending and capabilities.[58] The position of the United States and the rest of NATO is thus less pronounced in Figure 2.2 than in Figure 2.1. Using market rates, US military spending is more than ten times larger than Russian military spen-

57 SIPRI only reports data using market exchange rates. In Figure 2, however, SIPRI's raw data have been recalculated using the PPPs reported by the IMF in its *World Economic Outlook database*. Several organisations calculate PPPs, and the IMF uses the term "international dollars" for the amounts calculated in this way.

58 Kofman, Michael and Connolly, Richard, 'Why Russian military expenditure is much higher than commonly understood (as is China's)', *War on the Rocks*, 16 December 2019.

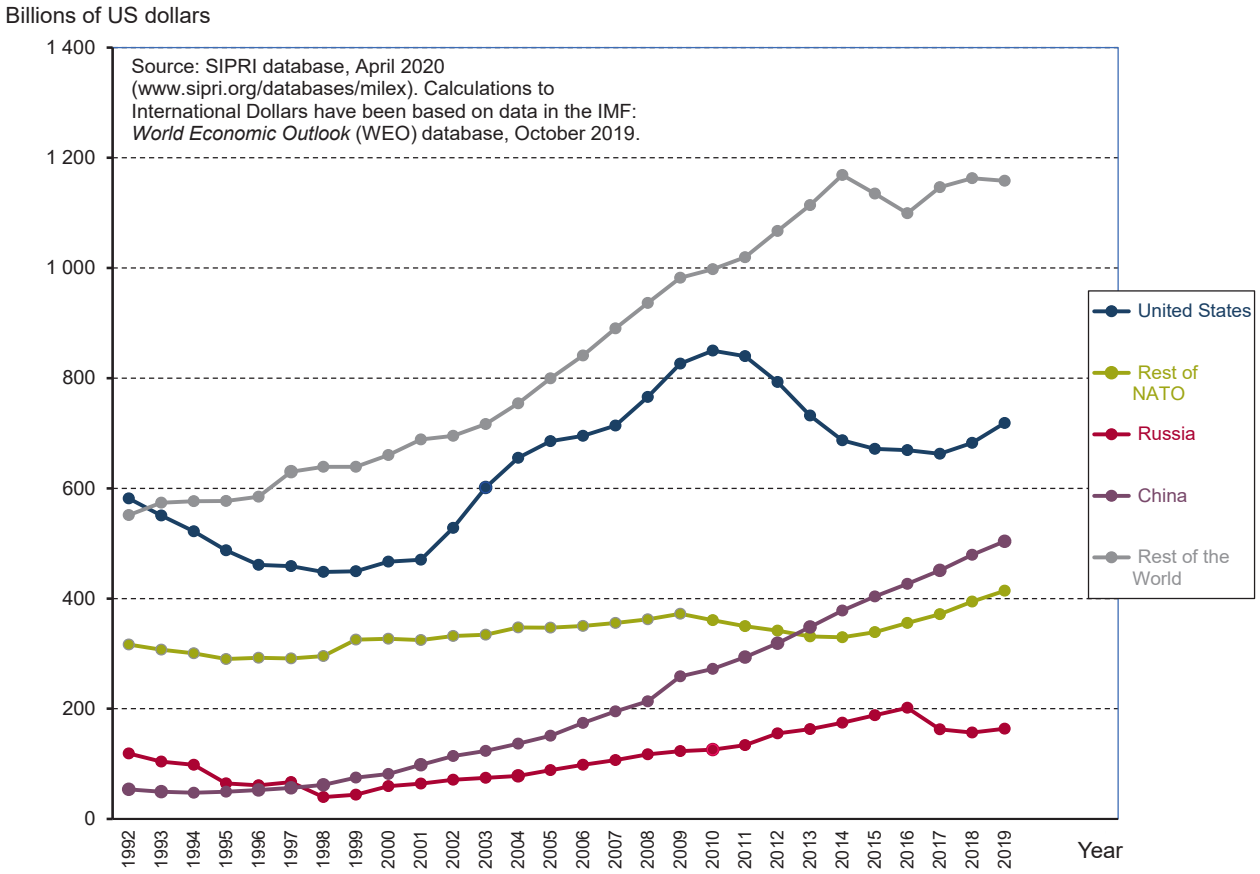

Figure 2.2 Military Expenditures: United States, Rest of NATO, Russia, China and Rest of World – Billions of International Dollars (*PPP*), 2018 prices

Source: Bergstrand, B-G, *Global Military Expenditures,* Working Document (Stockholm: Swedish Defence Research Agency – FOI, September 2020).

ding, though only about four times larger measured in international dollars. In addition, US military expenditures are intended to sustain force projection on a global level, while Russia's defence spending supports the country's military power projection in different regional strategic directions. In 2018, the estimated direct US expenses reserved for the defence of Europe amounted to USD 35.8 billion, or around 5.6 per cent of total US defence spending.[59] Similarly, the US outspends China by 2.7 times, when market rates are used, though only by 40 per cent in international dollars. Notably, current Chinese military expenditures are comparable to what the US spent in the early 2000s, before the build-up following 9/11, illustrating the US-China rivalry discussed above.

For many years, the US has urged its European allies to spend more on defence in order to share defence burdens more fairly. Already in 2006, NATO defence ministers agreed to commit to spending a minimum of 2 per cent of their GDP, respectively, on defence. The effects of the financial crisis of 2008, combined with a lack of political will, meant that the spending imbalance between the US and the other allies continued to widen. At NATO's Wales summit, in 2014, member states recommitted to the 2 per cent investment guideline by agreeing on a defence investment pledge, proclaiming that allies should move towards spending 2 per cent of their GDP on defence by 2024. Allies have recommitted to the pledge in subsequent meetings. Figure 2.3 shows military expenditures as a percentage of

59 Béraud-Sudreau, Lucie, 'On the up: Western defence spending in 2018', *Military Balance Blog*, 15 February 2019.

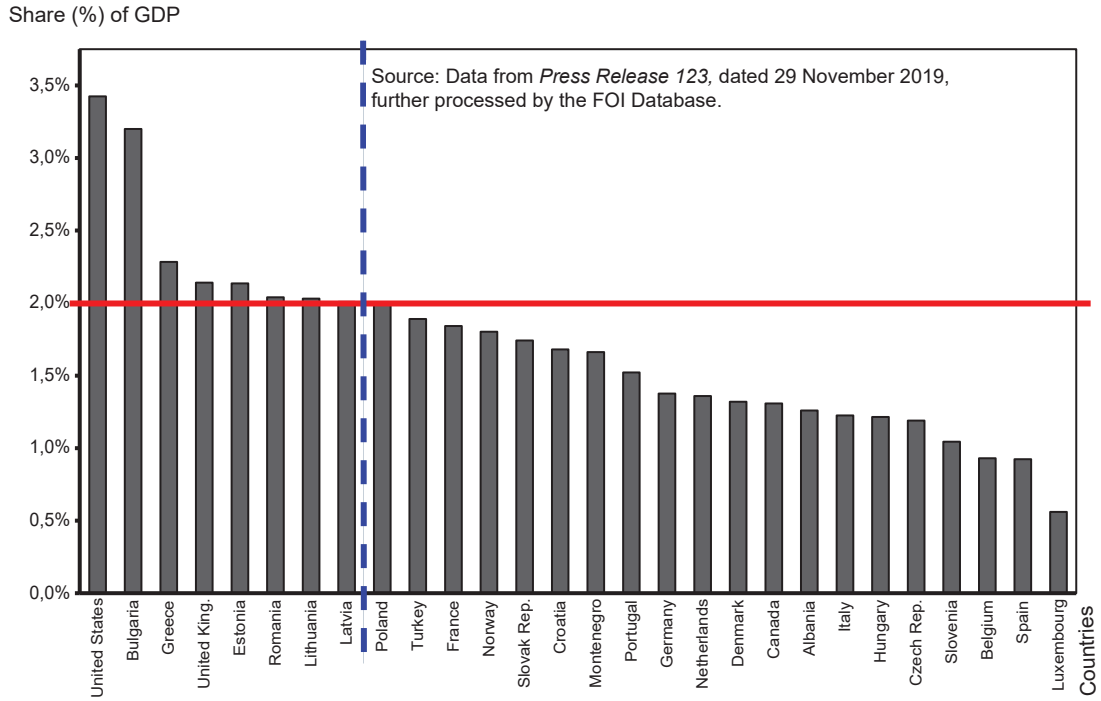

Figure 2.3 NATO Countries: Military expenditures as share (%) of GDP in 2019

Source: Bergstrand, B-G, *Global Military Expenditures,* Working Document (Stockholm: Swedish Defence Research Agency – FOI, September 2020).

NB: In 2019 Bulgaria purchased new fighter aircraft, thereby temporarily and rapidly increasing military expenditures this year.

GDP within NATO in 2019. Several countries have adopted policies in which they commit to raising their military expenditures in the coming years. In short, military expenditures in NATO countries are projected to rise in coming years, although not at the pace stipulated by NATO recommendations and decisions. The burden-sharing problem, thus, remains a major irritant to the US administration, clouding the transatlantic relationship.

In Europe, it is notable that all three Baltic countries as well as Poland have been spending approximately 2 per cent of GDP on defence in response to the fear of Russian aggression. The same trend applies to the Black Sea countries, Romania and Bulgaria, which have raised their military expenditures rapidly during recent years. Thus, they are all intent on playing their part in order to assure that they are worth defending.

All estimates, however, are increasingly uncertain pending the outcome of the coronavirus pandemic on both economic developments and defence spending.[60] It is too early at this stage to offer any predictions on what the sharp economic downturn of 2020 will mean for the allocation of resources for defence in future budgets. Suffice to say that the adoption of large financial stimulus packages in many countries, to support businesses, soften the economic decline and protect health care systems will increase budget deficits and raise national debts, suggesting that once the immediate crisis is over, economic policies will have to focus on tackling accumulating financial unbalances. The coronavirus pandemic has also elevated issues related to civil defence and civil emergency to the top of governments' priority lists. In the aftermath of the crisis, it is safe to assume that voices will be raised in favour of allocating resources to strengthen civil defence rather than military defence. Thus, in all likelihood, intra-state debates regarding military expenditures versus other priorities will be intensified.

60 Bergstrand, B-G, *Sammanställningar baserade på den senaste World Economic Outlook (WEO) om hur coronakrisen påverkar den ekonomiska tillväxten i 23 länder,* Working Document (Stockholm: Swedish Defence Research Agency–FOI, 20 April 2020).

2.4 EU and deepened defence cooperation

The rapidly changing security landscape has prompted a transformation of the EU's role in security and defence. After the launch of the European Security and Defence Policy (ESDP), in 1999, the EU's efforts concentrated on military and civilian crisis management operations in the Western Balkans, Africa, and Asia. The Lisbon Treaty, of 2009, introduced new tools to deepen collaboration and established the current Common Security and Defence Policy (CSDP). It also stressed the EU's ambition to gradually develop a common defence policy, which, if the member states unanimously agree, will lead to a common defence.[61] However, the financial and economic crisis of 2008, which reduced there sources available for defence, and the differing priorities of the key member states, have seriously hampered further EU integration in the field of defence.[62]

Nevertheless, a number of external and internal developments have in recent years spurred a new wave of collaborative efforts on security and defence. The security situation in Europe's neighbourhood has deteriorated after Russia's illegal annexation of Crimea and its aggression in Ukraine, in 2014; and, after the Arab Spring of 2011, the spread of instability and Islamist terrorism in Africa and the Middle East. The election of Donald Trump as President of the United States increased the uncertainty over the long-term commitment of the US to European security. This external context coincided with increasing internal divisions in Europe, aggravated by the financial and economic crisis of 2008, the influx of refugees in 2015, and the UK's 2016 referendum to leave the EU.

Recent initiatives

Against this backdrop, in June 2016 the EU Global Strategy, which presented a new ambition and set the priorities for the EU's external action, was launched by the High Representative of the Union for Foreign Affairs and Security Policy.[63] The EU institutions and member states have since decided on a wealth of new initiatives to strengthen EU defence efforts, but the pace of implementation has so far been slow. The Permanent Structured Cooperation (PESCO) allows participating states to make binding commitments on defence and to cooperate in smaller groups on capability development projects. The Coordinated Annual Review on Defence (CARD) intends to increase the transparency of national defence plans and identify opportunities for cooperation between member states to address common capability gaps. The European Defence Fund (EDF) aims to enhance multinational collaboration on research and industrial development of defence equipment. The EDF will come into place during the multiannual financial framework of 2021–2027, but interim programmes have already started. Furthermore, in 2016, the EU and NATO signed a Joint Declaration on Cooperation, which has pushed the coordination between the two organisations to new levels.

Many of the new EU measures aim to contribute to security and defence within the union rather than to crisis management outside it as was formerly the case. The EU Global Strategy broadened the CSDP level of ambition, from crisis management and support to partners, to encompass the protection of the union and its citizens. This has led to stronger links between measures aimed at internal and external security. The EU has, for example, adopted measures related to the security of external borders, counterterrorism, hybrid threats, and cyber security. In cooperation with NATO, the EU has launched initiatives to improve European transport infrastructure and facilitate military mobility. Furthermore, the mutual assistance and solidarity clauses enshrined in the Lisbon Treaty have the potential to contribute to security and defence within the union.[64] France has proposed that the EU should conduct scenario exercises and develop plans to facilitate the delivery of aid and assistance in

61 Article 42.2, in *Consolidated version of the Treaty of the European Union*, Official Journal of the European Union, vol. 55, C 326/13, 26 October 2012.

62 Major, Claudia and Mölling, Christian, 'The EU's military legacy', in Fiott, Daniel (ed.), *The CSDP in 2020: The EU's legacy and ambition in security and defence* (Paris: EU Institute for Security Studies, 2020), p. 42.

63 *Shared vision, common action: A stronger Europe: A global strategy for the European Union's foreign And security policy,* European Union Global Strategy, June 2016.

64 Council of the European Union, *Implementation plan on security and defence*, 14392/16, 14 November 2016, p. 3–4.

case of an armed attack on the territory of a member state, in accordance with Article 42.7 of the Treaty of the European Union.[65]

Many of the new initiatives primarily aim to promote long term capability development and industrial development rather than strengthening the operational capability of the EU and its member states in the short term. The focus on research and industrial development has increased the European Commission's role in security and defence. As most EU states are members of NATO, these efforts may contribute to national and collective defence.However, they may also cause friction between European and transatlantic defence-industrial interests. In order to secure the efficient use of resources, the EU has to ensure coordination and coherence between its programmes and NATO defence planning. The EU initiatives would also benefit from allowing the participation of non-EU NATO members in order to strengthen competitiveness and to avoid transatlantic rifts. Ultimately, the success of the EU defence programmes depends on the allocation of resources in the EU's multi-annual financial framework, which was almost halved during negotiations.[66] Efforts to alleviate the negative economic effects of the coronavirus pandemic may also lead to reductions in the resources available for defence collaboration among the member states.

Challenges to the EU's role as a security actor

As demonstrated above, the EU's development as a security actor has been formed by changes in the external security environment during the past twenty years. The EU's response to these changing circumstances has largely depended on the position of its three major powers – the UK, France, and Germany. The UK's decision to leave the union has facilitated the launch of new defence initiatives by removing the traditional British scepticism towards EU integration in this field. However, Brexit will reduce the military resources available for EU defence efforts. Given the UK's political and military weight, France and Germany are likely to maintain strong ties to the UK and have proposed to continue regular consultations on security and defence between the three countries in the E3 format.[67] At the same time, Brexit alters the balance of power in the EU and makes France and Germany more dominant, which may negatively affect smaller states in Northern Europe who have shared the UK's transatlantic approach to security and defence, its preference for liberal trade policies, and its inter-governmental approach to EU integration.[68] The countries in Northern Europe thus both have to find new cooperation partners in the EU and ways to maintain strong ties to the UK after Brexit.

At the same time, further development of EU defence initiatives is hampered by the differing perceptions of the two remaining major powers in the EU: France and Germany. Whereas France under President Macron has called for quick action and presented new ideas and proposals based on traditional power politics, Germany under Chancellor Merkel has adopted a more cautious approach and preferred multilateral solutions. France has a long-standing belief that the US is leaving Europe and wants Europe to achieve strategic autonomy, even including a strategic dialogue on nuclear deterrence. Germany considers US security guarantees to remain a key pillar of European defence and wants EU efforts to contribute to a stronger European pillar in NATO. These differences also hamper the EU's ability to launch crisis management operations, which are increasingly undertaken by coalitions of the willing, or other multilateral organisations. Even though Macron and Merkel were eventually able to agree on a European recovery fund, a similar step in the field of security and defence is less likely under the current leadership. That said, the joint proposal launched in March 2020 to develop a

65 Quencez, Martin and Besch, Sofia, *The Challenges Ahead for EU Defence Cooperation*, Policy Brief No. 2, (The German Marshall Fund of the United States, 2020), p. 4.

66 Novaky, Niklas, 'The budget deal and EU defence cooperation: What are the implications?', *Euractiv*, 22 July 2020.

67 Consultations in the E3 format, between the foreign ministers of France, Germany, and the UK, started in 2003, during the negotiations with Iran over its nuclear activities. Billon-Galland, Alice, Raines, Thomas, and Whitman, Richard G., *The Future of the E3: Post-Brexit cooperation between the UK, France and Germany* (London: The Royal Institute of International Affairs, 2020).

68 Wivel, Anders and Thorhallsson, Baldur. 'Brexit and small states in Europe – Hedging, hiding or seeking shelter?', in Diamond, P., Nedergaard P. and Rosamund, B. (eds.), *The Routledge handbook of the politics of Brexit* (London: Routledge, 2019).

strategic compass in the EU in the next two years is an attempt to promote a joint threat analysis, align strategic cultures, and define a common level of ambition for European defence.[69]

As discussed in Section 2.1, the EU is still charting its way in the current context of geopolitical rivalry. The EU has the potential to become a more prominent security actor by using its political and economic instruments. However, the EU currently lacks the institutional set-up and military capabilities to play an operational role in a military confrontation in Northern Europe. With time, recent defence initiatives may become relevant for national and collective defence. The initiatives complement NATO's efforts by focusing on both military mobility in Europe and the handling of hybrid and cyber threats. EU efforts to support defence research and industrial development of defence equipment may also benefit national and collective defence in the long term, but at the same time run the risk of causing transatlantic rifts if non-EU NATO members are kept outside. The UK's withdrawal from the EU has prompted all countries in Northern Europe to strengthen bilateral and regional defence ties with the UK in order to keep the UK militarily engaged in the region.

2.5 Regional and bilateral defence cooperation

Parallel to developments within NATO and the EU, there has been a significant increase in regional and bilateral defence collaboration in Europe during the past ten years. The initiatives vary in size and objectives. While the closest cooperation has emerged between smaller groups of countries that are geographically close, with a shared history and defence priorities, larger and more diverse groupings, based on shared interests, have also put successful collaboration arrangements into place. The objectives of recent defence initiatives range from procurement and maintenance of equipment, to capability development, the building of multinational force structures, and the use of forces in international operations.[70]

Political and military motivations

There are several motivations behind these new collaborative formats. Firstly, the rapid reduction of national military resources during the post-Cold War period has resulted in a situation where European countries lack sufficient capabilities for handling current security challenges on their own. Deepened defence collaboration has become a way to retain capabilities and compensate for diminishing defence budgets, not the least after the economic and financial crisis of 2008. They have also been promoted as a way to meet capability and force requirements within NATO and the EU.[71] The latter motivation may again become pertinent as a result of the coronavirus pandemic.

Secondly, the deteriorating security situation in Europe's eastern and southern neighbourhood has heightened threat perceptions and the sense of urgency to undertake reforms. Since the member states of NATO and the EU lack a common threat perception, regional and bilateral defence cooperation has become a way to address priority threats. The new formats are intended to enable quicker and more flexible action, particularly in cases where the reaction of multilateral organisations is slow or internally disputed. Some of the formats build on experiences gained in international operations and may allow closer relations between like-minded countries, regardless of their membership in NATO and the EU.

Thirdly, European countries have reacted to the increasing uncertainty regarding the future US commitment to European security in different ways. While most countries recognise the need for Europe to take greater responsibility for its security, some argue that this should take the form of a strengthened European pillar in NATO, while others see

69 Puglierin, Jana, *Charm defensive: Macron and the Germans at the Munich Security Conference,* European Council on Foreign Relations, 20 February 2020; and Gotkowska, Justyna, *European strategic autonomy or European pillar in NATO? Germany's stance on French initiatives,* OSW Commentary, 9 March 2020.

70 Hagström Frisell, Eva and Sjökvist, Emma, *Military cooperation around framework nations: A European solution to the problem of limited defence capabilities,* FOI-R--467--SE (Stockholm: Swedish Defence Research Agency – FOI, 2019), p. 10–11.

71 Major and Mölling, 'The EU's military legacy', p. 42.

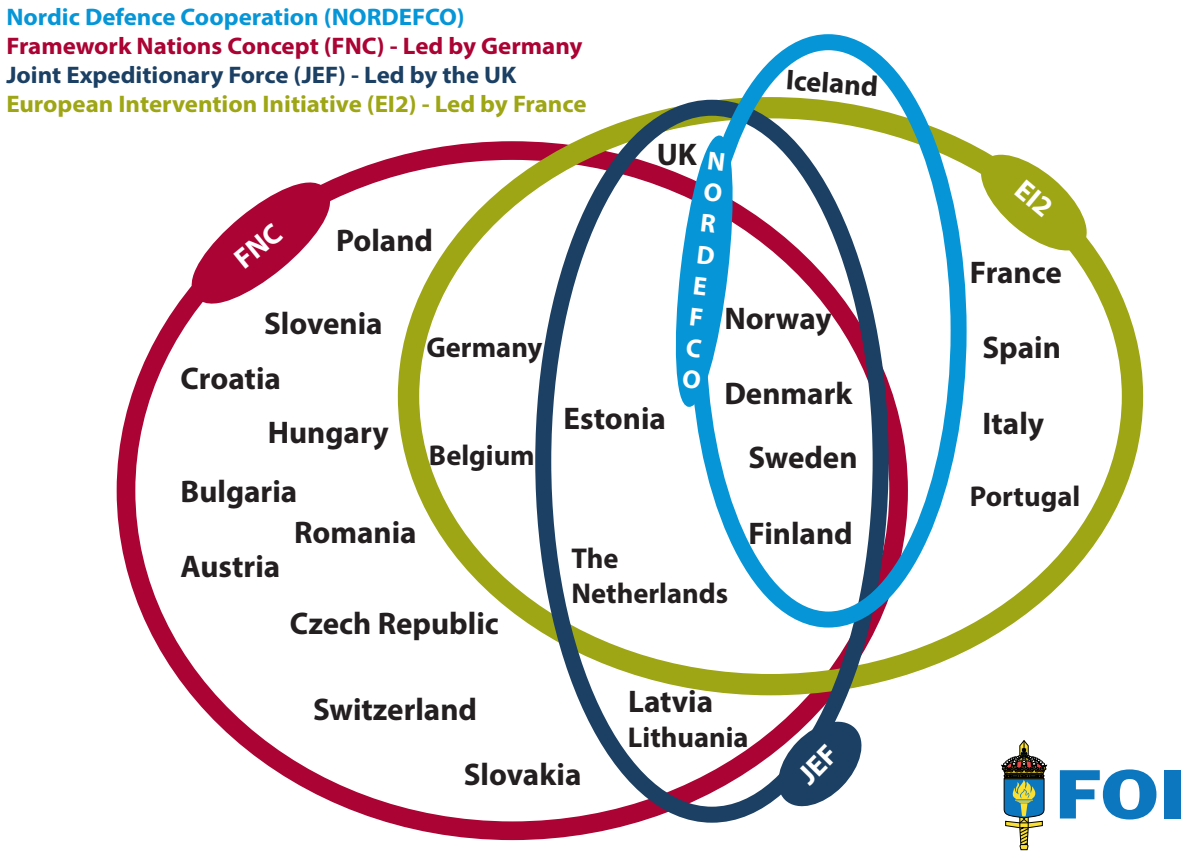

Figure 2.4 Military cooperation in Northern Europe

a need for an autonomous European capability to undertake crisis management operations in Europe's neighbourhood, as the US is shifting its priorities towards Asia. The countries in Northern and Eastern Europe have reacted to these developments by trying to develop and maintain closer bilateral military ties with the US. [72]

European powers in the lead

At the European level, the three major powers – the UK, France, and Germany – have each launched a new cooperation format. The initiatives differ significantly in terms of purpose and structure, and therefore represent different ways of enhancing European capabilities and establishing closer defence relations between a major power and a group of smaller states. The countries in Northern Europe primarily value these collaborative formats as a means to maintain strong security policy relations with the major powers, and secondarily as a way of promoting military capability and operational readiness.[73]

Germany proposed the Framework Nations Concept (FNC) as a way to address NATO capability gaps and contribute to greater burden sharing between European NATO members and the US. Since its launch in 2014, the German-led FNC has provided a structured framework for capability development that encompasses 20 states in Northern, Central, and Eastern Europe, see Figure 2.4. The initiative has evolved from the initial focus on capability clusters to setting up larger formations of forces. The aim is to enhance NATO's deterrence and defence, and participating states have started to link forces, up to brigade-level, to the German force structure. However, the initiative does not aim to set up an intervention force. Any use of capa-

72 Gotkowska, *NATO in transition*, p. 1–2.

73 Herolf, Gunilla and Håkansson, Calle, 'Part I – The new European security architecture', in Fägersten, Björn (ed.), *The Nordics and the new European security architecture* (Stockholm: Swedish Institute of International Affairs, 2020), p. 7–9.

bilities will be subject to ordinary force generation processes in NATO or the EU. The benefits of the collaboration mainly relate to common training and exercises, improved interoperability and the modernisation of equipment.[74]

The UK-led Joint Expeditionary Force (JEF), launched at the same time as the German-led FNC, is a military partnership between a smaller group of like-minded countries in Northern and Western Europe. The aim is to develop a UK-led high-readiness intervention force with contributions from partners.[75] While initially having a global ambition to carry out the full range of tasks, the JEF eventually developed a more regional focus, seeking to contribute to deterrence against Russia. The JEF is tasked to be able to engage early if a crisis erupts in Northern Europe and act as a bridging force until a broader multilateral operation can be launched. The benefits of the partnership mainly relate to training and exercises, improved interoperability, and rapid decision-making.[76]

In 2017, French President Macron proposed a European Intervention Initiative (EI2), to reinforce the ability of Europeans to act together, and to foster the emergence of a European strategic culture. Since its launch in June 2018, the EI2 gathers a mixed group of willing and able states, primarily from Northern and Western Europe, including the three major European powers.[77] The aim of the initiative is to promote strategic discussions at the military level to anticipate crises, improve information-sharing, and coordinate operations.[78] Although the initiative officially covers military operations across the whole spectrum of crises, many view it as most relevant for interventions in Europe's southern neighbourhood. Since the launch of EI2, participating states have coordinated their contributions to new operations in the Strait of Hormuz, the Sahel and the Caribbean.[79] For the states in Northern Europe, participation in the EI2 can be a way to maintain French commitment to security in the north.

Northern European countries hedging their bets

In Northern Europe, the threat from Russia has led to intensified defence cooperation between the Nordic states, both within the regional framework of the Nordic Defence Cooperation, or NORDEFCO, and bilaterally. Nordic defence cooperation has broad support at the political and military level. The aim of NORDEFCO is to improve national defence capabilities and Nordic cooperation in peace, crisis, and conflict. At the political level, the Nordic defence ministers meet regularly to exchange information about the regional security situation and engage in scenario-based discussions. At the military level, the various Nordic armed forces are increasingly focusing on operational cooperation in crisis situations. The level of cooperation varies between the branches of the armed forces and is underpinned by an increasing number of large-scale multinational exercises in the region. Among the Nordic countries, Sweden and Finland have the deepest bilateral cooperation, with the aim of developing common operational planning for crisis and war. The Nordic countries also engage in regular security policy consultations with other countries around the Baltic Sea, the Netherlands, and the UK, within the Northern Group.[80]

However, for the countries in Northern Europe, regional and European collaboration initiatives cannot replace close defence relations with the US, at least not in the short to medium term. The Nordic and Baltic countries as well as Poland have in recent years attempted to strengthen their bilateral relations with the US. Since 2017, Poland has become the hub of the US rotational force presence on the eastern flank; in August, 2020, the US and Poland reached

74 Hagström Frisell and Sjökvist, *Military cooperation around framework nations*, p. 15–25.

75 The partner nations in JEF are: Denmark, Estonia, Finland, Latvia, Lithuania, the Netherlands, Norway, Sweden, and the UK.

76 Hagström Frisell and Sjökvist, *Military cooperation around framework nations*, p. 27–32.

77 When the EI2 was launched in 2018 it initially comprised Belgium, Denmark, Estonia, France, Germany, the Netherlands, Portugal, Spain, and the United Kingdom. Finland joined in November 2018, and Norway, Sweden and Italy in September 2019.

78 Billon-Galland, Alice and Quencez, Martin, 'A Military Workshop', *Berlin Policy Journal*, 30 October 2018.

79 Vavasseur, Xavier, 'French, British and Dutch armed forces are deploying military assets in the Caribbean', *NavalNews*, 23 April 2020.

80 Engvall, Hagström Frisell and Lindström, *Nordiskt operativt försvarssamarbete*.

an agreement on enhanced defence cooperation, providing the basis for an increase in the number of US soldiers regularly rotating to Poland, including a new corps and division HQ.[81] The Baltic states have likewise argued for a stronger US presence, going beyond the regularly rotating US forces conducting exercises in the region. However, the lack of infrastructure and space to support an enhanced US presence in the Baltics, as well as political and military considerations, have made the US reluctant to place additional forces close to the Russian border.[82] In 2018, the US Marine Corps enhanced its presence in Norway for training and exercise purposes, including the stationing of troops at a base in the northern part of the country. However, in August 2020, the US announced a restructuring, of its presence in Norway. Due to new priorities, the Marine Corps will conduct shorter-term deployments and have a lighter force in place. In addition, Sweden and Finland have reached a trilateral agreement with the US to strengthen defence cooperation, including enhanced security policy dialogue and exercises.[83]

To conclude, continued US military engagement in Europe remains fundamental to the security of the countries in Northern Europe. Hence, both regional defence cooperation initiatives and stronger bilateral defence ties with the US and the major military powers in Europe serve as a hedge against increasing tensions within NATO and the EU. The increasing number of regional and bilateral defence cooperation initiatives may contribute to enhanced European capabilities and facilitate operational cooperation, both with regards to collective defence and crisis management. However, in order to avoid duplication and a waste of scarce resources, new initiatives need to coordinate with and be able to plug in to developments in both the EU and NATO.

2.6 Conclusions

The objective of this chapter has been to provide an analysis of how the changing global security landscape, and security and defence policy developments in Northern Europe, affect Western collective defence against Russia. An increasingly multipolar world order, characterised by competition between great powers and the weakening of multilateral organisations and norms, has consequences for Northern Europe. The uncertainties regarding the future role of the US and the weakening of the European security order may give revisionist powers, such as Russia, an incentive to further their interests and seek to establish a sphere of influence at the expense of the countries in the region.

At the same time, threat perceptions and priorities among NATO allies and their closest partners are diverging. In order to maintain unity, NATO has to plan for meeting threats in several directions, which affects the ability to build an effective deterrence and defence posture against Russia. The differing perceptions of Russia furthermore raise doubts as to whether NATO allies will be able to agree and act to counter Russian actions in a crisis. They may have particular trouble reaching an agreement if Russian actions remain under the threshold of an armed attack and if they contain information operations that obscure its origins. Countries with a more reconciling approach towards Russia might be more susceptible to such information operations. Consequently, it may be difficult for NATO to agree on a common assessment of the situation and to take the proactive measures necessary to reinforce threatened allies and deter Russian aggression. This is why regional and bilateral cooperation formats are fundamental in ensuring rapid response and support from key allies.

Historically, unambiguous US engagement has been the tie that binds NATO together. Even though President Joe Biden will reshape the US approach to alliances in general and NATO in particular, the increasing US trend of demanding that its European allies shoulder a bigger responsibility for their security is unlikely to be reversed. The most recent presidential administrations, under both Obama and Trump, have voiced such demands in increasingly stark terms and this is likely to continue under

81 Poland, Ministry of National Defence, 'New U.S.-Poland enhanced defense cooperation agreement signed', 15 August 2020.

82 Brauss, Stoicescu and Lawrence, *Capability and resolve,* p. 13–14.

83 Engvall, Hagström Frisell and Lindström, *Nordiskt operativt försvarssamarbete*, p. 22–23; and Johnsen, Alf Bjarne, 'Sjefsskifte i Forsvaret: USA flytter ut idet ny forsvarssjef flytter inn', *VG*, 18 August 2020.

the Biden administration.[84] Furthermore, current developments indicate that the US may be shifting its military engagement in Europe from a forward presence to one that is relying more on offshore balancing, using naval and air capabilities complemented by overseas reinforcements. In the future, European allies would need to prioritise and provide a larger share of NATO's rapid reaction forces in order to ensure that the US remains engaged in Europe's security. In the short and medium term, there is no substitute for an active and firm US political and military commitment to the defence of the region.

The countries in Northern Europe have in the past decade engaged in a growing number of regional groupings and bilateral defence initiatives, which serve as a hedge against the weakening of multilateral organisations. They are trying to secure bilateral commitments from Washington, while concomitantly opting to pursue regional solutions to address their defence needs. The resulting regional collaboration initiatives may enhance capabilities and facilitate operational cooperation in a crisis, particularly at short notice, before all allies have been able to reach an agreement on common action. However, in order to avoid a proliferation of initiatives, duplication, and waste of scarce resources, these initiatives should be coordinated with NATO and EU efforts. Despite talks in some European capitals and in Brussels about strengthening European strategic autonomy on security issues, the EU's security and defence policy essentially constitutes a complement to NATO efforts. Recent EU initiatives may support the long term development of national and collective defence and increase the capability to meet cyber and hybrid threats. However, Article 42.7 remains a political declaration that lacks proper planning or military structures for defending against an armed attack. Therefore, the EU is currently not a viable military alternative to NATO in a crisis in Northern Europe. This is unlikely to change in the short to medium term.

Finally, the consequences of the Covid-19 pandemic will affect the possibilities for enhancing defence capabilities and defence cooperation in Europe. The coronavirus pandemic has led to a severe economic decline in 2020, comparable to the financial crisis in 2008, and it is uncertain when the Western economies will fully recover. To prevent a fall into full recession, most countries have launched ambitious stimulus packages, thereby increasing budget deficits and national debts. This suggests that economic policies in the medium term will be marked by austerity measures aimed at reducing deficits and national debt, making it harder to sustain defence budgets and implement modernisation plans. This may weaken defence cooperation in Europe if falling defence spending results in uncoordinated reductions and loss of European military capabilities, as happened in the aftermath of the financial crisis of 2008. This may ultimately hamper the capability for collective defence in the face of a crisis.

84 Birnbaum, Michael, 'Gates rebukes European allies in farewell speech', *Washington Post*, 10 June 2011.

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3. NATO's collective defence of Northern Europe

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The ongoing turbulence in global and European affairs, in combination with the reality of Russian revisionism, has underlined the need for a capability for collective defence of Europe, previously thought unnecessary. The North Atlantic Treaty Organization, NATO, and its allies are currently in a process of adjusting from conducting expeditionary wars of choice against irregular adversaries, to preparing to fight in self-defence against a near-peer adversary in the east, or fight terrorism and instability to the south. In this report, we focus squarely on the first of those tasks; it is against this task that we try to measure Western military capability, including the improvements made and the remaining shortcomings. Here, the key components are not only the number, location, and status of the military units of the NATO allies, but also the command arrangements, war plans, logistic support, and exercises of the Alliance. This is because command and control and logistics are key enablers of combat power, while a focus on exercises provides a key indicator of military striving and proficiency.

Thus, the question of how well NATO preparations in these areas currently support collective defence in Northern Europe is explored in this chapter. It is structured in three parts: the first covers NATO's strategy, plans, and arrangements for command and control; the second focusses on logistics and the problem of rapid reinforcement; and the third considers both NATO exercises and multinational exercises conducted by or among the allies, but supported by NATO.

3.1 NATO strategy and plans

NATO's overarching politico-military guidance document is the *strategic concept*, of which there have been half a dozen since 1949.[1] These concepts encapsulate important internal compromises on the Alliance's purpose, direction, and overall approach. The current strategic concept dates from 2010 and lists three core tasks for the Alliance: collective defence, crisis management, and cooperative security, with the latter two much more in focus at the time.[2] There have been calls for drafting a new concept, as the external environment and NATO's focus have changed significantly, with more emphasis on collective defence.[3]

While the strategic concepts of the Cold War were secret and military in character and promulgated by NATO's top military body, the Military Committee (MC), the strategic concepts from 1991 onwards have been publicly available and more political-aspirational in nature. Accordingly, they have been promulgated by the Alliance's most senior and political body, the North Atlantic Council (NAC), in summit configuration.[4] However, the ongoing shift back to collective defence has created a need for a top-node military document that fills the

1 Five or seven, depending on how you count. See Pedlow, Gregory (ed.), *NATO strategy documents 1949–1989,* (NATO, 1997); NATO, *The Alliance's new Strategic Concept – Agreed by the Heads of State and Government participating in the Meeting of the North Atlantic Council,* 7–8 November 1991, updated 26 August 2010; NATO, *The Alliance's Strategic Concept – Approved by the Heads of State and Government participating in the meeting of the North Atlantic Council in Washington D.C.,* Press release NAC-S(99) 65, 24 April 1999, updated 25 June 2009. Also see Johnson, Seth, *How NATO adapts: Strategy and organization in the Atlantic Alliance since 1950* (Baltimore: Johns Hopkins University Press, 2017); Ruiz Palmer, Diego, *A strategic odyssey: Constancy of purpose and strategy-making in NATO, 1949–2019,* NDC Research Paper No. 3 (Rome: NATO Defense College, June 2019).

2 *Active Engagement, Modern Defence: "Strategic concept for the defence and security of the members of the North Atlantic Treaty Organisation," adopted by Heads of State and Government in Lisbon,* 2010.

3 See, e.g., Kampf, Karl-Heinz, *Why NATO needs a new strategic concept,* NDC Research Report 09/16 (Rome: NATO Defence College, November 2016).

4 The NAC can meet in different configurations, the lowest consisting of the allies' permanent representatives (ambassadors) to NATO; the next level, the foreign or defence ministers; and the topmost level, the heads of state or government.

same function as the Cold War's more well-known strategic concepts, which introduced *massive retaliation* (MC 14/2), from 1957, and *flexible response* (MC 14/3), from 1968.[5]

Thus, in 2019, for the first time in 50 years, NATO's Military Committee agreed on a new *military strategy,* called Comprehensive Defense and Shared Response.[6] According to official statements, the new strategy will be a policy reference to guide military decision-making. It defines the larger picture as to ends, ways, and means, and outlines the approach to take to neutralise the threat from near-peer competitors, i.e. Russia, as well as from international terror groups.[7]

Although the content is classified, the strategy appears to represent internal progress on a number of hitherto difficult and divisive issues, lending more coherence to NATO's adaptation to ongoing changes.[8] Most probably, it takes its departure in NATO's 360-degree approach to threats, which reflects the differing concerns of the Alliance's eastern, southern, and western members. Keeping the document military and the content classified has likely facilitated reaching an agreement. As was the case with MC 14/3, the new military strategy is probably more of a general guidance than a detailed or concrete recipe to follow. Thus, there is also an Overall Concept for Deterrence and Defence of the Euro-Atlantic Area, which will "aid planning and provide direction, assist in the reinforcement of forces and examine our approach to future threats to the Alliance in the Euro-Atlantic area."[9] These documents reflect the near-term perspective and needs of NATO's Supreme Allied Commander in Europe (SACEUR) and his staff at Allied Command Operations, which for historical reasons is called SHAPE (Supreme Headquarters Allied Powers in Europe). Guidance in the medium- and long-term perspectives is the responsibility of Allied Command Transformation (ACT), for example through the Warfighting Capstone Concept currently under development.[10]

As to the actual plans for the collective defence of Alliance territory, i.e. "war plans", NATO no longer has an overarching and all-encompassing plan for the defence of Europe, as it had with its General Defence Plan, of the late Cold War. Instead, there is a patchwork of more limited plans that may be national, multinational, or NATO, plans. These plans are of course not publicly available, but are reportedly being harmonised. Current NATO doctrine lists four kinds of advance plans: standing defence plans (SDPs), contingency plans, generic contingency plans, and graduated response plans (GRPs).[11] Open sources vary somewhat in their characterisation of these plans and their respective roles, but it seems that standing defence plans concern identified Article 5 threats or risks of varying magnitude, while the contingency plans are for reinforcement or defence of specific regions such as

5 MC is short for NATO's Military Committee, the organ that promulgated most of the documents referred to in Pedlow, Gregory, 'The evolution of NATO strategy 1949–1969', in Pedlow, Gregory (ed.), *NATO strategy documents*; and NATO, *Strategic concepts 1949–1989* (NATO, 1997).

6 U.S. Senate, Committee on Armed Services, 'Statement of General Tod D. Wolters, United States Air Force, Commander United States European Command, February 25, 2020.' The fact that the official statements mentioned that the last time such a document was adopted was in December 1967 strongly suggests that the new strategy is the functional equivalent of MC 14/3 (*Flexible Response)*, which was adopted by the Defence Planning Committee in December 1967 and expedited in January 1968. See NATO, 'Opening remarks by Air Chief Marshal Sir Stuart Peach, Chairman of the NATO Military Committee at the Military Committee Conference in Slovenia, 14 September 2019'

7 See NATO, 'Opening remarks by Air Chief Marshal Sir Stuart Peach'; Wolters, Tod, 'Foreword', in Olsen, John Andreas (ed.), *Future NATO: Adapting to new realities,* Whitehall Papers 95:1 (London: RUSI, 2019); United States Department of Defense, 'NATO's new strategy will better protect Europe, top commander says', press release, 4 October 2019.

8 Frühling, Stephan, *Political consensus and defence preparations: Why NATO needs a 'Military Strategy',* NDC Research Paper 125 (Rome: NATO Defence College, 2015); Dyndal, Gjert Lage and Hilde, Paal, 'Strategic thinking in NATO and the new 'Military Strategy' of 2019', in Johnson, Rob and Matlary, Janne Haaland (eds.), *Military strategy in the 21st century: The challenges for NATO* (London: Hurst, 2021).

9 NATO, Opening remarks by Air Chief Marshal Sir Stuart Peach. This fits the pattern from the Cold War, when the guidelines in the MC 14 documents were fleshed out and given more concrete form in the MC 48 document series. See Pedlow, *NATO strategy documents 1949–1989.*

10 NATO, 'NATO's Allied Command Transformation Holds Virtual Chiefs of Transformation Conference', 3 December 2020.

11 NATO, *AJP-5: Allied Joint Doctrine for the Planning of Operations,* Allied Joint Publication 5, Edition A, Version 2, published with UK national elements, by the United Kingdom Ministry of Defence, May 2019, p. 1–6.

the high north, the Baltic region, or the Black Sea region.[12] The generic contingency plans are tied to a type of threat or event – for example a terrorist strike – but not to a geographic location, while GRPs are essentially about the deployment and employment of the NATO Response Force (NRF), in either Article 4 or Article 5 situations.[13] Of these, only the SDPs and the first part of the GRPs are said to have specific units assigned and be "executable", i.e. so detailed and specific that they can be executed without further elaboration. The rest of the plans are essentially drafts that need to be updated, adapted, and have units assigned before they can be executed.[14]

Of these plans, GRPs are fairly often referred to in public, and are also used in exercises and war games. Reportedly, a number of them exist for different vulnerable parts of the Alliance, including for the Baltic States and Poland. A GRP breaks down into three parts: the first is about the deployment and employment of the so-called spearhead force, Very High Readiness Joint Task Force (VJTF), a light, multinational, brigade-size formation complemented by air and naval components, which is mainly intended as a mobile trip-wire. The lead ground elements of the VJTF are supposed to be ready to move within 2–3 days, and the rest within 7 days. The task of forming the core of the VJTF rotates annually between the European allies.[15] The second part of GRPs deals with the deployment and employment of the Initial Follow-on-Forces Group, which consists of the brigades that formed the VJTF in the previous year and those that will do so in the coming year. These units are tasked to be ready to move in 30–45 days.[16] The third part concerns the use of the NRF Follow-on-Forces Group and other Follow-on Forces, which are to be force-generated from force registers, i.e. a bidding process among members that probably takes months, although lately the availability of follow-on forces should have improved somewhat as a result of the NATO Readiness Initiative launched in 2018.[17]

Whereas Part 1 of the GRPs should be more or less fully developed, Part 2 is a draft that requires updating and elaboration into an operations plan (OPLAN) before it can be promulgated and used. Part 3 plans are sketchy and require even more work before they can be put into practise. The elaboration into OPLANs also requires a specific decision by the NAC on an Initiating Directive before it can proceed.[18] A further complication is that the method NATO has been using for operational planning during the last ten years was developed for stabilisation operations such as Afghanistan and is ill-suited for time-urgent existential defence, as it is slow and cumbersome.[19]

It may thus be that the only updated, detailed, and short-notice executable plan NATO has for the collective defence of the Baltic region is Part 1 of the GRP, i.e. the plan for the deployment of the VJTF, and that any further reinforcement requires elaboration of OPLANS based on either the drafts

12 Sources are notably tight-lipped concerning the nature and scope of SDPs, but it seems unlikely that they fill the same function as the General Defence Plans of the Cold War. For example, the deployment of air defence units to Turkey in 2012 was based on an SDP. NATO, 'NATO foreign ministers' statement on Patriot deployment to Turkey', press release, 4 December 2012.

13 Hilde, Paal Sigurd, 'Bistand fra NATO og allierte: Norge utlöser artikkel 4 og 5', in Larssen, Ann Karin and Dygdal, Gert Lage (eds.), *Strategisk ledelse i krise og krig (*Oslo: Universitetsforlaget, 2020); Olshausen, Klaus, *NATO's Readiness Action Plan for Assurance and Deterrence – Progress and challenges on the road from Wales to Warsaw,* ISPSW Strategy Series: Focus on Defense and International Security – Issue 402 (Berlin: ISPSW, January 2016); Binnendijk, Hans and Germanovich, Gene, 'NATO needs a European level of ambition', *Defense News,* 7 December 2018. The NRF has a troubled and patchy history, and the US has been frustrated by the Europeans' dragging their feet and failing to deliver; see Bell, Robert, 'Sisyphus and the NRF', *NATO Review,* Autumn 2006; Ringsmose, Jens and Rynning, Sten, 'The NATO Response Force: A qualified failure no more?', *Contemporary Security Policy* 38, no. 3, 2017.

14 NATO, *AJP-5,* p. 1– 6; Hilde, 'Bistand fra NATO og allierte', p. 374–375.

15 NATO, 'NATO Response Force', last updated 17 March 2020; Rheinmetall Defence, *Rheinmetall is equipping NATO's spearhead VJTF,* press release, n.d.

16 Ringsmose, Jens and Rynning, Sten, *Can NATO's new Very High Readiness Joint Task force deter?* NUPI Policy Brief 15/2015, Oslo: Norwegian Institute of International Affairs (NUPI), 2015.

17 Also known as the "Four Thirties", this initiative was launched by then US Secretary of Defense James Mattis at the NATO 2018 summit with the aim of having – by the end of 2020 – 30 European battalions, 30 European combat air squadrons, and 30 European combat vessels ready for use in 30 days. Reportedly, progress has been good on the naval and land parts, less so on the air side. However, there is always the risk that this progress is really less than meets the eye, and some changes may have been perfunctory.

18 NATO*, AJP 5.*

19 NATO, *Allied Command Operations – Comprehensive Operations Planning Directive COPD,* Interim v1.0, 17 December 2010.

in Part 2 and sketches in Part 3 of the GRP, or on the regional Contingency Plan for the Baltics and Poland, which is known as Eagle Guardian.[20] A particular source of concern seems to be a scenario known as "SACEUR's nightmare", in which Russia launches a quick land-grab attack on the Baltics, cutting off the Suwalki gap and overrunning parts or all of the Baltic States before NATO has had time to react. This scenario would establish a *fait accompli*, placing the Alliance on the horns of a dilemma: accept defeat and loss, or risk Russian nuclear escalation by attempting to restore lost territories.[21]

3.2 Command and control

One might say that during the Cold War the Warsaw Pact and the Soviet Union acted as a magnetic pole towards which NATO's attention and forces were oriented like compass needles. The collapse of the Warsaw Pact and the Soviet Union meant that the threat and, this pattern disappeared. Furthermore, a considerable drawdown of forces and funding started which in turn led to major reorganisation of Western defence, with greater room for national considerations of prestige and jobs.

Roles and responsibilities

The new command organisation that ensued, in stages, was smaller and based on functionality without geographic areas of responsibility in Europe. Moreover, the links between higher commands and actual combat forces were cut. Below the political level, there are now two strategic commands at the top military level: Allied Command Operations (ACO), in Mons, Belgium, which plans and leads operations and is led by SACEUR; and Allied Command Transformation (ACT), in Norfolk, Virginia, which maps the path to the future and is responsible for training and exercises.[22]

NATO's organisation for conducting operations is divided into two overall parts and levels. First, the NATO command structure (NCS) with headquarters and supporting elements at the strategic, operational and tactical level. Second, the so-called NATO Force Structure (NFS), which is composed of allied national and multinational forces placed at the Alliance's disposal on a permanent or temporary basis under specific readiness criteria. There are two major categories of the NFS: High Readiness Forces (HRF) and Forces of Lower Readiness (FLR). Together, HRF and FLR form the Graduated Readiness Forces (GRF).[23]

The NFS includes GRF HQs for land, maritime and air operations including appropriate supporting assets. There are nine land, five maritime and three air GRF HQs within the Alliance that, among other things, provide support to the NRF on a rotational basis. Force packages are built around these headquarters as needed and dependent upon the task. They can provide command and control for forces up to a land corps, a naval task force of several flotillas, and an air task force of several wings. Subordination of these HQs and combat units to the NATO chain of command requires a formal Transfer of Authority (TOA).

The current command structure, established in 2010/2011 and delineated in Figure 3.1, has since 2014 been somewhat adapted to reflect the return of collective defence and territorial threats. Allied Command Operations (ACO) is a three-tier command with Supreme Headquarters Allied Powers Europe (SHAPE) at the strategic level. At the operational level there are three Joint Force Commands (JFC) in Naples (Italy), Brunssum (the Netherlands), and Norfolk (USA), each of which is capable of deploying a major joint operation capable headquarters ("Joint Task Force HQ").

20 Kühn, Ulrich, *Preventing escalation in the Baltics: A NATO playbook* (Washington, DC: Carnegie, 2018).

21 Vershbow, Alexander and Breedlove, Philip, *Permanent deterrence: Enhancements to the US military presence in North Central Europe* (Washington, DC: Atlantic Council, 2019); Brauss, Heinrich, 'The need for the Alliance to adapt further', in Olsen, John Andreas (ed.), *Future NATO: Adapting to new realities,* p. 131–144, Whitehall Papers 95:1 (London: RUSI, 2019); Brauss, Heinrich, Stoicescu, Kalev and Lawrence, Tony, *Capability and resolve: Deterrence, security and stability in the Baltic region* (Tallinn: International Centre for Defence and Security, 2020), p. 9–10.

22 NATO, 'NATO Organisation'.

23 HRF readiness should range from 0 to 90 days and include capabilities for an immediate response from 0 to 30 days and in the framework of the NATO Response Force. FLR includes readiness ranges from 91 to 180 days and assets normally used to sustain already deployed HQs and forces. A further category known as "Long Term Build Up Forces" are assets held at very low readiness and intended for generation of capabilities for large scale Article 5 operations

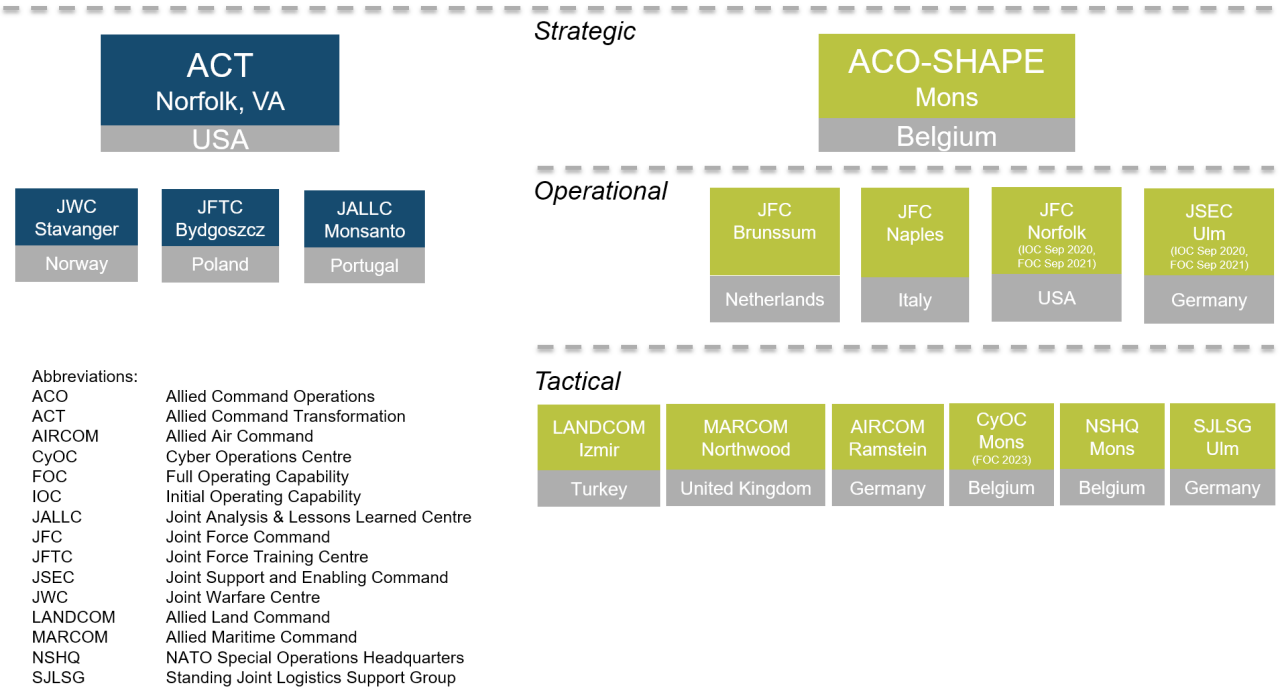


Figure 3.1 NATO Command Structure 2020
Source: NATO, 'NATO Organisation'.

Additionally, there is a Joint Support and Enabling Command (JSEC) in Ulm (Germany) capable of commanding logistic support to operations.
Although commands within ACO's structure still do not have geographic areas of responsibility, they can have a "regional focus". Thus, JFC Brunssum is focused on Europe north of the Alps, while JFC Naples focusses on the south, including the Mediterranean, and the new JFC Norfolk focuses on the Atlantic.

ACO is further organised into six major tactical-level commands for air, land, and sea operations, as well as for special operations, cyber operations, and logistics, each with a dedicated headquarters. For the major domains, these include Allied Land Command (LANDCOM), in Izmir, Turkey; Allied Maritime Command (MARCOM), in Northwood, United Kingdom; and Allied Air Command (AIRCOM), in Ramstein, Germany. AIRCOM and MARCOM are thought to be capable of running operations in their own domains. Reportedly, this is not true for LANDCOM, at least not with respect to Article 5 operations. In addition to acting as component commands in support of a JFC, MARCOM and AIRCOM can provide command and control for small joint naval and air operations, respectively. Notably, these tactical-level commands report directly to SHAPE and are under the command of SACEUR, to use as he sees fit, and are subordinated to JFC Brunssum or Naples as needed for major joint operations.

Two command entities in the NFS – first the corps headquarters, which has the annually rotating responsibility for the VJTF/NRF, and secondly the Multinational Corps Northeast HQ (MNC NE), in Szczecin, Poland – are of particular relevance to the Baltic region. They will probably provide command and control to land units in the area given a crisis or conflict with Russia. The MNC NE is a German-Polish-Danish entity, associated with units set up locally or deployed to the region, including the enhanced Forward Presence (eFP) battlegroups. The newly resurrected US V Corps, which will have a forward element in Europe and be tasked inter alia to "synchronize US Army and allied tactical units", may also become an important asset.

The German JSEC and the American JFC Norfolk were instated as a result of the Russian threat and the increased significance of rapid reinforcement.[24] In peacetime, these commands are mainly national entities, manned by national, and seconded multinational, staff but in wartime they are planned to be augmented with additional personnel and turned over to NATO. The JSEC's task is to facilitate logistics in Europe, especially the reception and onward movement of reinforcements through Germany and Benelux, although the division of responsibilities between JSEC and other logistics entities is far from clear yet, as shown below in Section 3.3.[25] JFC Norfolk, which is formally on the same command level as JFC Brunssum and Naples, is co-located and double-hatted with the HQ of the resurrected 2nd US Fleet; in a crisis or a conflict its task is to focus on the North Atlantic and on facilitating the transatlantic flow of reinforcements and supplies.[26]

Finally, there are some national staffs and headquarters not formally offered to NATO, but which nonetheless may play a role in a crisis or a conflict, either as complements to NATO staffs or as alternatives in case the Alliance is deadlocked. This applies particularly to the US European Command, whose commander is double-hatted as SACEUR, US Air Force Europe (USAFE) , US Army Europe, and the forward-deployed command elements of the US 1st Cavalry Division and the US V Corps.[27] The latter two could, after substantial US reinforcements had arrived, command US army units in the field, and probably some allied units, too.

To sum up, although JFC Brunssum has a "regional focus", north of the Alps, and MNC NE focuses on the Baltic region, there is still no formally pre-designated commands in charge of directing operations in that or any other region on the eastern flank. Thus, in case of a serious crisis, it seems likely that the first response of the allies and of the Alliance would be handled by the national command structures of the allies concerned, and by the corps HQ and the JFC – Brunssum or Naples – designated as responsible for the VJTF/NRF that year. But, if the crisis is not resolved reasonably quickly, NATO-command responsibilities are likely to be transferred to JFC Brunssum.[28] AIRCOM, in Ramstein, could lead the air operations, with the support of a CAOC and possibly from USAFE, and MARCOM could initially lead the maritime operations, but if these are extensive, the US-led Naval Striking and Support Forces (STRIKFOR) NATO might take over.[29] But there is no given mid-level HQ or staff available to lead land operations in Poland and the Baltic states, or joint operations in the region. The MNC NE is a likely candidate for overall land command of the area, but there is no obvious candidate for joint command below JFC Brunssum. This seems like a weakness, as air power would probably play a key role in the defence of the region, and maritime capabilities would be crucial for reinforcement and resupply.

Some observers have suggested that these weaknesses should be rectified by pre-designating a commander with HQ as responsible for this and other geographically exposed areas, or by creating subordinate joint commands responsible for land, sea, and air operations in the Baltic and Black Sea regions.[30] Many also call for a greater delegation of authority: from national capitals, to their permanent representatives in the NAC for authorising crisis response measures; and to SACEUR and subordinate commanders for raising readiness, taking command of

24 The status and alignment of these two new commands is still somewhat unclear; as national entities in peacetime (until Transfer of Authority), they would seem to belong in the force structure, but organisational charts and statements indicate they are nonetheless part of the command structure.

25 Hodges, Ben, Lawrence, Tony and Wojcik, Ray, *Until something moves: Reinforcing the Baltic region in crisis and war* (Tallinn: International Centre for Defence and Security, and Center for European Policy Analysis, April 2020), p. 20–22.

26 Hagström Frisell, Eva (ed.), Dalsjö, Robert, Gustafsson, Jakob and Rydqvist, John, *Deterrence by reinforcement – The strengths and weaknesses of NATO's evolving defence strategy,* FOI-R--4843--SE (Stockholm: Swedish Defence Research Agency – FOI, 2019); Hodges, Lawrence and Wojcik, *Until Something Moves,* p. 21; 'Navy's Atlantic-based 2nd Fleet command now fully operational', *Stars and Stripes,* 2 January 2020.

27 Vandiver, John, 'Army reactivates V Corps for Europe mission', *Stars and Stripes*, 20 May 2020.

28 Cf. Hodges, Lawrence and Wojcik, *Until something moves,* p. 21.

29 The commander of the US 6th Fleet is double-hatted as Commander, Naval Striking and Support Forces NATO (COM STRIKEFORNATO).

30 Efjestad, Sven and Tamnes, Rolf, 'NATO's enduring relevance', in Olsen, *Future NATO;* Hodges, Ben, Bugajski, Janusz, Wojcik, Ray, and Schmiedl, Carsten, *One flank, one threat, one presence: A strategy for NATO's eastern flank* (Washington, DC: Center for European Policy Analysis, 2020).

eFP units, and beginning to move troops, such as the VJTF, without needing to seek prior political authoriscation from the NAC or national capitals.[31]

Intelligence and early warning

Access to prompt, clear, and accurate intelligence providing early warning of aggression is of course a *sine qua non* for making timely decisions on raising readiness and sending reinforcements. In current circumstances, some decisions would have to be taken weeks in advance if they were to have any chance of affecting events. It is thus hardly a coincidence that SACEUR and other observers emphasise the need for speed – speed of recognition, speed of decision, and speed of action or of assembly, and that a prerequisite for the first two is intelligence.[32]

The historical examples illustrating how even major powers have been caught napping when the enemy strikes are legion and well known. The roots of such "intelligence failures" lie at least as much in the psychological and bureaucratic mechanisms of the victims, which make them discount the signs that warn of an impending attack, as in the cunning and insidiousness of the aggressor's preparations.[33] These problems could be multiplied when 30 governments, rather than one, have to be convinced, and where there is not always enough trust to share intelligence freely.[34]

While NATO does have some intelligence functions and assets, the collection, analysis, and dissemination of intelligence are nonetheless still essentially national prerogatives. NATO's role is primarily being a consumer, and sometimes coordinator, of intelligence.[35] Accordingly, and because of the inherent secrecy of the intelligence world in combination with a lack of trust, intelligence is often nationally stovepiped. When intelligence is shared with allies, the sharing primarily tends to take place bilaterally or within long-established and privileged "clubs", such as the "Five Eyes".[36]

Calls for developing Alliance intelligence capabilities, and the fact that the intelligence sharing between allies during Russia's exercise Zapad 2017 and the US-led Saber Strike 2018 has been highlighted as an example to be emulated, suggest that that there is room for improvement. Other suggestions for facilitating rapid decision-making is for the Alliance to do the following: delegate more authority to SACEUR; agree in advance on the indicators that might trigger the raising of readiness or sending reinforcements; and also agree, in concrete terms, on what type of adversary actions would constitute an armed attack and thus invoke the use of Article 5.[37] The last point has taken on particular relevance given widespread concerns over Russia's use of ambiguity, proxies, and salami tactics. The latter entails creeping aggression in many small steps, each in themselves unlikely to trigger a response.

The Alliance – or a coalition of the willing

As NATO takes decision by consensus, and as the number of members has grown, while geopolitical outlooks have tended to diverge, there are concerns that a decision in the NAC to reinforce or to help an Ally under threat or even under attack could be held up or blocked by one or more allies, thus leaving

31 Hodges, Ben, Bugajski, Janusz and Doran, Peter, *Securing the Suwalki Corridor: Strategy, statecraft, deterrence and defense* (Washington, DC: Center for European Policy Analysis, 2018), p. 7–8; Ringsmose and Rynning, 'The NATO Response Force', p. 449.

32 Wolters, Tod, 'Foreword'; Hodges, Lawrence, and Wojcik, *Until something moves,* p. 4–5.

33 Betts, Richard, *Surprise attack: Lessons for defense planning* (Washington, DC: Brookings, 1982); Hugemark, Bo, 'Överraskning i teori och praktik', in Hugemark, Bo (ed.), *Urladdning: 1940 blixtkrigens år* (Stockholm: Probus, 1990).

34 Giles, Keir, 'Missiles are not the only threat', in Jonsson, Michael and Dalsjö, Robert, (eds.), *Beyond bursting bubbles: Understanding the full spectrum of the Russian A2/AD threat and identifying strategies for counteraction,* FOI-R--4991--SE (Stockholm: Swedish Defence Research Agency – FOI, 2020).

35 NATO, centrally, and NATO commands have some intelligence functions, such as the J-2 (intelligence) sections in joint staffs, or the Intelligence Division in the International Military Staff at NATO HQ, which manages the production of NATO's Strategic Intelligence Estimate. NATO also has some ISR assets of its own, primarily the AWACS aircraft and a new, small fleet of Global Hawk drones. See Kriendler, John, *NATO intelligence and early warning*, Conflict Studies Research Centre Special Series 06/13 (Swindon: Defence Academy of the UK, 2006); Korkisch, Friedrich, *NATO gets better intelligence: New challenges require new answers to satisfy intelligence needs for headquarters and deployed/employed forces* (Vienna: IAS, 2010).

36 Five Eyes is a colloquial name for a still thriving intelligence-sharing arrangement set up during the Second World War, between five English-speaking countries: USA, Britain, Canada, Australia, and New Zealand.

37 See for example Kramer, Franklin and Binnendijk, Hans, *Meeting the Russian conventional challenge: Effective deterrence by prompt reinforcement* (Washington, DC: Atlantic Council, 2018), p. 11–12.

NATO paralysed. Such concerns have increased in later years with the increasing threat posed by Russia, Russian overtures to several allies, divergent views of Russia, and weak public support in several allied countries for backing up an Ally who is in conflict with Russia.[38] SACEUR's statement about the need for speed of decision, noted above, may also reflect such concerns.

However, what is not always appreciated is that while decisions in NATO require consensus, action under the Atlantic Alliance, as created in 1949, does not have such a requirement.[39] There is a subtle and often overlooked, but potentially important, difference between the alliance created in 1949 through the North Atlantic Treaty (NAT) and the organisation (NATO) added to it in 1950/51 as a result of the Korean War.[40] Article 5 of NAT – also called the Washington Treaty – states that:

The Parties agree that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all and consequently they agree that, if such an armed attack occurs, each of them, in exercise of the right of individual or collective self-defence recognised by Article 51 of the Charter of the United Nations, will assist the Party or Parties so attacked by taking forthwith, individually and in concert with the other Parties, such action as it deems necessary, including the use of armed force, to restore and maintain the security of the North Atlantic area".[41]

Thus there are sufficient legal grounds – both within the treaty and under international law – for individual allies to act under Article 5, even if the NAC were blocked or held up, and for such allies to form a coalition of the willing *within* the Alliance.[42]

If, for example, a decision to assist Poland or a Baltic Ally under threat or attack from Russia were held up or blocked in the NAC, the US could lead a coalition of allies willing to act, but still remain within the Alliance or the treaty. While any such action could not draw on NATO-owned or controlled assets, these are precious few, as most so-called NATO resources are in reality owned or provided by individual allies. SACEUR, double-hatted as commander of the US European Command, could change his hat and rely on the national command resources of willing allies.[43] The early part of the 2011 operation in Libya, which was conducted by a coalition led by the US, France, and the UK, using national command structures before NATO took over, can be seen as an example of this. The United Kingdom's initiative in setting up the Joint Expeditionary Force (JEF) can also be seen as a safety precaution that allows for action by a coalition of the willing in case the NAC is deadlocked.

There would of course be a delay and some temporary loss of effect due to the transition from NATO to the more or less improvised coalition structures, as well as some lasting loss of effect due to allies' opting out with their assets, but these effects might be more or less manageable depending on who opts out. A key consideration might also be whether the allies that decide to "sit out" the war – as Germany did in 2011, on Libya – would still allow participating allies to use their territory and airspace.

The fact that the possibility of setting up a coalition of the willing within the Alliance exists and is more or less openly discussed might increase the chances of reaching agreement in the NAC, as possible recalcitrant allies know that they can be sidelined in a pinch. Moreover, recalcitrant allies might find the political cost of blocking a decision to be prohibitive as compared to assenting but not participating.

Coalitions of the willing within the Alliance – most likely led by the US – could also be of crucial importance as first responders in the initial stages of a

38 Giles, 'Missiles are not the only threat'; Fagan, Moira and Poushter, Jacob, *NATO seen favorably across member states: Many in member countries express reservations about fulfilling Article 5's collective defense obligations (*Pew Research Center, 2020).

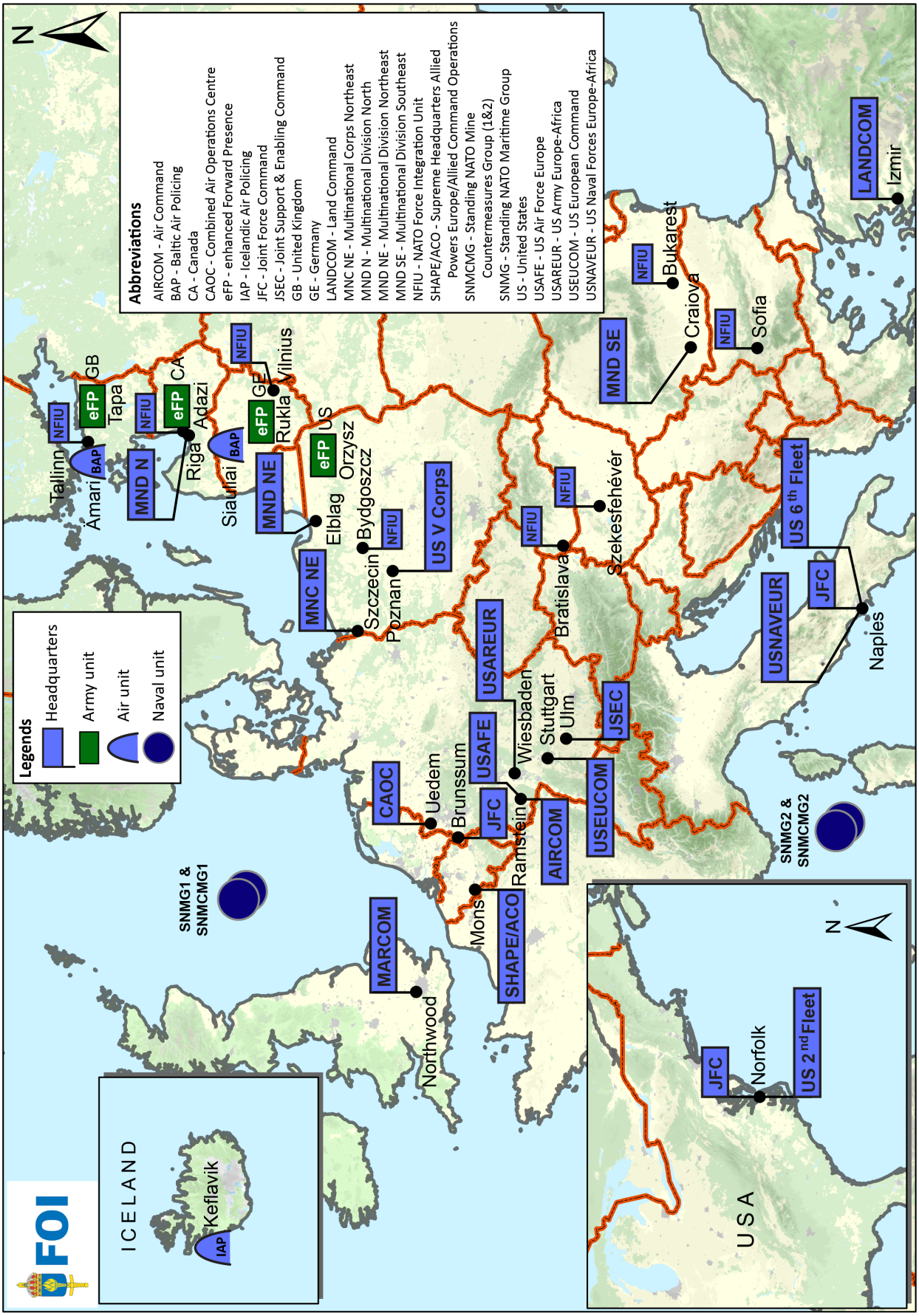
39 Michel, Leo, *NATO decision-making: Au revoir to the consensus rule?* Strategic Forum no. 202, (National Defence University Institute for National Strategic Studies, August 2003); and Traugutt, Loren, *Is consensus still necessary within Nato?* NDC Research report 07/16 (Rome: NATO Defense College, June 2016).

40 Pedlow, Gregory, 'The evolution of NATO strategy 1949–1969', p. xv; and Dalsjö, Robert, *Trapped in the Twilight Zone?: Sweden between neutrality and NATO*, FIIA Working Paper 94 (Helsinki: FIIA, 2017), p. 27–28.

41 NATO, *The North Atlantic Treaty Washington, D.C. – 4 April 1949*.

42 Dalsjö, *Trapped in the Twilight Zone?*; see also Hilde, 'Bistand fra NATO', p. 376–377.

43 It is notable that Richard Hooker, in his study of how to defend the Baltics, uses US HQs as land, air, and maritime component commands; see Hooker, *How to defend the Baltic states,* p. 43.



Map 3.1 Major allied commands, installations and forces
NB: Design by Per Wikström.

conflict, as the need to act quickly seems unlikely to be matched by NATO's political and military decision-making during a transition from peace to war.

3.3 Logistics of collective defence

Despite the deterioration of the European security environment in the last 10–15 years, NATO still adheres to a restrictive interpretation of its 1997 unilateral pledge to "carry out its collective defence and other missions by ensuring the necessary interoperability, integration, and capability for reinforcement rather than by additional permanent stationing of substantial combat forces".[44] NATO's force posture on the eastern flank thus consists of a limited forward presence and larger formations supposedly held at readiness for reinforcement operations, should the need arise. As the number of standing units and pre-positioned equipment has decreased since the Cold War, the ability to rapidly deploy forces across long distances has gained importance. This is not an easy feat, as years of out-of-area operations left European military infrastructure, transport assets, and movement planning to whither. Additionally, the distances that reinforcements must travel have increased, as the accession of former Warsaw Pact countries has moved NATO's borders further east.[45]

Military logistics is the movement and maintenance of forces. In NATO, logistic support to operations is a shared responsibility between the Alliance and its members, as none of these entities are capable of delivering the full range of support needed.[46] While NATO's understanding of logistics is broad, this section analyses specifically the Alliance's reinforcement capability. Thus, the focus here is on NATO's capability to move to, and sustain forces in, a *joint operations area* (JOA) in Northern Europe.

Movement to the joint operations area

In the event of crisis or conflict, NATO must move forces to the designated JOA through strategic and operational movement. Strategic movement is the transport of units from their country of origin to a port of debarkation (PoD), usually a seaport, airport, or railhead, in or near the declared joint operations area. Operational movement is the transport of units from the PoD to the area of operations, which is a smaller area within the JOA.[47] The delineation between these types of movement – where in continental Europe strategic movement ends and operational movement begins – is not clear-cut and is likely to differ depending on the situation and what PoDs are used.[48] *Reception, staging, and onward movement* (RSOM) is an important part of operational movement, through which units are received from strategic lift assets, assembled, and organised for onward movement to the area of operations.[49]

44 This pledge, which was linked to being made "in the current and foreseeable security environment", was made unilaterally by the NAC in the context of negotiations on the following: the adaptation of the Treaty on Conventional Armed Forces in Europe (the CFE treaty), the NATO-Russia Founding Act, and the accession to NATO of Poland, the Czech Republic, Slovakia, and Hungary. See Alberque, William, *"Substantial Combat Forces" in the context of NATO-Russia relations* (Rome: NATO Defence College, 2016).

45 Hagström Frisell et al., *Deterrence by reinforcement,* p. 25–26.

46 NATO, *Allied Joint Doctrine for Logistics,* (Brussels NATO Standardization Office 2018), p. 1-1. In detail, logistics is understood as the "design and development, acquisition, storage, movement, distribution, maintenance, evacuation and disposition of materiel; transport of personnel; acquisition, construction, maintenance, operation and disposition of facilities; acquisition or furnishing of services; and medical and health service support".

47 A joint operations area is "a temporary area within a theatre of operations defined by the Supreme Allied Commander Europe, in which a designated joint force commander plans and executes a specific mission at the operational level". An area of operations is "an area within a joint operations area defined by the joint force commander for conducting tactical level operations". See NATO, *Allied Joint Doctrine for the Conduct of Operations, (*Brussels NATO Standardization Office 2019), p. 2–9, LEX-5–LEX-7.

48 For example, whether strategic sealift vessels arrive in Antwerp or Riga. Given Russian long-range precision weapons, the PoDs utilised by reinforcing troops are unlikely, in this report's scenario, to be in or near the joint operations area.

49 Hagström Frisell et al., *Deterrence by reinforcement,* p. 11–12. It should be noted that logistics is a moving (no pun intended) subject. Many concepts (strategic and operational movement, RSOM), while part of NATO's 2018 Logistics Doctrine, have not yet been processed for NATO-agreed status. Furthermore, doctrinal documents will likely be reviewed to conform to NATO's new military strategy.

Table 3.1 Factors influencing movement capacity and efficiency

Areas	Examples
Infrastructure	Airports, ports, railways, roads, inland waterways, bridges
Transport assets	Sealift, airlift, heavy-equipment transporters, railway cars, line haul trucks
Legislation and procedures	Diplomatic clearance timelines, customs procedures, hazardous materiel regulations, force protection regulations
Command, control, and coordination	SHAPE (Allied Movement Coordination Centre), Standing Joint Logistics Support Group, Joint Support and Enabling Command, Joint Force Command Brunssum/Naples/Norfolk, NATO Force Integration Units, member states

NB: This table is not all-encompassing. Other factors influencing movement capacity and efficiency are, for example, having units ready to move, and exercises. For the latter, see Section 3.4.

NATO first referred to a "viable reinforcement strategy" in 2016, when it proposed the establishment of the eFP battlegroups in the Baltics and Poland. In 2018, the Alliance agreed to enhance command and control, legislation, transportation assets, and infrastructure to permit efficient deployment and sustainment of forces across Europe. To achieve this, NATO cooperates with the EU.[50] Table 3.1 summarises the areas involved in the movement of forces and lists important factors influencing the efficiency of movement, also examined below.[51] As much of Western infrastructure and transport assets are nowadays commercially owned and operated, civilian and commercial support to the movement of forces is vital.[52]

Recent reports indicate that the movement of forces from the US and across Europe takes considerable time. In 2019, FOI assessed that moving a US Armored Brigade Combat Team (ABCT), i.e. a heavy brigade including equipment, from the US to Poland takes 6–8 weeks in peacetime conditions. If equipment is drawn from US Army Prepositioned Stocks (APS), it might take about four weeks, including time to ready the equipment at the APS and fine-tuning before operational use. A reduced brigade in Germany on high readiness for the VJTF is expected to need about two weeks to move from home base and reach operational status in Poland.[53] Many obstacles contribute to these timelines.

Infrastructure and transport assets

First, infrastructural limitations include a lack of rail capacity as well as roads, bridges and tunnels that do not support heavy military equipment. These problems are generally more pronounced in countries in Central and Eastern Europe, whose infrastructure was built to handle lighter Soviet equipment. Railway movement to the Baltic states is impeded as they do not use the European standard railway gauge. However, a senior German officer also characterises parts of German infrastructure as "miserable", which suggests that limitations are not confined to the Baltics. Currently, shortages of rail capacity mean that no more than one and a half heavy brigades at a time can move by rail through Europe.[54] In parallel with NATO initiatives, the EU's Action Plan on military mobility and other EU projects aim to promote and, in part, finance dual-use (civil-military) infrastructure projects. However, the agreed-upon future multiannual financial framework within

50 NATO, *Warsaw Summit Communiqué,* 2016, para. 40; and NATO, *Brussels Summit Declaration,* 2018, para. 15–16.

51 For a more substantial review, see Hagström Frisell et al., *Deterrence by reinforcement*, and Hodges, Lawrence and Wojcik, *Until something moves.*

52 NATO, *Allied Joint Doctrine for Logistics,* p. 5–3, 6–3.

53 Hagström Frisell et al., *Deterrence by reinforcement,* p. 41–46.

54 Hodges et al., *Until something moves,* p. 16–17; and Dilianian, Arpi and Howard, Matthew, 'Backbone of deterrence', *Army Sustainment,* January–March 2020, p. 15.

the EU budget cut military mobility funds from the originally proposed EUR 6.5 billion to 1.5 billion.[55]

Second, there is a general lack of transport assets, such as railway cars and heavy-equipment transporters (HETs), and of *host-nation support* (HNS) to facilitate convoy movements, for example military police conducting military escort. The picture is further complicated by the fact that most of these assets are commercially owned and operated in peacetime. In total, the Baltic states can muster 50 HETs, while Germany had six trains on stand-by for moving the VJTF during the year that it was responsible. Additional assets may take several weeks to secure from commercial freight carriers. For perspective, moving a standard US ABCT, which contains some 400 tracked vehicles, requires 17 trains for its heavy equipment with other material carried by road convoys, and relies on Allied reception capabilities and bridging and transport assets.[56]

Moreover, while NATO is heavily dependent on US strategic lift capacity, there are doubts that US sealift capacity – slated for moving about 90 per cent of US wartime cargo – would be available in sufficient quantities for large-scale movement of forces within a reasonable time.[57] While this is not necessary for deployments to reinforce deterrence or initial defence operations, NATO considers even the rapid deployment of a brigade to be challenging. [58]

Air power is likely to be NATO's first response to a crisis or conflict in the Baltic region. Thus, arrangements to ensure rapid deployment and utilisation of air power are vital.[59] This includes basing, ground crews, ammunition, and fuel. However, NATO movement initiatives are primarily land-oriented, with the exception of the Rapid Air Mobility agreement, which is aimed at enabling more efficient airlift.[60] The US is developing a deployable air base system to pre-position in Europe, including billeting, vehicles, repair capabilities, and miscellaneous equipment.[61]

This initiative is illustrative of how the US bilaterally promotes efficient movement in Europe through the European Deterrence Initiative. Under EDI, the US has increased the amount of pre-positioned equipment, and upgraded infrastructure and reception facilities in the Baltics and Poland. In 2019, the US announced plans to establish a forward divisional HQ, an aerial port of debarkation to support movement of forces, and an area support group for RSOM, in Poland. A number of enabling functions such as Intelligence, Surveillance and Reconnaissance (ISR) are also part of the initiative.[62] These steps would seemingly make Poland a suitable staging area for operations in NATO's northeast. As noted in Chapter 2, however, there are Allied concerns regarding the future of EDI and US commitments to Europe, which are amplified by the decreasing budget of the EDI.

Given the lack of capabilities of deploying nations and the lack of host-nation support in transit nations, any deployment would probably result in surging demand for the limited amount of commercial transports available. Furthermore, reliance on commercial and civilian support for logistics, while cost-effective in peacetime, introduces many vulnerabilities in crisis and conflict. Questions linger regarding the reliability of foreign-owned infrastructure and assets and about the ability of commercial infrastructure and transportation companies to remain functional throughout the physical sabotage,

55 European Commission and High Representative of the Union for Foreign Affairs and Security Policy, *Joint Communication to the European Parliament and the Council on the Action Plan on Military Mobility,* 28 March 2018; and European Council, *Special Meeting of the European Council (17, 18, 19, 20 and 21 July 2020) – Conclusions,* 21 July 2020, p. 53.

56 Hodges et al., *Until something moves*, p. 16–17; and Dilianian and Howard, 'Backbone of deterrence', p. 13.

57 Lyons, Stephen R., Statement before the Senate Armed Services Committee Hearing, 25 February 2020, p. 5–6. See also Østensen, Åse Gilje and Ulriksen, Ståle, *Bridging the Atlantic – A Norwegian contribution to US sealift* (Oslo: Norwegian Institute of International Affairs, 2019); and United States Transportation Command, *Comprehensive report for turbo activation 19-plus USTRANSCOM,* 2019, for details on US strategic sealift.

58 Hodges et al., *Until something moves,* p. 8.

59 Brauss, 'The Need for the Alliance to adapt further', p. 139–140.

60 NATO, Rapid Air Mobility, 27 April 2020.

61 Insinna, Valerie, 'US Air Force tests "base in a box" in Poland to prep for future wars', *Defense News*, 26 August 2018.

62 Freedberg Jr., Sydney J., 'Poland deal lays groundwork for division-strength deployment', *Breaking Defense,* 13 June 2019.

cyber-attacks, and general chaos that is likely to accompany a military crisis.[63]

Legislation and procedures

Complicated legislation and regulations regarding diplomatic clearances for border crossings, transport safety standards, and customs procedures further affect movement efficiency. Since 2017, NATO and the EU have joined forces to address this. Allies have set up national Points of Contact for border crossings so as to enable efficient administration and coordination with relevant national ministries: receiving diplomatic clearances should for example take no more than five days.[64]

In general, eastern allies have come further in addressing these issues. Lithuania and Poland grant movement permission within 24 hours and three to five days, respectively, while Estonia grants annual approvals of certain movements, requiring only 24 hours advance notice. However, this excludes combat vehicles, and movements across Germany and Poland remain impeded by the need for coordination between state-level, regional and municipal authorities. Legislative hurdles are probably less of an issue than infrastructural limitations, but may hamper peacetime movements conducted to reinforce deterrence.[65]

While hailed as a flagship cooperation project, reports indicate that the EU's and NATO's infrastructural and legislative efforts suffer from differing aims and a lack of coordination. Partly, the EU's military mobility efforts aim to promote movement *out of* Europe, whereas NATO focusses on enabling movement *to* and *within* Europe. Additionally, EU does not factor in the geostrategic value of project proposals when reviewing future dual-use infrastructure projects.[66]

Command, control and coordination of movement

Currently, the command of NATO logistics is a mix of old and new arrangements, where the relationships and the exact division of labour remain to be resolved. As hinted in Table 3.1, there is an abundance of actors at different levels of the NATO command structure and member states with partly overlapping responsibilities that contribute to coordination issues.[67]

Concomitant with the 2014 Wales summit's decision to create the VJTF, NATO also decided to set up small outfits, called NATO Force Integration Units (NFIUs). Their task in each of their respective territories, is to prepare for the arrival of the VJTF and the NRF follow-on forces as well as their subsequent integration with local forces. Four years later, having realised the increased importance of reinforcement operations and the difficulties involved, NATO also established the two new operational-level logistics commands: JFC Norfolk, responsible for securing transatlantic sea lines of communications, and the JSEC in Ulm, Germany, tasked with securing the rear area of operations, RSOM, and facilitating forward deployments to the JOA.[68] While what constitutes the rear area is dependent on what is the designated JOA, JSEC's location fits well into the emerging pattern of Poland as a staging ground for operations on the eastern flank, with Germany centrally located in the rear area.[69]

JSEC is intended to fill a hole in NATO's command structure. Command over RSOM and logistics in the JOA is to be carried out by the assigned JFC, and each ally has the responsibility of providing for and planning its own movement to the theatre, in coordination with SHAPE. However, there is no clear picture regarding the part in between,

63 Hagström Frisell et al., *Deterrence by reinforcement*, p. 47; and Roepke, Wolf-Diether and Thankey, Hasit, 'Resilience: The first line of defence', *NATO Review,* 27 February 2019.

64 Hagström Frisell et al., *Deterrence by reinforcement*, p. 25–28. Receiving the necessary clearances can take more than 30 days in some countries.

65 Hodges et al., *Until something moves*, p. 13–14.

66 Scaparrotti, Curtis M. and Bell, Colleen B., *Moving out: A comprehensive assessment of European military mobility* (Washington, DC: Atlantic Council, April 2020), p. 20–23, 30; see the full report for an in-depth examination of EU-NATO cooperation.

67 For a full review of the NATO logistics command apparatus, see Hodges et al., *Until something moves*.

68 As noted above, in peacetime these commands are mainly national entities, to be augmented and turned over to NATO in wartime.

69 However, in line with NATO's 360-degree approach to deterrence and defence, JSEC is tasked with rear area enablement all over Europe.

that is, of which entity prioritises movements and conducts RSOM outside the JOA in the rear area of operations. Projected to reach *full operating capability* (FOC) in 2021, JSEC must convince NATO HQs, host nations, and member states of the benefit of sharing all relevant information with JSEC to enable it to coordinate movements and deconflict demands on commercial transportation assets.[70]

JFC Norfolk is different from JSEC in that, while it has a focus on transatlantic transports, it may in future be tasked with leading operations, and has the potential of becoming the equal of JFC Brunssum and Naples. Projected to reach full operational capability (FOC) in the end of 2021, it is more multinational than JSEC, with the American commander and British deputy commander complemented by Danish, Norwegian, and French leadership positions. As it is likely to draw most of its combat resources from the US 2nd Fleet, its efficiency is contingent upon future US ship allocations.[71]

NATO planning is closely related to command and control of movement. NATO has started work on identifying main and alternative supply routes in a European contingency but, as noted in Section 3.1, the level of detail of the GRPs and associated planning varies. Having plans that are more elaborate would alleviate some of the movement issues described above, as this would allow allies to share transport assets while limiting the range of possible destinations, making short-notice contractor support cheaper to uphold.[72]

While the state of affairs may seem problematic, developments since 2017 indicate widespread awareness of deficiencies and efforts to address them. Furthermore, necessity being the mother of invention, it could be that peacetime obstacles prove less insurmountable in crisis or war. However, crisis and war introduce new kinds of friction, such as fear, roads full of civilians fleeing in the opposite direction, and not least enemy action.

Sustaining forces during operations

Since work started on improving NATO's reinforcement capability, most attention has been paid to NATO's capability to move forces. The Alliance's capability to sustain the forces deployed is less clear. Although this section does not aim to provide an exhaustive answer to the question of NATO's sustainment capability, it does seek to analyse some of the needs and capabilities involved.

To NATO, sustainment includes "the sustenance and moral well-being of troops, the maintenance of materiel, the provision of expendable commodities and the treatment of casualties and replacement of personnel".[73] The support needed is contingent upon the type of deployment, but always substantial. During Exercise Trident Juncture 18, Norway provided deploying units with some 35,000 beds, 1.8 million meals, 50 camps, and 4.6 million bottles of water. Norway relied on commercial partners to deliver these services, at a cost of some USD 184 million.[74] In addition to such consumables, deployed forces need ammunition, fuel, maintenance, et cetera.

Thus, the support from host nations to sustainment is crucial, especially as it allows deploying allies to prioritise sending combat units and reduce the dependence on accompanying support. As logistics, HNS is a responsibility shared between NATO and member states, making cooperation and coordination vital. Ultimately, each nation is responsible for supporting its forces, but host nations have a

70 Hodges et al., *Until something moves,* p. 21. The assigned JFC's Joint Logistics Support Group (JLSG) will exercise logistics command in the JOA. As a JLSG must be augmented with additional posts in a crisis, the VJTF may be ready to move before a JLSG is operational. Thus, NATO created the Standing Joint Logistics Support Group (SJLSG) under SHAPE, nowadays co-located with JSEC, to execute logistics command for the VJTF if a JFC JLSG is not yet operational. The SJLSG is furthermore tasked with continuous preparations, enablement and coordination related to rapid reinforcement and sustainment. Notably, these tasks border on those of JSEC. Representatives acknowledge that the exact delineation remains to be seen, but (metaphorically) clarifies that JSEC will "build pipelines" and the SJLSG will determine what goes in them. The co-location of the headquarters will likely help this. See Boeke, Sergei, 'Creating a secure and functional rear area: NATO's new JSEC headquarters', *NATO Review,* 13 January 2020; and NATO, *Allied Joint Doctrine for Logistics*, p. A-4–A-5.

71 Shelbourne, Mallory 'Joint Force Command Norfolk reaches initial operational capability', *US Naval Institute News,* 17 September 2020; and McLeary, Paul, 'As Navy mulls ship cuts, new 2nd Fleet opens for business' *Breaking Defense,* 31 December 2019.

72 Fortune, Tom, 'Meeting the Enhanced NATO Response Force (ENRF) readiness requirement', *Allied Rapid Reaction Corps Journal*, June 2016, p. 26. Obviously, an adversary has a say in the possible destinations, but such unknowns are part of planning.

73 NATO, *Allied Joint Doctrine for Logistics*, p. 4–1.

74 Norwegian Armed Forces, *Facts and information: Exercise Trident Juncture 2018 (TRJE18),* 2018, p. 3.

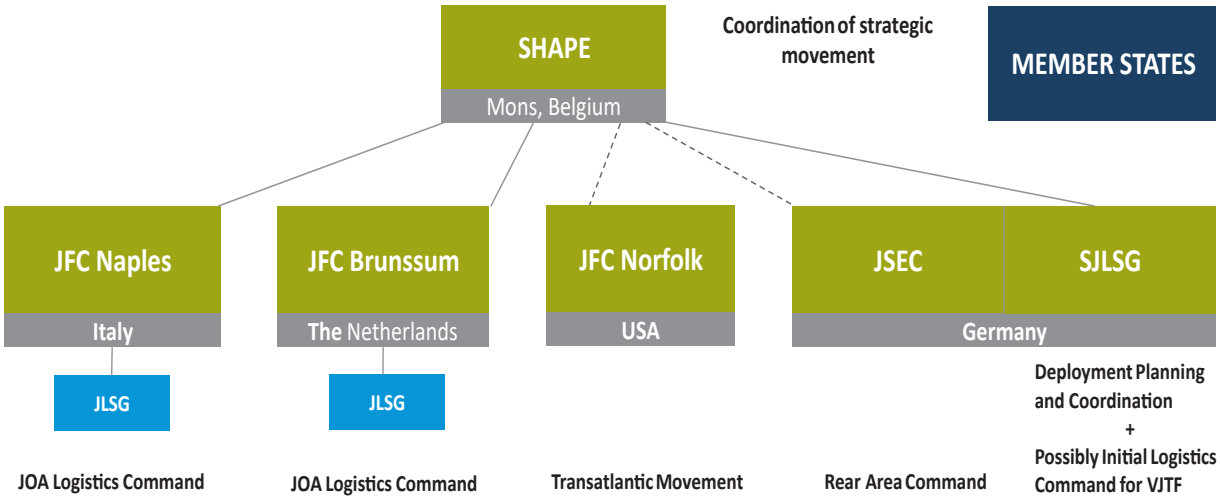


Figure 3.2 NATO Movement and Logistics Command and Control

clear interest in easing deployment to their territories. However, in order to prepare for HNS, the host nations and the NFIUs need data on the units that are planned to deploy and their needs. The layered approach to advance planning allows the VJTF to clearly state its HNS needs, although these may vary between years as a new ally assumes responsibility for the VTJF. However, the requirements for follow-on forces seem more sketchy. The Baltic states have invested in their HNS capabilities, which they regularly exercise, but as allied forces do not participate in these exercises to the extent needed, shortfalls and gaps remain unidentified.[75] In their national planning, it is likely that, in the absence of detailed advance planning for follow-on-forces, the clear requirements of the VJTF and the everyday lessons drawn from hosting eFP battlegroups take precedence over preparations for more abstract larger-scale reinforcements.

In a crisis, initial deployments would probably aim to reinforce deterrence and, therefore, to give priority to combat units. This should place large demands on the few logistics and sustainment resources already in theatre. Apart from European allies' national forces, the US 21st Theater Sustainment Command, with its 16th Sustainment Brigade and a rotational Sustainment Task Force of 900 personnel, make up most of this capacity. Furthermore, three battalions of the Europe-based US 405th Army Field Support Brigade provide support to permanent and rotating units, and maintain *army prepositioned stocks* (APS).

Since 2017, the APS, which are bilateral initiatives between the US and the respective host nation, have increased from one to several locations. In 2020, APS in Europe held equipment for an ABCT, an artillery brigade, and a sustainment brigade in Germany, the Netherlands and Belgium. Current plans include new locations, for example in Poland, and expanding stocks to hold equipment for a whole division within two-three years.[76]

If the Baltic scenario known as "SACEUR's nightmare" were to play out, units already deployed to the region – national forces, eFP battlegroups, US forces – and possible high-readiness reinforcements, such as the VJTF and US airborne units,

75 NATO, *Allied Joint Doctrine for Host Nation Support,* (Brussels NATO Standardization Office 2013), p. 1-1 – 1-2; and Hodges et al., *Until something moves,* p. 24–25.

76 McDonald, Jacob A., 'Ribbon cut on second prepositioned equipment site', US Army, 12 May 2017; and 405th Army Field Support Brigade, 'Welcome to Army Field Support Battalion – Benelux', US Army; and Szopa, Maciej and Palowski, Jakub, 'US Army to preposition heavy armour in Poland: Another stage begins', *Defence24*, 9 June 2020. The ABCT equipment destined for Poland is currently held in Mannheim, Germany. See United States Army Sustainment Command, '405th Army Field Support Battalion – Mannheim', The APS in Poland, however, is NATO-funded.

would likely constitute NATO's first response on the ground.[77] If the Suwalki gap is then closed, they would have to rely on HNS, prepositioned resources, and airlift for sustainment. How long before these units run out of fuel or ammunition? US exercises and simulations indicate that "ammunition expenditures are off the charts" and analysts have called for the US to preposition munitions and sustainment stocks for 30 days of combat, suggesting that this is currently not the case.[78] In 2018, Gus Perna, then Commander of US Army Materiel Command, claimed that the reliance on contractors for sustainment during the Afghanistan and Iraq deployments atrophied US sustainment skills. [79] It could be that the inability to resupply and maintain these forces constitutes a bigger problem than the inability to rapidly deploy additional combat units.[80]

3.4 Exercises

In recent years, the importance of military exercises for Western countries has increased. NATO's exercise pattern was already beginning to change before 2014, as a result of a desire to maintain interoperability as operations in Afghanistan were drawing down.[81] Following Russia's attack on Ukraine, this took on a new urgency. At NATO's 2014 Wales summit, the Alliance decided to increase the number and change the character of exercises. Consequently, from 2014 to 2015, the number of exercises across the Alliance almost doubled; this new level was maintained until 2019. Several large-scale exercises were planned for 2020, but many were curtailed or cancelled due to the Covid-19 pandemic.[82]

Military exercises contribute to deterrence through signalling. They also build and enhance military capabilities.[83] With regard to Europe, to what extent have military exercises contributed to the West's deterrence of Russia and the capability to withstand an attack from it? To answer that question, this section discusses the progress and shortcomings of the Western exercise regime, structured according to five features: signalling, a reorientation of exercises towards high-intensity warfare, the dominance of land exercises, progression through process, and logistics and military mobility. Lastly, we suggest probable developments in coming years.

Deterrence and reassurance signalling

In the aftermath of Russia's illegal annexation of Crimea, military exercises became an important element of the reassurance and deterrence measures that NATO and the US implemented in Europe. Consequently, from 2014 to 2015, the number of exercises scheduled and led by NATO (NATO exercises), and exercises led by individual member states but supported by NATO (NATO-associated exercises), increased from 155 to 297.[84] From 2015, approximately 300 NATO and NATO-associated

77 The US combat unit presence in Europe currently consists of two brigades (one light, in Germany; one airborne, in Italy), and a Combat Aviation Brigade (CAB), in Germany. This is augmented by rotational deployments of an ABCT and an additional CAB. See Hagström Frisell et al., *Deterrence by reinforcement,* p. 35–36. For a full list of US military units in Europe, also including combat support, combat service support, air, and naval units, see Part II of this report.

78 Dilianian and Howard, 'Backbone of deterrence', 14; and Fabian, Billy, Gunzinger, Mark, van Tol, Jan, Cohn, Jacob, and Evans, Gillian, *Strengthening the defense of NATO's eastern frontier,* Center for Strategic and Budgetary Assessments*, 2019*, p. 40. As for the eFP battlegroups, recent calls to augment them with combat support and combat service support units might indicate that they, in their current configurations, would require substantial support. See Brauss, Stoicescu and Lawrence, *Capability and resolve,* p. 16.

79 Perna, Gustave, 'Transcript – Defense Writers Group', *Center for Media & Security,* 2018, p. 12.

80 However, sustainment articles may arrive more quickly than additional combat units, as planners may be less reluctant to use Baltic ports vulnerable to long-range precision weapons for ships carrying consumables than combat units. Nevertheless, using Baltic ports would unlikely alter timelines enough to affect this scenario.

81 Steadfast Jazz, in 2013, was the largest field exercise with an Article 5 scenario since 2006.

82 The US military suspended some exercises in March 2020; see Myers, Meghann, 'The military has suspended all travel, deployments, exercises for the entire force', *Military Times*, 25 March 2020; Snow, Shawn, 'Major maritime exercises in the Baltic region could be scaled back due to COVID-19', *Military Times,* 16 April 2020; 'NATO holds Spring Storm exercise in Estonia', *Shephard Media*, 11 May 2020; and Danilov, Peter Bakkemo 'Cold Response 2020 cancelled', *High North News*, 11 March 2020.

83 For more on the purposes of exercises, see Heuser, Beatrice, Heier, Tormod and Lasconjarias, Guillaume (eds.), *Military exercises: Political messaging and strategic impact*, NDC Forum Paper Series 26, (Rome: NATO Defence College, 2018); and Krepinevich, Andrew F. *Lighting the path ahead: Field exercises and transformation* (Washington, DC: Center for Strategic and Budgetary Assessments, 2002).

84 Western countries conduct many military exercises. These vary significantly in terms of location, scale, and focus, which presents methodological challenges. These challenges are more thoroughly explained in Aronsson, Albin and Ottosson, Björn, *Västlig militär övningsverksamhet 2014–2019: Anpassning, utveckling och framsteg,* FOI-R--4875--SE (Stockholm: Swedish Defence Research Agency – FOI, 2020).

exercises are conducted annually.[85] Although these numbers may appear impressive, the increase is mostly due to an increase in the number of NATO-associated exercises. When member states lead the exercises, the Alliance's command and control (C2) functions are not in charge. Thus, the Alliance's command structures are not exercised to the extent the aggregate numbers may suggest.

The number of large exercises, here defined as involving 7,000 participants or more, have risen to 3–5 annually and, although few, this represents a step forward.[86] The geographical location of exercises has also contributed to deterrence signalling, with the number of "key exercises" conducted in Northern Europe having increased from 8 to 12 from 2015 to 2019.[87] The number of Alliance members participating in exercises has also increased since 2014. For instance, in Trident Juncture 18, all NATO members and some partner countries participated.

The increased frequency and scale of exercises appear to have improved the sense of security of the most vulnerable Alliance members. Exercises have also contributed to an increased sense of shared purpose among Europe's armed forces.

However, the Alliance suffers from internal disagreements on Russia, and this has occasionally resulted in incoherent signalling.[88] For instance, in the lead-up to exercise Anakonda 2016, Germany expressed that it considered the exercise unnecessarily provocative, and worked to reduce the exercise's scope. [89] More often, the members' differing positions are more subtly expressed, but this nevertheless contributes to undermining the message of unity and resolve that exercises are meant to send.[90]Apart from deterrence signalling, Alliance military exercises are also used to reassure the political leaders of member states about the capability of their armed forces.

At times, the requirements of signalling and of capability development may conflict with each other. It is important to signal reassurance and deterrence through exercises, as an instrument of strategic communication, but if an exercise does not go well, this risks undermining the message of capability. Nonetheless, if improving combat capability is considered paramount, the involved forces ought to be allowed to take risks, or fail, and not only "play safe". Whereas, descriptions of success are often required at the political and strategic levels, hard tests of capabilities including failures are also necessary in order to make the most of the exercises.

Reorientation towards high-intensity warfare

Prior to 2014, the primary aim of Western exercises was to ready forces for low-intensity operations against not-state adversaries, for example in Afghanistan, and the deployed Western forces eventually attained considerable prowess for such conflicts. Considerably different military capabilities are needed for high-intensity operations against peer competitors. For instance, in "war amongst the people", riot- and population control as well as patrols in remote areas are often essential.[91] For high-intensity operations, capabilities such as armoured warfare, air defence, and anti-submarine warfare are more important.[92] Thus, although many Western military units gained important experience from operations such as in Afghanistan, the lessons learned from them are only partially beneficial when confronting the military challenges in Europe.

85 See NATO Public Diplomacy Division, 'Key NATO and Allied exercises,' Fact Sheet, October 2015; NATO, 'Key NATO and Allied exercises', July 2016; idem, May 2017; NATO Public Diplomacy Division, 'Key NATO and Allied exercises in 2018', Fact Sheet, June 2018; NATO Public Diplomacy Division, 'Key NATO and Allied exercises in 2019', Fact Sheet, February 2019. For 2019, the NATO Secretary General's Annual Report states that 185 NATO and NATO-associated exercises were conducted, but this conflicts with the number of exercises announced in the 2019 Fact Sheet of key NATO and Allied exercises; see NATO, *The Secretary General's Annual Report 2019,* 19 March 2020.

86 Aronsson and Ottosson, *Västlig militär övningsverksamhet 2014–2019,* p. 23.

87 NATO annually publishes what it calls "key exercises". These exercises appear to be chosen on the basis of factors such as signalling, variation in capabilities exercised, and geographical focus.

88 Recent research also shows the trend is moving towards greater threat perception diversity among NATO's members. Becker, Jordan and Bell, Robert, 'Defence planning in the fog of peace: The transatlantic currency conversion conundrum', *European Security*, 2020.

89 Judson, Jen and Sprenger, Sebastian, 'Why NATO didn't fly its flag at Anakonda', *Defense News,* 17 July 2016.

90 Aronsson and Ottosson, *Västlig militär övningsverksamhet 2014-2019,* p. 46.

91 For "War amongst the people", see Smith, Rupert, *The utility of force: The art of war in the modern world* (London: Vintage, 2008).

92 This is elaborated on in Aronsson and Ottosson, *Västlig militär övningsverksamhet 2014–2019*.

The majority of exercises post-2014 have focused on high-intensity warfare against a near-peer competitor.[93] In particular, larger exercises are now based around Article 5 scenarios, meaning that participating forces train to defend their own or other member states' physical, or virtual, territory.[94]

The shift towards Article 5 scenarios means that a number of advanced capabilities, which for a long time had lower priority, have now taken centre-stage. On land, exercises regularly contain significant artillery elements as well as armoured manoeuvre and combat, demonstrated in exercises such as the Polish-led Anakonda and NATO-led Trident Juncture 18. Advanced air defence is trained in exercises such as the Tobruq Legacy series. Naval exercises for submarine and anti-submarine warfare are now common, as demonstrated in exercises such as Dynamic Manta and Dynamic Mongoose. Large exercises are now increasingly joint in character, as the Alliance's 2018 Trident Juncture showed.[95]

However, there are limits to the reorientation from low- to high-intensity operations, and important aspects of the exercises need development.[96]

First, since 2014, NATO and the member states have conducted few large-scale field exercises.[97] Large-scale exercises increase the complexity and the requirements for command and control, logistics and interoperability. Additionally, if exercises in peacetime constitute some indication of what armed forces will be able to do in wartime, it is significant that Russia has conducted many more large-scale exercises than NATO in the last decade.[98]

Second, some exercises have become burdened by overambitious goals, including the demand for success stories.[99] Those who plan and prepare exercises need to strike a balance between two conflicting aims. On the one hand, planners want to ensure that as many units as possible are continually active in the exercise: this leads to exercises that are tightly scripted.[100] On the other hand, overly scripted exercises run the risk of both having a negative impact on the ability of commanders and units to handle uncertainty and reducing their creativity. Awareness of this issue has led planners to try to increase elements of "free-play" in exercises.[101]

A further and notable point is that the Alliance does not seem to have conducted any exercises at short- or no-notice, nor at the military-strategic and political levels. Exercises of this sort would not only be particularly valuable for a quick military response, but also for political leaders, and might contribute substantially to the Alliance's ability to respond to crises in time.[102]

Progression through process

To ensure progression in exercises, the Alliance has improved how it plans, conducts and evaluates them. In the studied period, NATO's Joint Warfare Centre (JWC) has played an important role in developing new scenarios, such as an Article 5-based scenario used during Trident Juncture 18.[103] The JWC also has an important role in training commanders by organising command-post exercises (CPX), which often are conducted at a higher command level than field exercises. The CPXs also often include larger formations than the field exercises conducted. This is important, as it suggests that NATO's and at least some member states' ability to command and

93 Ibid., p. 42.

94 Virtual territory refers to cyber, or command post, exercises.

95 Aronsson and Ottosson, *Västlig militär övningsverksamhet 2014–2019,* p. 33–41.

96 Greenwood, Tom and Daniels, Owen, 'The Pentagon should train for – not just talk about – great-power competition', *War on the Rocks,* 8 May 2020; and Hill, Jonathan, 'NATO – ready for anything?' *NATO Review,* 24 January 2019.

97 Aronsson and Ottosson, *Västlig militär övningsverksamhet 2014–2019,* p. 53.

98 Norberg, Johan, *Training for war: Russia's strategic military exercises 2009–2017*, FOI-R--4627--SE (Stockholm: Swedish Defence Research Agency–FOI, 2018). As Andrew Marshall points out, military capability can only be assessed accurately in relation to the threat it is supposed to address; see Marshall, Andrew, *Problems of estimating military power* (Santa Monica, CA: RAND, 1966).

99 Aronsson and Ottosson, *Västlig militär övningsverksamhet 2014–2019,* p. 47.

100 Planners may also wish to script exercises closely to reduce the risk of accidents.

101 Ekstein, Megan, 'Baltops 2018 continues emphasis on air-sea integration, complex free-play phase', U.S. Naval Institute, 6 August 2018; Nordenman, Magnus, 'NATO and U.S. Baltic Sea exercises highlight ongoing tensions with Russian forces', U.S. Naval Institute, 7 July 2017; and Aronsson and Ottosson, *Västlig militär övningsverksamhet 2014–2019,* p. 46–47.

102 Brauss, Stoicescu and Lawrence, *Capability and Resolve,* p. 17.

103 A scenario called OCASSUS.

Figure 3.3 NATO and allied national exercises 2014—2019

Source: Aronsson, Albin and Ottosson, Björn, *Västlig militär övningsverksamhet 2014–2019: Anpassning, utveckling och framsteg,* FOI-R--4875--SE (Stockholm: Swedish Defence Research Agency – FOI, 2020).

NB: NATO reports on the number of exercises differs between 2014 and 2015-2019. Official documents claim that 115 exercises were carried out across the Alliance in 2014.

control larger formations may be better than the comparatively small field exercises that have been conducted would suggest.[104]

After an exercise, several reports are written; these then constitute a plan of action to remedy any shortcomings identified in an exercise.[105] Partly because of the planning and evaluation procedures, exercises have become more sophisticated and demanding. Ideally, lessons are learned and implemented in coming exercises, but in reality this is not always the case.[106] Thus, although it may be reassuring that mechanisms are in place to identify problems and gather lessons from exercises, these processes are not a guarantee that the lessons will be remembered and implemented.[107]

Insufficient air and naval exercises

Although some major exercises, such as Trident Juncture 18, have been conducted jointly, during the studied period NATO and its members have largely focused on land exercises, as demonstrated by exercises such as Saber Strike, Anakonda, and Cold Response.[108] However, the result of this focus has been that air and naval exercises, at least live exercises at scale, appear to have been given lower priority. If so, this would be problematic, as much of NATO's

104 Aronsson and Ottosson, *Västlig militär övningsverksamhet 2014–2019,* p. 28.

105 Lessons Identified Action Plan (LIAP).

106 On the EU and lessons learned: Minard, Pierre, 'Does practise make perfect? The mechanisms of lesson learning in CSDP military training missions', *Studia Diplomatica,* vol. 68, no. 4, 2017: p. 79–94.

107 The authors thank Johan Norberg (FOI) for a useful discussion on this point.

108 A noteworthy exception is the exercise series, Trident Juncture, which is conducted jointly (all services). Read more in Aronsson and Ottosson, *Västlig militär övningsverksamhet 2014–2019,* p. 33–37.

collective capability resides in the naval and the air forces.[109] Also, because of NATO's numerical and qualitative edge in air and sea power, Russia would have a strong interest in reducing or incapacitating NATO's capabilities in those domains early on in a conflict. Thus, whilst NATO holds a potentially significant advantage in air and naval assets, the Alliance does not appear to be training sufficiently at scale to protect and use that advantage in a conflict.

To remedy this situation, more large-scale air-defence and ground-attack exercises would need to be conducted.[110] The people manning air and naval platforms, and maintaining air and naval bases, would need to be further exposed to the simulated tempo and threat of high-intensity conflict.

In sum, the current focus on land exercises risks diminishing the advantages in air and naval power held by NATO countries, whilst also providing Russia with another reason to doubt the Alliance's commitment to preparing for high-intensity conflict.

Shortcomings in logistics and military mobility

Given NATO's small force posture in Europe's northeast, any effective defence of this area would depend on the timely arrival of reinforcements.[111] The exercises' shortcomings in those areas are therefore noteworthy.

In general, logistics have not been properly integrated into many exercises. The work of delivering personnel and equipment to the field exercise is handled in advance, according to peacetime procedures.[112] Furthermore, the logistics chains for sustaining forces during combat are seldom tested at realistic scale during exercises. Often, HNS functions have not been stress-tested.[113] For providing assistance to allies in need, these functions are crucial and must work as intended at short-notice. Nevertheless, Exercise Trident Juncture 18, in Norway, saw the testing of large-scale reinforcement, logistics, and sustainment.[114] In 2019, to take advantage of their rotation of their eFP contingent in Estonia, Britain turned the movement of 800 troops and 200 pieces of equipment via air, land, and sea into an exercise and a strategic communications vehicle.[115] The US-led exercise Defender Europe 2020 was to be a large-scale test of RSOM, HNS, and mobility. The exercise was eventually curtailed due to Covid-19, but not before the US Navy had already managed to move 6,000 troops and 9,000 pieces of equipment across the Atlantic to Europe.[116]

Future outlook

At present, the most important factor affecting the West's exercise schedule, with many cancelled events 2020–2021, is of course the Covid-19 pandemic. Given a gradual resumption of normal activities during 2021, the negative effects on capabilities and readiness will probably stay rather minor. A graver and more long-term problem may be the effect of the pandemic on funding for exercises as well as for defence in general. However, it seems early to draw any conclusions.

Several things will be worth observing in coming years. The new NATO Allied Joint Force Command in Norfolk will probably serve as command for exercises focused on bringing reinforcements across the Atlantic to the European theatre.[117]

Exercise Steadfast Defender is currently planned for 2021. Approximately 10,000 soldiers and 1,100 armoured vehicles will arrive in Europe from the US. The logistics required to accommodate such large-scale movement will put pressure on European infrastructure; this will probably render useful lessons and

109 Dalsjö, Robert. *Västliga fjärrstridskrafter,* FOI-R--4798--SE (Stockholm: Swedish Defence Research Agency – FOI, 2019). The Baltops exercise series is an exception to this general pattern of land focus. The numbers of participating forces and naval vessels have grown since 2014.

110 Hodges, Lawrence and Wojcik, *Until something moves,* p. 7; Hodges, Ben, 'Deterring Russia on NATO's eastern flank', in Jonsson and Dalsjö, *Beyond bursting bubbles,* p. 190–191.

111 This has been shown in several reports; see Hagström Frisell (et al.), *Deterrence by reinforcement;* Hodges, Lawrence and Wojcik, *Until something moves.*

112 Aronsson and Ottosson, *Västlig militär övningsverksamhet 2014–2019,* p. 47; Hagström Frisell (et al.), *Deterrence by reinforcement.*

113 Hodges, Lawrence and Wojcik, *Until something moves,* p. 27.

114 Norwegian Armed Forces, 'Facts and information – Exercise Trident Juncture 18', p. 22.

115 'Tractable exercise comes to an end in Estonia', *ERR News,* 5 May 2019.

116 Judson, Jen 'COVID-19 dampens European exercise, but US Army chief says all is not lost', *Defense News,* 18 March 2020.

117 NATO uses a naming convention for its exercises, indicating which command and which focus an exercise has. JFC Norfolk has been given a letter to indicate when it is leading an exercise; see NATO, 'Exercises', updated 1 July 2019.

reveal areas that are in need of improvement.[118] Given the curtailment of Defender Europe 2020, Steadfast Defender might be reinforced in order to compensate for the lessons not learned from the previous exercise.

Currently, NATO's long-term exercise planning indicates that the reorientation towards high-intensity warfare will continue, but whether NATO continues to expand its exercises, and address their shortcomings, will depend mainly on whether the perception of an urgent threat can be maintained.[119] Systemic factors, such as geopolitical rivalry and the need to test and demonstrate new military technology, suggest that exercises might become more frequent in the future, but, at the end of the day, as NATO adapts, or not, so will its exercises.[120]

3.5 Conclusions

So, how well do NATO preparations with respect to strategy, planning, command and control, logistics, and exercises support collective defence in Northern Europe? It can clearly be said that progress has been made, but NATO still seems to be focussing on strengthening its capability to deter a Russian attack on northeastern Europe, rather than on building a capability to defend against it.[121] The scanty order of battle and the reliance on trip-wires, as well as the state of planning and other preparations, suggest that either the Alliance's focus is on meeting an Article 4, rather than an Article 5, situation, or it is assuming there will be an extended grace period in which deficiencies can be rectified.[122]

The uncertainty concerning the chain of command for the defence of Alliance territory is illustrative of the current preparedness. As the chain of command is currently configured, there is no pre-designated HQ responsible for leading land operations or joint operations in defence of northeastern Europe. Thus, in case of a serious crisis or conflict, it seems likely that the first response of the allies and the Alliance would be handled by national command structures, by coalitions of the willing and by the corps HQ and the JFC designated as responsible for the VJTF/NRF. But if the crisis runs on and NATO is properly engaged, it seems likely that NATO-command responsibilities will be transferred to JFC Brunssum and, under that, to HQ MNC NE, at least for land operations. Although the execution of air and naval operations could be entrusted to AIRCOM and MARCOM, respectively, and these may be subordinated to JFC Brunssum, there is still a lack of a joint headquarters to coordinate land, air, and sea operations in the area of operations.

While the implementation of NATO's strategy of deterrence by reinforcement still suffers from considerable weaknesses, the situation has improved. Large-scale movement of troops under peacetime conditions has been undertaken in exercises such as Anakonda and Trident Juncture. Together with reported progress on readiness within the NRI, especially the land component, this signal that substance is being added to the strategy of deterrence by reinforcement. However, there are no signs of improvement concerning the capacity for sustaining forward-deployed forces beyond HNS, which may prove a weakness in case of war, and there is a notable lack of snap exercises, large-scale field exercises, and major air-to-ground exercises.

The divide between allies who prefer to rely on deterrence, which is cheaper but riskier, and those who advocate that NATO should be capable of defending its members is almost as old as the Alliance itself.[123] During the Cold War, NATO's deterrence was anchored in the American nuclear umbrella and buttressed by an increasingly robust forward posture in Germany. Today, however, NATO lacks a forward posture for defence. This, of course, raises the question of how credible NATO's deterrence in Northern Europe really is.

118 'Ranghoher Nato General kritisiert deutsche infrastruktur', *Welt,* 15 May 2019.

119 *NATO, Allied Command Transformation (2019), NATO Military Training and Exercise Program (MTEP) 2021–2025,* 23 September 2019.

120 Montgomery, Evan Braden, 'Signals of strength: Capability demonstrations and perceptions of military power', *Journal of Strategic Studies,* vol. 43, no. 2, 2020: p. 309–330. On NATO adaptation, also see Johnston, Seth, *How NATO adapts: Strategy and organisation in the Atlantic Alliance since 1950* (Baltimore: Johns Hopkins University Press, 2017).

121 Cf, Hagström Frisell, *Deterrence by reinforcement,* Chapter 4.

122 There is currently reason to doubt whether NATO has an executable plan for the defence of the Baltic States and/or Poland against a short notice Russian attack, although such a plan may exist in US EUCOM.

123 Liddell Hart, Basil, *Deterrent or defence: A fresh look at the West's military position* (New York: Praeger, 1960); and Schwartz, David, *NATO's nuclear dilemmas* (Washington, DC: Brookings, 1983). Old-timers can recall the German mantra of "We want deterrence and the Harmel report".

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4. Fighting power in Northern Europe

Krister Pallin

This chapter addresses the impact of military policy and doctrine and of available forces on fighting power and, in turn, the force balance in the event of conflict. The ability of any actor to use, or threaten to use, force to achieve a desired outcome in a fight against an adversary is dependent on their will, their understanding and their available means. Together, these determine an actor's military effectiveness – the fighting power – and represent, respectively, its three interrelated components: i.e. the moral, the conceptual and the physical ditto, which are also three of the essential perspectives in a model for net assessment.[1]

This chapter begins with an overview of the conceptual component – the moral aspects being excluded from the study, as described in Chapter 1 – of NATO and Russian fighting power in the light of current challenges. The conceptual component must provide a framework of general knowledge and guidance on the military trade, the tasks, the tools and how to operate. It must also provide specific and prescriptive instructions through plans, directives and orders, in response to changing circumstances, but also for the direction of operations. In other words, this includes both doctrine and policy at different levels of command. Whereas the use of and extent of formal doctrine and policy varies between countries and organisations, they always exist in some form and complement each other. Our focus here is doctrine in a wide sense and this includes overarching direction which may be denoted formally as policy.[2]

This is followed by description and assessment of some essential aspects of the physical component of NATO and Russian fighting power, i.e. the means to fight, essentially the "forces", with manpower, equipment and infrastructure, including their characteristics and properties regarding performance, readiness, sustainability, etc. The assessment includes the overall force balance, readiness and relevance for a conflict on the eastern flank, as well as force composition.

Finally, a discussion follows on the all-important context for the exercise of fighting power, i.e. possible conflict situations. This includes a broad perspective of NATO's eastern flank, with several geographical directions often connected to each other in case of conflict. In addition, the possible objectives for aggression and considerations for ensuring its success must be addressed in order to assess the relevance of the actors' fighting power.

4.1 NATO and Western military policy and doctrine

Emergent strategy for collective defence

The meaning of NATO's collective defence was more obvious during the Cold War in terms of ends, ways and means, expressed in well-developed concepts, planning, organisation and exercises. With a different international political and military order, and rather recently perceived threats from Russia in Europe and China in Asia, this is not the case any more. As described in Chapter 3, the Alliance struggles with a now dated strategic concept from 2010, which includes describing Russia as a strategic partner and little direction for collective defence.[3] Instead, there is now an evolvement of lower-level direction in the form of a military strategy and of a concept for deterrence and defence of the Euro-Atlantic Area, as well as of multilateral, bilateral

1 See, e.g., NATO, *AJP-01 Allied Joint Doctrine* (Brussels: NATO Standardization Office, 2017), p. 1:16–17.

2 For a similar description of the relationship between doctrine and policy, see, e.g. NATO, *AJP-01*, p. 1:1–2.

3 NATO, *Strategic concept for the defence and security of the members of the North Atlantic Treaty Organization,* NATO Summit in Lisbon, 19–20 November 2010, p. 29–30. Contrary to the intuition of many observers, the strategic concept actually has more the character of doctrine than policy, and is described by NATO as "The Strategic Concept . . . outlines NATO's enduring purpose and nature, and its fundamental security tasks. It also identifies the central features of the new security environment, specifies the elements of the Alliance's approach to security and provides guidelines for the adaptation of its military forces".

and national operational planning. This has often been the case in the Alliance's history, with the strategic concepts later confirming agreement and already-begun practice. Prime examples are the development of extended American nuclear deterrence and a more forward defence posture from the early 1960s, before approval of *Flexible Response*, MC 14/3, in 1968 and, much later, of peace enforcement operations, before the 1999 Strategic Concept established NATO's role in crisis management.[4]

As has been noted, we do not know the complete content of the newly developed military strategy and concept or of the operational planning. In addition, Allied joint doctrine is occupied with principles, processes and standards – rather than how to win wars and battles in the fight against an enemy.[5] So how would the Alliance fight a high-intensity conflict in terms of military strategy, operational art and tactics? Effective strategy-making – in its general term – must include not only secret high-level documents, but also their implementation through the Alliance and national armed forces, by further agreements, planning, force posture and activities.[6] With strategic direction under development and an absence of common warfighting doctrine, the best clues to NATO strategy for collective defence are probably the concrete and open measures taken since 2014.[7]

These include improved decision-making and direction of operations, better and graduated availability of forces, and enhanced ability to give military assistance to threatened member states as well as strengthening of national defences. The current military strategy for collective defence in the east – from Norway in the north to Bulgaria in the south – is based on dealing with smaller incursions with a limited forward presence and, in case of large-scale attacks, blocking enemy victory until reinforcements arrive. The objective is then to further deny enemy success with quick-reaction forces and then, if needed, reverse the situation and restore the integrity of the attacked member states with follow-on-forces. The logic of both the deterrence and defence is to signal commitment to an adversary and demonstrate the necessary capability to follow through, if needed, with nuclear assets.[8]

Deterrence and defence against a range of threats

Today's NATO strategy-making partly faces a situation similar to the early Cold War. In the first strategic concept in 1950, the emphasis was on deterrence rather than defence, emphasising inferiority in ground forces vis-à-vis the Soviet Union and as a consequence heavy reliance on strategic bombing and US nuclear capabilities. With limited political will and resources to strengthen NATO's conventional forces, this policy was confirmed through the 1950s, culminating in the third strategic concept, MC 14/2, which in 1958 introduced *Massive Retaliation*.[9] In parallel, the Alliance had adopted a concept of "forward strategy/defence", which meant that NATO wanted to place its forces and to hold the enemy as far to the east in Germany as possible.[10] This put further and, at the time, unrealistic demands on conventional defence.

4 See, e.g., Ruiz Palmer, Diego A., *A strategic odyssey: Constancy of purpose and strategy-making in NATO, 1949–2019* (Rome: NATO Defence College, Research Division, 2019), p. 5; and NATO, 'Strategic concepts', 2020.

5 See, e.g., NATO, *AJP-01*; some observers also claim an erosion of previously successful standardisation through doctrine. See, e.g. Hill, Jonathan, 'NATO – Ready for anything?' *NATO Review*, 24 January 2019.

6 Ruiz Palmer, *A strategic odyssey,* p. 1

7 See, e.g., Broeks, J., *The necessary adaptation of NATO's military instrument of power,* NDC Policy Brief (Rome: NATO Defence College, June 2019); and Brauss, H., *NATO beyond 70: Reviving a culture of readiness* (Tallinn: International Centre for Defence and Security, 2018). With respect to decision-making and strategy in NATO in recent years, see Ruiz Palmer, *A strategic odyssey,* p. 93–94.

8 For overarching policy, see, e.g., NATO, *Brussels Declaration on Transatlantic Security and Solidarity,* July 2018. For a discussion of deterrence and the role of reinforcement, see, e.g., Hagström Frisell, Eva (ed.), Dalsjö, Robert, Gustafsson, Jakob and Rydqvist, John, *Deterrence by reinforcement – the strengths and weaknesses of NATO's evolving defence strategy,* FOI-R--4843--SE (Stockholm: Swedish Defence Research Agency – FOI, 2019), p. 49–53.

9 NATO, 'Strategic concepts'; NATO, *D.C. 6/1 – Note by the Secretary to the North Atlantic Defence Committee on the Strategic Concept for the Defense of the North Atlantic Area*, in NATO Strategy Documents 1949–1969 (Brussels: NATO, 1 December 1949); NATO, *North Atlantic Military Committee decision on M.C. 14/1: A report by the Standing Group on Strategic Guidance – Note by the Secretary*, in NATO Strategy Documents 1949–1969 (Brussels: 9 December 1952); NATO, *Final decision on 14/2 (Revised) – A report by the Military Committee on the Overall Strategic Concept for the Defense of the NATO Area*, in NATO Strategy Documents 1949–1969 (Brussels: NATO, 23 May 1957).

10 NATO, *M.C. 14/1*, p. 17.

The strategy of massive retaliation was immediately questioned. Firstly, Europeans started to doubt whether a US President would – as it were – sacrifice an American city for a European city; secondly, the USSR had developed intercontinental missile capabilities and, more generally, its nuclear capability. As is the case today, the Alliance had reason to fear that "unless confronted with an appropriately flexible NATO military posture, the Soviet Union might be encouraged to believe that they could engage in limited aggression with relative impunity under the umbrella of their growing strategic nuclear capability".[11] The second Berlin Crisis, 1958–1962, and the Cuban Missile Crisis, in 1962, reinforced these concerns. Consequently, in the early 1960s the United States started advocating a stronger non-nuclear posture and a strategy of "flexible response". In the beginning, this was met with opposition from some European allies due to expected greater costs for defence, but also because of perceived risks with reduced emphasis on nuclear weapons as NATO's core deterrence and defence option.

In January 1968, NATO approved its fourth strategic concept, MC 14/3.[12] It is based on exposing an aggressor to unacceptable risk, regardless of the nature of the attack, and controlling escalation by the ability to respond flexibly. The concept holds that, if deterrence fails, there are three types of military response open to NATO. Firstly, direct defence seeks to defeat the aggression on the level at which the enemy chooses to fight. Secondly, should direct defence be insufficient, NATO would resort to deliberate escalation, seeking to defeat aggression by raising, but where possible controlling, the scope and intensity of combat. Such escalation includes non-nuclear engagement and graduated nuclear measures. Thirdly, all-out nuclear attack is the ultimate military response.[13] The doctrine of *Flexible Response* was to survive until the end of the Cold War, through the relative détente of the 1970s and into the 'second Cold War' and the arms race of the early 1980s.

In many respects, the Alliance was sent back to square one with the Russian aggression against Ukraine in 2014 and the build-up of Russian armed forces started before that. Again, the challenge is to credibly deter from and, if needed, defend against a range of possible enemy actions, from covert harassment of individual member states, unlikely to trigger Article 5, to major war, including nuclear threats.

From major war operations to full spectrum operations

Notably, it took many years, until the mid-1980s, to develop the necessary capabilities to provide full support to the ideas of flexible response and forward defence. Facing increased Soviet military power, this required both developed conventional and nuclear concepts, forces and postures.

Apart from general strengthening of the forces, this evolution involved better integration of air, ground and naval assets in trying to solve the problem of defeating a Warsaw Pact invasion of Western Europe below the nuclear threshold. In 1984, SACEUR approved the Follow-On Forces Attack (FOFA) concept in order to combine forward defence and deep operations against mobile Russian forces attacking in echelons.[14] Around the same time, NATO introduced a new Concept of Maritime Operations with focus on complementary campaigns on NATO's northern and southern flanks.[15] NATO's force posture was subject to extended efforts, but implementation was seldom realised fully, because of evolving condition and

11 NATO, *M.C.100/1 – Appreciation of the military situation as it affects NATO up to 1970,* M.C.100/1 Final Draft, Military Committee Series, (NATO Archives Online), 11 September 1963, p. 11.

12 See Dyndal, Gjert Lage and Hilde, Paal, 'Strategic thinking in NATO and the new 'Military Strategy' of 2019', in Johnson, Rob and Matlary, Janne Haaland (eds.), *Military strategy in the 21st century: The challenges for NATO* (London: Hurst, 2020), p. 312–313; see also the rest of the chapter for a good description of the development and the character of the strategic direction.

13 NATO, *North Atlantic Military Committee, Final decision on M.C. 14/3: A report by the Military Committee to the Defence Planning Committee on Overall Strategic Concept for the Defense of the NATO Area*, in NATO Strategy Documents 1949–1969 (Brussels: NATO, 16 January 1968), p. 10–11.

14 US Congress, Office of Technology Assessment, *New technology for NATO: Implementing Follow-on-Force Attack* (Washington DC: U.S. Government Printing Office, 1987), p. 15–16, 22–26. NATO implemented the FOFA concept, but the discussion about the balance between close and deep battle, effectiveness against the threat, the costs and required new technology continued among the allies.

15 Echevarria II, Antulio J. 'American operational art, 1917–2008', in Olsen, John Andreas and van Crevald, Martin (ed.), *The evolution of operational art. From Napoleon to the present* (Oxford: Oxford University Press, 2011), p. 154–155; and Ruiz Palmer, *A strategic odyssey*, p. 6, 9–11.

resource constraints. In the conventional field, forward defence was not rehearsed until the second half of the 1970s, with the Autumn Forge exercise series, whose best-known element was REFORGER (Return of Forces to Germany). Likewise, a Comprehensive Rapid Reinforcement Plan for Western Europe, including also the northern and southern flanks, came into being only in 1983.[16]

In the nuclear domain, the evolving Soviet threat triggered an extended deterrence from the early 1960s, with eventually more than 7000 US nuclear weapons in Europe as well as development of British and French nuclear forces. NATO was further challenged in the 1970s by the new Soviet SS-20 intermediate-range ballistic missiles (IRBMs), which led to the dual-track policy, including seeking arms control agreement and strengthened NATO deterrence in the form of Pershing 2 ballistic missiles and Gryphon ground-launched cruise missiles. NATO nuclear policy also developed over time.[17] While agreeing on the need to avoid general nuclear war, there were different views on whether nuclear strikes could be avoided altogether. Given forward defence, Europeans powers held that first-use must be an option, and came to regard British and French nuclear weapons as a back-up, should the US hesitate in fear of escalation to continental USA.[18]

As for conventional high-intensity warfare against a peer competitor, the Western powers still rely on the evolution of operational art during the 1970s and 1980s. Today's successor to the American *AirLand Battle*, which together with developments in European armies in the 1980s inspired the FOFA concept, is *Unified Land Operations* (ULO). ULO equally stresses the synchronisation of manoeuvre and firepower throughout the depth of the battle area. In addition, ULO aims at integrating operations with the efforts of joint, interagency, and multinational partners.[19] Emerging joint doctrine, e.g. the Joint Operational Access Concept (JOAC), the U.S. military's preliminary answer to A2/AD challenges, emphasises in similar manner using "cross-domain synergy" on land, at sea and in the air as well as in space and cyberspace.[20]

In addition, the member states have developed national doctrine, e.g. *full spectrum targeting* or *full dimensional/spectrum operations*, for the whole conflict spectrum.[21] Nonetheless, much of this aims at supporting civilian authorities, combating non-state actors, conducting conflict resolution, and carrying out stability operations, elevating the latter to an importance equal to offensive and defensive operations in major warfighting. There are new concepts under way, for example the American *Multi-Domain Operations* and the British *Integrated Operating Concept*, in order to better integrate new capabilities, in particular within information and space operations.[22] Whereas the exploitation of new domains has long since begun, as well as experimentation with concepts, these need more effort and time to become doctrine, i.e. understood, coordinated and implemented in the forces.[23]

NATO doctrine already requires the Alliance and its members to conduct every operation in the context of a comprehensive political, military and civil approach.[24] In addition, NATO now develops

16 Ruiz Palmer, *A strategic odyssey,* p. 10; and NATO, SHAPE, '1967–1979: NATO's readiness increases', *History of SHAPE*.

17 Yost, D.S., 'The history of NATO theater nuclear force policy: Key findings from the Sandia Conference', *Journal of Strategic Studies,* vol. 15, no. 2, June 1992: p. 231.

18 For views on nuclear weapons and flexible response, see Heuser, Beatrice, *NATO, Britain, France, and the FRG: Nuclear strategies and forces for Europe, 1949–2000* (London: Macmillan Press Ltd, 1999), p. 52–62.

19 Benson, B., 'Unified Land Operations: The evolution of army doctrine for success in the 21s century', *Military Review,* US Army, Mar-Apr 2012; and Unites States, US Army, *Army Doctrine Publication ADP 3-0 operations 2019*, p. 3-1–3-4, 4-4–4-5.

20 Echevarria II, Antulio J., *Operational concepts and military strength,* (Heritage Foundation, October 7, 2016), p. 12; and United States, U.S. Department of Defense, *Joint operational access concept. Version 1.0,* 17 January, 2012, p. ii.

21 United Kingdom, Ministry of Defence, *JDP 0-01 British defence doctrine,* 2014, p. 59; and United States. *Field Manual FM 3-0 Operations 2001.* (Washington, DC: U.S. Government Printing Office, 2001), p. 1–4.

22 United States, US Army, *The US Army in Multi-Domain Operations 2028,* TRADOC Pamphlet 525-3-1, 6 December 2018; and United Kingdom, UK Ministry of Defence, *The Integrated Operating Concept 2025*, 30 September 2020.

23 For good perspectives, see Nettis, Kimber, 'Multi-domain operations: Bridging the gaps for dominance', Wild Blue Yonder, Maxwell Air Force Base, AL; Spears, Will, 'A sailor's take on multi-domain operations', *War on the Rocks,* 21 May 2019; and Savage, Pat and Greenwood, Tom, 'In search of a 21st-century joint warfighting concept', *War on the Rocks,* 12 September 2019.

24 NATO, *AJP-01,* 2017, p. 2–3. In, for example, American and British military doctrines, the equivalent terms for *comprehensive approach* are *unified action* and *integrated approach*.

policies and capabilities to enhance the civil resilience and counter hybrid threats.[25] Although always part of the threat as a possible run-up to war, the Alliance has difficulty reacting below the threshold of open armed conflict and in particular to insidious and ambiguous threats. In contrast to Russia, this is not yet part of NATO capabilities.[26]

Low-risk quick wins and high-risk long hauls

While one can dispute if there is a Western way of war, a Western way of battle seems to emphasise offensive military responses in order to overwhelm and destroy enough of the enemy's forces to acquire a decisive and quick victory.[27] Western military doctrine and practice builds on political and legal legitimacy and normally superior resources and technology. This reflects the advantages of the Western societies, but may also lead to slow reflexes and risk aversion, not seldom ending up, historically, in costly wars of attrition, in contrast to the often-proclaimed manoeuvrist approaches and low-cost quick wins.[28]

Large-scale war against a near-peer adversary, be it in Asia or Europe, would create entirely new situations for the West and NATO.[29] A Russian attack on the eastern flank would not be a war of choice, i.e. it has to be countered immediately. To deter aggression, protect political and military freedom of action, and activate the Alliance would be first priorities. Warning time and preparations could vary greatly, and may influence the response, as could diverging views as to escalation risks. Significantly, you can only operate with what you have in terms of available forces and normally – at least initially – given what you have learnt in recent wars, small or big ones.[30]

Once armed conflict breaks out, given Western practices and capabilities, initial operations would aim at establishing air and maritime superiority on Alliance territory, over lines of communication and in the area of operations, in order to protect activation of the Alliance and limit the enemy's freedom of action. Simultaneously, NATO would target the enemy's assault forces as well as supporting military infrastructure with air force and other long-range strike assets, at this point careful not to escalate the conflict more than necessary. National forces and NATO forward presence would start defensive actions to delay and degrade the enemy before reinforcements arrive. Given adequate mobilisation of forces, a counteroffensive on the ground could start if air superiority is achieved and maintained in the area of operations.[31] Western navies would be supporting the collective defence by protecting sea lines of communication and supply across the Atlantic Ocean, denying Russian sea operations in the Arctic, the Baltic and Black Seas, and providing long-strike capabilities, apart from strategic nuclear deterrence.[32]

What is less clear is how the collective defence would play out in the event of early success for the enemy, with NATO and partner countries having to give up territory, e.g. a part of the Baltic states, Poland, or northern Norway. Major wars in the past have often started with a phase of significant devastation, heavy casualties and setbacks, inducing surprise and shock among the adversaries. With the

25 Turner, Paul, *NATO at 70: What defence policy and planning priorities?* NDC Policy Brief (Rome: NATO Defence College, October 2019), p. 2.

26 Lasconjarias, Guillaume, and Jacobs, Andreas, 'NATO's hybrid flanks: Handling unconventional warfare in the south and the east', in Lasconjarias, Guillaume and Larsen, Jeffrey A. (eds.), *NATO's Response to Hybrid Threats,* NATO Defence College, 2015, p. 270.

27 NATO, *AJP-01*, p. 2–3, Barnes Paul, 'The West: A unified concept of war?' in Roberts, Peter, *Future conflict operating environment out to 2030,* Occasional Paper, London: Royal United Services Institute, June 2019, p. 3–4; and Lopez Keravouri, Rose, 'Lost in translation: The American way of war', *Small Wars Journal*, November 2011, p. 1–3.

28 Coker, Cristopher. *Is there a Western way of warfare?* IFS Info 1/04 (Oslo: Institutt for forsvarstudier, 2004), p. 10–11.

29 For a good description of the challenges NATO might face in Europe, in particular, see Johnson, Rob, 'Military strategy and conventional warfare", in Johnson and Matlary, *Military strategy,* p. 207–225.

30 Linn, Brian McAllister 'The American way of war debate: An overview', *Historically Speaking,* vol. 11, no. 5, November 2010, p. 22.

31 Given the current level of combat support in Western ground forces, they are more dependent on protection and fire support from the air. The old issue of how to prioritise the use of air power, that is, support to ground operations or air operations, including strategic strike, will resurface in any high-intensity and all-arms conflict. See Johnson, David E., 'Shared problems: The lessons of AirLand Battle and the 31 initiatives for Multi-Domain Battle', *Perspective* (Santa Monica: RAND Corporation, August 2018), p. 3–4.

32 Although the scope is different and the relative importance of the tasks have changed, the naval role is much the same as during the Cold War. See, e.g., Echevarria II, *Operational Concepts,* p. 7, on AirLand Battle and the 1986 Maritime Strategy.

evolution of weapons and the vulnerabilities of modern societies, there is no reason to believe that a large conflict would differ in this respect even if it stays conventional. In addition, there is the high likelihood of at least threats with nuclear weapons. At such a juncture, NATO would have a number of options – if not shrinking from the challenge – for handling the situation.

The first consideration would be the cost of retaking lost territory compared to reaching a decision on some other front or in other domains in order to compel Russia to restore the pre-war situation. Strategic options for deliberate and armed escalation are for example, expanding the campaign to the flanks with aggressive maritime and air operations in the Arctic and the Black Sea, to the Russian heartland and the entire society with long-range strike, cyber operations and special forces, around the world with interdiction of Russian interest, and in the end to nuclear coercion.[33] If not before, a Western readiness to consider all forms of warfare is now likely, including asymmetric and high-risk operations.

However, restoration of NATO territory would probably require the mounting and – possibly – execution of a conventional campaign sufficient to defeat Russian forces in the immediate theatre of operations and compel them to call for a ceasefire before substantive negotiations. At this point, pre-war attitudes to the costs of war may have changed, but it would require a mobilisation of the Alliance and its members, including willingness to endure a protracted war, not envisaged since the Cold War.

4.2 Russian military policy and doctrine

The strategy of active defence

Russia developed its main security and foreign policy doctrines and strategies throughout the 1990s. It is clear that the Russian threat assessment in the military doctrine has been consistent – with only a few variations – since the first draft of the 1993 Military Doctrine and up to the current 2014 Military Doctrine. In 1997, a concept of national security and an updated foreign policy concept were published. The Military Doctrine, in its initial year, took a more hard-line approach to Russian national security, focusing more on external military threats than the documents of 1997 did. However, by the year 2000, the anti-Western view had become persistent in the political debate in general.[34]

The tasks of the Russian Armed Forces are to handle the stated threats of NATO eastward expansion and missile defence; regional and local wars on Russia's borders; and international terrorism and radicalism. Russia's military force structure, capabilities and activities follow the declared doctrine that the military exists to defend Russia, rather than to project power globally. In the Russian mind this is a natural part of a defensive grand strategy, established in order to maintain the sovereignty of the Russian state and the stability of the regime. Importantly, the strategy includes offensive measures for securing Russian influence, in particular in buffer states of the country's "near abroad", and reasserting Russia's status as a great power in a multipolar world order.[35]

33 Johnson, Rob. 'Military Strategy', p. 217–218. For a discussion of the pros and cons of horizontal escalation, see, e.g., Fitzsimmons, Michael. 'Horizontal escalation: An asymmetric approach to Russian aggression?' *Strategic Studies Quarterly*, vol. 13, no. 1 (Spring 2019), p. 95–133.

34 Hedenskog, Jakob and Persson, Gudrun, 'Russian security policy', in Westerlund, Fredrik and Oxenstierna, Susanne (eds.), *Russian military capability in a ten-year perspective – 2019',* FOI-R--4758--SE (Stockholm: Swedish Defence Research Agency – FOI, 2019), p. 80. The Russian Military Doctrine synthesises the official position on preparations for and conduct of armed defence by the Russian Federation. It covers definitions, dangers and threats; defence policy including use, build-up and mobilisation of the Armed Forces; defence economy including sustainment, equipment and industry, as well as military co-operation with other states. Contrary to Western tradition, the Russian military doctrine is state-level policy; it is a short, specific and prescriptive document for the entire defence-related sector. In Russia, the term doctrine is used only at the military-strategic level; see Russian Federation, Security Council, Voennaia doktrina Rossiiskoi Federatsii, adopted by Presidential Decree Pr-2976, 25 February 2014 [Military Doctrine 2014].

35 See, e.g., Boston, Scott and Massicot, Dara, *The Russian way of warfare* (Santa Monica: RAND Corporation, 2017), p. 4; Kofman, Michael, 'The role of pre-conflict conflict and the importance of the Syrian crucible', in Deni, John R. *Current Russia military affairs: Assessing and countering Russian strategy, operational planning, and modernization.* (Army War College's Strategic Studies Institute, July 2018), p. 22; and Kendall-Taylor, Andrea and Edmonds, J. 'The Evolution of the Russian Threat to NATO', in Olsen, John Andreas (ed.). *Future NATO, Adapting to New Realties.* (London: Royal United Services Institute, 2020), p. 55-57.

The response to any threat would be characterised by "the strategy of active defence", meaning the combination of military and non-military means, i.e. regular and irregular armed force as well as political, economic and informational measures. This follows from the long-held Russian realisation that the line between war and peace is blurred and that all instruments of power must be used across the spectrum of conflict. In addition, there is a Russian preference for pre-emption, which includes forceful and non-forceful measures, ranging from intimidation and coercive threats to offensive strikes. This also ensures that the strategic initiative is maintained, forcing a competitor or an enemy into a reactive mode.[36] The political and military leadership have emphasised non-military means and pre-emption to a greater degree since the late 2000s, when Russia transformed its national defence from mass mobilisation to standing forces. Nevertheless, the role of military force in contemporary and future wars is undisputed.[37]

According to Russian military theory, warfare is characterised by phases, where the first ones are about creating advantageous political, economic and military conditions and degrading the enemy's will and capabilities. The mix of methods and means persists through the phases, which means military forces have a role early in conflicts and, conversely, non-military means a role also in later phases. In addition, the credibility of deterrence and defence in any phase is contingent on the ability to handle escalation, be it non-military or military, conventional or nuclear. Capabilities for higher-intensity warfare should therefore back unconventional and irregular warfare in peacetime, being able at worst to handle escalation to a protracted and full-scale regional war, requiring mobilisation of follow-on forces.[38]

Offense, deep operations and large-scale war

Moving beyond competition short of war, Russian doctrine and experience – from the Second World War and onwards – stresses the importance of not losing the initiative and exploiting the opening phases of armed conflict. The Russian military holds a strong belief in offensive action at the tactical and operational levels of war. The sudden onset of an offensive without a declaration of war is seen as a force multiplier and key to success, and the evolution of modern warfare has made the initial period of war even more decisive in the Russian view.[39] In addition, a Russia clearly disadvantaged in a conventional long-term contest with NATO or China would likely seek to keep conflicts short and achieve objectives early, and then transit to defence and consolidation of gains. Russia would probably try to terminate the conflict by quickly raising the price for countermeasures, ultimately with nuclear weapons.[40]

In any armed conflict, Russian operations would target the opponent's ability and will to fight early, with focus on both military and civilian command, information, logistics and infrastructure. Salient features include: an appreciation that modern precision-guided weapons and standoff capabilities can create effects throughout the depth of the enemy's positions, that there are no longer operational pauses in conflict, and that non-military or indirect methods are at times much more effective than direct action. Russian conduct is driven by the assumption that the conditions for defeat of the enemy are created at strategic and operational levels of war, by deflection, degradation and suppression of the adversary's ability to fight.[41] In addition, while reference to the action in eastern Ukraine and Crimea is now popular and may give some clues, operations against a sophisticated adversary are likely to be different.

36 Kofman, Michael. 'It's time to talk about A2/AD: Rethinking the Russian military challenge', *War on the Rocks,* 5 September 2019, p. 4.

37 Hedenskog and Persson, 'Russian security policy', in Westerlund and Oxenstierna, *Russian military capability,* p. 88.

38 Berzins, Janis, 'The Russian way of warfare', in Deni, *Current Russia military affairs,* p. 18-20; Kendall-Taylor, and Edmonds, 'The evolution of the Russian threat', p. 60–61; and Muzyka, Konrad, *When Russia goes to war: Motives, means and indicators* (Tallinn: International Centre for Defence and Security, January, 2020), p. 4–5.

39 For a view on *Russian New Generation Warfare,* see, e.g., Petersen, Philip A., and Myers, Nicholas et al., *Baltic Security Net Assessment* (Tartu: Potomac Foundation and Baltic Defence College, Tartu, 2018), p. 132.

40 Boston and Massicot, *The Russian way of warfare,* p. 7.

41 Kofman, Michael, 'The Role of pre-conflict conflict'; and Kofman, 'It's time to talk about A2/AD'.

In the Russian military, there is no "one-size-fits-all" formula for conducting operations.[42]

Since at least 2013, Russia has prepared for regional wars by conducting increasingly large exercises in all strategic directions. Apart from general modernisation of the Armed Forces, this is based on a programme, started in 2009, centred on the now five Joint Strategic Commands (JSC), i.e. the four military districts and the Northern Fleet. Annual strategic exercises have evolved including strategic mobilisation and deployment, complex joint military manoeuvres, reserve mobilisation, industrial mobilisation, and civil defence. In addition, the Russian General Staff calls several snap exercises every year, including JSCs and service branches, and encompassing most of the Armed Forces in the course.

The exercise pattern illustrates the nation-wide scope and orientation towards challenging theatre-level conflicts, requiring co-ordinated operations in several directions and moving forces between them. For example, the character, scale and intensity of exercise activities during the exercise Zapad 2017 indicated an exercise of a state-on-state conflict. This included, in addition to the units and activities in the Western Military District, for example, strategic maritime operations by the Northern and Black Sea Fleets, strategic operations by the Aerospace Forces, and simulated attacks with intercontinental ballistic missiles. In other words, Russia exercises both going to and waging war with short preparations, including conventional and nuclear capabilities.[43]

Combined arms warfare, manoeuvre of fires and nuclear force

Head-on assault with ground forces has a lesser role in the direct destruction of the enemy forces than before, i.e. defeat of the enemy does not require closing with the enemy on the ground to the same degree. Combined arms warfare and manoeuvre of fires is the key to success, whether delivered by aviation, missiles or artillery.[44] However, Russia is a land power and good-sized assault forces are still deemed essential in order to manoeuvre fires, restrict enemy freedom of action, ensure breakthroughs, exploit success on the ground, hold territory, and, in direct contact, finalise the destruction and defeat of enemy forces. An essential part of today's Russian army is large strike assets, including shorter-range cannon and rocket artillery as well as longer range and tactical ballistic missiles. This is coupled with extensive use of different ISR platforms supporting battlefield awareness and integrated with the command and control systems. As a part of this, Russia now has rapidly growing fleets of unmanned aerial vehicles in dedicated regiments across the military districts. Their current main use is in land-based tactical targeting and reconnaissance, but well advanced development includes operational targeting, electronic warfare and strike capabilities.[45]

Russia has invested considerably in electronic warfare (EW) and given it higher status in operational thinking, including a wider set of conceivable targets and new destructive means, such as directed-energy weapons and cyber capabilities. The increased weight of EW in the Russian Armed Forces is also reflected in an expanded EW command structure, formation of EW troops and increased EW support in both the ground and airborne forces' combat formations. Denying an adversary, particularly the US and NATO, with their heavy dependence on electronically-derived information, and undisturbed use of its command and control system, is perceived as crucial at both the tactical and the operational

42 According to the current Chief of the General Staff of the Armed Forces of Russia, General Valery Gerasimov, "Each war represents its own isolated case, requiring understanding of its own particular logic, its own particular character"; see Grau, Lester and Bartles, Charles E. *The Russian way of war: Force structure, tactics, and modernization of the Russian ground forces,* US Army (Fort Leavenworth: Foreign Military Studies Office, 2016), p. XV.

43 Norberg, Johan, *Training for war: Russia's strategic-level military exercises 2009–2017*, FOI-R--4627--SE (Stockholm: Swedish Defence Research Agency – FOI, 2018), p. 41–44 and 48–51; Johnson, Dave, *Vostok 2018: Ten years of Russian strategic exercises and warfare preparation* NDC Policy Brief (Rome: NATO Defense College, February 2019), p. 2–4, and Warsaw Institute, 'Zapad 2017 Lessons Learned', *Russia Monitor,* 20 October 2017, p. 2–3.

44 Petersen and Myers, et al. *Baltic Security Net Assessment,* p. 165–166.

45 See e.g. Grau and Bartles, *The Russian way of war,* p. 371–377; and Edmonds, Jeffrey and Bendett, Samuel, 'Russian battlespace awareness and information dominance: Improved capabilities and future challenges', *Strategy Bridge,* 26 February, 2019.

level. The Russian military would most probably seek to create "disintegration" within NATO forces and exploit this advantage as best it can.[46]

Although Russia is a land power, Russian strategists believe air is a primary domain in modern warfare, and its conquest determines the success of ground operations. Hence, it is necessary to strive for air superiority or, at the very least, temporary air superiority or parity. The role of the Russian air force in an offensive operation is to provide strategic strike capabilities as well as air interdiction and support to ground operations with reconnaissance and close air support. However, Russian ground forces are heavily defended with surface-to-air systems rather than by the air force. In a situation of mutual air denial Russian forces would most likely enjoy a substantial advantage derived from their numerical superiority in ground-based fire support.[47] The Russian navy would also have a supporting role in a conventional conflict in Europe: this would include defence of the nuclear deterrent in the North; long-range precision strikes; sea denial operations in the Arctic, and in the Baltic and Black Seas; and attacks on Western sea lines of communication to and within Europe. However, the current strength of the Russian navy does not allow for offensive out-of-area operations by any of their fleets.[48]

The capacity to deliver a massive retaliatory nuclear strike continues to be the foundation of Russia's military strategy. Russia also sees a need for operational and tactical nuclear weapons, and the wide variety of non-strategic systems means that nuclear support to a broad spectrum of operations is possible. Russian armed forces train for nuclear war with chemical, biological and radiological (CBR) defence units in their manoeuvre forces and simulated nuclear strikes in exercises. However, whereas early Soviet war planning seems to have included liberal use of nuclear weapons in support of conventional operations, the hazards of devastation on the battlefield and of escalation led to a change of attitude. The Russians expect to fight under nuclear-threatened conditions, but to go nuclear is probably not their first choice due to the risk of further escalation. Improved, dual-capable strike forces and more mobile ground units support this. The Russian view on first-use is not clear, but nuclear weapons remain vital for deterrence and as a fall back should the fortunes of war turn the wrong way.[49]

4.3 Military Forces in Northern Europe

The general conventional balance

As has been described, the Russian and Western ways of warfare are the result of several factors, not least the preferred choice of military means, including perceptions of their relative strengths and weaknesses. So how does the balance of NATO-Russian military assets look at present and what conclusions can be drawn?

As emphasised in Chapter 1, comparing overall and absolute figures has important limitations, but gives an idea of trends and the military potential of alliances and states. Since the fall of the Soviet Union in 1991, NATO as a whole has had an advantage in terms of physical assets, which has increased with the enlargement of the Alliance and is overwhelming in almost all categories, as evident from the 2020 figures in the table below.

A representative overall observation is the more than 3 to 1 edge with respect to active personnel, a ratio found with respect to a range of other important assets, for example tanks, artillery, attack helicopters, submarines and combat aircraft. If one looks at NATO in Europe, including US forces in theatre, the Alliance still has a good upper hand and – it would seem– is adequate on paper for collective defence. Given the difference in defence expenditures between

46 Kjellén, Jonas, *Russian electronic warfare: The role of electronic warfare in the Russian armed forces,* FOI-R--4625--SE (Stockholm: Swedish Defence Research Agency – FOI, 2018), p 83–85; and Kendall-Taylor and Edmonds, 'The evolution of the Russian threat', p. 62–63.

47 Boston and Massicot, *The Russian way of warfare,* p. 4, 7–9.

48 Muzyka, Konrad, *When Russia goes to war,* p. 7–8.

49 Kjellén, Jonas, 'Russian armed forces in 2019', in Westerlund and Oxenstierna, *Russian military capability,* p. 38, 43; and Hedenskog and Persson, 'Russian security policy', in Westerlund and Oxenstierna, *Russian Military Capability,* p. 38, 43 and 89–91, respectively; and Grau and Bartles, *The Russian way of war,* p. 204-207.

Table 4.1 General balance of NATO and Russian military assets and geographic areas in 2020

Area/Assets	NATO Total	NATO Europe	NATO Eastern flank	Russia West of the Urals	Russia Total
Active personnel	3 300 000	1 900 000	345 000	540 000	900 000
Reservists	2 100 000	1 200 000	190 000	1 200 000	2 000 000
Tanks	9 150	6 300	1 250	1 860	3 100
Infantry fighting vehicles	12 500	7 700	2 600	4 750	7 900
Heavy artillery	6 600	4 550	1 170	1 210	2 000
Multiple rocket launchers	1 530	900	440	550	920
Attack helicopters	1 240	400	60	240	400
Large surface combatants	300	170	20	25	35
Submarines	140	75	10	35	50
Combat aircraft	4 700	1 920	270	885	1 180

Source: IISS, *The military balance 2020* (London: International Institute for Strategic Studies, 2020) and Norberg, Johan and Goliath, Martin, 'The fighting power of Russia's armed forces in 2019', in Westerlund and Oxenstierna, *Russian military capability*.
NB: NATO Europe includes US assets in theatre and Turkey. NATO's eastern flank includes, from south to north, Bulgaria, Romania, Hungary, Slovakia, Poland, Lithuania, Latvia, Estonia, Denmark and Norway. Russian assets west of the Urals is an approximation based on percentages of total military bases, i.e. around 60 per cent for ground forces and 75 per cent for naval and air forces.

the Alliance member states and Russia described in Chapter 2, even taking into account purchasing power, this follows as a matter of course.[50]
However, as has been noted by many observers, the challenge for NATO's collective defence is in part geography, often referred to as a "time-distance gap". Considering the military assets on NATO's eastern flank, i.e. the countries in proximity to Russia, the balance looks different and much in favour of Russia as a whole, but also for the country west of the Urals. This holds even if we include all NATO forward presence on the flank, in particular in the Baltic states and Poland. At the same time, the driving distance between Berlin and Vilnius, at around 1000 km, is the same as between Moscow and Vilnius, and the Urals are another 1000 km away. It is true that Russian forces are concentrated west of Moscow – with around a third of total forces in the Western Military District – but an effective defence normally requires considerably less forces than offensive ambitions. Critically, what the figures do not reveal anything about is the readiness and quality of Russian and NATO forces, including the ability to operate as coherent and – in the case of NATO – multinational forces in a high-intensity conflict.

Readiness

What can Russia on one hand and NATO with partner countries on the other assemble at short notice in terms of forces? For the units to be relevant, it was decided that they have to be ready for combat and movement in their home bases within a week from an alarm, especially considering that some units also have considerable distance to cover to reach the area of operations. Being combat-ready here entails being able to solve unit-specific mission-essential tasks in high-intensity operations without major restrictions.Generally, this means that only units that are more or less fully equipped with personnel and material, and trained for the tasks, can be included.[51]The estimate is based on our analysis of national capabilities presented in Part II of the this study and recent FOI work on Russian military capability in a ten-year

50 Russia's defence expenditures were USD 61 billion in 2019, at current exchange rates, i.e. about the same as those of the United Kingdom. Taking into account purchasing power parities (PPT), they have been estimated at USD 159 billion in 2019. See, e.g., Oxenstierna, Susanne, 'The economy and military expenditure', in Westerlund and Oxenstierna, *Russian military capability,* p. 104.

51 The capacity to solve mission-essential tasks without any restrictions was assumed to require at least 90 per cent of assigned personnel and materiel, of course depending on where the gaps are.

Table 4.2 Assessment of forces available west of the Urals and in Northern Europe within a week in 2020

Countries/Units	United States	United Kingdom	Germany	France	Poland	Baltic states	Nordic countries	West	Russia
Mechanised battalions	4–5	3–4	3–4	2–3	6–9	7–9	4–9	29–43	51–68
Infantry battalions	4–6	2–4	2–3	1–3	1–2	2–4	3–6	15–28	19–26
Special Forces companies	6–8	2–3	1–2	3–6	2–4	2–3	2–3	18–29	10–15
Attack helicopter battalions	1–2	<1	<1	<1	<1	–	–	2–5	6–8
Carrier groups	0–1	–	–	0–1	–	–	–	0–2	–
Surface combatants	2–4	3–5	3–6	6–8	0–1	–	3–6	17–30	9–12
Submarines	4–7	1–3	1	1–2	0–1	–	2–4	9–18	8–10
Combat aircraft squadrons	7–12	3–4	2–5	3–4	1–3	–	5–7	21–35	12–16
Strategic bomber squadrons	2–3	–	–	–	–	–	–	2–3	1–2

NB: The table is based on the country analyses in Part II of this study and work of the Russia Studies Programme at FOI, in particular Kjellén, 'Russian armed forces in 2019', in Westerlund and Oxenstierna, *Russian military capability,* p. 23–43. The figures for the US include units with prepositioned stocks in Europe and other estimated quick reaction ground and air forces. The figures for Russia include ground and air units in the Western Military District, Northern Fleet and Southern Military District, and naval units in the Western Military District and Northern Fleet. The Nordic countries are Denmark, Finland, Norway and Sweden. The Baltic States are Estonia, Latvia and Lithuania. The framework nation units of 2020 for VJTF, EUBG (EU battlegroups) and eFP are included. Mechanised units cover armoured as well as motorised ditto. Airborne and marine ground forces are in the infantry category, although nowadays often lightly mechanised. Light forces for local territorial defence, for example home guard, and paramilitary forces are not part of the figures. Surface combatants include large corvettes up to cruisers. Submarines refer to both nuclear-powered and conventional units, but not to ballistic missile submarines. In terms of personnel, Western and Russian ground units are roughly of the same size up to brigade level, although the figures vary and even more so with respect to equipment. Russian attack helicopter battalions and combat/strategic aircraft squadrons have been calculated in their Western equivalents, which have around 20 and 15/12 systems, respectively, per unit. The number of combat aircraft in Western units varies between countries.

perspective, including the status of the armed forces and at times specific knowledge of units, but also rules of thumb.[52] The table above summarises the estimates with respect to the important manoeuvre unit categories for major countries and groups of smaller countries, as well as the totals for Russia and NATO. With our focus on Northern Europe, only countries likely to make a considerable contribution in this area have been included. As for support in the form of intelligence, signals, fires, logistics, and so on, these capabilities are included in varying degrees in the combat units. This affects combat potential and reliance on higher echelon support, which is discussed below. A first observation is that in terms of numbers the balance of forces is in favour of Russia, primarily with respect to ground and attack helicopter units. An equal upper hand is in reach for the West with respect to naval and air forces, but would be dependent on American pre-planned quick reinforcements to Europe. As shown in table 4.2, the span of outcomes is considerable on both sides, but the likelihood of disappointing results seems higher on the Western side – at worst even below the low figures – due to its less focus on readiness. Apart from uncertainty with regard to reinforcement from the USA, the overall result is much contingent on the situation in the armed forces of major European powers.

Currently, even high-priority formations in all arms of European forces have problems with personnel and materiel. As an example, assuming framework-nation responsibility in the VJTF for one high-readiness brigade seems to be a major undertaking – which may produce a decent readiness one

52 For fully equipped and well-trained ground forces, up to a third of a combat unit, e.g. a brigade, is assumed to have a possibility to be combat ready within a week. The assumption for naval and air forces is up to half of the available units or systems. Better figures are possible but only for units at known high-readiness and for short periods.

year, but considerably worse at other times. For France and the United Kingdom, the situation is partly due to operational engagements elsewhere, but all major European armed forces now lack the financial resources to properly man, equip and train their listed units. As a result, it has been deliberate for many years that only minor parts of the organisations are kept at good readiness. Consequently, the availability of forces is surprisingly small for such large and potentially powerful allies as the United Kingdom, France, Germany and Poland.

Initially, and in numbers, the Baltic states can actually make a good contribution on the ground, given high readiness in most of their units. Strategically positioned, the Nordic countries could also be important before NATO and the major powers are up to speed, but Denmark, Norway and Sweden, with reasonably modern forces, have all long struggled with readiness problems. In terms of mobilisation potential on the ground, Finland, with its conscript forces, is superior, but the result for short-notice contingencies is still uncertain. Any significant Nordic force contribution to Western collective defence, beyond defending national territories, would be combat aircraft and submarines.

As for Russia, the estimated availability is based on the forces that can be made available without general mobilisation including the use of conscripts. Disbanding hollow forces and increasing readiness have been key features of military reform since 2008. In terms of equipment, the ground forces are well provided for, with an estimated serviceability of well over 90 per cent, but less for naval and air forces, at around 75 per cent, which has been taken into account above. [53] As for the Western side, outcomes in the lower part of the range are likely, if nothing else due to general friction connected with large-scale activation of armed forces, but the numbers remain impressive.

From a low level, the Western Alliance actually has a slowly increasing number of forces that may be available. The estimated numbers are, forexample, comparatively good, given the ambition of the NATO Readiness Initiative (NRI). The latter includes having 30 combat battalions, 30 surface combatants and 30 combat air squadrons ready for employment within 30 days by 2020, known as the "Four Thirties" (4x30) and, according to the Alliance, more than 90 per cent of the required forces were generated in 2019.[54] However, the above estimate also includes units not listed for the NRI.

What forces would it be possible for Russia and NATO to muster should the notice be a bit, or even considerably, longer?

Concerning Russia, the Swedish Defence Research Agency has estimated that it takes about a month to assemble forces for a major offensive operation in the European war theatre. That could entail up to three groups of forces (GOF), under the command of a JSC and tailored for the mission, each GOF typically consisting of 2–3 combined arms armies with 10–15 manoeuvre brigades including extensive combat and logistics support, up to 10 combat aircraft squadrons and naval forces from fleets in the theatre.[55] For an operation on NATO's eastern flank, this means a first GOF with high-readiness units primarily from the Western Military District and the Northern Fleet. A second GOF may reinforce in western directions within a few more weeks, with a third GOF for the southern direction.[56] However, there is uncertainty as to the quality and size of follow-on forces. The mobilisations system is being rebuilt but the last ten years the focus of military reform has been on high readiness and contract forces for a first echelon. With the bulk of the Russian air force based west of the Urals, such reinforcements would be small in a second echelon. The situation is similar for naval forces, apart from being more difficult to move quickly between war theatres.[57]

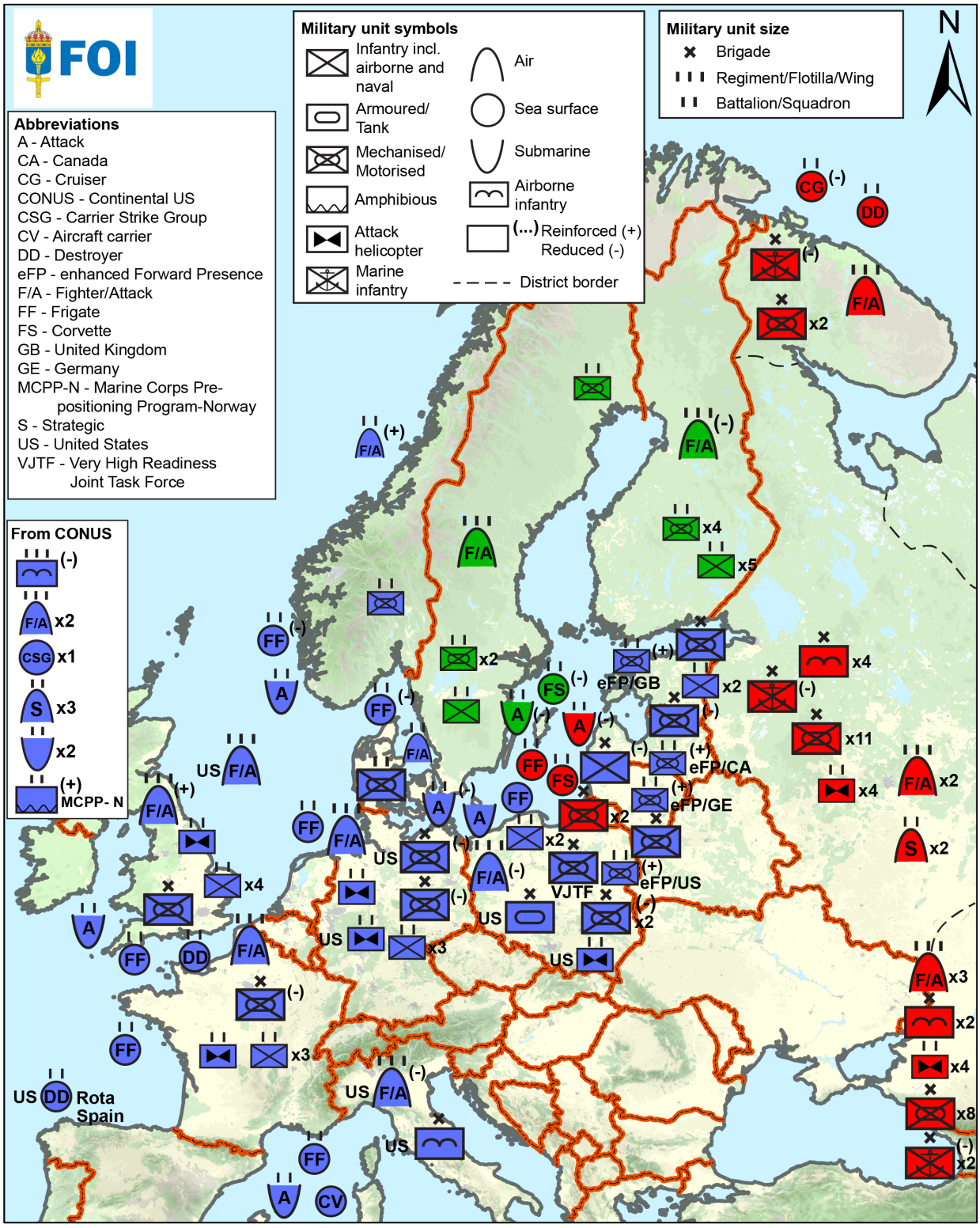
53 Westerlund and Oxenstierna, *Russian military capability*, p. 17, 25.

54 NATO. *NATO: Ready for the Future – Adapting the Alliance (2018–2019)* (Brussels: NATO, 2019), p. 6.

55 Manoeuvre brigades refer to independent brigades or the equivavalent force compositions in divisions.

56 Norberg and Goliath, 'The fighting power', in Westerlund and Oxenstierna, *Russian military capability,* p. 60–63, 72–73.

57 Russia do not seemed geared towards a large-scale war effort which require full mobilisation of the armed forces as well as other parts of the society. However, a mobilisation system to allow for supplementing the standing forces to a level corresponding to two simultaneous regional wars may well lie within reach for Russia in the coming decade. See, e.g., Westerlund, Fredrik, 'Russian military capability in a ten-year perspective', in Westerlund, Fredrik and Oxenstierna, Susanne (eds.), *Russian military capability in a ten-year perspective* – 2019, FOI-R--4758--SE (Stockholm: Swedish Defence Research Agency – FOI, 2019), p. 139-140.



Map 4.2 Assessment of the maximum available manoeuvre forces west of the Urals and in Northern Europe within a week in 2020, including overview of basing

NB: Design by Per Wikström. The map is based on table 4.2 and illustrates a best outcome for both sides. The forces have been converted into rough unit equivalents, and, with some exceptions, the symbols do not represent specific formations. Special forces and Russian sea forces in the Southern Military District, the latter unlikely to be deployed to the north, have been excluded. Infantry symbols include airborne and naval units in some countries. A Russian naval brigade, positioned east of the Baltic states, belongs in Kaliningrad. The Netherlands and Belgium, as well as NATO-countries in the south, are omitted in accordance with our delimitations.

For NATO, the order of battle would consist of some standing and modern units with known good readiness, including a capacity for expeditionary operations in Northern Europe. However, there will be more units of lesser quality and limited capabilities, suitable only for territorial defence at home. Within a month, a major improvement in available forces would be the arrival of American naval and air forces flowing into the theatre. However, as for ground forces, given the difficulty of moving units across the Atlantic and the state of the major European armed forces, a few weeks more of warning would not make a big difference.

It has been suggested that defending and, if necessary, retaking lost territory on the eastern flank could lead to an American contribution of 3–5 ground divisions, around 1000 combat aircraft and approximately 100 surface and submarine combatants. The other NATO allies would need to provide 3–4 ground divisions, perhaps 500 combat aircraft and up to 50 warships and submarines.[58] Our country analyses indicate that within 3 months such reinforcements of Europe might be possible for the US, at least if the country is not engaged simultaneously in a major armed conflict with China. The above-suggested European contribution of forces for offensive operations on the eastern flank is highly unlikely in the same time frame. However, as will become evident, conclusions with respect to force requirements are very dependent on the situation. If a reasonable force posture can be achieved in time on the eastern flank, the West's defence task may become much less demanding.[59]

Force composition

At the profound and simple level, readiness is about the availability of forces, but equally important is the force composition, including the qualities of combat units and formations combined.

Russia still emphasises heavy ground forces; apart from numbers, this means that all manoeuvre units – even in the airborne forces – are mechanised. In addition, there is extensive combat support within as well as outside the manoeuvre units. The latter has been a conscious effort of military reform and includes, apart from the well-known strong fire support, engineering, signals, CBR defence, and electronic warfare. With few exceptions and regardless of the number of manoeuvre units, each combined arms army and military district has a generic set of combat support and logistics units.

The Western ground units are a more mixed bag of heavy and light units with varying modernity. The modern heavy formations, i.e. the US, British, German and French ditto, are comparable to Russian counterparts in many aspects and, technologically, probably better or at least as good in relevant parts. However, they are fewer in total, especially the ones available in Europe. In addition, the fire support in the manoeuvre brigades is typically – with normally a single battalion of self-propelled artillery – only a third of the Russian fire power and less diverse, while the organic air defence and the electronic warfare assets are weak or non-existent.[60] In addition, higher echelon support which could partly compensate for the difference remains to be organised on the Western side. Apart from the larger proportion of light forces, the NATO allies in Eastern Europe still have much equipment of Cold War date, and few units would be useful for offensive tasks against Russian forces.

Russian naval and air power is less impressive, much due to their equipment serviceability, which is lower than that of the ground forces, and delays in procurement. Russia's surface and submarine fleets, as well as the air force, conduct out-of-area oper

58 See e.g. Hodges, Ben, Lawrence, Tony and Wojcik, Ray, *Until something moves: Reinforcing the Baltic region in crisis and war* (Tallinn: International Centre for Defence and Security, April 2020), p. 7–8; and Hooker, Richard D., 'Military strategy in the United States: The complexity of national strategy', in Johnson and Matlary, *Military strategy,* p. 343–344. For a scenario-based study of required military assets in a confrontation Russia without American support, see Barrie, Douglas et al, *Defending Europe: scenario-based capability requirements for NATO's European members* (London: International Institute for Strategic Studies, April 2019). For retaking lost Alliance territory, after a Russian offensive including occupation of the Baltic states and a part of northeast Poland, the latter study stated a force requirement of 9-12 ground division, 60-70 major surface combatants, around 30 submarines, and close to 600 combat aircraft.

59 See, e.g., Posen, Barry, 'Europe Can Defend Itself', Survival, vol. 62, no. 6, 2020-2021. Posen argues that a reasonable forward defence on the eastern flank as well as the countering of Russia in several domains and directions would make collective defence a manageable task.

60 For perspective, see, e.g., Boston and Massicot, *The Russian way of warfare,* p. 9–11; Rogoway, Tyler, 'America's startling short range air defense gap and how to close it fast,' *War Zone*, 9 August 2017; and Smith, Patrick, *Russian electronic warfare: A growing threat to U.S. battlefield supremacy,* Perspective, American Security Project, April 2020 p. 5–8.

ations, but given the limited number of platforms and technological inferiority, they can hardly challenge Western forces in general.[61] However, Russia has invested steadily in the strike capabilities of the air and naval forces for engaging in the operational and strategic depths of potential adversaries. While there are limits to the numbers of missiles and platforms, the ability to disrupt the Alliance's mobilisation and reinforcements to the eastern flank exists during early phases of conflict. In addition, the development of modern air-to-air capabilities probably makes it possible to achieve temporary air superiority during local or regional wars.[62]

As with ground forces, the quality of Western naval and air forces varies, but the Alliance possesses all or most types of capabilities needed for high-intensity conflict, and seems to be superior to Russia in most aspects. Some capabilities need to be renewed and strengthened after many years of stability operations, in particular suppression of enemy air defence, own air defence and electronic warfare. The latter are probably the main uncertainties in the forces, together with the actual availability of ships and aircraft and supply of precision munitions. At present, several Western air forces struggle with maintenance of fourth-generation aircraft, as well as the change to the next generation.[63]

Another equally important aspect of quality is the training and experience of the forces, and the ability to form effective fighting formations. At the lower tactical level, both the Russian armed forces and Western armed forces have experience of small-unit infantry warfare from stability operations and other interventions. However, conducting major war operations against a peer competitor is a different game at all levels and, in particular, requires the ability to conduct large joint operations. Here, Russia has the upper hand, at least with respect to ground forces, having systematically organised themselves for and exercised such operations with air and naval forces, including movement and sustainment of forces over Russian territory.[64]

As pointed out in Chapter 3, NATO left the exercise focus on low-intensity operations after 2014, but few large-scale Article 5 exercises have still been pursued. In addition, even fewer of them are truly joint, an exception being the NATO-led Trident Juncture, in 2018. Air and naval exercises of scale are less prioritised so far which, given the Alliance's reliance on these assets, is a weakness. Exercises for reinforcing Europe and the eastern flank are picking up speed, but it's early days, and, for example, Defender Europe 2020 was greatly reduced due to the COVID-19 pandemic, with the next opportunities arising in 2021. A more profound problem for NATO is that the only tested concept is the high-readiness VJTF, whereas the NRI units and the follow-on-forces of the NRF are essentially pools of assets. There are few details on how the readiness for these works, no pre-set wartime organisation including higher echelons, and no formal exercises and checks to ensure compliance.[65] Interoperability,implemented through doctrine and decades of training, was once a forte of NATO. However, NATO standardisation seems to have eroded since the 1990s and, with more allies, has become more complicated.[66] The result is probably that only a minor group of allies will be able to operate effectively together, at least at short-notice.

The main disadvantage for NATO, with respect to force qualities, seems to be in the areas of command and control of large and joint forces; interoperability; pre-set organisation, including

61 IISS, *Russia's military modernisation* (London: International Institute for Strategic Studies, 2020), p. 181.

62 See, e.g., Boston and Massicot, *The Russian way of warfare*, p. 4, 8; and Barrie, Douglas, 'Russian air-to-air power: Re-make, re-model", in Jonsson, Michael and Dalsjö, Robert (eds.), *Beyond bursting bubbles: Understanding the full spectrum of the Russian A2/AD threat and identifying strategies for counteraction*, FOI-R--4991--SE (Stockholm: Swedish Defence Research Agency – FOI, 2020), p. 41–53.

63 Boston, Scott, et al., *Assessing the conventional force imbalance in Europe: Implications for countering Russian local superiority, (*Santa Monica: RAND Corporation, 2018), p. 7–9; Reim, Garret, 'F-35 gives European air forces an edge over Russia, but coordination is key', *Flight Global,* 6 November, 2020.

64 Russian and Western exercises have not been compared in every detail for this study, but only with respect to overall purpose and pattern. Other aspects, e.g. realism, level of free-play and evaluation, are good candidates for further investigation.

65 Campbell, Josh, 'Why NATO should adopt a tactical readiness initiative', *War on the Rocks,* 13 July 2020.

66 Hill, Jonathan, 'NATO – Ready for anything?', *NATO Review,* 24 January 2019.

corps and division level; and combat support and logistic support from higher echelons.[67]

4.4 Conflict on the eastern flank

A strategic perspective

As we have stressed, fighting power is about doing something and only acquires meaning in a real-world context. For many purposes, it is sufficient to choose a scenario that cannot be excluded, in which Western military capability would have an important role and where the consequences of a failure would be dire. The well-known Baltic scenario, including an invasion of one or more of the Baltic states, fits the bill well and important conclusions for collective defence have been drawn from the pioneering RAND study, in 2016, and related subsequent efforts.[68] A polarised and inconclusive debate often rages about the relevance of specific threats, including whether operations on both sides are militarily sound and if the prospective gains from a major attack can ever outweigh the risks involved.[69]

However, for defence planning a range of scenarios is needed for balanced assessments and solutions. A strategic perspective is necessary, geographically and otherwise, starting both from where friction exists or may develop between Russia and the West and from possible gaps or relative vulnerabilities in Western defence. The most obvious expansion, for our purposes, is to look at NATO's eastern flank as a whole, stretching from the Arctic to the Black Sea. Whereas most discussions and analyses have focused on specific threats, for example cyber or ground attacks, or a geographic subarea, armed conflict cannot be excluded on any part of the flank. Proper attention has not been given to all threats, and it can be argued, for example, that NATO has done considerably less for the security of the Black Sea region than for that of the Baltic region.[70] In addition, it is essential to realise the interdependent character of many scenarios. There would always be a need to cover more than one direction and to be ready to handle simultaneous conflicts – but potentially also to escalate horizontally, on purpose. As has been pointed out, while Russia's strategic thinking perceives a theatre of conflict stretching from the Arctic to Turkey — with few meaningful distinctions between individual areas such as the Baltic or Black Seas—Western thinking is more stratified at present.[71]

As for the driving forces behind Russian security and defence policy, there seems to be consensus that they are about securing Russian power and influence, in particular its "near abroad", and reasserting Russia's status as a great power. Whether these are part of, or have resulted in, a defensive or revisionist Russian strategy is debatable. This may be important, but probably more for what measures one should take to handle threats than as an identification of possible offensive Russian actions, as the latter needs to include unpleasant surprises.[72]

War mindset and a theory of victory

Russia, like most other countries, would not attack a peer adversary – nor, in the case of NATO, a far stronger adversary, at least in the longer run – without weighing potential gains against costs and risks. As an important part, this normally implies some logical connections between strategic objectives on one hand and operational and tactical objectives on the other. Even in the midst of a crisis, which may have occurred and developed unexpectedly, placing heavy

67 For similar conclusions with respect to the US contribution, see, e.g., Fabian, Billy, et al., *Strengthening the defense of NATO's eastern frontier*, (Center for Strategic and Budgetary Assessments, 2019), p. 17–28.

68 Shaplak, David A, and Johnson, Michael W., *Reinforcing deterrence on NATO's Eastern Flank –Wargaming the defense of the Baltics,* (RAND Corporation, 2016).

69 See, e.g., Kofman, Michael, 'Fixing NATO deterrence in the east or: How I learned to stop worrying and love NATO's crushing defeat by Russia', *War on the Rock*s, 12 May 2016; and Mueller, Karl, et al., 'In defense of a wargame: Bolstering deterrence on NATO's Eastern Flank', *War on the Rocks,* 14 June 2016; and Michaels, Jeffrey H., *War with NATO: The essence of a Russian decision* (Oxford: Changing Character of War Centre, Pembroke College, University of Oxford, April 2019), p. 2.

70 See, e.g., Flanagan, Stephen J, et al., *Russia, NATO, and Black Sea Security* (Santa Monica: RAND Corporation, 2020), p. ix–xiii, regarding the challenges of the Black Sea region, Russian regional strategy, and NATO interests and options

71 Hodges, Ben, Bugajski, Janusz, Doran, Peter B, and Schmiedl, Carsten (ed.), *Strengthening NATO's Eastern Flank: A strategy for Baltic-Black Sea coherence,* (Center for European Policy Analysis, November 2019), p. 23.

72 Lanoszka, Alexander, and Hunzeker, Michael, *Conventional deterrence and landpower,* (Army War College's Strategic Studies Institute, 2017), p. xiv, 7–20.

pressure on politicians, any decision to "unleash the dogs of war" must still be taken deliberately. Although mindless use of force cannot be ruled out, such a decision will likely be based on established doctrine and policy and include a "war mindset", rather than only a "battlefield mindset", that is, one that at least tries to take into account the strategic aspects of a major armed conflict. During the Cold War, there were considerably divergent views in the West on the possible strategic objectives of an attack by the Warsaw Pact: the conquest of the whole of Europe or only a part, for example West Germany. Assumptions in this respect have far-reaching consequences about which conflicts we choose to prepare for with respect to type, geography and length.[73]

Thus, for a first and prioritised set of scenarios, a more or less rational behaviour from each part should be the starting point; however, this does not entail similar rationality in terms of ends, ways, means, costs and risks. Acts that may seem headless from a Western perspective can make perfect sense from an adversary's vantage point. Potential roots to an armed conflict that need to be examined are obviously known clashes of interest between Russia and the West, where the former may want to expand its influence or feels threatened by a perceived similar ambition of the West. Apart from the more global aspects of power competition, itis evident that Russia works hard along the eastern flank to sustain the country's influence. Much of this is a more or less legitimate political and economic competition, e.g. for unexploited natural resources in the Arctic and control of energy distribution around the Black Sea. However, some is certainly more of a political and military great power struggle, where the influence and security of the Russian state through a territorial *cordon sanitaire* is paramount in Russia's eyes. The latter leads Russia to counter NATO's further enlargement, to seek to exploit divisions among allies, and to build its own alliances as a counterweight to NATO. It thus works, for example, to prohibit Ukraine, Georgia and Moldova from joining NATO and the EU; persuade Finland and Sweden to stay out of NATO; hinder Norway from facilitating Allied reinforcements; exploit differences between Turkey and the rest of NATO; influence Western elections and support political extremists; exploit Russian energy supplies to European states; and further integrate with allies such as Belarus and Armenia.[74] All these constitute obvious issues and areas of serious friction, where escalation to armed conflict is possible in some circumstances.

However, given the potential costs and risks of war, and Russia's global and long-term inferiority, the probability of an armed attack on a NATO member state must be rated low. The same is probably true for NATO partners and EU states, although there is a difference, which the case of Ukraine well proves. Russian respect for the security guarantees provided by EU through article 42.7 of the Lisbon Treaty, where US involvement is absent, cannot be compared to Article 5. Nonetheless, 21 out 27 EU members are part of NATO as well. The whole idea for Russia would be, as has been stated many times, to keep confrontations below Article 5 – or Article 42.7 for only EU members – whenever possible. What could change the Russian approach is either a unique opportunity to exploit Western weaknesses or a perceived strategic threat from the West that compels Russia to act. It could start with an inadvertent escalation of a smaller incident that an expantionist Russia chooses to exploit.

In either case, the alternatives could be a limited intrusion, which the West is not prepared to start a proper war over, or a major intrusion, which seems far too costly for the West to reverse. The former would be the preferred choice for Russia, but the latter may be deemed necessary and cannot be excluded – the success of both would in the end depend on convincing NATO and the US in particular that the fight is not worth pursuing. Thus, total victory may and need not be the Russian end-state, but rather a settlement amenable to Russian interest.[75]

73 Michaels, *War with NATO*, p. 6–10, 46–48.

74 Brauss, Heinrich, Stoicescu, Kalev, and Lawrence, Tony, *Capability and resolve: Deterrence, security and stability in the Baltic region (*Tallinn: International Centre for Defence and Security, Policy Paper, February 2020), p. 2–3.

75 Kendall-Taylor and Edmonds, 'The evolution of the Russian threat', p. 62–63

Some situations to consider

Given serious conflicts of interest, in considering scenarios it becomes necessary to look closer at opportunities for action and threat perceptions. Vulnerabilities that could be exploited are capability gaps including lack of will to defend oneself; exposed lines of communication on the ground, at sea or in the air; lack of geographic depth for defence of population centres, industry, infrastructure or military bases; and, more generally, weaknesses in political institutions, financial systems, economic and energy dependencies, and social cohesion. Capabilities presenting a threat or an opportunity could be forces at high readiness; the possibility for quick reinforcement supported by infrastructure; strike capabilities, kinetic and others, for long-range targeting of military and civilian infrastructure, with little warning; and subversion via influence operations and sabotage.[76] This leads us to a host of scenarios with respect to how Russia might use force on the eastern flank – and which the West needs to prepare for.[77]

Around the Black Sea, Russia's continuing interest in forcing Ukraine to concede to its political and territorial demands as well as in the control of the sea and the gas energy infrastructure in the area may lead to open confrontation. Russia could decide to seize the Ukrainian ports of Mariupol and Berdyansk, on the Azov Sea, and block other major Ukrainian ports along the Black Sea, including the key outlet of Odessa, while using Crimea as a bridgehead for its operations along the entire Ukrainian coastline. As an extension, Russia could, claiming a threat to Moldova from Romania, intervene to defend Transnistria and the Russian-speaking populations in the rest of Moldova. Russian strategic objectives would be to ensure control of or, possibly, annex Moldavia and encircle Ukraine. In addition, Russia may aim at forcing southeast European states, in particular Romania and Bulgaria, to accept Russian and Turkish control of the Black Sea. The start of this could be incidents triggered by Russian offensive behaviour, or a deliberate act of aggression.

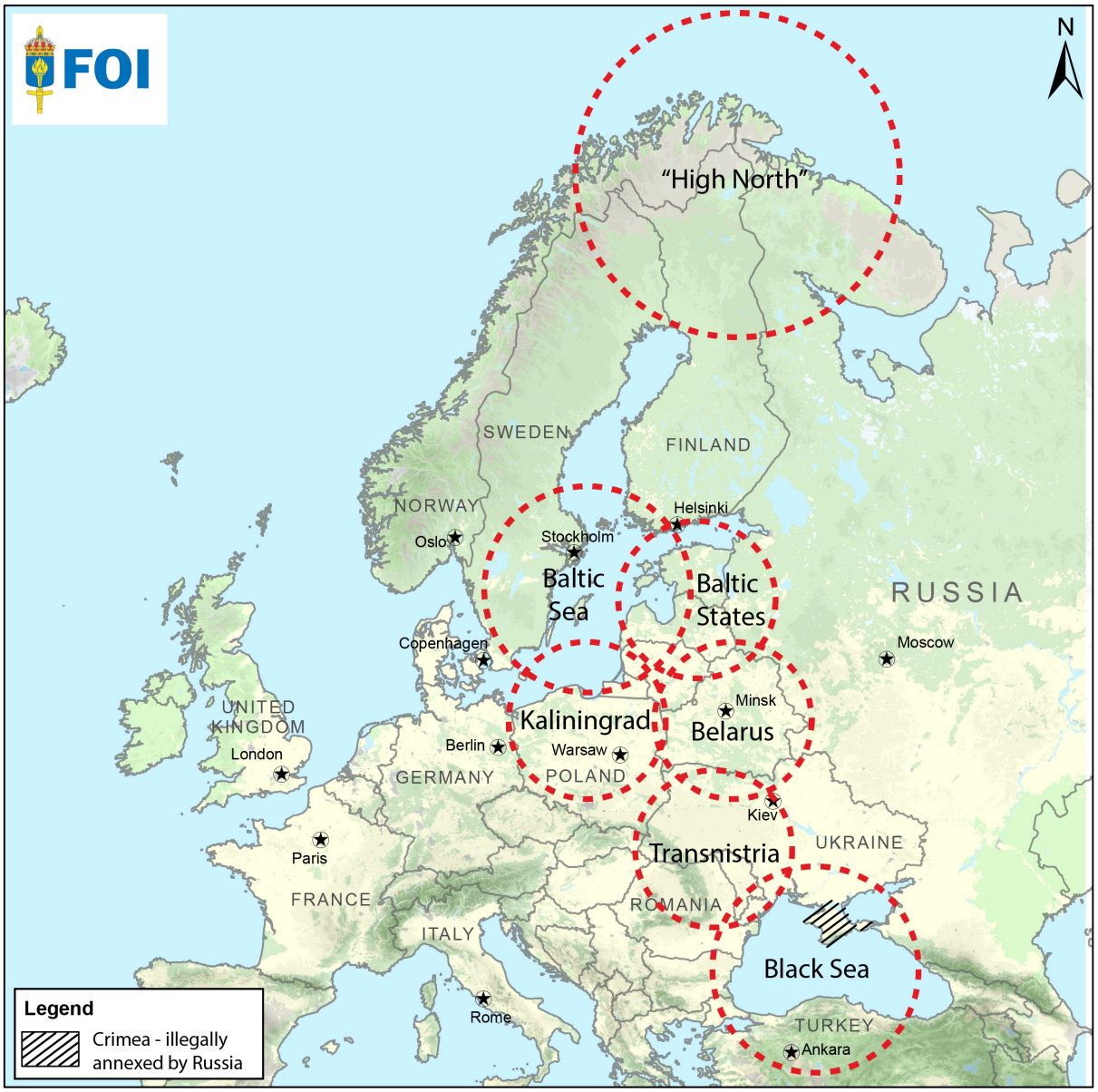
In the Baltic region, the security of Kaliningrad and Russia's influence in the former Soviet republics of Belarus and the Baltic states are well-known priorities for Russia. Any perceived existential threat to Kaliningrad or Belarus would probably trigger a robust response from Russia. Russian primary strategic objectives would be to secure the sovereignty of Kaliningrad and the control of Belarus. A possible extension could be to attack the Baltic states, with the object of moving the Russian sphere of control westwards and undermining the cohesion of NATO, including the current security order of Europe. NATO's perceived military build-up and the situation in the old Soviet republics are likely sources of confrontation. However, an open and all-out assault directly against NATO allies, with the risks involved for Russia, is probably not a first choice. Political pressure and various forms of harassment and subversion, including systematic territorial intrusions, are more likely contingencies, but still not always easy to tackle. In addition, given some profound differences of opinion, seemingly small incidents may escalate. A conflict may start on land, at sea, or in the air, then easily grow, and spread in other directions and domains.

The high north, in particular the Barents region, has partly been forgotten as a strategically contentious area. During the Cold War, the northern flank became important for two reasons: the need to protect and manoeuvre strategic nuclear assets, and the limited freedom of action for both military blocks on the central front in continental Europe. With respect to hard security, what is left is the Russian need to protect strategic assets and counter what Russia calls NATO's aggressive preparations for war in the high north, including basing of US forces and large exercises. With increased access to the Arctic, a wider political and economic interest is evident, which has also affected military activities.

However, the current political frictions in the high north do not create much incentive for military adventures, in particular with the current absence of an ambitious American strategy. Still, in case of armed conflict elsewhere, there are important

76 See, e.g., Charap, Samuel, et al., *A new approach to conventional arms control in Europe: Addressing the security challenges of the 21st century* (Santa Monica: RAND Corporation, April 2020), p. 15ff.

77 Inspired, e.g., by Hodges, Ben, et al., *One flank, one threat, one presence: A strategy for NATO's Eastern Flank* (Center for European Policy Analysis, May 2020), p. 24ff; and Charap, *A new approach*, p. 15 ff.



Map 4.3 Some possible areas of conflict on NATO's eastern flank
NB: Design by Per Wikström.

military interests at stake, including Russian nuclear assets, Western sea lines of communications across the Atlantic and sensor capabilities for detecting ballistic missiles strikes. A major armed escalation somewhere on the eastern flank is therefore likely to spread and include military confrontation in the high north, in particular at sea and in the air.

4.5 Conclusions

So what is the impact of current military policy and doctrine and of available forces on fighting power and, in turn, the force balance in the event of conflict?

The current military policies and doctrines of Russia and the West reflect choices made since the end of the Cold War. They are a product of military culture as well as of general political, economic andsocial conditions, but more specifically of prevailing experience and demand. Sometimes doctrine points to the next war, but it is more often a confirmation of practice. At present, the resultis a Russia with a military thinking for handling the entire conflict spectrum and using military and non-military means in a coordinated way. Facing it, we find an Alliance that is burdened by

different views with respect to threats and priorities as well as by unclear roles and responsibilities for handling challenges across that same spectrum.

As for the high-intensity warfare in focus in this study, Russia and the West have a similar understanding of many aspects, although different conditions and needs have led to contrasting choices with respect to ends, ways and means. Theoretically, there seems to be considerable Western doctrine in place for guidance. Some needs an update but the main challenge for NATO and its members is putting existing doctrine into practice, i.e. implement it through policy, training and exercises. In this context, it is instructive to consider the time required to develop and implement new doctrine; the latest full efforts of Russia and the West have taken 10–20 years.

However, there is also a need to operationalise current military strategy with respect to forward defence, reinforcements, vertical and horizontal escalation, defence in depth, deep operations, counter-offensive, and so on. All this required careful thought during the Cold War, and needs updated answers given today's situation and conditions. As then, some interests are competing; for example, a forward defence with limited forces also requires some ability for defence in depth, while deep operations on enemy territory may run counter to views on escalation. In addition, new capabilities, in particular within information and space operations, need to be included in joint warfighting when they have matured.

With respect to total military assets and the long term, there is no question about the superiority of the Western alliance versus Russia. When considering NATO on the eastern flank and Russia west of the Urals, the balance shifts in Russia's favour, but numbers are not the worst problem. It is rather that the NATO forces are spread across many countries and have generally low readiness. Despite having much larger armed forces and defence expenditures, NATO still has difficulty in assembling the same numbers of ground forces as Russia. An upper hand for the West is likely with respect to naval and air forces, provided that more assets are sent from America. On the ground, NATO needs at least two to three months to achieve more favourable force ratios on the eastern flank.

In addition, Russian ground forces are more adequately organised and equipped for warfighting. The Western forces are a mixed bag of heavy and light units with much weaker combat support. The quality of Western naval and air forces varies, but the Alliance seems superior to Russia in most aspects, although some capabilities need renewal. However, the fact that NATO forces are essentially pools of assets and not tested fighting formations is a less noted but more serious problem. In contrast to the Russian armed forces, NATO forces are not prepared for warfighting together at present, with the possible exception of a few allies and given good notice.

For assessments of the overall force balance, we need to look at NATO's eastern flank as a strategic whole and a host of contingencies. Some capabilities, for example command, intelligence and logistics, will be important for both Russia and the West in any scenario, but the scale and mix of ground, maritime and air capabilities will differ. The geography of the conflict area decides this, but also the force postures and available courses of action. Furthermore, the time scales will vary: for some escalation may happen very quickly, within minutes or hours; in other situations, weeks or months of build-up may proceed open hostilities. Last, but not least, any major conflict in one area or domain could soon be affected by what happens in other areas and domains, whether they are supporting, competing for attention and resources, or becoming stages for deliberate escalation.

Consequently, the resulting force balance between Russia and the West in each scenario will vary greatly. In many cases, in particular when naval and air forces have a dominating role, for example in the Barents or Black Seas, NATO and partners may be able to quickly and robustly counter Russian aggressive behaviour, if the Alliance holds together. In other cases, it will be more difficult or even impossible in the short term, especially if Russia has the initiative and can achieve *fait accomplis* on the ground that require risky and costly offensive measures to reverse. In addition, and critically, capacity is needed for a range of responses, in order to expose Russia to unacceptable risk, regardless of the nature of the attack, and at the same time controlling escalation. At present, the Alliance lacks some of the conceptual and physical tools of fighting power needed to achieve this.

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5. Fighting for a draw in the Baltic

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As military capability can only be meaningfully assessed against a task, a terrain and an adversary, part of the study effort was channelled into preparing, conducting and analysing a war game. The scenario used in our war game was a Russian attack on the Baltic states via Belarus, planned and executed as a limited war, and intended to defeat NATO's forces quickly. This would be a variant of the already mentioned "nightmare scenario", and is – as noted by others – compatible with both an offensive and a defensive assessment of Russian strategy and intentions.[1]

The overall goal of the war game was not to predict a likely scenario or its outcome, but to throw light on the major factors influencing a major conventional armed conflict in the Baltic area. The primary role of the game was to produce a baseline in the form of a reasonable course of events for an armed conflict in the area. In addition, we wanted to generate hypotheses as to the critical factors involved, reveal dependencies between these factors, and importantly, identify relevant variations of conditions, actions and events for further analysis.[2] A war game is always a simplification of reality, and many assumptions have to be made. As the game was to serve as a vehicle for analysis, we also made conjectures that are open to debate, such as the presence of some units, and treated some matters, such as air-to-air operations, with less depth, and did not fully game some aspects, such as nuclear weapons. However, we did discuss variations of several of these, e.g. nuclear weapons and limited war, as shown in the analysis provided in Section 5.2, below.

This chapter first summarizes the game, including the strategic and operational setting, the forces involved, the concepts of operation, and the outcome. Then we delve further into land and air operations, as well as operational choices and the command of forces. The enquiry proceeds to a discussion of limited war and the role of nuclear weapons. We end with conclusions concerning dilemmas for both the aggressor and the defender, with critical factors identified for the success of both.

5.1 Strategic and operational setting

Strategic situation

The events played out in the game started in the autumn of 2020, after the presidential elections in Belarus and the ensuing internal instability, accompanied by an increased Russian military presence there. In the evolving crisis, Russia decided to secure and expand its influence in the "near abroad", and strike a blow against NATO. This was to be done by a limited military campaign that broke up or at least seriously weakened NATO as an alliance, and at the same time secured Belarus and the Baltic states as parts of an accepted and extended Russian sphere of influence. The West, in turn, feared both that Russia would pressure Belarus to accept the stationing of Russian troops and that Russia might launch a surprise attack on the Baltic states. NATO's overall strategic objective was to preserve the status quo, to deter Russia from attacking the Baltic states and Poland, and, if deterrence failed, to restore the status quo ante.

The Russian attack plan consisted of a concentrated ground attack on Lithuania from Belarus, with a southern prong securing the Suwalki Gap and linking up with forces in Kaliningrad, and a northern prong rapidly breaking through to the Baltic Sea. Success would cut the Baltics off from the rest of

1 Cf. Fabian, Billy et. al, *Strengthening the defense of NATO's eastern frontier* (Washington, DC: Center for Strategic and Budgetary Assessments, 2019), p. 1ff.

2 The game and subsequent analysis was a development of a new method for producing adjudication guides for ground battle at the tactical level; see Nordstrand, Erik, and Rindstål, Peter, *Framtagning av avdömningsunderlag för markstrid med stöd av spel i seminarieform – En metodbeskrivning,* FOI-D--0761--SE (Stockholm: Swedish Defence Research Agency – FOI, 2016).

NATO, break up the Alliance's defensive position in the Baltic region, and encircle Western forces north of the breakthrough, making the situation untenable for the Alliance and creating favourable conditions for a settlement. A short but intense barrage of long-range precision weapons on key NATO assets in the region would precede the ground offensive. However, in line with the concept of a limited war, Russia did not plan to invade Poland on the ground or attack targets in Western Europe, in general.[3]

The Russian preparations for an offensive, including a build-up in Belarus, started a month before D-day. After two weeks, NATO reacted by raising general readiness and deciding on selective reinforcement of the eastern flank. During these weeks, an increase in Russian influence operations was expected in all of NATO and the partner countries; their aim would be to undermine resolve and cohesion, but without arousing the Western allies through obvious armed provocations or blatant acts of "hybrid warfare". It was in Russia's clear interest to limit the war to the Baltic region and keep it short.

The global situation was the current one and neither NATO nor Russia were engaged in any other new major military conflicts elsewhere.

Operational estimate

The terrain of the Baltic states is flat and without major natural barriers to East-West movement before the Baltic Sea, with the exception of the Narva River and Lake Peipius, in northeast Estonia. Forests and marshes dominate the northern half of the Baltic states, i.e. north of the Daugava River in Latvia, while the southern half mainly consists of open agricultural land. In Poland, the terrain east of the Vistula is also generally open and flat, with good roads, except for the Masuria region, which has more forests, hills and lakes.

The rail network in the Baltic states is Russian gauge and connected to the Russian and Belarus network, while the Polish railway is European gauge. The area has good roads, particularly in the south. The operational depth is around 300 km, but Vilnius and Warsaw are only 30 and 120 km, respectively, from the border with Belarus. This limits NATO prospects for defence in depth and a strategy of trading terrain for time, and increases the risk for forward-based forces. In conclusion, both geography and infrastructure favour the aggressor.

As outlined in Chapter 4, Russia has sufficient high-readiness forces trained and available for a quick offensive into the Baltic states or Poland. In addition, Russia has the advantage of the unity of command that follows from a national order of battle, of operating on well-known, or one's own, territory, and of having prepared for major combat operations in the region for some time now.

Foremost, Russia has larger and heavier ground forces, with far better protection and firepower, in Eastern Europe. The same is true for combat support, in particular artillery, ground-based air defence and electronic warfare. This means that Russia can seize the initiative by choosing the time and location of combat. Because of its geographical proximity to its heartland, Russia also has significantly better prospects for supporting, resupplying and reinforcing the operation, while NATO is dependent on long and vulnerable lines of communication.

As for air forces, however, the relations are reversed, in particular if the US reinforces Europe with additional units from continental USA. The total and combined firepower, also against ground targets, of NATO forces primarily resides in the air component: tactical air, long-range strike, and enablers, such as drones, tankers and radar aircraft. Not being able to match this, Russia instead has a strong ground-based air defence for defensive purposes and expanded strike capabilities for offensive purposes, at intermediate ranges with cruise missiles and at shorter ranges with tactical ballistic missiles and rocket artillery. Russian intelligence, reconnaissance and surveillance (ISR) capability is probably inferior to that of NATO, especially concerning airborne assets, but may be sufficient. Russian naval forces in the Baltic Sea are relatively modest but, even so, roughly equal to local NATO forces in

3 Cf. the question *Pourqui mourir pour Danzig?*, which underpinned French and British inaction in 1939. Whether this would work again – given the fact that attacks on key nodes east of the Vistula and on the HQ in Szczecin have taken place – is another matter, but we assumed that the Russians would try. The chances of success would probably increase if the initial restraint east of the Vistula were combined with nuclear threats, in case allies to the west interfered seriously.

size and quality, while NATO, given reinforcement from the US, would clearly have the upper hand in the open sea: namely, the North Sea and the North Atlantic. The choice of stance that NATO partners Sweden and Finland take with their naval and air forces might be an important factor, especially early in a conflict.

On paper, the correlation of forces gives Russia good prospects for success if the conflict can be kept short and the outcome decided early. A critical condition for Russian success is that American, and in part also British and French, air and long-range strike assets will not be able to begin operations in earnest against advancing Russian army units before matters have already been decided on the ground. This could be either because NATO's air forces are slow out of the starting blocks, or because the first days of an air campaign focus on the suppression of ground-based air defences (SEAD) rather than striking on manoeuvre units. However, as NATO's strength in the air will no doubt grow over time, combat objectives that require at least a degree of Russian air superiority must be attained early in the operation.

For NATO, on the contrary, a prerequisite for any successful defence of the Baltic states and eastern Poland is to deny the enemy quick success on the ground it desires, and to enable air power to engage with the attacking ground forces and begin to turn the tide. This calls for a defence that blunts, delays, or blocks the attacks, while hitting enemy lines of communication, in particular railroads, in order to impede enemy supplies and reinforcements. A problem for NATO is that its light ground forces, with their weak artillery, to have a reasonable chance would be dependent on close air support (CAS), but enemy air defences must be suppressed first if air support is to be given with an acceptable level of risk. SEAD is also required for a concentration of airpower against Russian spearhead forces on the ground and against critical capabilities, e.g. command and control and logistics. Of particular importance is to stop Russia from breaking through in the south and cutting off the rest of the defence of the Baltic states. Finally, naval operations need to support the defence operation by denying Russia control of the Baltic Sea, with the purpose of keeping sea lines of communication to Baltic and Polish ports open.

Forces

The orders of battle of Russia and NATO reflected a possible real situation in 2020, with respect to conventional forces as delineated in the previous chapter. This included manoeuvre units with integrated combat support as well as additional and specialised combat support at division or corps level. Although logistics and special forces, as well as nuclear forces, were assumed and discussed, neither they, nor paramilitary forces and civilian defence, were played out in the game.

Russian forces available within a week's notice at any time formed a first echelon in the operation, on paper estimated at 50 per cent of the land forces, and 60–70 per cent of the maritime and air assets, available in the Western Military District. The personnel consisted of professionals on contract and conscripts, but no mobilised reservists.[4]

A Russian group of forces (GOF) was tailored for the operation, with the typical nucleus of large ground force formations supported by naval and air forces. One tank army and one airborne division, together with extra combat support from the Western Military District, formed the ground forces. They were supported by an air and air defence army and the Baltic Fleet, including the army corps in Kaliningrad and subordinated to it. Cruise and ballistic missiles were to deliver strikes for the wider war theatre beyond the immediate battle area, but only east of the Vistula. All of these forces were either in, or close to, their normal bases, just east of the Baltic states, with the exception of the tank army, which deployed to Belarus in advance of the start of the conflict.

NATO forces available for defending the Baltic States within the given two weeks' notice consisted primarily of national defence forces of Poland and the Baltic states and the enhanced Forward Presence (eFP). In addition, there was time to reinforce the eastern flank with primarily a few American units. Consequently, the NATO order of battle was a mix

4 It was assumed that only three out of the nominally four manoeuvre battalions in Russian regiments or brigades were activated: two with contract soldiers and one with conscripts.

of forces of greatly varying status and capabilities, with some units or parts of units still on their way when hostilities started. It was assumed that general mobilisation would start in Poland and the Baltic states a week before the Russian assault, while only more selective steps were taken in the remainder of NATO. The same held for NATO partner countries Sweden and Finland, which provided certain support but stayed out of the fight initially.

The NATO ground forces in the Baltic states, under the command of JFC Brunssum, consisted roughly of 3–4 national brigades in the Baltic States, backed up by the 3 eFP-Battlegroups stationed there. These units were reinforced by 2 US airborne brigades, at less than full strength; a British air mobile battalion, supported by attack helicopters flown in; and by the main body of the rotating mechanised US brigade. In Poland, the ground forces under Brunssum's command were primarily a mobile US-Polish force, consisting of the US Stryker brigade from Germany and 2 Polish mechanised brigades in northeast Poland; the remaining eFP-Battlegroup; and 2 Polish brigades with combat support for territorial defence of Poland.[5]

The command of these Allied ground forces under JFC Brunssum was given to MNC NE, in Szczecin. Under the corps, command of Allied ground units in Estonia and Latvia was the responsibility of MND North, in Adazi, while MND Northeast, in Elblag, commanded units in Lithuania and relevant forces in Poland.

The NATO maritime forces in the Baltic Sea, initially led by MARCOM, in Northwood, consisted initially of less than a handful of home-ported corvettes and frigates, some mine-clearing vessels and a coastal missile battery. By the start of the conflict, the northern NATO Standing Maritime Group had deployed to the Skagerrak and a mine clearance group to the southern Baltic Sea. Naval forces further west or north and of relevance to the operation in the Baltic region were primarily some missile destroyers and a cruise missile submarine.

The NATO air forces, led by AIRCOM at Ramstein, consisted of around 25 combat aircraft squadrons, including suppression of enemy air defence, 2–4 strategic bomber squadrons and 4 attack helicopter battalions. About 25 per cent of the tactical air forces were based close to the area of operations on the eastern flank; the rest had to operate from bases further west.

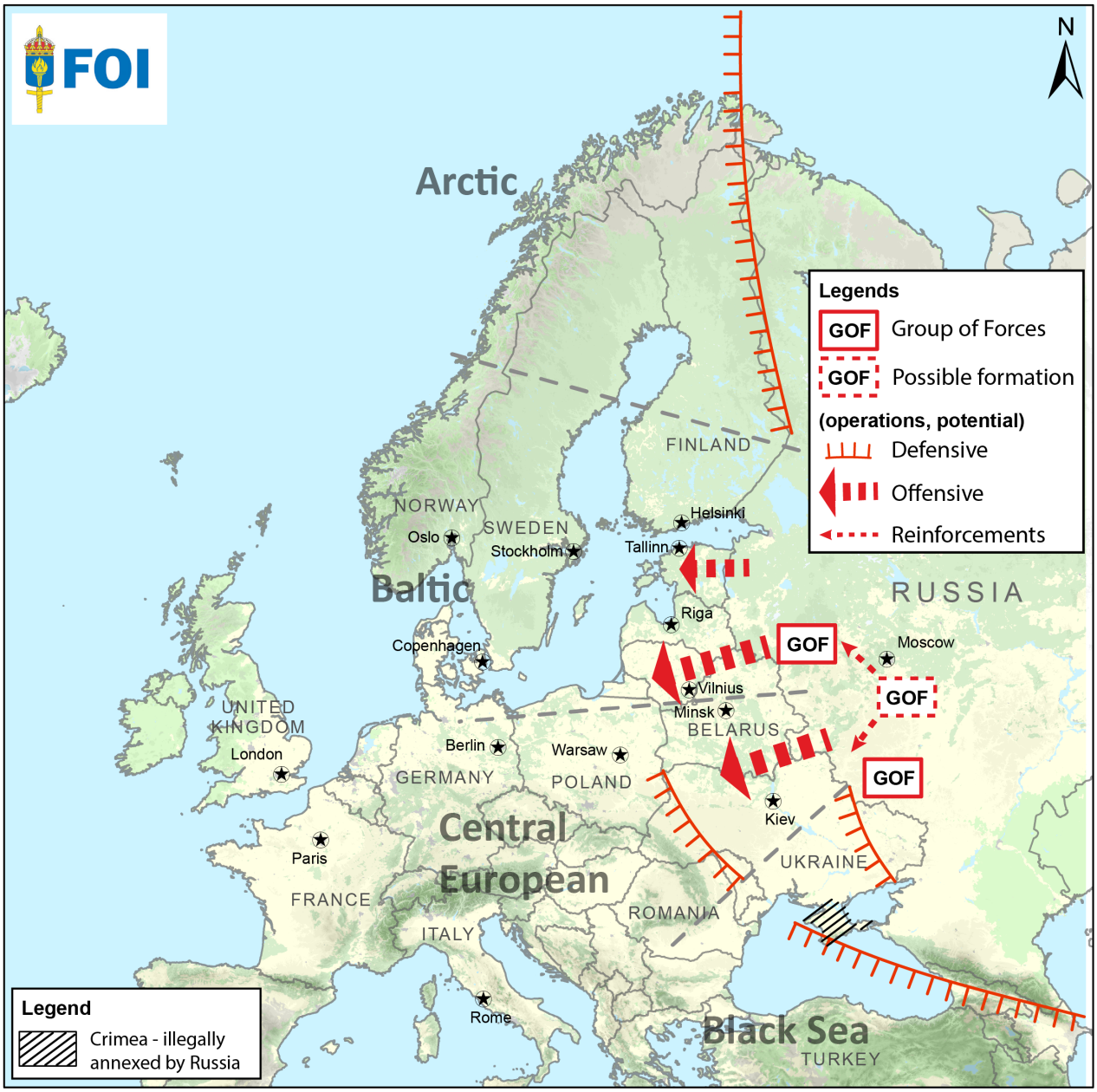
Concepts of operation

The Russian mission was to execute an offensive against the Baltic states, which could not be stopped by NATO before it had reached its objectives and NATOs' military position in the region had become untenable. The Russian theatre of operations encompasses the Baltic states, Belarus, and the airspace over the Baltic Sea. The operational level tasks of the Russian armed forces were to (i) prevent NATO from reinforcing the Baltic States, (ii) secure land lines of communication to Kaliningrad, and (iii) break up NATO defence of the Baltic states and isolate NATO's forces from the remainder of NATO's territory.

In the other three operational directions, the Arctic, central European and Black Sea, of the European theatre of war, Russian forces were initially tasked with countering any potential Western horizontal escalation, diverting NATO attention and assets from the Baltic direction and, if required, reinforcing the Baltic theatre. In addition, in the Arctic region, the armed forces' tasks were to protect Russia's strategic nuclear forces there and to pose a threat to the transatlantic sea lines of communication.

The Russian plan envisioned that major ground operations would start 12 hours after preparatory strikes, by aircraft, intermediate- and short-range missiles, and special forces, which were intended to disrupt NATO command and control in the Baltic area, delay deployment of reinforcement forces to the Baltic countries and ensure air superiority for the initial phase of the assault. The main targets were national and NATO assets in Estonia, Latvia, Lithuania, and Poland east of the Vistula. Among the targets were national operational headquarters, NATO ground headquarters, air bases, radar installations, lines of communication and logistics bases. The headquarters MNC NE, in Szczecin, although west of the Vistula, was struck because it was deemed to be of central importance for coordinating the defence of the region.

5 These units were generally assumed to be two-thirds or three-quarter strength.



Map 5.1 The European Theatre of War in the game with four operational directions from a Russian perspective
NB: Design by Per Wikström.

At the start of ground operations, the Russian ground forces attacked the Baltic countries simultaneously in four different border areas. In the north, a mechanised brigade carried out a supporting attack on Narva, in Estonia, while two airborne regiments with combat support units advanced from the Pskov area southwards into eastern Latvia. The main assault conducted by the tank army focussed on Lithuania and started from western Belarus, with one tank division attacking south of Vilnius and one mechanised division attacking north of Vilnius. The objective was for the Russian forces to create a defended corridor across the Suwalki Gap to Kaliningrad within 48 hours, and to reach the coast with the main force within 96 hours. Furthermore, a landing operation against Liepaja, in Latvia, took place, with two airborne battalions and two marine infantry battalions with a coastal missile battalion, with the aim of dividing NATO's attention and establishing a missile screen to block reinforcements from the sea. The bulk of the army forces in the Kaliningrad enclave remained there

to protect the oblast and function as a reserve, but a reinforced mechanised battalion advanced out of Kaliningrad to link up with the assault on Liepaja.

Although nuclear weapons were not actually employed in the operation, they were assumed to be part of Russian planning and their order of battle, and that Russia maintained options for using them, either for coercion, signalling, or destroying targets.

In the initial phase of the war, NATO's operational priorities were to uphold command and control, maintain coherence and freedom of action, deny Russia an early decisive success on the ground, delay Russian reinforcements and logistics support, and take control of the airspace in order to launch a campaign against Russian ground targets. On the ground, all units were prepared for defence but in different roles, according to national or Alliance defence plans. The heavier and more capable units, such as the two American mechanised brigades in Poland and Lithuania, two Polish brigades, and one or two eFP battlegroups were available for offensive tasks, whereas the rest of the NATO units were primarily intended for defensive tasks. In the air domain, initially and before the main effort of the Russian attack had been determined, NATO responded with a pre-planned cruise missile strike on all the railroads leading into the Baltic region from the east, so as to hamper Russian westward movement. In order to determine the location and nature of the envisaged assault, stand-off ISR assets were stationed over Scandinavia and Poland, protected by fighter patrols. The order of battle of Russia and NATO, respectively, are summarised in the map below.After four days of fighting, the general force balance in the Baltic States was clearly in favour of Russia. Whilst the Russian Armed Forces had not yet achieved a decisive victory, they had reached many of the tactical objectives of the operation, with small losses, except around Vilnius. On the operational level, the land bridge to Kaliningrad was established and the breakup of NATO's defence of the Baltic states seemed likely to occur within days, given that Alliance forces north of Lithuania were about to be cut off.

5.2 The face and factors of Battle

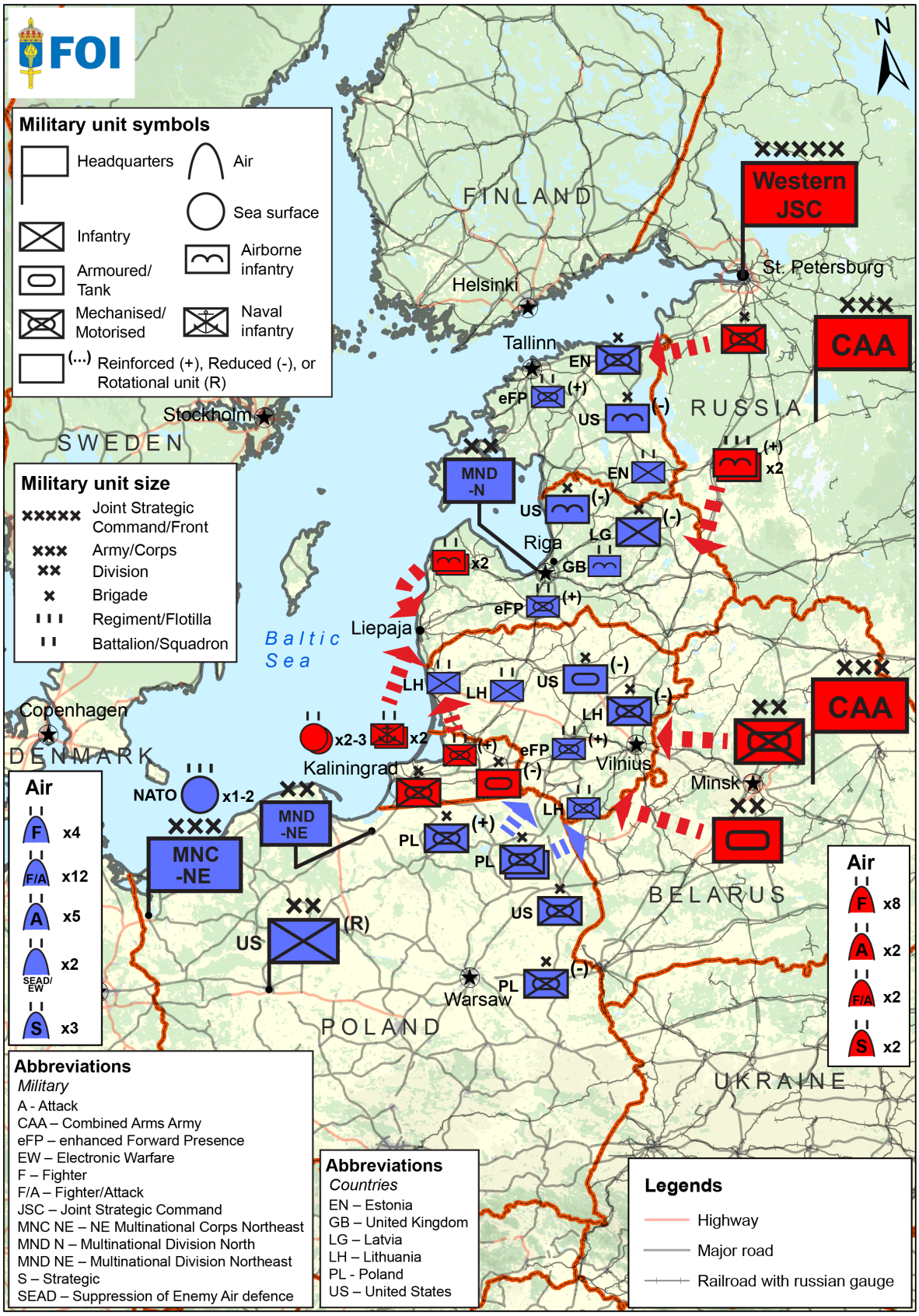
Manoeuvre of fires dominates the ground battle

A brief look at the orders of battle, and at crude force ratios in the area of operations, reveals only a slight quantitative, up to 20 per cent, advantage for the Russian manoeuvre forces on the ground. However, if one excludes the ground forces in Poland that did not see any combat, the force ratios tilt clearly in Russia's direction, giving them an overall 50 per cent advantage. In addition, the different composition of Western and Russian ground forces would also favour the Russians. On the other hand, the influence of the terrain and weather, timing and the frictions of war can cause upsets.

On the Narva front, there were quantitatively more or less equal manoeuvre units facing each other, with a reduced semi-mechanised Estonian brigade and the British-led mechanised eFP battlegroup against a Russian mechanised regiment. Although the Russians would be superior in artillery, the terrain strongly favours the defender. If this led to a tactical impasse, then it was no problem for the Russians, as their objectives were limited to diversion and tying down enemy forces in the first days.

As for Latvia, Russian airborne units could advance through Latgale without significant opposition, as the Latvian brigade, the eFP battlegroup and the reduced US airborne brigade were deployed more to the west. The British air assault battalion was out of action due to the Russian pre-invasion strikes. This left the defence of Latgale to the National Guard and the attackers were able to approach Daugavpils within a day or so, but found the bridges over the Daugava blown up by local forces.

The initial outcome of the operations on the coast, i.e. the seaborne and airborne landings, had the character of a coin flip. While the transports and the landings were vulnerable to interception by NATO's air and naval forces, the operation had the advantage of surprise and the time-window for NATO's to act in was small. Further south, the two Lithuanian light infantry battalions could not pre



Map 5.2 Russian and NATO order of battle in the war game

NB: Design by Per Wikström.

vent the reinforced Russian mechanised battalion task group, which advanced out of Kaliningrad, from reaching its tactical objectives. Things might have turned out differently if the defenders had had air support, but the available air-to-ground resources were concentrated against the units of the tank army advancing from Belarus.

The major ground battle of the war game took place north of Vilnius. A Russian force of two mechanised regiments and a tank regiment supported by divisional artillery, air defence and attack helicopters encountered one American and one Lithuanian reduced brigade and an eFP battlegroup, with an MLRS battalion and CAS. Here, Russia had an advantage in numbers, firepower and tactical initiative in open terrain, while the advantage for the defenders on the ground lay in the technological level of the American units, air support, and, arguably, the tactical advantage of defence.

Any significant or at least partial NATO success thus hinged on air power, as is discussed in the next section, with the outcome depending on the effectiveness of air strikes.

South of Vilnius, in the Suwalki Gap, the force ratio was superficially balanced, with essentially three manoeuvre brigades – or regiments with divisional support – on each side but, again, combat support was much stronger on the Russian side and air power on the NATO side. The NATO commander chose not to engage the advancing Russian units directly in an encounter battle, but advanced to the east to encircle the Russian ground forces, cutting off the Russian lines of communication and threatening their main force from the rear. This manoeuvre also created free fields of fire for NATO airpower, as the Russian tanks crossed the open terrain northeast of the Suwalki Gap.

In the game, it was determined that NATO forces were delayed in Belarus and by Russian flank protection, with the main Russian forces reaching their objectives and linking up with Kaliningrad within two days. However, the span of possible outcomes was considered great, and NATO forces might have halted the advance. Western air power would again be very important, both for protecting friendly forces that had little ground-based air defence and for attacking Russian forces. Direct action was costly for both sides, but initially Russia would most probably have been intent on avoiding just that, and NATO interested in the contrary, with different courses of events being possible.

As the game ended after four days, the outcome of the campaign was not yet decided, but Russia was in a good position to secure operational success on the ground. Major factors behind Russian successes on the ground were advantage in initiative and surprise, numbers, mechanisation, and, not least, in the volume and reach of indirect fires.[6]

Fire support not only delivers destructive capability, but also the capability to suppress and break up enemy force concentrations. This means that few Western units would have to spread out on an already dispersed battlefield and risk being pinned down, giving Russian forces both easier advance and better odds when confrontation occurred between manoeuvre units. The consequences may be less dire when the enemy is constrained by the terrain and the defenders can prepare and dig in, but a mobile fight in open terrain, including tactical retreats, would result in serious losses and possible defeat for the Western forces.[7] The only way for NATO to compensate for this situation would be to ensure continuous support from the air, which in turn requires air superiority.

It was clear that electronic warfare (EW) can be of critical importance, not only by degrading the enemy's command, communication, and sensor systems, but also for improving one's own situational awareness and force protection. Russian systematic development of EW capability in the last decade, in contrast to Western countries, aims to level the playing field vis-à-vis Western forces by incapacitating

6 Russian regiments typically possess three times the artillery, including rocket artillery, of NATO brigades and with longer reach and broader choice of munitions; see e.g., Boston, Scott and Massicot, Dara. *The Russian way of warfare*, (RAND Corporation, 2017), p. 10–11. This gave Russia decisive advantage in every instance of the ground battle, with an even worse balance around Vilnius and on the coast, also given considerable combat support from division and army levels.

7 Watling, Jack, *The future of fires: Maximising the UK's tactical and operational firepower*, (RUSI, 2019), p. 1–2, 5–15.

or degrading their command and control or ISR systems.[8] How this would play out in real life is difficult to assess: Russia's main advantages seem to be training, operational practice and integration of EW in the ground forces down to the level of every manoeuvre brigade. On the Western side, the EW capability in the ground forces suffers from many years of low demand and subsequent neglect, with the updated and powerful assets residing in the air forces.[9]

Other issues that merit closer examination are counter-mobility operations, mobility in a degraded infrastructure and supplying front-line forces. Destroying roads and bridges and then mining and defending the site could significantly delay an aggressor's advance in the difficult terrain of the northern parts of the region, but would, except in the case of major rivers, have much less of an impact in the south, with its open terrain and better roads. Similarly, repair of roads and bridges as well as demining vary in importance depending on the terrain and whether defending or attacking. While engineer support is much the same within Russian and NATO heavy manoeuvre units, typically a battalion in each brigade, the Russian Army also has engineering resources at division and army level, which NATO generally lacks in this area.[10]

Resupplying the first echelons after the initial period will be a challenge for both sides, as manoeuvre forces typically have no more than 2-4 days of supplies organically, in particular not in high-intensity operation.[11] In addition, mutual strikes at each other's depots and lines of communication to the main battle areas can be expected.[12] This means that after a few days of operations, both sides might well reach a culmination point as relates to supplies. Targeting Russia's logistical tail is perhaps NATO's best chance for strangling the Russian offensive if the conflict does not end quickly, but the Alliance's own situation might be even more precarious after only some days.[13]

Superior air power – a good but risky bet

Air power, enabled by advanced electronics included in sensors, communications and weapons, is one of the Western alliance's and especially the US's real strong point in conflicts with other powers, as has been evident at least since the first Gulf War. Some observers assess that as much as 80% of the West's conventional firepower resides in its air forces, and our own rough calculations indicate that, under favourable conditions, the attack aircraft of the allies north of the Alps, with the US, could wipe out much of the Russian army west of the Urals in days.[14] However, during the decades since Desert Storm, the West has mainly employed its air power against insurgents or third-rate powers, and thus encountered little or no resistance in the air or from the ground. Accordingly, capabilities for air-to-air and SEAD have suffered, but have begun to be rebuilt since Russia re-emerged as an adversary.

Russian military capabilities are in many ways a reverse image of NATO's: strong, where NATO is weak, and vice versa. Against NATO's superior air power, Russia pits its own anti-access and area denial (A2/AD) capabilities, particularly its air defences.[15]

8 See Kjellén, Jonas, *Russian electronic warfare: The role of electronic warfare in the Russian armed forces*, FOI-R--4625--SE (Stockholm: Swedish Defence Research Agency – FOI, 2018), p. 83–86; and McDermott, Roger, *Russia's electronic warfare capabilities to 2025: NATO in the electromagnetic spectrum*, (Tallinn: ICDS, 2017), p. IV–V, 5–8.

9 Spring-Glace, Morgan J. 'Return of ground-based electronic warfare platforms and force structure', *Military Review,* US Army, Jul-Aug 2019, p. 1–6,

10 Kjellén, Jonas. 'Russian armed forces in 2019', in Westerlund, Fredrik and Oxenstierna, Susanne (eds.), *Russian military capability in a ten-year perspective – 2019,* FOI-R--4758--SE (Stockholm: Swedish Defence Research Agency – FOI, 2019), p. 26–28. In the Western Military District, Russia has 6 engineer brigades/regiments, whereas NATO primarily has Polish engineer units of unknown status outside the manoeuvre unit in proximity to the Baltic states.

11 With respect to sustainment of high-intensity operation and supply levels, see e.g. Peltz, Eric, Robbins, Marc L, Girardini, Kenneth J, Eden, Rick, Halliday, John M, Angers, Jeffrey. *Sustainment of Army Forces in Operation Iraqi Freedom* (Santa Monica: RAND Corporation, 2005), p. 44-50, 107-114.

12 Kofman, Michael. 'It's time to talk about A2/AD: Rethinking the Russian military challenge', *War on the Rocks*, 5 September 2019, p. 6.

13 Watling, *The future of fires*, p. 6–7.

14 Ibid., p. 2; Dalsjö, Robert, V*ästliga fjärrstridskrafter: En operationsanalytisk studie av kapaciteten för markmålsbekämpning vid krig i närområdet,* FOI-R--4798--SE (Stockholm: Swedish Defence Research Agency – FOI, 2019).

15 A2/AD is an American buzzword for systems and capabilities – typically long-range sensors and missiles – which can make access to or operations within a region risky or costly for an adversary's forces, though seldom impossible as is sometimes claimed.

Although much less powerful in the air than NATO, and backward in the field of electronics, Russian air power and its ground-based air defences (GBAD) are by no means negligible entities. While still largely dependent on updated versions of Cold War aircraft, they have recently been equipped with modern systems, both for air-to-air and air-to-ground purposes. In the Syrian intervention, Russia has displayed its new weapons, including cruise missiles, smart bombs and drones. Russia has made considerable investments in GBAD, for the army, navy and air force, to be able to stave off Western airpower in case of a war. Many Western assessments of Russian A2/AD capabilities have been overblown, conjuring up images of large impenetrable A2/AD bubbles neither consonant with the laws of physics nor supported by fact. However, the Russians do pay serious attention to ground-based air defence, since they know that the airpower of their main adversary is potent and lethal.[16]

As to the forces available in the gamed scenario, after deducting for non-availability and demands in other operational directions, NATO had roughly 4 squadrons of fighters, 10 squadrons of fighter-bombers, 5 squadrons of attack aircraft, and 4 battalions of attack helicopters. This was complemented by 3 squadrons of aircraft for SEAD and electronic warfare, 2 squadrons of F-35 Joint Strike Fighters, strategic bombers armed with cruise missiles, and support aircraft such as airborne warning and control systems (AWACS), tankers, joint surveillance target attack radar systems (JSTARS), etc.

Russia had 8 squadrons of fighter and fighter-bombers, 5 squadrons of attack aircraft, 4 battalions of attack helicopters and one squadron of strategic bombers. Though clearly inferior in the number of aircraft, Russia had an advantage in being able to operate from bases closer to the area of operations, which allowed for two or three sorties per plane per 24 hours. NATO, on the other hand, based most of its aircraft in Western Europe, which meant that they could only do one sortie per 24 hours and were dependent on tanker support. Thus, after NATO's losses in the initial strike, both sides were roughly even in the number of tactical aircraft sorties they could generate, about 400 per 24 hours, although NATO could momentarily put more aircraft into the air.

In terms of the quality of aircraft, sensors, weapons and personnel, however, the sides were not evenly matched, with NATO likely to be superior in most cases.[17] This meant that Russia would probably avoid duels between fighter aircraft and utilize gaps in NATO's fighter cover. However, Russia had the advantage of unity of command, while NATO had to deal with the adverse effects of multi-nationality in terms of military coherence and effectiveness, and was more dependent on maintaining air superiority over time, because of its lack of GBAD and its reliance on valuable but vulnerable airborne assets, such as AWACS.

We did not play out the air-to-air contest but adjudicated that, during the initial days of the war, NATO dominated the airspace west of a line running from Turku, in Finland, via Gotland, in Sweden, to Bydgoszcz, in Poland, and that Russia had control of the air over Russia. The airspace in between, i.e. over the Baltic states, eastern Poland and the eastern Baltic Sea, was deemed contested airspace, where either side could achieve temporary air superiority if they concentrated forces.

The air operations NATO would have to mount in this type of conflict are complex, with many interdependent and specialised components having to work together. For example, the strike against Russian tank forces south of Vilnius first required ISR assets for an estimate of the position and size

16 In a report published in 2019, we subjected Russia's A2/AD capabilities in the Baltic region to closer scrutiny, and found that many of the claims made by Russia and in the West were considerably overblown. Four cardinal errors of analysis were involved: confusing nominal and effective ranges, underestimating the problems of hitting moving targets at a distance, underestimating the potential for countermeasures, and uncritically accepting Russian performance claims. For example, the top-of-the-line 40N6 missile for the S-400 air defence system has been plagued by problems and is not yet operational in Russia, and, anyhow, the curvature of the earth places severe limits on the effective range of almost any air defence against low-flying targets; see Dalsjö, Robert, Berglund, Christofer and Jonsson, Michael (eds.), *Bursting the bubbles – Russian A2/AD in the Baltic Sea region: Capabilities, countermeasures and implications*, FOI-R--4651--SE (Stockholm: Swedish Defence Research Agency – FOI, 2019).

17 Barrie, Douglas, 'Russian air-to-air power: Re-make, re-model', in Jonsson, Michael and Dalsjö, Robert (eds.), *Beyond bursting bubbles: Understanding the full spectrum of the Russian A2/AD threat and identifying strategies for counteraction*, FOI-R--4991--SE (Stockholm: Swedish Defence Research Agency – FOI, 2020); and Barrie, Douglas, and Hackett, James (eds.), *Russia's military modernisation* (London: IISS, 2020), p. 117–144.

of the enemy's formations, then a detailed reconnaissance of the targets and of its GBAD assets, followed by a SEAD mission to supress air defences, before a strike by two squadrons could be unleashed. Moreover, in this case it would also have been necessary to first suppress any Russian S-300/400 batteries within range in the Kaliningrad exclave.

Making such a complicated operation work under conditions of urgency and multi-nationality requires both intricate planning and coordination in an Air Tasking Order (ATO). Given the current general state of preparedness in NATO, it is an open question whether the Alliance can launch the required air operations quickly enough, although planning of US Air Force Europe (USAFE) could maybe work as a back-up. Even so, to be readily executable, an ATO needs to have been briefed to, and exercised, by the prospective participants beforehand. The NATO air component would thus have a lot to do in the weeks and days leading up to a war. A final complication is that the planning models and tools developed, as well as gained experience, during many years of stabilisation operations relate to slow-tempo campaigns where one's own side dominates, sets the pace and has the initiative – not for urgent contingencies, where a peer aggressor has the initiative and the very existence of allies is at stake.[18]

Reliable and up-to-date data on targets and on adversary air defences is a sine qua non for planning and executing any air campaign, but even more so when going after army units in the field. Moreover, the individual target often has to be acquired by the aircraft's or the weapon's sensors before weapons can be launched. The Western alliance has access to an impressive range of sensors, of all kinds, to find targets, but given the nature of operations during the last two decades it is an open question how many of them could survive in a fiercely contested airspace.

Another sine qua non for execution of an air campaign against ground targets is being able to suppress Russian ground-based air defence sufficiently to allow operating at reasonable height with an acceptable level of risk. Taking out an abundance of targets that also are mobile requires getting reasonably close, with some systems, and cannot be done with only long-range strike assets. Western defence suppression capabilities have deteriorated during the decades when the focus was on peace enforcement, stabilisation and counterinsurgency operations, but are now being rebuilt. The array of GBAD systems fielded by Russia can seem daunting at first sight, but our analysis of the duel between aircraft and GBAD during the air strikes south and north of Vilnius indicates that there were really only two sorts of systems that had to be taken out – the army's SA-15s and the air force's S-300/400s.[19]

A Russian tank or motor rifle regiment normally has four launchers each, for SA-13s, SA-19s, and SA-15s, excluding man-portable air defence systems. However, the SA-13 and SA-19 have a rather low ceiling of 3.5 km, and only the SA-15 can reach targets at higher altitudes than that. This means that if one can eliminate the four SA-15 fire units in a regiment, which should be doable unless Russia adopts Serb-style "run and hide" tactics, it should be possible to fly at a comfortable height of about 5000 meters and start engaging ground targets.[20] However, if the area in which the targets need to be struck lies within the effective range of the Russian air force's territorial S-300/400 air defence systems – as they did south of Vilnius – and above a certain altitude, things become different. There, taking out the SA-15s and then operating at medium height would not work, as S-300/400 units in the Kaliningrad exclave could be a threat against aircraft at that height. Thus, any

18 Cf. NATO, *Allied Command Operations – Comprehensive Operations Planning Directive COPD,* Interim v1.0., 17 December 2010; United States Air Force, Curtis E. Lemay Center, *Annex 3-0 operations and planning: contingency and crisis execution – Tasking cycle stages,* last updated 4 November 2016.

19 Something of an anomaly is that the 1st Tank Army also has a separate anti-aircraft missile brigade equipped with SA-17 Buk launchers, but this unit did not participate in the operation.

20 In the air war over Kosovo, the Serb air defences did not light up all their missile battery radars from the outset (as the Iraqis had done, whereupon they were promptly taken out), but preserved them by staying silent and hidden. This reduced the immediate effects on allied air operations, but meant that there remained a persistent threat that NATO had to factor in.

such units had to be defeated, or at least suppressed, before the manoeuvre units could be taken on.

So, NATO's air forces have impressive and potentially deadly firepower, which can be moved readily and have a decisive influence on many battles. However, questions remain whether the Alliance could get out of the starting blocks fast enough, and if so whether its stores of missiles and guided bombs would suffice.[21]

Operational choices matters

As been shown already, consideration of overall force ratios gives us only part of the truth of force balances. Many tactical force balances were already determined, before the fighting started, by the dispositions of the combatants, and it is obvious that Russia would have had no interest in arranging a symmetric battle with the Alliance. All Russian military strategy would be about exploiting the initial advantage with respect to geography, ground forces and A2/AD capabilities, in order to reduce the Western advantage in air power and information technology, as well as in total resources. A short war, or at least an early success that the Alliance can be convinced is not worth reversing, must always be a strategic priority.[22] In the given scenario, Russia decided on a relatively moderate build-up before the offensive and the short pre-invasion campaign, in order not to arouse a NATO that was perhaps divided on how to respond to the military build-up in Belarus, and to maximise the element of surprise. Considering force ratios, a safer choice could have been to allow more time for mobilisation and a more extensive campaign against Western strong points.

Now, the available first-echelon forces seemed enough for Russia; the question is how much making longer preparations, and more extensive mobilisation, would add. Generally, the Russian army's biggest problem is personnel, while in its air force and navy it is equipment. As for ground forces, Russia might on paper be able to muster twice the number of units that we used in our game for the Western direction, but in reality, due to restrictions with respect to personnel, a full mobilisation would take time and most probably also warn NATO. It might not even be possible, at least not within a month. However, a second echelon, which is needed as an operational reserve and for replacement, as well as for finishing the fight, of the equivalent of 6-8 brigades, seems realistic, given that some assets in the Western Military District must be assigned to other directions. This means that more time to mass a larger first echelon might not make a great difference on the ground. Trying to mobilise more than 60–70 per cent of the Russian air force and navy in the Western Military District for the operation could also prove difficult, as in contrast to the army, the problems there are more about low serviceability of equipment.[23]

As for NATO, the order of battle and the positioning of forces when the conflict starts are strategically constrained not only by policy but, equally, by the total availability of forces and the capacity to move them.[24] At least the ground forces would never have been much larger, even if NATO had been given more time and was quicker in its reaction to the Russian build-up: at least, not within a month. Even with constraints on the Russian side, any growth of forces on the ground will favour Russia in the region for the relevant periods, and NATO can only outweigh this advantage with other qualities. In addition, NATO must also retain some reserves, for the same reasons as Russia. As for Western air power, it is less a question of available assets – they will be considerable already after two weeks – but more of the short time available for preparing the operations, as discussed above. In addition, NATO's regional command and control structure might be stretched early, due to the apparent lack of preplanned arrangements for command and control

21 This is a relevant question given that in the Libyan air operation, in 2011, the European allies soon ran out of precision-guided munitions.

22 See e.g. Kendall-Taylor, Andrea and Edmonds, Jeffrey, 'The evolution of the Russian threat to NATO', in Olsen, John Andreas (ed.), *Future NATO: Adapting to new realities,* Whitehall Papers 95:1 (London: RUSI, 2020), p, 61–63.

23 Kjellén, Jonas. 'Russian armed forces in 2019', in Westerlund and Oxenstierna, *Russian military capability*, p. 25–29. Russia has around 54 BTGs rapidly available in the Western Military District, i.e. two per brigade. A third battalion consists of conscripts, which might be used as a reserve or for less-demanding tasks. There are different opinions about the readiness of Russian Armed Forces; see, e.g., Muzyka, Konrad, *When Russia goes to war* (Tallinn: ICDS, 2019), p. 5ff, for another perspective.

24 As for NATO's ability to move forces, see, e.g., Hodges, Ben, Lawrence, Tony, and Wojick, Ray, *Until something moves: Reinforcing the Baltic region in crisis and in war* (Tallinn: ICDS, 2020), p. 8–9.

below the JFC level, and the extent of multi-nationality, down to the tactical level, in some units.[25] Some of these deficiencies may, however, be on the way to being rectified, with implementation of the DDA, i.e. 'Comprehensive Concept for Deterrence and Defence in the Euro-Atlantic Area'.

A more difficult factor is the length and extent of the Russian pre-invasion campaign. As stressed above, it was decided that it would be very short, in order to maximise the surprise for the Allied defenders and to capitalise on their lack of preparations. In addition, restraint was upheld, with no strikes on Allied infrastructure, in particular military command posts, airbases, logistical depots, lines of communication, etc., west of the Vistula, except for HQ MNC NE, so as to minimise the risk of a united NATO response. Unconventional and irregular warfare was assumed, but never factored in, and had an equally short time to have effect. Such operations against civilian parts of western European societies would probably be rather effective in disturbing the war effort. Given Russian military thinking and the high risks involved in not doing the utmost to degrade in particular NATO air power and command and control, the assumption of a restrained Russian approach is debatable. Russia must count on that an offensive against the Baltic states will be perceived as a full-scale challenge to the Alliance.

As for long-range strikes, it has been suggested that the Russian conventional capability, although greatly improved lately, might not include sufficient quantities of precision-guided weapons to support both its own forces in the operational-depth fight and conduct theatre-depth strikes on a large scale.[26] However, rather than shooting at everything, a careful use of strike capabilities for strategic operations might be very effective. A relatively small number of strikes, without obliterating every objective, may inflict enough damage and general disorder on NATO. Perhaps Russia does not have enough precision-guided weapons, and maybe it does not need that many.[27] Fixed targets – in particular roads and bridges, in the area of operations – and mobile targets, are more effectively engaged with aircraft. Exactly the same argument can of course be applied to NATO; the priority of stand-off strikes and effect against strategic targets is an important element impacting the outcome of a campaign that merits closer analysis.

Given the strategic choices for positioning and the use of forces, the operational conduct of operations, including planning and execution, is also of paramount importance. In the game, operational planning was assumed to be well developed on both sides, giving none an advantage, initially. However, as soon as the conflict started, the ability to execute and adjust the plan had to be considered. In general, seizing the initiative, surprise, short operational distances, and well-prepared coordination of joint operations favoured the Russians in the early phases of the conflict. For the other, less ambitious objectives – the initial sufficiency of planning and the operational level command's being spared from Russian attacks – helped the defenders in the beginning.

For the ground forces in the area of operations, the attacks before the invasion meant significant degradation – possibly temporary loss – of the operational picture and coordination on the ground. The effects on operations were considered to be minor in the first couple of hours, due to existing plans and mission command, but the situation would become problematic very soon after a major Russian ground assault, if Western command capability was not restored.

For example, during the operations in Latgale and south of Vilnius, this seemed important. In the former case, Russian local success depended on the fact that regular NATO forces did not enter the fight during the first two days. In the latter case, the outcome hinged on the Polish-American force's arriving in time to stop the Russian advance with support from the air. With respect to reinforcements and sustainment of the forces on the Baltic front, the

25 During the Cold War, multinationality only existed in corps-level commands and above. As a rule, formations below that level were of one nationality, for reasons of effectiveness.

26 See, e.g., Norberg, Johan and Goliath, Martin, 'The fighting power of Russia's armed forces in 2019', in Westerlund and Oxenstierna, *Russian military capability,* p. 67, for an assessment. The Russian stand-off strikes may have difficulty in decisively affecting a peer adversary, at least without nuclear warheads.

27 Kofman, 'It's time to talk', p 7.

effects of degraded command and control on the battle were expected to show after only 2–3 days, and even minor delays and disruptions could tip the scales further against the Alliance.

The game underlined the importance of joint operations, especially for NATO, which had fewer and lighter forces on the ground and was the reactive party; no forces could be spared and operational synergies had to be exploited as much as possible. Fighting against a near-peer adversary entails co-ordination of manoeuvre, fires, protection, intelligence, sustainment, and civil-military cooperation at several command levels, while at the same time allowing room for initiative and risk-taking.[28] Emerging doctrine, for example the Americans' Joint Operational Access Concept (JOAC) aims even further at 'cross-domain synergy', and at lower levels.[29] This places further demands on command and control; against this stands the Russians' dedication to preventing just that by hitting Western C4SIR.

Several courses of action were considered in the red and blue military estimates, and both sides began adjusting their plans early in the battle. Some capabilities should have been better exploited and assessed in the game, e.g. Russian air force and long-range strike, as well as maritime force, on both sides. Questions were raised about the flexibility at the operational level and the time-frames for changing plans and orders, especially in a disturbed operational environment. These times may have been unrealistically short in the game. It was clear that, when giving a go-ahead for actions, timing and positioning of forces are of paramount importance for the outcome. In this context, the importance of terrain, distances and weather should be underlined. Even on closer inspection, these factors are easily miscalculated and at times were difficult to include fully in the game. Likewise, the effects of manoeuvres were difficult to assess, as most rules for adjudication of war games focus on attrition.

The difficult concept of limited war

At the onset of the war in the Baltic region, Russia had mobilised forces in the other European operational directions, the Arctic, central European and Black Sea, in order to counter any possible Western horizontal escalation and to divert NATO attention and forces from the Baltic direction. If required, some of these forces were also on standby to reinforce the Baltic operation. When mustering forces to the Baltic region, both sides have to consider and prepare for the possibility of the conflict's spreading to other geographical areas.

In the high north, it seemed plausible to assume an expanded Russian military presence in the Barents Sea, as well as attempts to establish a marine exclusion zone and a no-fly zone including parts of northern Finland, Sweden and Norway. There was also the possibility of Russia moving ground forces, with advanced air defence, towards the Norwegian border. A priority for Russia in the Arctic would be to secure its nuclear escalation capabilities, but possibly also to threaten or to disrupt NATO's transatlantic communications, and prevent potential NATO conventional attacks against northwest Russia. Russian advances in the high north would force NATO to undertake measures to secure supply chains and maintain freedom of action as long as the war in the Baltic region was ongoing. In the central European and Black Sea directions, Russian armed forces had been mobilised to protect against and, if deemed necessary, to exploit an escalation of conflicts in Ukraine and the Black Sea, respectively. The main purpose was to ensure Russia's interests in these directions.

The concept of a limited war raises a dilemma for both warring parties, and suggests a number of key factors. First, persistent uncertainties regardingthe intentions of the enemy mean that neither party can exclude the possibility of escalation in other directions. Russian mobilisation in the Arctic, central Europe

28 See, e.g., Benson, Bill, 'The evolution of army doctrine for success in the 21st century', *Military Review,* Mar–Apr, 2012, p. 54, 56–57; Taylor, Curt and Kay, Larry, *Putting the enemy between a rock and a hard place: Multi-domain operations in practice*, Modern War Institute, 27 August 2019; King, Scott and Boykin, Dennis B, 'Distinctly different doctrine: Why multi-domain operations isn't AirLand Battle 2.0.', Association of the United States' Army, 20 February 2019.

29 Echevarria II, Antulio J, 'Operational concepts and ilitary strength', *2017 Essays,* Heritage Foundation, 7 October 2016, p. 12. In JOAC, the domains are the traditional land-sea battlespace, but also include space and cyberspace. There are other but similar descriptions in other concepts; see United States. Department of Defense, *Joint Operational Access Concept – Version 1.0*, 17 January 2012, p. ii–iii.

and the Black Sea leaves NATO little choice but to allocate resources for adequate cover in these directions, not least in order to be able to resupply the Baltic operation. In the case of an extended conflict, there would be competition within NATO over military resources. Conversely, a geographic expansion of the conflict is a gamble, from the Russian perspective, since it runs the risk of overstretching its military resources and losing the focus on its primary objective.[30] Neither NATO nor Russia have endless resources, which limits their respective abilities to extend the conflict beyond the Baltic region. That said, over time, the concept of a limited war is likely to become challenging to maintain. Whereas, in the war game, the initial Russian preference was to take a cautious approach to extending the fight beyond the Baltic region, securing success in the operation might have eventually required an expansion of its geographic scope. If NATO were to engage strongly in the conflict, Russia would likely try to hinder the Alliance's mobilisation and its war effort in general, including via degradation of Western cohesion and societies, as well as particular strong points such as air power.

Second, for Russia's ability to conduct a rapid and large-scale invasion of the Baltic states, deploying into Belarus and then securing reinforcements through that country offers several advantages. It provides favourable terrain for ground forces, which enables a quick breakthrough deep into the Baltics, with nearby logistics support. In particular, it enables both the encirclement of the Baltic region and cutting it off from the remainder of NATO's territory and forces at an early stage of the campaign. Moreover, Belarus's strategic location further provides freedom of manoeuvre in several directions, including Lithuania, Kaliningrad and Poland.

Third, the scenario presumed that militarily non-aligned Sweden and Finland stayed out of the actual combat operations, for both political and practical reasons. Early and extensive involvement of these countries was judged to require more than the current preparations and, importantly, formal acceptance as operational partner by the NAC. However, from the onset of the military conflict in the game, NATO requested the right to access Swedish airspace and airbases for air operations in the Baltics. The former was granted quickly but basing in Sweden was neither approved nor deemed possible within the first week of hostilities, due to lack of preparations. Access to Swedish territory is probably a significant factor for increasing the sortie rates of Western air operations and achieving air superiority in the operational theatre. As for Russia, in this particular scenario, it was adjudicated that the primary interest would be to prevent Sweden and Finland from actively interfering and joining the NATO operation. In the event, this was done effectively by threats of military actions, ultimately with nuclear weapons. However, Russian offensive measures against Sweden and Finland cannot be excluded. As is the case with other parts of Western Europe, operations against Sweden and Finland in some situations will be likely and even necessary for Russian success in the Baltics and the high north.

Fourth, for NATO, the role of Poland is critical to the defence of the Baltic region. Poland currently hosts important headquarters and combat support assets, and Polish airbases could host allied aircraft, allowing a higher sortie rate. The ability to add substantial reinforcements to the Baltic operation depends on maintaining logistical supply capability through Poland. Moreover, for the defence of the Baltic countries, the offensive fighting power of Poland is important in its own right. As a possible countermeasure, it cannot be excluded that Russian troops, possibly with Belarussian support, could launch an attack into northeast Poland with the intention of at least tying up NATO resources and cutting off allied supplies and reinforcements from Poland to Lithuania. Another possible Russian option could be to strike deep into Polish territory in order to cut off NATO rear supplies.

In conclusion, given the ambition to limit the war, Russia went for a smaller scale, but riskier, operation, with an emphasis on surprise and speed, at the expense of quantitative superiority. However, in order to secure the desired outcome, a larger

30 A 2019 FOI study of Russian military capability, for example, estimates that Russia's armed forces can only launch one regional war at a time; see Johan Norberg and Martin Goliath, 'The fighting power of Russia's Armed Forces in 2019', in Westerlund and Oxenstierna, *Russian military capability,* p. 74.

operation might still have been necessary. Yet, this might run the risk of "awakening" NATO at an earlier stage. In the end, the time available to NATO in reacting to an attack would have significant implications for the course and outcome of the war.

The long shadow of the mushroom cloud

A limited war between Russia and NATO would be fought under both the Russian and the Alliance's nuclear umbrellas.[31] Inevitably, nuclear weapons would be a key coercive and actual asset, instrumental in achieving victory. Any theory of victory and of a campaign plan developed by Russia will take nuclear capabilities on all sides into account, both in the preparations for and the execution of the war. As shown in Chapter 4, Russia prepares itself for regional wars at its periphery. This includes using nuclear weapons, for coercion and intimidation through threats or their actual employment. Thus, even in the case of a limited operation in the Baltic region, Russia might use nuclear-capable precision weapons in order to: 1) threaten or execute deep strikes on European capitals and critical infrastructure; 2) discourage the European allies from living up to their defence commitments; 3) keep the US out of such a regional limited conflict and, thus; 4) decouple Europe from the US extended nuclear deterrence. If this worked, and Russia were to convince the Alliance to stand down, for fear of nuclear escalation, this could disrupt NATO and Russia would gain a strategic success without a long war.

NATO, consequently, has no choice but to include nuclear assets in its own considerations and planning.[32] The Alliance needs to be prepared to be confronted with a Russian nuclear threat, even in a conventional conflict, and to discourage it from employing them. Moreover, NATO's weak conventional military posture on the eastern flank implies a greater reliance on nuclear weapons for deterrence, and possibly also for defence.[33] In this sense, a war in the Baltics, even one that remains conventional, would necessarily include a nuclear dimension that would influence political and military calculations on all sides.[34]

Russia has devoted much effort to modernising its short- and intermediate-range missiles and today has a numerically superior force for dual use, i.e. capable of delivering both conventional and nuclear warheads, in Europe. Among experts, there are divergent opinions on Russia's actual doctrine for non-strategic nuclear deterrence and use. This includes whether nuclear weapons would be used in other situations than as an extreme last resort, as well as to what degree the Russian leadership, as distinct from Russian military commanders, contemplate first use of sub-strategic nuclear weapons to defeat an enemy or to terminate an ongoing conflict.[35] Importantly, the current US official nuclear posture operates under the premise that Russia could use the threat of limited nuclear escalation to terminate a conflict on favourable terms.[36]

NATO's declaratory policy emphasises the deterrent role of nuclear weapons: "Nuclear weapons are unique, and the circumstances in which NATO might contemplate the use of them are extremely remote. However, if the fundamental security of any ally were to be threatened, NATO has the capabilities and resolve to defend itself – including with-nuclear weapons".[37] NATO also reiterates that "any employment of nuclear weapons against NATO would fundamentally alter the nature of a conflict".[38]

A key difference between Russia and NATO is the fact that the majority of the latter's allies

31 This section, apart from some discussions during the war game regarding the possible role of nuclear weapons, is largely based on working paper by FOI colleague John Rydqvist.

32 For a convincing argument, see Roberts, Brad, *The case for U.S. nuclear weapons in the 21st century* (Stanford: Stanford University Press, 2016).

33 Cf. Hagström Frisell, Eva (ed.), et al., *Deterrence by reinforcement – The strengths and weaknesses of NATO's evolving defence strategy,* FOI-R--4843--SE (Stockholm: Swedish Defence Research Agency – FOI, 2019), Chapter 4.

34 Schelling, Thomas C., 'Foreword', in Larsen, Jeffrey A. and Kartchner, Kerry M., eds., *On limited nuclear war* (Stanford: Stanford University Press, 2014), p. xii.

35 Binnendijk, Hans and Gompert, David, 'Decisive response – A new nuclear strategy for NATO', *Survival,* vol. 61, no. 5, 2019, p. 113–128; Tertrais, Bruno, 'Russia's nuclear policy: Worrying for the wrong reasons', *Survival,* vol. 60, no. 2, 2018, p. 35.

36 Tertrais, 'Russia's nuclear policy'.

37 NATO, 'Nuclear deterrence', Fact Sheet, February 2020.

38 NATO, *Brussels Summit Declaration,* July 2018.

ultimately rely on extended nuclear deterrence provided by the United States, albeit nowadays only a few allied governments and electorates seem to acknowledge this.[39] From this follows both political and strategic dynamics in the Alliance. In essence, European concerns mirror two fundamental questions: the first concerns the reliability of American assurances, famously captured in de Gaulle's question of whether the US would risk New York to save Hamburg. The second question concerns the utility of nuclear security guarantees and whether it is not better to be red than dead.[40] The consequence, as some have pointed out, is that reassuring allies is oftentimes more difficult than deterring an adversary.[41]

Overall, the belligerent with the most flexible and the most graded capability to escalate at all levels of conflict will have an advantage and would theoretically be able to dominate the escalation process. This will in turn enhance the ability to force a contender to back down without resorting to general nuclear war. This is escalation dominance and why nuclear weapons would play a key role in a Baltic war. Consequently, reliance on nuclear weapons would not be panacea for NATO. At present, Russia may enjoy escalation dominance at the sub-strategic level in a conflict on the eastern flank, given a more varied nuclear arsenal but also, possibly, an advantage in suitable nuclear targets as compared to the West.[42]

What might constitute nuclear thresholds in a limited or regional war? As alluded to above, nuclear weapons do not have to go "bang" in order to affect the course of a conflict in the Baltics. Coercion and threats could be used to enforce political and military objectives and operations. Threats would further be directed at the adversary in an attempt to dominate the escalatory dynamic of the conflict either to compel a defender to refrain from taking certain steps or even to give in. The aggressor could also use nuclear weapons to move up the escalation ladder, beyond a level that the defender would deem worth the cause.

Intense nuclear signalling by means of rhetoric, threats and force activation is likely to accompany conventional build-up and preparations for hostilities. This intertwined dynamic poses a number of serious questions to the West. What would such signalling mean for NATO's nuclear posture and how would it affect Allied war preparations? Moreover, what impact would it have on non-NATO members in the region, such as Finland and Sweden?

During the course of conventional conflict, additional critical questions would have to be addressed, for example: Might Russia go nuclear in response to any strikes on Russian soil, including Kaliningrad? What kind of targets in Russia should be considered off-limits, because of the risk of nuclear escalation? To what degree is Russia planning for limited nuclear use? Is first-use of nuclear weapons a likely course of action for Russia? Which targets and which circumstances could provoke Russia to contemplate nuclear counterstrikes? What are the viable allied countermeasures to nuclear coercion in the Baltics?

Finally, it should be pointed out that while nuclear use by Russia would certainly constitute a breach of taboo and fundamentally alter the character of war in a political sense, it might not militarily. Capabilities exist, both in Russia and in the Alliance, to conduct strikes of a limited nature, both in terms of yield and radiological fallout. A strike on a lone high-value target at sea or a single airfield is a possibility. To what degree limited nuclear use during the course of conflict would be viewed as a fundamental transgression is not clear, nor is the response.

39 See e.g. Germany, Bundesministerium der Verteidigung, Speech by Federal Minister of Defense Annegret Kramp-Karrenbauer on the occasion of the presentation of the Steuben Schurz Media Award on October 23, 2020 in Frankfurt/Main.

40 Fontain, André, 'De Gaulle's view of Europe and the nuclear debate', *Reporter*, 19 July 1962.

41 Roberts, *The case for U.S. nuclear weapons*, p. 214 ff.

42 See, e.g., Davis, Paul K.; Gilmore, J. Michael; Frelinger, David R.; Geist, Edward; Gilmore, Christopher K.; Oberholtzer, Jenny; and Tarraf, Danielle C., *Exploring the Role Nuclear Weapons Could Play in Deterring Russian Threats to the Baltic States* (Santa Monica: RAND Corporation, 2019), p. ix–xii.

5.3 Conclusions

The war game brought to light a number of dilemmas and critical factors the belligerents would face, which might also apply in other scenarios, and that are thus worth highlighting as conclusions to draw from it.

First, there is the difficulty of waging war with limited objectives. If Russia contemplated launching a quick but limited offensive with the aim of grabbing major chunks of territory before NATO reacted, it would face a dilemma. In the interest of keeping the conflict limited, in the game Russia decided not to provoke the major Western powers with strikes on installations in their home countries. However, this also entailed higher military risk of significant losses for the Russian forces. If on the other hand, Russia had decided to go for a more extensive target list for the initial strikes, NATO's contermeassures would probably have been degraded, but the likelihood of more serious Western engagement in the conflict would thereby increase. The way that Russia would decide might depend not only on how it reads the allies' capabilities and determination, but also on the number of long-range missiles available and how much confidence Russia had in them.

Likewise, Russia would have to choose how to act militarily in the other operational directions: either to lay low in order to communicate to NATO that this is a limited conflict, or raise readiness and move troops in order to divert NATO's attention and forces. As with the extent of the initial strike, the call would probably hinge on how Russia reads the Alliance – as eager to act, or as proceeding slowly and cautiously. In any event, Russia could not leave the other directions undefended and would have to guard against possible horizontal escalation by NATO, in particular at sea and in the air. In addition, Russia would also need to take into account the possibility of Ukraine's using the conflict for enhancing its position, for example by acting militarily in Donbas and Crimea, with Turkey perhaps doing the same in the Black Sea.

Second, the game highlighted the importance of Belarus as either a buffer, an alarm bell, or a favourable jumping-off point, for a Russian attack. In its present state, Belarus acts as a buffer for neighbouring states and the introduction of Russian troops there in a crisis could serve as a warning, possibly triggering countermeasures on the part of NATO. However, if significant Russian ground troops were already being based in Belarus in peacetime, the warning time before a Russian attack on Lithuania or Poland would be greatly reduced, and Ukraine would face a threat from the north. Thus, maintaining Belarus as a country separate from Russia and free of major Russian troop numbers is strongly in the Western interest. Any change to this status would most probably lead to calls for the revocation of the NATO-Russia Founding Act and for the construction of a more robust posture in the East.[43] This, in turn, would not be in Russia's interest.

Third, geography and terrain have significant impact on operations. In this case, the northern parts restricted an aggressor to a few main roads and also made the task of defence suited for lighter infantry units. In contrast, the open landscape in the south, with a more developed road net, gave the attacker a longer-range view and more options for choosing avenues of approach and bypassing resistance, if encountered. The landscape is thus better suited for manoeuvre warfare by a mechanised attacker, and less favorable for defence with light or unprotected units. However, as noted by Clausewitz, restrictive terrain can also be a problem for the defender if the aggressor takes another route and there is a need to regroup forces or conduct mobile operations.[44] Russia could, for example, take the decision to expand the war and quickly move into Polish territory, presenting additional challenges to NATO. The relative lack of depth of the area of operations, about 300 km, also obviously matters, as this makes it harder for the defender to trade space for time and makes it easier for the aggressor to reach his objectives quickly. In addition the open landscape in the south, in combination with low force-to-space ratios, could open up possibilities for rather extreme forms of mobile warfare, with comparatively small units able to

43 Cf. Balčiūnas, Andrius, 'If Russia swallows Belarus, what would happen to Lithuania?', *Lithuanian Radio and Television – LRT*, 10 September 2020.

44 Clausewitz, Carl von, *On war*, edited by Howard, Michael and Paret, Peter (Princeton: Princeton University Press, 1976), 417–422.

make quick forays deep into the enemy's rear areas, although having a low ability to sustain themselves.[45]

Fourth, the character of units is as important as numbers. While light units are cheaper to set up and easier to deploy, and thus can be valuable for deterrence or for defensive operations in closed terrain, they have limited utility in defending against mechanised units in open terrain. For this task, mechanised units not tied to their national territory are sorely needed by NATO. That said, focussing solely on the need for more mechanised manoeuvre units risks leaving out the combat support enablers – artillery, air defence, engineers, etc – that are needed to bring the effectiveness of manoeuvre units fully to bear. Continuous fire support on the ground is not only necessary for fixing and destroying the enemy, it is equally important for suppressing him in order to enable your own manoeuvre. At present, NATO would be relying on fire support from the air, which in turn requires air supremacy, or at least a high degree of air superiority.

In addition, a striking feature of the game was how few of the Alliance's ground units were actually available for offensive operations, for manoeuvre warfare or even for repositioning. This put the defending side at a severe disadvantage. A major factor behind this was that the combat units of the frontline states were – with few exceptions – tied to the territory of their own country. This was not only due to the fact that units were under national command at the outset of hostilities, but also much to the limited expeditionary capabilities of local forces. In addition, a highly exposed country with few units could not be expected to make its home territory defenceless in order to reinforce a neighbour, unless the task was critical.

Fifth, the early delivery of airpower is imperative. Given NATO's weakness on the ground, airpower probably is the only factor – besides nuclear weapons – that could deny Russia an early success in the Baltic region. However, any such air operation would be a complex endeavour involving several steps and special enabling capabilities, including ISR, SEAD and EW, before substantial air strikes could be unleashed on the advancing force columns. As planning and coordination for major air operations normally takes about 72 hours to work out, this work must be completed before the start of hostilities.[46]

The basing of aircraft has a huge impact on sortie rates. Although the NATO air forces had more – and generally better – aircraft available than Russia, this did not translate into more sorties, because the aircraft were mostly based in Western Europe, and, for example, could not use Swedish air bases. This allowed for only a single sortie per aircraft per 24 hours, while Russian aircraft could do two or three sorties on account of being based closer to the area of operations. Consequently, if NATO air forces could redeploy to temporary bases closer to the fight, a higher number of sorties could be generated and the dependence on tankers would be reduced.

The outcome of the duel between NATO's SEAD and Russia's GBAD is a great unknown that seems critical to the defence of NATO's eastern flank. Currently, it is highly uncertain how quickly and at what cost the Russian air defences could be supressed sufficiently to allow for strikes by non-specialist aircraft, or what the risks that such aircraft would encounter would be. Our rough calculations indicate that in this scenario it was mainly a limited number of SA-15s that really needed to be eliminated, in addition to any S-300/400 units within effective range, but that may underestimate the synergies stemming from Russia's large GBAD establishment.

Finally, a number of caveats and additional factors should be mentioned. The methodology used by us in this game favours quantifiable factors and attrition warfare, while intangible or qualitative factors such as morale, skill, surprise, or the effects of manoeuvre warfare are given less weight. This needs to be factored in in an overall assessment. As for additional factors or events, there were a number – besides nuclear weapons – not played out in the game, or not pursued in our post-game analysis, which

45 This was foreseen in Soviet Marshal Nicolai Ogarkov's Operational Maneuvre Group (OMG) concept and by Richard Simpkin in the 1980s; see Simpkin, Richard, *Race to the swift: Thoughts on twenty-first century warfare* (London: Brasseys, 1985).

46 Unites States Air Force, *Annex 3-0 operations and planning:* the 72-hour cycle can be bypassed for fleeting or time-urgent targets – dynamic targeting – but hardly on this scale and in the face of intact air defences.

may nevertheless be relevant and should be kept in mind for an overall assessment and future work. While the events in the game were to a considerable degree predetermined by the dispositions of both sides and the plans they made ahead of hostilities, there were several occasions when NATO or Russia could have acted differently, in a way that could have affected the outcome. For example, NATO could have counterattacked straight through the Suwalki Gap, instead of going through Belarus, or used its attack helicopters differently, while Russia's left-flank force could have moved into northeastern Poland to tie down NATO's mobile forces, instead of seizing only the Lithuanian parts of the Suwalki Gap. Likewise, either of the parties could have acted in other regions or domains – such as information or space – in a way that could have created synergies or distractions that impacted on the war in the Baltic region. These variations would benefit from more detailed analysis and gaming, in order to determine which factors are decisive and what might have happened if other paths had been taken.

The constraints on command-and-control and logistics were not analysed thoroughly. This includes the effects of Russia's initial strikes on Allied HQs and Allied missile strikes on Russian lines of communication, as well as the prospect that combat units might soon run low on ammunition and fuel. This means that the frontline units on both sides could reach a culmination point early unless the war was kept short.

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6. Towards a net assessment

Eva Hagström Frisell and Krister Pallin

After covering, in Chapters 2 to 5, the different perspectives of our study model, i.e. the global security environment and Western security and defence policy, NATO preparations for collective defence, military policy and doctrine, armed forces, and conflict situations, this final chapter attempts to make a first cut *net assessment*. The aim is to identify asymmetries in the force balance between the West and Russia in Northern Europe from a Western point of view or, more precisely, the important characteristics of the force balance with respect to relative strengths and weaknesses, and noting possible trends in the relationship. Finally, we suggest some implications for Western collective defence against Russia.

6.1 Western power, priorities and cohesion

Today and in the near future, Russia, or for that matter China, cannot match a united Western alliance in terms of political, economic, or military power. In the past 70 years, the global and European security order has been underpinned by a general cohesion among the Western liberal democracies, under US leadership, even if views have differed greatly at times. In particular, the strong US engagement in Europe and for multilateral organisations, such as NATO and the EU, has contributed to stability. Although other continents and powers are on the rise, the superior potential of the West is still there – given political cohesion and proper coordination based on common values and interests and, if needed, a single purpose, for example to counter a serious security threat.

However, in the past two decades Western cohesion has been challenged both by outside actors and from within. The US has, since the Obama administration, gradually shifted its long-term priority to the rise of China and has under the Trump administration challenged multilateral organisations and norms underpinning the international order. The European countries, in turn, are preoccupied with other matters, including threats emanating from both strategic competitors such as Russia and non-state pressures including international terrorism and migration. The larger European states will in the coming years also face increasing demands from the US to engage politically and economically, and to deploy naval resources to the Indo-Pacific region. France, Germany and the United Kingdom have already indicated an increasing military presence in the region. In addition, European allies at times have diverging views on questions of democracy and the rule of law and more significantly on the priority and urgency of different threats. This means that Western defence efforts are partly diverging in terms of ambition and direction.

Post-Trump, enhancing the European capability to share the defence burden of the West in both Europe and Asia will be crucial to preserve and to strengthen transatlantic relations and the political cohesion of the West. However, the defence plans launched in Europe in recent years will take significant time to implement, and many are still underfunded. The uncertainties regarding future military spending due to the coronavirus pandemic and competing demands on state budgets may also make European defence efforts difficult to sustain in the short and medium term.

At the same time, the West is faced with an authoritarian regime in Russia that wants to regain its status as a great power and establish a sphere of privileged interest in its neighbourhood. Furthermore, Russia does not accept the norms of the international order and is capable of blatant breaches of it, including armed aggression, when the leadership sees fit. In contrast to the Western alliance, Russia is a single state with unity of command, and can more easily adopt and follow coherent strategies, including deciding to act quickly against threats or to promote its own interests. Nonetheless, the Russian regime's reliance on one leader, growing social resentment

and considerable economic weaknesses make Russia vulnerable. This could tempt the regime to try diverting the people's attention through military adventures, but any costly setbacks may equally likely precipitate the same regime's downfall.

With diverging geopolitical outlooks and threat perceptions, there are concerns that a decision in the North Atlantic Council (NAC) to help an ally could be halted temporarily or even blocked, thus leaving NATO paralysed. However, the fact that the North Atlantic Treaty of 1949 requires allies to respond to an attack, both individually and collectively, raises the possibility to form a coalition of the willing within the Alliance. This constitutes a fall back and could be a decisive strength in a conflict, especially given some preparations. There would probably be delay and maybe loss of effect, due to restricted access to NATO-controlled assets and allies' opting out, but this might be manageable. A key consideration might also be whether allies that decide to "sit out" the war allow participating allies to use their territory and airspace. Even if NATO eventually unites and acts, a smaller coalition could be of importance as first responder in the initial stages of a conflict. Many regional and bilateral cooperation initiatives in Northern Europe are therefore aiming at ensuring quick reaction and operational cooperation in a crisis.

6.2 Strategic direction, command and support

NATO's strategy for collective defence has moved forward with a new military strategy and a supporting concept for deterrence and defence of the Euro-Atlantic area. We do not know the complete contents of these documents, but strategy-making includes not only high-level documents but also their implementation by the Alliance and national armed forces, through agreements, planning, force posture and activities. Hence, *de facto* alliance strategy is still under development and an important part is decisions taken at NATO summits since 2014, focused on improving responsiveness, readiness and reinforcement. The concrete NATO preparations, multilaterally and nationally, consist of improved decision-making and direction of operations, better and graduated availability of forces, and enhanced ability to give military assistance to threatened member states, as well as strengthening of national capabilities.

An enemy could still exploit Western hesitation and sluggishness. Russia may for example obscure the origin of an attack or blame the victim and launch campaigns towards Western countries to bloc or delay common assessment, decisions and actions in NATO. As a result, NATO has commenced work to improve the speed of decision-making by promoting intelligence-sharing, delegating authority to SACEUR and agreeing on indicators of an armed attack. In addition, the NATO command structure has since 2014 been adapted to reflect the return of collective defence and territorial threats, but command and control still suffers from the absence of clear geographic responsibilities and predesignated command links between higher commands and the combat forces. Consequently, there is uncertainty concerning the chain of command, with for example no given headquarters responsible for leading land operations or joint operations in Northern Europe.

Furthermore, there is still no comprehensive planning for the defence of Europe that may support decision-making and the direction of operations. Instead, there is a patchwork of limited plans, although important steps have reportedly been made in harmonising plans and complementing them by other regional, bilateral and national planning. However, at present there are executable NATO plans only for the immediate defence of the eastern flank and for the deployment of first responders, primarily the VJTF, while the planning for follow-on-forces requires more time and effort. Importantly, other regional or bilateral arrangements may compensate, in particular if involving the US, but concerted alliance efforts at short notice would face obstacles.

The ability to reinforce the eastern flank is being improved by the co-ordination of strategic and operational movement, developed legislation and procedures, better host-nation support (HNS) and exercises. Nevertheless, inadequate infrastructure and a dearth of readily available transport assets continue to impose severe limits. In addition, few large-scale movements have been practiced and would be vulnerable to enemy countermeasures during crisis

or war, especially given the heavy reliance on commercial and civilian support. In addition, there are no signs of improvement of the capacity for sustaining forward-deployed forces beyond HNS.

NATO preparations for collective defence have thus improved with respect to decision-making, operational planning and direction of operations. Apart from the political handling of conflicts and the transition to war, which is difficult to prepare fully, there are nevertheless some gaps in common preparations, particularly with respect to roles and responsibilities, advance planning and exercises. The current planning gap could have knock-on effects on other war preparations and, critically, time could be lost in case of conflict. Some measures are contingent on the allies themselves, in particular the strengthening of national capabilities and providing forces to the Alliance. In contrast, Russia, with national command over its armed forces, has practiced going to and waging war for a number of years. Whereas the content of Russian war planning is unknown, the chain of command seem well prepared and tested, as is movement and sustainment of large forces on and near Russian territory. Thus, deficiencies in common allied defence preparations constitute a relative weakness compared to Russia, but some of these may be rather easily rectified.

6.3 Allied responses, warfighting and the conflict spectrum

The current Western military strategy for collective defence on the eastern flank, from north to south, is based on dealing with smaller incursions with a limited forward presence and, in case of larger attacks, blocking enemy victory until reinforcements arrive. The objective would be to deny enemy success with quick-reaction forces and, if needed, to reverse the situation and restore the integrity of the member states with follow-on-forces. The logic of both deterrence and defence is to signal commitment to an adversary and to demonstrate the necessary capability to follow through, if needed, with nuclear assets.

Against this stands a Russian strategy of active defence, combining military and non-military means across the spectrum of conflict. In addition, there is a Russian emphasis on pre-emption for seizing or maintaining the strategic initiative. The credibility of deterrence and defence is contingent on the ability to handle escalation, be it non-military or military, conventional or nuclear. Russian capabilities for higher-intensity warfare support unconventional and irregular warfare in peacetime, enabling at worst the handling of escalation to a protracted and full-scale regional war, requiring mobilisation of follow-on forces.

The question is to what extent NATO can credibly deter and, if needed, defend against a range of possible enemy actions, from covert harassment of individual member states, unlikely to trigger Article 5, to major war. While collective defence has improved, NATO still seems to be focussing on deterring Russia rather than defending against all attacks – at least this is what current preparations and capabilities may allow for. Alternatively, the Alliance is assuming an extended grace period for rectifying deficiencies. In particular, NATO should worry that Russia might be tempted to engage in limited aggression with relative impunity under its nuclear umbrella.

As for high-intensity warfare, there is considerable Western doctrine in place, with insights and guidance similar to military thinking in the Russian Armed forces. Some needs an update, but the main challenge is putting existing theory into practice, after many years of out-of-area stabilisation operations. However, there is also a need for developing the current strategy with respect to forward defence, reinforcements, vertical and horizontal escalation, defence in depth, deep operations, counter-offensive, and so on. Much of this lacks answers for today's situation and conditions in both doctrine and policy, for example regarding the balance between forward defence and defence in depth, or deep operations and control of escalation.

In addition, new capabilities, in particular within information and space operations, need to be included in allied warfighting as they emerge. While the exploitation of new domains has begun, new concepts need more effort, testing and time to become doctrine, i.e. understood, coordinated and implemented in the forces. Equally important is to develop the ability to handle the whole conflict spectrum. NATO doctrine already requires

a comprehensive political, military and civilian approach to all operations, and NATO now develops policies and capabilities to enhance civilian resilience and to counter hybrid threats. In contrast to Russia, this is not yet part of NATO doctrine and requires new capabilities.

At the other end of the conflict spectrum, Russia and NATO would inevitably fight any war under nuclear-threatened conditions. The Russian view on first-use is not clear, but nuclear assets would be included in any campaign plan, even for a limited war. Thus, NATO, or at least its nuclear-armed members, needs to be prepared for Russian threats with nuclear weapons even in a conventional conflict and to discourage Russia from employing them. Moreover, NATO's weak conventional military posture implies a greater reliance on nuclear weapons for deterrence, and possibly also for defence. In the end and for both sides, nuclear weapons remain vital for deterrence and for possible escalation.

Current military policy and doctrine of Russia and the West reflect their having made different choices since the end of the Cold War. At present, the result is a Russia with a military thinking for handling the entire conflict spectrum and using military and non-military means in a co-ordinated way. Facing it, we find an Alliance that is burdened by divided attention and different views with respect to threats and priorities, as well as by some capability gaps across the spectrum of conflict. Alliance progress is under way, but it is instructive to consider the time and effort required in previous eras for developing and implementing new strategies.

6.4 Force readiness, composition and capabilities

NATO's problem is not the strength of its total military assets but rather that its forces are spread across many countries, have low readiness and are based far from Russia. At short notice, the balance with respect to ground forces is in favour of Russia in Europe, particularly in proximity to the eastern flank. An upper hand for the West is likely with respect to naval and air forces, but only provided that more assets are sent from America. Within a month, Russia would be able to mobilise considerably more ground forces, however this second echelon would have uncertain quality and size. The capacity for further reinforcing naval and air forces in the theatre would be much more limited. As for NATO, the only major reinforcements possible within a few weeks would be additional American naval and air forces. Given up to three months, the US would be able to reinforce Europe significantly, also with ground forces, but it seems that substantial European contributions for operations on the eastern flank would be difficult to achieve even within that period. At present, collective defence against Russia without the American reinforcements would be untenable within a reasonable time.

With respect to force composition for high-intensity operations, Russian forces are more adequately organised for the task at present. This means well-protected and heavily-armed ground units with good support. The Western ground units are a mixed bag of heavy and light units with generally much weaker combat support. In addition, few units would be useful for offensive tasks and many of them would be tied to their home turf. This means that for any major Western ground operation, early delivery of air power is imperative, contingent on quick reinforcements, forward-basing and suppression of Russian air defences, particularly ground-based assets. Russian naval and air forces can hardly challenge their Western counterparts on a strategic level, but may have the ability to disrupt the Alliance's defence efforts early in a conflict. The quality of Western naval and air forces varies, but the Alliance is superior to Russia overall, although some capabilities need renewal.

As for training, Russia has a clear lead, although Western forces also have combat experience gained from recent conflicts. However, major war operations against a peer competitor is a different game than stability operations at all levels and, in particular, requires the ability to conduct extensive joint operations. NATO has still conducted few large and joint Article-5 exercises. In addition, the Alliance has not so far prioritised air and naval exercises of scale. A more profound problem is that NATO forces are mainly pools of assets with uncertain readiness. There is a lack of a pre-designated order of battle indicating organisation and subordination, as well as of exercises and procedures for validating

capabilities and readiness. With a decline in interoperability in the Alliance since the end of the Cold War, the result is probably that only a minor group of allies would be able to operate effectively together at shorter notice.

Whereas force ratios and force composition are important, the conduct of operations may win, and lose, battles. Effective use of available forces is critical, especially for NATO with fewer forces on the ground on the eastern flank and as the reactive part. Seizing the initiative when possible and hitting the enemy's vulnerabilities as they emerge at all levels becomes of paramount importance, even though the objective for NATO initially would not be to win, but to avoid losing. This includes the ability to exploit synergies across capabilities and domains, including information and space, in joint operations. Consequently, there would be heavy demands on allied ISR and command and control; against this stands the obvious Russian dedication to target these Western capabilities. The resulting dynamic is difficult to assess but it could clearly be decisive. As a result, there is also a need for robustness in the West's direction, coordination, and control of forces, including decentralised execution, with initiative and independent action, particularly in the likely event of chaos and isolation of one's own forces early in a conflict

Although not analysed in detail in this study, a major challenge for both sides will be the sustainment of front-line units, including substitution of combat losses, with the logistical tails likely targeted on both sides. Operational culmination may thus occur after only some days, with one or both sides forced to change their plans due to degradation of the fighting power.

6.5 Scenarios, escalation control and the fortunes of war

An assessment of the overall force balance in Northern Europe between Russia and the West requires a range of scenarios that includes the whole of NATO's eastern Flank from the Black Sea to the high north. Armed conflict cannot be excluded on any part of the flank and there would always be a need to cover more than one direction and to be ready to handle simultaneous conflicts. The difficulty of war with limited objectives and limited action is evident. Whereas this seems to be part of the Russian strategy of active defence, it is clear that a withholding approach also may imply greater risks and in part contradicts other military thinking. The same is true with respect to the West's conduct of its collective defence. Consequently, any major conflict in one area or domain could soon be affected by what happens in other areas or domains, whether they are supporting, competing for attention and resources, or becoming stages for deliberate escalation.

As for capabilities, some will be important for both Russia and the West in any scenario, for example command and control, intelligence and logistics, while the required quantities and mix of ground, maritime and air capabilities will differ. The geography, including size and domain, decides this, but also force postures, time scales and available courses of action. For example, in the often-analysed attacks on the Baltic States, ground forces dominate and the role of forward-based forces and differences in the terrain is evident. Consequently, the force balance between Russia and the West in each scenario will vary and is sensitive to specific conditions. In many cases, in particular when naval and air forces have a major role, for instance in the Barents or Black Seas, NATO and partners may be able to quickly and robustly counter Russian aggression. In other cases, it will be more difficult or even impossible in the short term.

In addition, while the outcome of different scenarios may seem to be predetermined by the initial force ratios as well as dispositions and plans made by both sides ahead of hostilities, the dynamics of combat can often change the course of events. The war game pursued in this study produced a number of situations where the fortunes of war could have turned another way, due to other operational choices by the adversaries or, simply, the frictions of war. Force dominance at the strategic or operational level does not always translate into a superior force balance locally on the battlefield. Positioning and timing, for example, is of paramount importance for the outcome. Furthermore, qualitative and intangible factors, such as operational and tactical skills, particularly in manoeuvre warfare, and morale may ultimately decide the outcome of battle.

In the case of the gamed Russian attack on the Baltic states, denying Russia early success while gaining time for organising collective defence is crucial for the West. Given the likely Russian preference for short wars, this means that improvements in NATO's capabilities in holding out against the first Russian echelon also improves the prospects for deterring Russia and, if need be, for defending allies successfully. The goal for the West need not be winning the fight on the ground; it might be enough to achieve a draw, which could be translated into a situation where Russia could be compelled to restore the pre-war situation. However, in such a situation – especially given Russia's penchant for creating and perpetuating frozen conflicts – it would be imperative for the West to amass the advantage necessary to compel Russia to comply. This would involve the reinforcement of the area of operations and the threat of escalation into other areas or domains, but also the use of economic and political instruments of power. Consequently, taking into account force balances beyond the immediate area of conflict and time scales, as well as outside the military domain, becomes important. With this perspective, more defence options emerge and Russia seems a more manageable threat, even in a fight on the ground.

In sum, the margin between success and failure is often slight, and few if any conflicts will follow the expected course of events, neither with respect to propagation nor time scale. Critically, the West needs a capacity for a range of responses in order to effectively contain and counter Russian expansionism.

6.6 Some implications for Western collective defence

Given the above net assessment of Western military capability in Northern Europe, the pertinent question is not what the West can do in general to enhance collective defence against Russia; but rather which realistic, urgent and effective measures can be taken, given relative strengths and weaknesses and, most importantly, other political, economic and military framing conditions.

Our assessment concludes that the different views on security threats and defence priorities in the West are logical and will remain for the foreseeable future. Consequently, any strategy-making for collective defence in NATO must acknowledge the diverging geopolitical outlooks and threat perceptions, and include responses not only with respect to Russia but also to threats from other directions, including from not-state actors and China. As a part of this, demands for a reasonable degree of burden-sharing should be expected and, for European powers, political, economic and military contributions, in the effort to counter Chinese expansionism. In addition, the US's shift of its long-term priority to the rise of China is unlikely to change. The political challenge to the transatlantic link, to multilateral organisations and to partnerships is expected to lessen with the Biden administration, but American demands for burden-sharing will persist. In effect, this can be seen as a second chance for Europeans allies and partners to take proper responsibility for their own defence.

Military expenditures have in general been slowly on the rise in NATO and Northern Europe since 2014, and several countries have adopted policies in which they commit to raising their expenditures in the coming years. This is particularly true of the Western allies on the eastern flank, but uncertainty surrounds the plans of the major European military powers – i.e. France, Germany and the United Kingdom – for economic reasons, but also due to divergent views on the security threats and what to do about them. In addition, at present, all estimates are pending the outcome of the coronavirus pandemic on both economic developments and defence spending. In all likelihood, intrastate debates regarding military expenditures versus other priorities will be intensified, especially in the medium term, when economic policies will have to handle the financial imbalances resulting from extensive stimulus packages. Given an unchanged security situation, significant increases in military expenditures cannot be taken for granted, at least not for the next three to five years.

The West's current conventional military capability against Russia in Northern Europe can in short be characterised as superior at sea and in the air, but inferior on the ground, as well as regarding readiness for high-intensity operations and the co-ordination of and with non-military means across the

spectrum of conflict. As for sustainment of front-line forces, the conditions differ, but, overall, both sides will already be finding this a challenge in the early stages of an armed conflict. As for operational reserves, Russia has an upper hand on the ground, but only for some time. The combination of weak or dated national armed forces on the eastern flank and a reluctance to base substantial forces close to Russia – in order not to increase tensions with Russia or within the Alliance – means that the current force posture of the West does not encompass a forward defence of NATO's eastern flank against major attacks.

In addition, given a weak posture also immediately to the west of the eastern flank, and lack of ability to reinforce quickly on the ground, a credible defence in depth is not in place either. The net result at present is an almost non-existent capacity for deterrence by denial against Russian major aggression, and at best a capacity for deterrence by punishment. As in the first decades of the Cold War, this inevitably implies a greater reliance on nuclear weapons for deterrence, and possibly also for defence. At the same time, Western early use of nuclear weapons seems much less credible now, both militarily and politically, given the long disregard for the nuclear dimension on the battlefield and the by now small arsenal in Europe. In effect, Russia may enjoy escalation dominance at the substrategic level. Furthermore, as in the 1960s, when the doctrine of flexible response was developed, the Western alliance's appetite for large investments in conventional defence, defence in depth on Alliance territory and long wars is limited.

What are realistic, urgent and effective measures for, or, rather, keys to, improving Western collective defence in Northern Europe, given our net assessment and the above conditions?

A first key is to accept that the cohesion of NATO demands solidarity and burden-sharing not only in handling the threat from Russia. At the same time, coalitions on the Western side are more likely to be the norm in the future, given the many allies with different priorities and capabilities. Thus, there is a need for planned options that would allow quick and effective action in coalitions. When appropriate, this should also include partners in the Baltic and high north, particularly Sweden and Finland, given improved preparations. In the short run, coalitions would always demand a leading role for the US, but in the long run European dependence on the US for the defence of Europe must be reduced, particularly early in a conflict and in the event the US simultaneously becomes heavily engaged in Asia.

A second key is to once again develop and implement a strategy of both robust and flexible responses that can credibly deter and, if needed, defend against a possible and realistic range of enemy actions of today. Confronted with competitors, be they Russia or China, that are prepared to act across the conflict spectrum with all available means and obstruct international norms of behaviour, this is what the West needs to prepare for. However, as for Russia, the conventional military threat is serious, but should not be overrated. The main challenge lies in Russia's proximity to some allies, the high readiness of its armed forces and the inclination to offensive and unscrupulous action, but the capacity for force growth and sustained war efforts seems limited.

A third key is to realise that it is not necessary for successful deterrence and defence to assure a Western victory in all situations. It goes a long way to expose Russia to high risk in terms of costs given the nature of the attack, and to have the ability to escalate in step with the enemy. Although it is always difficult to assess an adversary's willingness to take risks, it is easier to identify measures that would increase the adversary's risks considerably and thus the price of an aggression. Accordingly, any capabilities that are likely to degrade Russian fighting power, block a quick enemy victory or strip Russia of any confidence in escalation control, should have a deterrent effect as well as improve Western odds in the event of open conflict.

A fourth key is that Western and Alliance capability development needs to focus more on having a complete set of capabilities for integrated use across the spectrum of conflict, including on land, at sea and in the air, as well as in space and cyberspace. Furthermore, for the ability to counter the Russian threat, it is imperative to have an appropriate set of ready conventional and nuclear forces in the right place at the right time, rather than large forces of uncertain relevance. Small improvements in

the force posture for the eastern flank may actually increase the deterrent and defensive effect considerably. This should for example entail organising and readying the forces of the NATO Readiness Initiative (NRI), including combat support and combat service support, practicing their operational movement to the eastern flank and training for warfighting together, raising the availability and readiness of air forces, and preparing and practising the forward-basing of air forces. Furthermore, an ability to sustain front-line forces for the fight against a Russian first echelon, i.e. for around a month, would be needed, particularly including adequate stocks of ammunition for high-intensity operations on the ground and in the air. Together with a slight increase in heavy and capable ground forces in Poland – partly US reinforcement with pre-positioned stocks, partly Polish and European units – the force balance on the eastern flank would be much improved.

A fifth key is to pursue the already begun enhancement of NATO and coalition command structures; continue Alliance, regional and bilateral planning; as well as conduct exercises and tests of preparations. These are probably the cheapest and most effective measures available, and a pre-requisite for many other war preparations, including essential civilian support to the war effort and protection of the civilian part of the society. In particular, they target the West's great dependence on agile decision-making and quick reaction, the primary risk being that Russia gets a head start. Furthermore, Alliance preparations and communication, signalling cohesion and common will to defend the West, are an important part of deterrence. Build-up of large follow-on-forces, which takes several months to deploy, and preparations for a long conventional war are logical, given current NATO strategy. However, it nevertheless seems a questionable first priority, given the funding likely to be available for Western armed forces in the next couple of years. In addition, the likelihood of long and large-scale conventional war in the nuclear age is at least unclear, as is the possibility of political and popular support for such an endeavour on Alliance territory.

A sixth key is to acknowledge that long-term investments in collective defence are legitimate and necessary, both for qualitative and quantitative development of Western military capability. There may also be effective offset strategies available for the West, based on technological superiority or horizontal escalation, for example, in concepts such as *Multi-Domain Operations*. However, their effectiveness against the current real adversaries must be evaluated and the ideas implemented before any confidence can be put in them; until then they are high-risk bets, and not silver bullets, as solutions for Western collective defence. Russia's window of opportunity in the great power struggle and for military aggression against the West seems primarily to lie in the next few years, given, on the one hand, the clear but slow strengthening of Western collective defence and, on the other, the plateau in Russian military capability expected in the 2020s. Therefore, improvements in collective defence in Northern Europe should focus on the effect in the near term, albeit with a view towards the future and any approaching revolutions in military affairs. Even bringing order to the relevant parts of the current force structures takes time and requires additional resources. In addition, given uncertain needs, scarce funding, and likely weak popular support for a build-up of large armed forces for warfighting, defence investment for the long term should be chosen carefully.

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FOI conducts defence research for the Swedish Government, in particular the Ministry of Defence, and the Swedish Armed Forces. The Northern European and Transatlantic Security Programme follows the security and defence policy developments in relevant Western countries and organisations. Every third year the programme provides an aggregate analysis of the military strategic situation in Northern Europe.

In the 2020 study of Western military capability in Northern Europe, our wish was to perform a first cut net assessment of the force balance between the West and Russia. The aim is to identify the important characteristics of the force balance with respect to relative strengths and weaknesses. The assessment leads us to a number of conclusions for the Western defence of Northern Europe.

The study is divided into two parts. Part I covers the actual net assessment and examines the changing global security landscape, security and defence policy in Northern Europe, NATO preparations for Western collective defence, fighting power in Northern Europe and the results of a war game involving the West and Russia. Part II charts the base for Western military capability in Northern Europe, i.e. the defence efforts of eleven key Western countries that play a significant role in the collective defence of the area.

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