



NATO: READY FOR THE FUTURE

Adapting the Alliance (2018-2019)





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2018-2019: NATO'S ADAPTATION AT A GLANCE

In 2019, we celebrate seventy years of our Alliance. For the past seven decades the Transatlantic Alliance, which NATO embodies, has brought unprecedented peace and prosperity to the Euro-Atlantic area. Today, we face the most complex and unpredictable security environment since the end of the Cold War: with growing geo-political competition, more sophisticated and disruptive cyber and hybrid threats, and exponential technological change rapidly transforming the way wars are fought and won.

These new security challenges and the shifting global balance of power mean that, more than ever, we need to work together to protect our shared security and values, to reaffirm our solidarity, and to collectively prepare for the future.

As we continue to adapt, the forces of the Alliance underpin our mutual commitment to defend each other against any potential threat and ensure the security of all Allies.

Over the last year we have taken concrete steps to make sure we remain capable to fulfil our core tasks in the years to come. We continue to strengthen our deterrence and defence, raising the readiness of our forces, increasing our ability to move them across the Atlantic and within Europe, and modernising our military command structure and headquarters.

We are adapting in a coordinated, measured and responsible way to a less stable strategic environment. In response to Russia's development and fielding of the intermediate-range ground-launched SSC-8 missile system, which has led to the demise of the INF Treaty, we have agreed to implement a balanced and defensive package of measures that ensure the credibility and effectiveness of our deterrence. We will also continue to make sure our nuclear deterrent remains safe, secure and effective.

We are taking these steps while remaining firmly committed to meaningful dialogue and effective arms control, disarmament, and non-proliferation.

We are increasing our investment in innovation so that we are able to responsibly harness the benefits and mitigate the risks of emerging technologies, such as Artificial Intelligence and autonomous and hypersonic systems. We are strengthening our ability to counter threats in the cyber domain, while also adopting a new policy and approach to space as a new operational domain for NATO, enabling us to strengthen our awareness of the situation in space and ensure our operations receive the necessary support from national space capabilities. At the same time, we work together to ensure the resilience of our critical infrastructure, including with the adoption, in October 2019, of updated baseline requirements for resilient civilian telecommunications, including 5G.

The Alliance remains committed to fighting terrorism and contributing to stability in our neighbourhood, including with our training mission in Iraq—where we assist the Iraqi government to help prevent the resurgence of ISIS and other terrorist groups. We also do this with our presence in Afghanistan, where we remain committed to ensuring that the country never again becomes a safe haven for international terrorists and to supporting efforts to achieve a political settlement. We also continue to assist our partners in building their defence capacity, from Jordan and Tunisia to Ukraine and Georgia.

NATO projects stability in different ways, including by bringing new members into our family. Following the historic agreement between Athens and Skopje on the name issue, in 2018 we invited North Macedonia to start accession talks.

These talks have now been completed and, once the Accession Protocol is ratified by all Allies, the Republic of North Macedonia will become the 30th member of our Alliance.

Looking to the future, we need to continue on this trajectory of adaptation.

First, we should redouble our commitment to each other's security. This means continuing to invest in defence and in the capabilities the Alliance needs. It also means ensuring a fair sharing of our collective responsibility for the security and defence of the Euro-Atlantic area. Here the trend is positive: defence spending has been on the rise over the past five years. Between 2016 and 2020, European Allies and Canada will add well over USD 100 billion to their defence budgets. Based on national plans submitted by Allies in 2019, this figure will rise to USD 400 billion by the end of 2024. And we are not just spending more, we are also acquiring more of the high-end capabilities NATO needs, while increasing the readiness and deployability of our forces. This is good news, but we must continue to do more.

Second, I believe the Alliance has to push forward on its adaptation to the shifting global balance of power. This includes continuing to map the challenges and opportunities

presented by China's rise and working together to understand and address the implications for our Alliance.

Finally, while we remain a transatlantic alliance, our perspective should be global. This requires working together with our partners, from the Middle East and North Africa to the Pacific, in tackling transnational threats that no single country can take on alone. Cooperation with other multilateral institutions, like the United Nations and the European Union, will remain important to address global challenges and uphold the rules-based international order.

We face a complex security environment, one that requires us to adapt, innovate and be prepared for an uncertain future. I am confident that the steps we are taking today to tackle these challenges ready us for the future, while ensuring we preserve our core values and commitment to each other.



Jens Stoltenberg
NATO Secretary General



Elements of NATO's Deterrence and 2018-2019



Baltic Air Policing

Mission
Protecting the airspace of the Baltic States

Location
 Estonia Latvia Lithuania Poland

Contributing nations

- Belgium (Siaulai, Lithuania)
- Denmark (Siaulai, Lithuania or Malbork, Poland)
- Czech Republic (Amari, Estonia)
- France (Amari, Estonia)
- Germany (Amari, Estonia)
- Hungary (Siaulai, Lithuania)
- Italy (Amari, Estonia)
- Poland (Siaulai, Lithuania)
- Portugal (Siaulai, Lithuania or Malbork, Poland)
- Spain (Siaulai, Lithuania or Malbork, Poland)
- United Kingdom (Amari, Estonia)

Support and Assurance for Turkey

Mission
Reinforcing air defences and providing tailored assurance measures for Turkey

Location
 Turkey

Contributing nations

- Italy (Kahramanmaraş, Turkey) - *Surface-to-air missile batteries*
- Spain (Adana, Turkey) - *Surface-to-air missile batteries*

NATO assets

- NATO (Konya, Turkey) - *AWACS aircraft*

Allies also contribute through increased Standing Naval Forces port calls, participation in exercises and Intelligence, Surveillance and Reconnaissance activities.

Joint Intelligence, Surveillance and Reconnaissance

Mission
Supporting decision-makers with timely information and intelligence

Location
 Germany Italy United Kingdom

NATO assets

- NATO - *AGS Global Hawk, AWACS aircraft*

Standing Naval Forces

Mission
Providing the Alliance with a continuous naval presence

Location
The Atlantic Ocean, the Baltic, Black and the Mediterranean Sea

NATO assets

- NATO - *Standing NATO Maritime Groups (SNMG1 & 2), Standing NATO Mine Countermeasures Groups (SNMCMG1 & 2)*

AWACS patrols over Eastern Europe

Mission
Patrolling the skies over Eastern Europe

Contributing nations & NATO assets

- France Greece Italy Turkey United Kingdom
- AWACS aircraft

Framework for the South: Regional Hub for the South

Mission
Improving regional understanding and anticipation of threats emanating from the south

Location
 Joint Force Command Naples

Contributing nations
22 Allies contribute with Voluntary National Contributions and reassigned JFC Naples staff

Note: Map data display contributions by Allies in 2018 and 2019

Iceland Peacetime Preparedness

Mission

Protecting Iceland's airspace

Location

 Iceland, Keflavik

Contributing nations

-  Denmark
-  Italy
-  United Kingdom
-  United States

Enhanced NATO Response Force / Very High Readiness Joint Task Force

Mission

Ready to deploy at short notice for crisis management or collective defence

Location

-  Joint Force Command Brunssum (eNRF 2018)
-  Italy (VJTF lead nation 2018)
-  Joint Force Command Naples (eNRF 2019)
-  Germany  Netherlands  Norway (VJTF lead nations 2019)

Contributing nations

Enhanced NATO Response Force (eNRF): 27 Allies
Very High Readiness Joint Task Force (VJTF): 26 Allies

NATO's Forward Presence

Mission

Strengthening NATO's deterrence and defence

Location

 Estonia  Latvia  Lithuania  Poland  Romania  Bulgaria

Contributing nations

- | | |
|--|---|
| ESTONIA | Framework nation:  United Kingdom |
| |  Belgium  Denmark  France  Iceland |
| LATVIA | Framework nation:  Canada |
| |  Albania  Croatia  Czech Republic  Italy |
| |  Montenegro  Poland  Slovakia  Slovenia |
| |  Spain |
| LITHUANIA | Framework nation:  Germany |
| |  Belgium  Czech Republic  France  Iceland |
| |  Luxembourg  Netherlands  Norway |
| POLAND | Framework nation:  United States |
| |  Croatia  Romania  United Kingdom |
| BLACK SEA, BULGARIA AND ROMANIA |  Bulgaria  Canada  France  Germany |
| |  Hungary  Italy  Luxembourg  Netherlands |
| |  Poland  Portugal  Romania  Spain  Turkey |
| |  United Kingdom  United States |

Ballistic Missile Defence

Mission

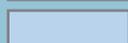
Protecting NATO's populations, territory and forces

Location

 Germany  Romania  Poland  Spain  Turkey

NATO assets

-  United States (Rota, Spain) - US Aegis BMD-capable ships
-  United States (Deveselu, Romania) - Aegis Ashore
-  United States (Kürecik, Turkey) - BMD tracking sensor
-  United States (Redzikowo, Poland) - Aegis Ashore (under construction)
-  NATO (Ramstein, Germany) - Allied Air Command

-  NATO members
-  NATO partners

0 500 km



ADAPTING TO AN UNPREDICTABLE SECURITY ENVIRONMENT

Strengthened Deterrence and Defence Posture

Since 2014, Allies have reinforced NATO's collective deterrence and defence posture, on land, at sea, in the air and in cyberspace. At the Brussels Summit in July 2018, Allied leaders took more than one hundred decisions to strengthen the Alliance. Since then, we have increased the responsiveness and readiness of our forces. We have strengthened the Alliance's ability to rapidly reinforce any Ally that may come under threat. We have enhanced our capabilities, bolstered our resilience and invested in modernising our Alliance, with a new space policy, an adapted Command Structure and Headquarters, and ongoing work on emerging technologies. We demonstrate our solidarity and resolve with exercises and increased contributions to multinational deployments and activities.

NATO's Posture: Fit-for-Purpose

Over the past few years, NATO has implemented the biggest adaptation and reinforcement of our collective defence since the end of the Cold War. These steps, along with the adoption of a new NATO Military Strategy, are ensuring that the Alliance's deterrence and defence posture remains credible and effective.

NATO is also working to implement a balanced and robust set of political and military measures in response to Russia's development and fielding of the SSC-8 and other missile systems, including by adapting our air and missile defence posture, conventional force posture, intelligence, surveillance and reconnaissance, and by ensuring the continued effectiveness of NATO's nuclear deterrence. We are implementing these measures while stressing our firm commitment to the preservation of effective international arms control, disarmament and non-proliferation.

Forward Presence and Reinforcement

Forward Presence

NATO continues to deploy four multinational, combat ready battlegroups in Estonia,

Latvia, Lithuania and Poland. They are led by Canada, Germany, the United Kingdom, and the United States and comprise almost 5,000 troops from across the entire Alliance. These troops contribute to deterrence by operating alongside national home defence forces.

We also continue to deploy a forward presence in the Black Sea region. A multinational framework brigade for training Allies' land forces is in place in Romania; we stepped up cooperation on air training and air policing, and increased the presence of the NATO Standing Naval Forces in the Black Sea. In 2018 and 2019, NATO ships spent, respectively, 120 and 100 days in the Black Sea.

NATO Response Force

Since 2014, we have increased the size of the NATO Response Force (NRF) to about 40,000 troops. These include a brigade-sized 'spearhead' force, the Very High Readiness Joint Task Force (VJTF), able to react within days, and follow-on forces ready to provide rapid reinforcements if needed. The NRF is a credible, multinational force made up of land, air, maritime and Special Operations Forces that the Alliance can deploy quickly, wherever needed. In 2019, we have agreed to begin work to further adapt the NRF.

NATO Forward Presence (2018-2019)

Enhanced Forward Presence

ESTONIA

- United Kingdom
- Belgium
- Denmark
- France
- Iceland

LATVIA

- Canada
- Albania
- Czech Republic
- Italy
- Montenegro
- Poland
- Slovakia
- Slovenia
- Spain

LITHUANIA

- Germany
- Belgium
- Croatia
- Czech Republic
- France
- Iceland
- Luxembourg
- Netherlands
- Norway

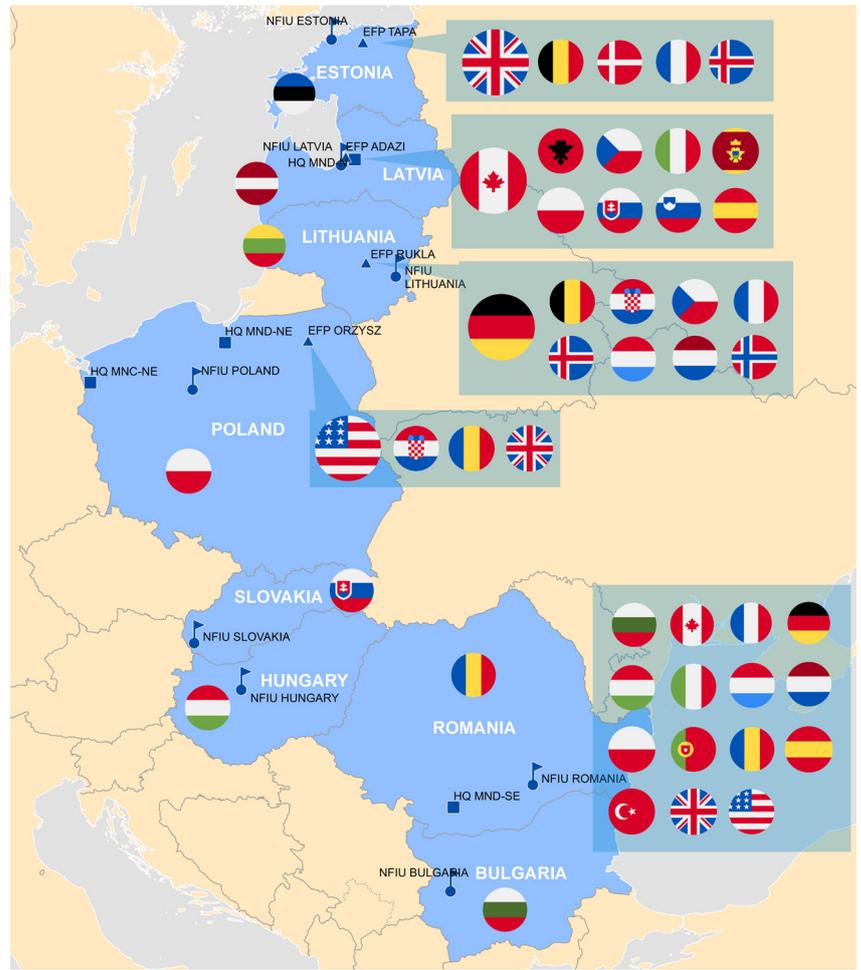
POLAND

- United States
- Croatia
- Romania
- United Kingdom

Tailored Forward Presence

BLACK SEA, BULGARIA and ROMANIA

- Bulgaria
- Canada
- France
- Germany
- Hungary
- Italy
- Luxembourg
- Netherlands
- Poland
- Portugal
- Romania
- Spain
- Turkey
- United Kingdom
- United States



NATO Readiness Initiative

Allies are bolstering the readiness and responsiveness of their forces so that the Alliance can use high quality, “ready to employ” national forces made available in support of NATO’s collective defence and crisis response. Allies have committed to reaching these targets, collectively known as the ‘Four Thirties’ (4x30), by 2020 and, to that end, have already generated more than ninety per cent of the forces required.



Moving and Sustaining NATO Forces

In 2018, Allies took further steps to ensure Allied forces can be quickly mobilised and deployed, if needed, including by improving the Alliance’s military mobility by land, air, and sea. Allies are working together to ensure we have the legislation and procedures in place to mobilise and move our forces across borders rapidly, to enhance our command, control and communications, and to increase our capabilities and capacities, including by upgrading the infrastructure across Europe.

As part of these broader efforts, in October 2019, NATO, in close cooperation with EUROCONTROL, established the Rapid Air Mobility mechanism, which allows Allied aircraft to move across Europe with priority handling by Air Traffic Control in Europe. NATO continues to work with the European Union to improve military mobility. Areas of cooperation include coordination of military requirements, customs and border-crossing legislation, regulations and procedures, and transport infrastructure.

NATO Ballistic Missile Defence Architecture as of 2019 Protecting NATO's Populations, Territory and Forces



Integrated Air & Missile Defence

NATO's Integrated Air and Missile Defence is essential to the Alliance's collective defence. The Alliance has two missions in peacetime: Air Policing and Ballistic Missile Defence. Air policing is a collective task and involves the continuous presence – 24 hours a day, 365 days a year – of fighter interceptor aircraft patrolling our skies, ready to react quickly to airspace violations and infringements. Allies provide NATO Air Policing support to Estonia, Latvia, Lithuania and Slovenia (all since 2004); Iceland (since 2008); Albania (since 2009); and Montenegro (since 2018).

NATO's Ballistic Missile Defence represents a purely defensive long-term investment against a serious threat from outside the Euro-Atlantic area. NATO's missile defence architecture relies on the United States Ballistic Missile Defence systems deployed in Europe, as well as on additional voluntary national contributions offered by European Allies, including Italy, Poland, Romania, Spain and Turkey. It also relies on common-funded Command and Control.

NATO Space Policy

Space is essential to NATO's deterrence and defence, underpinning our ability to navigate and track forces, to have effective satellite communications, and to detect missile launches. In 2019, Allies agreed a NATO space policy and recognised space as a new operational domain – alongside air, land, sea and cyber-space. These steps, in full compliance with international law, will enable the Alliance to strengthen its awareness of the situation in space. NATO has no intention to put weapons in space and does not seek to become an autonomous space actor. Instead, NATO can serve as a forum for Allies to share relevant information, to increase interoperability, and to ensure the Alliance's operations receive the necessary support from national space capabilities.

NATO's Maritime Posture

We have taken steps to reinforce the Alliance's maritime posture by increasing maritime situational awareness, interoperability and skills. We are strengthening our collective

maritime warfighting skills in key areas, including anti-submarine warfare and protection of sea lines of communications. We have also agreed a new policy for our Standing Naval Forces that enhances our responsiveness at sea.

NATO and its Southern Neighbourhood

NATO is enhancing its ability to anticipate and respond to developments in its southern neighbourhood. We continue to work on robust planning and responsiveness; on addressing specific capability requirements for expeditionary operations as part of the NATO Defence Planning Process; and to conduct exercises dealing with scenarios relevant for the south. NATO is also increasing its situational awareness and regional understanding through the Hub for the South in Naples, fully operational since 2018. The Hub's contributions benefit not only NATO's contingency and advanced planning, but also the enhancement of the Alliance's capacity to conduct expeditionary operations. The Alliance also remains committed to fighting terrorism, including through its participation in the Global Coalition to Defeat ISIS and through its regional partnerships.

Exercises

Regular exercises ensure the Alliance is ready and able to defend itself against any threat. Since the beginning of 2018, NATO has conducted a total of 207 exercises, with an additional 270 national exercises associated to NATO. These exercises involved troops and assets from Allied and partner countries and were conducted to enhance the readiness and interoperability of our forces, and test, among

others, Allied capabilities in anti-submarine warfare, air policing, NATO communication and information systems, as well as the ability to protect the Alliance in cyber space and the continued safety, security, and effectiveness of our nuclear deterrent.

Assurance Measures

NATO maintains a range of assurance measures in place across the Alliance. These exist to deter potential adversaries and reassure Allies. They aim to preserve airspace integrity, supplement national air policing, provide maritime situational awareness by employing Maritime Patrol Aircraft and NATO's Standing Naval Forces, and also to improve interoperability by training and exercising along the eastern border. We continue to demonstrate the Alliance's determination to deter threats and defend Alliance territory by maintaining a series of tailored assurance measures for Turkey, including through port visits and by augmenting Turkish air defence with the deployment of missile batteries.

Countering Hybrid Threats

We have developed instruments to prepare, deter, and defend against hybrid threats. Our toolbox combines military tools, intelligence and information sharing, civil-military preparation and other resilience measures. NATO provides support to Allies with Counter Hybrid Support Teams, NATO Special Operations Forces, and other military advisory teams (in the areas of cyber, electronic warfare, and Chemical, Biological, Radiological and Nuclear capabilities). In 2019, the first NATO counter-hybrid support team was deployed to Montenegro, with the aim to help strengthen the country's capabilities in deterring and



With air, sea and land elements, Trident Juncture 2018 was NATO's largest collective defence exercise since the end of the Cold War. Hosted by Norway, it involved a total of 50,000 personnel, 250 aircraft, 65 ships and 10,000 vehicles from 29 Allies, and partners Finland and Sweden. Trident Juncture 2018 was designed to increase NATO's ability to integrate Allied command and force structures in operations on our territory. The exercise also provided a venue for the certification of the different elements of the NATO Response Force and demonstrated our ability to deploy and sustain large numbers of forces to reinforce Allies, including from across the Atlantic Ocean.

responding to hybrid challenges. Hybrid threat scenarios feature prominently in our training and exercises, including in the area of Crisis Management, where we also exercise with the European Union and partner countries. Our cooperation with the EU in this area has been further boosted by the work of the European Centre of Excellence for Countering Hybrid Threats in Helsinki, Finland, which has produced valuable work on education, training, table-top exercises and building resilience to hybrid threats.

Resilience & Civil Preparedness

The resilience of Allied civilian infrastructure is just as important as that of its military infrastructure because today's armed forces rely heavily on civilian capabilities.

National resilience is the first line of our defence, and being resilient is part of every Ally's commitment to the Alliance, and to each other. We are making progress to implement a common set of Baseline Requirements for National Resilience. These focus on ensuring continuity of government and essential services to the public, protecting critical infrastructure and supporting military operations with civilian means.

For example, we are helping national authorities to address mass-casualties events and to improve the resilience of cross-border energy networks and transport infrastructure.

Allies also agreed to update NATO's baseline requirements for resilient civilian telecommunications, including 5G. These requirements establish the need to develop risk and vulnerability assessments, identify and mitigate cyber threats, and to fully assess the consequences of foreign ownership, control or direct investment.

Cyber Defence

Cyber defence is part of NATO's core task of collective defence, and we have made clear that a cyber-attack could trigger Article 5. To protect NATO's networks around the world, we have set-up Rapid Reaction Teams that are on standby to assist Allies. As part of the modernised NATO Command Structure, we have established the Cyberspace Operations Centre to continuously adapt and respond to the evolving cyber threat landscape. Allies have also agreed to integrate sovereign cyber effects, provided voluntarily, into Alliance operations and missions.

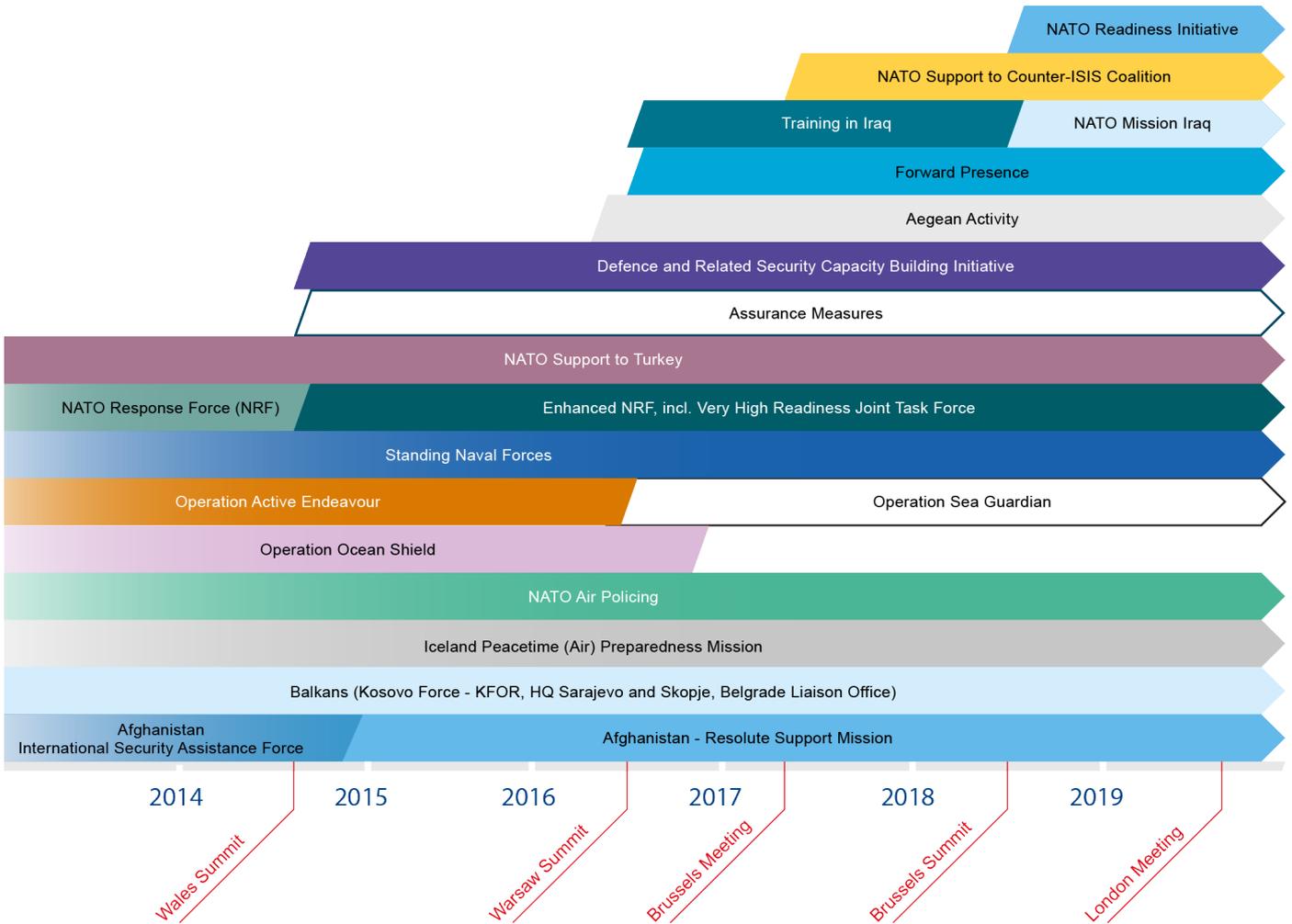
Commitment to Arms Control, Disarmament and Non-Proliferation

NATO has a longstanding commitment and track-record in promoting arms control, disarmament and non-proliferation. Over the past decades, NATO has supported the development of many key arms control agreements, including the START and New START Treaties, the OSCE's Vienna Document on military transparency, and the Conventional Forces in Europe Treaty, among others.

Today, the global arms control architecture that has served us so well is eroding, due to Russia's disregard for its international commitments, and to the emergence of new actors and new technologies.

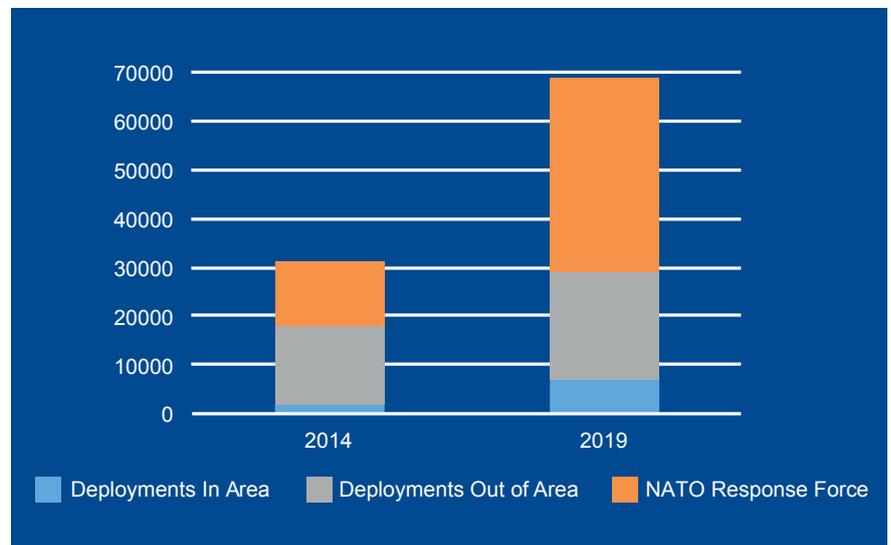
In this complex context, the Alliance and NATO Allies continue to play a positive role, including by making concrete proposals to modernise the Vienna Document and ensure effective transparency, predictability and risk-reduction in the Euro-Atlantic area. NATO can also support efforts by Allies to address the proliferation of missiles and the spread of new missile technologies. NATO remains committed to strengthening nuclear arms control and to supporting the Non-Proliferation Treaty, in line with the Alliance's ultimate goal of a world without nuclear weapons.

Evolution of NATO's Tasks, Missions and Activities: Deterrence and Defence & Projecting Stability and Fighting Terrorism



Personnel in Allied Deployments and NATO Response Force

Allied Personnel includes: 1- Deployments in area: Allied operations, missions and activities conducted within the territory of NATO Allied countries; 2- Deployments out of area: Allied operations, missions and activities carried out outside Allied states' territory; 3- NATO Response Force: Allied forces earmarked as NATO's high readiness response forces, including the Very High readiness Joint Task Force. In 2018-2019, NATO's principal in area engagements included its Forward Presence; whereas NATO's main out of area deployments included the Kosovo Force, the non-combat Resolute Support Mission in Afghanistan and NATO Mission Iraq. The numbers displayed in the chart are rounded off.



Projecting Stability and Fighting Terrorism

Ensuring the security of Allies is not only about deterrence and defence at home, it is also about developments beyond our borders that can impact our security. When our neighbours are more stable, we are more secure. We have extensive experience in projecting stability, including through our operations and missions in the Alliance's neighbourhoods; but also through political engagement, dialogue and cooperation with partners and with other international organisations, like the European Union. We continue to work with our partners to assist them in building stronger defence institutions, improving good governance, enhancing their resilience, and more effectively contributing to the fight against terrorism.

Fighting Terrorism

The Alliance's contribution to the fight against terrorism began in Afghanistan, following the 9/11 terrorist attacks, but it now extends far wider. As a part of the Global Coalition to Defeat ISIS, NATO provides situational awareness and early warning with Airborne Warning and Control System (AWACS) flights. The Alliance is now exploring options to provide additional support to the Global Coalition. At the same time, the NATO training and capacity building mission in Iraq continues to support the country in its efforts to fight terrorism and prevent a resurgence of ISIS.

Working with our partners remains key in fighting terrorism. We continue to support their counter-terrorism efforts through training and capacity-building on issues such as countering improvised explosive devices, cyber defence and mine detection.

In parallel, we assist Allies in enhancing their ability to better prevent, protect and respond to terrorist threats, for example, by using biometric data to identify returning foreign terrorist fighters.

Afghanistan

Allies remain committed to preventing Afghanistan from ever again becoming a safe haven for international terrorism. We do this through our Resolute Support Mission to train, advise and assist the Afghan Security Forces;

through our political and practical partnership with Afghanistan; and with ongoing financial support to the Afghan Security Forces. Our training mission is also helping the Afghan Security Forces create the conditions for peace. In 2018, we have extended our financial support to the Afghan security institutions through 2024.

Iraq

Our non-combat training and capacity building mission in Iraq is now fully operational. It helps strengthen Iraqi security forces and Iraqi military education institutions so that they can fight terrorism and prevent the resurgence of ISIS. A professional and accountable security sector in Iraq is key to the stability of the country and the wider region, as well as our own security. NATO provides assistance through a train-the-trainers approach and by advising officials in the Ministry of Defence and the Office of the National Security Advisor, to help Iraq develop its capacity to build more effective national security structures and professional military education institutions.

Working with Partners to Enhance Security and Stability

Our partnerships across Europe, Asia, the Middle East and North Africa, the Pacific Region and Latin America help us establish and develop practical cooperation driven forward by political dialogue.

Terrorism affects every NATO Ally. It is a long-term threat to our values, freedom and way of life – a global challenge that knows no border, nationality or religion, and that the international community must tackle together.

In the Middle East and North Africa, we contribute to regional security and stability by assisting our partners in developing their defence capacity, including through tailored Defence Capacity Building measures for partners such as Jordan and Tunisia. We also foster regional understanding and exchange of expertise, including through our regional training centre in Kuwait.

We have intensified political consultations, joint exercising and capacity building with partners, including Georgia and Ukraine, also in support of their right to make independent and sovereign choices free from external pressure and coercion. Our assistance serves to preserve stability and uphold the rules-based international order.

We continue to promote lasting stability in the Western Balkans. This year, we mark 20 years since the beginning of the NATO-led Kosovo Force (KFOR), a mission launched on the basis of UN Security Council Resolution 1244 to keep a safe and secure environment for all the people in Kosovo.

Alongside these efforts, we continue to deepen military interoperability for multinational operations with partners, including through robust defence cooperation with Enhanced Opportunity partners Australia, Finland, Georgia, Jordan and Sweden.

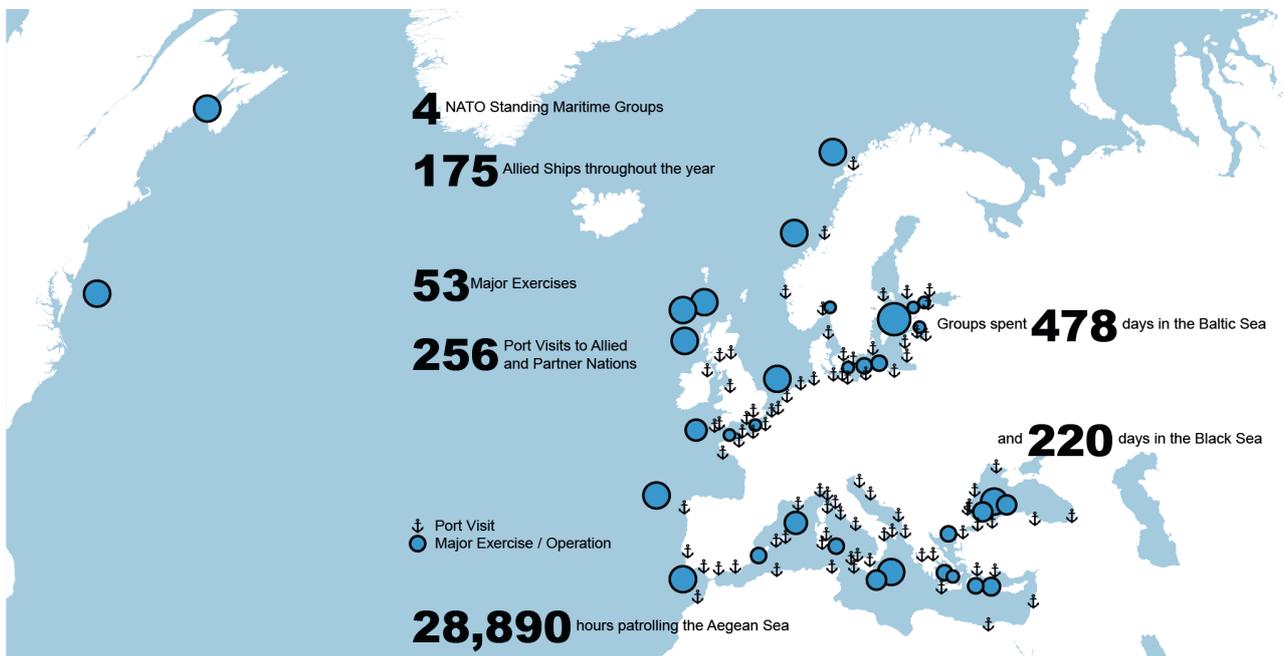
NATO's operations at sea are a crucial element of the Alliance's ability to deter and defend against any potential adversary, and its ability to project stability in areas of strategic importance.

We have further deepened our cooperation with the European Union by working together on the implementation of 74 mutually agreed proposals for NATO-EU cooperation, ranging from working together on military mobility to countering hybrid threats and promoting cyber security.

Maritime Security

Through our enhanced exercise programme, we are strengthening our collective maritime defence in key areas, including anti-submarine warfare, amphibious operations, and protection of sea lines of communications. Operation Sea Guardian operates in the Mediterranean to enhance maritime situational awareness, support maritime counter-terrorism efforts and contribute to capacity-building. It provides support to the European Union's Operation Sophia with information and logistics support. NATO's activity in the Aegean Sea continues to regularly provide information on illegal trafficking activities to the Greek and Turkish coastguards and the European Border and Coast Guard Agency, Frontex.

NATO Standing Maritime Presence (2018-2019)



INVESTING IN DEFENCE

Fair burden-sharing is the foundation of everything NATO does. Effective defence is impossible without investment in the capabilities the Alliance needs.

In 2020 Allies will continue to increase their defence spending, in real terms, for the sixth consecutive year. By then, European Allies and Canada will, since 2016, have added a cumulative total of USD 130 billion to their defence budgets. As shown in the graph below, based on national plans submitted by Allies in 2019, this figure will rise to USD 400 billion by the end of 2024.

Total NATO military spending is estimated to reach one trillion USD this year.

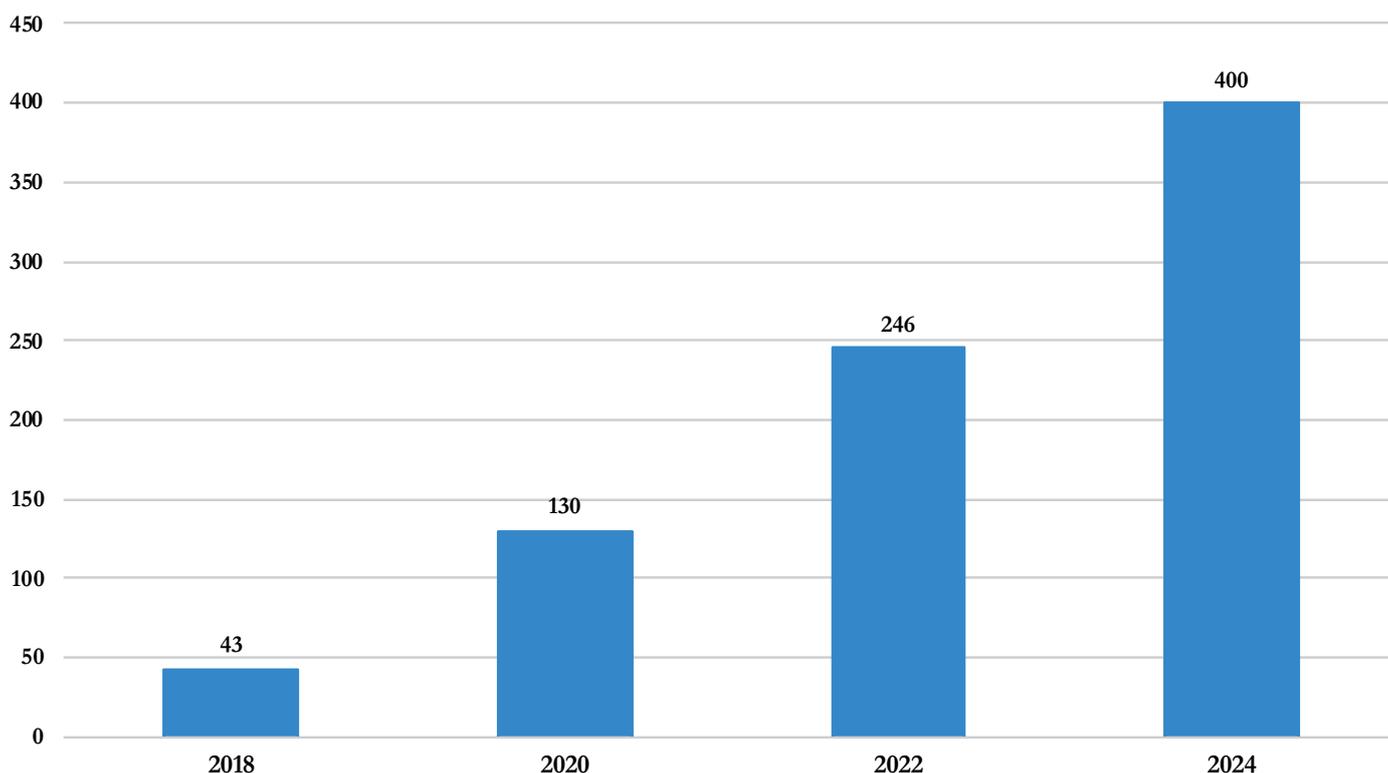
The majority of Allies have national plans in place to spend 2% of their GDP on defence by 2024. Already 16 Allies are spending more than 20% of their defence expenditure on major

equipment, including related research and development. According to 2019 national plans, all but two Allies will meet the 20% guideline by 2024.

In addition, in 2019, European Allies and Canada are forecast to spend approximately USD 66 billion on major equipment and the associated research and development.

Allies are not just delivering more of the heavier, high-end capabilities NATO needs, they are also improving the readiness, deployability, sustainability and interoperability of their forces. The number of activities in which Allies are engaged has increased, and Allies continue to make valuable force and capability contributions that benefit the security of the Euro-Atlantic area through NATO's operations, missions and other activities.

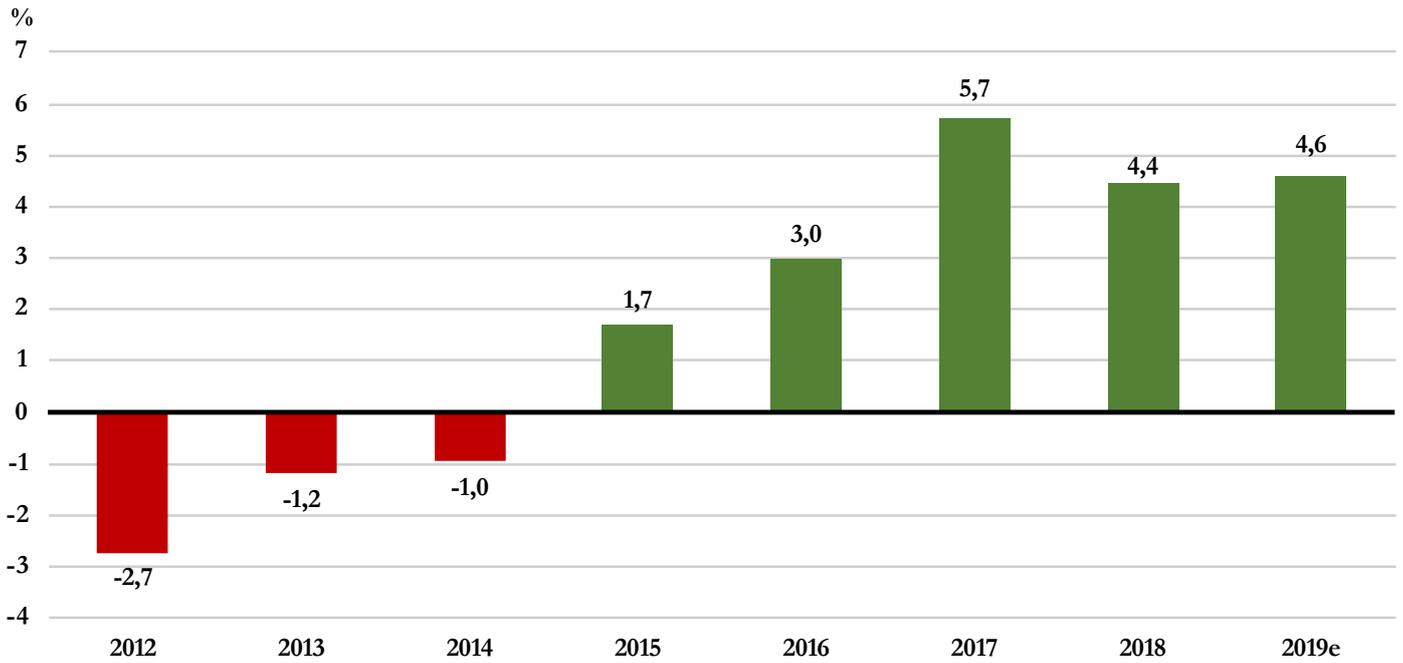
NATO Europe and Canada - Cumulative Defence Spending Over 2016
(billion USD, based on 2015 prices and exchange rates)



Note: Figures for 2019-2024 are estimates.

NATO Europe and Canada - Defence Expenditure

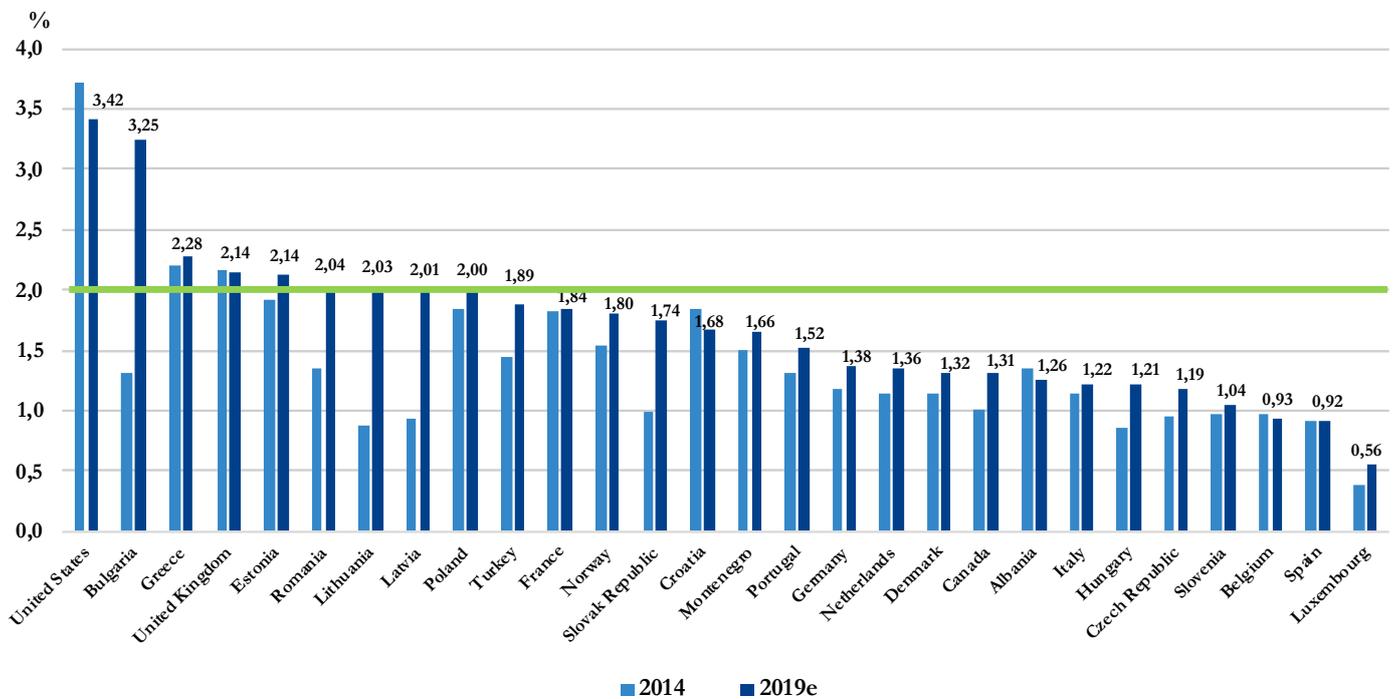
(annual real change, based on 2015 prices and exchange rates)



Note: Data as at 21 November 2019. Figures for 2019 are estimates. The NATO Europe and Canada aggregate from 2017 onwards includes Montenegro, which became an Ally on 5 June 2017.

Defence Expenditure as a Share of GDP (%)

(based on 2015 prices and exchange rates)



Note: Figures for 2019 are estimates.

MODERNISING THE ALLIANCE

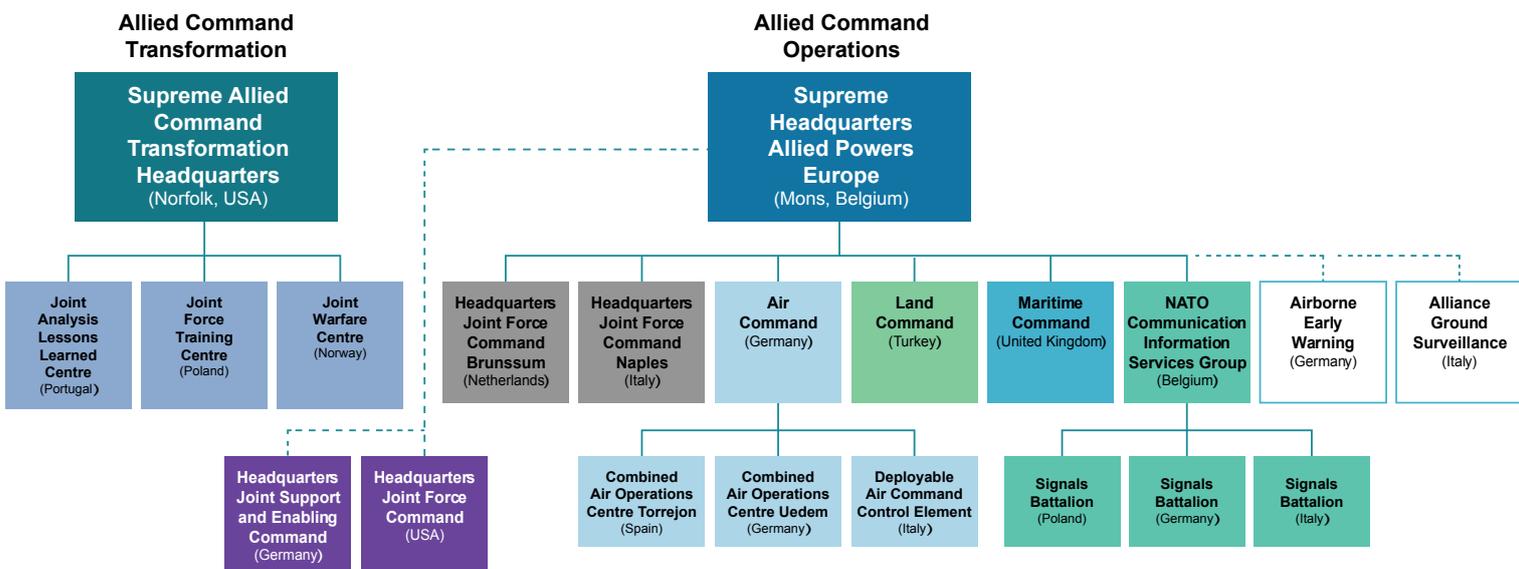
We place speed, innovation and resilience at the centre of the way NATO works. We have updated our Command Structure, the military backbone of the Alliance, and implemented a series of measures to modernise our Headquarters in Brussels. We also reduced and streamlined the process to deliver military capabilities through common funding.

Adaptation of NATO's Command Structure

We have updated the NATO Command Structure with more than 1,200 additional personnel and two new headquarters: a Joint Force Command in Norfolk (Virginia), United States, to focus on protecting transatlantic sea

lines of communication; and a Joint Support and Enabling Command in Ulm, Germany, to support the rapid movement of troops and equipment into, across, and out of Europe. We have also established a Cyberspace Operations Centre at SHAPE, to coordinate NATO operations in cyberspace, provide cyberspace situational awareness, assess risks, and support decision-making, planning and exercises.

Adapted NATO Command Structure

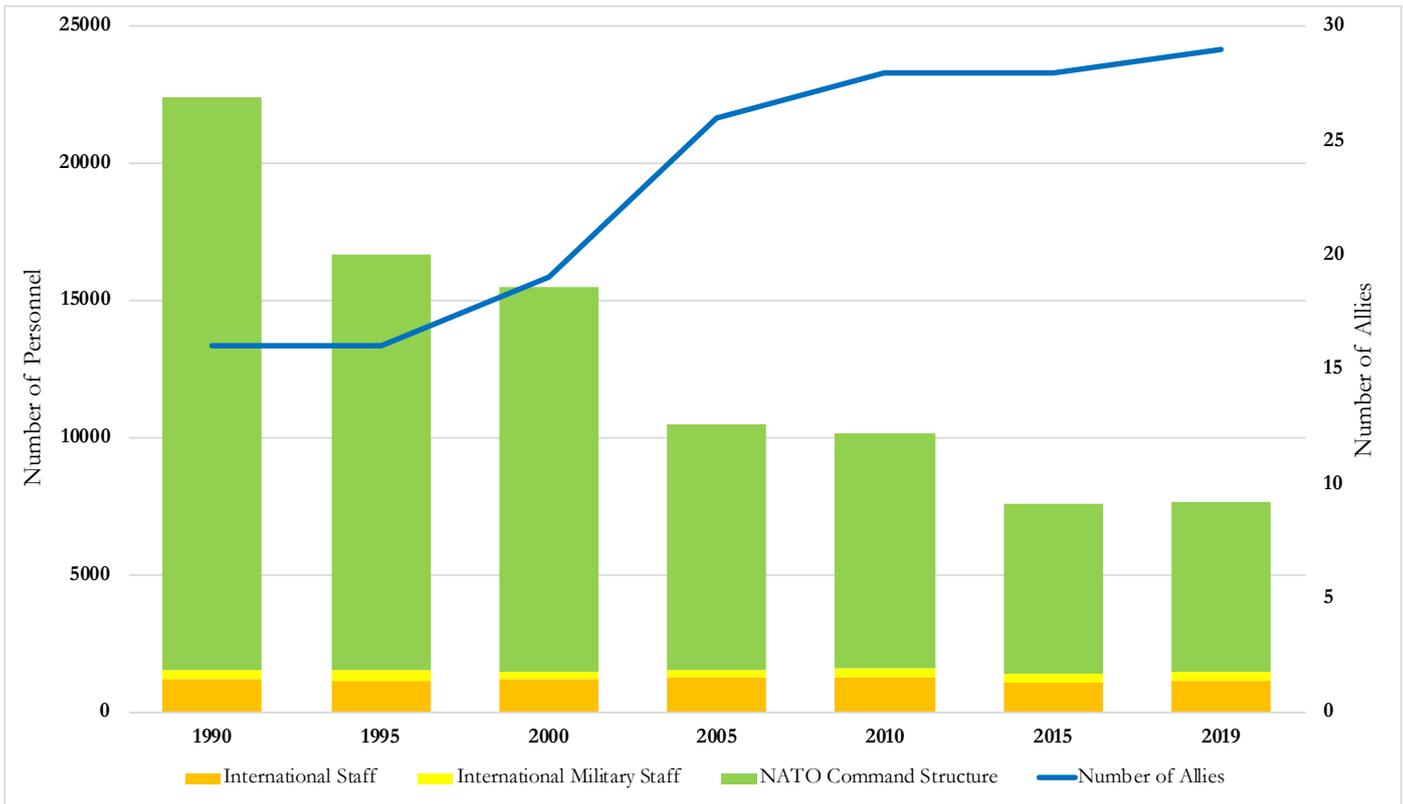


Functional Review of NATO Headquarters

The NATO Headquarters has been restructured as part of a Functional Review, to close functional gaps and ensure the Headquarters can fully support Allies in peacetime, crisis, and conflict. As a result, we will be better prepared to anticipate and meet unforeseen political and military scenarios;

more integrated, coherent, and efficient; and more ready to innovate and exploit disruptive technologies. As part of our modernisation efforts, NATO is also adapting and strengthening its strategic communications as well as investing in advanced technology to counter disinformation and to optimise the effectiveness of NATO's own communications.

NATO Organisation and Command Structure



Capability Development and Innovation

Our Alliance must have adequate, sufficient and flexible capabilities to respond to current and future challenges. NATO, through its Defence Planning Process, identifies the capabilities and forces the Alliance requires, and then apportions Capability Targets to Allies, based on the principles of fair burden sharing and reasonable challenge. Defence Ministers, in February 2019, agreed the latest Political Guidance for Defence Planning, setting the parameters for Allied capability development for the next 20 years.

Helping Allies make informed investment decisions on military capabilities is a crucial part of NATO's job. NATO supports Allies to understand the implications of new technologies and innovation, and manufacture and acquire the high-end equipment their militaries need.

The past two years have been a pivotal period for NATO's intelligence, surveillance, and reconnaissance capabilities. NATO Ground Surveillance Program is specifically designed to meet the Alliance's surveillance requirements. It will be collectively owned and operated by

all NATO Allies and will be a vital capability for NATO operations and missions. On 21 November 2019, the first of five NATO Alliance Ground Surveillance aircraft landed in Sigonella, Italy, marking an important step in the delivery of the Alliance Ground Surveillance Program.

In early 2019, NATO AWACS completed a nearly USD 1 billion mid-life upgrade programme, equipping the fleet with the latest digital technology. In November 2019, a further USD 1 billion modernisation contract was awarded, providing sophisticated new capabilities required to operate AWACS out to 2035. The first phase of designing NATO's capabilities after 2035 – under Alliance Future Surveillance and Control – was completed on schedule, on scope, and under budget. The Alliance's defence industry will now develop six alternative concepts on how disruptive technologies, like artificial intelligence, big data, and quantum computing, could help NATO maintain its decision advantage after AWACS retires in 2035.

NATO is also taking steps to enhance the sharing of intelligence information among Allies. Contracts were awarded in 2019 to



NATO Allied Ground Surveillance Aircraft – Global Hawk

procure search-and-retrieval capabilities for intelligence data. Moreover, UNIFIED VISION 2018, NATO's intelligence trial, tested cutting-edge technology for intelligence collection and sharing, including against simulated terrorist threats.

In October 2018 NATO launched the Maritime Unmanned Systems Initiative (MUSI). Fourteen nations now collaborate on the development of interoperable unmanned systems capability in the maritime arena. In September 2019 the MUSI partnered with the Portuguese Navy in the Recognised Environment Picture 2019 exercise to test and trial unmanned systems, teaming with conventional manned platforms above, on and under the water during both day and night. This level of unmanned systems integration in such a complex environment was a world first and provided data and insight to Allies which will help to further develop the Maritime Unmanned Systems Initiative.

NATO naval forces must be able to operate in today's increasingly potent Anti-Access Area Denial environments. In October 2019, the annual Naval Electromagnetic Operations

(NEMO) trials were executed off the southeast coast of the United Kingdom. For the first time NEMO included an operational focus aimed at improving the naval Electronic Warfare and Anti-Ship Missile Defence capabilities of NATO's Standing Naval Maritime Group 1.

In 2018, the Alliance launched the Maritime Battle Decisive Munitions multinational project to help procure and manage stockpiles of key maritime munitions more cheaply and flexibly. Other projects, such as the Air-to-Ground Precision Guided Munition, the Land Battle Decisive Munitions and the Multi Role Tanker Transport Capability have seen an expansion in membership. Furthermore, a new training facility dedicated to Special Operations Forces Aviation under the Multinational Special Aviation Programme will have its official opening in Zadar, Croatia, in December, 2019.

NATO's technological edge has always been an essential enabler of its ability to deter and defend against potential adversaries. Our future security will depend on our ability to understand, adopt and implement technologies such as Artificial Intelligence, autonomy, and hypersonic systems. In October 2019, Defence Ministers approved an Emerging and Disruptive Technologies Roadmap to help structure NATO's work across key technology areas, and enable Allies to consider these technologies' implications for deterrence and defence, capability development, legal and ethical norms, and arms control aspects.

