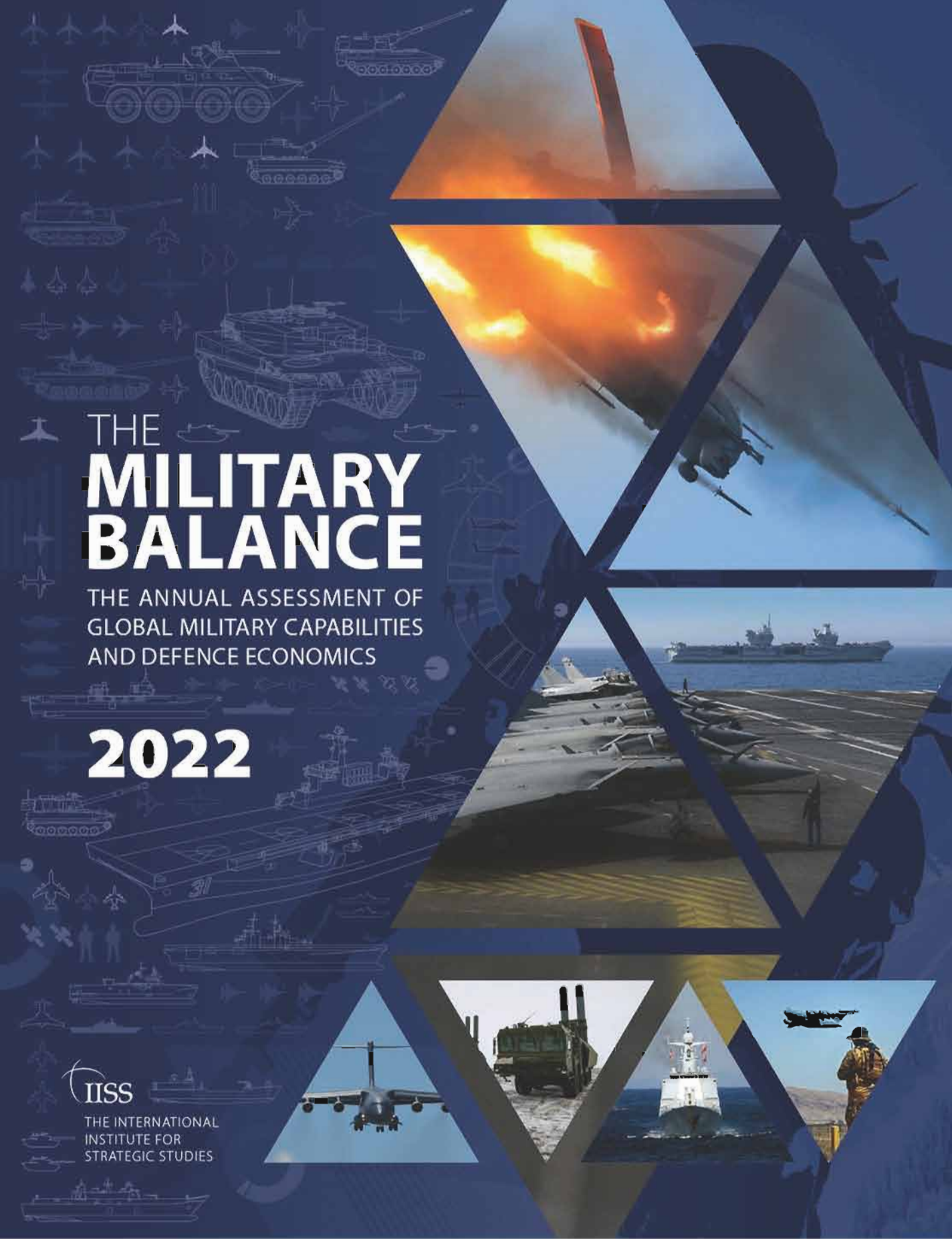


The background is a dark blue collage. On the left, there are white line-art icons of various military vehicles and aircraft, including tanks, armored cars, helicopters, and fighter jets, arranged in a grid-like pattern. On the right, there are several triangular photographic panels. The top panel shows a missile launch with a large orange flame. The middle panel shows a fighter jet in flight. The bottom-left panel shows an aircraft carrier at sea. The bottom-right panel shows a soldier in camouflage gear. The overall theme is military and defense.

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THE ANNUAL ASSESSMENT OF
GLOBAL MILITARY CAPABILITIES
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THE **MILITARY BALANCE** 2022

The International Institute for Strategic Studies

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Editor's Introduction

Two years into the coronavirus pandemic, armed forces across the world continue to support public health measures. This support is likely to persist if new COVID-19 variants emerge. Nonetheless, in 2021 many armed forces sought to resume activities that had been affected by the pandemic. Military training and exercises adapted to become COVID-secure, to the extent that was possible, and large-scale deployments resumed, such as the UK-led Carrier Strike Group 21. However, infection risks remained as armed forces grappled with introducing vaccinations and other preventive measures: COVID could still undermine operational readiness. At the same time, as in 2020, there was no reduction in conflict or confrontation. Heightened perceptions of great-power competition still motivated many countries' defence-planning considerations and influenced important procurement decisions.

Persistent conflicts remained unresolved. In Africa, France moved to reshape its involvement in the Sahel, focusing its military presence around the *Takuba* counter-terrorist mission, while elsewhere, war in Ethiopia and insurgency in Mozambique provoked concern. In the Middle East, wars in Libya, Syria and Yemen continued, even if a combination of fatigue and stalemate led to tentative de-escalation.

Middle Eastern states also awaited decisions on future US force dispositions. In 2021 the US withdrew missile-defence batteries, and the Biden administration has said it would 'right-size' the US regional presence. Specific details, however, remained scant in advance of the National Security Strategy, expected in 2022. Moreover, reports of the conclusions of the Global Posture Review contained little firm detail other than the ambition to develop a more robust presence in both the Indo-Pacific and Europe. This was linked to the administration's Interim National Security Strategic Guidance, which said the US would end 'forever wars'.

Biden's election brought expectations for improved transatlantic ties. However, the manner of the US withdrawal from Afghanistan – and the knowledge among European states that they lacked the military capability to do anything but follow Washington's decision – dampened hopes for a strengthened relationship, particularly when viewed alongside the diplomatic fallout in Europe from the announcement in September of the AUKUS arrangement. Despite unifying rhetoric, European allies were still expected to do more for their own defence. It is likely that this will be reflected in NATO's new Strategic Concept and in the EU's so-called 'Strategic Compass'.

Defence spending

Nonetheless, it is clear that European states have turned a corner in terms of their defence spending, since Russia's annexation of Crimea in 2014 and subsequent military intervention in eastern Ukraine upended the continent's security landscape. In 2021, European defence spending grew by 4.8% in real terms, more than in any other region. This marked the seventh

consecutive year of real-terms growth. The 2021 increase, combined with reduced spending in other regions, means that European spending represented 18.7% of the global total, after hovering between 16.5% and 17% annually since 2014.

The continued upward trajectory of European defence spending reflects sharpened threat perceptions. Moreover, this higher European spending is adjusted for inflation; elsewhere, surging inflation has reduced the effect of nominal defence-budget increases. Indeed, while global spending rose again in 2021, reaching USD1.92 trillion – 3.4% higher than in 2020 – inflation in all regions meant this amounted to a 1.8% reduction in real terms. There were real-terms spending contractions in Latin America, sub-Saharan Africa, the Middle East and North Africa and in Russia and Eurasia, even though nominal increases were evident across most regions. In real terms, spending in Latin America – largely insulated from any major threat – is at the same level as in 2009. Meanwhile, economic constraints in sub-Saharan Africa have continued to subdue defence expenditure. In real terms, the region's spending in 2021 is the same as it was in 2012. If inflation continues to rise, it may increase pressure on defence budgets.

Defence spending in Asia has proven resilient, and there is little evidence that the pandemic has derailed planned defence investments. Total regional spending came to USD488bn in 2021, more than double the 2008 total of USD226bn. China accounted for 43% of total regional spending in 2021, with its defence budget of USD207bn supporting Beijing's military modernisation. Our budget projections indicate that, if current trends continue, China's official budget could reach just under USD270bn by 2030.

China and Russia

The public revelation that China was probably pursuing a significant expansion of its nuclear forces highlighted the breadth and scale of ambition underlying its military modernisation.

China's naval transformation has in recent years been remarkable and rapid by any measure. Fully developing the capabilities of the People's Liberation Army (PLA) Navy will, however, require further investments, not least in training. Nonetheless, the navy may be at an important stage in its force development. China's shipbuilding output remains prodigious. Near-seas capability has been strengthened, with 72 Type-056/056A corvettes commissioned into service since 2012. But the commissioning of the first Type-075 large aviation-capable amphibious assault ship, continued aircraft-carrier development and the commissioning of a growing number of frigates and destroyers reflect determined efforts to develop a blue-water navy. In late April, in the presence of President Xi Jinping, the navy simultaneously commissioned its third Type-055 cruiser, a Type-094 nuclear-powered ballistic-missile submarine and the amphibious assault ship.

Importantly, as well as commissioning new vessels, the retirement of legacy platforms continued. The last Type-053H1 frigate in service is likely to decommission soon. Meanwhile, China's Coast Guard is an important component of a three-layered maritime strategy alongside the navy and the maritime militia. The introduction of two 12,000+-tonne *Zhaotou*-class cutters was particularly noteworthy; these are the largest such coast guard vessels in the world.

The PLA Air Force has continued to exercise its capabilities, including close to Taiwan. From January to November 2021, the PLA conducted 230 incursions into Taiwan's Air Defence Identification Zone. Over 800 aircraft were employed, including fighters, bombers and also special mission types, particularly KQ-200 anti-submarine warfare (ASW) aircraft, as well as ASW and army attack helicopters. Meanwhile, the appearance of China's Y-20 transport aircraft in a tanker variant indicated not only that the days of the ageing H-6U may be numbered in that role, but also that China may soon possess a more modern means of refuelling its aircraft and extending their range over the South China Sea. The scale and quality of the air force's re-equipment programme is concerning other air forces in the region (notably India, Japan and Taiwan) and also making it a credible peer-level threat to US forces. Beijing is also offering for export increasingly capable combat aircraft, uninhabited aerial vehicles and guided weapons, such as the PL-15 (CH-AA-10) medium- to long-range air-to-air missile – which only entered PLA service in 2018.

In late 2021, attention again focused on Russia's build-up of forces near the border with Ukraine. The November build-up once more highlighted not just the military units Moscow could mobilise and deploy, but also the supporting civilian and military infrastructure that enabled this. The navy continued testing 3M22 *Tsirkon* sea-launched hypersonic missiles, with the first surface and submerged firings from a submarine, the *Yasen* (Project 885) vessel *Severodvinsk*, in October. The first serial-production *Tsirkon* weapons are scheduled to enter service in 2022. The Aerospace Forces have begun taking delivery of the first of up to 24 upgraded Su-34 *Fullback* bombers, but other air force re-equipment was limited: service entry for the Su-57 *Felon* remains some way off, while the new *Checkmate* combat aircraft concept is perhaps intended more for export. Meanwhile, Russia has looked to introduce upgraded capabilities in various locations, including in the Arctic and the Far East.

Regional reactions

It is clear that concern over Chinese and Russian military developments is driving regional as well as wider international military developments. In Europe, there is continued focus on improving combat air capabilities as well as air-defence and rocket artillery, while there is growing attention on countering the non-military tools that Russia employs as part of its overall strategy. These worries are also driving closer cooperation between NATO and non-NATO states that are particularly concerned by Russia's activity, notably Finland, Sweden and Ukraine.

In Asia, China's military modernisation provides a lens through which to examine regional states' defence poli-

cies and capability development programmes. Much attention has focused on PLA activity near Taiwan, but Southeast Asian countries are also feeling Chinese military pressure. Indonesia's government and armed forces have become increasingly concerned about Chinese activities inside its exclusive economic zone near the Natuna islands, while Malaysia's government issued a tender for a new long-range air surveillance radar a month after its air force intercepted a formation of PLA transport aircraft 60 nautical miles off the coast of Sarawak State in May. Meanwhile, Japan is strengthening its military capabilities: it will acquire F-35Bs and its *Izumo* helicopter carriers will be modified to operate these aircraft.

In contrast to Europe, there is no multilateral alliance framework in Asia, so states there have used bilateral or mini-lateral groupings to support their security and defence efforts. An example is the AUKUS partnership, signed by Australia, the UK and US in September, which while initially concerned with helping Australia develop a nuclear-powered submarine capability is also intended to promote deeper collaboration between its three members on cyber, artificial intelligence (AI), quantum and 'additional undersea' capabilities. However, effective military cooperation also depends on a range of often unheralded bilateral agreements, for instance relating to military logistics support and intelligence sharing.

Technological change

China's development of and integration of advanced defence technology continues at pace. US government officials reportedly expressed surprise at the level of technological sophistication evident in the August test of a hypersonic glide vehicle. China is, of course, not the only nation pursuing such technology. Russia's boost-glide *Avangard* system is already entering service and other nations, including the US, are developing new hypersonic systems. But Beijing is attempting to build an overarching integrated strategic structure in which the civilian, defence and national-security sectors are closely aligned and coordinated. In Western states, attempts at civil-military technology collaboration have run into problems. As the speed of technological change accelerates, and as states look to integrate into their defence capabilities emerging technologies like AI and machine learning, it will be important for states in the West to tackle this issue. NATO is seeking to do so with its Defence Innovation Accelerator, but this will probably still rely on national pledges to the innovation fund, making effectiveness dependent on national priorities. At the same time, adopting more complex capabilities also risks creating vulnerability, for instance to adversaries targeting the systems on which networked armed forces depend. It also has the potential to complicate military cooperation, if not all members of an alliance can afford to keep up. Plans for increased Western military deployments to the Asia-Pacific will exacerbate these issues. The US may be able to afford to meet these tasks and to modernise its armed forces while facing challenges from China as well as Russia, but the same is not true of other Western or like-minded states. Moreover, the problem of managing these demands will only become more acute as long-term 'strategic competition' replaces 'forever wars' in the lexicon.

Chapter One

Domain trends

Defence economics

- Global defence expenditure reached USD1.92 trillion in 2021, 3.4% higher than 2020 levels. However, surging inflation in all regions meant this amounted to a 1.8% reduction in real terms. If inflation continues to increase, this will put pressure on defence budgets as factor-input costs increase, while military personnel may call for higher wages to keep pace with cost-of-living increases.
- In 2020, the United States was the primary driver of global defence-spending growth. However, US defence-budget authority fell to USD754bn in 2021, from USD775bn in 2020. Inflation rose from 3.1% to 6.4% in 2021, which meant that the budget contracted by 6% in real terms.
- High inflation rates also resulted in real spending contractions in Latin America, sub-Saharan Africa, the Middle East and North Africa, and Russia and Eurasia, even though nominal increases were evident across most regions. In real terms, Latin American spending is at the same level as in 2009. Meanwhile, economic constraints in sub-Saharan Africa have continued to subdue defence expenditure. In real terms, the region's spending in 2021 is the same as it was in 2012.
- Middle Eastern regional defence spending has been relatively stable in nominal terms, but with rates of inflation averaging 6.9% annually (and in some countries exceeding 30%), there have been sizeable real-terms reductions, with cuts averaging 3.6% annually in the four years to 2021.
- Defence budgets in Asia have proved resilient, despite a constrained fiscal backdrop, and there is little evidence that the coronavirus pandemic has derailed planned defence investments. Regional spending growth slowed in 2020 and 2021, down to 3.4% and 2.8% respectively from 5.3% in 2019 in real terms, but only a few countries implemented cuts, with others choosing instead to rein in spending plans. With a defence budget of USD207bn, China accounted for 43% of total regional spending in 2021. Total regional spending came to USD488bn in 2021, more than double the 2008 total of USD226bn.
- In 2021, European defence spending grew by 4.8% in real terms, higher than in any other region. This marked the seventh consecutive year of real-terms growth. The 2021 increase, combined with reduced spending in other regions, means that European spending represented 18.7% of the global total after hovering between 16.5% and 17% annually since 2014.

Land

- The proliferation of more precise and longer-range fire-support capabilities will continue to complicate ground manoeuvre at both the tactical and operational levels. While some armed forces are increasing their investments in both kinetic and non-kinetic defensive systems and counter-measures, their relative cost is likely to limit availability in the near term, leaving armed forces at risk of being overwhelmed by larger quantities of cheaper offensive systems.
- The use of civilian-transport and logistics-support capabilities in Chinese exercises and Russian readiness drills in 2021 illustrates the key role such assets can be expected to play in any large-scale conflict between peer adversaries. Even countries that have invested in substantial military-transport and logistics equipment inventories, such as China and the United States, would still be dependent on non-military capacity to mobilise, deploy and sustain forces in the required quantities.
- Military capacity-building in fragile states remains a challenging concept, particularly under fraught political conditions, as illustrated by the rapid collapse of the Afghan security forces. Nonetheless, demand for such external assistance continues to grow, particularly in states facing significant challenges from armed non-state actors, such as Mozambique. This has led to a proliferation of different actors and approaches, often with competing ideas about the objectives of such capacity-building.

Maritime

- The importance and challenges of the underwater battlespace continue to grow, as do investments in subsurface capabilities. This was underlined by the September 2021 AUKUS partnership, under which Australia, the United Kingdom and the United States will work together to develop nuclear-powered attack submarines (SSNs) for the Royal Australian Navy. Meanwhile, the UK also announced contracts in September for early design work on its next-generation SSN; South Korea commissioned a conventionally powered boat capable of launching ballistic missiles; NATO members continue to enhance submarine and anti-submarine warfare training; and Germany confirmed in June an order of five P-8A *Poseidon* maritime-patrol aircraft.
- The US and some of its major allies and partners are engaging in increasing numbers of complex, often multinational naval task group exercises, chiefly but not exclusively in the Indo-Pacific, to hone skills for operating in high-intensity peer or near-peer scenarios.
- There is a growing focus on hybrid or 'grey zone' threats in the maritime domain, challenging naval forces in terms of capabilities and doctrine. They must also balance the competing deployment requirements of more aggregated capabilities for high-end tasks and those for a more dispersed presence. This has led to an increase in forward-deployment patterns among some naval forces, as well as moves towards

coordinated deployments and shared maritime-domain awareness.

- Navies are continuing to balance increasing capability requirements for high-intensity warfare (including increased magazine provision) with the demand for greater affordability to maintain or increase hull numbers for presence and lower-end maritime-security missions. Germany and Italy will

likely join the group of states procuring 10,000-tonne-plus principal surface combatants, while next-generation UK and US destroyers could also be in that class or, in the UK's case, perhaps within a dispersed system of systems. Meanwhile, the UK is pursuing the more affordable Type-31 and Type-32 designs, while France, Greece, Italy and Spain are leading the European Patrol Corvette programme.

Aerospace

- Range and speed are of heightened importance for peer and near-peer powers looking to their next generation of aircraft and weapons. The US focus on the Indo-Pacific places a premium on both. The geography of the region favours longer-range combat aircraft, given the likely mission radius required for operations there. Extended-range weapons will allow for greater stand-off, while increased speed will reduce the time from launch to target. Washington, however, is not alone in pursuing such goals, with Beijing and Moscow developing high-speed land-attack and anti-ship missiles.
- Air forces continued to struggle with balancing the cost of quality with the growing demand for quantity. The re-emergence of the risk of peer or near-peer state-on-state warfare, and the associated consequence of high attrition rates, is focusing attention on combat aircraft numbers and how they could be supplemented. Crewed-uninhabited teaming, and uninhabited systems more broadly, are emerging as ways to supplement combat-aircraft fleet numbers and reduce the potential attrition rate of crewed platforms in high-threat environments.
- Comparatively low-cost armed uninhabited aerial vehicles (UAVs) are increasingly being adopted to supplement more

traditional airpower. China and Turkey are emerging as leaders in addressing this market. The corollary is that there is a further increase in efforts to develop detection and engagement systems to defeat armed UAVs. Uninhabited combat aerial vehicle (UCAV) research and development is ongoing in several countries, with India the latest to begin flight tests of its design as part of the *Ghatak* UCAV programme. Russia and China also have UCAV flight vehicles in test.

- The weaponisation of space continues in parallel with efforts to curtail or manage this. China, Russia and the US are developing a variety of counter-space systems. Middle powers are also bolstering their space capabilities. France, having established a space command in 2019, carried out its first satellite-defence exercise, *AsterX*, in March 2021. The United Kingdom and Germany created space commands in April and July 2021 respectively.
- Air forces remain worried about platform survivability, principally that of enablers including tankers, early warning aircraft and large UAVs, which are vulnerable even at long range to some air-to-air and surface-to-air missiles currently in development. Concerns over runway vulnerability have also re-emerged, with more air forces now conducting training in dispersed operations for their combat-aircraft fleets.

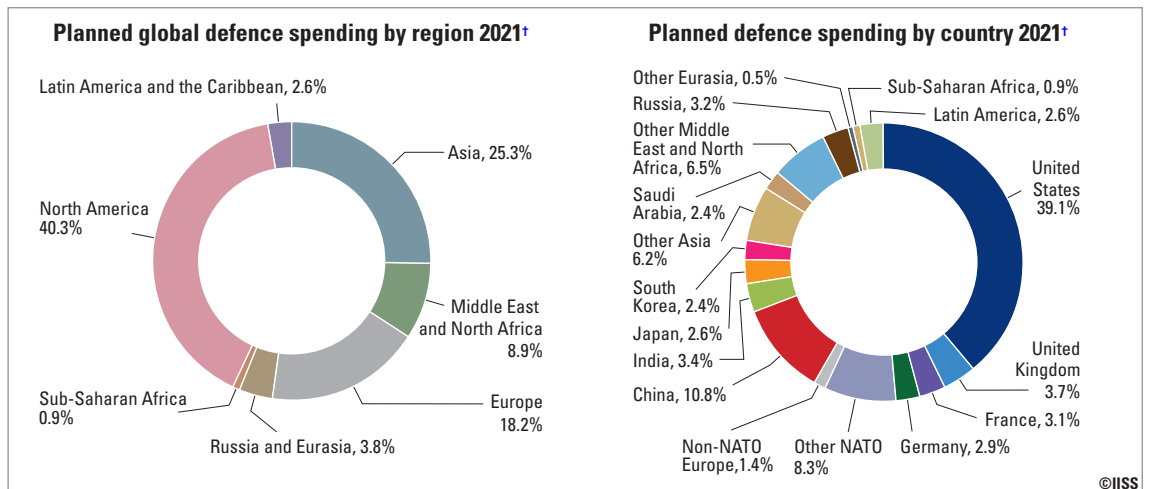
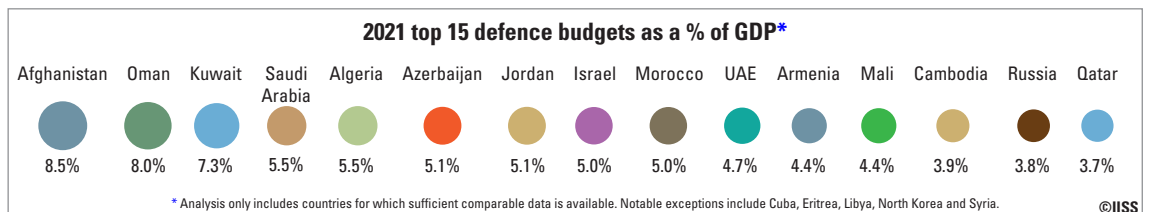
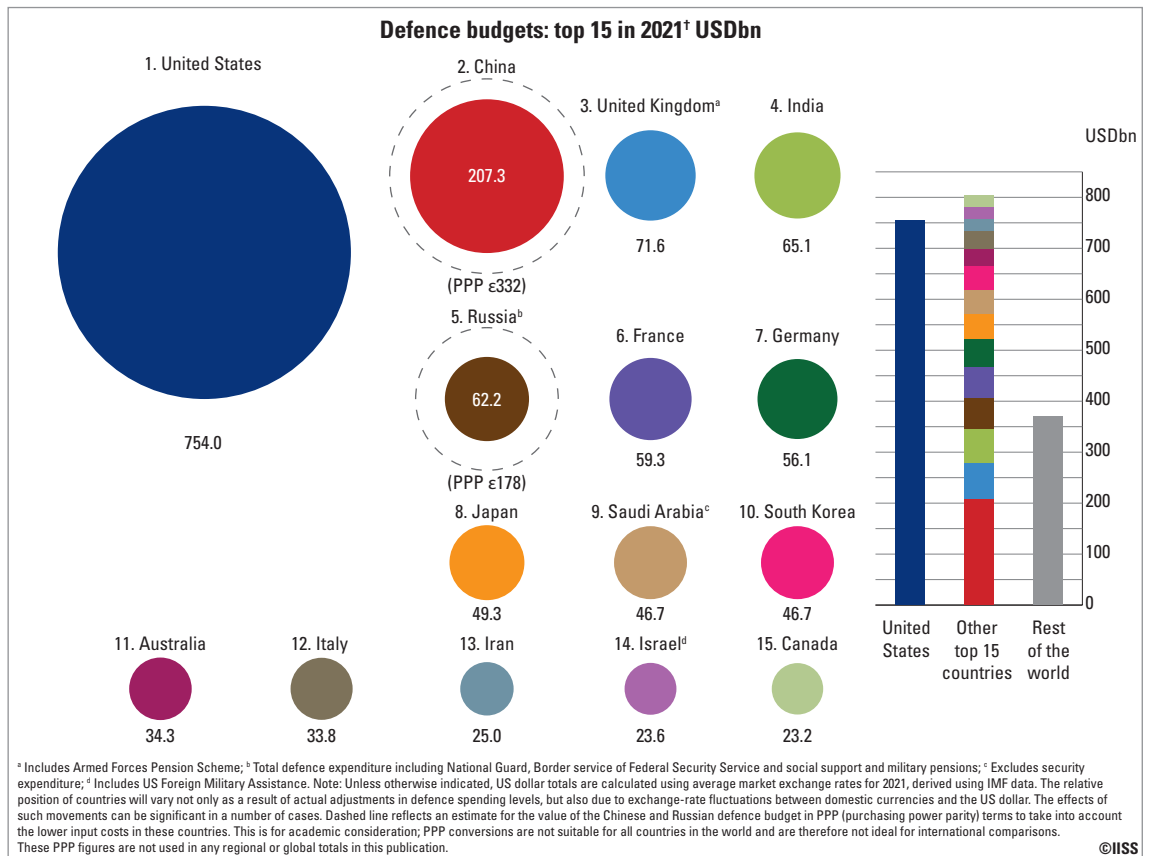
Cyber

- Defence policymakers are now coming to terms with the impact of artificial intelligence (AI) on all aspects of military and intelligence operations. Advanced military powers are increasingly seeking cyber capabilities supported by narrow artificial intelligence/machine learning (AI/ML) for both defensive and offensive operations. The use of narrow AI/ML is confined mostly to standardising secure data collection, as well as network mapping and incident detection, although AI/ML-supported cyber tools are being slowly introduced alongside investments in zero-trust and cloud network architectures. This is leading military powers to concentrate on increasing numbers of AI-literate personnel. A deficit in governmental AI talents is increasingly seen as a key challenge to using these technologies for enhanced national-security purposes.
- Efforts are continuing among leading military powers to connect weapons systems, platforms, information infrastructure, and other devices in the Internet of Military Things (IoMT). There is also an ongoing push towards integrating electronic warfare and cyber capabilities. Cyberspace and the electromagnetic spectrum are interlinked because the IoMT primarily relies on radio frequency pathways for connectivity. US Cyber Command has expressed a demand for radio-

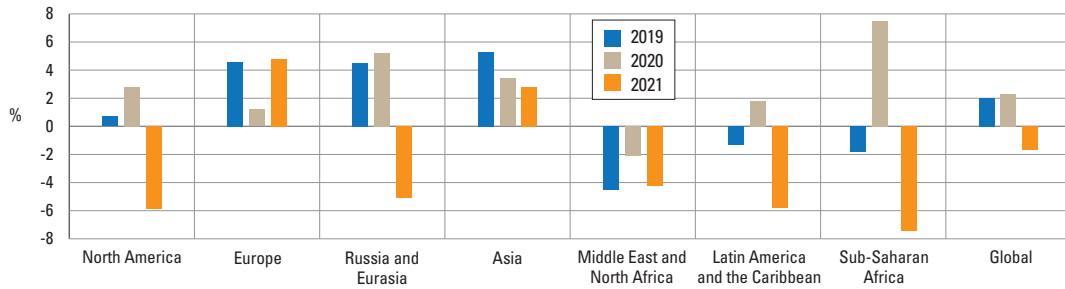
frequency-enabled cyber tools for operations at the tactical level.

- Defence budgets are reflecting a new priority to expand military cyber forces and provision for commissioning external providers for specific cyber operations. This is being driven in part by military needs but also by growing concern that civilian cyber-defence mechanisms are inadequate by themselves to protect national critical infrastructure – both in wartime and peacetime.
- Trends towards multi-domain integration and multi-domain operations (MDO) are continuing. However, MDO concepts, the integration of capabilities, and the synchronisation of operations and fires across all domains are imposing new demands on military information and communications systems, requiring investments that perhaps only some countries will be able to meet. As part of overall MDO efforts, Australia, the UK and the US are increasingly experimenting with the integration of narrow AI/ML as part of their tactical suites. A major concern remains to what degree such command and control capabilities (and MDO) will be feasible in a degraded operational environment.

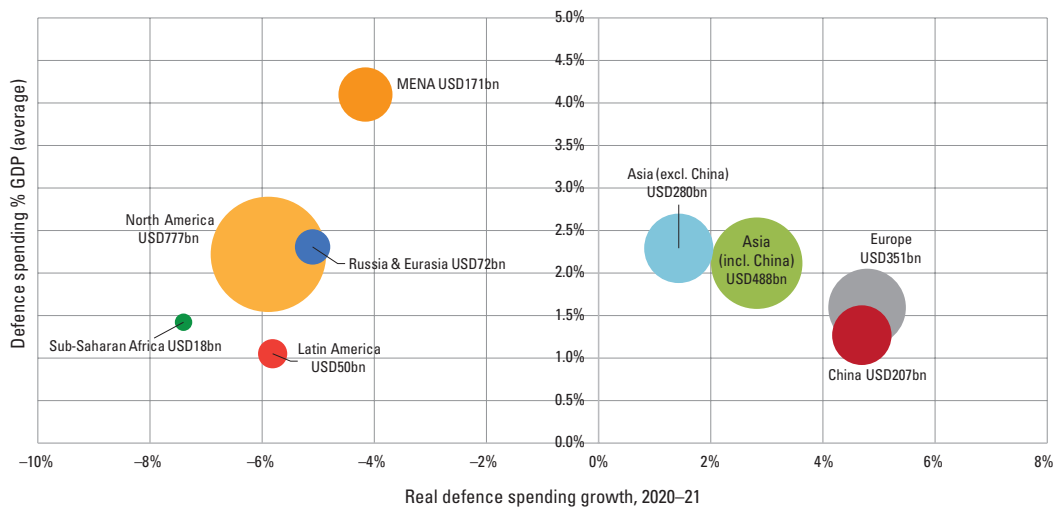
Defence budgets and expenditure



Real global defence-spending changes by region, 2019–21*

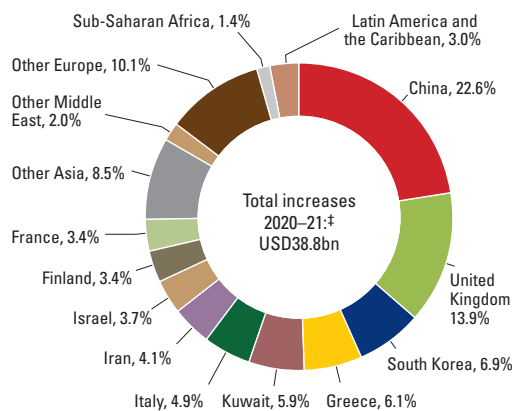


2021 regional defence spending, growth (%) and % GDP

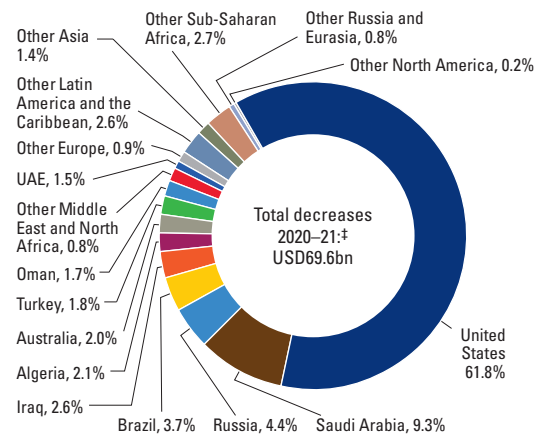


Note: Chart compares regional defence spending totals (size of circle) in 2021, the real growth in 2021 spending compared to 2020 levels (x-axis), and defence as % of GDP average allocations (y-axis) in 2021. Please note growth rates are in real terms and will therefore reflect the higher rates of inflation globally in 2021. The North America drop in 2021 is the result of a return to trend budget level in the US following a surge in 2020 evident in the Operations and Maintenance (O&M) and military construction account of the Department of Defense (DoD) budget.

Composition of real defence-spending increases 2020–21*



Composition of real defence-spending reductions 2020–21*



Tracked self-propelled artillery: selected current and next-generation systems

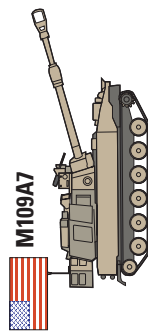
Self-propelled artillery systems provide mobile indirect firepower to support many armoured and mechanised manoeuvre formations. They also provide several important benefits over towed systems. For example, they can move under their own power to firing positions and they take less time to prepare for firing or for repositioning, which is intended to increase survivability against counter-battery fire. A number of nations are pursuing improvements to tracked and armoured self-propelled systems. These are designed for tactical mobility on unprepared ground, benefiting from a level of protection that enables close liaison with armoured units. That said, they may have a larger logistic



PzH 2000

Key features

- Entered service in 2008
- 56 tonnes
- 5 crewmembers
- Armament:**
 - 155mm L52
- Range:**
 - Standard round – 30 km
 - Base bleed round – 47 km
 - Rocket-assisted round – 60 km
- Rate of fire**
 - 10 rounds per minute
 - 5 round MRSI



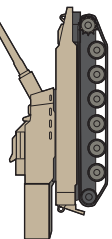
M109A7

Key features

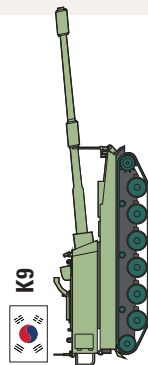
- Entered service in 2015, based on 1960s design
- 38 tonnes
- 4 crewmembers
- Armament:**
 - 155mm L39
- Range:**
 - Standard round – 24 km
 - Rocket-assisted round – 30 km+
- Rate of fire**
 - 4 rounds per minute

**M1299 Extended-Range Cannon Artillery**

The Extended-Range Cannon Artillery (ERCA) is in development to replace the US Army's older M109 systems. Based on the M109A6 Paladin Integrated Management chassis, ERCA aims to achieve a range of 70 km through a combination of its longer 58 calibre armament and higher-energy propellant charges.

**Key features**

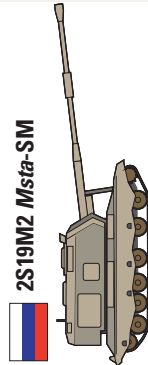
- Developmental
- Weight n.k. but the programme aims to maintain 'the weight found in current systems'
- 4 crewmembers
- Armament:**
 - 155mm L58
- Range:**
 - Rocket-assisted round – 70 km
- Rate of fire**
 - 4 rounds per minute
 - There are future plans to add an autoloader, which will significantly increase the rate of fire.
 - MRSI



K9

Key features

- Entered service in 1999
- 47 tonnes
- 5 crewmembers
- Armament:**
 - 155mm L52
- Range:**
 - Standard round – 30 km
 - Base bleed round – 40 km
 - Rocket-assisted round – 50 km
- Rate of fire**
 - 6–8 rounds per minute
 - 3 round MRSI



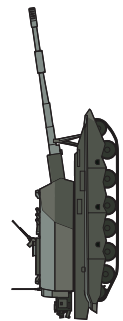
2S19M2 Msta-SM

Key features

- Entered service c. 2013
- 43 tonnes
- 5 crewmembers
- Armament:**
 - 152mm L48
- Range:**
 - Standard round – 25 km
 - Rocket-assisted round – 29 km
- Rate of fire**
 - 10 rounds per minute
 - 4 round MRSI

**2S35 Koalitsiya-SV**

Koalitsiya is beginning to enter service as the Russian army's next-generation self-propelled artillery system. A high level of automation allows for a faster rate of fire, and Russian sources claim a maximum range in excess of 70 km when using rocket-assisted ammunition.

**Key features**

- Entered service for testing in 2020
- Estimated 48 tonnes
- 3 crewmembers
- Armament:**
 - 152mm L52
- Range:**
 - Base bleed round – 29 km
 - Rocket-assisted round – 70 km
- Rate of fire**
 - Approximately 16 rounds per minute claimed
 - MRSI

footprint than wheeled self-propelled artillery systems, which offer greater mobility on roads. Current and next-generation tracked systems are focused on achieving longer ranges and higher rates of fire. Developments in computerised fire control and automated gun laying also allows many systems to perform Multiple Round Simultaneous Impact (MRSI) fire missions. An increased rate of fire allows fire missions to be conducted more rapidly, enabling faster repositioning before counter-battery fire can be effectively brought to bear. Most self-propelled artillery systems – both wheeled and tracked – are also capable of firing precision guided shells, enabling greater accuracy at long range.

Amphibious ship programmes and capabilities

China's People's Liberation Army Navy (PLAN) has filled a major gap in its amphibious warfare inventory with the arrival of the Type-075 (*Yuzhen*) large aviation-capable amphibious assault ships with a floodable well-deck (LHD). Such vessels can transport and rapidly land a significant embarked force and its equipment. Because of the versatility of such platforms, a number of countries have recently invested in them, notably Australia, Egypt, France, South Korea and Spain. Italy and Turkey each have a new LHD nearing completion, Russia has begun building two and India has a long-standing requirement for up to four. Others have been acquiring Landing Platform Dock

(LPD) and Landing Ship Dock (LSD) vessels, designed to fulfil roles from amphibious power projection to strategic sealift and humanitarian assistance and disaster relief (HADR), the latter seen as of particular strategic significance in the Indo-Pacific. For the PLAN, the Type-075 will reinforce its fleet of Type-071 (*Yuzhao*) LPDs, likely to be used for regional power projection, HADR, and to support Beijing's growing global interests. There are reports of a possible follow-on Type-076 LHD with enhanced aviation facilities. The United States still maintains the most sizeable fleet of large amphibious vessels but is also considering a new class of light amphibious warships (LAWs) for dispersed operations.

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Wasp/America-class LHD/LHA
42,000–44,000 tonnes
23–29 aircraft/helicopters;
1,687–1,800 troops
US (9 + 1 in build)
- 

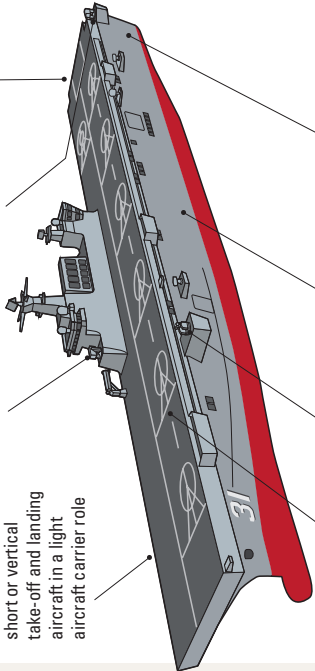
Juan Carlos I-class LHD
21,500 tonnes
18 aircraft/helicopters; 900 troops
Australia (2), Spain (1) and Turkey (1 in build)
- 

Mistral-class LHD
21,500 tonnes
16 helicopters; 450 troops
Egypt (2) and France (3)
- 

Trieste-class LHD
36,000 tonnes
15 aircraft/helicopters; 600 troops
Italy (1 on trials)
- 

Dokdo-class LHD
19,000 tonnes
10 helicopters; 700 troops
South Korea (2)

Type-075 (Yuzhen)-class LHD



Operator: China
(1 + 2 on trials)

Full-load displacement: Est. 35,000 tonnes
Capacity: Est. 28 helicopters; 800 troops

Design provides potential to accommodate future short or vertical take-off and landing aircraft in a light aircraft carrier role

24-cell Guided-Missile Launch System for HHQ-10 (CH-SA-N-17) point-defence surface-to-air missile

H/PJ-11 close-in weapons system

Floodable stern well deck for tank landing craft, air cushion vehicles and amphibious vehicles

Internal hangar and other facilities for helicopters, armoured vehicles and embarked troops

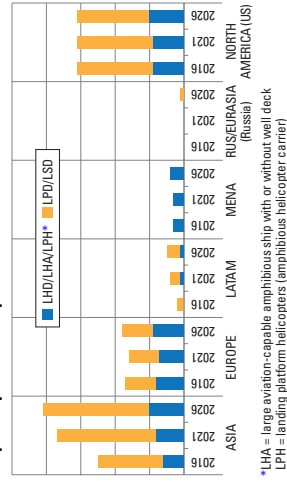
H/PJ-11 close-in weapons system

Full-length flight deck with seven spots for helicopter operations

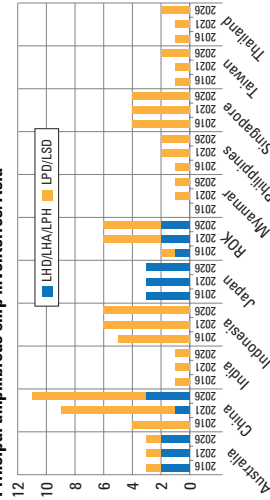
Light Amphibious Warship (LAW)

To support the US Marine Corps' vision of a more distributed and agile future operating concept including its Expeditionary Advanced Base Operations model (chiefly intended to respond to a more contested operating environment and the challenge from China), the US Navy is seeking a new class of LAW of approximately 4,000 tonnes and with the capacity to

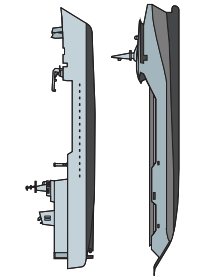
Principal amphibious ship inventories



Principal amphibious ship inventories: Asia



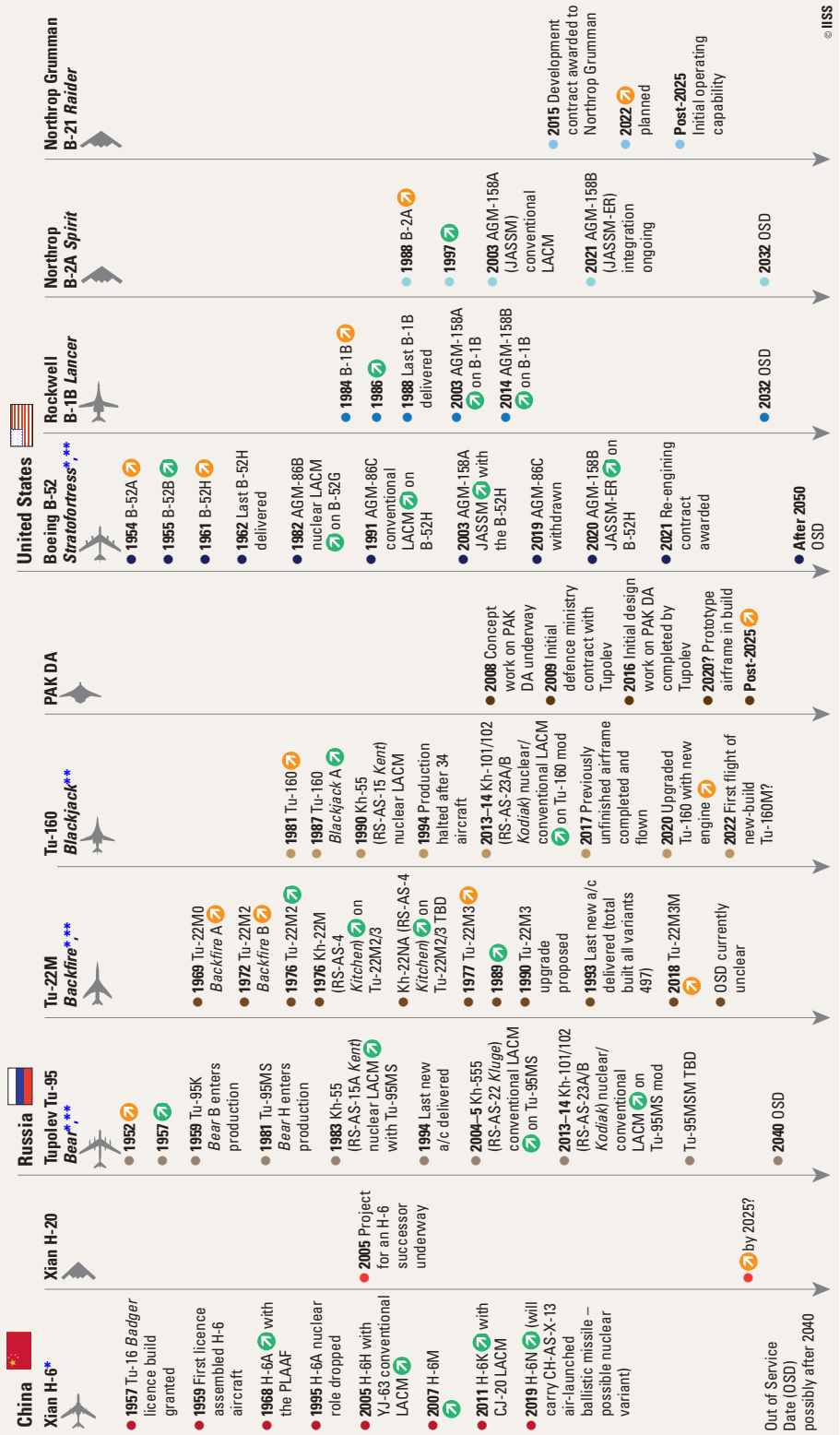
carry at least 75 marines and their equipment. A number of design concepts have already been produced. The US Navy would like 24–35 of such vessels. Judgements about the nature of the future operating environment will affect how navies operate and equip their LHDs, LPDs and LSDs in the future, and could generate a variety of new amphibious ship designs.



In-service or in-development bomber aircraft

Only a handful of nations continue to operate what are considered dedicated bomber aircraft. Two are the world's main nuclear powers, Russia and the US, while the third, China, is modernising and expanding its nuclear arsenal. All of the designs currently in service had nuclear weapons delivery as a core part of their role when conceived, and the same is likely true for those in development. Long-range bombers remain part of Moscow's and Washington's nuclear triad, while China is now at least on the brink of fielding the same capability. All three nations are also pursuing new bombers, with the US Northrop Grumman B-21 *Raider* most likely to be flown and introduced into service

first. The status of the Chinese Xian H-20 and the design, by Tupolev, to meet Russia's PAK DA future bomber requirement is less certain. Russia is also returning the Tu-160 *Blackjack* to production and upgrading the aircraft though its capacity to conduct the two programmes in parallel has been questioned. All of the new aircraft are assumed to be subsonic flying wing designs with low observable characteristics, for operating in contested airspace. At the same time, older designs like the B-52 continue in service with this latter aircraft increasingly envisaged as a stand-off weapons delivery platform.



Defence intelligence

Maintaining relevance in the open-source era

Defence intelligence organisations are generally less well known than civilian, ostensibly more secretive, intelligence agencies. Whilst in recent years Russia's GRU has entered the public eye because of its involvement in the Salisbury poisonings in the United Kingdom in 2018 and other similar operations, it is less familiar than Russia's domestic-intelligence agency, the FSB. Similarly, there is more public awareness of the United States' CIA or the UK's MI5 or MI6 than the United States' Defense Intelligence Agency or the UK's Defence Intelligence. The same arguably holds true for these countries' signals intelligence agencies. Much less has been written about or by defence intelligence organisations, despite their work often underpinning the strategic intelligence insights that support decisions in defence ministries and at the highest levels of government, as well as their respective country's deep expertise on topics such as nuclear or chemical weapons.

Defence intelligence organisations should start with the advantage of being part of a system, within defence organisations, which is predisposed to require insights to support both policy and operational decisions. Armed forces and defence ministries turn to their 'J2' intelligence branch when they need information on, for instance, an adversary's order of battle or the capability of its weapons systems. Indeed, an intelligence division is as much a part of a standard military organisation as an operations or logistics branch. However, defence intelligence organisations are distinct from the intelligence sections found in military units, which provide tactical intelligence to support operations. That said, while not all will follow the same model (as, for instance, the GRU in light of the operation cited above), defence intelligence organisations nevertheless share similar functions, such as the oversight of or responsibility for intelligence collection from military sensors (for example, on aircraft or ships), and the provision of analysis to support decision-making at the defence ministry level.

The growth of 'open source'

Relevance is a perennial problem for any intelligence body. There is a risk that if it is not providing insights

or contributing to the thinking of decision-makers, its value will be questioned and it may be sidelined and have its level of funding reviewed (perhaps under the guise of an administrative reorganisation). At any time, but perhaps more so today than before, such organisations are faced with competing sources of information, ranging from domestic and foreign newspapers, magazines and journals and the output of think tanks to personal contacts, special advisers and meetings with foreign leaders. Accordingly, it may be tempting for ministers, senior civilian officials and military officers to question what extra value their intelligence organisation can offer. However, 'open source' (often referred to as 'publicly available') information is nothing new. At the turn of the nineteenth century, Vice Admiral Nelson's multilingual chaplain, and effectively his intelligence officer, would go through and summarise foreign newspapers and pamphlets. More recently, in the UK, a key conclusion of the Franks Report on the Argentinian invasion of the Falkland Islands in 1982 focused on open-source material:

The aim should be to ensure that the assessments staff are able to take fully into account both relevant diplomatic and political developments and foreign press treatment of sensitive foreign policy issues ... We consider that the assessment machinery should be reviewed ... [including] the arrangements for bringing to the Joint Intelligence Organisation's attention information other than intelligence reports.

A key difference in the current era is that so much more material is available and publicly accessible, alongside tools that can triage and analyse information to help citizen analysts make sense of it. During the Cold War, access to satellite imagery was highly sensitive and restricted to those with the highest security clearances. Today, clear and detailed satellite imagery of any place in the world is open to all, in what has been called 'the democratisation of information'. Crowd-sourced, academic and think-tank-driven projects have made remarkable discoveries and contributed analysis to issues ranging from the location of Chinese ICBM

silos to an image of a North Korean missile in flight. The investigation by Bellingcat, the Netherlands-based investigative-journalism website, into the shooting down of Malaysia Airlines flight MH17 over eastern Ukraine in July 2014 – attributing it to a Russian missile launcher – is just one example of how ‘citizen journalists’ have used satellite imagery, together with photographs and videos taken by locals in the area. This poses a challenge to intelligence organisations, because they have to justify their added value, as well as the expense and risk involved in maintaining them and in collecting secret intelligence. With the possibility that leaders question the distinctiveness of their agencies’ intelligence assessments compared to what they themselves can find in the media or on the internet, defence intelligence organisations have to adapt to survive. However, there are means available that can help this process, including the same tools and techniques that appear to threaten these agencies’ previously unique position.

The data explosion

Figures vary, but a 2020 study by the US-based International Data Corporation reported that ‘the amount of data created over the next three years will be more than the data created over the past 30 years, and the world will create more than three times the data over the next five years than it did in the previous five’. This prediction may not translate precisely into the volume of data for defence and national security, but it is unlikely to be much different. The days when an analyst could file all the material on their subject in secure cabinets in their office are long past. It is impossible for human analysts to keep pace with such a rate of growth, even if money is no issue. Additionally, those inside government are constrained by high-security information technology (IT) systems designed to protect the most sensitive information, obtained at high cost and risk by their intelligence agencies. While those secret ‘nuggets’ ought to provide key insights that are not available to those in the unclassified world, they can be drowned out by the data that is publicly available.

Classified systems can also be limited in the ways they can present data in an attractive and accessible way and share it with customers. In this realm, much use has been made of text-based documents and PowerPoint presentations in hard copy or on secure office computers – a less attractive means of accessing and engaging with information compared to an interactive tablet computer at home. An additional

challenge for the intelligence analyst arises when information comes from a respected citizen-journalist body and appears more rapidly than a classified assessment. While long aware of the problem, defence intelligence organisations around the world have been slow to respond beyond limited steps – partly because changing IT in government is a slow process and partly because of a predilection amongst analysts for secret intelligence. Added to this is the complexity of exploiting material in multiple languages, some relatively obscure, and the need to teach analysts how to effectively exploit material on the internet and in social media.

The pace of events also presents a challenge and requires agility. Supporting deployed forces at a speed that can inform their decision-making cycle and at a classification that they can deal with combines all the issues highlighted above. In other words, what is the level of classification that the deployed unit’s systems can safely hold? If timely assessments are not delivered by their intelligence organisations, there is a risk that frustrated decision-makers may be tempted to turn to unfiltered news reports and social media.

Ways of adapting *Improved technology*

While technological solutions are available, and some are already in use, intelligence assessment organisations have generally been slow in taking full advantage of new tools and technologies. To a degree, this can be explained by the time it takes to effect change within government IT infrastructures. This challenge has been recognised in the UK, with attention given to improving intelligence-related IT in the government’s ‘Integrated Review of Security, Defence, Development and Foreign Policy’ and the Defence Command Paper, both published in March 2021. The latter placed emphasis on regaining the technological lead over the UK’s adversaries, including implementing a ‘secure Digital Backbone’ linking different secure networks. It also suggested that to succeed in the modern environment, ‘open source intelligence, automation and AI [artificial intelligence] provide potentially game-changing ways to understand and counter these new challenges’. Automation and AI are not seen as supplanting analysts, with the ‘Integrated Review’ emphasising the need for ‘rigorous, independent assessment for effective national security policy-making’. But advanced IT tools – like those that can scour the internet, predigest material to present to the analyst and combine it in one place with other,

highly classified material – need to be delivered more rapidly than normal government IT projects. And they need to draw in innovative solutions from the private sector. At the same time, the increasing use of technology raises other issues that need to be addressed, including understanding how AI makes decisions and the ethics of allowing machines to make decisions, as well as deciding where and when humans should intervene.

Access and ethos

Technology, however, is not the only answer. Intelligence analysts have a unique advantage in that they can work alongside their customers; for instance, attending their meetings, listening to their problems and requirements and, as a result, responding in a tailored way. This relationship should be interactive. Meetings like these enable customers from policy and operations backgrounds to ask further questions; indeed, according to senior practitioners, these personnel have a responsibility to be questioning and demanding. It is important for clear priorities to be established, with each side holding the other to account for their contribution. This means that honest and robust discussions are needed from the early planning stage. While it is difficult to generalise, most military and civilian analysts work in government with a sense of public service, of service to their country, and not for profit or personal gain. They are accountable for their advice but have to work on the basis of providing the best advice that they can to the decision-maker without advocating any particular course of action. As a result, their advice may be unwelcome but – depending on the process followed in each country – it can be probed and questioned, and should be presented with clear statements about the degree of confidence analysts have in their judgements and about the alternatives that have been considered. This may lead to uncomfortable discussions; though in these cases, the decision-maker knows that the assessment they receive has not, for instance, come with an eye to a future contract or a desire not to upset the client.

The importance of training

However, there is a risk that the consumers of intelligence assessments may forget that these are not simply another ‘point of view’. In the Five Eyes intelligence assessment community (comprising Australia, Canada, New Zealand, UK and US), there has been much emphasis in recent years on professionalising the business of intelligence assessment, particularly in

the light of lessons from the failure to prevent the 9/11 attacks in the US and from the UK’s ‘dossier’ entitled ‘Iraq’s Weapons of Mass Destruction – The Assessment of the British Government’. For instance, analysts are better trained now than in the past to understand the advantages and limitations of different types of intelligence. They learn analytical techniques to help them to recognise and minimise biases and to be open to challenge. And they learn to make reasoned judgements and to be able to explain and justify them. Increasingly, formal training includes guidance on how to make the most of open source, such as using the tools available to them, conducting safe and effective searches and making judgements about the veracity of different sources, ranging from social media to scientific publications. But that training needs greater emphasis and weight in an analyst’s overall career development, and to be renewed and refreshed. It is also important that customers of intelligence assessments become demanding and critical consumers, and understand the product they are receiving and the process that has gone into its creation; this will help them to recognise that an all-source intelligence assessment is not simply an opinion.

Classified sources

Despite the emphasis on open sources, analysts within government continue to have access to confidential insights provided by diplomats and other government officials with relevant access, as well as classified material acquired by their intelligence agencies, sometimes from highly technical capacities. The exclusive nature of secret intelligence should be able to give analysts insights that are not available to those without access. The optimum combination should be to provide insights that can only be gained through the fusion at scale of both open source and classified information. However, the agencies that collect secret intelligence (and diplomats) need to be tasked effectively and need time to develop their sources and access, whether human or technical. This means that the process cannot necessarily be as agile as an analyst may need, especially in a developing crisis in an area not previously considered a priority. The analyst also needs to be able to recognise how best to address the problem they are trying to understand. It might be that open-source information is perfectly adequate to meet a particular requirement. But if this is the case, the analyst still has to use the analytical process to give it the same level of scrutiny and ‘added value’ as that given to secret sources. For these analysts,

to rely on open source, rather than classified intelligence, may not always be instinctive. It also requires collection agencies to focus on where they can make a difference, not to simply collect what might be regarded as 'low-hanging fruit'. This calls for clear prioritisation, emanating from the most senior policy/operational decision-makers, that feeds into collection and analysis. It also requires a close and open relationship between the collector and the analyst about where secret intelligence can make a real difference. Without that, agencies risk following the approach taken by Soviet agencies during the Cold War, when extracts gained from official publications or think tanks were stamped with a security classification and given the status of secret intelligence, whether or not they had originally come from the public domain.

Allies and burden-sharing

Defence intelligence organisations can also draw on the insights, sources, and challenge function that can be offered by their counterparts around the world. While the Five Eyes relationship may be the most enduring, trusting and deep, others can provide insights and local knowledge that add value and are worth investment, especially in their specific region, or where their armed forces are deployed on operations. In some countries, particularly where the armed forces are more prominent in government and the security apparatus, the defence intelligence relationship can be more important and valuable than that between the traditional civilian agencies. 'Burden-sharing' in the strict sense, where countries decide not to collect and instead rely on a partner country to do this, is more difficult than it may appear because governments are usually unwilling to sacrifice their own capacity to provide analysis. But it does happen in some areas and can be particularly valuable when an issue or crisis arises in a place that is normally a low priority – especially when they know they can rely on the analysis of their counterparts.

Developing genuine all-source analysis

If analysts are to develop the best all-source analysis, this also means that the security and classification of material need to be addressed. Security can stifle engagement with experts in academia and think tanks, and particularly with those 'citizen analysts' whose contributions should be part of a genuine all-source process; the latter especially may be unfamiliar to agencies. This places a premium on the regular review of security systems and processes to ensure

that they are not self-defeating. While security is essential to protect sensitive material and the means by which it was acquired, it also gets in the way of making intelligence useful and sharing it with those who need it most. For instance, intelligence insights are not just for senior decision-makers in secure locations, but for troops deployed in challenging environments, perhaps with limited communications bandwidth. Moreover, in the face of pressure for increased openness, and with greater value placed on countering disinformation, defence intelligence organisations – like other members of the intelligence community – will need to consider either their conclusions can be made publicly available, whether on an ad hoc or regular basis. There will, therefore, always need to be pressure on the classification process so that intelligence becomes more accessible.

Intelligence analysts have always had a challenging task: they are working in an environment that can be fast-moving and where they can have significant gaps in their knowledge. Yet decision-makers want immediate answers with a degree of certainty that the analyst cannot generally provide. The vast increase in data of all types is both an asset – it can give insights only previously available through secret intelligence – and a huge challenge if it is to be assimilated and used to advantage. And there is always a requirement to be relevant and timely or risk obsolescence. There is a greater chance that this task can be achieved by analysts who are able to work closely with their customers and have the ability to fuse secret and open sources of information in order to create an all-source assessment that is tailored, objective and non-partisan. But this needs to be paired with a continued desire to improve, including incorporating new tools and techniques. Those tools, IT and training exist and could help the analyst in their work. In the UK, the government's 'Integrated Review' recognised the importance of delivering on these issues if decision-makers are to retain an advantage over their adversaries. But this issue is not one for the UK and its close allies and partners alone. With information increasingly ubiquitous, crossing national borders and challenging previous definitions of classification, similar concerns over how to cope with the rise of open-source data and analysis face defence intelligence organisations around the world. Those in closed regimes, who might regard open source as more of a threat than an opportunity, and perhaps with analysts who are encouraged to 'toe the line' and are actively discouraged from providing challenging assessments, may find it harder to adapt.

Simulation and defence

Training benefits and trends

Simulation has become progressively more important to military forces, defence industry and defence organisations. Its utility is being seen in training and mission preparation and other key defence activities, including experimentation, concept development, and equipment design, manufacturing, testing and support. Although computer-based simulation or synthetic environments have supported armed forces since the latter half of the twentieth century, contemporary advances in technologies, such as the internet, artificial intelligence (AI), gaming and eXtended Reality (XR) systems, are increasing the practical and potential utility of simulation technologies. Whatever use is intended for them, simulations imitate the real world over time and are intended to help the armed forces, government and defence industry to prepare for the future and enhance their readiness. However, while simulations are often seen as driven by computers, this does not necessarily need to be the case, and some live exercises or paper-based war games may require no or only limited computer support.

Although simulation is used across defence organisations, analysts suggest that it is not often managed strategically, with piecemeal procurement and support leading to duplicative investments (for example, acquiring multiple terrain databases) and to reduced interoperability between systems and the data that they rely on. Simulation is an approximation or an estimate and cannot completely replicate the real world, as the models it employs may not be accurate and variables may be unknown in advance. Further, important real-world physical and psychological effects may not be faithfully replicated in simulation, reducing its training benefit or, in the worst case, leading to 'negative training', where incorrect information or invalid concepts are unintentionally introduced or acquired. Nevertheless, the saying that 'all but war is simulation' remains common among simulation practitioners; that nothing can fully prepare personnel for the actual operational and physical environment.

Simulation and training

In its earliest days, simulation was used in training principally for safety reasons. Simulation supported

higher-risk activities such as pilot training; for example, instrument flying could safely be taught and practised in a simulator prior to taking to the air. Used from the early twentieth century, pilot-training devices like these transformed from largely mechanical to electrically powered devices by mid-century, before the widespread adoption of analogue then digital computers further improved their capability. Up until the 1990s, simulation was important particularly for pilot training, although it was also used in the maritime and land sectors. The cost of flying, as well as safety, were significant factors. In the 1990s, non-defence sectors, such as IT and gaming, began to influence military-simulator technology, moving it progressively away from bespoke and highly expensive technology to more commoditised hardware and software. This trend, together with more adaptable technology, has meant that simulation has become more affordable to training designers and providers for land, sea, air and space, and for command, control, communications, computers and intelligence, surveillance and reconnaissance (C4ISR) and cyber. Today, most training courses can be supported by simulation, in part or wholly.

Beyond safety and cost, simulation has other advantages to purely live training. Simulation is not weather dependent, so the risk of an exercise being cancelled or curtailed due to bad weather is minimised. Indeed, to a large extent, weather can be altered within the simulation to best reflect the training requirement and increase variety within training serials. Additional important benefits of simulation are that complexity can be introduced into training, and certain tactics and techniques can be practised – or novel capabilities introduced into exercises – which might be impracticable or carry security risks if conducted in a live environment. This is particularly relevant to the modern, networked, multi-domain battlespace, where many activities and capability effects can be simulated as part of training programmes. That said, one of the downsides of training in such a secure environment is that the training cannot readily be observed and thus has little of the deterrence or influence benefits that

come from more obviously 'advertising' capability developments or from training close to a border, with partners, or in another country. Live training can be instrumented to an extent, but simulations by their digital nature are data rich, which can make after-action reviews and debriefing additionally insightful and increase training value. Another benefit of simulation may be in helping armed forces to reduce their carbon footprint.

Live/synthetic balance

Armed forces around the world are considering the balance between live and synthetic training at a more strategic level. While simulation might have been previously considered on a case-by-case basis, military leaders are now pursuing broader defence-wide approaches to save resources and respond to environmental pressures. By making central investments in simulation research and technology, together with providing the necessary leadership and culture changes, those in charge of training systems seem to be demonstrating greater motivation to move more training from the live environment to simulation. The live/synthetic balance is not only a consideration of cost effectiveness. Platforms like the F-35 combat aircraft cannot easily train and test their full capabilities in the real world, not least for security reasons. Typically, the time spent in the aircraft versus the simulator is split at least 50/50, and the time spent in the simulator is only expected to grow. That said, armed forces ultimately conduct their missions in the live environment, and rather than simulation being seen as a direct competitor to live training, it is likely that this will not be a binary choice; in time, simulation will be a precursor and means to better prepare for live training – which in turn, although reduced, may be better utilised.

Simulation types

Training simulation systems reflect the diversity of military training; for instance, the years-long training for a warship captain, or firefighting training that must be delivered in volume. They are typically termed live, virtual or constructive (LVC). Live defines a simulation involving real people operating real systems and, for some training, it will be instrumented to enhance training and debriefing. Virtual describes a simulation involving real people operating simulated systems; the flight simulator is a typical example. A constructive simulation is one involving simulated people operating simulated systems, for example,

one that supports command-and-control training, where a live-training equivalent would be expensive for a relatively small training audience. Moreover, live, virtual and constructive simulations can be combined to provide a richer LVC-based training experience. For instance, the British Army's 'synthetic wrap' is intended to generate capabilities that are difficult to reproduce in live training, injecting into the training both real and synthetic forces and C4ISR feeds to enhance headquarters training. Similarly, a real pilot in a flight simulator can interact with a live land-training exercise, negating the need for flying. Such LVC-training capabilities can also generate useful data for improving both the lessons-learned process and analysis after the training is over. Mock battles at the United States' National Training Center (NTC) at Fort Irwin demonstrated this functionality: when simulators and instrumentation were added to existing capabilities, they reportedly showed that attack helicopters on both sides were vulnerable to tank main armament, something that neither US armour nor army aviation personnel had anticipated.

Military-simulation specialists have worked for several decades to develop international simulation standards that permit such interoperability. As well as LVC interoperability, simulation standards also facilitate distributed simulation and training. One example is the US Air Force (USAF) Distributed Mission Operations Network, which since 1999 has enabled interoperability and training between dissimilar aircraft platforms located across the globe in a virtual environment. Moreover, broader networks are periodically established. The Swedish-led *Viking* exercise is another example. In a recent iteration, up to 2,600 participants, representing 24 countries and 33 organisations, were networked in order to enhance multinational and multifunctional cooperation in peace operations through distributed command-post exercises. Simulation-based training can now also be delivered to individuals and small teams over military networks or the internet using standard information-services technologies such as personal computers and mobile devices. Further, good levels of immersion can be achieved through today's off-the-shelf virtual reality (VR) headsets.

Fidelity

The realism of a training simulation, or its fidelity, is an important driver of a system's cost and complexity. Its definition can depend on the industrial sector but, for defence, it can be considered, as the UK MoD has

termed it, 'the necessary degree of correspondence between the training and operational environments'. Motion and vision are important aspects of simulation fidelity, but how the simulation responds to human input can also be critical to training. Motion is a cost driver because expensive systems are often required to generate motion features, although whether it is actually required can be based as much on precedent and human judgement as science. Visuals were a significant cost driver up to the late 1990s, as until then the technology behind computerised graphics was generally bespoke for the application. However, as gaming and wider IT technology have advanced, the relative cost has come down, for instance, as components such as graphics cards have become commoditised. Further, small domes (structures onto which simulations can be presented 'in the round' via projection) and XR systems are reducing the cost further. Ultimately, simulation design needs to be driven by training needs and, because of this, the highest levels of physical fidelity are not always required. Instead, good instructors and training design may be more critical in delivering the necessary 'psychological fidelity'.

International trends

Barriers to the adoption of simulation in training have traditionally been the change to culture and process required to transition from live training, as well as cost. However, as simulation has improved and become more cost-effective, it is now being exploited at all levels of training. This trend is being seen across the world, and also in countries with only modest defence budgets. Furthermore, pressures to reduce the cost and duration of training are progressively increasing adoption. Some current initiatives are looking to simulation and new processes to transform training; for instance, the USAF is introducing its Rebuilding the Forge (Reforge) Concept of Operations. This is looking to reduce the time by over a year between finishing undergraduate pilot training and assuming the position of a combat flight leader in an operational fighter. Reforge builds on the USAF's Pilot Training Next trials of VR-based simulation and redesigned courses, and will also involve AI tools to help identify student strengths and weaknesses. Likewise, the British Army is looking to make its collective training more challenging and to conduct training in more dynamic and complex environments (physical, virtual and cognitive) through its Collective Training Transformation Programme.

This programme will make greater use of virtual training with a paradigm shift to 'virtual before live', where training will be carried out in virtual simulation before going to live instrumented training. LVC-simulation systems will be routinely held and operated at the unit level, with all training data captured, analysed and exploited. The US Army's Synthetic Training Environment (STE) is similarly seeking to transform training through technology but also to enhance mission rehearsal in support of multi-domain operations. Full operational capability is planned for 2023 and it is planned to combine all LVC-training environments into a single STE, accessing One World Terrain software and data, which will be compatible with Joint All-Domain Command-and-Control architecture. Simulation has supported mission preparation before, but this has been mainly on a case-by-case basis – for instance, the NTC was turned into simulated Iraqi and Afghan provinces for the pre-tour training of US Army brigades. In contrast, STE is a US Army-wide initiative. The global exploitation of advanced simulation technology can be exemplified by China, which has established a pilot-training simulation centre that, according to reports, has reduced live training. Beyond pilot training, the People's Liberation Army (PLA) is reported to be using VR simulators to train for naval pipeline maintenance and to have introduced VR-training simulation rooms for instruction in some areas, while the PLA Rocket Force is said by Chinese media sources to be using similar simulation technologies to practice missile launches.

Technological advances

Today's simulation systems have high-fidelity graphics and audio capabilities, principally leveraging advances in computer-gaming technology, and military leaders are now looking to other advances to improve the flexibility, accessibility and cost effectiveness of training. These fall into five broad categories: human interfaces; data and analytics; AI; networking and the cloud; and system convergence.

The most prominent human interfaces now are XR technologies. These encompass real-and-virtual combined environments, such as virtual and augmented reality (AR) as well as human machine interfaces. Fully immersive systems, such as VR, are now routinely used for military training. Mixed reality (MR) systems that blend the physical and digital worlds are also showing promise and may reduce the need for expensive simulator domes, or at

least support training when domes are not available. Their maturity can be illustrated by the European Union Aviation Safety Agency's recent approval of an MR-based helicopter simulator for (civil) pilot training. It is possible, meanwhile, that XR may develop to the extent that the distinction between live and virtual simulations becomes less relevant and creating a live/virtual blend may become increasingly viable. AR systems overlay virtual content onto the real world and are finding utility in training, for example the combination of manikins and AR overlays in medical training, and in operations, such as the US Army's development of its Integrated Visual Augmentation System.

Data and analytics can enable a more quantitative approach to training design and assessment. Indeed, technology trends are offering new opportunities. Data can be captured through wearables, eye-tracking and a variety of other sensors to provide improved feedback to trainees and instructors and to influence training design. At the 'enterprise' or headquarters level, such data can help to monitor the cost-effectiveness of training and training systems, enabling authorities to rebalance resources as necessary. The concept of linking digital replicas with real-world data, known as 'digital twins', has existed for some time, but it is becoming more mainstream with advances in digital technologies. The benefit for armed forces is that there will be a single source of data for simulations accessible across defence organisations, accurately and dynamically representing future operating environments and able to capture the whole life of operational systems, such as wear-and-tear over time.

AI will likely influence many areas of military training. It has the potential to accelerate the planning and preparation of training events, reduce the demand for human role players, support training data analytics, and support more realistic environments as well as human and team behaviour. Moreover, simulation can also assist in the training of the AI systems themselves, which will likely become more important as humans and machines increasingly operate together in the battlespace.

The networking of simulation systems allows training audiences to be expanded and geographically dispersed. It also offers the prospect of connecting to public or private cloud services, interacting with larger, more secure data sources, and reducing local-hardware requirements through streaming services. Although network bandwidth, latency, reliability

and security are all issues to be addressed, gaming is already moving in this direction and similar trends are anticipated in simulation. Wireless technologies, such as 5G, may also enable training establishments with currently poor fixed-line networks to benefit from simulation technologies in order to enhance their live and virtual training.

Specialists are now discussing the convergence of systems, where previously distinct simulation systems become more closely integrated and unified; for example, simulation systems may draw on a single source of data for a training scenario or forthcoming operation, or trainees and instructors will use the same user interface regardless of the system they are using for training. This convergence is still some way off, because of the number of legacy systems that need to be updated, but nonetheless, the adoption of open standards and consolidation in the wider technology sector will drive this trend. Moreover, it will not be restricted to simulation systems. For example, United States Special Operations Command is funding a simulation and training company to create a digital ecosystem that fuses data from a variety of sources and delivers a common operational picture. Indeed, some simulation specialists consider that the ultimate convergence may be in the form of the so-called metaverse: a future vision of the digital world that goes beyond today's internet, in which people socialise, work and play across multiple connected virtual domains, but remain socially and economically integrated with the physical world. This remains some way off, and it will likely be some time before defence establishments could themselves create such an environment, but it is apparent that some technology CEOs see the metaverse as the direction in which these developments may ultimately move.

Training and the pandemic

At the outset of the coronavirus pandemic, travel restrictions and base closures led many training events to be cancelled or scaled back. The reliance on civilian contractors for simulator operations and maintenance further contributed to disruption. However, the pandemic also led some military officials to more fully consider the power of distributed learning, training and connectivity. For instance, in the UK, the Scottish and North Irish Yeomanry, an Army Reserve light cavalry regiment, set up – under their own initiative – a distributed system based on existing military and gaming software so they could continue to train from their homes. Another, perhaps

unforeseen consequence of social distancing has been its impact on instructors who previously worked close to trainees, for example, within flight simulators. In such cases, instructors were moved outside the simulators but remained nearby. Moreover, some training centres started to include short online courses for their trainees, which had the benefit of allowing students to review subjects before attending practical training. But perhaps the greatest change is the realisation within the simulation and training community that capabilities previously seen as only desirable, such as remote training, could overnight become imperative. Trends that existed before the pandemic have rapidly accelerated.

Beyond training

Simulation is widely used in training and mission preparation but is also supporting a broad range of other defence activities. The UK MoD is funding a 'single synthetic environment', or digital replica of the country, to test resilience to natural disasters and attacks by hostile states. With geographical and critical infrastructure layers, the virtual 'twin' uses AI to simulate future scenarios and support the war gaming of responses. Meanwhile, the UK/Italy/Sweden sixth-generation fighter-jet collaboration, known as *Tempest* in the UK, has been put on a 'digital first' footing, whereby simulated design and testing are expected to significantly reduce costs, time and carbon emissions. In the field of AI, the environments within which new systems will operate can be simulated, and the resulting synthetic data used to train the system using machine learning. These digital twin approaches to defence planning and equipment design and acquisition are likely to become more important and main-

stream as technology advances, though issues of data ownership, financing and control will need to be addressed.

Future simulation

In the 1985 novel *Ender's Game*, the young protagonist learns how to fight and lead others in a training simulator, but what he is told is his last training exercise is in fact a real operation – one that he leads successfully. This is perhaps the ultimate simulation, one that accurately reflects the operational system such that the trainee(s) can seamlessly move from training to operations. *Ender's Game* is not just about such technology; it has other human characters who provide guidance and instruction to the protagonist and his comrades. As such, however good the simulation is and however capable AI becomes, the role of humans in instructing and inspiring trainees is unlikely to go away. Nevertheless, as simulation and training technologies advance and as training content becomes more ubiquitous, the trainees of today and tomorrow may look to instructors and other trainees more as mentors and collaborators, with training adapted to individual styles of learning. Decision-makers also need to consider a generation of new recruits who have predominantly grown up with digital technologies and gaming, the so-called Generations Z and A, who may have quite different views and needs regarding the best way for them to learn and train. It is possible that in the longer term, as today's recruits become decision-makers who have been immersed their whole lives in virtual worlds with seamless connectivity, simulation may be seen instinctively by them as an important means of helping to solve a raft of defence problems.

Military adaptation to climate change

Reducing emissions and maintaining military effectiveness

Climate change is an accelerator and multiplier of conflict risk. First-order physical effects of the changing climate include storms, floods, heat-waves and droughts. Second-order effects include degradation of water supplies, reduced agricultural productivity, and damage to infrastructure and disruption to energy generation, with all these having potential consequences for economies and employment. These changes could increase migration and forced displacement, adding challenges to stressed governance systems that could in turn increase grievances, weaken the social compact and contribute to political instability. In late 2021, the United States National Intelligence Council published an assessment referencing many of these challenges, also raising the possibility that competition and disputes may grow as states look to acquire technologies and resources needed to assist their adaptation to renewable energy sources or carbon reduction.

These trends are likely to increase the requirement to deploy military forces for humanitarian assistance and disaster-relief missions, both at home and abroad. They will also increase the demand for a range of peacekeeping, stabilisation and combat missions. Furthermore, climate change has the potential to affect global trade patterns, for instance by opening up waterways in previously ice-bound regions, which might lead some states to adjust their overseas deployments. The radius of action and frequency of international military operations may increase as a result. With current military equipment, this would increase military greenhouse gas (GHG) emissions.

Mitigating the impact of climate change on military effectiveness

Military operations will be increasingly affected by climate change. This is not only because it may make planning and executing operations more complex, but also because armed forces will need to adapt their equipment capabilities for operations in warming and variable climates. For example, as polar ice melts, it is possible that ice floes may fragment more than before, creating challenges for ships and possibly requiring extra hull strengthening to enable safe operations in

previously ice-free areas. Further south, the likely rise in summer temperatures in the Gulf will increasingly strain the performance of people, radios, aircraft and warship engine-cooling systems; changes in water temperature and salinity will affect underwater operations; while there may also be effects on sensor and weapons performance. Moreover, ameliorating these problems can bring unhelpful secondary effects. For example, fitting additional cooling systems, as these are currently designed, will increase GHG emissions.

Climate change will have negative effects on military bases and infrastructure. Ports and other coastal installations will be threatened by rising sea levels from unpredictable weather events, while rising temperatures may require longer runways. Some of these risks can be alleviated by physical defences, but it is possible that some bases will have to be abandoned. Similarly, a growing threat of fires on increasingly arid military-training areas and ranges will require mitigation.

The armed forces and decarbonisation

These trends raise the question of what actions armed forces and defence establishments might undertake to reduce their emissions and contribute to national sustainability targets. In the 2015 Paris Agreement, many nations committed to reducing carbon emissions to net zero by 2050. While many countries have made policy declarations to this effect, only a few have so far legislated to achieve this goal, including France and the United Kingdom. However, it is still up to each nation whether they include their military emissions in net-zero targets. Military emissions were exempt under the Kyoto Protocol and, while Paris eliminated that loophole, reporting on them remains voluntary. For states that include military emissions in their legal net-zero requirements, the question of reducing military emissions may be one of not 'when' or 'if', but 'how', although this is not the same for all. Moreover, much depends on how states actually report their emissions: pressure groups that aggregate military-related emissions data that is reported to the United Nations Framework Convention on Climate Change assert that reporting remains partial.

Indeed, calculating military emissions remains an inexact science, something NATO hopes to address for the Alliance with its Climate Change and Security Action Plan.

Nonetheless, it is acknowledged that military facilities and equipment emit large amounts of greenhouse gases, with these rising as a consequence of increased use – for instance on operations. As one example, the UK Ministry of Defence assessed that in 2020 about 3.8 million tonnes of these gases were emitted by its forces. This was about half of all UK government emissions. If emissions by the UK defence supply chain were included, this figure rose to 5m tonnes.

Accepting these caveats on overall reporting, reducing emissions to a net total of zero by 2050 will nonetheless be a challenge for governments wishing to do so. The full spectrum of military activity, including travel and training, will need to adapt to reduce unnecessary emissions. Increasing the proportion of training in simulated environments would assist in this change. Military estates of barracks, docks, airfields and training areas offer opportunities to reduce emissions, such as through better insulation; to generate renewable energy, for instance by using solar power; and to capture carbon dioxide emissions, with planting trees one example. This could help offset military emissions elsewhere and may increase resilience by making bases more energy independent.

Decarbonising military equipment

Military equipment is currently optimised for military advantage, with little consideration of climate sustainability issues such as emissions reduction. Many planned future equipment acquisitions appear to continue in this mode. For nations that have committed to decarbonisation, the most difficult issue will be whether operational capability should be reduced to meet emissions targets, or whether priority should be given instead to protecting capabilities at the expense of emissions reductions. It is unlikely that politicians, citizens or armed forces will want decarbonisation to result in the loss of military capability.

On the other hand, adopting climate-adapted equipment could reduce emissions and might provide useful options for improving military effectiveness, operational capability and climate resilience. For example, increased use of uninhabited, robotic and autonomous systems would, by removing

human operators, reduce fuel consumption and thus emissions. Moreover, reducing fuel consumption and carbon emissions would increase the range and endurance of military platforms, thus expanding options for employment and reducing logistic dependency.

There is much research and development (R&D) underway in relevant civilian industries. Examples include increased use of electric vehicles, reducing aircraft fuel emissions and reducing the carbon footprint of shipping. In the medium term, advanced fuels and new sources of energy may further reduce emissions, but it is likely that some options will have limitations without significant technological progress. There are range and payload trade-offs to consider, for one thing. For example, it is probable that electrical propulsion would have utility for short-haul missions with aircraft carrying relatively light payloads, but be insufficient to power large aircraft or jet fighters.

However, notwithstanding the global diffusion and commercial availability of advanced technologies, progress in this area might still be faster among those states in the global ‘north’ that have the funds and technical capacity either in government or in the private sector to pursue or acquire them. Indeed, even in these states, the pace of private-sector development indicates that for many military capabilities, the best option will likely be ‘fast following’ of civilian R&D, applying new technologies to new-generation systems, but also to mid-life updates of in-service equipment.

Near-term steps

US President Joe Biden has identified climate change as a national-security issue, underscoring the growing impact it will have on US and allied armed forces from combat units to their support and logistics arms. The Pentagon has published an ambitious strategy for climate change adaptation and mitigation, paralleled by ongoing efforts in the US services to explore relevant technologies, such as the US Marine Corps developing more sustainable combat outposts and the US Army trialling electric drives for its vehicles. But the Pentagon has neither been set any hard targets to reduce emissions, nor imposed them on the four US services. In the UK, meanwhile, the MoD has issued a blueprint for addressing the environmental challenge as a consumer and emitter. Its leadership, including service chiefs, has publicly committed to achieving net zero by 2050.

Nonetheless, the fact remains that achieving net zero, for armed forces, largely remains dependent on national policy on emissions reporting. Moreover, few countries would find it politically feasible to agree to net-zero commitments if it constrained their ability to defend themselves. Indeed, the dilemma remains – for the states that do go down this route – of accepting risk, aware that some adversaries might not follow the same path and may instead focus on maintaining either legacy or new equipment that is emission-intensive but which they judge is necessary to secure military advantage. So, being a ‘first mover’ may

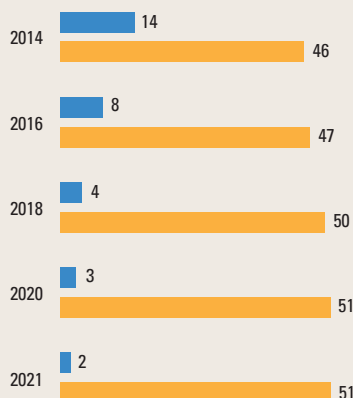
have its disadvantages. But perhaps there are also advantages, and faster transformation could occur if states are able to field climate-adapted equipment that increases military advantage in a progressively climate-changed world. The fact remains, however, that not all states will be able to, or may wish to, follow this path. For countries who are looking ahead at emission reduction targets, as well as the future threat landscape, the question of whether and how to include military emissions in their climate efforts, and navigating the potential political repercussions of these choices, is likely to become increasingly complicated.

Chapter Three

North America

- While the US defence budget's USD715 billion top line constitutes an USD11.27bn increase on the enacted FY2021 US defence budget, the FY2022 budget request is essentially flat in real terms when adjusted for inflation. Reflecting the Pentagon's focus on the Indo-Pacific, the air force and navy budgets are set to increase, making up 52% of the top-line DoD budget in FY2022, up from 48% in the enacted FY21 budget.
- The US conducted its Global Posture Review during 2021. The Review was anticipated to reshape global United States military deployments, likely heralding reductions in all regions bar Europe and the Indo-Pacific, where there were to be increased infrastructure developments with a focus on survivability.
- The US army is recapitalising its mobile air defence. The first prototype M-SHORAD Increment 1 vehicles arrived in Germany in early 2021. Meanwhile, M-SHORAD Increment 2 is a directed-energy variant. Another project, the Indirect Fire Protection Capability (IFPC) Increment 2, is designed to tackle threats including from uninhabited aerial systems and cruise missiles.
- While uncertainty remains over plans to increase the size of the US navy's fleet, there has been consistent focus on an eventual fleet that is more distributed, with a shift in balance to smaller surface combatants and with significant numbers of uninhabited surface and underwater vehicles.
- The US air force's stated acquisition target of 1,763 F-35As is coming under scrutiny. F-15EX *Eagle* IIs are being bought to replace F-15Cs, and there was talk of restarting F-16 acquisition or even building a new successor. Meanwhile, a demonstrator for elements of the Next-Generation Air Dominance programme reportedly flew in 2021. In September, Secretary of the Air Force Frank Kendall said that five B-21 bombers were in various states of production.
- Air transport and air refuelling remain essential to US expeditionary operations, as the evacuation from Afghanistan showed. This also highlighted the importance of overseas bases for logistical support. There are as yet no identified replacements for the C-17 or C-5M; a C-17 sustainment contract was awarded in late 2021.
- Canada and the US are building more icebreakers. Three new heavy icebreakers are being procured for the US Coast Guard, to be followed by three medium icebreakers. In June 2021, the Royal Canadian Navy commissioned the first of its six planned *Harry DeWolf*-class Arctic Offshore Patrol Ships.

United States, attack submarines 2014–21



■ SSN: Nuclear-powered attack submarine
 ■ SSGN: Nuclear-powered attack submarine with dedicated launch tubes for guided missiles

Active military personnel

(25,000 per unit)

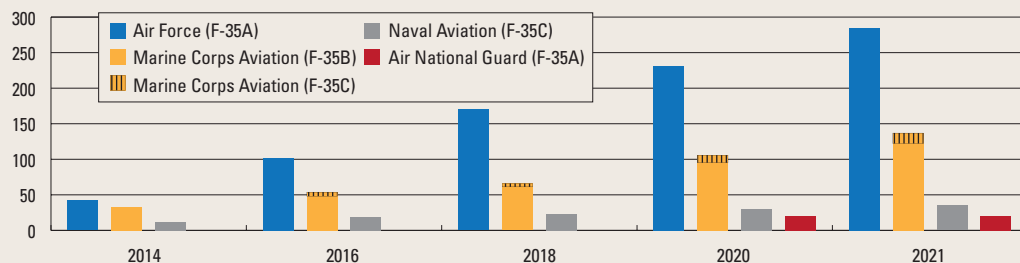


Global total
19,605,000

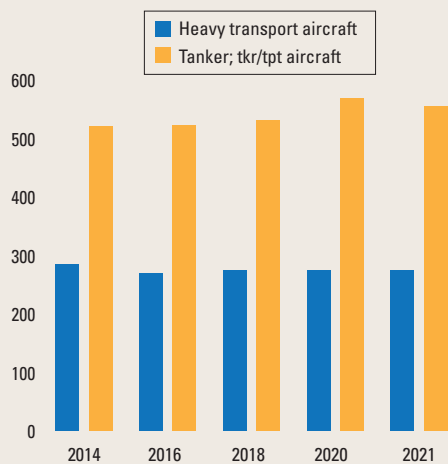
Regional total
1,461,850

7.5%

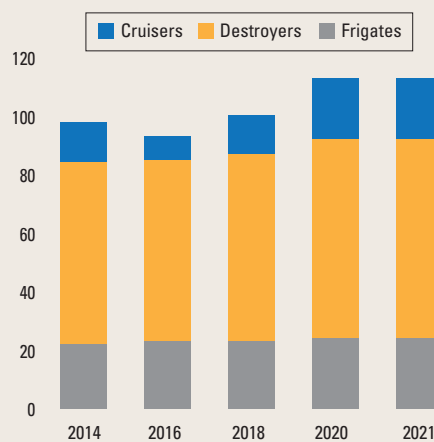
US F-35 numbers, 2014–21



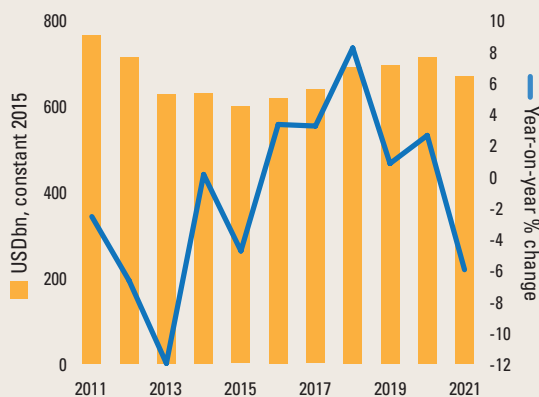
US heavy air transport and tankers, 2014–21



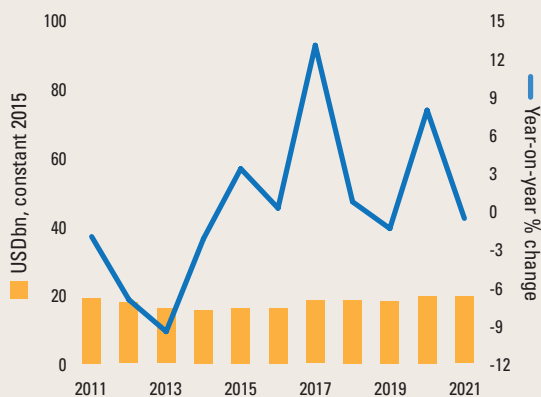
US cruisers, destroyers and frigates, 2014–21



US real-terms defence budget trend, 2011–21



Canada real-terms defence budget trend, 2011–21



North America

UNITED STATES

Defence policy

The Biden administration took office in January 2021. President Joe Biden pledged a wholesale overhaul of foreign policy, vowing to bring back professionalism, multilateralism, diplomacy and cooperation after the Trump presidency. The chaotic nature of the final withdrawal from Afghanistan cast some doubt on these goals, though Biden emphasised that he was following through on commitments made by his predecessor. Overall, on many other matters – including the defence budget, weapons acquisition, overseas basing and force deployments, and principal ideas for defence innovation – there had been only limited change as 2021 drew to a close.

This continuity is attributed by some to factors including bureaucratic inertia, the influence of the defence-industrial sector and congressional earmarks, as well as it being the administration's first year. But it also seems likely that there is strong bipartisan consensus around many of the ideas in the Trump administration's 2018 National Defense Strategy (NDS), which was drawn up during the term of the then-defence secretary James Mattis. That document, and the budgetary changes that accompanied it, were themselves in part inspired by the 'rebalance' in the Indo-Pacific and the 'Third Offset' of the Obama administration. These earlier initiatives placed a much greater emphasis on great-power competition, and deterrence, than had been the case under previous political and military thinking in the post-Cold War period.

Minor modifications, so far

The main change over the last half decade is arguably the approximate USD100 billion increase in the annual total defence budget – from the low USD600bn range in the late Obama years (2013–15) to the mid-USD700bn range in place since 2019. While this might mean that some of the goals set out in the 2018 NDS can be addressed, such as high-technology projects, the actual shift in relative priorities has been modest. It is generally easier for the Pentagon

to add new ideas, such as a greater emphasis on artificial intelligence, or research into boost-glide hypersonic vehicles, than to reduce emphasis on previous priorities. For instance, when discussing the military challenges posed by Russia and China, and how these states field new capabilities, the Future of Defense Task Force report, issued in 2020 by the House Armed Services Committee, stated (in reference to the Pentagon's acquisition system) that 'the current system is predisposed and incentivized to invest in incrementally better versions of existing legacy systems'.

The Biden administration's Interim National Security Strategic Guidance (NSSG), issued in March 2021, ranged across themes including transnational threats like the coronavirus pandemic, strengthening America's democracy, 'building back better' at home and restoring alliance solidarity as much as it discussed specific defence priorities. Regarding the latter, those mentioned ranged from improving conditions for personnel and their families, enhancing force training and readiness, innovation and modernisation, the need to focus more on China and Russia, and ensuring cyber and climate resilience. Other priorities were to shift emphasis from 'unneeded legacy platforms' and the suggestion of a reduction in the overall US troop presence in the Middle East.

During the Trump administration, troop numbers in South Korea and Germany did not substantially change, despite the then-president's call to reduce numbers. Indeed, the period from 2014–21 produced a stronger US presence in Poland in particular, as NATO buttressed its position in front-line states. However, the withdrawal from Afghanistan indicated that more consequential change was likely.

The Interim NSSG clearly stated that 'the United States should not, and will not, engage in "forever wars"'. And the president was unrepentant in the wake of the collapse of the Afghan National Defense and Security Forces and the Ghani administration, stating that Washington was implementing agreements made by his predecessor. Moreover, as Biden said in a speech on 31 August, the decision concerning Afghanistan 'was not just about Afghanistan'; it was

also about ‘ending an era of major military operations to remake other countries’. The lessons were that ‘first, we must set missions with clear, achievable goals – not ones we’ll never reach. And second, we must stay clearly focused on the fundamental national security interest of the United States of America.’ If anything, this accorded with the Interim NSSG, which said that the US would ‘right-size’ its presence in the Middle East ‘to disrupt international terrorist networks, deter Iranian aggression, and protect other vital U.S. interests ... as we position ourselves to deter our adversaries and defend our interests ... our presence will be most robust in the Indo-Pacific and Europe.’ The US presence has been boosted in Europe, but there has been minimal change so far to the size or deployment patterns of the Indo-Pacific Command’s assets. Moreover, Afghanistan dominated the defence-policy debate in mid-2021, and it remains to be seen whether the nature of the final exit from that country, and its aftermath, will adjust thinking on future deployments, particularly in the Middle East. The Global Posture Review will set the scale and pattern of the future US military presence abroad, though there was little detail made public when the document was approved in November 2021.

Looking ahead

While in recent years there have been a number of new DoD documents and concepts, such as the Tri-Service Maritime Strategy document and the Joint All-Domain Command and Control (JADC2) initiative (related to the Multi-Domain Operations (MDO) concept), so far this year there has generally only been minor modification to the armed forces’ size and structure. Exceptions include the creation of the US Space Force and the US Marine Corps’ (USMC) decision to give up main battle tanks as it seeks to develop a more agile and distributed force. Modernisation priorities such as the replacement of the nuclear triad, the army’s ‘big six’ priorities and the development of a new bomber, the B-21 *Raider*, remain on the agenda. But while continuity may have been the watchword so far, there may be more movement in 2022, as the Biden administration prepares its first comprehensive budget request (for Fiscal Year (FY) 2023), as well as its own formal defence strategy document, while the services further develop their own modernisation plans.

A key issue for the DoD is that while it is urged to refocus its plans and priorities and to innovate, reform and improve great-power deterrence, it has to meet

a range of demands, including its disparate global responsibilities. And while modernisation plans might herald ground-breaking capabilities, ‘legacy’ platforms will continue to arrive and established logistics enablers – like refuelling and transport aircraft – will remain key to future operations. Indeed, as the armed services look to reshape for future military operations and develop novel formations (such as the Space Force and the army’s Multi-Domain Task Forces) (MDTFs) – it remains the case that the force still has to focus on other areas: the army’s Security Force Assistance Brigades, for instance, are being adapted to align with Combatant Commands (a key reason underpinning these units is that they can free up Brigade Combat Teams for other operations). That said, as the Pentagon charts its course, a number of the initiatives from the final months of the Trump administration and the early period under Biden could be consequential in determining the direction of defence policy and procurement and future capability development. They include:

- The administration’s budget request for FY2022 (which will likely increase real resources by about 3%, as the 2018 NDS had advocated);
- Former secretary of defense Mark Esper’s late 2020 ‘Battle Force 2045’ proposal to raise the overall goal for the navy’s fleet size to at least 500 vessels, with a future fleet comprising a mix of uninhabited and crewed vessels;
- JADC2, which emphasises the construction of a survivable, inter-operable and fast-acting command-and-control network. Related service initiatives include Project Convergence (army), Project Overmatch (navy) and the Advanced Battle Management System (air force).
- Secretary of Defense Lloyd Austin’s concept of ‘integrated deterrence’ which seeks to combine economic, diplomatic and allied instruments of foreign policy into an overall framework for handling China’s rise and deterring aggression.

This may constitute a significant departure in US security policy, particularly if it is carried through into the Biden administration’s future national-security strategy and security planning in Washington and allied capitals. As Austin said, when discussing the idea at an IISS Fullerton Lecture in Singapore, ‘we’re

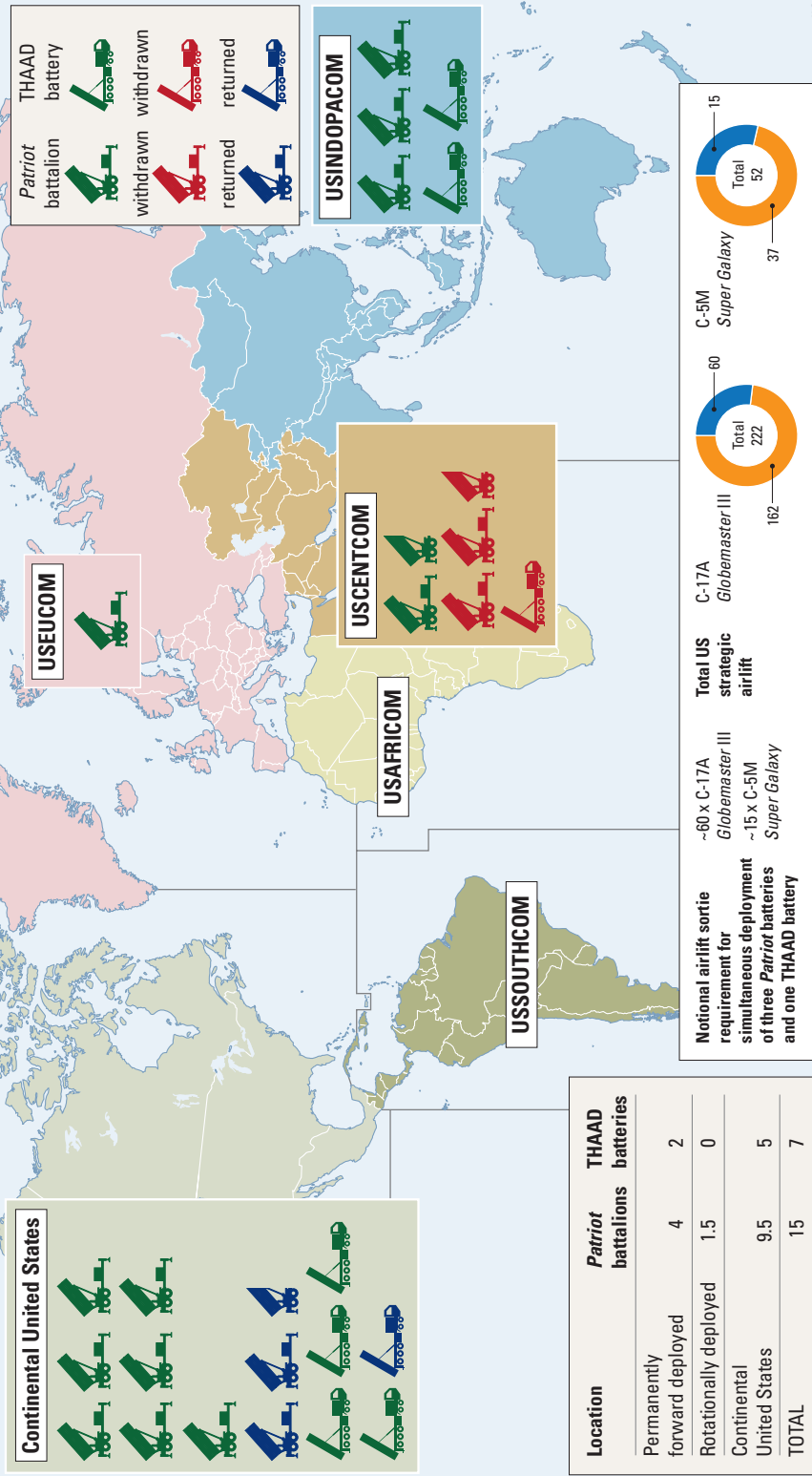
▼ Figure 1 US missile defence assets

By the end of 2020, around half of the US Army's long-range air- and missile-defence units were forward deployed in Europe, Asia and the Middle East. However, in early 2021, the army began a significant drawdown of its air- and missile-defence assets in the Middle East, reducing its overall footprint in the region by about two-thirds.

These moves will help relieve the immediate pressure on both crew training and equipment overhaul and maintenance, as well as offering the Pentagon greater flexibility in its planning, by recreating a sizeable 'contingency' force based in the United States that can be deployed in response to future operational demands. This strategy of emphasising a central reserve over forward-deployed forces offers its own

challenges, however. Transporting a notional battalion-sized force of *Patriot* and/or THAAD systems from the United States to Europe or Asia by air in a single lift would require the use of between 60 and 80 heavy transport aircraft, about a quarter of the total US inventory, at a time when these aircraft can be expected to be in high demand from other arms and services.

Using multiple sequential airlifts, or shipping these forces by sea, as the army has historically preferred to do, however, risks depriving operational commanders of these key defensive assets in advance of, or in the early stages of, hostilities, when the threat from hostile missile forces is likely to be at its greatest.



aiming to coordinate better, to network tighter, and to innovate faster. And we're working to ensure that our allies and partners have the capabilities, the capacities, and the information that they need.' The examples he quoted included cyber-defence cooperation with Singapore, more complex exercises, and the test (by US and Japanese forces) of the HIMARS artillery system in Japan. However, it will be important for Washington to ensure that concepts like integrated deterrence, as well as US actions (such as the withdrawal from Afghanistan) and relationships (like the AUKUS security partnership and that with the 'Quad' countries), are mutually reinforcing developments that also strengthen the US security posture and core alliances and are not disconnected, improvised policy developments.

US Army

The US army continues to adapt, based on the priorities identified in the Army Strategy and the National Military Strategy, both released in 2018, which highlight the re-emergence of great-power competition and the need to deter or defeat conventional attacks. The March 2021 Interim NSSG maintained this emphasis. The administration's new national security and military strategies are awaited not only to see if the army's current plans and priorities need to be modified, but also to gauge its share of the budget in relation to the other armed services given the continued focus on rebalancing the US defence establishment towards military challenges in the Indo-Pacific. At present the army is aiming to transition to an MDO-ready force under its AimPoint initiative for 2035. As part of this process, the army has set a 'Waypoint 2028–2029' to assess its progress towards the 2035 target and then reassess its assumptions and adjust as required.

Improving interoperability

Project Convergence, the army's series of annual experiments and exercises intended to improve joint inter-operability, is intended to help the army integrate into the JADC2 concept. The army's development of very long-range weapons under its Long-Range Precision Fires (LRPF) programme will rely heavily on the type of joint inter-operability that the JADC2 programme seeks to enable.

Modernisation

The LRPF programme remains the top priority among the army's six key modernisation areas,

although disagreement remains about how much and what type of very long-range fires capability the army needs in relation to the other services. The Long-Range Hypersonic Weapon (LRHW) programme (dubbed '*Dark Eagle*') began delivering hardware in early 2021, with an initial battery planned to be operational with prototype equipment by 2023. While the army has been tight-lipped about the LRHW's capabilities, it was reportedly confirmed that its range is anticipated as being 'greater than 2,775 km'. At the other end of the army's range spectrum, the 1st Armored Division's 4th Battalion, 27th Field Artillery Regiment has started taking delivery of revised Extended Range Cannon Artillery (ERCA) platforms for operational testing. Coupling a longer 58-calibre gun with new rocket-assisted ammunition, ERCA aims to increase the maximum range of the army's current self-propelled artillery to 70 km. The service expects to have the first battalion of the XM1299 (Increment 1C) Improved Range variant fielded by 2023 and is working on an XM1299A1 (Increment 2) Increased Rate of Fire variant.

The army's Air Defense branch suffered cuts to both its force structure and its modernisation programmes during operations in Iraq and Afghanistan, particularly in mobile systems designed to protect manoeuvre forces. The arrival of the first prototype M-SHORAD Increment 1 vehicles (based on a *Stryker* chassis fitted with *Stinger* and *Longbow Hellfire* missiles) with the 5th Battalion, 4th Air Defense Artillery Regiment (5-4 ADA) in Germany in early 2021 marks the first step in renewing this capability, and the army currently plans on fielding ten battalion sets of M-SHORAD. In addition to the kinetic capabilities of the Increment 1 vehicles, the army is also looking at directed-energy capabilities, with an initial platoon of 50Kw-class laser-fitted vehicles planned for delivery in 2022 as part of M-SHORAD Increment 2. Another priority is the Indirect Fire Protection Capability (IFPC) Increment 2 project, which is designed to tackle threats including from uninhabited aerial systems and cruise missiles. Two systems were reportedly tested against this requirement in early 2021: the Rafael and Raytheon bid of the *Iron Dome* system and *Tamir* interceptor and the Dynetics *Enduring Shield* variant of the army's Multi-Mission Launcher paired with Raytheon's AIM-9X *Sidewinder* missile. In September, the army officially announced it had selected Dynetics' offering. The eventual fate of the two *Iron Dome* batteries that had already been delivered as part of the testing

process for an interim cruise-missile solution remains unclear. IFPC work also has a directed-energy strand, with prototype platoons of 300Kw-class laser and high-powered microwave systems (respectively dubbed 'Valkyrie' and 'Thor') due for delivery by 2024 and intended to defend fixed sites.

Balancing between Europe and Asia

Emphasis on the Indo-Pacific in the recent strategic guidance has led the army to explore how it would contribute to operations in that region, and there is particular interest in establishing a role for its still-evolving very long-range fires capabilities. However, it remains unclear where those new fires units could be based, while there is equal importance in determining the army's role, alongside other services, in the event of a conflict in the region.

At the same time, there remains a need to deter possible Russian aggression in Europe. In mid-September, the 2nd MDTF was officially activated in the European Command (EUCOM) area of responsibility (AOR) whilst it was conducting its first exercise, in Norway, designed to test capabilities and tactics. Subsequently, the army's first (EUCOM-based) Theater Fires Command (TFC) was also activated in the EUCOM-AOR in November 2021. TFCs, part of the army's adaption for MDO, are intended to plan very long-range fires at the theatre level, while the brigade-sized MDTFs are intended to synchronise effects across domains, including traditional fires as well as space and cyber operations.

Broader equipment recapitalisation efforts are also proceeding, with an eye on EUCOM requirements. The EUCOM-based APS-2 (Army Prepositioned Stock 2) has nearly completed its expansion to two Armored Brigade Combat Team (ABCT) sets, including some of the latest M1A2 Abrams SEPv3 variants and M109A7 Paladins. The pre-positioning of supplies and unit equipment is being expanded, including in Germany, the Netherlands and also at Powidz, in Poland. The Powidz APS-2 site is scheduled to be operational by 2024 at the latest.

The M1074 Joint Assault Bridge is being fielded after issues during testing were resolved; the bridge is reported to have a higher load-bearing capacity than its predecessor and to be able to support the new, heavier Abrams and Paladin variants. Meanwhile, deliveries of the Trophy Active Protection System were reported as complete in early 2021, though it is unclear whether any of the four ABCTs on which the army intends to field Trophy have yet integrated

the capability. The plan is that these ABCTs will pair Trophy-fitted M1A2 SEPv2 and SEPv3 Abrams with upgraded Bradley M2A4 IFVs for the EUCOM theatre; after some delay the first brigade is now scheduled to be equipped with the A4 Bradley in late 2022.

US Navy

The US Navy continues to grapple with questions over the size and structure of its future fleet, budget allocations and long-term shipbuilding plans, as well as how to integrate uninhabited systems into the fleet mix. Meanwhile, the force remains under stress from the current high operational tempo.

In December 2020, the navy, the USMC and the US Coast Guard (USCG) jointly unveiled a new maritime strategy 'Advantage at Sea: Prevailing with Integrated All-Domain Naval Power'. While it portrayed a maritime domain characterised by persistent competition from both China and Russia, the focus was on the former. It stressed integration of the services and the value of alliances and partnerships. As well as high-end combat capabilities, it set out a requirement for presence and for 'a more assertive posture' in routine operations to counter the incremental, grey-zone approaches of adversary states.

Driven by concern about the pace of Chinese maritime developments, the document also called for aggressive force modernisation and experimentation. US naval forces, it said, must 'boldly' modernise by creating a new 'balanced, hybrid fleet' of existing and new platforms, both crewed and uninhabited. US naval forces will divest themselves of legacy capabilities, it said, and there would be a new mix between larger platforms and smaller, more affordable ones. Future combat readiness would be prioritised over near-term demands.

In early 2021 the navy and USMC unveiled a new Arctic strategy, which spoke of the need for US naval forces to operate more assertively, but also more cooperatively with like-minded nations, in response to the challenges from Russia and China in the region.

Nonetheless, uncertainty remains over plans to increase the size of the fleet. The official ambition set in 2016 was for a 'battle force' of 355 ships, compared to a recent level of just around 300. Various efforts have been made to update the target, among them Battle Force 2045, proposed by then-defence secretary Mark Esper in October 2020. All these efforts have tended to include the characteristics of a more distributed fleet, with a shift in the balance from larger to smaller

surface combatants and with significant numbers of uninhabited surface and underwater vehicles.

The Biden administration gave no early sign regarding its intentions in this area. A new Secretary of the Navy, Carlos Del Toro, was only confirmed in August 2021, although in his confirmation hearings he endorsed the principle that the fleet should increase. A key challenge is the prospect that future budgets are likely to be static or declining in real terms. As a result, the navy's FY2022 budget request included the addition of just eight new ships – four combatants and four support vessels – which is below the level necessary to build towards a 355-ship navy. As a corollary, in the context of a 'divest to invest' approach, the navy is seeking to retire seven of the ageing *Ticonderoga*-class cruisers and four more Littoral Combat Ships.

This led to friction with legislators in Congress. Concerns have included the loss of capability by retiring the cruisers, as well as doubts about the navy's approach to replacing them, especially its plans for incorporating uninhabited vehicles into the fleet.

In June 2021, the navy also released a long-range shipbuilding document looking 30 years ahead. It included a range of targets for fleet growth, of between 321–372 crewed vessels and 77–140 uninhabited vessels. A Congressional Budget Office report in September 2021 estimated that such targets would require higher shipbuilding budgets than have been allocated in recent years. As a result, the navy's force-structure work appeared to be a 'work in progress'. In part this may also be a result of the fact that the Pentagon is also conducting the Global Posture Review and a review of the NDS.

In shipbuilding terms, the navy's top priority is the new-generation *Columbia*-class of SSBNs, 12 of which are slated to replace the existing 14 *Ohio*-class SSBNs. The construction contract for the lead vessel of the class, and advanced funding for the second, were announced in November 2020. USS *Columbia* is scheduled to undertake its first patrol in 2031, but there remain concerns about possible delays and potential cost growth. The other key project is for the *Constellation*-class frigates. Construction of the first vessel – a modification of the Italian variant of the Franco-Italian FREMM frigate design – is due to begin in the latter part of 2021 or early 2022. The initial plan was to build 20 vessels, but their eventual significance in future fleet composition remains to be seen.

A high operational tempo continued in 2021, including freedom of navigation operations in and around the South China Sea. Transits of the Taiwan Strait were being conducted at a rate of approximately one per month, on par with 2020. The navy also deployed a carrier presence to help cover the withdrawal of US forces from Afghanistan, including the deployment to the Central Command area of the Japan-based carrier USS *Ronald Reagan*, in part a reflection of the operational stress on the carrier force. That said, the much-delayed new carrier, USS *Gerald R. Ford*, may finally be ready for a first deployment in 2022.

Meanwhile, the USS *Carl Vinson* undertook a first operational-carrier deployment into the Pacific with F-35C *Lightning II* combat aircraft and the CMV-22B *Osprey* vertical take-off transport aircraft incorporated into its air wing. Land-based trials of a prototype MQ-25 *Stingray* uninhabited air-to-air refueller were also under way ahead of anticipated shipboard trials in 2022.

In August 2021, the *Carl Vinson* strike group took part in the navy's Large-Scale Exercise 21 (LSA21), dubbed the largest of its kind in a generation. Among other things, it incorporated five carrier strike groups and four amphibious groups and ranged across the west and east coasts of the United States, the European theatre and the western Pacific. It was designed to test doctrines for high-end combat, including the navy's Distributed Maritime Operations concept, as well as the US Marine Corps' Expeditionary Advanced Base Operations (EABO) and Littoral Operations in a Contested Environment concepts.

US Marine Corps

The marines continue to implement and update their plan to transform into a more agile, distributed force under the Force Design 2030 concept, which has included the loss of its main battle tank units. Among the aims is to integrate more fully with the navy for its sea control and naval interdiction missions.

This was underscored during LSA21 when the USMC demonstrated its Navy-Marine Expeditionary Ship Interdiction System (NMESIS). In the context of the EABO, which is essentially an 'island-hopping' strategy for the western Pacific in a potential confrontation with China, NMESIS provides a mobile land-based anti-ship missile capability, and specifically in this exercise the Naval Strike Missile. It could also include the *Tactical Tomahawk* cruise-missile variant. The plan is for NMESIS to deploy operationally from 2023.

▼ Figure 2 R/UGM-109 *Tomahawk* Block V upgrade

The R/UGM-109 *Tomahawk* land-attack cruise missile (LACM) has undergone multiple upgrades since its introduction into service with the US Navy in 1983. Early iterations of the missile mostly had nuclear roles amid only limited precision-strike capability. However, improvements in guidance technology have correspondingly enhanced the *Tomahawk*'s suitability for conventional roles. The latest version of the *Tomahawk*, the

Block V, will provide the US with a more survivable system with greater targeting options (including striking moving targets for the first time). The *Tomahawk*'s continued evolution highlights that, despite significant interest in developing hypersonic (Mach 5+) LACMs, accurate and survivable subsonic systems still have significant value for long-range and deep-strike roles.

Tomahawk Block V

IOC: 2021

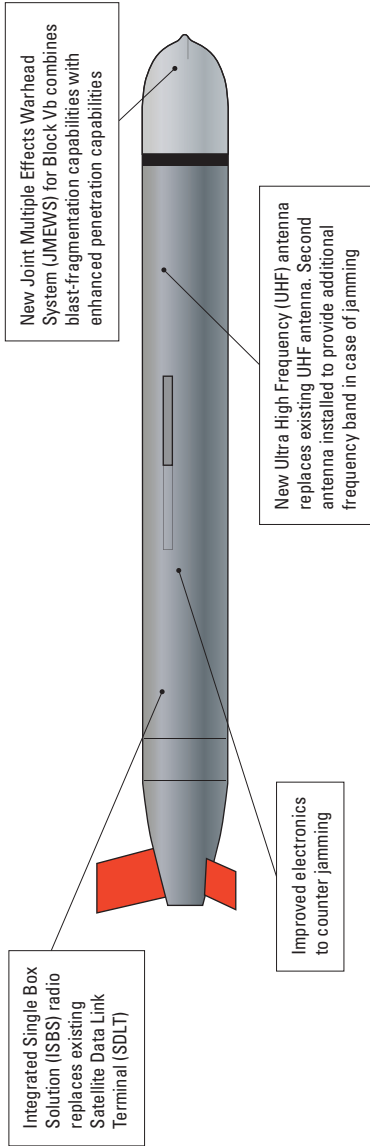
Range: 1,500 km

Warhead: 454 kg conventional warhead (Block V TACTOM and Block Va)

Joint Multi-Effects Warhead System (Block Vb)

Circular Error Probable: 4 metres

Key features: The *Tomahawk* Block V will be produced in three versions: TACTOM; Block Va for maritime targets and Block Vb for destroying hardened targets



	Block I (TLAM-N, BGM-109 <i>Gryphon</i> and TASM)	Block II (TLAM-A, TLAM-B)	Block III (TLAM-C, TLAM-D)	Block IV (TLAM-E)
Initial Operational Capability (IOC)	1983	1983	1994	2004
Range (kilometres)	2,500 km (TLAM-N: submarine-launched) 2,500 km (BGM-109 <i>Gryphon</i> : ground-launched) 460 km (TASM: submarine-launched)	1,300 km (both variants, ship-launched) 925 km (both variants, submarine-launched)	1,300 km (ship-launched)	1,500 km (ship-launched)
Warhead	W80 5 – 150 kt nuclear warhead (TLAM-N) W84 0.2 – 130 kt nuclear warhead (BGM 109 <i>Gryphon</i>) 454 kg conventional warhead (TASM)	454 kg conventional warhead (TLAM-C) 454 kg fragmentation unitary warhead (TLAM-D)	454 kg conventional warhead	454 kg conventional warhead
Circular Error Probable (CEP)	30 metres	10 metres	10 metres	4 metres
Key features	• First variant of <i>Tomahawk</i> • TASM version equipped with active radar seeker. • Capable of various flight patterns and profiles, including sea-skimming.	• Improved booster rocket. • Installation of a radar altimeter. • Equipped with Digital Scene Matching Area Correlator (DSMAC).	• Installation of jam-resistant GPS guidance. • Reduced mission planning time. • Ability to loiter over target area. • New turbofan engine for lower fuel consumption and increased thrust.	• Faster launch timeline. • Upgraded data link allowing re-routing in-flight to pre-planned or new targets. • Installation of electro-optical sensors provides battle damage information.

Plans were also proceeding to stand up the first of potentially three lighter regimental units – to be called Marine Littoral Regiments – consisting of some 1,800 to 2,000 personnel (compared to the current Marine Regiment model of about 3,400 personnel) in the latter half of 2021 or early 2022. This, again, is to be better adapted to fulfil the EABO concept.

Related to this, in June 2021 the US Navy issued concept design contracts to five companies for a Light Amphibious Warship (LAW). Essentially a small to medium landing craft, up to 35 LAWs could be purchased, and they are seen as critical enablers to the new USMC strategy of being able to move small units around flexibly. One consequence of this change is that the long-time force goal of up to 38 traditional large amphibious ships is essentially being abandoned. The navy's long-range shipbuilding plan suggested a force goal of 28–31 traditional amphibious ships, along with the LAWs.

US Coast Guard

Another aim of the new Tri-Service Maritime Strategy is greater integration of the USCG. To this end, the USCG continued high-profile deployments in the western Pacific, not least the participation of the USCG cutter *Munro* in a Taiwan Strait transit in August 2021, while the USCG cutter *Hamilton* deployed to the Mediterranean Sea and the Black Sea (the first USCG cutter in more than a decade to deploy there) in April 2021.

The USCG continues a significant recapitalisation programme. Partly in recognition of its expanding presence operations, Congress has authorised and funded new *Legend*-class National Security Cutters (NSCs) over and above the eight originally planned. The ninth NSC, *Stone*, was commissioned on 19 March 2021. The tenth and eleventh ships of the class are also under construction, out of a possible 12.

The next priority is the slightly smaller Offshore Patrol Cutter programme for up to 25 vessels, with the first set to be delivered in 2022. The most high-profile procurement programme, however, is for three new heavy icebreakers or Polar Security Cutters (PSCs), to be followed by three medium icebreakers, or Arctic Security Cutters. Despite growing interest in the Arctic, the current US fleet consists of just one ageing heavy and one medium icebreaker. The first PSC was due to start construction during 2021 for delivery in late 2025.

US Air Force

The United States Air Force (USAF) is re-evaluating its tactical aircraft force mix, under the guidance of Chief of Staff General Charles Brown. A previous commitment to fifth-generation aircraft seems increasingly balanced by consideration of more diverse missions and concern over operating costs. Fiscal pressure may be just one of the reasons that the USAF's target of growing to 386 squadrons, declared in September 2018 and labelled 'The Air Force We Need', is no longer the goal.

Like the other services, the USAF assumed an increase in funding following expiration of the Budget Control Act caps in FY2021. That anticipated additional funding has yet to arrive, not least because the incoming Biden team, like many new administrations, only submitted a modestly revised budget for its initial 2022 submission while promising full details and five-year projections in the fiscal 2023 plan. Further diluting the 386-squadron aim, Brown has placed renewed emphasis on readiness, and better means of gauging this rather than a specific number of units. Brown has posed the question, rhetorically at least, as to whether the same effectiveness could be provided by fewer squadrons, asking 'what is the capability that would give me the equivalent of 386?' His August 2020 policy paper 'Accelerate Change or Lose' will affect force structure, doctrine and systems, with legacy systems or programmes that 'once held promise, but are no longer affordable or will not deliver needed capabilities on competition-relevant timelines' facing cancellation.

A review of the tactical aircraft portfolio is also looking at new capabilities, with results expected to appear in the FY2023 budget. Service experiments with comparatively low-cost uninhabited combat air vehicles, notably the XQ-58 *Valkyrie*, highlight future capabilities that could augment or even replace planned crewed-combat aircraft in some roles or in high-threat airspace. Experiments, including with directed-energy weapons, may give current platforms improved lethality. It is possible that the outcome of such experiments may lead to doctrinal changes and a subsequent shift in force mix.

Funding numbers

To date the procurement target of 1,763 F-35A *Lightning* IIs has not been revised since the programme began. But signs increasingly point to a more heterogeneous future fighter fleet. The service's procurement of an initial 144 F-15EX *Eagle* IIs to replace

F-15Cs, largely in the Air National Guard, was one such sign, followed by official talk of restarting F-16 acquisition or even building a successor from scratch, with details to be revealed in the 2023 budget submission. Another indication was the interest in the reported flying of a demonstrator for elements of the Next Generation Air Dominance (NGAD) programme, officially a research effort to develop five fighter-relevant technologies, of which only propulsion has been publicly acknowledged. NGAD is described variously by the USAF as a family of systems and/or a family of airframes. At the time of writing, it remains an open question which of the five NGAD-relevant technologies the demonstrator was being used to explore.

F-35A numbers will likely come under additional pressure as the B-21 *Raider* long-range bomber moves from research to production funding in FY2022. This procurement has so far been on schedule and budget, and Secretary of Air Force Frank Kendall said in September that five bombers were now in various states of production. However, the programme's ambitious timeline will leave the USAF juggling simultaneous acquisitions of F-35A, F-15EX, the T-7 *Red Hawk* advanced trainer, MH-139 *Grey Wolf* helicopter, HH-60W *Jolly Green II* combat rescue helicopter, KC-46A *Pegasus* tanker, and some C-130 variants at the very least. These programmes need to fit within the USAF's procurement budget, while also accommodating the investment for the Ground-Based Strategic Deterrent replacement for the *Minuteman III* ICBM and development of the network-based Advanced Battle Management System.

The scope of the recapitalisation programme – only the transport fleet is not undergoing replacement – is placing both financial and cultural demands on the service. Normally, the USAF acquisition chief would be entrusted with managing the challenges. However, Kendall has significant acquisition experience, so his input will likely be important. Meanwhile, it is not clear if procurement initiatives begun under former acquisition executive Dr Will Roper – designed to decrease development time, disaggregate production from development and support, and lower the bar for new entrants in the military aircraft market – will become policy under the new team.

Indo-Pacific real estate

The vulnerability and limited numbers of large bases in the Indo-Pacific is an increasing concern. The USAF has been experimenting with what is dubbed

'agile combat employment' where combat aircraft are dispersed to austere locations and challenged to operate without a significant logistical footprint. At the same time, the proposed enhancement of Andersen Air Force Base on Guam with munitions storage and stand-off weapon-reloading facilities has the effect of highlighting its relative vulnerability. Recent USAF wargames have also mooted the use of unspecified high-speed short take-off and vertical-landing aircraft, possibly a reference to a still-classified programme.

Room for space

The establishment and development of the Space Force within the Department of the Air Force may prove a mixed blessing. By moving space systems from Brown's agenda, the USAF has been able to simplify its message within DoD and to legislators regarding its priorities. The force-generation process for the service has been deliberative, as the other services consider which current capabilities they are willing to transfer, personnel are brought on gradually, and the new service develops its own organisation, doctrine and procedures. First on General Jay Raymond's list of goals is to protect and defend US assets in space. With peer rivals having demonstrated anti-satellite and space-control capabilities, the development of capabilities and countermeasures is proceeding apace. This leads to a second priority – changing the US space architecture so it is simultaneously more defensible while being accessible to allies and commercial partners. To reach this point, the Space Force is establishing a new acquisition structure and testing programme, but at the same time it has to keep existing space systems operating at full capacity.

DEFENCE ECONOMICS

On 28 May 2021, the Biden administration released its FY2022 DoD budget request. The request included a top line DoD budget of USD715 billion. An additional USD37.9bn was requested for non-DoD defence spending, including funding for the Department of Energy's National Nuclear Security Administration, bringing the total spending on defence activities to USD752.9bn.

The USD715bn top line constitutes an USD11.27bn increase on the enacted FY2021 budget, a nominal 1.6% increase. Adjusting for inflation, projected by the IMF to reach 2.4% in 2022, the budget request is essentially flat in real terms.

Table 1 The US president's budget request by appropriation title, USDm

Requested Budget by Appropriation Title (USDm)	FY2021 (enacted)	FY2022 (requested)	Change
Military Personnel	162,270	167,285	5,015
Operation & Maintenance	283,395	290,361	6,966
Procurement	141,672	133,640	-8,032
RDT&E	106,447	111,964	5,517
Revolving and Management Funds	1,394	1,902	508
Military Construction & Family Housing	8,545	9,847	1,302
Total Defense Budget Request	703,723	715,000	11,277

Source: adapted from the United States DoD Fiscal Year 2022 Budget Request, Appendix A, FY2022_Budget_Request_Overview_Book.pdf (defense.gov)

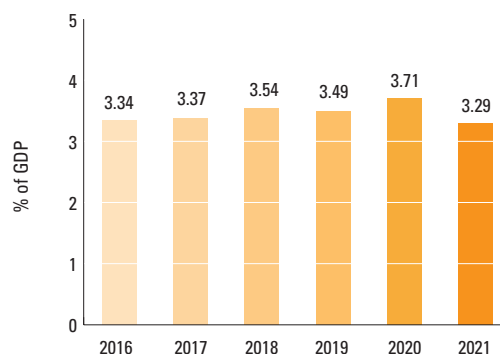
The president's request is a starting point for negotiations. Congress has already moved to authorise up to USD740bn in core DoD funding, though there is little detail about how extra funds will be committed.

In July, the Senate Appropriations Committee passed a version of the National Defense Authorization Act (NDAA) that included a USD25bn increase over the Biden request, and on 23 September the US House of Representatives approved an NDAA that included the USD740bn top line and USD778bn in total defence-related spending. The Senate debate on the NDAA, due to begin in October, was delayed by the inclusion of various amendments, including the U.S. Innovation and Competition Act, a bipartisan measure aimed at combating China and boosting investments in research, technology and manufacturing.

Status quo top line foreshadows future trade-offs

The budget request should be considered within the context of the political and process constraints in which it was developed. First-year budgets of new administrations frequently inherit and only marginally adjust the assumptions of the outgoing administration's Future Years Defense Plan (FYDP) due to the need to release a budget soon after the 20 January inauguration date.

Even though the top line reflected the existing state of affairs, the 28 May budget request was the latest since annual-budget submissions were first required in the 1920s. Moreover, the administration



[1] Figures refer to the National Defense (050) Budget Function (Budget Authority) as a % of GDP

▲ **Figure 3 US defence budget as % of GDP¹**

did not release an FYDP, which projects top-line budgets over five years and is traditionally included with the annual-budget request.

Some of this delay can be attributed to the contentious presidential transition. The efforts of the Trump administration to obstruct the incoming administration's planning caused delays in the budget release. But there are other structural reasons behind the late release. Critically, the Biden administration is currently in the process of developing a new national security and national defence strategy that will not be completed until FY2023. The FY2023 and, especially, FY2024 budgets are likely to more accurately reflect the Biden administration's vision for the future of DoD.

The budget request does, however, introduce some new dynamics. As expected, the budget eliminates the controversial Overseas Contingency Operations (OCO) fund, which incorporated expenses related to overseas conflicts into the base budget as 'direct war and enduring contingencies'. Moreover, Biden's budget amplifies themes and reinforces priorities from the FY2021 budget – the enhanced focus on air and naval forces and the centrality of the challenge from China's growing military power – and reveals tensions likely to shape DoD strategy and budget discussions in coming years as it seeks to balance readiness and modernisation and sharpen priority missions related to its three articulated objectives of defending the nation, taking care of people and succeeding through teamwork.

China is the 'pacing challenge'

At the core of the defence-budget request is the need to meet an expanding threat environment and begin

Table 2 US National Defense Budget Function and other selected budgets, 2000, 2010–22

USD in billions, current- year dollars	National Defense Budget Function		Atomic Energy Defense Activities	Other Defense Activities	Total National Defense			Department of Homeland Security	Department of Veterans' Affairs	Total Federal Government Outlays	Total Federal Budget Surplus/ Deficit
FY	BA	Outlay	BA	BA	BA	Discretionary BA	Outlay	BA	BA		
2000	290.3	281.00	12.4	1.3	304.0	300.8	294.4	13.8	45.5	1,789.0	236.2
2010	695.6	666.7	18.2	7.3	721.2	714.1	693.5	45.4	124.3	3,457.1	-1,294.4
2011	691.5	678.1	18.5	7.0	717.0	710.1	705.6	41.6	122.8	3,603.1	-1,299.6
2012	655.4	650.9	18.3	7.7	681.4	669.6	677.9	45.9	124.0	3,526.6	-1,076.6
2013	585.2	607.8	17.5	7.4	610.2	600.4	633.4	61.9	136.0	3,454.9	-679.8
2014	595.7	577.9	18.4	8.2	622.3	606.2	603.5	44.1	165.7	3,506.3	-484.8
2015	570.8	562.5	19.0	8.5	598.4	585.9	589.7	45.3	160.5	3,691.9	-442.0
2016	595.7	565.4	20.1	8.3	624.1	606.8	593.4	46.0	163.3	3,852.6	-584.7
2017	626.2	568.9	21.4	8.7	656.3	634.1	598.7	62.3	178.8	3,981.6	-665.4
2018	694.5	600.7	23.3	9.0	726.8	700.9	631.2	103.0	191.8	4,109.0	-779.1
2019	712.6	654.0	24.0	9.1	745.7	718.8	686.0	61.4	194.2	4,447.0	-983.6
2020	738.8	690.4	26.0	9.7	774.5	756.6	724.6	114.2	233.3	6,550.4	-3,129.2
2021*	713.8	712.4	29.4	10.8	754.0	740.8	748.4	124.3	255.6	7,249.5	-3,668.7
2022*	727.9	729.5	29.9	10.5	768.3	752.9	770.6	69.5	283.9	6,011.1	-1,837.0

Notes

FY = Fiscal Year (1 October–30 September)

* (request)

¹The National Defense Budget Function subsumes funding for the DoD, the Department of Energy Atomic Energy Defense Activities and some smaller support agencies (including Federal Emergency Management and Selective Service System). It does not include

funding for International Security Assistance (under International Affairs), the Veterans Administration, the US Coast Guard (Department of Homeland Security), nor for the National Aeronautics and Space Administration (NASA). Funding for civil projects administered by the DoD is excluded from the figures cited here.

²Early in each calendar year, the US government presents its defence budget to Congress for

the next fiscal year, which begins on 1 October. The government also presents its Future Years Defense Program (FYDP), which covers the next fiscal year plus the following five. Until approved by Congress, the budget is called the Budget Request; after approval, it becomes the Budget Authority (BA).

to implement a concept of national security that goes beyond military considerations solely. COVID-19 and pandemic preparedness (with USD500 million allocated) and adapting to and mitigating the risks of climate change (USD617m) both featured as priority DoD challenges.

Violent extremism, Iran, North Korea and Russia are all also mentioned in the funding request. But it is deterring and maintaining advantage over China that serves as the primary 'pacing challenge' for the DoD and that is animating congressional efforts to increase the budget. Several overlapping DoD efforts are explicitly designed to deter China.

The Pacific Deterrence Initiative received USD5.1bn in the request, USD4.9bn of which was allocated to joint-force lethality. In addition, the FY2022 DoD budget request included USD27.7bn in modernisation programmes for all three legs of the nuclear triad. Key programmes include the B-21 *Raider* bomber, the *Columbia*-class ballistic-missile submarine

(SSBN), the Long-Range Stand-Off missile (LRSO), and the Ground Based Strategic Deterrent (GBSD) that will replace the *Minuteman* III intercontinental ballistic missile. The budget also included USD6.6bn to develop and field multi-service, multi-domain offensive long-range fires, a clear priority of the Indo-Pacific theatre, characterised by long distances and China's increasingly sophisticated anti-access/area-denial capabilities.

Budget priorities: research, readiness and people

Biden's first budget requested USD112bn for research, development, test and evaluation (RDT&E). This was a 5.2% increase over the FY2021-enacted amount, which was itself the largest RDT&E budget at that time. The budget identifies several technologies as central to modernisation and innovation: microelectronics (USD2.3bn), artificial intelligence (USD814m), 5G (USD398m) and hypersonics (USD3.8bn).

In addition to the increase in RDT&E funding, the budget includes a 2.5% increase in the Operations and Maintenance (O&M) budget as part of a parallel effort to 'sustain and advance readiness'. The budget request allocates USD122bn to 'readiness' across the services, augmented by the proposed investment in personnel.

The Military Personnel (MILPERS) budget incorporates a 2.7% pay rise across DoD and provides USD8.6bn for family support and training programmes. The budget seeks to align DoD funding with broader DoD initiatives to address workplace and workforce challenges and inequities, including 'extremism in the ranks', and DoD efforts to implement the values of 'diversity, equity, and inclusion' in all aspects of DoD activities.

To pay for the increase in RDT&E, O&M and MILPERS, the FY2022 request cuts procurement by over USD8bn, dropping from USD142bn in FY2021 to USD134bn. Future budgets will likely continue to prioritise other areas of the budget as the DoD pushes forward with efforts at force-wide modernisation and deals with the loss of OCO funding.

Funds are also reclaimed through USD2.8bn-worth of equipment reductions across the services of 'older and less-capable platforms and programs', with notable targets including the A-10 *Thunderbolt II*, F-16 C/D *Fighting Falcon*, F-15 C/D *Eagle*, F/A-18 *A-D Hornet*, KC-135 *Stratotanker*, and KC-10 *Extender* as well as multiple Littoral Combat Ships. The navy and USAF are responsible for USD2.7bn in planned divestments. Choosing to divest legacy systems is politically sensitive, given legislators' interest in keeping production lines that employ their constituents open. In September 2021, Kendall urged Congress to retain focus on the need to meet the pacing challenge of China, arguing that the US 'will not succeed against a well-resourced and strategic competitor if we insist on keeping every legacy system we have'. According to Kendall, keeping 'aircraft that we no longer need and that do not intimidate China' is 'consuming precious resources we do need for modernization'.

The services: naval and air focus

The budgets for the Department of the Navy and the USAF are set to increase as part of the effort to deter China and focus DoD operations on the Indo-Pacific. Together, the Department of the Navy and the USAF combine for a 52% share of the total DoD top-line budget, up from 48% in the enacted FY2021 budget.

Table 3 The US president's budget request by service, USDm

Requested budget by service (USDm)	FY2021 (enacted)	FY2022 (requested)	Change
Army	174,265	172,734	-1,531
Department of the Navy	207,079	211,721(Total) 163,900 (Navy) 47,800 (Marines)	4,642
Department of the Air Force	204,001	212,764 (Total) 156,300 (Air Force) 17,400 (Space Force) 39,100 (Pass-through)	8,763
Defence-wide	118,377	117,780	-597

Source: The US DoD FY2022 Budget Request Defense Budget Overview Appendix A as well as other open and publicly available sources, FY2022_Budget_Request_Overview_Book.pdf (defense.gov).

There is some nuance to how these budgets are allocated. Of the USD212bn requested for the Department of the Navy, USD164bn is for the navy, an increase of only 0.6% over the FY2021 enacted sum, while USD47.8bn is for the USMC, an increase of 6.2%.

The Department of the Air Force budget request of USD213bn is inflated by USD39.1bn in pass-through funding that is not controlled by the USAF and mostly is dedicated to classified activities. Removing the pass-through funding leaves a budget request of USD174bn. The USAF budget of USD156bn is a 2.3% year-on-year increase. The USD17.4bn requested for Space Force is a 13.1% increase from FY2021, reflecting the growing importance of the space domain to operations. Nearly USD8bn of the USAF budget is tied to 'direct war and enduring costs' that previously were funded by the OCO account.

The navy and USAF are taking different approaches to spending their requested budgets. The navy's priority is to deliver a 'combat credible' force and to improve readiness. The DoD request includes USD48.5bn for the navy's and the USMC's readiness, with increases in O&M, MILPERS and infrastructure as well as RDT&E.

To cover these costs, naval procurement has declined by 5.7% from the sum enacted in FY2021. The navy will procure only eight ships in FY2022: two *Virginia*-class submarines, an *Arleigh Burke*-class destroyer, a frigate and four support ships. This is down from the 12 planned by the Trump administration, raising questions about future-force structure and the sustainability of the domestic ship-

building industry. A new force-structure review is underway, though in September 2021 the Chief of Naval Operations announced that the review may not be completed until 2023.

USAF spending includes an RDT&E increase of USD3.8bn and stresses modernisation, especially of the nuclear triad. The GBSD, LRSO, National Command, Control, and Communications infrastructure development programmes and B-21 *Raider* are all 'fully funded'.

Other priorities for RDT&E funding include the Advanced Battle Management System, the Air Force's component of DoD's Joint All Domain Command and Control (JADC2) programme, the Next Generation Air Dominance (NGAD) aircraft, and space-based capabilities such as the Next-Generation Overhead Persistent Infrared missile-warning system. The request includes funds for 85 F-35s across the USAF and navy as well as 12 F-15EXs. The KC-46A *Pegasus* tanker replacement programme receives USD2.5bn for 14 aircraft.

The army plays the role of bill payer in the FY2022 budget as it attempts to develop a vision for its role in the Indo-Pacific while also maintaining the capacity to deter Russia and the ability to meet contingencies elsewhere. The army budget of USD173bn is USD1.5bn below the 2021-enacted budget. It constitutes only 24% of the total top-line share, its lowest in a decade. The budget includes USD18.4bn in direct and enduring costs that previously would have been covered by OCO funds.

Within these budget constraints, the army has prioritised protecting its end strength, which will remain essentially constant. The army is also defending its 35 prioritised modernisation programmes, as well as 30 additional enabling programmes, deemed essential to future lethality and operational effectiveness. However, after three years of the 'night court' process of cutting non-priority programmes in order to free up money for modernisation, a senior officer was reported as saying in mid-2021 that there is little left to cut across its legacy systems. It has, according to acting secretary of the army John Whitley, become 'progressively harder to find lower-priority programs to realign'. While the top modernisation programmes are protected this year, the army RDT&E and procurement budgets have fallen by USD1.3bn and USD2.8bn respectively, reinforcing the long-term challenge to army modernisation in years ahead.

CANADA

Prime Minister Justin Trudeau won a new mandate in the snap general election held on 20 September 2021. This meant at least a degree of continuity in Canadian defence and security policy, which remains based on the Trudeau government's 2017 defence-policy review entitled 'Strong, Secure, Engaged'.

Nevertheless, Ottawa, like many other capitals, is grappling with the fallout from the coronavirus pandemic, not least potential budgetary implications and added project delays at a time when a number of long-term (and in many cases long overdue) procurement programmes are reaching key decision points. The 2017 review outlined continued support for alliance and coalition ties and a broad global deployment and engagement posture. It also promised to transform Canada's armed forces, detailing financial commitments and a major procurement programme.

Deployments to support NATO continued under the umbrella of *Operation Reassurance*. These included some 540 personnel leading the NATO Enhanced Presence Battlegroup in Latvia. The naval contribution continued to include the deployment of a frigate, and in January 2021 a Canadian commodore took command of Standing NATO Maritime Group One for 12 months. The air force again deployed to Romania as part of the NATO-enhanced Air Policing mission, while the *Operation Unifier* military-training mission to Ukraine was also due to continue until at least March 2022. There were also deployments in the Middle East, while in July a frigate took part in the Australia-US *Exercise Talisman Sabre* off northeast Australia.

At the same time, a number of major procurement programmes reached or were approaching important milestones. Since 2019, the army has been pursuing a new operating concept for complex operations against state and non-state actors. The army has also identified a number of equipment priorities, including a modern ground-based air defence system, with decisions pending on defining a programme to deliver an initial capability in 2026–27.

Among current land programmes, the first of 360 new Armoured Combat Support Vehicles (based on the LAV 6.0) was accepted in December 2020, with full operational capability scheduled for 2024. This will replace the LAV II *Bison* and M113. Meanwhile, the first mast was delivered in August 2020 for testing as part of the new Light Armoured

Vehicle Reconnaissance Surveillance System, to be incorporated as an upgrade to 66 LAV III vehicles (at LAV 6.0 standard). The first is due for delivery to the army in October 2021, with full operational capability planned for February 2023.

One of the looming pivotal capability decisions concerns Canada's Future Fighter Capability Project. Final selection to fulfil the requirement for 88 new aircraft is due in 2022, the remaining contenders being the Lockheed Martin F-35A *Lightning* II and the Saab *Gripen* E. There could be a down-selection eliminating at least one of the bids in late 2021.

This troubled project has been under way for more than a decade, and there are concerns about possible further delays resulting from the coronavirus pandemic. Nevertheless, the plan is for the first aircraft to be delivered in 2025 with all aircraft delivered by the early 2030s. Interim measures to sustain Canada's existing fighter capability have included the purchase of 18 second-hand F/A-18s from Australia, the last of which was delivered in April 2021, and the upgrading of 36 of Canada's remaining CF-18s with the AN/APG-79(V)4 active electronically scanned array radar. Another important development in terms of air-capability recapitalisation was the announcement in April 2021 that Airbus, with its A330 MRTT, was the only qualified bidder for the future Strategic Tanker Transport Capability to replace five CC-150 *Polaris* aircraft, with an initial operating capability from 2028–29.

In the maritime sphere, perhaps as consequential as the future fighter programme in the air domain, is the future Canadian Surface Combatant. After

the selection of the Lockheed Martin bid in 2018, based on the BAE Systems Type-26 frigate design, the programme has proceeded, but not without continuing concern about costs.

In April 2021, MBDA was awarded a contract to supply the *Sea Ceptor* air-defence missile. Given that the plan is also to equip the ships with SM-2 and Evolved *SeaSparrow* missiles, the ambition for the capability in these vessels is considerable. Also in April, Leonardo was chosen to supply the OTO 127/64 LW *Vulcano* medium-calibre gun for the class, a departure from the choice for the Australian and UK versions of the Type-26, requiring some significant redesign. The plan is for 15 vessels to be delivered from the early 2030s through to the 2040s.

With growing attention on the Arctic, at the end of June 2021 the navy commissioned the first of its planned six *Harry DeWolf*-class Arctic Offshore Patrol Ships. With a full-load displacement of 6,600 tonnes, they are currently the navy's largest surface combatants. The second ship was delivered in July 2021 with deliveries to the navy planned at one a year until 2025, followed by two more for the Canadian Coast Guard.

The plan remains that the first of the two *Protecteur*-class Joint Support Ships will be delivered in 2023, although this may be affected by the coronavirus pandemic. The 2017 review also announced a modernisation plan to extend the service life of the four *Victoria*-class submarines to the mid- to late-2030s. One of the submarines, HMCS *Corner Brook*, which has been undergoing long-running repairs and upgrades, will likely return to service in 2022.

Arms procurements and deliveries – North America

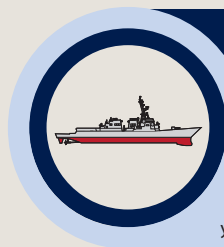
Significant events in 2021



APRIL

CANADA CANCELS TURKEY-RELATED PERMITS

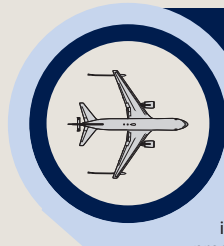
Canada became the latest NATO ally to block the sale of defence equipment to Turkey after restricting 29 export permits. Principally, this stops the sale of WESCAM's CMX-15D electro-optical/infrared imaging system, which is fitted to some Turkish UAVs, such as the *Bayraktar* TB2. Canada's position is that the use of these UAVs in the Nagorno-Karabakh conflict was 'not consistent with Canadian foreign policy, nor end-use assurances'. The halt on exports to Turkey has hampered several programmes, though it is possible that Ankara will introduce a domestic replacement from ASELSAN for the CMX-15D. Tests began on the ASELSAN product in 2020.



JUNE

US NAVY RELEASES SHIPBUILDING PLAN

The Biden administration released a shipbuilding plan that retained the focus of its predecessor on, for instance, maintaining subsurface advantage. However, it abbreviated its ambitions in the new 30 year plan, indicating an aspiration for a fleet of 321–372 crewed warships and 77–140 uninhabited surface/subsurface vessels. In contrast, the final plan of the Trump administration, published in December 2020, aimed to have a fleet of 403 crewed ships and submarines and 143 uninhabited maritime systems by 2045. The latest plan is likely informed by a reassessment of industrial capacity and limited growth expected in future shipbuilding budgets, though the administration has indicated that a complete 30-year plan will be issued with the FY2023 budget.



JULY

USAF ISSUES KC-Y RFI

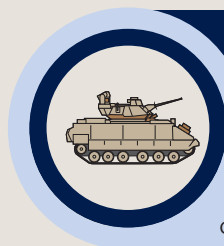
The US Air Force (USAF) issued a request for information (RFI) for 140–160 tankers based on a commercial aircraft design to replace the KC-135 *Stratotanker* under the 'Bridge' Tanker (KC-Y) programme. KC-Y is intended as a follow-on programme to the Boeing KC-46A (KC-X programme), of which USAF plans to order 179. However, the KC-46A has suffered from technical problems and has cost Boeing over USD5 billion in overruns to date. Interim capability was only certified in 2021, but it is possible that problems may be resolved by the time any KC-Y decision is made before the end of the decade. Indeed, KC-Y will very likely be a competitive programme, as Airbus is expected to offer the A330 MRTT, as it did in several KC-X competitions in the late 2000s and early 2010s. KC-Y will itself be succeeded by the Advanced Air Refueling Tanker (KC-Z) programme, which will be more ambitious, for instance in terms of signature management and endurance.



JULY

L3HARRIS DIVESTS BUSINESSES

Prior to the merger of L3 Technologies and Harris Corporation in 2019, to form L3Harris Technologies, both companies divested parts of their businesses and indicated that more were likely. These began in 2020 and the process has accelerated in 2021, with the sale of the defence-training business to Canada's CAE for USD1.05bn and propulsion systems to Germany's RENK for USD400 million. The acquisition significantly expands CAE's presence in the United States' simulation-and-training market, with a large F-35 training programme still to be tendered. Only Lockheed Martin currently has a larger market share. RENK's acquisition is likely also motivated by the potential value of future land programmes, in particular the series of projects that make up the US Army's Next-Generation Combat Vehicle programme.



JULY

OMFV MOVES FORWARD

The US Army awarded Phase II Concept Design contracts, totalling USD299.4m, for the Optionally Manned Fighting Vehicle (OMFV) to five industrial teams: BAE Systems Land & Armaments, General Dynamics Land Systems, Hanwha Defense and Oshkosh Defense, Point Blank Enterprises and Rheinmetall. A first request for proposals was cancelled in 2020 after companies could not meet the technical or procedural requirements. The reorganisation of the programme in April 2020 set out a five-phase process with a winner being selected in FY2027 and low-rate production beginning in FY2028. This is the third attempt to replace the *Bradley* infantry fighting vehicle following the cancellation of the Future Combat System and Ground Combat Vehicle programmes in 2010 and 2014, respectively.

Table 4 US fixed-wing fighter-aircraft exports, 2010–October 2021

Country	Equipment	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 [†]
Australia 	F-35A					2				8	8	14	9
Denmark 	F-35A												4
Egypt 	F-16C/D			7	20								
Indonesia 	F-16C/D					5	4	5	4	2			
Iraq 	F-16C/D						4	10	7	6	11		
Israel 	F-35I							2	7	5	6	4	6
Italy 	F-16A/B			3									
Italy 	F-35A							6*	2*	2*	1*	2*	1*
Italy 	F-35B									1*	1*	1*	1*
Japan 	F-35A							2	3 and 1*	4*	6*	6*	6*
Korea, Republic of 	F-15K	2	2	3									
Korea, Republic of 	F-35A									6	7	11	12
Kuwait 	F/A-18E/F											12	16
Morocco 	F-16C/D	3	13	6									
Netherlands 	F-35A			1	1						8	5	6
Norway 	F-35A						2	2	6	6	6	6	3
Pakistan 	F-16C/D	14	14	1									
Qatar 	F-15QA											4	6
Saudi Arabia 	F-15SA							4	29	19	21	11	
Singapore 	F-15SG	4		2				8					
Turkey 	F-16C/D		3	11									
Turkey 	F-35A									2	2		
United Arab Emirates 	F-16E/F	3	3	1									
United Kingdom 	F-35B			2	1			5	6	3	1	3	3
Total = 540		26	35	37	22	7	10	44	65	64	78	79	73

*Final assembly outside the US. †January–October

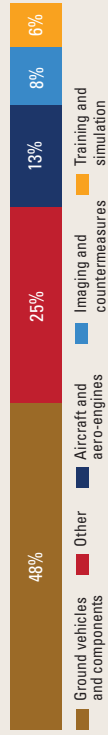
Figure 4  Canada: non-US defence exports, 2000–20

Canada's non-US defence exports* have quadrupled in value since 2000, with half of this amount coming from the sale of armoured vehicles. Canada's most significant exporters are subsidiaries of large US companies. For instance, the leading armoured-vehicle firm is General Dynamics Land Systems-Canada (GDLS-C) in London, Ontario. Originally a division of US firm General Motors, since the 1970s the plant has been building Canadian versions, known as Light Armoured Vehicles (LAV), of the Swiss firm MOWAG's *Piranha* wheeled armoured vehicle. (MOWAG is now part of General Dynamics.) As well as exporting the design to the United States, GDLS-C has also exported hundreds of LAVs to Saudi Arabia. Indeed, since 2000 total Canadian exports to Saudi Arabia comprise 40% of the non-US total, the vast majority of this being of armoured vehicles. Most recently, a contract was signed in 2014 for 928 LAVs, worth CAD15 billion (USD13.56bn). Saudi Arabia's military intervention in Yemen led to calls in Canada to either review or cancel the contract, though Canada's post-2015 Liberal government has suggested in statements that the contract has strict confidentiality clauses and stringent cancellation penalties. Two of Canada's other major companies are L3Harris subsidiary WESCAM and Pratt & Whitney subsidiary, Pratt

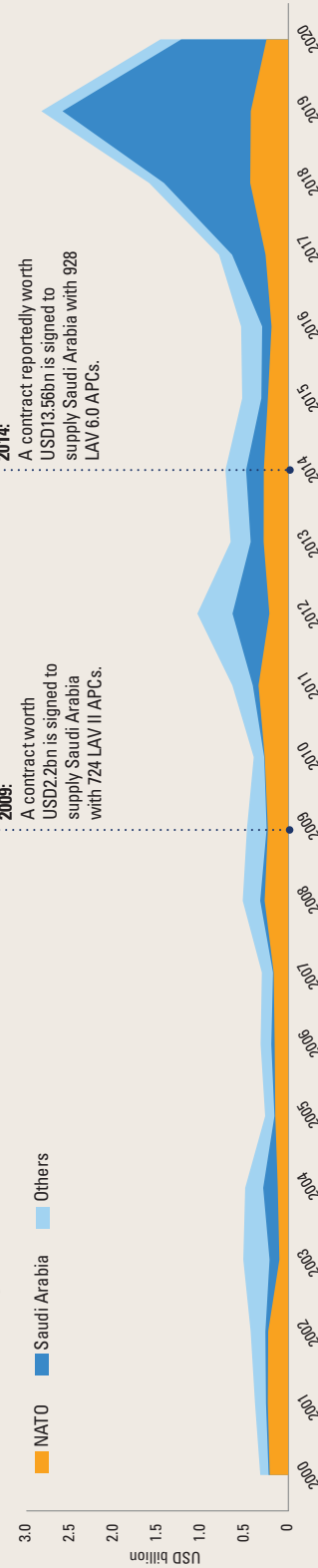
& Whitney Canada. The former supplies electro-optical/infrared (EO/IR) sensor systems that are fitted onto aircraft, including uninhabited aerial vehicles (UAVs). The use of Turkish-built UAVs, fitted with WESCAM's MX-15D EO/IR sensor, in the 2020 Armenia–Azerbaijan conflict prompted the Canadian government to halt exports to Turkey. Pratt & Whitney Canada supplies turboprop engines for everything from large transport aircraft to small training aircraft. Canadian firm Bombardier manufactures civilian business jets, which are often sold to form the basis of special-mission aircraft.

*Canada does not report its exports to the US due to many not requiring permits.

Canada non-US defence exports by sector, 2000–20



Canadian non-US defence exports, 2000–20 (USD)



Deliveries of Canadian 'Armoured Combat Vehicles' and 'Large-Calibre Artillery Systems' to Saudi Arabia as reported to the UN Register of Conventional Arms, 2000–20



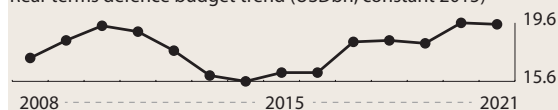
Canada CAN

Canadian Dollar CAD		2020	2021	2022
GDP	CAD	2.20tr	2.52tr	
	USD	1.64tr	2.02tr	
<i>per capita</i>	USD	43,295	52,791	
Growth	%	-5.3	5.7	
Inflation	%	0.7	3.2	
Def exp [a]	CAD	31.6bn	33.7bn	
	USD	23.6bn	26.9bn	
Def bdtg [b]	CAD	27.0bn	29.1bn	
	USD	20.1bn	23.2bn	
USD1= CAD		1.34	1.25	

[a] NATO figure

[b] Department of National Defence and Veterans Affairs

Real-terms defence budget trend (USDbn, constant 2015)



Population 37,943,231

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	8.1%	2.7%	2.9%	3.4%	23.4%	8.9%
Female	7.7%	2.6%	2.7%	3.2%	23.7%	10.5%

Capabilities

Canada's armed forces are focused principally on territorial defence, as well as contributing important capabilities to international missions, principally through NATO. The 2017 defence review reaffirmed commitments to NATO, but also to modernising capabilities, including cyber power. The review promised to increase regular and reserve forces, with particular enhancements in the areas of cyber and intelligence. Canada's deployments, although relatively small scale, underscore a determination to maintain both international engagement and power-projection capability. Canada's leadership of a NATO battlegroup in Latvia highlights a continuing capability to deploy medium-sized land formations. It has also contributed to NATO's air-policing mission. Meanwhile, the deployments of frigates to the NATO theatre and the Pacific demonstrate continuing blue-water naval capabilities. It has recently extended its coalition contribution to military capacity-building in Iraq, Jordan and Lebanon until March 2022. The 2017 review pledged to finally deliver on a range of delayed procurements. It raised the target for a new-generation fighter to 88 aircraft with the choice being between the F/A-18E/F *Super Hornet*, the F-35A *Lightning II* and the *Gripen E*, with a final contract award due in 2022. In the interim, Canada has been supplementing its existing fighter force with second-hand Australian F/A-18 *Hornets*. Despite continuing cost concerns, work has progressed on the future Canadian Surface Combatant programme, based on the UK Type-26 frigate design, with a construction contract expected in 2022 or 2023. In July 2021, the navy commissioned the first of six Arctic Offshore Patrol Ships intended to enhance its Arctic operating capability – its first new warship in nearly 25 years. Canada maintains a well-developed range of mainly small and medium-sized defence firms. The strongest sector is in combat vehicles, though the government is using its latest naval procurements to establish a long-term national ship-building strategy.

ACTIVE 66,500 (Army 22,500 Navy 12,600 Air Force 12,100 Other 19,300) Gendarmerie & Paramilitary 4,500

RESERVE 34,400 (Army 26,800 Navy 4,100 Air 2,000 Other 1,500)

ORGANISATIONS BY SERVICE

Space

EQUIPMENT BY TYPE

SATELLITES • SPACE SURVEILLANCE 1 *Sapphire*

Army 22,500

FORCES BY ROLE

MANOEUVRE

Mechanised

- (1st) mech bde gp (1 armd regt, 2 mech inf bn, 1 lt inf bn, 1 arty regt, 1 cbt engr regt, 1 log bn)
- (2nd & 5th) mech bde gp (1 armd recce regt, 2 mech inf bn, 1 lt inf bn, 1 arty regt, 1 cbt engr regt, 1 log bn)

COMBAT SUPPORT

- engr regt
- MP pl

AIR DEFENCE

- SAM regt

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

MBT 82: 42 *Leopard* 2A4 (trg role); 20 *Leopard* 2A4M (upgraded); 20 *Leopard* 2A6M (52 *Leopard* 1C2 in store)
 RECCE €120 LAV-25 *Coyote*
 IFV 550 LAV 6.0

APC 443

APC (T) 268: 235 M113; 33 M577 (CP)

APC (W) 175 LAV *Bison* (incl 10 EW, 32 amb, 32 repair, 64 recovery)

AUV 507: 7 *Cougar*; 500 TAPV

ENGINEERING & MAINTENANCE VEHICLES

AEV 23: 5 *Buffalo*; 18 *Wisent* 2

ARV 12 BPz-3 *Büffel*

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL • MANPATS TOW-2

RCL 84mm *Carl Gustaf*

ARTILLERY 287

TOWED 163 105mm 126: 98 C3 (M101); 28 LG1 MkII; 155mm 37 M777

MOR 124: 81mm 100; SP 81mm 24 LAV *Bison*

UNINHABITED AERIAL VEHICLES • ISR • Light 5 RQ-21A *Blackjack*

Reserve Organisations 26,800

Canadian Rangers 5,300 Reservists

Provide a limited military presence in Canada's northern, coastal and isolated areas. Sovereignty, public-safety and surveillance roles

FORCES BY ROLE

MANOEUVRE

Other

- (patrol) ranger gp (209 patrols)

Army Reserves 21,500 Reservists

Most units have only coy-sized establishments

FORCES BY ROLE**COMMAND**

10 bde gp HQ

MANOEUVRE**Reconnaissance**

18 recce regt (sqn)

Light

51 inf regt (coy)

COMBAT SUPPORT

16 fd arty regt (bty)

3 indep fd arty bty

10 cbt engr regt (coy)

1 EW regt (sqn)

4 int coy

10 sigs regt (coy)

COMBAT SERVICE SUPPORT

10 log bn (coy)

3 MP coy

Royal Canadian Navy 12,600**EQUIPMENT BY TYPE****SUBMARINES 4**

SSK 4 *Victoria* (ex-UK *Upholder*) (of which 1 in long-term refit) with 6 single 533mm TT with Mk 48 HWT

PRINCIPAL SURFACE COMBATANTS • FRIGATES 12

FFGHM 12 *Halifax* with 2 quad Inchr with RGM-84L *Harpoon* Block II AShM, 2 8-cell Mk 48 mod 0 VLS with RIM-162C ESSM SAM, 2 twin 324mm SVTT Mk 32 mod 9 ASTT with Mk 46 LWT, 1 Mk 15 *Phalanx* Block 1B CIWS, 1 57mm gun (capacity 1 CH-148 *Cyclone* ASW hel)

PATROL AND COASTAL COMBATANTS 1

PSOH 1 *Harry DeWolf* (capacity 1 CH-148 *Cyclone* ASW hel)

MINE WARFARE • MINE COUNTERMEASURES 12

MCO 12 *Kingston* (also used in patrol role)

LOGISTICS AND SUPPORT 10

AORH 1 *Asterix* (*Resolve*) (capacity 2 CH-148 *Cyclone* ASW hel)

AX 9: **AXL** 8 *Orca*; **AXS** 1 *Oriole*

Reserves 4,100 reservists

24 units tasked with crewing 10 of the 12 MCOs, harbour defence & naval control of shipping

Royal Canadian Air Force (RCAF) 12,100**FORCES BY ROLE****FIGHTER/GROUND ATTACK**

4 sqn with F/A-18A/B *Hornet* (CF-18AM/BM)

ANTI-SUBMARINE WARFARE

2 sqn with CH-148 *Cyclone*

MARITIME PATROL

2 sqn with P-3 *Orion* (CP-140M *Aurora*)

SEARCH & RESCUE/TRANSPORT

3 sqn with AW101 *Merlin* (CH-149 *Cormorant*);

C-130H/H-30 (CC-130) *Hercules*

1 sqn with DHC-5 (CC-115) *Buffalo*

TANKER/TRANSPORT

1 sqn with A310/A310 MRTT (CC-150/CC-150T)

1 sqn with KC-130H

TRANSPORT

1 sqn with C-17A (CC-177) *Globemaster*

1 sqn with CL-600 (CC-144B)

1 sqn with C-130J-30 (CC-130) *Hercules*

1 (utl) sqn with DHC-6 (CC-138) *Twin Otter*

TRAINING

1 OCU sqn with F/A-18A/B *Hornet* (CF-18AM/BM)

1 OCU sqn with C-130H/H-30/J (CC-130) *Hercules*

1 OCU sqn with CH-148 *Cyclone*

1 OCU sqn with Bell 412 (CH-146 *Griffon*)

1 sqn with P-3 *Orion* (CP-140M *Aurora*)

TRANSPORT HELICOPTER

5 sqn with Bell 412 (CH-146 *Griffon*)

3 (cbt spt) sqn with Bell 412 (CH-146 *Griffon*)

1 (Spec Ops) sqn with Bell 412 (CH-146 *Griffon* – OPCODE Canadian Special Operations Command)

1 sqn with CH-47F (CH-147F) *Chinook*

EQUIPMENT BY TYPE**AIRCRAFT** 110 combat capable

FGA 96: 71 F/A-18A (CF-18AM) *Hornet*; 25 F/A-18B (CF-18BM) *Hornet*

ASW 14 P-3 *Orion* (CP-140M *Aurora*)

SAR 7 C295W (CC-295)

TKR/TPT 5: 2 A310 MRTT (CC-150T); 3 KC-130H

TPT 48: **Heavy** 5 C-17A (CC-177) *Globemaster III*; **Medium**

26: 7 C-130H (CC-130) *Hercules*; 2 C-130H-30 (CC-130)

Hercules; 17 C-130J-30 (CC-130) *Hercules*; **Light** 10: 6

DHC-5 (CC-115) *Buffalo*; 4 DHC-6 (CC-138) *Twin Otter*;

PAX 7: 3 A310 (CC-150 *Polaris*); 4 CL-600 (CC-144B/C)

TRG 4 DHC-8 (CT-142)

HELICOPTERS

ASW 22 CH-148 *Cyclone*

MRH 68 Bell 412 (CH-146 *Griffon*)

TPT 29: **Heavy** 15 CH-47F (CH-147F) *Chinook*; **Medium**

14 AW101 *Merlin* (CH-149 *Cormorant*)

RADAR 53

AD RADAR • NORTH WARNING SYSTEM 47: 11 AN/

FPS-117 (range 200nm); 36 AN/FPS-124 (range 80nm)

STRATEGIC 6: 4 Coastal; 2 Transportable

AIR-LAUNCHED MISSILES

AAM • IR AIM-9L *Sidewinder*

ARH AIM-120C AMRAAM

BOMBS

Laser-guided: GBU-10/GBU-12/GBU-16 *Paveway II*;

GBU-24 *Paveway III*

INS/GPS-guided: GBU-31 JDAM; GBU-38 JDAM; GBU-

49 *Enhanced Paveway II*

NATO Flight Training Canada**EQUIPMENT BY TYPE****AIRCRAFT**

TRG 45: 26 T-6A *Texan II* (CT-156 *Harvard II*); 19 *Hawk*

115 (CT-155) (advanced wpns/tactics trg)

Contracted Flying Services – Southport**EQUIPMENT BY TYPE****AIRCRAFT**

TPT • Light 7 Beech C90B *King Air*

TRG 11 G-120A

HELICOPTERS

MRH 9 Bell 412 (CH-146)

TPT • Light 7 Bell 206 *Jet Ranger* (CH-139)**Canadian Special Operations Forces Command 1,500****FORCES BY ROLE****SPECIAL FORCES**

1 SF regt (Canadian Special Operations Regiment)

1 SF unit (JTF 2)

COMBAT SERVICE SUPPORT

1 CBRN unit (Canadian Joint Incident Response Unit – CJIRU)

TRANSPORT HELICOPTER1 (spec ops) sqn, with Bell 412 (CH-146 *Griffon* – from the RCAF)**EQUIPMENT BY TYPE**NBC VEHICLES 4 LAV *Bison* NBCHELICOPTERS • MRH 10 Bell 412 (CH-146 *Griffon*)**Canadian Forces Joint Operational Support Group****FORCES BY ROLE****COMBAT SUPPORT**

1 engr spt coy

1 (close protection) MP coy

1 (joint) sigs regt

COMBAT SERVICE SUPPORT

1 (spt) log unit

1 (movement) log unit

Gendarmerie & Paramilitary 4,500**Canadian Coast Guard 4,500**

Incl Department of Fisheries and Oceans; all platforms are designated as non-combatant

EQUIPMENT BY TYPE**PATROL AND COASTAL COMBATANTS 71**PSOH 1 *Leonard J Cowley*PSO 1 *Sir Wilfred Grenfell* (with hel landing platform)PCO 13: 2 *Cape Roger*; 1 *Gordon Reid*; 9 *Hero*; 1 *Tanu*

PBF 1 Response Boat-Medium (RB-M)

PB 55: 6 *Baie de Plaisance*; 1 *Laredo Sound*; 10 Type-300A;36 Type-300B; 1 *S. Dudka*; 1 *Vakta***AMPHIBIOUS • LANDING CRAFT 4**

UCAC 4 Type-400

LOGISTICS AND SUPPORT 33

ABU 7

AG 4

AGB 17

AGOS 5

HELICOPTERS • MRH 7 Bell 412EP • TPT 19: Medium

1 S-61; Light 18: 3 Bell 206L *Long Ranger*; 15 Bell 429**DEPLOYMENT**CYPRUS: UN • UNFICYP (*Operation Snowgoose*) 1

DEMOCRATIC REPUBLIC OF THE CONGO: UN •

MONUSCO (*Operation Crocodile*) 8EGYPT: MFO (*Operation Calumet*) 55; 1 MP teamIRAQ: *Operation Inherent Resolve (Impact)* 250; 1 SF trg gp; 1 hel flt with 3 Bell 412 (CH-146 *Griffon*) hel 1 med unit;

NATO • NATO Mission Iraq 17

KUWAIT: *Operation Inherent Resolve (Impact)* 2 C-130J-30 *Hercules* (CC-130J)LATVIA: NATO • Enhanced Forward Presence (*Operation Reassurance*) 540; 1 mech inf bn HQ; 1 mech inf coy(+); 1 cbt spt coy; LAV 6.0; M777MALI: UN • MINUSMA (*Operation Presence*) 5MIDDLE EAST: UN • UNTSO (*Operation Jade*) 5

NORTH SEA: NATO • SNMG 1: 1 FFGHM

ROMANIA: NATO • Air Policing 135; 6 F/A-18A *Hornet* (CF-18)SERBIA: NATO • KFOR • *Joint Enterprise (Operation Kobold)* 5SOUTH SUDAN: UN • UNMISS (*Operation Soprano*) 6UKRAINE: *Operation Unifier* 200**FOREIGN FORCES**United Kingdom BATUS 400; 1 trg unit; 1 hel flt with SA341 *Gazelle* AH1

United States 140

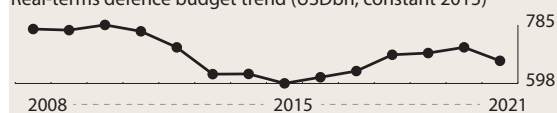
United States US

United States Dollar USD		2020	2021	2022
GDP	USD	20.9tr	22.9tr	
per capita	USD	63,358	69,375	
Growth	%	-3.4	6.0	
Inflation	%	1.2	4.3	
Def exp [a]	USD	785bn	811bn	
Def bdgt [b]	USD	775bn	754bn	768bn

[a] NATO figure

[b] National Defense Budget Function (50) Budget Authority. Includes DoD funding, as well as funds for nuclear-weapons-related activities undertaken by the Department of Energy. Excludes some military retirement and healthcare costs.

Real-terms defence budget trend (USDbn, constant 2015)



Population 334,998,398

Age	0–14	15–19	20–24	25–29	30–64	65 plus
Male	9.4%	3.2%	3.3%	3.5%	22.1%	7.7%
Female	9.0%	3.1%	3.2%	3.4%	22.5%	9.5%

Capabilities

The United States remains the world's most capable military power, with a unique ability to project power on a global basis. In March 2021, the Biden administration issued an Interim National Security Strategic Guidance which heralded international re-engagement and the end of what it termed the US's 'forever wars'. It announced a new Global Posture Review that would mainly focus on the Indo-Pacific and Europe with more qualified attention on the Middle East. The manner of the US withdrawal from Afghanistan led to concerns and unease among allies and partners about future US engagements. The US defence secretary has called for an 'integrated deterrence' strategy across the domains but also with allies and partners. The Biden administration has also begun a Nuclear Posture Review, after the previous Trump administration review in 2018 backed the development of low-yield warheads and a nuclear-capable sea-launched cruise missile. A Missile Defense Review was published in January 2019 envisaging a number of new programmes and technologies, including space-based systems. In August 2019 the Pentagon established a new Space Command followed by the establishment of a Space Force in December 2019, subsequently endorsed by the Biden administration. In June 2020 it also published a Defense Space Strategy. The US maintains an all-volunteer force, including significant reserves, with high levels of training throughout all commands and services. The Pentagon is trying to improve readiness. Modernisation priorities include a renewal of strategic nuclear capabilities, including a new class of ballistic-missile submarine and a new long-range bomber, and also improved naval capabilities that are likely to include both crewed and uninhabited platforms. In August 2019, the US withdrew from the Intermediate-range Nuclear Forces Treaty, and three weeks later conducted a ground-launched cruise-missile test. Under President Biden, the US agreed to extend the New START treaty in February 2021 but in May 2021 confirmed it would not rejoin the Open Skies Treaty (from which the US had withdrawn in November 2020). The US also continues to actively

develop its defensive and offensive cyber capabilities. The country has the world's most capable defence industry, active in all sectors and with a dominant position in the international defence market.

ACTIVE 1,395,350 (Army 489,050 Navy 349,600 Air Force 329,400 Space Force 6,400 US Marine Corps 179,250 US Coast Guard 41,650)

RESERVE 843,450 (Army 522,300 Navy 100,450 Air Force 178,600 Marine Corps Reserve 35,850 US Coast Guard 6,250)

ORGANISATIONS BY SERVICE

US Strategic Command

HQ at Offutt AFB (NE). Five missions: US nuclear deterrent; missile defence; global strike; info ops; ISR

US Navy

EQUIPMENT BY TYPE

SUBMARINES • STRATEGIC • SSBN 14 *Ohio* with up to 20 UGM-133A *Trident* D-5/D-5LE nuclear SLBM, 4 single 533mm TT with Mk 48 ADCAP mod 6/7 HWT

US Air Force • Global Strike Command

FORCES BY ROLE

MISSILE

9 sqn with LGM-30G *Minuteman* III

BOMBER

5 sqn with B-52H *Stratofortress*

2 sqn with B-2A *Spirit* (+1 ANG sqn personnel only)

EQUIPMENT BY TYPE

SURFACE-TO-SURFACE MISSILE LAUNCHERS

ICBM • Nuclear 400 LGM-30G *Minuteman* III (1 Mk12A or Mk21 re-entry veh per missile)

AIRCRAFT

BBR 66: 20 B-2A *Spirit*; 46 B-52H *Stratofortress*

AIR-LAUNCHED MISSILES

ALCM • Nuclear AGM-86B

Strategic Defenses – Early Warning

North American Aerospace Defense Command (NORAD) – a combined US–CAN organisation

EQUIPMENT BY TYPE

RADAR

NORTH WARNING SYSTEM 50: 14 AN/FPS-117; 36 AN/FPS-124

SOLID STATE PHASED ARRAY RADAR SYSTEM (SSPARS) 5 AN/FPS-132 Upgraded Early Warning Radar located at Beale AFB (CA), Cape Cod SFS (MA), Clear SFS (AK), Thule AB (GL) and RAF Fylingdales (UK)

SPACETRACK SYSTEM 7: 1 AN/FPS-85 Spacetrack Radar at Eglin AFB (FL); 6 contributing radars at Cavalier SFS (ND), Clear SFS (AK), Thule AB (GL), RAF Fylingdales (UK), Beale AFB (CA) and Cape Cod SFS (MA); 3 Spacetrack Optical Trackers located at Socorro (NM), Maui (HI), Diego Garcia (BIOT)

PERIMETER ACQUISITION RADAR ATTACK CHARACTERISATION SYSTEM (PARCS) 1 AN/FPQ-16 at Cavalier SFS (ND)

DETECTION AND TRACKING RADARS 5 located at Kwajalein Atoll, Ascension Island, Australia, Kaena Point (HI), MIT Lincoln Laboratory (MA)

GROUND BASED ELECTRO OPTICAL DEEP SPACE SURVEILLANCE SYSTEM (GEODSS) Socorro (NM), Maui (HI), Diego Garcia (BIOT)

STRATEGIC DEFENCES – MISSILE DEFENCES

SEA-BASED: *Aegis* engagement cruisers and destroyers

LAND-BASED: 40 ground-based interceptors at Fort Greely (AK); 4 ground-based interceptors at Vandenburg SFB (CA)

Space

EQUIPMENT BY TYPE

SATELLITES 142

COMMUNICATIONS 46: 6 AEHF; 6 DSCS-III; 2 *Milstar-I*; 3 *Milstar-II*; 5 MUOS; 1 PAN-1 (P360); 5 SDS-III; 2 SDS-IV; 6 UFO; 10 WGS SV2

NAVIGATION/POSITIONING/TIMING 30: 12 NAVSTAR Block IIF; 7 NAVSTAR Block IIR; 7 NAVSTAR Block IIRM; 4 NAVSTAR Block III

METEOROLOGY/OCEANOGRAPHY 6 DMSP-5

ISR 18: 5 *FIA Radar*; 6 *Evolved Enhanced/Improved Crystal* (visible and infrared imagery); 2 *Lacrosse (Onyx radar imaging satellite)*; 1 NRO L-71; 1 NRO L-76; 1 ORS-1; 1 *TacSat-4*; 1 *TacSat-6*

ELINT/SIGINT 27: 2 *Mentor* (advanced *Orion*); 3 *Advanced Mentor*; 4 *Mercury*; 1 NRO L-67; 1 *Trumpet*; 4 *Improved Trumpet*; 12 SBWASS (Space Based Wide Area Surveillance System; Naval Ocean Surveillance System)

SPACE SURVEILLANCE 6: 4 GSSAP; 1 SBSS (Space Based Surveillance System); 1 ORS-5

EARLY WARNING 9: 4 DSP; 5 SBIRS *Geo-1*

COUNTERSPACE • **EW** Counter Communications System (CCS)

US Army 489,050

FORCES BY ROLE

Sqn are generally bn sized and tp are generally coy sized

COMMAND

4 (I, III, V & XVIII AB) corps HQ

1 (2nd) inf div HQ

1 (56th) arty comd

SPECIAL FORCES

(see USSOCOM)

MANOEUVRE

Armoured

2 (1st Armd & 1st Cav) armd div (3 (1st–3rd ABCT) armd bde (1 armd recce sqn, 2 armd bn, 1 armd inf bn, 1 SP arty bn, 1 cbt engr bn, 1 CSS bn); 1 SP arty bde HQ; 1 log bde; 1 (hy cbt avn) hel bde)

1 (1st) inf div (2 (1st & 2nd ABCT) armd bde (1 armd recce sqn, 2 armd bn, 1 armd inf bn, 1 SP arty bn, 1 cbt engr bn, 1 CSS bn); 1 SP arty bde HQ; 1 log bde; 1 (cbt avn) hel bde)

1 (3rd) inf div (2 (1st & 2nd ABCT) armd bde (1 armd recce sqn, 2 armd bn, 1 armd inf bn, 1 SP arty bn, 1 cbt engr bn, 1 CSS bn); 1 lt inf bn; 1 SP arty bde HQ; 1 log bde; 1 (cbt avn) hel bde)

Mechanised

1 (4th) inf div (1 (3rd ABCT) armd bde (1 armd recce sqn, 2 armd bn, 1 armd inf bn, 1 SP arty bn, 1 cbt engr bn, 1 CSS bn); 2 (1st & 2nd SBCT) mech bde (1 armd recce sqn, 3 mech inf bn, 1 arty bn, 1 cbt engr bn, 1 CSS bn); 1 SP arty bde HQ; 1 log bde; 1 (hy cbt avn) hel bde)

1 (7th) inf div (2 (1st & 2nd SBCT, 2nd ID) mech bde (1 armd recce sqn, 3 mech inf bn, 1 arty bn, 1 cbt engr bn, 1 CSS bn))

1 (1st SBCT, 25th ID) mech bde (1 armd recce sqn, 3 mech inf bn, 1 arty bn, 1 cbt engr bn, 1 CSS bn)

2 (2nd & 3rd CR) mech bde (1 armd recce sqn, 3 mech sqn, 1 arty sqn, 1 cbt engr sqn, 1 CSS sqn)

Light

1 (10th Mtn) inf div (3 (1st–3rd IBCT) lt inf bde (1 recce sqn, 3 inf bn, 1 arty bn, 1 cbt engr bn, 1 CSS bn); 1 log bde; 1 (cbt avn) hel bde)

1 (25th) inf div (2 (2 & 3rd IBCT) inf bde (1 recce sqn, 2 inf bn, 1 arty bn, 1 cbt engr bn, 1 CSS bn); 1 log bde; 1 (cbt avn) hel bde)

5 (Sy Force Assist) inf bde(-)

Air Manoeuvre

1 (82nd) AB div (1 (1st AB BCT) AB bde (1 recce bn, 1 mech coy; 3 para bn, 1 arty bn, 1 cbt engr bn, 1 CSS bn); 2 (2nd & 3rd AB BCT) AB bde (1 recce bn, 3 para bn, 1 arty bn, 1 cbt engr bn, 1 CSS bn); 1 (cbt avn) hel bde; 1 log bde)

1 (101st) air aslt div (3 (1st–3rd AB BCT) AB bde (1 recce bn, 3 para bn, 1 arty bn, 1 cbt engr bn, 1 CSS bn); 1 (cbt avn) hel bde; 1 log bde)

1 (173rd AB BCT) AB bde (1 recce bn, 2 para bn, 1 arty bn, 1 cbt engr bn, 1 CSS bn)

1 (4th AB BCT, 25th ID) AB bde (1 recce bn, 2 para bn, 1 arty bn, 1 cbt engr bn, 1 CSS bn)

Other

1 (11th ACR) trg armd cav regt (OPFOR) (2 armd cav sqn, 1 CSS bn)

COMBAT SUPPORT

3 MRL bde (2 MRL bn)

1 MRL bde (1 MRL bn; 1 SSM bn (forming))

1 MRL bde (5 MRL bn)

4 engr bde

2 EOD gp (2 EOD bn)

10 int bde

2 int gp

4 MP bde

1 NBC bde

3 (strat) sigs bde

4 (tac) sigs bde

1 (1st MDTF) cbt spt bde (1 (I2CEWS) cbt spt bn)

1 (2nd MDTF) cbt spt bde(-)

COMBAT SERVICE SUPPORT

- 2 log bde
- 3 med bde
- 1 tpt bde

ISR

- 1 ISR avn bde

HELICOPTER

- 2 (cbt avn) hel bde
- 1 (cbt avn) hel bde HQ

AIR DEFENCE

- 5 SAM bde

Reserve Organisations**Army National Guard 337,150 reservists**

Normally dual-funded by DoD and states. Civil-emergency responses can be mobilised by state governors. Federal government can mobilise ARNG for major domestic emergencies and for overseas operations

FORCES BY ROLE**COMMAND**

- 8 div HQ

SPECIAL FORCES

- (see USSOCOM)

MANOEUVRE**Reconnaissance**

- 1 armd recce sqn

Armoured

- 5 (ABCT) armd bde (1 armd recce sqn, 2 armd bn, 1 armd inf bn, 1 SP arty bn, 1 cbt engr bn, 1 CSS bn)

Mechanised

- 2 (SBCT) mech bde (1 armd recce sqn, 3 mech inf bn, 1 arty bn, 1 cbt engr bn, 1 CSS bn)

Light

- 14 (IBCT) inf bde (1 recce sqn, 3 inf bn, 1 arty bn, 1 cbt engr bn, 1 CSS bn)

- 6 (IBCT) inf bde (1 recce sqn, 2 inf bn, 1 arty bn, 1 cbt engr bn, 1 CSS bn)

- 1 (Sy Force Assist) inf bde(-)

- 4 inf bn

Air Manoeuvre

- 1 AB bn

COMBAT SERVICE SUPPORT

- 8 arty bde
- 1 SP arty bn
- 8 engr bde
- 1 EOD regt
- 3 int bde
- 3 MP bde
- 1 NBC bde
- 2 (tac) sigs bde
- 17 (Mnv Enh) cbt spt bde

COMBAT SERVICE SUPPORT

- 10 log bde
- 17 (regional) log spt gp

HELICOPTER

- 8 (cbt avn) hel bde
- 5 (theatre avn) hel bde

AIR DEFENCE

- 3 SAM bde

Army Reserve 185,150 reservists

Reserve under full command of US Army. Does not have state-emergency liability of Army National Guard

FORCES BY ROLE**SPECIAL FORCES**

- (see USSOCOM)

COMBAT SUPPORT

- 4 engr bde
- 4 MP bde
- 2 NBC bde
- 2 sigs bde
- 3 (Mnv Enh) cbt spt bde

COMBAT SERVICE SUPPORT

- 9 log bde
- 11 med bde

HELICOPTER

- 2 (exp cbt avn) hel bde

Army Stand-by Reserve 700 reservists

Trained individuals for mobilisation

EQUIPMENT BY TYPE**ARMoured FIGHTING VEHICLES**

MBT 2,645: €650 M1A1 SA *Abrams*; 1,605 M1A2 SEPv2 *Abrams*; €390 M1A2 SEPv3 *Abrams*; (€3,450 more M1A1/A2 *Abrams* in store)

ASLT €100 M1128 *Stryker* MGS (being divested 2022)

RECCE 1,745: €1,200 M3A2/A3 *Bradley*; 545 M1127 *Stryker* RV (€800 more M3 *Bradley* in store)

IFV 2,931: €14 LAV-25; €2,500 M2A2/A3 *Bradley*; 334 M7A3/SA BFIST (OP); 83 M1296 *Stryker Dragoon* (€2,000 more M2 *Bradley* in store)

APC 10,607

APC (T) 5,060: 60 AMPV (in test); €5,000 M113A2/A3 (€8,000 more in store)

APC (W) 2,613: 1,467 M1126 *Stryker* ICV; 296 M1130 *Stryker* CV (CP); 167 M1131 *Stryker* FSV (OP); 258 M1133 *Stryker* MEV (Amb); 21 M1251A1 *Stryker* FSV (OP); 46 M1254A1 *Stryker* MEV (Amb); 52 M1255A1 *Stryker* CV (CP); 306 M1256A1 *Stryker* ICV

PPV 2,934: 2,633 *MaxxPro Dash*; 301 *MaxxPro* LWB (Amb)

AUV 19,516+: 10,500+ JLTV; 2,900 M1117 ASV; 465 M1200 *Armored Knight* (OP); 5,651 M-ATV

ENGINEERING & MAINTENANCE VEHICLES

AEV 553: €135 M1150 ABV; 250 M9 ACE; 152 M1132 *Stryker* ESV; 16 M1257A1 *Stryker* ESV

ARV 1,260+: 360 M88A1; €900 M88A2 (€1,000 more M88A1 in store); some M578

VLB 365: €230 M60 AVLB; 75 M1074 Joint Assault Bridge; 20 REBS; 40 *Wolverine* HAB

MW 3+: *Aardvark* JSFU Mk4; some *Husky* 2G; 3+ *Hydrema* 910 MCV-2; M58/M59 MICLIC; M139; *Rhino*

NBC VEHICLES 234 M1135 *Stryker* NBCRV

ANTI-TANK/ANTI-INFRASTRUCTURE**MSL**

SP 1,133: 120 M1134 *Stryker* ATGM; 13 M1253A1 *Stryker* ATGM; €1,000 M1167 HMMWV TOW

MANPATs FGM-148 *Javelin*

RCL 84mm *Carl Gustaf*

ARTILLERY 5,123

SP 155mm 689: €514 M109A6; 175 M109A7 (€850 more M109A6 in store)

TOWED 1,339: 105mm 821 M119A2/3; 155mm 518 M777A2

MRL 227mm 588: 363 M142 HIMARS; 225 M270A1 MLRS

MOR 2,507: 81mm 990 M252; 120mm 1,076 M120/M1064A3; SP 120mm 441; 378 M1129 *Stryker* MC; 63 M1252A1 *Stryker* MC

SURFACE-TO-SURFACE MISSILE LAUNCHERS

SRBM • Conventional MGM-140A/B ATACMS; MGM-168 ATACMS (All launched from M270A1 MLRS or M142 HIMARS MRLs)

AMPHIBIOUS

PRINCIPAL AMPHIBIOUS SHIPS 7

LSL 7 *Frank Besson* (capacity 24 *Abrams* MBT)

LANDING CRAFT 70

LCT 34 LCU 2000 (capacity 5 M1 *Abrams* MBT)

LCM 36 LCM 8 (capacity either 1 M1 *Abrams* MBT or 200 troops)

AIRCRAFT

ISR 47: 8 EMARSS-G; 4 EMARSS-V; 8 EMARSS-M; 19 RC-12X *Guardrail* (5 trg); 8 RO-6A ARL-E

SIGINT 2 CL-600 *Artemis*

ELINT 9: 4 EMARSS-S; 4 EO-5C ARL-M (COMINT/ELINT); 1 TO-5C (trg)

TPT 156: **Light** 152: 113 Beech A200 *King Air* (C-12 *Huron*); 28 Cessna 560 *Citation* (UC-35A/B); 11 SA-227 *Metro* (C-26E); **PAX** 4: 1 Gulfstream IV (C-20F); 2 Gulfstream V (C-37A); 1 Gulfstream G550 (C-37B)

TRG 4 T-6D *Texan* II

HELICOPTERS

ATK 740: €310 AH-64D *Apache*; €430 AH-64E *Apache*

SAR 306: 19 HH-60L *Black Hawk*; 287 HH-60M *Black Hawk* (medevac)

TPT 2,766: **Heavy** 450 CH-47F *Chinook*; **Medium** 1,794: €50 UH-60A *Black Hawk*; €900 UH-60L *Black Hawk*; 838 UH-60M *Black Hawk*; 6 UH-60V *Black Hawk*; **Light** 522: 457 UH-72A *Lakota*; 65 UH-1H/V *Iroquois*

UNINHABITED AERIAL VEHICLES 416

CISR • **Heavy** €180 MQ-1C *Gray Eagle*

ISR • **Medium** 236 RQ-7B *Shadow*

AIR DEFENCE

SAM 1,187+

Long-range 480 M902/M903 *Patriot* PAC-3/PAC-3 MSE

Short-range *Iron Dome*; NASAMS

Point-defence 457+: FIM-92 *Stinger*; 4 M-SHORAD; 453 M1097 *Avenger*

GUNS • Towed • 20mm *Phalanx* (LPWS)

MISSILE DEFENCE • Long-range 42 THAAD

AIR-LAUNCHED MISSILES

ASM AGM-114K/L/M/N/R *Hellfire* II; AGM-179A JAGM; APKWS

US Navy 349,600

Comprises 2 Fleet Areas, Atlantic and Pacific. 6 Fleets: 2nd – Atlantic; 3rd – Pacific; 4th – Caribbean, Central and South America; 5th – Arabian Sea, Persian Gulf, Red Sea; 6th – Mediterranean; 7th – Indian Ocean, East Asia, W. Pacific; plus Military Sealift Command (MSC); Naval Reserve Force (NRF). For Naval Special Warfare Command, see US Special Operations Command

EQUIPMENT BY TYPE

SUBMARINES 67

STRATEGIC • SSBN 14 *Ohio* (opcon US STRATCOM) with up to 20 UGM-133A *Trident* D-5/D-5LE nuclear SLBM, 4 single 533mm TT with Mk 48 ADCAP mod 6/7 HWT

TACTICAL 53

SSGN 51:

4 *Ohio* (mod) with 22 7-cell MAC VLS with UGM-109E *Tomahawk* Block IV LACM, 4 single 533mm TT with Mk 48 ADCAP mod 6/7 HWT

6 *Los Angeles* Flight II with 1 12-cell VLS with UGM-109E *Tomahawk* Block IV LACM, 4 single 533mm TT with Mk 48 ADCAP mod 6/7 HWT

22 *Los Angeles* Flight III with 1 12-cell VLS with UGM-109E *Tomahawk* Block IV LACM, 4 single 533mm TT with Mk 48 ADCAP mod 6/7 HWT

10 *Virginia* Flight I/II with 1 12-cell VLS with UGM-109E *Tomahawk* Block IV LACM, 4 single 533mm TT with Mk 48 ADCAP mod 6/7 HWT

8 *Virginia* Flight III with 2 6-cell VPT VLS with UGM-109E *Tomahawk* Block IV LACM, 4 single 533mm TT with Mk 48 ADCAP mod 6/7 HWT

1 *Virginia* Flight IV with 2 6-cell VPT VLS with UGM-109E *Tomahawk* Block IV LACM, 4 single 533mm TT with Mk 48 ADCAP mod 6/7 HWT

SSN 2 *Seawolf* (one other non-operational after collision in 2021, extent of damage unclear) with 8 single 660mm TT with UGM-109E *Tomahawk* Block IV LACM/Mk 48 ADCAP mod 6/7 HWT

PRINCIPAL SURFACE COMBATANTS 124

AIRCRAFT CARRIERS • CVN 11:

1 *Gerald R. Ford* with 2 octuple Mk 29 mod 5 GMLS with RIM-162D ESSM SAM, 2 Mk 49 mod 3 GMLS with RIM-116C RAM Block 2 SAM, 3 Mk 15 *Phalanx* Block 1B CIWS (typical capacity 75+ F/A-18E/F *Super Hornet* FGA ac; F-35C *Lightning* II FGA ac; E-2D *Hawkeye* AEW&C ac; EA-18G *Growler* EW ac; MH-60R *Seahawk* ASW hel; MH-60S *Knight Hawk* MRH hel)

10 *Nimitz* with 2 8-cell Mk29 GMLS with RIM-162 ESSM SAM, 2 Mk 49 GMLS with RIM-116 RAM Block 2 SAM, 3 Mk 15 *Phalanx* Block 1B CIWS (typical capacity 55 F/A-18E/F *Super Hornet* FGA ac; F-35C *Lightning* II FGA ac; 4 EA-18G *Growler* EW ac; 4 E-2C/D *Hawkeye* AEW ac; 6 MH-60R/S *Seahawk*/ *Knight Hawk* hel)

CRUISERS • CGHM 24:

22 *Ticonderoga* (of which 5 in modernisation programme and 2 more at Reduced Readiness) with *Aegis* Baseline 5/6/8/9 C2, 2 quad Inchr with RGM-84D *Harpoon* Block 1C ASHM, 16 8-cell Mk 41 VLS (of

which 2 only 5-cell and fitted with reload crane) with RGM-109E *Tomahawk* Block IV LACM/SM-2 Block III/IIIA/IIIB/IV SAM/SM-3 Block IA/B SAM/SM-6 Block I SAM, 2 triple 324mm SVTT Mk 32 ASTT with Mk 54 LWT, 2 Mk 15 *Phalanx* Block 1B CIWS, 2 127mm guns (capacity 2 MH-60R *Seahawk*/MH-60S *Knight Hawk* hel)

- 2 *Zumwalt* with 20 4-cell Mk 57 VLS with RGM-109E *Tomahawk* Block IV LACM/RIM-162 ESSM SAM/SM-2 Block IIIA SAM/ASROC A/S msl, 2 155mm guns (capacity 2 MH-60R *Seahawk* ASW hel or 1 MH-60R *Seahawk* ASW hel and 3 *Fire Scout* UAV)

DESTROYERS 68:

DDGHM 40:

5 *Arleigh Burke* Flight IIA with *Aegis* Baseline 5/9 C2, 12 8-cell Mk 41 VLS with RGM-109E *Tomahawk* Block IV LACM/SM-2 Block III/IIIA/IIIB/IV SAM/SM-3 Block IA/B SAM/SM-6 Block I SAM/ASROC A/S msl, 2 triple 324mm SVTT Mk 32 ASTT with Mk 54 LWT, 2 Mk 15 *Phalanx* Block 1B CIWS, 1 127mm gun (capacity 2 MH-60R *Seahawk*/MH-60S *Knight Hawk* hel)

35 *Arleigh Burke* Flight IIA with *Aegis* Baseline 6/7/9 C2, 12 8-cell Mk 41 VLS with RGM-109E *Tomahawk* Block IV LACM/SM-2 Block III/IIIA/IIIB/IV SAM/SM-3 Block IA/B SAM/SM-6 Block I SAM/ASROC A/S msl, 2 triple 324mm SVTT Mk 32 ASTT with Mk 54 LWT, 1 Mk 15 *Phalanx* Block 1B CIWS, 1 127mm gun (capacity 2 MH-60R *Seahawk*/MH-60S *Knight Hawk* hel) (of which 1 vessel also with 1 Mk 15 SeaRAM with RIM-116C RAM Block 2 and 2 vessels also with 1 Optical Dazzling Interdictor, Navy (ODIN) LWS)

DDGM 28 *Arleigh Burke* Flight I/II with *Aegis* Baseline 5/9 C2, 2 quad Inchr with RGM-84D *Harpoon* Block 1C AShM, 12 8-cell Mk 41 VLS (of which 2 only 5-cell and fitted with reload crane) with RGM-109E *Tomahawk* Block IV LACM/SM-2 Block III/IIIA/IIIB/IV SAM/SM-3 Block IA/B SAM/SM-6 Block I SAM/ASROC A/S msl, 2 triple 324mm SVTT Mk 32 ASTT with Mk 54 LWT, 2 Mk 15 *Phalanx* Block 1B CIWS (of which 3 vessels with 1 Mk 15 SeaRAM with RIM-116C RAM Block 2, 1 Mk 15 *Phalanx* Block 1B instead of 2 *Phalanx*), 1 127mm gun, 1 hel landing platform

FRIGATES 21:

FFGHM 4 *Independence* with 2 quad Inchr with NSM (RGM-184A) AShM, 1 11-cell SeaRAM Inchr with RIM-116C Block 2 SAM, 1 57mm gun (capacity 2 MH-60R/S *Seahawk*/Knight Hawk hel and 3 MQ-8 *Fire Scout* UAV)

FFHM 17:

9 *Freedom* with 1 21-cell Mk 49 Inchr with RIM-116C RAM Block 2 SAM, 1 57mm gun (capacity 2 MH-60R/S *Seahawk*/Knight Hawk hel or 1 MH-60 with 3 MQ-8 *Fire Scout* UAV)

8 *Independence* with 1 11-cell SeaRAM Inchr with RIM-116C Block 2 SAM, 1 57mm gun (capacity 2 MH-60R/S *Seahawk*/Knight Hawk hel and 3 MQ-8 *Fire Scout* UAV)

PATROL AND COASTAL COMBATANTS 86

PCFG 10 *Cyclone* with 1 quad Mk 208 Inchr with BGM-176B *Griffin* B SSM

PBF 76: 12 Mk VI; 32 Combatant Craft Assault; 2 Combatant Craft Heavy; 30 Combatant Craft Medium Mk 1

MINE WARFARE • MINE COUNTERMEASURES 8

MCO 8 *Avenger*

COMMAND SHIPS

LCC 2 *Blue Ridge* with 2 Mk 15 *Phalanx* Block 1B CIWS (capacity 3 LCPL; 2 LCPV; 700 troops; 1 med hel) (of which 1 vessel partially crewed by Military Sealift Command personnel)

AMPHIBIOUS

PRINCIPAL AMPHIBIOUS SHIPS 31:

LHA 2 *America* with 2 8-cell Mk 29 GMLS with RIM-162D ESSM SAM, 2 Mk 49 GMLS with RIM-116C RAM Block 2 SAM, 2 Mk 15 *Phalanx* Block 1B CIWS (capacity up to 29 ac/hel incl: 6-13 F-35B *Lightning* II FGA ac (possible 20 as full 'Lightning carrier'; 4 AH-1Z *Viper* atk hel; up to 12 MV-22B *Osprey* tpt ac; 2 MH-60S *Knight Hawk* MRH; 4 CH-53E *Sea Stallion* tpt hel; 2 UH-1Y *Iroquois* tpt hel; up to 1,800 troops)

LHD 7 *Wasp* with 2 8-cell Mk 29 GMLS with RIM-7M/P *Sea Sparrow* SAM, 2 Mk 49 GMLS with RIM-116C RAM Block 2 SAM, 2 Mk 15 *Phalanx* Block 1B CIWS (capacity up to 23 ac/hel incl: 6 AV-8B *Harrier* II FGA or F-35B *Lightning* II FGA ac (possible 20 F-35B as full 'Lightning carrier'; 4 AH-1Z *Viper* atk hel; 4 CH-53E *Sea Stallion* hel; up to 6 MV-22B *Osprey* tpt ac; 3 UH-1Y *Iroquois* tpt hel; 3 LCAC(L); 60 tanks; 1,687 troops)

LPD 11 *San Antonio* with 2 21-cell Mk 49 GMLS with RIM-116C RAM Block 2 SAM (1 vessel also fitted with 1 Solid-State Laser Technology Maturation (SSL-TM) LWS) (capacity 2 CH-53E *Sea Stallion* hel or 2 MV-22 *Osprey*; 2 LCAC(L); 14 AAV; 720 troops)

LSD 11:

4 *Harpers Ferry* with 2 Mk 49 GMLS with RIM-116C RAM Block 2 SAM, 2 Mk 15 *Phalanx* Block 1B CIWS (capacity 2 CH-53E *Sea Stallion* hel; 2 LCAC(L); 40 tanks; 500 troops)

7 *Whidbey Island* with 2 Mk 49 GMLS with RIM-116C RAM Block 2 SAM, 2 Mk 15 *Phalanx* Block 1B CIWS (capacity 2 CH-53E *Sea Stallion* hel; 4 LCAC(L); 40 tanks; 500 troops)

LANDING CRAFT 143:

LCU 32 LCU 1610 (capacity either 1 M1 *Abrams* MBT or 350 troops)

LCM 8 LCM 8

LCP 33 Maritime Positioning Force Utility Boat (MPF-UB)

LCAC 70: 68 LCAC(L) (MLU ongoing) (capacity either 1 MBT or 60 troops); 2 Ship To Shore Connector (SSC) (capacity 1 MBT or 145 troops)

LOGISTICS AND SUPPORT 13

AFDL 1 *Dynamic*

AGOR 6 (all leased out): 2 *Ocean*; 3 *Thomas G. Thompson*; 1 *Kilo Moana*

ARD 2

AX 1 *Prevail*

ESB 3 *Lewis B. Puller* (capacity 4 MH-53/MH-60 hel)

UUV (1 *Cutthroat* for testing)

MISSILE DEFENCE • Long-range 3 8-cell Mk 41 VLS with SM-3

Naval Reserve Forces 100,450**Selected Reserve 57,700****Individual Ready Reserve 42,750****Naval Inactive Fleet**

Notice for reactivation:

60–90 days minimum (still on naval-vessel register)

EQUIPMENT BY TYPE**PRINCIPAL SURFACE COMBATANTS • FRIGATES 2**FFH 2: 1 *Freedom* with 1 57mm gun; 1 *Independence* with 1 57mm gun**AMPHIBIOUS 4**LHA 3 *Tarawa*LSD 1 *Whidbey Island***LOGISTICS AND SUPPORT 4**AOE 2 *Supply*ARS 2 *Safeguard***Military Sealift Command (MSC)****Fleet Oiler (PM1)****EQUIPMENT BY TYPE****LOGISTICS AND SUPPORT 15**AOR 15 *Henry J. Kaiser* with 1 hel landing platform**Special Mission (PM2)****EQUIPMENT BY TYPE****LOGISTICS AND SUPPORT 21**AGM 3: 1 *Howard O. Lorenzen*; 1 *Invincible* (commercial operator); 1 Sea-based X-band radarAGOR 6 *Pathfinder*AGOS 5: 1 *Impeccable* (commercial operator); 4 *Victorious*AGS 1 *Waters*ARC 1 *Zeus*AS 5 (long-term chartered, of which 1 *Dominator*, 4 *Arrowhead*)**Prepositioning (PM3)****EQUIPMENT BY TYPE****LOGISTICS AND SUPPORT 14**AG 2: 1 *V Adm K.R. Wheeler*; 1 *Fast Tempo*AKR 5: 2 *Bob Hope*; 1 *Stockham*; 2 *Watson*

AKRH 5 2nd Lt John P. Bobo

ESD 2 *Montford Point***Service Support (PM4)****EQUIPMENT BY TYPE****LOGISTICS AND SUPPORT 12**AH 2 *Mercy* with 1 hel landing platformARS 2 *Safeguard*AS 4: 1 *Carolyn Chouest*; 2 *Emory S. Land*; 1 *Malama* (long-term chartered)ATF 4: 1 *Gary Chouest*; 3 *Powhatan***Sealift (PM5)**

(At a minimum of 4 days' readiness)

EQUIPMENT BY TYPE**LOGISTICS AND SUPPORT 25**AOT 1 *Maersk Peary* (long-term chartered)AK 9: 3 Sgt *Matej Kocak*; 1 1st Lt *Harry L. Martin*;1 LCpl *Roy M. Wheat*; 2 LTC *John U.D. Page*; 1 Maj.*Bernard F. Fisher*; 1 CPT *David I. Lyon*AKR 15: 5 *Bob Hope*; 2 *Gordon*; 2 *Shughart*; 6 *Watson***Fleet Ordnance and Dry Cargo (PM6)****EQUIPMENT BY TYPE****LOGISTICS AND SUPPORT 16**AOE 2 *Supply*AKEH 14 *Lewis and Clark***Expeditionary Fast Transport (PM8)****EQUIPMENT BY TYPE****LOGISTICS AND SUPPORT 14**AP 2 *Guam*EPF 12 *Spearhead***Dry Cargo and Tankers****EQUIPMENT BY TYPE****LOGISTICS AND SUPPORT 7**AK 3 (long-term chartered, of which 1 MV *Maersk Valencia*; 1 *Sea Eagle*; 1 SLNC *Corsica*)AOT 4 (long-term chartered, of which 2 *Empire State*; 1 SLNC *Pax*; 1 SLNC *Goodwill*)**US Maritime Administration (MARAD)****National Defense Reserve Fleet****EQUIPMENT BY TYPE****LOGISTICS AND SUPPORT 25**AGOS 2 *General Rudder*AGM 2: 1 *Pacific Collector*; 1 *Pacific Tracker*AK 11: 2 *Cape Ann* (breakbulk); 1 *Cape Chalmers* (breakbulk); 2 *Cape Farewell*; 1 *Cape Fear*; 2 *Cape Jacob*; 1 *Cape Nome* (breakbulk); 1 *Del Monte* (breakbulk); 1 *Savannah*AOT 4: 1 *Lawrence H. Gianella*; 3 *Paul Buck*AP 4: 1 *Empire State VI*; 1 *Golden Bear*; 1 *Kennedy*; 1 *State of Maine*AX 2: 1 *Freedom Star*; 1 *Kings Pointer***Ready Reserve Force**

Ships at readiness up to a maximum of 30 days

EQUIPMENT BY TYPE**LOGISTICS AND SUPPORT 42**ACS 6: 2 *Flickertail State*; 1 *Gopher State*; 3 *Keystone State*AK 2 *Wright* (breakbulk)AKR 33: 1 *Adm W.M. Callaghan*; 4 *Algol*; 4 *Cape Capella*; 1 *Cape Decision*; 4 *Cape Ducato*; 1 *Cape Edmont*; 1 *Cape Henry*; 2 *Cape Hudson*; 2 *Cape Knox*; 4 *Cape Island*; 1 *Cape Orlando*; 1 *Cape Race*; 1 *Cape Trinity*; 2 *Cape Trinity*; 2 *Cape Victory*; 2 *Cape Washington*AOT 1 *Petersburg***Naval Aviation 98,600**

10 air wg. Average air wing comprises 8 sqns: 4 with F/A-18; 1 with MH-60R; 1 with EA-18G; 1 with E-2C/D; 1 with MH-60S

FORCES BY ROLE**FIGHTER/GROUND ATTACK**

- 22 sqn with F/A-18E *Super Hornet*
- 10 sqn with F/A-18F *Super Hornet*
- 1 sqn with F-35C *Lightning II*
- 1 sqn (forming) with F-35C *Lightning II*

ANTI-SUBMARINE WARFARE

- 12 sqn with MH-60R *Seahawk*
- 3 ASW/ISR sqn with MH-60R *Seahawk*; MQ-8B *Fire Scout*

ELINT

- 1 sqn with EP-3E *Aries II*

ELINT/ELECTRONIC WARFARE

- 13 sqn with EA-18G *Growler*

MARITIME PATROL

- 12 sqn with P-8A *Poseidon*
- 1 (special projects) sqn with P-8A *Poseidon*

AIRBORNE EARLY WARNING & CONTROL

- 4 sqn with E-2C *Hawkeye*
- 5 sqn with E-2D *Hawkeye*

COMMAND & CONTROL

- 2 sqn with E-6B *Mercury*

MINE COUNTERMEASURES

- 2 sqn with MH-53E *Sea Dragon*

TRANSPORT

- 2 sqn with CMV-22B *Osprey* (forming)
- 2 sqn with C-2A *Greyhound*

TRAINING

- 1 (FRS) sqn with EA-18G *Growler*
- 1 (FRS) sqn with C-2A *Greyhound*; E-2C/D *Hawkeye*; TE-2C *Hawkeye*
- 1 sqn with E-6B *Mercury*
- 2 (FRS) sqn with F/A-18E/F *Super Hornet*
- 1 (FRS) sqn with F-35C *Lightning II*
- 1 (FRS) sqn with MH-53 *Sea Dragon*
- 2 (FRS) sqn with MH-60S *Knight Hawk*; HH-60H *Seahawk*
- 2 (FRS) sqn with MH-60R *Seahawk*
- 1 (FRS) sqn with P-3C *Orion*; P-8A *Poseidon*
- 6 sqn with T-6A/B *Texan II*
- 2 sqn with T-44C *Pegasus*
- 5 sqn with T-45C *Goshawk*
- 3 hel sqn with TH-57B/C *Sea Ranger*
- 1 (FRS) UAV sqn with MQ-8B *Fire Scout*; MQ-8C *Fire Scout*

TRANSPORT HELICOPTER

- 13 sqn with MH-60S *Knight Hawk*
- 2 tpt hel/ISR sqn with MH-60S *Knight Hawk*; MQ-8B *Fire Scout*; MQ-8C *Fire Scout*

ISR UAV

- 1 sqn with MQ-4C *Triton*

EQUIPMENT BY TYPE**AIRCRAFT** 954 combat capable

- FGA 672: 10 F-16A *Fighting Falcon*; 4 F-16B *Fighting Falcon*; 35 F-35C *Lightning II*; 5 F/A-18B *Hornet*; 16 F/A-18C *Hornet*; 4 F/A-18D *Hornet*; 319 F/A-18E *Super Hornet*; 279 F/A-18F *Super Hornet*
- ASW 124: 14 P-3C *Orion*; 110 P-8A *Poseidon*
- EW 158 EA-18G *Growler**
- ELINT 9 EP-3E *Aries II*
- AEW&C 74: 26 E-2C *Hawkeye*; 48 E-2D *Hawkeye*
- C2 16 E-6B *Mercury*

TKR/TPT 3: 1 KC-130R *Hercules*; 1 KC-130T *Hercules*; 1 KC-130J *Hercules*

TPT • **Light** 54: 4 Beech A200 *King Air* (C-12C *Huron*); 6 Beech A200 *King Air* (UC-12F *Huron*); 8 Beech A200 *King Air* (UC-12M *Huron*); 27 C-2A *Greyhound*; 2 DHC-2 *Beaver* (U-6A); 7 SA-227-BC *Metro III* (C-26D)

TRG 577: 44 T-6A *Texan II*; 231 T-6B *Texan II*; 7 T-38C *Talon*; 55 T-44C *Pegasus*; 238 T-45C *Goshawk*; 2 TE-2C *Hawkeye*

TILTROTOR • TPT 15 CMV-22B *Osprey*

HELICOPTERS

ASW 271 MH-60R *Seahawk*

MRH 258 MH-60S *Knight Hawk* (Multi Mission Support)

MCM 28 MH-53E *Sea Dragon*

ISR 3 OH-58C *Kiowa*

TPT 13: **Heavy** 2 CH-53E *Sea Stallion*; **Medium** 3 UH-60L *Black Hawk*; **Light** 8: 5 UH-72A *Lakota*; 2 UH-1N *Iroquois*; 1 UH-1Y *Venom*

TRG 134: 43 TH-57B *Sea Ranger*; 76 TH-57C *Sea Ranger*; 15 TH-73A

UNINHABITED AERIAL VEHICLES • ISR 113

Heavy 63: 5 MQ-4C *Triton*; 20 MQ-8B *Fire Scout*; 34 MQ-8C *Fire Scout*; 4 RQ-4A *Global Hawk* (evaluation and trials); **Medium** 35 RQ-2B *Pioneer*; **Light** 15 RQ-21A *Blackjack*

AIR-LAUNCHED MISSILES

AAM • IR AIM-9M *Sidewinder*; IIR AIM-9X *Sidewinder II*; SARH AIM-7 *Sparrow* (being withdrawn); ARH AIM-120C-5/C-7/D AMRAAM

ASM AGM-65F *Maverick*; AGM-114B/K/M *Hellfire*; APKWS

ASHM AGM-84D *Harpoon*; AGM-119A *Penguin* 3; AGM-158C LRASM

ARM AGM-88B/C/E HARM/AARGM

ALCM • **Conventional** AGM-84E/H/K SLAM/SLAM-ER

BOMBS

Laser-guided: GBU-10/12/16 *Paveway II*; GBU-24 *Paveway III*

INS/GPS guided: GBU-31/32/38 JDAM; Enhanced *Paveway II*; GBU-54 *Laser JDAM*; AGM-154A/C/C-1 JSOW

Naval Aviation Reserve**FORCES BY ROLE****FIGHTER/GROUND ATTACK**

- 1 sqn with F/A-18E/F *Super Hornet*

ANTI-SUBMARINE WARFARE

- 1 sqn with MH-60R *Seahawk*

ELECTRONIC WARFARE

- 1 sqn with EA-18G *Growler*

MARITIME PATROL

- 2 sqn with P-3C *Orion*

TRANSPORT

- 6 log spt sqn with B-737-700 (C-40A *Clipper*)
- 1 log spt sqn with Gulfstream V/G550 (C-37A/B)
- 5 sqn with C-130T/KC-130T *Hercules*

TRAINING

- 2 (aggressor) sqn with F-5F/N *Tiger II*
- 1 (aggressor) sqn with F/A-18C/D *Hornet*

TRANSPORT HELICOPTER

1 sqn with MH-60S *Knight Hawk*

EQUIPMENT BY TYPE

AIRCRAFT 67 combat capable

FTR 31: 2 F-5F *Tiger II*; 29 F-5N *Tiger II*

FGA 24: 10 F/A-18C *Hornet*; 2 F/A-18D *Hornet*; 10 F/A-18E *Super Hornet*; 2 F/A-18F *Super Hornet*

ASW 7 P-3C *Orion*

EW 5 EA-18G *Growler**

TKR/TPT 11 KC-130T *Hercules*

TPT 40: **Medium** 19 C-130T *Hercules*; **PAX** 21: 17 B-737-700 (C-40A *Clipper*); 1 Gulfstream V (C-37A); 3 Gulfstream G550 (C-37B)

HELICOPTERS

ASW 5 MH-60R *Seahawk*

MRH 12 MH-60S *Knight Hawk*

MCM 6 MH-53E *Sea Dragon*

US Marine Corps 179,250

3 Marine Expeditionary Forces (MEF), 3 Marine Expeditionary Brigades (MEB), 7 Marine Expeditionary Units (MEU) drawn from 3 div. An MEU usually consists of a battalion landing team (1 SF coy, 1 lt armd recce coy, 1 recce pl, 1 armd pl, 1 amph aslt pl, 1 inf bn, 1 arty bty, 1 cbt engr pl), an aviation combat element (1 medium-lift sqn with attached atk hel, FGA ac and AD assets) and a composite log bn, with a combined total of about 2,200 personnel. Composition varies with mission requirements

FORCES BY ROLE**SPECIAL FORCES**

(see USSOCOM)

MANOEUVRE**Reconnaissance**

3 (MEF) recce coy

Amphibious

1 (1st) mne div (2 armd recce bn, 1 recce bn, 3 mne regt (4 mne bn), 1 amph aslt bn, 1 arty regt (3 arty bn, 1 MRL bn), 1 cbt engr bn, 1 EW bn, 1 int bn, 1 sigs bn)

1 (2nd) mne div (1 armd recce bn, 1 recce bn, 3 mne regt (3 mne bn), 1 amph aslt bn, 1 arty regt (2 arty bn), 1 cbt engr bn, 1 EW bn, 1 int bn, 1 sigs bn)

1 (3rd) mne div (1 recce bn, 1 inf regt (3 inf bn), 1 arty regt (2 arty bn), 1 cbt spt bn (1 armd recce coy, 1 amph aslt coy, 1 cbt engr coy), 1 EW bn, 1 int bn, 1 sigs bn)

COMBAT SERVICE SUPPORT

3 log gp

EQUIPMENT BY TYPE**ARMoured FIGHTING VEHICLES**

IFV 488 LAV-25

APC • **APC (W)** 207 LAV variants (66 CP; 127 log; 14 EW)

AAV 1,254: 1,200 AAV-7A1 (all roles); 54 ACV (in test)

AUV 6,129+: 1,725 *Cougar*; 3,700+ *JLTV*; 704 M-ATV

ENGINEERING & MAINTENANCE VEHICLES

AEV 42 M1 ABV

ARV 105: 60 AAVRA1; 45 LAV-R

MW 38 *Buffalo*; some *Husky* 2G

VLB 30 M60 AVLB

ANTI-TANK/ANTI-INFRASTRUCTURE**MSL**

SP 106 LAV-AT

MANPATS FGM-148 *Javelin*; FGM-172B SRAW-MPV; TOW

ARTILLERY 1,459

TOWED 812: **105mm**: 331 M101A1; **155mm** 481 M777A2

MRL **227mm** 47 M142 HIMARS

MOR 600: **81mm** 535 M252; **SP 81mm** 65 LAV-M; **120mm** (49 EFSS in store for trg)

UNINHABITED AERIAL VEHICLES

ISR • **Light** 100 BQM-147 *Exdrone*

AIR DEFENCE • **SAM** • **Point-defence** FIM-92 *Stinger*

Marine Corps Aviation 34,700

3 active Marine Aircraft Wings (MAW) and 1 MCR MAW

FORCES BY ROLE**FIGHTER**

1 sqn with F/A-18A++/C/C+ *Hornet*

3 sqn with F/A-18C *Hornet*

2 sqn with F/A-18D *Hornet*

FIGHTER/GROUND ATTACK

4 sqn with AV-8B *Harrier II*

5 sqn with F-35B *Lightning II*

1 sqn with F-35C *Lightning II*

COMBAT SEARCH & RESCUE/TRANSPORT

1 sqn with Beech A200/B200 *King Air* (UC-12F/M

Huron); Beech 350 *King Air* (UC-12W *Huron*); Cessna

560 *Citation Ultra/Encore* (UC-35C/D); Gulfstream

IV (C-20G)

TANKER

3 sqn with KC-130J *Hercules*

TRANSPORT

16 sqn with MV-22B *Osprey*

TRAINING

1 sqn with F/A-18C/D *Hornet*

2 sqn with F-35B *Lightning II*

1 sqn with MV-22B *Osprey*

1 hel sqn with AH-1Z *Viper*; UH-1Y *Venom*

1 hel sqn with CH-53E *Sea Stallion*

ATTACK HELICOPTER

7 sqn with AH-1Z *Viper*; UH-1Y *Venom*

TRANSPORT HELICOPTER

8 sqn with CH-53E *Sea Stallion*

1 (VIP) sqn with MV-22B *Osprey*; VH-3D *Sea King*;

VH-60N *White Hawk*

CISR UAV

1 sqn with MQ-9A *Reaper*

ISR UAV

2 sqn with RQ-21A *Blackjack*

AIR DEFENCE

2 bn with M1097 *Avenger*; FIM-92 *Stinger*

EQUIPMENT BY TYPE

AIRCRAFT 366 combat capable

FGA 366: 112 F-35B *Lightning II*; 15 F-35C *Lightning II*;

10 F/A-18A++ *Hornet*; 70 F/A-18C *Hornet*; 1 F/A-18C+

Hornet; 50 F/A-18D *Hornet*; 95 AV-8B *Harrier II*; 13 TAV-8B *Harrier*

TKR/TPT 44 KC-130J *Hercules*

TPT 17: **Light** 16: 5 Beech A200/B200 *King Air* (UC-

12F/M *Huron*); 5 Beech 350 *King Air* (C-12W *Huron*); 6

Cessna 560 *Citation Encore* (UC-35D); **PAX** 1 Gulfstream

IV (C-20G)

TRG 3 T-34C *Turbo Mentor*
TILTROTOR • TPT 309 MV-22B Osprey
HELICOPTERS

ATK 131 AH-1Z *Viper*
TPT 291: Heavy 140: 136 CH-53E *Sea Stallion*; 4 CH-53K *King Stallion* (in test); **Medium** 23: 11 VH-3D *Sea King* (VIP tpt); 8 VH-60N *White Hawk* (VIP tpt); 4 VH-92A (in test); **Light** 128 UH-1Y *Venom*

UNINHABITED AERIAL VEHICLES

CISR • **Heavy** 2 MQ-9A *Reaper*
ISR • Light 80 RQ-21A *Blackjack*

AIR DEFENCE

SAM • Point-defence FIM-92 *Stinger*; M1097 *Avenger*

AIR-LAUNCHED MISSILES

AAM • IR AIM-9M *Sidewinder*; **IIR** AIM-9X *Sidewinder II*; **SARH** AIM-7P *Sparrow*; **ARH** AIM-120C AMRAAM
ASM AGM-65E/F *IR Maverick*; AGM-114 *Hellfire*; AGM-176 *Griffin*; APKWS
AShM AGM-84D *Harpoon*
ARM AGM-88 *HARM*
LACM AGM-84E/H/K *SLAM/SLAM-ER*

BOMBS

Laser-guided GBU-10/-12/-16 *Paveway II*
INS/GPS guided GBU-31 *JDAM*; AGM-154A/C/C-1 *JSOW*

Reserve Organisations

Marine Corps Reserve 35,850

FORCES BY ROLE

MANOEUVRE

Reconnaissance
 2 MEF recce coy

Amphibious

1 (4th) mne div (1 armd recce bn, 1 recce bn, 2 mne regt (3 mne bn), 1 amph aslt bn, 1 arty regt (2 arty bn, 1 MRL bn), 1 cbt engr bn, 1 int bn, 1 sigs bn)

COMBAT SERVICE SUPPORT

1 log gp

Marine Corps Aviation Reserve 12,000 reservists

FORCES BY ROLE

FIGHTER

1 sqn with F/A-18A++/C+ *Hornet*

TANKER

2 sqn with KC-130J *Hercules*

TRANSPORT

2 sqn with MV-22B *Osprey*

TRAINING

1 sqn with F-5F/N *Tiger II*

ATTACK HELICOPTER

2 sqn with AH-1Z *Viper*; UH-1Y *Venom*

TRANSPORT HELICOPTER

1 sqn with CH-53E *Sea Stallion*

ISR UAV

1 sqn with RQ-21A *Blackjack*

EQUIPMENT BY TYPE

AIRCRAFT 33 combat capable

FTR 12: 1 F-5F *Tiger II*; 11 F-5N *Tiger II*

FGA 21: 15 F/A-18A++ *Hornet*; 6 F/A-18C+ *Hornet*

TKR/TPT 14 KC-130J *Hercules*

TPT • Light 8: 2 Beech 350 *King Air* (UC-12W *Huron*); 2 Cessna 560 *Citation Ultra* (UC-35C); 4 Cessna 560 *Citation Encore* (UC-35D)

TILTROTOR • TPT 24 MV-22B Osprey

HELICOPTERS

ATK 12 AH-1Z *Viper*

TPT 30: Heavy 8 CH-53E *Sea Stallion*; **Light** 22 UH-1Y *Venom*

UNINHABITED AERIAL VEHICLES

ISR • Light 20 RQ-21A *Blackjack*

Marine Stand-by Reserve 700 reservists

Trained individuals available for mobilisation

US Coast Guard 41,650

9 districts (4 Pacific, 5 Atlantic)

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS 343

PSO 23: 1 *Alex Haley*; 13 *Famous*; 9 *Legend* with 1 Mk 15 *Phalanx* Block 1B CIWS, 1 57mm gun (capacity 2 MH-65 hel)

PCO 59: 14 *Reliance* (with 1 hel landing platform); 45 *Sentinel* (Damen 4708)

PCC 17 *Island*

PBF 174 *Response Boat-Medium* (RB-M)

PBI 70 *Marine Protector*

LOGISTICS AND SUPPORT 65

ABU 52: 16 *Juniper*; 4 *WLI*; 14 *Keeper*; 18 *WLR*

AGB 12: 9 *Bay*; 1 *Mackinaw*; 1 *Healy*; 1 *Polar* (1 *Polar* in reserve)

AXS 1 *Eagle*

US Coast Guard Aviation

EQUIPMENT BY TYPE

AIRCRAFT

SAR 42: 11 HC-130H *Hercules*; 13 HC-130J *Hercules*; 10 HC-144A; 8 HC-144B

TPT 16: **Medium** 14 C-27J *Spartan*; **PAX** 2 Gulfstream V (C-37A)

HELICOPTERS

SAR 146: 44 MH-60T *Jayhawk*; 102 AS366G1 (MH-65C/D) *Dauphin II*

US Air Force (USAF) 329,400

Almost the entire USAF (plus active-force ANG and AFR) is divided into 10 Aerospace Expeditionary Forces (AEF), each on call for 120 days every 20 months. At least 2 of the 10 AEFs are on call at any one time, each with 10,000–15,000 personnel, 90 multi-role ftr and bbr ac, 31 intra-theatre refuelling aircraft and 13 aircraft for ISR and EW missions

Global Strike Command (GSC)

2 active air forces (8th & 20th); 8 wg

FORCES BY ROLE

SURFACE-TO-SURFACE MISSILE

9 ICBM sqn with LGM-30G *Minuteman III*

BOMBER

4 sqn with B-1B *Lancer*

2 sqn with B-2A *Spirit*

5 sqn (incl 1 trg) with B-52H *Stratofortress*

COMMAND & CONTROL

1 sqn with E-4B

TRANSPORT HELICOPTER

3 sqn with UH-1N *Iroquois*

Air Combat Command (ACC)

2 active air forces (9th & 12th); 12 wg. ACC numbered air forces provide the air component to CENTCOM, SOUTHCOM and NORTHCOM

FORCES BY ROLE**FIGHTER**

3 sqn with F-22A *Raptor*

FIGHTER/GROUND ATTACK

4 sqn with F-15E *Strike Eagle*

3 sqn with F-16C/D *Fighting Falcon* (+6 sqn personnel only)

3 sqn with F-35A *Lightning II*

GROUND ATTACK

3 sqn with A-10C *Thunderbolt II* (+1 sqn personnel only)

ELECTRONIC WARFARE

1 sqn with EA-18G *Growler* (personnel only – USN aircraft)

2 sqn with EC-130H *Compass Call*

ISR

2 sqn with E-8C J-STARS (personnel only)

5 sqn with OC-135/RC-135/WC-135

2 sqn with U-2S

AIRBORNE EARLY WARNING & CONTROL

5 sqn with E-3 *Sentry*

COMBAT SEARCH & RESCUE

2 sqn with HC-130J *Combat King II*

1 sqn with HH-60G *Pave Hawk*

1 sqn with HH-60W *Jolly Green II* (forming)

TRAINING

1 sqn with A-10C *Thunderbolt II*

1 sqn with E-3 *Sentry*

2 sqn with F-15E *Strike Eagle*

1 sqn with F-22A *Raptor*

1 sqn with RQ-4A *Global Hawk*; TU-2S

1 UAV sqn with MQ-9A *Reaper*

COMBAT/ISR UAV

9 sqn with MQ-9A *Reaper*

ISR UAV

2 sqn with RQ-4B *Global Hawk*

2 sqn with RQ-170 *Sentinel*

1 sqn with RQ-180

Pacific Air Forces (PACAF)

Provides the air component of PACOM, and commands air units based in Alaska, Hawaii, Japan and South Korea. 3 active air forces (5th, 7th, & 11th); 8 wg

FORCES BY ROLE**FIGHTER**

2 sqn with F-15C/D *Eagle*

2 sqn with F-22A *Raptor* (+1 sqn personnel only)

FIGHTER/GROUND ATTACK

5 sqn with F-16C/D *Fighting Falcon*

2 sqn with F-35A *Lightning II*

GROUND ATTACK

1 sqn with A-10C *Thunderbolt II*

AIRBORNE EARLY WARNING & CONTROL

2 sqn with E-3 *Sentry*

COMBAT SEARCH & RESCUE

1 sqn with HH-60G *Pave Hawk*

TANKER

1 sqn with KC-135R (+1 sqn personnel only)

TRANSPORT

1 sqn with B-737-200 (C-40B); Gulfstream V (C-37A)

1 sqn with C-17A *Globemaster* (+1 sqn personnel only)

1 sqn with C-130J-30 *Hercules*

1 sqn with Beech 1900C (C-12J); UH-1N *Huey*

TRAINING

1 (aggressor) sqn with F-16C/D *Fighting Falcon*

United States Air Forces in Europe - Air Forces in Africa (USAFE-AFAFRICA)

Provides the air component to both EUCOM and AFRICOM. 1 active air force (3rd); 5 wg

FORCES BY ROLE**FIGHTER**

1 sqn with F-15C/D *Eagle*

FIGHTER/GROUND ATTACK

2 sqn with F-15E *Strike Eagle*

3 sqn with F-16C/D *Fighting Falcon*

1 sqn with F-35A *Lightning II* (forming)

COMBAT SEARCH & RESCUE

1 sqn with HH-60G *Pave Hawk*

TANKER

1 sqn with KC-135R *Stratotanker*

TRANSPORT

1 sqn with C-130J-30 *Hercules*

2 sqn with Gulfstream V (C-37A); Learjet 35A (C-21A); B-737-700 (C-40B)

Air Mobility Command (AMC)

Provides strategic and tactical airlift, air-to-air refuelling and aeromedical evacuation. 1 active air force (18th); 12 wg and 1 gp

FORCES BY ROLE**TANKER**

3 sqn with KC-10A *Extender*

1 sqn with KC-46A *Pegasus*

1 sqn with KC-46A *Pegasus* (forming)

8 sqn with KC-135R/T *Stratotanker* (+2 sqn with personnel only)

TRANSPORT

1 VIP sqn with B-737-200 (C-40B); B-757-200 (C-32A)

1 VIP sqn with Gulfstream V (C-37A); Gulfstream 550 (C-37B)

1 VIP sqn with VC-25 *Air Force One*

2 sqn with C-5M *Super Galaxy*

8 sqn with C-17A *Globemaster III* (+1 sqn personnel only)

5 sqn with C-130J-30 *Hercules* (+1 sqn personnel only)

1 sqn with Learjet 35A (C-21A)

Air Education and Training Command

1 active air force (2nd), 10 active air wg and 1 gp

FORCES BY ROLE

TRAINING

- 1 sqn with C-17A *Globemaster III*
- 1 sqn with C-130J-30 *Hercules*
- 4 sqn with F-16C/D *Fighting Falcon*
- 5 sqn with F-35A *Lightning II*
- 1 sqn with KC-46A *Pegasus*
- 1 sqn with KC-135R *Stratotanker*
- 5 (flying trg) sqn with T-1A *Jayhawk*
- 10 (flying trg) sqn with T-6A *Texan II*
- 10 (flying trg) sqn with T-38C *Talon*
- 5 UAV sqn with MQ-9A *Reaper*

EQUIPMENT BY TYPE

SURFACE-TO-SURFACE MISSILE LAUNCHERS

ICBM • Nuclear 400 LGM-30G *Minuteman III* (1 Mk12A or Mk21 re-entry veh per missile)

AIRCRAFT 1,574 combat capable

BBR 123: 45 B-1B *Lancer*; 20 B-2A *Spirit*; 58 B-52H *Stratofortress* (46 nuclear capable)

FTR 261: 86 F-15C *Eagle*; 10 F-15D *Eagle*; 165 F-22A *Raptor*

FGA 1,055: 218 F-15E *Strike Eagle*; 2 F-15EX *Eagle II*; 439 F-16C *Fighting Falcon*; 111 F-16D *Fighting Falcon*; 285 F-35A *Lightning II*

ATK 135 A-10C *Thunderbolt II*

CSAR 16 HC-130J *Combat King II*

EW 13 EC-130H *Compass Call*

ISR 38: 2 E-9A; 4 E-11A; 26 U-2S; 4 TU-2S; 2 WC-135 *Constant Phoenix*

ELINT 22: 8 RC-135V *Rivet Joint*; 9 RC-135W *Rivet Joint*; 3 RC-135S *Cobra Ball*; 2 RC-135U *Combat Sent*

AEW&C 31: 7 E-3B *Sentry*; 1 E-3C *Sentry*; 23 E-3G *Sentry*

C2 4 E-4B

TKR 156: 126 KC-135R *Stratotanker*; 30 KC-135T *Stratotanker*

TKR/TPT 82: 51 KC-10A *Extender*; 31 KC-46A *Pegasus*

TPT 333: **Heavy** 182: 36 C-5M *Super Galaxy*; 146 C-17A *Globemaster III*; **Medium** 105 C-130J/J-30 *Hercules*; **Light** 23: 4 Beech 1900C (C-12J); 19 Learjet 35A (C-21A); **PAX** 23: 4 B-737-700 (C-40B); 4 B-757-200 (C-32A); 9 Gulfstream V (C-37A); 4 Gulfstream 550 (C-37B); 2 VC-25A *Air Force One*

TRG 1,126: 178 T-1A *Jayhawk*; 443 T-6A *Texan II*; 505 T-38A/C *Talon*

HELICOPTERS

CSAR 82: 74 HH-60G *Pave Hawk*; 8 HH-60W *Jolly Green II*

TPT • Light 62 UH-1N *Huey*

UNINHABITED AERIAL VEHICLES 261

CISR • Heavy 210 MQ-9A *Reaper*

ISR • Heavy 47: 30 RQ-4B *Global Hawk*; £10 RQ-170 *Sentinel*; £7 RQ-180

AIR DEFENCE

SAM • Point-defence FIM-92 *Stinger*

AIR-LAUNCHED MISSILES

AAM • IR AIM-9M *Sidewinder*; **IIR** AIM-9X *Sidewinder II*;

SARH AIM-7M *Sparrow*; **ARH** AIM-120C/D *AMRAAM*

ASM AGM-65D/G *Maverick*; AGM-114K/M/N/R *Hellfire II*; AGM-130A; AGM-176 *Griffin*; APKWS

AShM AGM-158C *LRASM*

ALCM

Nuclear AGM-86B (ALCM)

Conventional AGM-158A *JASSM*; AGM-158B *JASSM-ER*

ARM AGM-88B/C *HARM*

EW MALD/MALD-J

BOMBS

Laser-guided GBU 10/12/16 *Paveway II*, GBU-24 *Paveway III*; GBU-28

INS/GPS guided GBU 31/32/38 *JDAM*; GBU-54 *Laser JDAM*; GBU-15 (with BLU-109 penetrating warhead or Mk84); GBU-39B *Small Diameter Bomb* (250lb); GBU-43B *MOAB*; GBU-53/B *Stormbreaker*; GBU-57A/B *MOP*; Enhanced *Paveway III*

Reserve Organisations Air National Guard

108,150 reservists

FORCES BY ROLE

BOMBER

1 sqn with B-2A *Spirit* (personnel only)

FIGHTER

5 sqn with F-15C/D *Eagle*

1 sqn with F-22A *Raptor* (+1 sqn personnel only)

FIGHTER/GROUND ATTACK

10 sqn with F-16C/D *Fighting Falcon*

1 sqn with F-35A *Lightning II*

GROUND ATTACK

4 sqn with A-10C *Thunderbolt II*

ISR

1 sqn with E-8C *J-STARS*

COMBAT SEARCH & RESCUE

3 sqn with HC-130J *Combat King II*

3 sqn with HH-60G *Pave Hawk*

TANKER

1 sqn with KC-46A *Pegasus*

16 sqn with KC-135R *Stratotanker* (+1 sqn personnel only)

3 sqn with KC-135T *Stratotanker*

TRANSPORT

1 sqn with B-737-700 (C-40C)

6 sqn with C-17A *Globemaster* (+2 sqn personnel only)

10 sqn with C-130H *Hercules*

1 sqn with C-130H/LC-130H *Hercules*

4 sqn with C-130J-30 *Hercules*

TRAINING

1 sqn with C-130H *Hercules*

1 sqn with F-15C/D *Eagle*

4 sqn with F-16C/D *Fighting Falcon*

1 sqn with MQ-9A *Reaper*

COMBAT/ISR UAV

10 sqn with MQ-9A *Reaper*

EQUIPMENT BY TYPE

AIRCRAFT 597 combat capable

FTR 157: 123 F-15C *Eagle*; 14 F-15D *Eagle*; 20 F-22A *Raptor*

FGA 355: 289 F-16C *Fighting Falcon*; 46 F-16D *Fighting Falcon*; 20 F-35A *Lightning II*

ATK 85 A-10C *Thunderbolt II*

CSAR 12 HC-130J *Combat King II*

ISR 13 E-8C *J-STARS*

ELINT 11 RC-26B *Metroliner*
TKR 164: 140 KC-135R *Stratotanker*; 24 KC-135T *Stratotanker*
TKR/TPT 12 KC-46A *Pegasus*
TPT 194: **Heavy** 50 C-17A *Globemaster III*; **Medium** 141: 99 C-130H *Hercules*; 32 C-130J/J-30 *Hercules*; 10 LC-130H *Hercules*; **PAX** 3 B-737-700 (C-40C)
HELICOPTERS • **CSAR** 18 HH-60G *Pave Hawk*
UNINHABITED AERIAL VEHICLES • **CISR** • **Heavy** 24 MQ-9A *Reaper*

Air Force Reserve Command 70,450 reservists

FORCES BY ROLE

BOMBER

1 sqn with B-52H *Stratofortress* (personnel only)

FIGHTER

2 sqn with F-22A *Raptor* (personnel only)

FIGHTER/GROUND ATTACK

2 sqn with F-16C/D *Fighting Falcon* (+1 sqn personnel only)

1 sqn with F-35A *Lightning II* (personnel only)

GROUND ATTACK

1 sqn with A-10C *Thunderbolt II* (+2 sqn personnel only)

ISR

1 (Weather Recce) sqn with WC-130J *Hercules*

AIRBORNE EARLY WARNING & CONTROL

1 sqn with E-3 *Sentry* (personnel only)

COMBAT SEARCH & RESCUE

1 sqn with HC-130J *Combat King II*

2 sqn with HH-60G *Pave Hawk*

TANKER

4 sqn with KC-10A *Extender* (personnel only)

1 sqn with KC-46A *Pegasus*

1 sqn with KC-46A *Pegasus* (personnel only)

6 sqn with KC-135R *Stratotanker* (+2 sqn personnel only)

TRANSPORT

1 (VIP) sqn with B-737-700 (C-40C)

2 sqn with C-5M *Super Galaxy* (+2 sqn personnel only)

3 sqn with C-17A *Globemaster* (+9 sqn personnel only)

6 sqn with C-130H *Hercules*

1 sqn with C-130J-30 *Hercules*

1 (Aerial Spray) sqn with C-130H *Hercules*

TRAINING

1 (aggressor) sqn with A-10C *Thunderbolt II*; F-15C/E *Eagle*; F-16 *Fighting Falcon*; F-22A *Raptor* (personnel only)

1 sqn with A-10C *Thunderbolt II*

1 sqn with B-52H *Stratofortress*

1 sqn with C-5M *Super Galaxy*

1 sqn with F-16C/D *Fighting Falcon*

5 (flying training) sqn with T-1A *Jayhawk*; T-6A *Texan II*; T-38C *Talon* (personnel only)

COMBAT/ISR UAV

2 sqn with MQ-9A *Reaper* (personnel only)

ISR UAV

1 sqn with RQ-4B *Global Hawk* (personnel only)

EQUIPMENT BY TYPE

AIRCRAFT 133 combat capable

BBR 18 B-52H *Stratofortress*

FGA 54: 52 F-16C *Fighting Falcon*; 2 F-16D *Fighting Falcon*

ATK 61 A-10C *Thunderbolt II*

CSAR 4 HC-130J *Combat King II*

ISR 10 WC-130J *Hercules* (Weather Recce)

TKR 62 KC-135R *Stratotanker*

TKR/TPT 7 KC-46A *Pegasus*

TPT 98: **Heavy** 42: 16 C-5M *Super Galaxy*; 26 C-17A *Globemaster III*; **Medium** 52: 42 C-130H *Hercules*; 10 C-130J-30 *Hercules*; **PAX** 4 B-737-700 (C-40C)

HELICOPTERS • **CSAR** 16 HH-60G *Pave Hawk*

Civil Reserve Air Fleet

Commercial ac numbers fluctuate

AIRCRAFT • **TPT** 517 international (391 long-range and 126 short-range); 36 national

Air Force Stand-by Reserve 16,850 reservists

Trained individuals for mobilisation

US Space Force 6,400

New service established December 2019, currently in the process of being stood up. Tasked with organising, training and equipping forces to protect US and allied space interests and to provide space capabilities to the joint Combatant Commands

EQUIPMENT BY TYPE

SATELLITES see Space

COUNTERSPACE see Space

RADAR see Strategic Defenses – Early Warning

US Special Operations Command (USSOCOM) 65,800

Commands all active, reserve and National Guard Special Operations Forces (SOF) of all services based in CONUS

Joint Special Operations Command

Reported to comprise elite US SOF, including Special Forces Operations Detachment Delta ('Delta Force'), SEAL Team 6 and integral USAF support

US Army Special Operations Command 35,000

FORCES BY ROLE

SPECIAL FORCES

5 SF gp (4 SF bn, 1 spt bn)

1 ranger regt (3 ranger bn; 1 cbt spt bn)

COMBAT SUPPORT

1 civil affairs bde (5 civil affairs bn)

1 psyops gp (3 psyops bn)

1 psyops gp (4 psyops bn)

COMBAT SERVICE SUPPORT

1 (sustainment) log bde (1 sigs bn)

HELICOPTER

1 (160th SOAR) hel regt (4 hel bn)

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

APC • **APC (W)** 28: 16 M1126 *Stryker* ICV; 12 *Pandur*

AUV 640 M-ATV

ARTILLERY 20

MOR • **120mm** 20 XM905 EMTAS

AIRCRAFT

TPT 12: **Medium** 7 C-27J *Spartan* (parachute training);
Light 5 C-212 (parachute training)

HELICOPTERS

MRH 51 AH-6M/MH-6M *Little Bird*
 TPT 140: **Heavy** 67 MH-47G *Chinook*; **Medium** 73 MH-60M *Black Hawk*

UNINHABITED AERIAL VEHICLES

CISR • **Heavy** 24 MQ-1C *Gray Eagle*
 ISR • **Light** 29: 15 XPV-1 *Tern*; 14 XPV-2 *Mako*
 TPT • **Heavy** 28 CQ-10 *Snowgoose*

Reserve Organisations**Army National Guard****FORCES BY ROLE****SPECIAL FORCES**

2 SF gp (3 SF bn)

Army Reserve**FORCES BY ROLE****COMBAT SUPPORT**

2 psyops gp
 4 civil affairs comd HQ
 8 civil affairs bde HQ
 32 civil affairs bn (coy)

US Navy Special Warfare Command 10,500**FORCES BY ROLE****SPECIAL FORCES**

8 SEAL team (total: 48 SF pl)
 2 SEAL Delivery Vehicle team

Reserve Organisations**Naval Reserve Force****FORCES BY ROLE****SPECIAL FORCES**

8 SEAL det
 10 Naval Special Warfare det
 2 Special Boat sqn
 2 Special Boat unit
 1 SEAL Delivery Vehicle det

US Marine Special Operations Command (MARSOC) 3,500**FORCES BY ROLE****SPECIAL FORCES**

1 SF regt (3 SF bn)

COMBAT SUPPORT

1 int bn

COMBAT SERVICE SUPPORT

1 spt gp

Air Force Special Operations Command (AFSOC) 16,800**FORCES BY ROLE****GROUND ATTACK**

2 sqn with AC-130J *Ghostrider*
 1 sqn with AC-130W *Stinger II*

TRANSPORT

4 sqn with CV-22B *Osprey*

1 sqn with Do-328 (C-146A)
 1 sqn with MC-130H *Combat Talon*
 3 sqn with MC-130J *Commando II*
 3 sqn with PC-12 (U-28A)

TRAINING

1 sqn with M-28 *Skytruck* (C-145A)
 1 sqn with CV-22A/B *Osprey*
 1 sqn with HC-130J *Combat King II*; MC-130J *Commando II*
 1 sqn with Bell 205 (TH-1H *Iroquois*)
 1 sqn with HH-60G *Pave Hawk*; UH-1N *Huey*

COMBAT/ISR UAV

3 sqn with MQ-9 *Reaper*

EQUIPMENT BY TYPE**AIRCRAFT** 33 combat capable

ATK 33: 23 AC-130J *Ghostrider*; 10 AC-130W *Stinger II*
 ISR 22 MC-12 *Javaman*
 CSAR 3 HC-130J *Combat King II*
 TPT 114: **Medium** 54: 13 MC-130H *Combat Talon II*; 41 MC-130J *Commando II*; **Light** 60: 20 Do-328 (C-146A); 5 M-28 *Skytruck* (C-145A); 35 PC-12 (U-28A)

TILT-ROTOR 51 CV-22A/B *Osprey***HELICOPTERS**

CSAR 3 HH-60G *Pave Hawk*
 TPT • **Light** 34: 28 Bell 205 (TH-1H *Iroquois*); 6 UH-1N *Huey*

UNINHABITED AERIAL VEHICLES • CISR • Heavy 50 MQ-9 *Reaper***Reserve Organisations****Air National Guard****FORCES BY ROLE****ELECTRONIC WARFARE**

1 sqn with C-130J *Hercules*/EC-130J *Commando Solo*

ISR

1 sqn with MC-12W *Liberty*

TRANSPORT

1 flt with B-737-200 (C-32B)

EQUIPMENT BY TYPE**AIRCRAFT**

EW 7 EC-130J *Commando Solo*
 ISR 13 MC-12W *Liberty*
 TPT 5: **Medium** 3 C-130J *Hercules*; PAX 2 B-757-200 (C-32B)

Air Force Reserve**FORCES BY ROLE****TRAINING**

1 sqn with AC-130J *Ghostrider* (personnel only)
 1 sqn with M-28 *Skytruck* (C-145A) (personnel only)

COMBAT/ISR UAV

1 sqn with MQ-9 *Reaper* (personnel only)

DEPLOYMENT

ARABIAN SEA: US Central Command • US Navy • 5th Fleet 1,100: 2 SSGN; 1 LPD; 1 LSD; **Combined Maritime Forces** • TF 53: 3 AKEH; 1 AOR

ARUBA: US Southern Command • 1 Forward Operating Location

ASCENSION ISLAND: US Strategic Command • 1 detection and tracking radar at Ascension Auxiliary Air Field

AUSTRALIA: US Pacific Command • 1,700; 1 SEWS at Pine Gap; 1 comms facility at Pine Gap; 1 SIGINT stn at Pine Gap; **US Strategic Command • 1** detection and tracking radar at Naval Communication Station Harold E. Holt

BAHRAIN: US Central Command • 4,700; 1 HQ (5th Fleet); 10 PCFG; 4 MCO; 1 ESB; 1 ASW sqn with 2 P-8A *Poseidon*; 1 EP-3E *Aries* II; 2 SAM bty with M902/M903 *Patriot* PAC-3/PAC-3 MSE

BELGIUM: US European Command • 1,150

BRITISH INDIAN OCEAN TERRITORY: US Strategic Command • 300; 1 Spacetrack Optical Tracker at Diego Garcia; 1 ground-based electro-optical deep space surveillance system (GEODSS) at Diego Garcia **US Pacific Command • 1** MPS sqn (MPS-2 with equipment for one MEB) at Diego Garcia with 2 AKRH; 3 AKR; 1 AKEH; 1 ESD; 1 naval air base at Diego Garcia, 1 support facility at Diego Garcia

CANADA: US Northern Command • 140

CENTRAL AFRICAN REPUBLIC: UN • MINUSCA 8

COLOMBIA: US Southern Command • 70

CUBA: US Southern Command • 650 (JTF-GTMO) at Guantanamo Bay

CURACAO: US Southern Command • 1 Forward Operating Location

DEMOCRATIC REPUBLIC OF THE CONGO: UN • MONUSCO 3

DJIBOUTI: US Africa Command • 4,000; 1 tpt sqn with C-130H/J-30 *Hercules*; 1 tpt sqn with 6 MV-22B *Osprey*; 2 KC-130J *Hercules*; 1 spec ops sqn with MC-130H/J; PC-12 (U-28A); 1 CSAR sqn with HH-60G *Pave Hawk*; 1 CISR UAV sqn with MQ-9A *Reaper*; 1 naval air base

EGYPT: MFO 452; elm 1 ARNG recce bn; 1 ARNG spt bn

EL SALVADOR: US Southern Command • 100; 1 ASW flt with 2 P-8A *Poseidon*; 1 Forward Operating Location (Military, DEA, USCG and Customs personnel)

GERMANY: US Africa Command • 1 HQ at Stuttgart **US European Command • 36,950; 1 Combined Service** HQ (EUCOM) at Stuttgart–Vaihingen
US Army 22,650

FORCES BY ROLE

1 HQ (US Army Europe & Africa (USAREUR-AF)) at Wiesbaden; 1 arty comd; 1 spec ops gp; 1 recce bn; 1 mech bde(-); 1 MRL bde (2 MRL bn); 1 fd arty bn; 1 (cbt avn) hel bde; 1 (cbt avn) hel bde HQ; 1 int bde; 1 MP bde; 1 sigs bde; 1 (MDTF) cbt spt bde(-); 1 spt bde; 1 SAM bn; 1 ARNG SAM bde(-); 2 (APS) armd bde eqpt set

EQUIPMENT BY TYPE

M1A2 SEPv2/v3 *Abrams*; M2A3/M3A3 *Bradley*; M1296 *Stryker Dragoon*; M109A6; M119A3; M777A2; M270A1; AH-64D/E *Apache*; CH-47F *Chinook*; UH-60M *Black*

Hawk; HH-60M *Black Hawk*; M902 *Patriot* PAC-3; M1097 *Avenger*; M-SHORAD

US Navy 450

USAF 13,300

FORCES BY ROLE

1 HQ (US Air Forces in Europe and Africa) at Ramstein AB; 1 HQ (3rd Air Force) at Ramstein AB; 1 FGA wg at Spangdahlem AB with (1 FGA sqn with 24 F-16C/D *Fighting Falcon*); 1 tpt wg at Ramstein AB with 14 C-130J-30 *Hercules*; 2 Gulfstream V (C-37A); 5 Learjet 35A (C-21A); 1 B-737-700 (C-40B)
USMC 550

GREECE: US European Command • 400; 1 EP-3E *Aries* II; 1 naval base at Makri; 1 naval base at Souda Bay; 1 air base at Iraklion

GREENLAND (DNK): US Strategic Command • 150; 1 AN/ FPS-132 Upgraded Early Warning Radar and 1 Spacetrack Radar at Thule

GUAM: US Pacific Command • 9,000; 4 SSGN; 1 MPS sqn (MPS-3 with equipment for one MEB) with 2 AKRH; 4 AKR; 1 ESD; 1 AKEH; 1 tkr sqn with 12 KC-135R *Stratotanker*; 1 tpt hel sqn with MH-60S; 1 ISR UAV unit with 2 MQ-4C *Triton*; 1 SAM bty with THAAD; 1 air base; 1 naval base

HONDURAS: US Southern Command • 400; 1 avn bn with CH-47F *Chinook*; UH-60 *Black Hawk*

ICELAND: US European Command • 100; 1 ASW flt with 2 P-8A *Poseidon*

IRAQ: US Central Command • Operation Inherent Resolve 2,000; 1 ARNG inf bde(-); 1 EOD pl; 1 atk hel bn with AH-64E *Apache*; 1 CISR UAV sqn with MQ-9A *Reaper*; **NATO • NATO Mission Iraq 1**

ISRAEL: US Strategic Command • 100; 1 AN/TPY-2 X-band radar at Mount Keren

ITALY: US European Command • 12,900

US Army 4,100; 1 AB bde(-)
US Navy 3,600; 1 HQ (US Naval Forces Europe-Africa (NAVEUR-NAVAF/6th Fleet) at Naples; 1 LCC; 1 ASW sqn with 5 P-8A *Poseidon* at Sigonella
USAF 4,800; 1 FGA wg with (2 FGA sqn with 21 F-16C/D *Fighting Falcon* at Aviano; 1 CSAR sqn with 8 HH-60G *Pave Hawk* at Aviano); 1 CISR UAV sqn with MQ-9A *Reaper* at Sigonella; 1 ISR UAV flt with RQ-4B *Global Hawk* at Sigonella
USMC 400; 1 tpt sqn with 6 MV-22B *Osprey*; 2 KC-130J *Hercules*

JAPAN: US Pacific Command • 55,600

US Army 2,600; 1 corps HQ (fwd); 1 SF gp; 1 avn bn; 1 SAM bn with M903 *Patriot* PAC-3 MSE
US Navy 20,000; 1 HQ (7th Fleet) at Yokosuka; 1 base at Sasebo; 1 base at Yokosuka

FORCES BY ROLE

3 FGA sqn at Iwakuni with 10 F/A-18E *Super Hornet*; 1 FGA sqn at Iwakuni with 10 F/A-18F *Super Hornet*; 2 ASW sqn at Misawa/Kadena with 5 P-8A *Poseidon*; 2 EW sqn at Iwakuni/Misawa with 5 EA-18G *Growler*; 1 ELINT flt at Okinawa – Kadena AB with 2 EP-3E *Aries*

II; 1 AEW&C sqn at Iwakuni with 5 E-2D *Hawkeye*; 2 ASW hel sqn at Atsugi with 12 MH-60R; 1 tpt hel sqn at Atsugi with 12 MH-60S

EQUIPMENT BY TYPE

1 CVN; 3 CGHM; 4 DDGHM; 4 DDGM; 1 LCC; 4 MCO; 1 LHA; 2 LPD; 2 LSD

USAF 13,000

FORCES BY ROLE

1 HQ (5th Air Force) at Okinawa – Kadena AB; 1 ftr wg at Misawa AB with (2 FGA sqn with 22 F-16C/D *Fighting Falcon*); 1 wg at Okinawa – Kadena AB with (2 ftr sqn with 27 F-15C/D *Eagle*; 1 tkr sqn with 15 KC-135R *Stratotanker*; 1 AEW&C sqn with 2 E-3B *Sentry*; 1 CSAR sqn with 10 HH-60G *Pave Hawk*); 1 tpt wg at Yokota AB with 10 C-130J-30 *Hercules*; 3 Beech 1900C (C-12J); 1 Spec Ops gp at Okinawa – Kadena AB with (1 sqn with 5 MC-130J *Commando II*; 1 sqn with 5 CV-22B *Osprey*); 1 ISR sqn with RC-135 *Rivet Joint*; 1 ISR UAV flt with 5 RQ-4A *Global Hawk*

USMC 20,000

FORCES BY ROLE

1 mne div; 1 mne regt HQ; 1 arty regt HQ; 1 recce bn; 1 mne bn; 1 amph aslt bn; 1 arty bn; 1 FGA sqn with 12 F/A-18A+/C+ *Hornet*; 2 FGA sqn with 12 F-35B *Lightning II*; 1 tkr sqn with 15 KC-130J *Hercules*; 2 tpt sqn with 12 MV-22B *Osprey*

US Strategic Command • 1 AN/TPY-2 X-band radar at Shariki; 1 AN/TPY-2 X-band radar at Kyogamisaki

JORDAN: US Central Command • *Operation Inherent Resolve* 2,000; 1 FGA sqn with 18 F-16C *Fighting Falcon*; 1 CISR UAV sqn with 12 MQ-9A *Reaper*

KOREA, REPUBLIC OF: US Pacific Command • 30,400

US Army 21,500

FORCES BY ROLE

1 HQ (8th Army) at Pyeongtaek; 1 div HQ (2nd Inf) located at Pyeongtaek; 1 armd bde; 1 (cbt avn) hel bde; 1 MRL bde; 1 AD bde; 1 SAM bty with THAAD

EQUIPMENT BY TYPE

M1A2 SEPv2 *Abrams*; M2A3/M3A3 *Bradley*; M109A6; M270A1 MLRS; AH-64D/E *Apache*; CH-47F *Chinook*; UH-60L/M *Black Hawk*; M902 *Patriot PAC-3*; THAAD; FIM-92A *Avenger*; 1 (APS) armd bde eqpt set

US Navy 350

USAF 8,350

FORCES BY ROLE

1 (AF) HQ (7th Air Force) at Osan AB; 1 ftr wg at Osan AB with (1 ftr sqn with 20 F-16C/D *Fighting Falcon*; 1 atk sqn with 24 A-10C *Thunderbolt II*); 1 ftr wg at Kunsan AB with (2 ftr sqn with 20 F-16C/D *Fighting Falcon*); 1 ISR sqn at Osan AB with U-2S

USMC 200

KUWAIT: US Central Command • 10,000; 1 ARNG armd bn; 1 ARNG (cbt avn) hel bde; 1 spt bde; 1 tpt sqn with 6 MV-22B *Osprey*; 1 CISR UAV sqn with MQ-9A *Reaper*; 1 (APS) armd bde set; 1 (APS) inf bde set

LIBYA: UN • UNSMIL 1

MALI: UN • MINUSMA 8

MARSHALL ISLANDS: US Strategic Command • 20; 1 detection and tracking radar at Kwajalein Atoll

MIDDLE EAST: UN • UNTSO 2

NETHERLANDS: US European Command • 450

NIGER: US Africa Command • 800; 1 CISR sqn with MQ-9A *Reaper*

NORWAY: US European Command • 1,100; 1 (USMC) MEU eqpt set; 1 (APS) SP 155mm arty bn set

PERSIAN GULF: US Central Command • US Navy • 5th Fleet 3,000; 1 LHD; 1 DDGHM; 6 (Coast Guard) PCC

PHILIPPINES: US Pacific Command • *Operation Pacific Eagle* – Philippines 200

POLAND: NATO • Enhanced Forward Presence 691; 1 mech bn with M1296 *Stryker Dragoon*; M777A2

US European Command • 4,500; 1 corps HQ (fwd); 1 div HQ (fwd); 1 armd bde; M1A2 SEPv2 *Abrams*; M3A3 *Bradley*; M2A3 *Bradley*; M109A7; 1 CISR UAV sqn with MQ-9A *Reaper*

PORTUGAL: US European Command • 500; 1 ASW sqn with 5 P-8A *Poseidon*; 1 spt facility at Lajes

QATAR: US Central Command • 10,000; 1 ISR sqn with 4 RC-135 *Rivet Joint*; 1 ISR sqn with 4 E-8C *JSTARS*; 2 tkr sqn with 12 KC-135R/T *Stratotanker*; 1 tpt sqn with 4 C-17A *Globemaster*; 4 C-130H/J-30 *Hercules*; 2 SAM bty with M902/M903 *Patriot PAC-3*/PAC-3 MSE

US Strategic Command • 1 AN/TPY-2 X-band radar

ROMANIA: US European Command • 120; 1 *Aegis Ashore* BMD unit with three 8-cell Mk 41 VLS launchers with SM-3

SAUDI ARABIA: US Central Command • 1,800; 1 FGA sqn with 12 F-16C *Fighting Falcon*

SERBIA: NATO • KFOR • *Joint Enterprise* 660; elm 1 ARNG inf bde HQ; 1 ARNG recce bn; 1 hel flt with UH-60

SINGAPORE: US Pacific Command • 200; 1 log spt sqn; 1 spt facility

SOUTH SUDAN: UN • UNMISS 7

SPAIN: US European Command • 3,250; 4 DDGM; 1 air base at Morón; 1 naval base at Rota

SYRIA: US Central Command • *Operation Inherent Resolve* 900; 1 armd inf coy; 1 mne bn(-)

THAILAND: US Pacific Command • 100

TURKEY: US European Command • 1,800; 1 tkr sqn with 14 KC-135; 1 air base at Incirlik; 1 support facility at Ankara; 1 support facility at Izmir

US Strategic Command • 1 AN/TPY-2 X-band radar at Kürecik

UKRAINE: JMTG-U 150 (trg mission)

UNITED ARAB EMIRATES: US Central Command • 5,000; 1 ISR sqn with 4 U-2; 1 AEW&C sqn with 4 E-3B/G *Sentry*; 1 tkr sqn with 12 KC-10A; 1 ISR UAV sqn with RQ-4 *Global Hawk*; 2 SAM bty with M902/M903 *Patriot PAC-3*/PAC-3 MSE

UNITED KINGDOM: US European Command • 9,500

FORCES BY ROLE

1 ftr wg at RAF Lakenheath with (1 ftr sqn with 24 F-15C/D *Eagle*, 2 FGA sqn with 23 F-15E *Strike Eagle*, 1 FGA sqn with F-35A *Lightning II* (forming)); 1 ISR sqn at RAF Mildenhall with OC-135/RC-135; 1 tkr wg at RAF Mildenhall with 15 KC-135R/T *Stratotanker*; 1 spec ops gp at RAF Mildenhall with (1 sqn with 8 CV-22B *Osprey*; 1 sqn with 8 MC-130J *Commando II*)

US Strategic Command • 1 AN/FPS-132 Upgraded Early Warning Radar and 1 Spacetrack Radar at Fylingdales Moor

FOREIGN FORCES

Germany Air Force: trg units with 40 T-38 *Talon*; 69 T-6A *Texan II*; • Missile trg at Fort Bliss (TX)

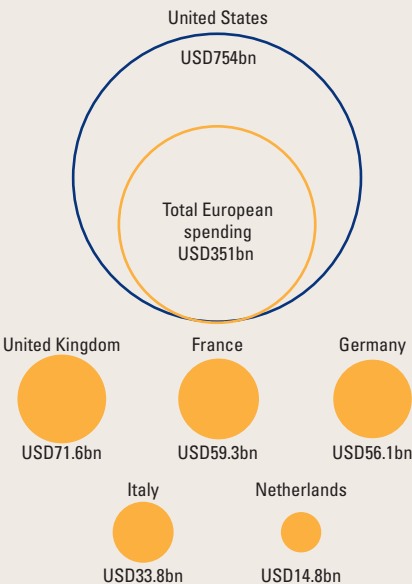
Netherlands 1 hel trg sqn with AH-64D *Apache*; CH-47D *Chinook*

Singapore Air Force: trg units with F-16C/D; 12 F-15SG; AH-64D *Apache*; 6+ CH-47D *Chinook* hel

Europe

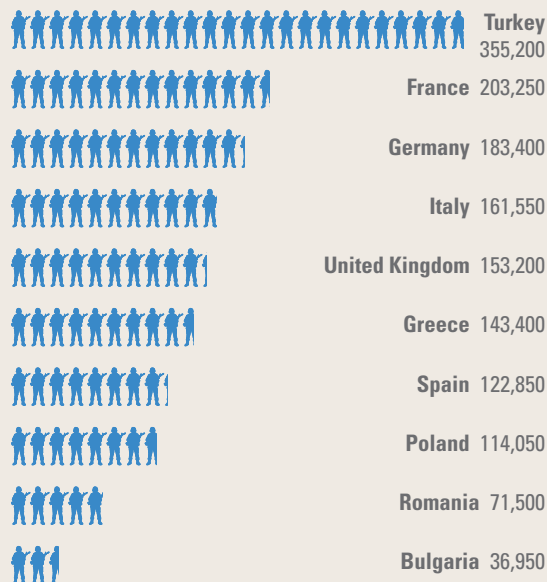
- In 2021 Europe's defence expenditure grew at a faster rate than any other region, with real defence-spending growth reaching 4.8%. This was primarily driven by the United Kingdom's increased defence spending plan but there were also notable budget increases in Finland, France, Germany, Greece, Italy and the Netherlands.
- NATO is working on a new Strategic Concept, due to be endorsed by leaders in 2022. It is likely to mark the formal end of the post-2014 phase in which collective defence returned as the Alliance's defining mission. Meanwhile, the EU is scheduled to complete its Strategic Compass process by March 2022. This will likely provide guidance concerning how to increase defence capabilities and conduct joint expeditionary operations in a crisis.
- The Norwegian-led *Cold Response* exercise is due to take place in Spring 2022, involving up to 40,000 troops, including personnel from Norway and other NATO states. Planning indicates that it will be the largest Norwegian-led military exercise inside the Arctic Circle since the end of the Cold War. The exercise will test cold-weather capabilities and operations, including the reinforcement of northern Norway.
- There is continuing focus on the recapitalisation of Europe's combat air fleets. The F-35 has been linked with requirements in the Czech Republic, Greece and Spain, and existing customers include Denmark, Italy, the Netherlands, Norway and the UK, while it has been selected in Belgium, Poland and Switzerland, and most recently in Finland to meet the HX requirement. Meanwhile, Croatia and Greece selected the *Rafale*.
- A number of European nations are elaborating their ambitions for a security role in the Indo-Pacific. France, Germany and the UK have all either produced strategies focused on the region or significantly referenced the region in other documents, and there has been increased military engagement. The EU also produced an Indo-Pacific strategy in 2021. France maintains permanent forces in the region, and routinely deploys other naval vessels. The UK's Carrier Strike Group 21 deployment to the region included a Dutch frigate, and the UK has deployed two offshore-patrol vessels to the region. Germany, meanwhile, deployed a frigate for six months and is to step up exercise participation.

Europe defence spending, 2021 – top 5



Active military personnel – top 10

(15,000 per unit)

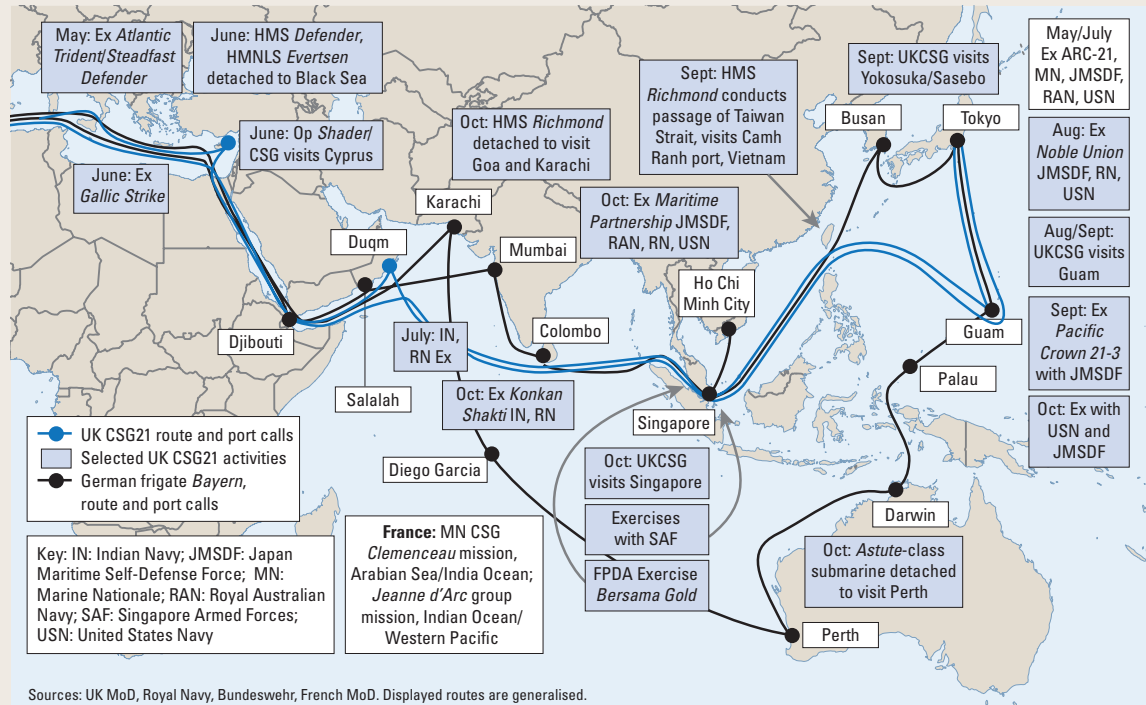


Global total
19,605,000

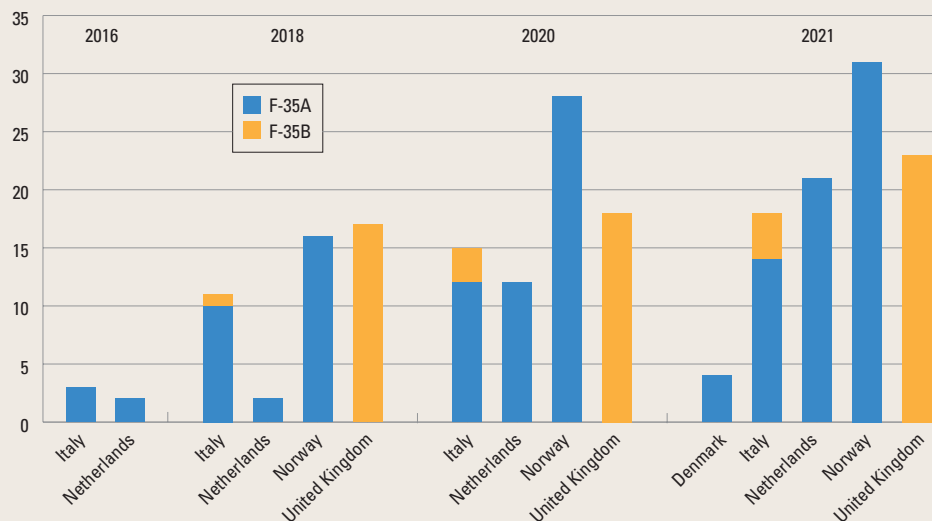
Regional total
1,967,000

10%

2021: selected European maritime deployments to the Indo-Pacific



Europe: F-35 operators, 2016–21



Europe

The 2020 election of Joe Biden as president of the United States provided a moment of relief and optimism for European leaders. It came at a time when they were adjusting to heightened great-power tension, while also dealing with sub-threshold security challenges, continued instability on Europe's southern and eastern periphery and the need to manage the implications of the coronavirus pandemic. After the Trump administration had tested NATO cohesion, and amid the EU's attempts to further develop its own global security role, Biden's election brought expectations for a return to transatlantic normalcy. In February 2021 Biden said 'America is back, the transatlantic alliance is back'. Ahead of the June 2021 NATO summit in Brussels, he reassured allies by saying that NATO's Article 5 collective-defence clause was 'a sacred commitment' and that 'NATO is as important to [US] security as we are to NATO'. EU High Representative for Foreign Affairs and Security Policy Josep Borrell explained at the end of 2020 that 'revitalizing multilateralism' would be a key priority for 2021.

However, optimism about a return to robust transatlantic cooperation diminished during the summer, indicating that underlying structural factors could still create division, despite unifying rhetoric on both sides of the Atlantic. The rapid collapse of Afghanistan's security forces following the withdrawal of US and allied forces from the country, the chaotic evacuation of international and local staff via Kabul airport, and the Taliban's return to power surprised and embarrassed many European governments. Some thought that they had been left exposed by Washington's lack of consultation when it negotiated in 2020 a withdrawal timetable with the Taliban. But fundamentally, these events demonstrated that Europeans lacked the military capability to do anything but follow the US decision to end the military presence in Afghanistan, whatever they thought about its wisdom or the way in which it was implemented.

With failure in Afghanistan still present in national debates, on 15 September Australia, the United Kingdom and the US announced a trilateral security arrangement known as AUKUS. According to the

agreement, the UK and US will support Australia's acquisition of nuclear-powered submarines and deepen cooperation on a range of other technology developments. As a consequence, Australia cancelled a contract with France, signed in 2016, for the acquisition of conventionally powered submarines. Although the contract had been questioned for some time, French leaders initially reacted with anger, arguing that they had been surprised by the trilateral negotiations. Foreign Minister Jean-Yves Le Drian accused the AUKUS signatories of 'duplicity, a major breach of trust and contempt'. French President Emmanuel Macron said 'Europeans must come out of their naivety' regarding international security and the motivations of others. A telephone call between Biden and Macron on 22 September took some of the sting out of the debate, and Macron extracted US support for 'a stronger and more capable European defense' complementary to NATO (organised in the EU) and for French-led counter-terrorism efforts in the Sahel.

While additional fallout will likely be minimised by damage-limitation efforts and the wider interests of other Europeans, AUKUS has further dampened expectations for a transatlantic revival at the point when NATO and the EU are engaged in strategy debates over the new political guidance due for both in 2022. Strategic autonomy – the idea that the EU and its member states should give themselves the means to act on their own when necessary – is evolving from its origin in security and defence policy into an overall approach for the EU's international role in an age of great-power competition. However, the experiences of Afghanistan and AUKUS demonstrated once more not just how militarily dependent Europeans are on the US, but also that Washington's focus has clearly shifted to the Indo-Pacific. It is likely that these factors will be reflected in NATO's new Strategic Concept and in the EU's effort to develop political-strategic guidance in the form of the so-called 'Strategic Compass'.

Strategy and European security in NATO and the EU

In 2019, at NATO's London Summit, heads of state and government tasked Secretary-General Jens

Stoltenberg with developing recommendations for NATO's evolution over the coming decade. Stoltenberg argued that NATO 2030 – the label under which this conversation was organised – should be an organisation that is more political, more capable and more global. This agenda was driven by an evolving international environment, including the rise of China, diversifying security challenges and the corresponding requirement for further adaptation. It informed eight priorities that were adopted in the June 2021 summit communiqué as the 'transatlantic agenda for the future'.

Firstly, the Alliance would be strengthened as a forum for consultation on 'all matters related to our individual and collective security'. Secondly, its deterrence and defence posture would be reinforced by fully implementing the capability and readiness agenda adopted at previous summits. This reinforces the post-2014 emphasis on collective defence, relative to NATO's other two core tasks of crisis management and cooperative security. Regarding readiness, the summit communiqué stated that NATO had 'sourced' all the combat forces required to fulfil the requirements of the NATO Readiness Initiative – the so-called Four Thirties plan agreed in 2018 – but confirmed that these forces are 'being organized and trained as larger combat formations for reinforcement and high-intensity warfighting, or for rapid military crisis intervention' and thus were not yet ready. Leaders also agreed that they would, from 2023, aim to increase NATO common funding for the military budget, the civil budget and NATO's security investment programme. Meanwhile, both the Joint Force Command in Norfolk, Virginia, and the Joint Support and Enabling Command in Ulm, Germany, reached full operating capability in 2021. Thirdly, NATO would improve resilience, aiming 'to reduce vulnerabilities and ensure our militaries can effectively operate in peace, crisis, and conflict'. Resilience objectives will be developed to give governments a reference point for their national plans. Fourthly, NATO would set up a Defence Innovation Accelerator for the North Atlantic (DIANA), as well as a NATO Innovation Fund to foster technological development, interoperability and the ability to integrate dual-use and emerging technologies into NATO thinking and forces. While NATO common budgets are likely to cover staffing costs, it will need to rely on national pledges to the innovation fund. Because of this, a question mark remains over the ultimate ambition of this new tool and how it relates

to the European Defence Fund (which is also trying to leverage national spending from some of the same nations). Points five and six on the agenda underlined NATO's commitment to a rules-based international order and suggested increased efforts to enable NATO partner nations through training and capacity-building measures where instability directly affects the Alliance. Next, NATO would aim to 'become the leading international organisation when it comes to understanding and adapting to the impact of climate change on security'. And finally, the secretary-general was formally tasked with leading the development of a new Strategic Concept, to be endorsed in 2022.

Charting the course for a new Strategic Concept likely absorbed significant diplomatic capital in the run-up to the summit, but the collapse in Afghanistan and the fallout from the AUKUS security partnership later in the year put earlier challenges into perspective. At the very least, it is likely that the idea that NATO should develop its political side, and a more global outlook, will be harder to pursue after these two episodes highlighted (at least for some allies), a lack of political consultation and a failure of out-of-area operations. Others will likely argue that these problems underline precisely the deficits the new agenda is meant to address. Overall, the new Strategic Concept is likely to mark the formal end of the post-2014 phase in which collective defence returned as the Alliance's defining mission. This does not necessarily mean that other tasks will be abandoned or that new ones will not arise, but it indicates a clearer order of hierarchy than before.

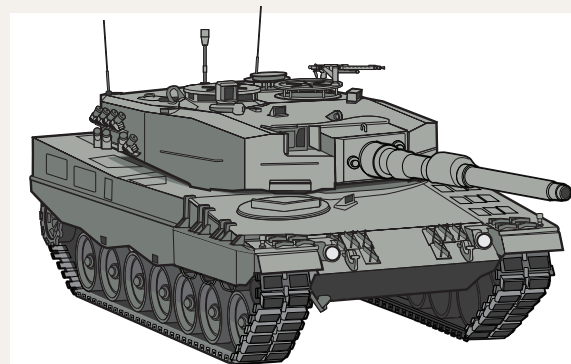
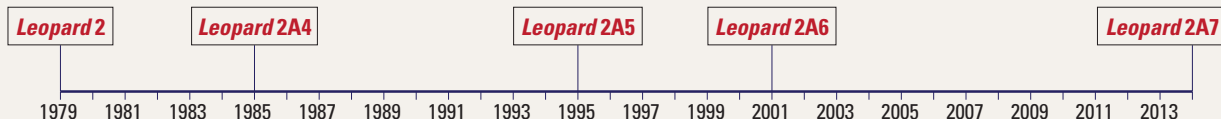
The summit communiqué also stated that 'Russia's aggressive actions constitute a threat to Euro-Atlantic security' and that China's 'growing influence and international policies can present challenges that we need to address together as an Alliance'. 'We will engage China', NATO said, 'with a view to defending the security interests of the Alliance.' Working towards a common position on China was seen by some as a measure of progress, but it also highlighted continued disagreement among allies on key security concerns.

While China has been Washington's 'pacing challenge' for some years, not all European allies think in such adversarial terms, even if they share misgivings about Beijing's international policies. For instance, Macron said that 'NATO is a military organisation, the subject of our relationship with China is not just military. NATO is an organisation ... which concerns the North Atlantic, China has little

▼ Figure 5 *Leopard 2* main battle tank (MBT): major upgrades, 1979–2014

The *Leopard 2* main battle tank (MBT) entered service in 1979 as the German army's successor to the mid-1960s *Leopard 1*. Manufactured by Krauss-Maffei (later Krauss-Maffei Wegmann), the tank represented a change in design philosophy and a generational leap from the earlier *Leopard 1*. Advances in composite armour technology gave the *Leopard 2* substantially better protection than the earlier model, while the switch from the venerable L7 series of 105mm rifled main guns to the Rheinmetall 120mm smoothbore gun offered a significant increase in firepower. The *Leopard 2* was the first production tank to mount this armament. Since then, this weapon, or derivatives of it, has become the standard armament for western MBTs. Having undergone several improvements since its introduction, the *Leopard 2* now serves, in its various configurations, with 19 armies worldwide and many of those have developed their own upgrades for the vehicle. While more upgrades may take place, including abroad, in German service the tank will eventually be replaced, likely by the platform developed under the Franco-German Major Ground Combat System programme.

Entry into service



Leopard 2 (1979)

Selected features

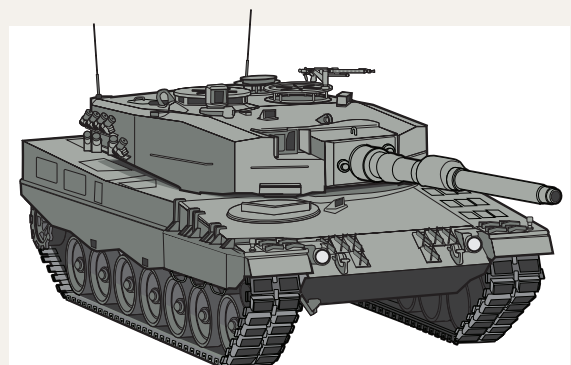
- 55 tonnes
- 1500hp diesel engine

Firepower:

- RH 120 L/44 120mm smoothbore gun
- Thermal gunner's optics (early production vehicles mounted image-intensification night optics)
- Commander's panoramic periscope

Protection:

- Composite armour in hull and turret



Leopard 2A4 (1985)

Selected features

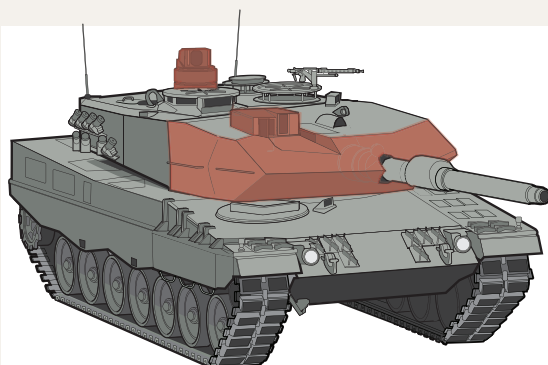
- 55 tonnes

Firepower:

- Fully digital fire-control system

Protection:

- Improved composite armour in hull and turret



Leopard 2A5 (1995)

Selected features

- 62.5 tonnes

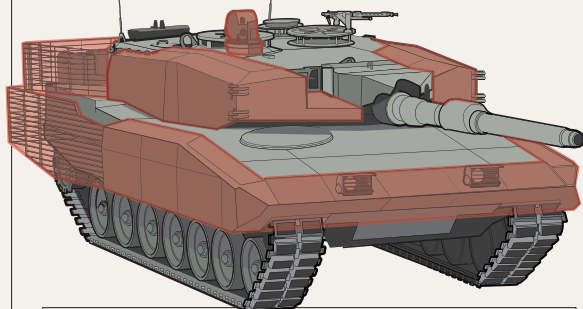
Firepower:

- Improved fire-control system and fully-electric turret drives
- Improved commander's periscope with integrated thermal imaging

Protection:

- Additional spaced armour modules fitted to turret front

Selected non-German variants



Leopard 2SG (2010) (Singapore)

Selected features

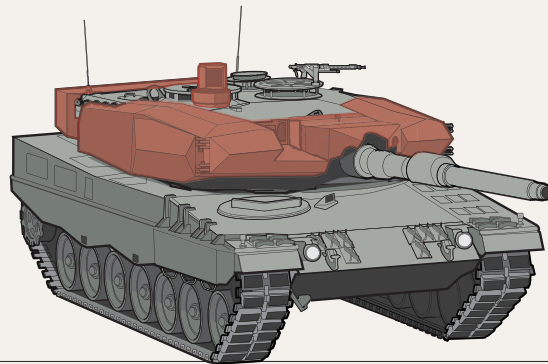
- Estimated 60 tonnes
- Based on the *Leopard 2A4*

Firepower:

- New commander's periscope with integrated thermal imaging

Protection:

- Additional Advanced Modular Armor Protection (AMAP) composite armour package



Leopard 2PL (2020) (Poland)

Selected features

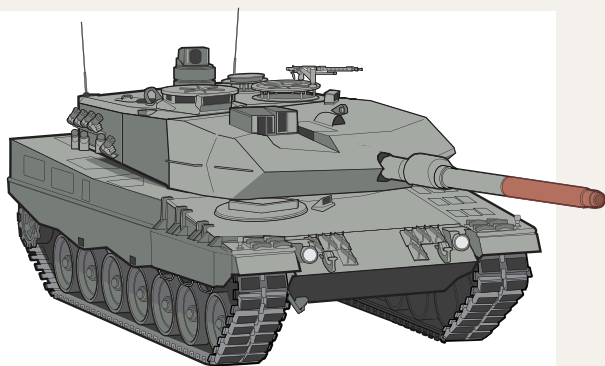
- 59 tonnes
- Based on the *Leopard 2A4*

Firepower:

- Improved fire-control system with data-link allowing the use of programmable rounds
- Electric turret drives
- Modernised thermal imaging for commander's and gunner's sights

Protection:

- AMAP composite armour package



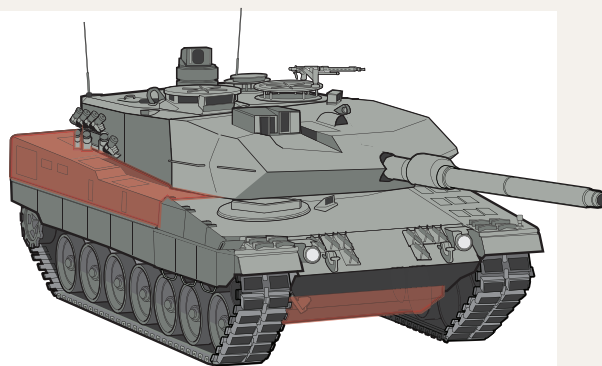
Leopard 2A6 (2001)

Selected features

- 62.5 tonnes

Firepower:

- Improved RH 120 L/55 120mm smoothbore gun enabling improved muzzle velocity



Leopard 2A7 (2014)

Selected features

- 64.5 tonnes
- Fitted with an auxiliary power unit which allows major systems to be operated when the engine is off

Firepower:

- Improved fire-control system with data-link allowing the use of programmable rounds
- Improved commander's thermal optics

Protection:

- Mounting points for additional side armour
- Fitted with additional belly armour

to do with the North Atlantic.’ While France has long tried to put the brakes on a more global role for NATO, many Central and Eastern European allies will also be keen to maintain NATO’s focus on Russia. It will be important for these states to also acknowledge US concerns over China, and perhaps demonstrate support if they can, though the underlying structural changes that are refocusing US attention on the Indo-Pacific are outside their control.

Another point for debate will be the NATO–EU relationship. There is a growing connection between the two organisations, albeit with different positions regarding the desirable division of labour between them. However, the approximate alignment of the strategic processes at the EU and NATO levels presents an opportunity to bring into line their defence planning and capability development priorities.

For its part, the EU is scheduled to complete its Strategic Compass process by March 2022, during the French EU presidency. The EU Strategic Compass will, in principle, provide the guidance missing from the 2016 EU Global Strategy concerning how to increase defence capabilities and conduct joint expeditionary operations in a crisis. The process started in 2020 with a classified shared-threat analysis. This was intended to generate common assumptions among EU governments, which the Strategic Compass would address by focusing on capability development, crisis management, partnerships and resilience. While work on all four ‘baskets’ was proceeding in 2021, the proposal to create a 5,000-strong initial entry force, able to mobilise and deploy at short notice for crisis-management purposes, received wider attention – not least in the context of Afghanistan – as a practical expression of European capacity to act. Borrell said that ‘the EU must be able to intervene to protect our interests when the Americans don’t want to be involved’.

European Commission President Ursula von der Leyen adopted a slightly different perspective in her annual State of the Union address to the European Parliament on 15 September: she focused on political will. Nations may have advanced armed forces, she said, but ‘what use are they’ without the will to use them. She continued, ‘what has held us back until now is not just a shortfall of capacity – it is the lack of political will.’ A week earlier, von der Leyen’s successor as German defence minister, Annegret Kramp-Karrenbauer, had said (on the occasion of the opening of the IISS–Europe office in Berlin), that institutions were not the first priority in strengthening

the role of the EU in security and defence matters, and that ‘it is the political will that is needed first’. As such, the responsibility lies with national capitals, not EU-level bodies. Von der Leyen also announced that she would, with President Macron, convene a summit on European defence in 2022.

Responding to Russia and tilting to the Indo-Pacific

The NATO 2021 summit communiqué describes Russia’s military capability developments, its ‘more assertive posture’ and its ‘provocative activities ... as well as its large-scale no-notice and snap exercises’ as an increasing threat to Euro–Atlantic security, amplified by Moscow’s use of ‘hybrid actions ... including through proxies’. After the summit, Stoltenberg said that NATO’s relationship with Russia was at its ‘lowest point since the Cold War. And Moscow’s aggressive actions are a threat to our security.’ Borrell, meanwhile, visited Moscow for talks in February 2021 to explore areas for EU dialogue with Russia, only to learn during a meeting with Foreign Minister Sergei Lavrov that Russia was expelling three European diplomats.

NATO defence planners are worried by Russia’s potential ability to create diverse challenges in multiple locations, taxing and possibly undermining the Alliance’s ability to swiftly form a coherent response. In the Arctic, Russian investment in infrastructure and relevant capabilities worries both NATO and non-NATO states alike, has refocused attention on capability development and led to increased exercise activity. The biennial exercise *Cold Response* in Norway is due to involve up to 40,000 troops in spring 2022. According to current plans, it will be the largest Norwegian-led military exercise inside the Arctic Circle since the end of the Cold War. The North Atlantic, including the so-called Greenland–Iceland–United Kingdom gap, remains of concern as a potential staging ground for Russian power projection and disruption of transatlantic reinforcement routes. NATO’s Joint Force Command, now at full operational capability, is dedicated to protecting these routes. Meanwhile, NATO’s air policing operations have operated at Quick Reaction Alert for some years, and NATO allies including Germany, Norway and the UK are investing in both anti-submarine warfare and intelligence, surveillance and reconnaissance capabilities. The Baltic region has been a focal point for NATO, which agreed the Readiness Action Plan at the 2014 Wales Summit

and established the Enhanced Forward Presence at the 2016 Warsaw Summit. There was additional scrutiny on Russia's actions and intentions when it built up armed forces in Crimea and near the eastern border with Ukraine in April 2021 (and again in late 2021), concerning its September 2021 *Zapad* strategic exercise held with Belarus, as well as in relation to the late-2021 migrant crisis on the Belarusian–Polish border. Allies remain concerned by Russia's posture and activities in the Black Sea, the Mediterranean and Syria, and NATO has continued to develop its focus on Black Sea security. In 2021, the annual *Breeze* exercise included some 30 vessels and 2,000 troops from 12 NATO allies as well as Georgia and Ukraine.

A number of European nations have started to elaborate their ambitions for a security role in the Indo-Pacific. France's 2021 Indo-Pacific strategy document says that it aims to increase interoperability with regional partners, including Australia, India, Japan and the US, while also conducting deployments and exercises, though the effect of the September 2021 AUKUS arrangement on this plan remains to be seen. Germany published Indo-Pacific policy guidelines in 2020 and also intends to expand its footprint in regional exercises and deployments. In 2022 Germany intends to participate in the Australian-led exercise *Pitch Black*, and plans to strengthen bilateral defence partnerships with Australia and Japan in particular. The UK's 2021 Integrated Review, meanwhile, identified the Indo-Pacific as a region critical to the UK's economy and security.

To varying degrees, European countries, the UK included, maintain a degree of ambiguity regarding their Indo-Pacific posture, designed to mitigate tensions between their economic and their security interests, both of which centre on China. However, the nations that are frequently identified as priority partners for European nations – like Australia and Japan – may in future demand less hedging and more commitment as their own concerns over China's activities continue to deepen. In 2021 the UK was the European power most willing to embrace this logic and the US narrative of strategic competition with China. In its 2021 summit communiqué, NATO said that it maintained a 'constructive dialogue' with China, but that Beijing's 'stated ambitions and assertive behaviour present systemic challenges to the rules-based international order and to areas relevant to Alliance security'. For its part, the EU, which published its Strategy for Cooperation in the Indo-Pacific on 16 September 2021, is explicitly inclusive in

its view of partnerships, including China while also suggesting it would be unwise to force nations to take sides in the US–China rivalry.

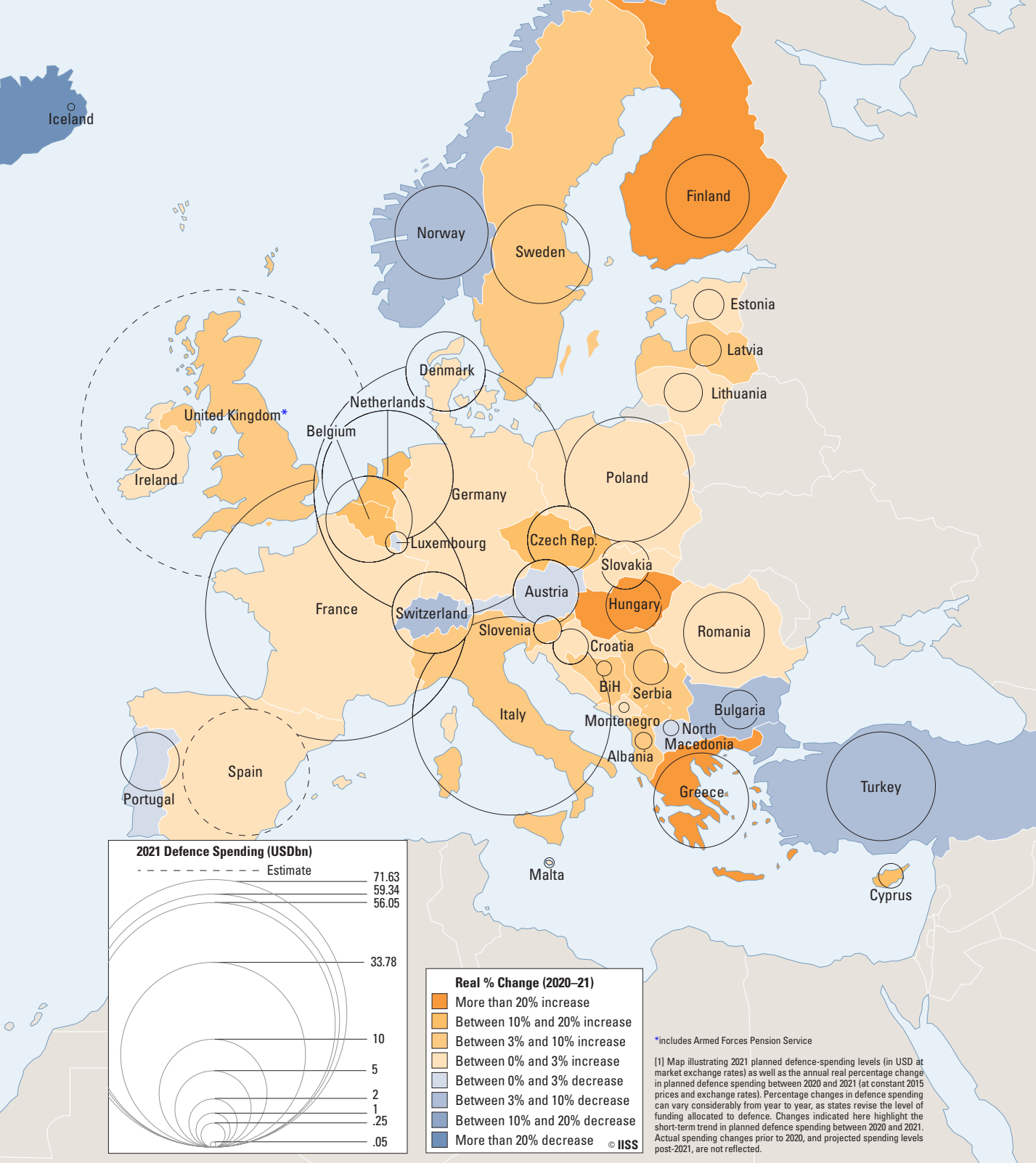
DEFENCE ECONOMICS

Macroeconomics

European economies were among the worst affected globally by the coronavirus pandemic. According to the International Monetary Fund (IMF), the region's real GDP contracted by 5.0% in 2020 with a significant economic contraction in Western and Southern European countries somewhat offset by better performance in Eastern and Northern Europe. Spain and the UK were among the 20 worst performing economies globally in 2020, with real GDP growth rates of -10.8% and -9.8% respectively. France, Greece, Italy and Portugal were not far behind, with the contraction in their real GDP exceeding 8%. The reduction was more muted in the Nordic states and emerging economies in Eastern Europe, where reductions ranged between -1% and -4% in 2020.

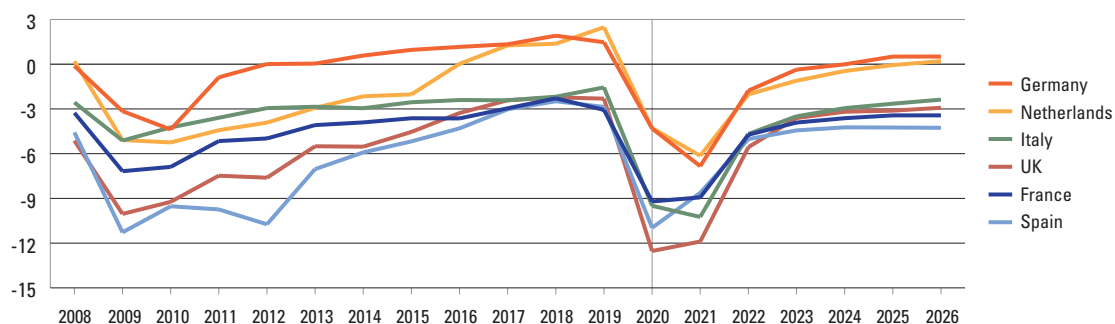
The IMF expects regional GDP to grow by 5.4% in 2021, pointing to a swift recovery to pre-pandemic (2019) levels of output. This latest assessment is more positive than the IMF's October 2020 forecast, which expected Europe's GDP to contract by 7.0% in 2020 and grow by just 4.7% in 2021. The more positive figures result from a better-than-expected performance in the fourth quarter of 2020 and increased external demand for exports, as well as strengthening domestic demand due to extensive fiscal support packages and the knock-on effect of vaccination programmes. However, risks remain, particularly if new infection variants emerge or vaccination or revaccination programmes stall.

Extensive support packages, including the European Union's EUR750 billion (USD958bn) Next Generation EU (NGEU) recovery plan and the UK's furlough scheme, have helped to avoid more severe economic contractions, but they have come at a cost to government finances. Of the USD16.5bn spent globally on fiscal-support measures (including additional public spending and liquidity support) between January 2020 and July 2021, almost one-third was spent by European countries. Fiscal deficits extended from a regional average of 0.2% of GDP in 2019 to 6.8% in 2020 and will persist into 2022 as countries continue to borrow to support their recovery. However, fiscal support packages have shifted from emergency measures to those aimed at



▲ Map 1 Europe: regional defence spending¹

Sub-regional groupings referred to in defence economics text: Central Europe (Austria, Czech Republic, Germany, Hungary, Poland, Slovakia and Switzerland), Northern Europe (Denmark, Estonia, Finland, Latvia, Lithuania, Norway and Sweden), Southern Europe (Cyprus, Greece, Italy, Malta, Portugal and Spain), Southeastern Europe (Bulgaria, Romania and Turkey), the Balkans (Albania, Bosnia-Herzegovina, Croatia, Montenegro, North Macedonia, Serbia and Slovenia) and Western Europe (Belgium, France, Iceland, Ireland, Luxembourg, the Netherlands and the United Kingdom).



Source: IMF World Economic Outlook October 2021

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▲ Figure 6 Western Europe: selected countries, fiscal balance (% of GDP), 2008–26

aiding economic recovery, including investment in public services, support for business and boosting employment and skills development.

The NGEU plan primarily aims to support the EU members hardest hit by the pandemic and with limited fiscal bandwidth to support their own recovery. Because of this, the IMF projects that the EU's emerging markets will suffer far less pandemic-related economic damage than countries around the world which do not receive similar support. Beyond helping the recovery, the NGEU also aims to support investment in green and digital transitions. The NGEU's Recovery and Resilience Facility, which will allocate most of the recovery plan's financing, requires that at least 37% of national allocations support the green transition, with at least 20% directed to digital transformation.

Similarly, regional debt levels grew from an average of 60.7% in 2019 to 72.5% in 2020, with levels set to persist at around 70% of GDP well into the 2020s, according to the IMF. Indeed, debt levels extend beyond 100% of GDP in Belgium, Cyprus, France, Greece, Italy, Montenegro, Portugal, Spain and the UK. As economic support for the recovery continues, government spending will continue to exceed revenues and debt levels will remain high. This level of debt is sustainable while interest rates are low and borrowing is cheap. However, as inflationary pressures rise in some countries (as a result of higher commodity prices and increased wages due to higher labour demand), interest rates may begin to rise, making borrowing less sustainable.

Defence economics

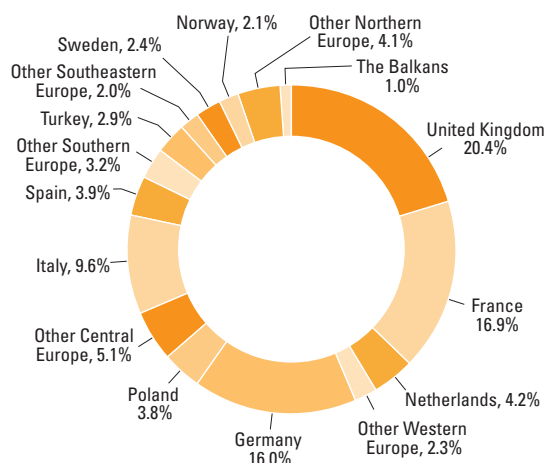
Despite the sizeable economic contraction in 2020, European defence spending continued to grow and

2021 saw the seventh consecutive year of real growth. Indeed, in 2021 Europe's defence expenditure growth rate was higher than that of any other region, with real defence spending growth reaching 4.8%. This rise was primarily driven by the UK's increased spending plan for defence, announced in November 2020, but there were also notable budget increases in Finland, France, Germany, Greece, Italy and the Netherlands, meaning that growth was spread across the region.

Total regional spending increased to USD351bn from USD314bn in 2020. Despite sustained growth since 2014, European defence spending had been static as a proportion of total global defence expenditure, hovering between 16.5% and 17.0% annually until 2020. The 2021 increase, combined with a drop in spending in Latin America, sub-Saharan Africa and the Middle East and North Africa, means that European spending is now 18.7% of the global total.

Europe's NATO members have steadily increased their defence budgets as a proportion of GDP since 2014, from 1.26% to 1.52% in 2019. The figures for 2020 and 2021 are distorted by the economic impact of the pandemic, with European members now spending an average of 1.6% of GDP on defence. Using economic projections from the IMF's October 2019 World Economic Outlook (so, from before the pandemic), the IISS has determined that the proportion would have remained fairly static at 1.5% of GDP in 2020 and 2021 had economic growth continued as expected.

Sub-regional trends reflect this broader growth. Northern European spending grew by 7.1% in 2021, up from the 5.2% uplift in 2020. The main source of the increase was a 34.6% real-terms surge in Finland's defence budget as the country intended to make a final decision on the USD12.3bn HX fighter programme by the end of 2021. Sizeable growth was also evident in



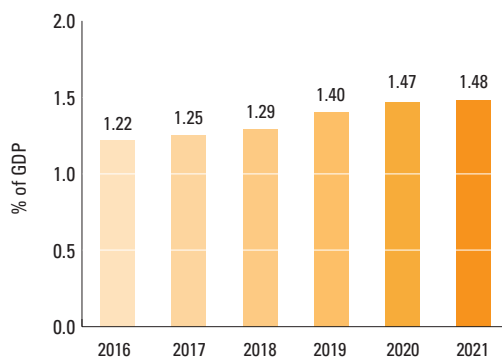
Other Western Europe – Belgium, Iceland, Ireland, Luxembourg, Switzerland
Other Central Europe – Austria, Czech Republic, Hungary, Slovakia, Switzerland
Other Northern Europe – Denmark, Estonia, Finland, Latvia, Lithuania
Other Southern Europe – Cyprus, Malta, Portugal
The Balkans – Albania, Bosnia-Herzegovina, Croatia, Montenegro, North Macedonia, Serbia, Slovenia
Other Southeastern Europe – Bulgaria, Romania

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▲ **Figure 7 Europe: defence spending by country and sub-region, 2021**

Sweden with a 7.5% real uplift in 2021 to bring the total defence budget to SEK71.2bn (USD8.40bn), including funding for crisis management and radiation safety. The country is pursuing an ambitious spending plan after its Total Defence 2021–25 bill was signed with unanimous political support in December 2020. The bill indicates that Sweden's core defence budget will increase annually to reach SEK88.7bn (USD10.4bn) by 2025, bringing the total defence budget to an estimated SEK95.2bn (USD11.2bn). It calls for an enhanced and more resilient force structure and will mean the 2025 budget is 34% higher than 2021 levels and almost double the 2015 total in nominal terms.

Spending in Southern Europe surged by 9.2% in real terms in 2021 due to significant uplifts in Greece and Italy. Greek spending rose by 47.9% in real terms to reach EUR6.47bn (USD7.73bn) – including pensions – as the country funds the procurement of 18 *Rafale* F3R combat aircraft (six new and 12 second-hand from the French air force) in a deal valued at EUR2.5bn (USD3.07bn) including munitions, training and support. Greece's 2022 budget is projected to be EUR6.15bn (USD7.5bn). This is lower than 2021 spending but well above the trend levels seen over the last decade. Italy's budget increase comes as the



▲ **Figure 8 Europe: regional defence spending as % of GDP (average)**

European Commission continues to waive the fiscal rules of the Stability and Growth Pact and enables the country to enact significant uplifts to investment spending and to begin to allocate funding for the UK-led *Tempest* combat aircraft programme.

Western European spending is also set to rise by 7.6% in real terms, driven by the UK as it pursues the spending profile outlined in its Spending Review 2020, released in December. This announced additional funding totals GBP24bn (USD30.8bn) for defence over the four-year period to 2024–25. This is effectively 'front-loaded' with significant increases evident in 2021 and 2022 but only marginal nominal increases in 2023 and 2024, which translate to reductions in real terms. The UK Budget 2021, announced in October 2021, reaffirmed these increases. Meanwhile, France continues to enact increases in line with the *Loi de Programmation Militaire* (military programming law) 2019–2024, with real-terms increases averaging 1.8% between 2019 and 2021, bringing the total defence budget to EUR49.7bn (USD59.3bn) with a further 2.0% increase projected for 2022.

In Southeastern Europe, meanwhile, defence expenditure trends continue to be distorted by volatile movements in Bulgarian and Turkish defence budgets. Bulgaria's budget continues to decline as spending returns to normal levels following the increase that accompanied the USD1.26bn purchase of eight F-16 *Fighting Falcon* combat aircraft in 2019. Turkey continues to implement sizeable nominal increases though these have been negated by the ongoing depreciation of the Turkish lira against the US dollar and a persistently high inflation rate that has averaged 14% since 2017. The 2022–24 Medium Term Expenditure Framework sets out increases that

will translate to a real-terms uplift, though increased government expenditure will do little to curb inflation.

Defence industry

The pandemic affected several of the main players in Europe's defence-industrial base in 2020, particularly those that depend on revenues from commercial aviation, leading many governments to implement support packages or bring forward procurement programmes. In June 2020, France announced a EUR600 million (USD684m) programme of investment intended to accelerate key military aerospace programmes, including the light intelligence and surveillance aircraft (Avion Léger de Surveillance et de Renseignement) programme and the acquisition of three Airbus A330 aircraft and eight Airbus H225M *Caracal* helicopters for the air force. The investment programme was part of a wider EUR15bn (USD17.1bn) rescue package to support the national aviation sector.

Germany announced a EUR130bn (USD148bn) stimulus package in June 2020. EUR10bn (USD11.4bn) was earmarked to accelerate armaments programmes that included a high workshare for local firms.

The UK did not bring forward major programmes but instead ensured that cash flow was maintained and that the supply chain was supported by forward ordering and adjusting payment schedules. The UK also indicated a more protective industrial stance on future defence procurement in the Defence and Security Industrial Strategy (DSIS) published on 23 March 2021. The DSIS stated that UK defence-procurement policy will shift from one where there was open global competition 'by default' to a more 'flexible and nuanced approach' that balances the required capability with both national-security considerations and the potential impact on UK 'prosperity'.

The DSIS established two new categories of protected capability: 'strategic imperatives', which are to be sustained wholly onshore and include nuclear deterrence, cryptographic and offensive cyber capability; and those capabilities that are needed to retain 'operational independence'. For the latter, the UK should maintain key competencies onshore but full procurement independence is not required, thus allowing the UK to work with partners on wider defence programmes. These capabilities include complex weapons, novel (including directed-energy) weapons, test and evaluation, and chemical,

biological, radiological and nuclear (CBRN) capabilities.

This approach brings the UK into alignment with continental Europe, where countries clearly distinguish between key areas that are to be protected domestically and those that are less strategically vital and can therefore be developed with, or procured from, international partners. This approach is, for instance, outlined in Germany's 2020 Strategy Paper of the Federal Government on Strengthening the Security and Defence Industry.

However, despite the UK's spending increase, affordability concerns endure. The Ministry of Defence (MoD) estimates that the costs of the UK's 10-year Equipment Plan will be GBP7.3bn (USD10.2bn) higher than the budget between 2020 and 2030. The Public Accounts Committee stated in a November 2021 report that the MoD bears too much of the financial risk in UK defence procurement programmes, relying on 'a limited specialist supply base' and lacking at times 'the skilled personnel to effectively manage the performance of these suppliers'. The report also cited a net delay of 21 years across the 20 projects most recently examined by the National Audit Office.

Meanwhile, the UK's spending announcement indicated a focus on resilience and new technology, as funding for artificial intelligence, cyber, space development and research and development was ring-fenced. Similarly, the 2022 French defence budget allocated EUR1bn (USD1.4bn) to support innovation, with a particular emphasis on cyber defence, the space sector, defence CBRN and research funding for European cooperation programmes (principally the Franco-German-Spanish future combat air system).

The coronavirus pandemic caused delays to the acquisition process for Switzerland's fighter and ground-based air defence (GBAD) Air2030 programme, as well as Finland's HX fighter programme. In June 2021, it was announced that Lockheed Martin and Raytheon had won the bid in Switzerland, with F-35 *Lightning* II combat aircraft and *Patriot* GBAD selected respectively. Meanwhile, Finland received final offers for the HX programme in May 2021.

The impact of the pandemic on the defence industry largely depended on firms' exposure to commercial aviation and on the success of government support initiatives. Airbus reported a 29% drop in annual revenue in 2020 as the significant reduction in the commercial aviation sector was only slightly

tempered by an increase of 10% and 15% respectively in revenues for the considerably smaller business segments of Defence and Space and Helicopters. Similarly, Rolls-Royce reported a revenue reduction of 28% with losses reaching GBP4.8bn (USD6.62bn) as demand for engines fell as global commercial aviation ground to a halt.

SPAIN

Spanish defence policy has changed significantly since the end of the Cold War, when it was focused on territorial defence tasks in the Balearic Islands, the Iberian Peninsula and the Canary Islands. At that time, the armed forces mainly comprised conscripts, while the services were equipped with a mix of materiel largely provided by the United States. Since the country became a NATO member in 1982, its level of participation has developed incrementally. Greater involvement in working groups and committees and in military coordination processes followed a referendum in 1986, but it only began to participate in the Alliance's integrated military structure in January 1999. Spain is now fully integrated into NATO structures and has fully professional armed forces equipped with modern materiel, mainly sourced from manufacturers based in the European Union.

The armed forces are focused on projecting stability in Europe, the western Mediterranean, the Atlantic Ocean and the Sahel. Stability in the latter region is seen as vital to Spanish security; the 2017 National Security Strategy (NSS) referred to the Sahel as part of Spain's 'advanced border'. Meanwhile, since 2012 there has been renewed focus on Ceuta and Melilla because of continued Moroccan claims to these exclaves as well as concerns over border security. Other defence-policy drivers include maintaining credible capability for self-defence and the projection of security through multilateral organisations. Madrid is a key supporter of EU defence initiatives, though NATO and European-level defence initiatives are overall seen as essentially compatible.

Strategy and policy

The 2017 NSS consolidated the 'national security system' created by its 2013 predecessor (which led, among other initiatives, to the creation of a National Security Council), recommended improvements to Spain's crisis management system and indicated that disinformation was a risk to national security. It was

revised in light of the coronavirus pandemic, though the updated version had not been released at the time of writing.

Defence priorities are set by National Defence Directives (NDDs), signed by the prime minister. The current NDD, from June 2020, was shaped by factors including the coronavirus pandemic and the EU Global Strategy, as well as the new legislature and legislation (the 2017 NSS and the 2015 National Security Law). While the preceding NDD, in 2012, prioritised defence transformation and deterrence, the 2020 document reflects a more multilateral and security-based concept of defence, noting that military participation in security tasks or multilateral activities contributes to international peace and stability. However, both documents highlight the importance of reinforcing deterrence, Spain's role in security organisations and of defence investments (though the 2020 NDD highlights investments in improving conditions of service).

The 2020 NDD indicates that Spain will focus its deployments in its European neighbourhood, the Mediterranean, the Atlantic Ocean and the western Sahel through multilateral frameworks. European-level initiatives remain key, with the EU's Common Security and Defence Policy being central to increasing stability and 'managing [Spain's] main security challenges', though NATO remains a key element of collective defence.

Some Spanish analysts have suggested that there is a disconnect between the political rhetoric around threats to security – as well as how these appear in defence documents – and the means allocated to address these challenges. This can in part be explained, they say, by the relatively low visibility of defence debates in political discourse (barring, perhaps, matters around budgeting), as well as by the effect of changes in government and resultant uncertainty over financial allocations. It means, analysts continue, that while there may be emphasis on the operational and capability planning that is needed to address potential challenges, these are less clearly reflected in the procurement portfolio.

Armed forces

Spain's current armed forces have been principally shaped by four documents. The Organic Law on defence (5/2005) and other regulations changed defence and military structures; an investment cycle from 1997–2008 modernised much military equipment; and Law 39/2007 established a maximum

strength of 130,000 personnel. Meanwhile, the 2003 Strategic Defence Review set out future force design, combining the transatlantic transformation agenda (including jointness, interoperability, power projection and improved equipment) with Spain's specific circumstances, such as its ongoing integration into NATO's military structure and professionalisation process.

In July 2020 a new division was created in the defence staff to assist force development, focusing on preparation and interoperability, strategic foresight, concept development and experimentation and doctrine. Together with changes to the planning division, intended to increase its role in capability development and transformation, these developments will support the implementation of the 2035 'Operational Environment' document (issued in 2019), intended to support transformation in line with NATO priorities. Royal Decree 521/2020, meanwhile, bolstered the Joint Staff, transformed the Joint Cyber Defence Command into the Joint Cyberspace Command and gave the chief of defence new responsibilities relating to the employment of the Emergencies Military Unit (which had an active role in Spain's coronavirus response and comes under the authority of the defence minister).

The 2007–08 financial crisis affected training and sustainment, and Madrid prioritised training and maintenance for operational units, those involved in external deployments or most relevant to deterrence and territorial defence. There are fears that the economic effects of the coronavirus pandemic will affect readiness, and the army chief of staff reflected these concerns when he discussed the potential effect of the pandemic on maintenance and training in a June 2020 interview. That said, the armed forces have benefited from the lessons of deployments to the Balkans, Afghanistan and, to a lesser extent, Iraq. There has also been a continued focus on personnel management. As part of the professionalisation process, Law 8/2006 established three types of engagement: an initial commitment of up to six years; a long-term commitment up to 45 years of age; or a permanent engagement (beyond the age of 45), to which service personnel could progress if already engaged in a 'long-term' commitment. At the end of a long-term contract, at the age of 45, personnel could leave with a pension of around EUR600 (USD717) per month and be free to find other work. However, there have been reports that some personnel are concerned about their employment prospects after leaving

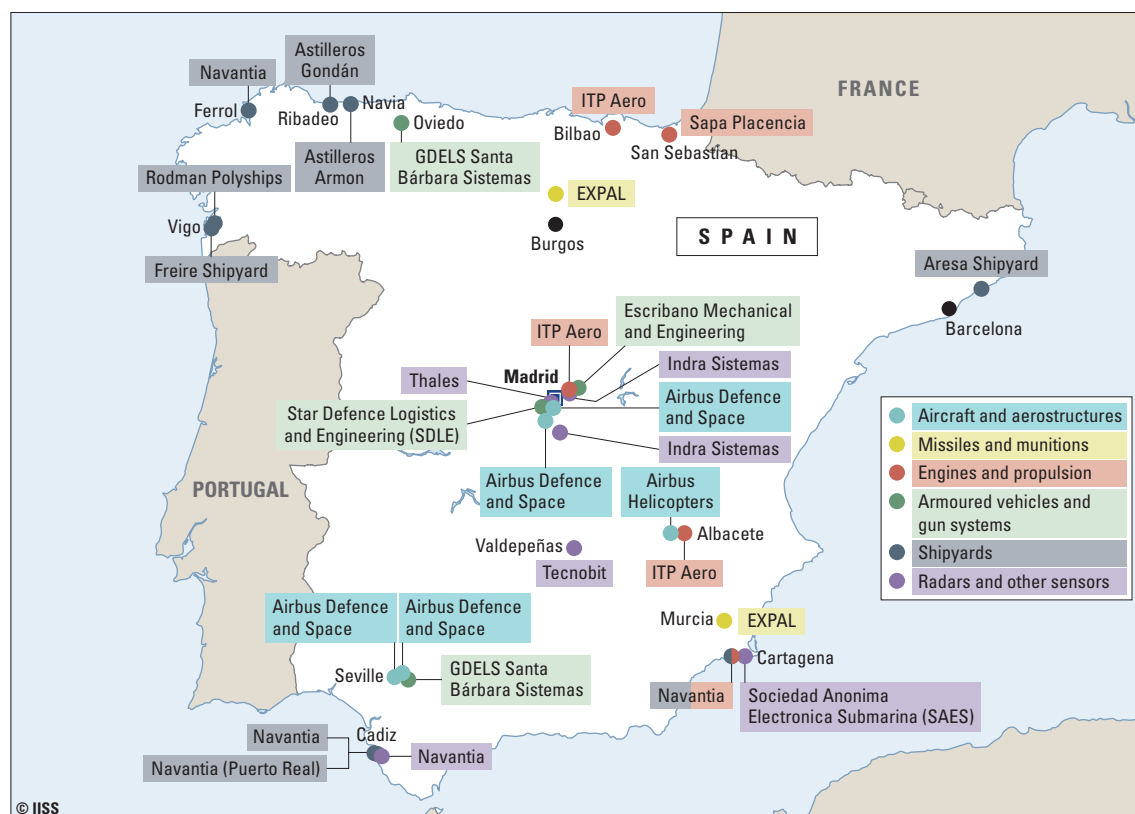
military service, in light of the pandemic's effect on the broader employment market and with permanent posts remaining limited in number (and dependent on an examination and existing level of education). The air force, meanwhile, has in recent years lost pilots to civilian airlines, and it is unclear whether the disruption caused to the civil aviation sector by the pandemic will reverse this trend.

Equipment modernisation

A new defence investment programme began in 2018. Due to run until 2032, it intends to replace ageing platforms and boost local defence-industrial production. The programme has enabled new procurements and also unlocked long-running projects that had been delayed due to budget problems. Key acquisitions for the armed forces include five F-110 frigates, ordered in April 2019; 348 *Piranha* V armoured vehicles (of a total requirement of 998), ordered in September 2015; A330 MRTT aircraft; and NH90 helicopters. The first of the planned four S-80 Plus submarines was launched in April 2021. The first two boats will be retrofitted with air-independent propulsion (AIP) system once development is complete. The project's financial ceiling was earlier raised by EUR1.8 billion (USD2.13bn) (to EUR3.9bn or USD4.61bn) in November 2018. There are also plans to modernise CH-47 helicopters and Eurofighter combat aircraft (the latter at a cost of EUR906 million or USD1.07bn), as well as to purchase the right to use two communications satellites (for 19 years). In late 2020, Eurofighter submitted a proposal to sell an additional batch of 20 Eurofighters, likely part of Spain's *Project Halcón* programme, to replace the air force's F/A-18 *Hornets* based at Gran Canaria.

Defence economics

Spain's baseline defence budget – primarily covering core MoD funding, war pensions and allocations from 'autonomous agencies' – came to EUR11.5bn (USD13.8bn) in 2021, amounting to around 1% of GDP, similar to the levels seen since the end of the Cold War. Commitments made at NATO's Wales Summit in 2014 led defence ministers to pledge to progressively increase defence spending, first to 1.53% of GDP and then to 2% by 2024. (US exhortations that European nations spend more on defence were likely also important.) Prime Minister Pedro Sánchez restated this ambition at NATO's Brussels Summit in 2018, though Margarita Robles (defence minister since 2018) has reportedly cast doubt on whether



▲ Map 2 Spain: principal defence industrial manufacturing sites

these objectives will be reached. With post-pandemic economic factors likely important in this regard, some Spanish analysts also argue that this owes much to the relatively peripheral place they assert defence debates occupy in political discourse.

While the defence budget has remained relatively stable at around 1% of GDP, this does not include other allocations that raise defence expenditure to between 1.1% and 1.3% of GDP. These include funds for the Social Institute of the Armed Forces; military pensions; the corresponding part of the Guardia Civil responsible to the MoD; appropriations for research, development and innovation; the military contribution to NATO and the EU under the auspices of the Ministry of Foreign Affairs; and the costs of international missions. Nor does it include financial aid (in the form of credits) from the Ministry of Industry, Trade and Tourism. This is important because the defence budget increase seen in 2017 broadly corresponds with debt payments for Special Armament Programmes (SAPs) linked to the 1997–2008 modernisation cycle. Projects justified by strategic requirements, acquisition cost and

industrial implications were to be funded through an industrial pre-financing system, based on interest-free loans for system development, deferred payment to contractors with MoD funds and the repayment of advances to the Treasury. (These have since been renamed as Special Modernisation Projects.)

For instance, while EUR11bn (USD13.1bn) was allocated to modernisation projects from 1997–2008, contracts totalled EUR36.5bn (USD43.6bn), with EUR27bn (USD33.2bn) funded via the SAP mechanism (for which the Ministry of Industry advanced EUR15bn (USD17.9bn) to manufacturers for development and the MoD prepared a payment schedule that would be extended until 2025). This model made it possible to keep the core defence budget low and to meet the convergence criteria for Economic and Monetary Union. However, some platform deliveries coincided with the financial crisis, which meant that some instalments were not paid in 2010 and 2011, forcing a renegotiation of the payment schedule until 2031 and the approval of extraordinary credits to pay the accumulated debt. The Constitutional Court ruled against the extraordinary credits in 2016 and the MoD

announced in March 2017 that funding for the SAP would be incorporated into the core MoD budget going forward. To date, programmes worth some EUR14bn (USD16.7bn) have been approved under the 2018 modernisation cycle, but with payments delayed until the 2030s this has enabled actual military investment to exceed 20% of the defence budget.

In order to reduce the economic impact of the pandemic on the defence sector, guarantee spending commitments and support the defence-industrial base, the MoD proposed a plan called Ave Fénix in 2020. It not only included new military programmes – likely following the existing industrial pre-financing model – but also involved EU funding. A first step was taken after Airbus announced redundancies in Spain. To minimise job losses and support the sector, a plan was agreed that included the acquisition of three A330 MRTT, four C295 maritime patrol aircraft, the start of the Future Combat Air System (FCAS) phase II, advance payments for the A400M and support for the development of *Tiger* MkIII helicopters and a medium-altitude long-endurance uninhabited aerial vehicle (MALE UAV).

These decisions reflect the importance of national industrial and social factors in defence investment decision-making. For instance, the modernisation of the Eurofighter fleet and the purchase of 20 additional aircraft would provide the Airbus factory in Getafe with work until at least 2030. But, analysts assert, politics is also an important factor. Spain is one of the prime advocates of the Permanent Structured Cooperation (PESCO) project, but it only leads two of the 24 projects in which it participates.

Defence industry

Large firms, such as the state-owned Navantia shipyards, Santa Bárbara Sistemas (belonging to General Dynamics European Land Systems) and Airbus, comprise nearly one-quarter of Spain's defence industrial sector. For several years, the MoD has been trying to strengthen the national defence-industrial and technological base and improve the competitiveness of defence firms. Participation in PESCO projects may reflect this intent, though much remains to be decided about the level of Spanish industrial participation in project consortia. While defence exports are modest in global terms, they remain an important source of revenue, mainly deriving from sales of Airbus products (such as the A400M, A330 MRTT, C295 or CN235) and Navantia vessels (such as the *Canberra*-class LHD and *Hobart*-

class DDG for Australia, as well as corvettes for Saudi Arabia). Other small- and medium-sized companies, such as Urovesa, Escribano, Instalaza, Maxam and Rodman, are also active in the export market. There has been some debate over sales to Middle Eastern states, which led to Royal Decree 679/2014, approving the Regulation for the Control of Foreign Trade in Defence Material, Other Material and Dual-Use Products and Technologies. This is intended to reinforce controls over defence sales (including post-sale verification) to prevent weapons from being used outside the importing country. Military sales must also be authorised by the Inter-Ministerial Regulatory Board on External Trade in Defence and Dual-Use Material.

UNITED KINGDOM

In March 2021 the UK government unveiled its Integrated Review (IR) of security, defence, development and foreign policy, entitled 'Global Britain in a Competitive Age', which it had previously declared would be the largest review of its type carried out in the UK since the end of the Cold War. This was immediately followed by a Defence Command Paper, 'Defence in a Competitive Age', which set out in greater detail plans to modernise the armed forces, including some significant cuts to personnel and inventories of platforms, especially in the British Army and the Royal Air Force (RAF), to help pay for new equipment programmes and investment in emerging technologies.

This transition from obsolete 'sunset' to 'sunrise' capabilities is planned to involve networking, the exploitation of data, artificial intelligence, directed-energy weapons and robotic and autonomous systems. These plans include a reconnaissance satellite constellation for the new UK Space Command. Overall, the IR proposed a UK posture that would be more proactive in seeking to shape the international order and, critically, would integrate the key levers of government and national power and influence. To underpin all this, the government had previously announced in November 2020 an uplift of GBP16.5 billion (USD22.8bn) in the defence budget over four years.

The most attention-grabbing aspect of the IR was the announcement of an 'Indo-Pacific tilt', as well as increased focus on Africa and the Middle East. At the same time, the review suggested that the centre of gravity of the UK's defence commitments would

remain NATO and the Euro–Atlantic arena. Indeed, it identified Russia as posing the ‘most acute direct threat’ to the UK, while China was portrayed as a ‘systemic’ competitor.

Minilateral defence cooperation in Europe

Regional and minilateral defence cooperation in Europe accelerated during the coronavirus pandemic. In addition to enhanced interoperability, joint planning and cooperative capability development, initiatives to tackle the coronavirus pandemic, improve resilience and further both NATO’s and the EU’s green defence and innovation priorities all provided an impetus for regional and minilateral formats in 2020 and 2021.

The French-led **European Intervention Initiative** (EI2) focuses on tackling terrorism, improving resilience, anticipating future crises and on enhanced defence cooperation. EI2 activity is structured across eight working groups – four geographical (focusing on the Sahel, the Caribbean, the Baltic region and the Indian Ocean) and four thematic working groups (focusing on power projection, terrorism, external influence in Africa and legal affairs). On 22 June 2021 a conference on European defence cooperation outlined a requirement for European defence cooperation in fully-networked, optionally-crewed, collaborative combat-air capability and showcased the FCAS and Next-Generation Weapons System (NGWS). Earlier, on 25 September 2020, EI2 defence ministers met in Portugal for a third high-level meeting. Among other agenda points, they discussed enlargement, though no new members have been invited to join since 2019 despite reports of interest by Greece and others. This reignited criticism in some quarters over perceptions of the format’s exclusivity and perhaps reflects a lack of consensus on EI2 enlargement among its members.

The UK-led **Joint Expeditionary Force** (JEF) focused on increasing preparedness and interoperability. On 1 July 2021 JEF states adopted a new Policy Direction concerning operational and logistical guidance for rapid deployment and deterrence against hybrid security threats in Northern Europe. On 12 February 2020 the participating states signed a Readiness Declaration, committing the JEF to contribute to NATO’s Readiness Initiative, including with land, maritime and air capabilities, and military logistics. In March 2021 two Royal Navy ships participated alongside Baltic partners in the JEF’s first maritime security activity in the Baltic Sea. This prepared the ground for the JEF’s second large joint exercise, *Joint Protector 21*, which took place in Sweden in September 2021. Iceland became the tenth JEF member state on joining in April 2021.

Inevitably, this raised questions about whether the government can deliver on all these ambitions. Ministers and senior officers have sought to reconcile this apparent tension by arguing in part that the

The **Nordic Defence Cooperation** (NORDEFCO) grouping is focused on implementing its Vision 2025 priorities, notably tackling the pandemic; ‘green defence’; consolidating work on ‘total defence’, military logistics and capability development; and strengthening partnerships with the US and Baltic countries. In February 2020, member states activated the NORDEFCO Crisis Consultation Mechanism to collaborate on reducing the pandemic’s impact on the armed forces and resuming training and exercises. During 2020 a Danish-led working group on green defence was set up to discuss options for reducing CO₂ emissions by installations, equipment and operations. The National Armaments Directors of NORDEFCO countries met twice to review ongoing work on capability development in Space, Counter Unmanned Aircraft Systems and Electronic Warfare as part of NORDEFCO’s new Long-Term Project Development model. The Military Coordination Committee authorised further action on five lines of effort: ammunition, strategic sea- and airlift, maintenance, joint warehousing and host-nation support within NORDEFCO’s Logistics Forum initiative. Discussions with US European Command in September 2020 focused on cooperation over military mobility, capability development, Arctic security and exercise coordination. In 2021 Finland, as chair, signalled that NORDEFCO will work on project bids for the European Defence Fund and on reducing the impact of the pandemic on security of supply issues, especially relating to defence projects and the Nordic defence industry and industrial base.

On 24 June 2020 the **Visegrad Four** (V4) ministers of defence signed the Long-Term Vision of the Visegrad Countries on their Defence Cooperation, revising a document originally signed in 2014. The 2020 document increases V4 contributions to NATO and EU Common Security and Defence Policy operations and commits them to closer cooperative capability development, including through a joint ammunition project and European Defence Fund bids. Meeting in Krakow from 23–24 June 2021, V4 chiefs of defence updated the 2023 V4 EU Battlegroup preparation process and launched a joint initiative on V4 Training and Exercise Strategy. Improved cooperation against Russian ‘hybrid threats’ through strategic communications and cooperation on digitisation and technical innovation featured in V4 meetings throughout 2020 and 2021.

declared ambition of a greater and more persistent presence in the Indo-Pacific region should not be seen solely, or indeed primarily, in defence terms. However, the prominence given during 2021 to the dispatch to the region of the UK's Carrier Strike Group on its first operational deployment appeared only to heighten expectations. The September 2021 Australia–UK–US (AUKUS) agreement, centred on cooperation to deliver a nuclear-powered submarine capability for the Royal Australian Navy, could help underpin increased UK commitment to the region, but the specific role of each signatory to the agreement remains unclear at the time of writing.

The IR also announced that the ceiling on the UK's nuclear-warhead stockpile would be raised to counter 'the developing range of technological and doctrinal threats' in other countries. This appeared to be a sign of renewed concern about the strength of the UK's deterrent posture in the face of developments in the nuclear and missile-defence capabilities and postures of Russia and, possibly, China. The budget implications of this move were unclear but could be significant.

Increasing maritime capability – reducing land and air capabilities

In October 2021 Prime Minister Boris Johnson appointed an admiral to the post of chief of the defence staff for the first time in two decades (and for only the third time since 1982), which some analysts understood to suggest a more maritime-centred focus. Johnson declared that his ambition for the Royal Navy was for it to be 'foremost in Europe'.

The navy appears to be a major beneficiary from the review. There will be a short-term dip in destroyer and frigate numbers (already reduced from 19 to 18). Navy chiefs argue that there will be compensation in increased numbers in the future (although the plan to rectify the unreliable propulsion of the Type-45 destroyers appears to be running behind schedule). The aim is to build up to a force of 24 escorts by the mid-2030s, including new Type-26, Type-31 and eventually Type-32 frigates, the last of which is still in the design phase. New autonomous mine-warfare capabilities will replace existing mine countermeasures vessels. Also critical to the navy's future operational plans is the new Fleet Solid Support ship programme.

Two new Littoral Response Groups – one in the Euro–Atlantic area and from late 2023 another in the Indo-Pacific and centred mainly on the Indian

Ocean – will carry Royal Marines as part of a transformed Future Commando Force. Forward presence will also include the latest offshore patrol vessels, to be replaced or supplemented later by some of the new-design frigates. Initial planning is also underway for a new-generation destroyer, the Type-83, and a successor nuclear-powered attack submarine. There are also increasing signs that the navy is looking to keep both of its aircraft carriers available for operations, although at present there are not sufficient assets for two carrier air groups. The UK says it will buy more than its current commitment of 48 F-35B *Lightning* II aircraft to fly from the ships, though it has not been specific about how many more or when; at the same time, there may be greater focus on developing uninhabited air capabilities to fly from the carriers.

The RAF will reduce airframe numbers, allowing a GBP2bn (USD2.8bn) investment in the concept and assessment phase of the FCAS programme, with the *Tempest* crewed combat aircraft project at its core, to potentially provide a replacement for the *Typhoon* after 2035. The RAF plans to continue fielding seven *Typhoon* operational squadrons, although 24 early model *Typhoons* are to be withdrawn by 2025, five years earlier than anticipated.

The 14 C-130J *Hercules* medium-transport aircraft that support special forces will be retired. The role will be assumed by the larger A400M *Atlas*. The last three E-3D airborne early-warning and control aircraft were retired in 2021, to be replaced from 2023 by three E-7 *Wedgetail* aircraft. The *Puma* HC2 medium-lift helicopter fleet will retire by 2025, to be replaced by an as-yet-unidentified type, while eight of the RAF's early-model *Chinook* heavy-lift helicopters are also to be withdrawn, though the UK agreed a contract for 14 H-47(ER) *Chinook* helicopters in May 2021.

A Global Response Force will combine the army's existing air-assault and combat-aviation brigades. The 3rd Division will remain optimised for high-intensity warfighting and will shift its capabilities in favour of both protection and deep battle. The plan is also for electronic-warfare and air-defence capabilities to double in size. The army will also reduce from three to two armoured Brigade Combat Teams (BCTs), with a mixture of heavy and medium armour. Two-thirds of the current fleet of *Challenger* 2 main battle tanks will be upgraded, amounting to 148 vehicles. The *Warrior* infantry fighting vehicle will be retired and the armoured-infantry capability apparently abandoned. Instead, mechanised infantry will use the *Boxer*

wheeled armoured personnel carrier, meaning that the UK will be the only significant NATO member without armoured infantry. This and the reduction in tanks and ground-manoeuvre brigades by one-third will reduce close-combat capability, not least in urban terrain.

The army plans to increase capability for deep battle by attacking more targets with greater precision at longer range. The plan is for a new 'Deep Recce Strike' BCT to achieve this by using *Ajax* scout vehicles, electronic warfare and long-range precision artillery, including guided multiple-launch rocket systems (MLRS) and *Spike*-NLOS missiles, supported by attack helicopters. The Army's *Future Soldier* document, released in November 2021, set out these plans, including the creation of a new 'Ranger' regiment designed to train, advise 'and if necessary accompany' partners, alongside more detail on the new Special Operations Brigade, announced in August 2021. However, the army's plans depend on the long-overdue replacement of the high proportion of its fighting equipment that is either obsolete or nearing obsolescence, such as the exchange of the *Scimitar* reconnaissance vehicles with the *Ajax*. But *Ajax* is suffering well-publicised problems that have inflicted a considerable delay and its survival remains

in some doubt, indicating that, despite many reforms, the process for procuring UK military equipment still has considerable weaknesses.

Unclear priorities

The review's analysis of developing challenges appears consistent with the thinking of the US and many of the UK's allies that are de-emphasising traditional assets – force size and materiel – in favour of emerging technological capabilities. However, there is a risk of too much combat capability being removed, particularly from the army and the RAF. Moreover, many of the new technologies promoted in the review depend on the existence of a secure backbone of digital communications. This has the potential to increase capability, but conversely could increase vulnerability to attack by cyber, electronic warfare or electromagnetic pulse weapons.

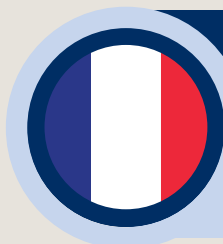
Meanwhile, reductions in the numbers of aircraft and armoured forces will make it more difficult to sustain the repeated deployments required by the IR. If the ambitions in the review are followed through, it is likely that forces will be spread more thinly, perhaps increasing risk in the move to reduce personnel in favour of technology, not least as the size of reserve forces is to remain static.

Arms procurements and deliveries – Europe

Significant events in 2021

JANUARY

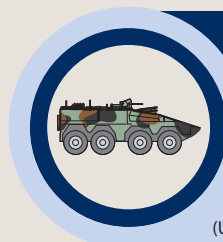
FRENCH SHIPYARD SALE CALLED OFF



The 2018 agreement to sell the Chantiers de l'Atlantique shipyard in Saint-Nazaire to Italy's Fincantieri was called off, with both sides citing the significant economic challenges facing the cruise ship industry due to the pandemic. Chantiers de l'Atlantique – the only shipyard in France with enough capacity to build the country's next aircraft carrier – had been majority-owned by Korean firm STX from 2008 until the company's bankruptcy in 2016. The French government's subsequent nationalisation of the shipyard was described as a 'temporary' measure, with the sale to Fincantieri intended to secure the company's longer-term health.

FEBRUARY

RHEINMETALL RESTRUCTURING



Rheinmetall announced a restructuring that will dissolve its Automotive and Defence divisions and replace them with five new groups: Weapon & Ammunition, Electronic Solutions, Vehicle Systems, Sensors & Actuators and Materials & Trade. One of the reasons given for the move was to reduce the share of sales of automotive components, such as for internal combustion engines, while the firm also announced that its pistons business will be sold. Rheinmetall intends to focus more on the defence and security sector. Currently comprising 63% (EUR3.65bn (USD4.45bn)) of the firm's total sales of EUR5.8bn (USD7.06bn), the company expects that defence and security products will by 2025 reach 70% (EUR5.95bn (USD7.25bn)) of its projected total sales of EUR8.5bn (USD10.36bn).

JUNE

SWITZERLAND BUYS AMERICAN



The Swiss government announced the selection of the F-35A and *Patriot* for its new fighter and ground-based air-defence programmes, respectively. The choice of the former ends a saga that began in the late 2000s and included the rejection of the Swedish *Gripen* in a popular referendum in 2014, followed by the (narrow) approval of the programme in another referendum in 2020. The government stated that both systems were the lowest-priced offers in their respective competitions. The F-35 has recently begun to see its unit cost reduce as production edges closer to one-third of the number ordered globally so far.

AUGUST

FCAS/SCAF: SIX YEARS OF DEVELOPMENT AGREED



France, Germany and Spain agreed on a further six years of development work for the FCAS/SCAF programme, specifically the Next Generation Weapon System project that includes a fighter aircraft (led by Dassault), an uninhabited systems remote carrier and a combat cloud (both led by Airbus). In March the CEO of Dassault Aviation voiced concerns over workshare arrangements and project management. The addition of Spain as an equal partner in 2019 spreads the financial burden, but it also increases Airbus's share of the programme. In addition, both companies have concerns over intellectual property, as some technology that will be used in the programme has already been developed by them independently. The respective governments have so far managed to smooth over potential disagreements but their continued attention will be required as the companies negotiate the specifics of the next phase of work.

AUGUST

ULTRA ELECTRONICS: PROPOSED TAKEOVER PROBED



The UK government announced that it would investigate the proposed GBP2.6bn (USD3.61bn) takeover of Ultra Electronics by Cobham Group. Ultra Electronics supplies several key subsystems to the UK and other close allies, and the deal is being assessed for its national security implications. Cobham was itself controversially taken over by US private-equity firm Advent International in December 2019 and has since divested a number of businesses, including its stake in the AirTanker consortium and its Mission Systems pilot-training business. Advent International and Cobham had earlier raised the possibility of acquiring Ultra to create a 'global defence electronics champion'. However, the UK government will be concerned about the potential implications of the takeover of a company that provides the UK with some of its most sensitive technology, most significantly hull-mounted sonars for frigates.

Table 5  **Hungary: defence procurement since 2010**

Launched in 2017, Hungary's ten-year Zrínyi 2026 programme aims to achieve the most significant modernisation of the armed forces since the end of the Cold War. There is particular focus on recapitalising equipment across the air and land domains and the development of the defence industry by facilitating offset agreements, local production deals and technology transfer. Over the last three years, Hungary has signed several contracts designed to boost its land capa-

bilities, largely with German companies; of 218 *Lynx* infantry fighting vehicles contracted from Rheinmetall, the plan is to manufacture 172 in Hungary. Aerospace procurement has focused on acquiring utility transport platforms. The two KC-390 medium transport aircraft ordered from Embraer will provide a significant capability upgrade following the retirement of the four An-26 *Curl* light transport aircraft in 2020. Construction of the first airframe began in late 2021.

Contract date	Equipment	Type	Quantity	Value	Prime contractor	Deliveries	Part of Zrínyi 2026?
Aug 2014	<i>Mistral</i> 3	Point-defence man-portable air defence system	73+	HUF3.68bn (USD15.83m)	 MBDA	2016–19	No
Jan 2017	Z-242L	Training aircraft	2	Approx. HUF363m (USD1.32m)		Mar 2017	Yes
	Z-143L		2			Mar 2018	Yes
Dec 2017	A319*	Passenger transport aircraft	2	€USD90m	 Česká Letecká Servisní (CLS)	Jan 2018	Yes
Jun 2018	H145M	Multi-role helicopter	20	Approx. HUF100bn (USD370.08m)	 Airbus	Nov 2019–Dec 2021	Yes
Dec 2018	<i>Leopard</i> 2A4**	Main battle tank	12	Approx. EUR1.76bn (USD2.08bn)		Jul–Dec 2020	Yes
	<i>Leopard</i> 2A7+	Main battle tank	44		Krauss-Maffei Wegmann (KMW)	Expected from 2023	Yes
	PzH 2000	155mm self-propelled artillery	24			Expected in 2021–25	Yes
Dec 2018	H225M	Heavy transport helicopter	16	HUF48bn (USD177.64m)	 Airbus	Expected in 2023–25	Yes
Dec 2019	<i>Wisent</i> 2	Armoured recovery vehicle	5	n.k.	 Flensburger Fahrzeugbau Gesellschaft (FFG)	Expected in 2023–25	Yes
Dec 2019	<i>Ejder Yalcin</i> 4x4	Protected patrol vehicle	10	€USD6.10m		Dec 2020	Yes
Sep 2020	<i>Lynx</i>	Infantry fighting vehicle	218***	EUR2bn (USD2.28bn)		Expected from 2023	Yes
	BPz-3 <i>Büffel</i>	Armoured recovery vehicle	9			Expected from 2023	Yes
Nov 2020	NASAMS III	Short-range surface-to-air missile system	n.k.	EUR410m (USD468.7m)	 Raytheon Technologies  Kongsberg	Expected in 2023	Yes
Nov 2020	KC-390	Medium transport aircraft	2	Up to HUF75bn (USD243.51m)		Expected in 2023–24	Yes
Dec 2020	<i>Ejder Yalcin</i> 4x4	Protected patrol vehicle	40 (320)****	€USD23m		n.k.	Yes

*second-hand

**a second-hand lease agreement

***46 to be built in Germany by Rheinmetall; 172 to be built in Hungary by Rheinmetall Hungary

****40 to be built in Turkey by Nurol Makina; 280 to be built in Hungary by HT Division

 – multinational

▼ Figure 9  European Multi-Mission Frigate (FREMM)

In 2002, France and Italy agreed to jointly develop and acquire multi-mission frigates (FRégates Européennes Multi-Missions (FREMM)). The resulting vessels share a basic hull design, propulsion system and some weapons, but little else. Both France and Italy have large and well-established domestic manufacturers of sensors and combat systems, principally Thales and Leonardo, which have integrated equipment on each country's respective frigates. Italy's requirement has always been for ten vessels, but while France began with a plan to build 17 this was subsequently reduced to eight. In part because of these changes, French unit-cost estimates have

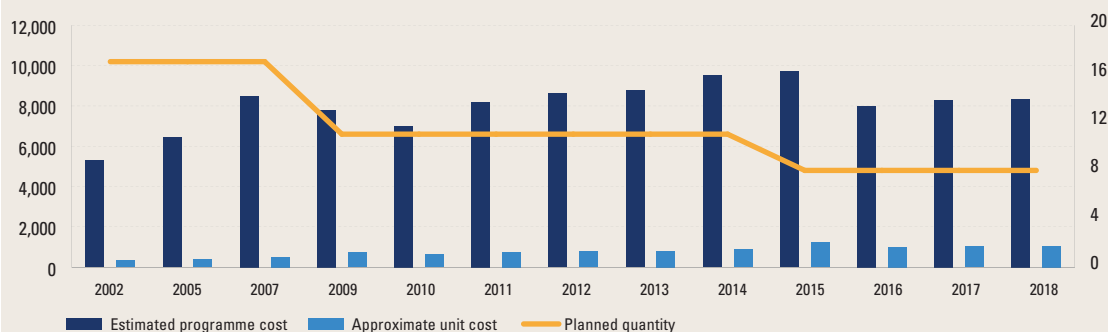
more than doubled; this is despite the export of two vessels to Morocco and Egypt. In contrast, the unit cost of Italy's vessels has remained broadly the same. More recently Italy has also exported two of its unfinished frigates to Egypt, with two replacements added to the shipbuilding plan. However, the most significant export was secured in 2020 when the US Navy (USN) selected a modified version of Italy's FREMM variant for its FFG(X) programme of up to 20 ships. If the USN does build up to 20 vessels, like the UK's Type-26 frigate the design will be operated in greater numbers by a foreign navy than by the domestic customer.

FREMM exports

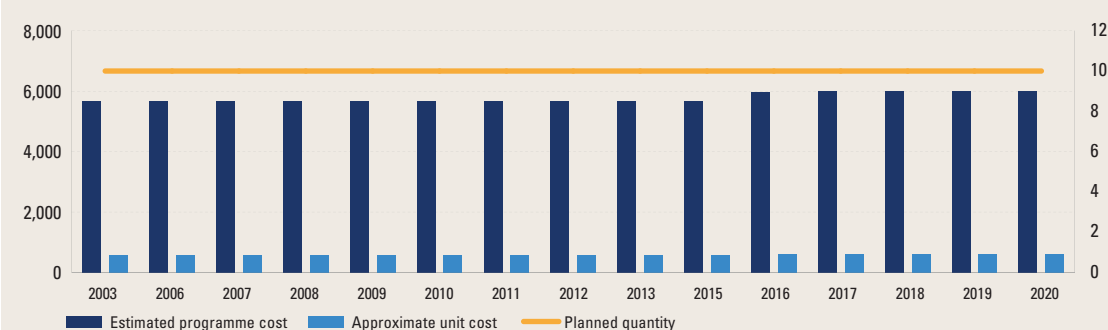
Order date	Recipient	Variant	Quantity	Value (USD)	Deliveries
2007	 Morocco	 ASW	1	685.23m	2014
2015	 Egypt	 ASW	1	1.11bn	2016
2020*	 United States	 Constellation	2	2.33bn	2026–27
2020	 Egypt	 GP	2	1.37bn	2020–ongoing
2021	 Indonesia	 tbd	6	n.k.	n.k.

*Contract for first of class; 20 to be built under current Program of Record
ASW = Anti-Submarine Warfare; GP = General Purpose

France: planned quantity of purchase and government's estimated programme cost (EUR million)



Italy: planned quantity of purchase and government's estimated programme cost (EUR million)

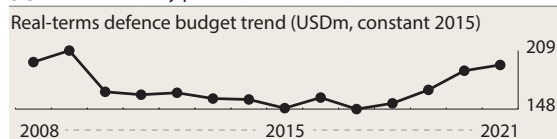


Albania ALB

Albanian Lek ALL		2020	2021	2022
GDP	ALL	1.61tr	1.72tr	
	USD	14.8bn	16.8bn	
per capita	USD	5,153	5,837	
Growth	%	-3.3	5.3	
Inflation	%	1.6	1.9	
Def exp [a]	ALL	20.4bn	34.5bn	
	USD	188m	336m	
Def bdgt [b]	ALL	24.1bn	25.2bn	32.2bn
	USD	222m	246m	
USD1=ALL		108.44	102.51	

[a] NATO figure

[b] Excludes military pensions



Population 3,088,385

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	9.3%	3.4%	4.2%	4.7%	21.5%	6.3%
Female	8.4%	3.0%	3.9%	4.5%	23.6%	7.3%

Capabilities

Principal missions for Albania's armed forces include territorial defence, internal security, disaster-relief tasks and small-scale peacekeeping or training deployments. Tirana is looking to improve the operational readiness and capability of its infantry battalion, including with new equipment closer to NATO standards. Other priorities include improving border management and information sharing to prevent transnational crime and terrorism, establishing a cyber-security unit and developing air capabilities, and creating an armed-forces academy styled on the US Military Academy. Greece and Italy police Albania's airspace. Albania contributes to NATO, UN and EU missions but does not possess an independent expeditionary capability. Most Soviet-era equipment has been sold. Limited defence modernisation under the Long-Term Development Plan 2016-25 is proceeding, including the purchase of helicopters and UAVs and the installation of an airspace-surveillance system. The navy is expected to receive upgrades to vessels that have been or still are deployed in the Aegean Sea. NATO support for the modernisation of Kucova air base is due to begin in 2022. Albania has little in the way of a domestic defence industry, with no ability to design and manufacture modern military platforms. Nevertheless, the country has some publicly owned defence companies that are capable of producing small arms, explosives and ammunition.

ACTIVE 7,500 (Land Force 2,350 Naval Force 700 Air Force 650 Support Command 1,650 Other 2,150)

ORGANISATIONS BY SERVICE

Land Force 2,350

FORCES BY ROLE

SPECIAL FORCES

1 spec ops regt (1 SF bn, 1 cdo bn)

MANOEUVRE

Light

3 lt inf bn

COMBAT SUPPORT

1 mor bty

1 NBC coy

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

APC • PPV 40 *MaxxPro Plus*

ARTILLERY • MOR 32: 82mm 20; 120mm 12

Naval Force 700

EQUIPMENT BY TYPE

All operational patrol vessels under 10t FLD

Coast Guard

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS 14

PB 9: 4 *Iliria* (Damen Stan Patrol 4207); 3 Mk3 *Sea**Spectre*; 2 *Shqypnia*

PB 5: 2 Type-227; 1 Type-246; 2 Type-2010

Air Force 650

EQUIPMENT BY TYPE

HELICOPTERS

TPT 16: **Medium** 4 AS532AL *Cougar*; **Light** 12: 1 AW109;

3 Bell 205 (AB-205); 2 Bell 206C (AB-206C); 4 Bo-105; 2 H145

Military Police

FORCES BY ROLE

COMBAT SUPPORT

1 MP bn

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

AUV 8 IVECO LMV

Support Command 1,650

FORCES BY ROLE

COMBAT SUPPORT

1 engr bn

1 cbt spt bn

COMBAT SERVICE SUPPORT

1 log bde (1 tpt bn, 1 log bn)

1 maint unit

DEPLOYMENT

BOSNIA-HERZEGOVINA: EU • EUFOR • *Operation Althea*
1

LATVIA: NATO • Enhanced Forward Presence 21; 1 EOD pl

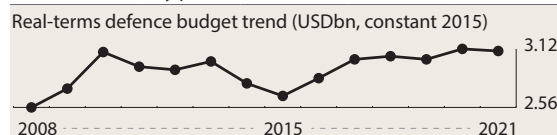
SERBIA: NATO • KFOR 29

SOUTH SUDAN: UN • UNMISS 2

Austria AUT

Euro EUR		2020	2021	2022
GDP	EUR	379bn	403bn	
	USD	433bn	481bn	
per capita	USD	48,593	53,793	
Growth	%	-6.2	3.9	
Inflation	%	1.4	2.5	
Def bdgt [a]	EUR	3.04bn	3.08bn	3.11bn
	USD	3.47bn	3.68bn	
USD1=EUR		0.88	0.84	

[a] Includes military pensions



Population 8,884,864

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	7.2%	2.4%	2.7%	3.3%	24.5%	8.8%
Female	6.8%	2.4%	2.6%	3.2%	24.7%	11.3%

Capabilities

Austria remains constitutionally non-aligned, but is an EU member and actively engaged in the CSDP. Defence-policy objectives are based on the 2013 National Security Strategy, the 2014 Defence Strategy and the 2017 Military Strategy, including providing military capabilities to maintain sovereignty and territorial integrity, to enable military assistance to the civil authorities and to participate in crisis-management missions abroad. A 2017 defence plan included structural changes at the operational and tactical command-and-control level. Army brigades have specialised according to roles, such as rapid response, mechanised (heavy), air-mobile (light) and mountain warfare. In June 2021, organisational-reform plans were announced that envisage a streamlining of structures in the Ministry of Defence. These are supposed to be completed by April 2022. While not a NATO member, Austria joined NATO's Partnership for Peace framework in 1995. A September 2019 defence ministry report defined recapitalisation requirements until 2030. It warned that the gap between requirements and available resources was growing and would ultimately undermine the ability of the armed forces to implement its missions. The level of ambition for crisis response is to be able to deploy and sustain a minimum (on average) of 1,100 troops. The September 2019 report also called for the *Typhoon* fleet to be upgraded rather than replaced. In July 2020, the defence ministry confirmed that it would retain the *Typhoon* but in January 2021 the defence minister suggested they might be sold if the opportunity presented itself. There are plans to cooperate with Italy over helicopter procurement, and a letter of intent was signed in November 2020. Austria's defence-industrial base is comprised of some 100 companies with significant niche capabilities and international ties in the areas of weapons and ammunitions, communications equipment and vehicles.

ACTIVE 23,300 (Land Forces 13,000 Air 2,800 Support 7,500)

Conscript liability 6 months recruit trg, 30 days reservist refresher trg for volunteers; 120-150 days additional for officers, NCOs and specialists. Authorised maximum wartime strength of 55,000

RESERVE 115,950 (Joint structured 35,050; Joint unstructured 80,900)

Some 12,000 reservists a year undergo refresher trg in tranches

ORGANISATIONS BY SERVICE

Land Forces 13,000

FORCES BY ROLE

MANOEUVRE

Armoured

1 (4th) armd inf bde (1 recce/SP arty bn, 1 tk bn, 2 armd inf bn, 1 spt bn)

Mechanised

1 (3rd) mech inf bde (1 recce/SP arty bn, 3 mech inf bn, 1 cbt engr bn, 1 spt bn)

Light

1 (7th) lt inf bde (1 recce bn, 3 inf bn, 1 cbt engr bn, 1 spt bn)

1 (6th) mtn inf bde (3 mtn inf bn, 1 cbt engr bn, 1 spt bn)

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

MBT 56 *Leopard* 2A4

IFV 112 *Ulan*

APC 144

APC (T) 32 BvS-10

APC (W) 112: 78 *Pandur*; 34 *Pandur* EVO

AUV 216: 66 *Dingo* 2; 150 IVECO LMV

ENGINEERING & MAINTENANCE VEHICLES

ARV 49: 27 4KH7FA-SB *Greif* (11 more in store); 12

Dingo 2 ARV; 10 M88A1

NBC VEHICLES 12 *Dingo* 2 AC NBC

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL • MANPATS *Bill* 2 (PAL 2000)

ARTILLERY 105

SP 155mm 48 M109A5ÖE

MOR 120mm 57 sGrW 86 (40 more in store)

Air Force 2,800

The Air Force is part of Joint Forces Comd and consists of 2 bde; Air Support Comd and Airspace Surveillance Comd

FORCES BY ROLE

FIGHTER

2 sqn with Eurofighter *Typhoon*

ISR

1 sqn with PC-6B *Turbo Porter*

TRANSPORT

1 sqn with C-130K *Hercules*

TRAINING

1 trg sqn with PC-7 *Turbo Trainer*

TRANSPORT HELICOPTER

2 sqn with Bell 212 (AB-212)

1 sqn with OH-58B *Kiowa*

1 sqn with S-70A *Black Hawk*

2 sqn with SA316/SA319 *Alouette* III

AIR DEFENCE

2 bn

1 radar bn

EQUIPMENT BY TYPE**AIRCRAFT** 15 combat capableFTR 15 Eurofighter *Typhoon* (Tranche 1)TPT 11: **Medium** 3 C-130K *Hercules*; **Light** 8 PC-6B*Turbo Porter*TRG 16: 12 PC-7 *Turbo Trainer*; 4 DA40NG**HELICOPTERS**MRH 18 SA316/SA319 *Alouette III*ISR 10 OH-58B *Kiowa*TPT 32: **Medium** 9 S-70A-42 *Black Hawk*; **Light** 23 Bell 212 (AB-212)**AIR DEFENCE**SAM • **Point-defence** *Mistral*

GUNS 35mm 24 GDF-005 (6 more in store)

AIR-LAUNCHED MISSILES • AAM • IIR IRIS-T**Special Operations Forces****FORCES BY ROLE****SPECIAL FORCES**

2 SF gp

1 SF gp (reserve)

Support 7,500

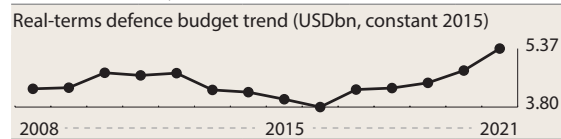
Support forces comprise Joint Services Support Command and several agencies, academies and schools

DEPLOYMENT**BOSNIA-HERZEGOVINA:** EU • EUFOR • *Operation Althea* 258; 1 inf bn HQ; 1 inf coy; 1 hel unit**CYPRUS:** UN • UNFICYP 3**LEBANON:** UN • UNIFIL 172; 1 log coy**MALI:** EU • EUTM Mali 21; UN • MINUSMA 2**MIDDLE EAST:** UN • UNTSO 4**SERBIA:** NATO • KFOR 338; 1 recce coy; 1 mech inf coy; 1 log coy; UN • UNMIK 1**WESTERN SAHARA:** UN • MINURSO 6**Belgium BEL**

Euro EUR		2020	2021	2022
GDP	EUR	451bn	487bn	
	USD	515bn	582bn	
<i>per capita</i>	USD	44,688	50,413	
Growth	%	-6.3	5.6	
Inflation	%	0.4	2.4	
Def exp [a]	EUR	4.76bn	5.34bn	
	USD	5.43bn	6.37bn	
Def bdgt [b]	EUR	4.66bn	5.36bn	5.99bn
	USD	5.32bn	6.40bn	
USD1=EUR		0.88	0.84	

[a] NATO figure

[b] Includes military pensions



Population 11,778,842

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	8.8%	2.8%	2.9%	3.2%	23.1%	8.5%
Female	8.4%	2.7%	2.8%	3.1%	22.9%	10.8%

Capabilities

In July 2016, the government published its Strategic Vision for Defence for 2030. This envisaged a reduced personnel component of around 25,000. However, a large number of impending service retirements means that a gradual increase in recruitment is planned. Belgium also continues to pursue high readiness levels and deployable niche capabilities. NATO, EU and UN membership are central to defence policy. Due to its limited force size, Belgium often collaborates with neighbours and has committed with Denmark and the Netherlands to form a composite combined special-operations command. Belgium can deploy forces for a small-scale overseas operation and maintains overseas deployments on EU and UN missions. It has withdrawn its aircraft from the Middle East. The six-year domestic deployment in support of the federal police officially ended in September 2021, though mid-year saw the armed forces deployed to assist in domestic flood responses. The government is investing in short-term requirements related to aircraft readiness, personal equipment and land-forces vehicles. As part of the defence plan, the government envisages launching five investment projects for fighter aircraft, frigates, mine-countermeasures vessels (being procured jointly with the Netherlands), UAVs and land-combat vehicles. The army has ordered French *Griffon* and *Jaguar* wheeled armoured vehicles for its mechanised brigade as well as the US JLTV. It is forming a multinational unit of A400M transport aircraft with Luxembourg. The air force has selected the F-35 to replace its F-16s and is procuring MQ-9B *Sky Guardian* UAVs. An upgraded, and re-sited, airspace monitoring centre began operations in October 2020. Belgium has an advanced, export-focused defence industry, focusing on components and subcontracting, though in FN Herstal it has one of the world's largest manufacturers of small arms.

ACTIVE 24,450 (Army 9,600 Navy 1,500 Air 4,950 Medical Service 1,450 Joint Service 6,950)

RESERVE 5,900

ORGANISATIONS BY SERVICE

Land Component 9,600

FORCES BY ROLE

SPECIAL FORCES

1 spec ops regt (1 SF gp, 1 cdo bn, 1 para bn, 1 sigs gp)

MANOEUVRE

Mechanised

1 mech bde (1 ISR bn; 3 mech bn; 2 lt inf bn; 1 arty bn; 2 engr bn; 2 sigs gp; 2 log bn)

COMBAT SUPPORT

1 CIMIC gp

1 EOD unit

1 MP coy

COMBAT SERVICE SUPPORT

1 log bn

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

ASLT 18 *Piranha* III-C DF90

RECCE 30 *Pandur Recce*

IFV 19 *Piranha* III-C DF30

APC • APC (W) 78: 64 *Piranha* III-C; 14 *Piranha* III-PC (CP)

AUV 655: 219 *Dingo* 2 (inc 52 CP); 436 IVECO LMV

ENGINEERING & MAINTENANCE VEHICLES

AEV 14: 6 *Pionierpanzer* 2 *Dachs*; 8 *Piranha* III-C

ARV 13: 4 *Pandur*; 9 *Piranha* III-C

VLB 4 *Leguan*

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL • MANPATS *Spike*-MR

ARTILLERY 60

TOWED 105mm 14 LG1 MkII

MOR 46: 81mm 14 *Expal*; 120mm 32 RT-61

Naval Component 1,500

EQUIPMENT BY TYPE

PRINCIPAL SURFACE COMBATANTS • FRIGATES 2

FFGHM 2 *Leopold* I (ex-NLD *Karel Doorman*) with 2 quad Inchr with RGM-84 *Harpoon* AShM, 1 16-cell Mk 48 mod 1 VLS with RIM-7P *Sea Sparrow* SAM, 2 twin 324mm SVTT Mk 32 ASTT with Mk 46 LWT, 1 *Goalkeeper* CIWS, 1 76mm gun (capacity 1 med hel)

PATROL AND COASTAL COMBATANTS

PCC 2 *Castor* (FRA *Kermorvan* mod)

MINE WARFARE • MINE COUNTERMEASURES

MHC 5 *Flower* (*Tripartite*)

LOGISTICS AND SUPPORT 2

AGOR 1 *Belgica* (owned by BELSPO, managed by RBINS)

AXS 1 *Zenobe Gramme*

Air Component 4,950

FORCES BY ROLE

FIGHTER/GROUND ATTACK/ISR

4 sqn with F-16AM/BM *Fighting Falcon*

SEARCH & RESCUE

1 sqn with NH90 NFH

TRANSPORT

1 sqn with *Falcon* 7X (VIP)

1 sqn (BEL/LUX) with A400M; C-130H *Hercules*

TRAINING

1 OCU sqn with F-16AM/BM *Fighting Falcon*

1 sqn with SF-260D/M

1 OCU unit with AW109

TRANSPORT HELICOPTER

2 sqn with AW109 (ISR)

EQUIPMENT BY TYPE

AIRCRAFT 53 combat capable

FTR 53: 44 F-16AM *Fighting Falcon*; 9 F-16BM *Fighting Falcon*

TPT 10: **Heavy** 4 A400M; **Medium** 4 C-130H *Hercules*;

PAX 2 *Falcon* 7X (VIP, leased)

TRG 32: 9 SF-260D; 23 SF-260M

HELICOPTERS

ASW 4 NH90 NFH (opcon Navy)

TPT 11: **Medium** 4 NH90 TTH; **Light** 7 AW109 (ISR) (7 more in store)

AIR-LAUNCHED MISSILES

AAM • IR AIM-9M *Sidewinder*; IIR AIM-9X *Sidewinder*

II; ARH AIM-120B AMRAAM

BOMBS

Laser-guided: GBU-10/GBU-12 *Paveway* II; GBU-24 *Paveway* III

INS/GPS guided: GBU-31 JDAM; GBU-38 JDAM; GBU-54 Laser JDAM (dual-mode)

Medical Service 1,450

FORCES BY ROLE

COMBAT SERVICE SUPPORT

4 med unit

1 fd hospital

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

APC • APC (W) 10: 4 *Pandur* (amb); 6 *Piranha* III-C (amb)

AUV 10 *Dingo* 2 (amb)

DEPLOYMENT

BALTIC SEA: NATO • SNMCMG 1: 1 MHC

CENTRAL AFRICAN REPUBLIC: EU • EUTM RCA 60

DEMOCRATIC REPUBLIC OF THE CONGO: UN • MONUSCO 1

IRAQ: *Operation Inherent Resolve* 6; NATO • NATO Mission Iraq 7

LITHUANIA: NATO • Enhanced Forward Presence 198; 1 mot inf coy

MALI: *Operation Barkhane* 3; EU • EUTM Mali 15; UN • MINUSMA 53

MIDDLE EAST: UN • UNTSO 1

NIGER: METT 130

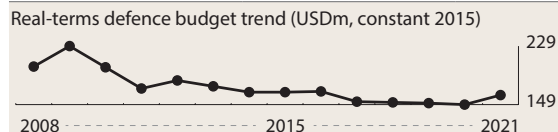
NORTH SEA: NATO • SNMG 1: 1 FFGHM

FOREIGN FORCES

United States US European Command: 1,150

Bosnia-Herzegovina BIH

Convertible Mark BAM		2020	2021	2022
GDP	BAM	34.0bn	35.5bn	
	USD	19.8bn	21.7bn	
per capita	USD	6,035	6,648	
Growth	%	-4.3	2.8	
Inflation	%	-1.1	1.8	
Def bdgt	BAM	288m	318m	313m
	USD	168m	194m	
USD1=BAM		1.72	1.64	



Population 3,824,782

Age	0–14	15–19	20–24	25–29	30–64	65 plus
Male	6.8%	2.4%	3.1%	3.2%	26.6%	6.7%
Female	6.4%	2.2%	2.9%	3.0%	26.9%	9.9%

Capabilities

The armed forces' primary goals are to defend territorial integrity and contribute to peacekeeping missions and civilian-support operations. Bosnia-Herzegovina joined NATO's Partnership for Peace in 2006 and a Membership Action Plan was presented in 2010. Its aspiration to join NATO has been delayed due to unresolved defence-property issues, and continuing ethnic tensions have seen the ethnic Serb community threaten to withdraw from national structures including the armed forces. The country is reforming its armed forces and modernising its equipment in accordance with its Defence Review, Development and Modernisation Plan for 2017–27 and its NATO aspirations. The armed forces are professional and represent all three ethnic groups. However, low salaries may negatively affect recruitment and retention. Bosnia-Herzegovina contributes to EU, NATO and UN missions, but the armed forces have no capacity to deploy independently and self-sustain beyond national borders. The inventory comprises mainly ageing Soviet-era equipment, though some new helicopters have been procured from the US. Bosnia-Herzegovina has little in the way of a domestic defence industry, with only the capability to produce small arms, ammunition and explosives.

ACTIVE 10,500 (Armed Forces 10,500)

RESERVE 6,000 (Armed Forces 6,000)

ORGANISATIONS BY SERVICE

Armed Forces 10,500

1 ops comd; 1 spt comd

FORCES BY ROLE

MANOEUVRE

Light

3 inf bde (1 recce coy, 3 inf bn, 1 arty bn)

COMBAT SUPPORT

1 cbt spt bde (1 tk bn, 1 engr bn, 1 EOD bn, 1 int bn, 1 MP bn, 1 CBRN coy, 1 sigs bn)

COMBAT SERVICE SUPPORT

1 log comd (5 log bn)

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

MBT 45 M60A3

APC • APC (T) 20 M113A2

ENGINEERING & MAINTENANCE VEHICLES

VLB MTU

MW *Bozena*

ANTI-TANK/ANTI-INFRASTRUCTURE • MSL

SP 60: 8 9P122 *Malyutka*; 9 9P133 *Malyutka*; 32 BOV-1; 11 M-92

MANPATS 9K11 *Malyutka* (RS-AT-3 *Sagger*); 9K111 *Fagot* (RS-AT-4 *Spigot*); 9K115 *Metis* (RS-AT-7 *Saxhorn*); HJ-8; *Milan*

ARTILLERY 224

TOWED 122mm 100 D-30

MRL 122mm 24 APRA-40

MOR 120mm 100 M-75

Air Force and Air Defence Brigade 800

FORCES BY ROLE

HELICOPTER

1 sqn with Bell 205; Mi-8MTV *Hip*; Mi-17 *Hip* H

1 sqn with Mi-8 *Hip*; SA-341H/SA-342L *Gazelle* (HN-42/45M)

AIR DEFENCE

1 AD bn

EQUIPMENT BY TYPE

AIRCRAFT

FGA (7 J-22 *Orao* in store)

ATK (6 J-1 (J-21) *Jastreb*; 3 TJ-1(NJ-21) *Jastreb* all in store)

ISR (2 RJ-1 (IJ-21) *Jastreb** in store)

TRG (1 G-4 *Super Galeb* (N-62)* in store)

HELICOPTERS

MRH 13: 4 Mi-8MTV *Hip*; 1 Mi-17 *Hip* H; 1 SA-341H *Gazelle* (HN-42); 7 SA-342L *Gazelle* (HN-45M)

TPT 21: Medium 8 Mi-8 *Hip* Light 13 Bell 205 (UH-1H *Iroquois*)

TRG 1 Mi-34 *Hermit*

AIR DEFENCE

SAM

Short-range 20 2K12 *Kub* (RS-SA-6 *Gainful*)

Point-defence 9K34 *Strela-3* (RS-SA-14 *Gremlin*); 9K310 *Igla-1* (RS-SA-16 *Gimlet*)

GUNS • TOWED 40mm 47: 31 L/60, 16 L/70

DEPLOYMENT

CENTRAL AFRICAN REPUBLIC: EU • EUTM RCA 3

DEMOCRATIC REPUBLIC OF THE CONGO: UN • MONUSCO 3

MALI: UN • MINUSMA 2

FOREIGN FORCES

Part of EUFOR – *Operation Althea* unless otherwise stated

Albania 1

Austria 258; 1 inf bn HQ; 1 inf coy; 1 hel unit

Bulgaria 12
 Chile 8
 Czech Republic 2
 Greece 6
 Hungary 174; 1 inf coy
 Ireland 5
 Italy 50; 1 ISR coy
 Macedonia, North 1
 Poland 38
 Romania 40
 Slovakia 40
 Slovenia 10
 Spain 2
 Switzerland 20
 Turkey 242; 1 inf coy

Bulgaria BLG

Bulgarian Lev BGN		2020	2021	2022
GDP	BGN	119bn	128bn	
	USD	69.2bn	77.9bn	
per capita	USD	10,006	11,332	
Growth	%	-4.2	4.5	
Inflation	%	1.2	2.1	
Def exp [a]	BGN	1.84bn	2.01bn	
	USD	1.08bn	1.23bn	
Def bdtg [b]	BGN	2.14bn	2.10bn	2.23bn
	USD	1.25bn	1.28bn	
FMA (US)	USD	5m	0m	0m
USD1=BGN		1.71	1.64	

[a] NATO figure

[b] Excludes military pensions



Population 6,919,180

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	7.4%	2.5%	2.4%	2.8%	25.5%	8.2%
Female	7.0%	2.3%	2.2%	2.5%	25.0%	12.1%

Capabilities

The armed forces' main priority is defending state sovereignty and territorial integrity. Following a strategic defence review in 2019-20, the national assembly in February 2021 endorsed the Programme 2032 long-term development plan involving significant re-equipment and modernisation and a focus on artificial intelligence and cyber capability. There is also a long-term commitment to spend at least 2% of GDP on defence. Bulgaria signed a ten-year Defence Cooperation Roadmap with the US in 2020 to assist force development, including meeting NATO capability targets. There are several bilateral defence-cooperation agreements with regional states. Bulgaria's airspace is protected by NATO's Air Policing Mission, due to its limited numbers of combat aircraft. In an attempt to cope with personnel shortfalls, the mili-

tary retirement age and salaries have been increased. Training is prioritised for units intended for international operations and those with certain readiness levels declared to NATO and the EU. Bulgaria regularly trains and exercises with NATO partners and regional allies. The country contributes to NATO and EU missions but has little logistics-support capability. Despite long-term plans for reform, there is still much ageing Soviet-era equipment. In April 2020, a contract was signed for eight F-16 Block 70 fighter aircraft, to replace MiG-29s, with the intention also to acquire another eight. There are also plans for acquisitions to enable the formation of battalion battlegroups within its mechanised brigades. The navy is prioritising the procurement of a multi-purpose patrol vessel and the modernisation of its frigates to boost its presence in the Black Sea. However, there are concerns over the affordability of some of these ambitions. Bulgaria's defence industry exports small arms but has limited capacity to design and manufacture platforms.

ACTIVE 36,950 (Army 17,000 Navy 4,450 Air 8,500 Central Staff 7,000)

RESERVE 3,000 (Joint 3,000)

ORGANISATIONS BY SERVICE

Army 17,000

FORCES BY ROLE

MANOEUVRE

Reconnaissance

1 recce bn

Mechanised

2 mech bde (4 mech inf bn, 1 SP arty bn, 1 cbt engr bn, 1 log bn, 1 SAM bn)

Light

1 mtn inf regt

COMBAT SUPPORT

1 arty regt (1 fd arty bn, 1 MRL bn)

1 engr regt (1 cbt engr bn, 1 ptn br bn, 1 engr spt bn)

1 NBC bn

COMBAT SERVICE SUPPORT

1 log regt

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

MBT 90 T-72M1/M2+

IFV 160: 90 BMP-1; 70 BMP-23

APC 120

APC (T) 100 MT-LB

APC (W) 20 BTR-60

AUV 44: 17 M1117 ASV; 27 Plasan *SandCat*

ENGINEERING & MAINTENANCE VEHICLES

AEV MT-LB

ARV T-54/T-55; MTP-1; MT-LB

VLB BLG67; TMM

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL

SP 29 9P148 *Konkurs* (RS-AT-5 *Spandrel*)

MANPATS 9K111 *Fagot* (RS-AT-4 *Spigot*); 9K111-1 *Konkurs* (RS-AT-5 *Spandrel*); (9K11 *Malyutka* (RS-AT-3 *Sagger*) in store)

GUNS 126: 85mm (150 D-44 in store); 100mm 126 MT-12

ARTILLERY 176

SP 122mm 48 2S1

TOWED 152mm 24 D-20

MRL 122mm 24 BM-21

MOR 120mm ε80 *Tundza/Tundza Sani*

SURFACE-TO-SURFACE MISSILE LAUNCHERS

SRBM • Conventional 9K79 *Tochka* (RS-SS-21 *Scarab*)

AIR DEFENCE

SAM • Point-defence 9K32 *Strela* (RS-SA-7 *Grail*)†; 24 9K33 *Osa* (RS-SA-8 *Gecko*)

GUNS 400

SP 23mm ZSU-23-4

TOWED 23mm ZU-23-2; **57mm** S-60

Navy 4,450

EQUIPMENT BY TYPE

PRINCIPAL SURFACE COMBATANTS • FRIGATES 3

FFM 3 *Drazki* (ex-BEL *Wielingen*) (of which 2†) with 1 octuple Mk 29 GMLS with RIM-7P *Sea Sparrow* SAM, 2 single 533mm ASTT with L5 mod 4 HWT, 1 sextuple Bofors ASW Rocket Launcher System 375mm A/S mor, 1 100mm gun (Fitted for but not with 2 twin Inchr with MM38 *Exocet* ASHM)

PATROL AND COASTAL COMBATANTS 4

CORVETTES • FS 1 *Smeli* (ex-FSU *Koni*) with 2 RBU 6000 *Smerch* 2 A/S mor, 2 twin 76mm guns

PCF 1 *Molnya†* (ex-FSU *Tarantula II*) with 2 AK630M CIWS, 1 76mm gun

PCT 2 *Reshitelni* (ex-FSU *Pauk I*) with 4 single 406mm TT, 2 RBU 1200 *Uragan* A/S mor, 1 76mm gun

MINE COUNTERMEASURES 9

MHC 3: 2 *Mesta* (ex-NLD *Alkmaar*); 1 *Tsibar* (*Tripartite* – ex-BEL *Flower*)

MSC 3 *Briz* (ex-FSU *Sonya*) (of which 1†)

MSI 3 *Olya* (ex-FSU) (3 more non-operational)

AMPHIBIOUS • LANDING CRAFT

LCM 1 *Vydrat†* (capacity either 3 MBT or 200 troops)

LOGISTICS AND SUPPORT 9: 3 AGS; 2 AOL; 1 ARS; 2 ATE; 1 AX

Naval Aviation

EQUIPMENT BY TYPE

HELICOPTERS

ASW 2 AS565MB *Panther*

MRH 1 AS365N3+ *Dauphin* 2

Air Force 8,500

FORCES BY ROLE

FIGHTER/ISR

1 sqn with MiG-29/MiG-29UB *Fulcrum*

TRANSPORT

1 sqn with An-30 *Clank*; C-27J *Spartan*; L-410UVP-E; PC-12M

TRAINING

1 sqn with L-39ZA *Albatros**

1 sqn with PC-9M

ATTACK HELICOPTER

1 sqn with Mi-24D/V *Hind D/E*

TRANSPORT HELICOPTER

1 sqn with AS532AL *Cougar*; Bell 206 *Jet Ranger*; Mi-17 *Hip H*

EQUIPMENT BY TYPE

AIRCRAFT 23 combat capable

FTR 14: 11 MiG-29 *Fulcrum*; 3 MiG-29UB *Fulcrum†*

FGA (Some MiG-21bis *Fishbed*/MiG-21UM *Mongol B* in store)

ATK 3: 2 Su-25K *Frogfoot K*; 1 Su-25UBK *Frogfoot B*

ISR 1 An-30 *Clank*

TPT 7: **Medium** 3 C-27J *Spartan*; **Light** 4: 1 An-2T *Colt*; 2 L-410UVP-E; 1 PC-12M

TRG 12: 6 L-39ZA *Albatros**; 6 PC-9M (basic)

HELICOPTERS

ATK 6 Mi-24V *Hind E* (6 Mi-24D *Hind D* in store)

MRH 5 Mi-17 *Hip H*

TPT 18: **Medium** 12 AS532AL *Cougar*; **Light** 6 Bell 206 *Jet Ranger*

UNINHABITED AERIAL VEHICLES • EW Yastreb-2S

AIR DEFENCE

SAM 20

Long-range 20: 12 S-200 (RS-SA-5 *Gammon*); 8 S-300PMU (RS-SA-10 *Grumble*)

Short-range S-125M *Neva-M* (RS-SA-3 *Goa*); 2K12 *Kub* (RS-SA-6 *Gainful*)

AIR-LAUNCHED MISSILES

AAM • IR R-3 (RS-AA-2 *Atoll*)† R-73 (RS-AA-11A *Archer*) **SARH** R-27R (RS-AA-10 *Alamo A*)

ASM Kh-29 (RS-AS-14 *Kedge*); Kh-25 (RS-AS-10 *Karen*)

Special Forces

FORCES BY ROLE

SPECIAL FORCES

1 spec ops bde (1 SF bn, 1 para bn)

DEPLOYMENT

BOSNIA-HERZEGOVINA: EU • EUFOR • *Operation Althea* 12

IRAQ: NATO • NATO Mission Iraq 2

MALI: EU • EUTM Mali 4

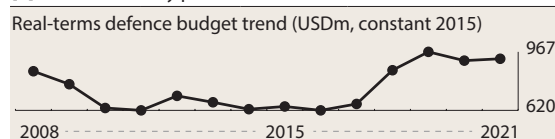
SERBIA: NATO • KFOR 26

Croatia CRO

Croatian Kuna HRK		2020	2021	2022
GDP	HRK	372bn	398bn	
	USD	56.2bn	63.4bn	
per capita	USD	13,896	15,808	
Growth	%	-8.0	6.3	
Inflation	%	0.1	2.0	
Def exp [a]	HRK	6.70bn	11.1bn	
	USD	1.01bn	1.77bn	
Def bdgt [b]	HRK	6.59bn	6.72bn	6.77bn
	USD	997m	1.07bn	
USD1=HRK		6.61	6.27	

[a] NATO figure

[b] Includes military pensions



Population 4,208,973

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	7.3%	2.5%	2.9%	3.0%	23.7%	8.9%
Female	6.8%	2.3%	2.8%	2.9%	24.2%	12.7%

Capabilities

Principal tasks for the armed forces include defending national sovereignty and territorial integrity as well as tackling terrorism and contributing to international peacekeeping missions. Croatia joined NATO in 2009, having reformed its armed forces to create a small professional force. There have been recent moves to improve conditions of service. Despite economic challenges, the 2021 defence budget exceeded 2% of GDP, with a significant proportion of the budget going to equipment investment. Zagreb has defence-cooperation agreements with Bosnia-Herzegovina, Hungary and Romania, and personnel frequently train with regional and international allies. Croatia hosts the NATO Multi-national Special Aviation Programme and training centre and participates in EU and NATO missions, including NATO's Enhanced Forward Presence in Poland. The inventory is almost entirely composed of ageing Soviet-era equipment. Modernisation objectives include the acquisition of UH-60M helicopters from the US. In May 2021, Croatia announced the purchase of second-hand *Rafale* F3-R fighters from France, after earlier US objections to the proposed sale of second-hand, upgraded Israeli F-16s to replace Croatia's ageing MiG-21s. Croatia has a small defence industry, focused on small arms, ammunition, explosives and naval systems.

ACTIVE 16,700 (Army 11,100 Navy 1,650 Air 1,600 Joint 2,350) Gendarmerie & Paramilitary 3,000

Conscript liability Voluntary conscription, 8 weeks

RESERVE 21,000 (Army 21,000)

ORGANISATIONS BY SERVICE

Joint 2,350 (General Staff)

FORCES BY ROLE SPECIAL FORCES

5 SF gp

Army 11,100

FORCES BY ROLE

MANOEUVRE

Armoured

1 armd bde (1 tk bn, 1 armd bn, 2 armd inf bn, 1 SP arty bn, 1 ADA bn, 1 cbt engr bn)

Mechanised

1 mech bde (3 mech inf bn, 1 lt mech inf bn, 1 fd arty bn, 1 ADA bn, 1 cbt engr bn)

Other

1 inf trg regt

COMBAT SUPPORT

1 arty/MRL regt

1 engr regt

1 NBC bn

1 sigs bn

COMBAT SERVICE SUPPORT

1 log regt

AIR DEFENCE

1 ADA regt

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

MBT 75 M-84

IFV 100 M-80

APC 188

APC (T) 15: 11 BTR-50; 4 OT M-60

APC (W) 132: 6 BOV-VP; 126 Patria AMV (incl variants)

PPV 41: 21 *Maxxpro Plus*; 20 RG-33 HAGA (amb)

AUV 172: 10 IVECO LMV; 162 M-ATV

ENGINEERING & MAINTENANCE VEHICLES

ARV 22: 12 JVB-T-55A; 1 M-84AI; 1 WZT-2; 2 WZT-3; 6

Maxxpro Recovery

VLB 6 MT-55A

MW 4 MV-4

ANTI-TANK/ANTI-INFRASTRUCTURE • MSL

SP 20 BOV-1

MANPATS 9K11 *Malyutka* (RS-AT-3 *Sagger*); 9K111

Fagot (RS-AT-4 *Spigot*); 9K111-1 *Konkurs* (RS-AT-5

Spandrel); 9K115 *Metis* (RS-AT-7 *Saxhorn*)

ARTILLERY 168

SP 21: 122mm 8 2S1 *Gvozдика*; 155mm 13 PzH 2000

TOWED 122mm 20 D-30

MRL 122mm 27: 6 M91 *Vulkan*; 21 BM-21 *Grad*

MOR 100: 82mm 54 LMB M96; 120mm 46 M-75/UBM 52

AIR DEFENCE

SAM • Point-defence 9+: 9 9K35 *Strela-10M3* (RS-SA-13 *Gopher*); 9K310 *Igla-1* (RS-SA-16 *Gimlet*)

GUNS SP 20mm 10 BOV-3 SP

Navy 1,650

Navy HQ at Split

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS 5

PCFG 1 *Končar* with 2 twin Inchr with RBS15B Mk I

AShM, 1 AK630 CIWS, 1 57mm gun

PCG 4:

- 2 *Kralj* with 4 single Inchr with RBS15B Mk I AShM, 1 AK630 CIWS, 1 57mm gun (with minelaying capability)
- 2 *Vukovar* (ex-FIN *Helsinki*) with 4 single Inchr with RBS15B Mk I AShM, 1 57mm gun

MINE WARFARE • MINE COUNTERMEASURES 1MHI 1 *Korcula***AMPHIBIOUS • LANDING CRAFT 5:**

- LCT 2 *Cetina* (with minelaying capability)
- LCVP 3: 2 Type-21; 1 Type-22

LOGISTICS AND SUPPORT • AKL 1 PDS 713**COASTAL DEFENCE • AShM 3 RBS15K****Marines****FORCES BY ROLE****MANOEUVRE****Amphibious**

1 indep mne coy

Coast Guard**FORCES BY ROLE**

Two divisions, headquartered in Split (1st div) and Pula (2nd div)

EQUIPMENT BY TYPE**PATROL AND COASTAL COMBATANTS • PB 5: 4***Mirna*; 1 *Omiš***LOGISTICS AND SUPPORT 3:**AAR 1 *Faust Vrancic* (YUG *Spasilac*)

AKL 1 PT-71+

AX 1 *Andrija Mohorovicic* (POL Project 861)**Air Force and Air Defence 1,600****FORCES BY ROLE****FIGHTER/GROUND ATTACK**1 (mixed) sqn with MiG-21bis/UMD *Fishbed***TRAINING**

1 sqn with PC-9M; Z-242L

ISR HELICOPTER1 hel sqn with Bell 206B *Jet Ranger II*; OH-58D *Kiowa Warrior***TRANSPORT HELICOPTER**2 sqn with Mi-8MTV *Hip H*; Mi-8T *Hip C*; Mi-171Sh**EQUIPMENT BY TYPE****AIRCRAFT 8 combat capable**FGA 8: 4 MiG-21bis *Fishbed*; 4 MiG-21UMD *Fishbed*TPT • **Light** (2 An-32 *Cline* in store)

TRG 21: 17 PC-9M; 4 Z-242L

HELICOPTERSMRH 25: 10 Mi-8MTV *Hip H*; 15 OH-58D *Kiowa Warrior*TPT 21: **Medium** 13: 3 Mi-8T *Hip C*; 10 Mi-171Sh; **Light**8 Bell 206B *Jet Ranger II***AIR DEFENCE • SAM****Point-defence** 9K31 *Strela-1* (RS-SA-9 *Gaskin*); 9K34*Strela-3* (RS-SA-14 *Gremlin*); 9K310 *Igla-1* (RS-SA-16*Gimlet*)**AIR-LAUNCHED MISSILES**AAM • **IR** R-60; R-60MK (RS-AA-8 *Aphid*)ASM AGM-114R *Hellfire***Special Forces Command****FORCES BY ROLE****SPECIAL FORCES**

2 SF gp

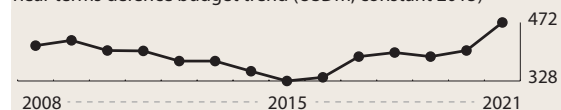
Gendarmerie & Paramilitary 3,000

Police 3,000 armed

DEPLOYMENT**INDIA/PAKISTAN:** UN • UNMOGIP 8**IRAQ:** NATO • NATO Mission Iraq 10**LEBANON:** UN • UNIFIL 1**POLAND:** NATO • Enhanced Forward Presence 80; 1 MRL bty with M91 *Vulkan***SERBIA:** NATO • KFOR 142; 1 inf coy; 1 hel unit with Mi-8 *Hip***WESTERN SAHARA:** UN • MINURSO 9**Cyprus CYP**

Euro EUR		2020	2021	2022
GDP	EUR	20.8bn	22.2bn	
	USD	23.8bn	26.5bn	
per capita	USD	26,785	29,486	
Growth	%	-5.1	4.8	
Inflation	%	-1.1	1.7	
Def bdgt	EUR	367m	438m	465m
	USD	419m	523m	
USD1=EUR		0.88	0.84	

Real-terms defence budget trend (USDm, constant 2015)



Population 1,281,506

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	8.0%	2.8%	3.7%	4.6%	26.3%	5.8%
Female	7.6%	2.4%	3.0%	3.8%	24.6%	7.5%

Capabilities

The National Guard is focused on protecting the island's territorial integrity and sovereignty, and safeguarding Cyprus's EEZ. Its main objective is to deter any Turkish incursion, and to provide enough opposition until military support can be provided by Greece, its primary ally. Cyprus has been enhancing its defence cooperation with Greece, including on cyber defence. Nicosia has also pledged deeper military ties with Israel, while France has renewed and enhanced its defence-cooperation agreement with Cyprus. In 2018 Cyprus also signed a memorandum of understanding on enhancing defence and security cooperation with the UK. Having reduced conscript liability in 2016, Nicosia began recruiting additional contract-service personnel, as part of the effort to modernise and professionalise its forces. Cyprus exercises with several international partners, most notably France, Greece and Israel. External deployments have been limited to some officers joining EU and

UN missions. Cyprus has little logistics capability to support operations abroad. Equipment comprises a mix of Soviet-era and modern European systems. The defence minister announced in 2019 the intention to introduce an eight-year military-modernisation programme that would also involve a higher defence budget. Cyprus has little in the way of a domestic defence industry, with no ability to design and manufacture modern equipment. However, the government is looking for opportunities to cooperate with defence firms in Greece.

ACTIVE 12,000 (National Guard 12,000)

Gendarmerie & Paramilitary 750

Conscript liability 15 months

RESERVE 50,000 (National Guard 50,000)

Reserve service to age 50 (officers dependent on rank; military doctors to age 60)

ORGANISATIONS BY SERVICE

National Guard 12,000 (incl conscripts)

FORCES BY ROLE

SPECIAL FORCES

1 comd (regt) (1 SF bn)

MANOEUVRE

Armoured

1 armd bde (2 armd bn, 1 armd inf bn)

Mechanised

4 (1st, 2nd, 6th & 7th) mech bde

Light

1 (4th) lt inf bde

2 (2nd & 8th) lt inf regt

COMBAT SUPPORT

1 arty comd (8 arty bn)

COMBAT SERVICE SUPPORT

1 (3rd) spt bde

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

MBT 134: 82 T-80U; 52 AMX-30B2

RECCE 72 EE-9 *Cascavel*

IFV 43 BMP-3

APC 295

APC (T) 168 *Leonidas*

APC (W) 127 VAB (incl variants)

AUV 8 BOV M16 *Milos*

ENGINEERING & MAINTENANCE VEHICLES

ARV 2+: 2 AMX-30D; BREM-80U

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL

SP 33: 15 EE-3 *Jararaca* with *Milan*; 18 VAB with HOT

MANPATS *Milan*

RCL 106mm 144 M40A1

GUNS • TOWED 100mm 20 M-1944

ARTILLERY 456

SP 155mm 48: 24 NORA B-52; 12 Mk F3; 12 *Zuzana*

TOWED 84: 105mm 72 M-56; 155mm 12 TR-F-1

MRL 22: 122mm 4 BM-21; 128mm 18 M-63 *Plamen*

MOR 302: 81mm 170 E-44 (70+ M1/M9 in store); 107mm 20 M2/M30; 120mm 112 RT61

AIR DEFENCE

SAM 22+

Medium-range 4 9K37M1 *Buk* M1-2 (RS-SA-11 *Gadfly*)

Short-range 18: 12 *Aspide*; 6 9K331 *Tor*-M1 (RS-SA-15 *Gauntlet*)

Point-defence *Mistral*

GUNS • TOWED 60: 20mm 36 M-55; 35mm 24 GDF-003 (with *Skyguard*)

Maritime Wing

FORCES BY ROLE

COMBAT SUPPORT

1 (coastal defence) AshM bty with MM40 *Exocet* AshM

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS 6

PCC 2: 1 *Alasia* (ex-OMN *Al Mabrukha*) with 1 hel landing platform; 1 OPV 62 (ISR *Sa'ar* 4.5 derivative)

PBF 4: 2 *Rodman* 55; 2 *Vittoria*

COASTAL DEFENCE • AshM 3 MM40 *Exocet*

Air Wing

EQUIPMENT BY TYPE

HELICOPTERS

ATK 11 Mi-35P *Hind* E (offered for sale)

MRH 7: 3 AW139 (SAR); 4 SA342L1 *Gazelle* (with HOT for anti-armour role)

TPT • Light 2 Bell 206L3 *Long Ranger*

Paramilitary 750+

Armed Police 500+

FORCES BY ROLE

MANOEUVRE

Other

1 (rapid-reaction) paramilitary unit

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

APC • APC (W) 2 VAB VTT

HELICOPTERS • MRH 4: 2 AW139; 2 Bell 412SP

Maritime Police 250

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS 10

PBF 5: 2 *Poseidon*; 1 *Shaldag*; 2 *Vittoria*

PB 5 SAB-12

DEPLOYMENT

LEBANON: UN • UNIFIL 2

FOREIGN FORCES

Argentina UNFICYP 249; 2 inf coy; 1 hel flt

Austria UNFICYP 3

Brazil UNFICYP 2

Canada UNFICYP 1

Chile UNFICYP 6

Ghana UNFICYP 1

Greece Army: 950

Hungary UNFICYP 12

India UNFICYP 1

Norway UNFICYP 2

Pakistan UNFICYP 2

Paraguay UNFICYP 12

Russia UNFICYP 4

Serbia UNFICYP 8

Slovakia UNFICYP 289; 2 inf coy; 1 engr pl

United Kingdom 2,260; 2 inf bn; 1 hel sqn with 4 Bell 412

Twin Huey • Operation Inherent Resolve (Shader) 500: 1 FGA

sqn with 6 Typhoon FGR4; 1 Sentinel R1; 1 A330 MRTT

Voyager KC3; 2 C-130J-30 Hercules • UNFICYP (Operation

Tosca) 327: 2 inf coy

TERRITORY WHERE THE GOVERNMENT DOES NOT EXERCISE EFFECTIVE CONTROL

Data here represents the de facto situation on the northern section of the island. This does not imply international recognition as a sovereign state.

Capabilities

ACTIVE 3,000 (Army 3,000) Gendarmerie & Paramilitary 150

Conscript liability 15 months

RESERVE 15,000

Reserve liability to age 50

ORGANISATIONS BY SERVICE

Army €3,000

FORCES BY ROLE

MANOEUVRE

Light

5 inf bn

7 inf bn (reserve)

EQUIPMENT BY TYPE

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL • MANPATS Milan

RCL • 106mm 36

ARTILLERY • MOR • 120mm 73

Gendarmerie & Paramilitary

Armed Police €150

FORCES BY ROLE

SPECIAL FORCES

1 (police) SF unit

Coast Guard

PATROL AND COASTAL COMBATANTS 6

PCC 5: 2 SG45/SG46; 1 Rauf Denktash; 2 US Mk 5

PB 1

FOREIGN FORCES

TURKEY

Army €33,800

FORCES BY ROLE

1 corps HQ; 1 SF regt; 1 armd bde; 2 mech inf div; 1

mech inf regt; 1 arty regt; 1 avn comd

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

MBT 287 M48A5T1

IFV 145 ACV AIFV

APC • APC (T) 488: 70 ACV AAPC (incl variants); 418

M113 (incl variants)

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL

SP 66 ACV TOW

MANPATS Milan

RCL 106mm 219 M40A1

ARTILLERY 656

SP 155mm 178: 30 M44T; 144 M52T1; 4 T-155 Firtina

TOWED 84: 105mm 36 M101A1; 155mm 36 M114A2;

203mm 12 M115

MRL 122mm 18 T-122

MOR 376: 81mm 171; 107mm 70 M30; 120mm 135

HY-12

PATROL AND COASTAL COMBATANTS • PB 1

AIRCRAFT • TPT • Light 3 Cessna 185 (U-17)

HELICOPTERS • TPT 3: Medium 2 AS532UL Cougar

Light 1 Bell 205 (UH-1H Iroquois)

AIR DEFENCE

SAM Point-defence FIM-92 Stinger

GUNS • TOWED 150: 20mm 122: 44 Rh 202; 78

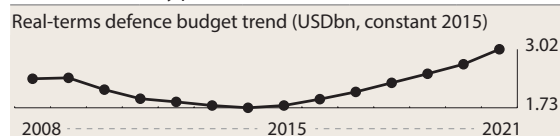
GAI-D01; 35mm 28 GDF-003

Czech Republic CZE

Czech Koruna CZK		2020	2021	2022
GDP	CZK	5.69tr	5.95tr	
	USD	245bn	277bn	
per capita	USD	22,943	25,806	
Growth	%	-5.8	3.8	
Inflation	%	3.2	2.7	
Def exp [a]	CZK	74.3bn	85.3bn	
	USD	3.20bn	3.97bn	
Def bdgt [b]	CZK	75.5bn	85.4bn	93.5bn
	USD	3.25bn	3.97bn	
USD1=CZK		23.21	21.49	

[a] NATO figure

[b] Includes military pensions



Population 10,702,596

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	7.8%	2.4%	2.4%	3.0%	25.1%	8.6%
Female	7.3%	2.3%	2.2%	2.8%	24.2%	11.9%

Capabilities

The 2015 national-security strategy states that NATO is central to Czech security, while the 2017 defence strategy points to Russian assertiveness, an arc of instability to the south and southeast of Europe and information warfare, including cyber attacks, as core security challenges. The evolving security environment is discussed in the 'Long Term Perspective for Defence 2035' and the 'Czech Armed Forces Development Concept 2030', both published in 2019. Modernisation priorities include infantry fighting vehicles (IFVs), self-propelled howitzers, multi-role helicopters, transport aircraft, short-range air-defence systems and UAVs. With the lease agreement for the Czech Republic's *Gripen* fleet currently running through to 2027, the government began to explore follow-on solutions in 2020 and 2021. In September 2021, the defence ministry received final offers from three shortlisted companies for an IFV requirement. At the end of September 2021, the ministry signed a contract to procure CAESAR self-propelled howitzers. In February 2017, the Czech Republic signed a letter of intent with Germany to affiliate the 4th Czech Rapid Reaction Brigade with the 10th German Armoured Division under NATO's Framework Nations Concept. Recruitment and retention remains a challenge: in May 2020, the air-force chief outlined shortfalls in specialised trades such as engineers and pilots. The armed forces are able to deploy on a variety of international crisis-management operations, including NATO's Enhanced Forward Presence, Baltic Air Policing and contributing to NATO's Very High Readiness Joint Task Force. There are plans to upgrade military training and simulation facilities by 2025. The government is trying to replace legacy equipment to modernise the armed forces and reduce dependence on foreign sources for spares for its Soviet-era systems. The defence-industrial base includes development and manufacturing capability, in particular small arms, vehicles, and training and light attack aircraft. The holding company Czechoslovak Group brings together several companies across the munitions, vehicles and aerospace sectors. In 2020, the government set up an agency to support the defence industry in government-to-government procurement activities.

ACTIVE 26,600 (Army 14,700 Air 5,850 Other 6,050)

ORGANISATIONS BY SERVICE

Army 14,700

FORCES BY ROLE

MANOEUVRE

Reconnaissance

1 ISR/EW regt (1 recce bn, 1 EW bn, 1 ISR UAV bn)

Armoured

1 (7th) mech bde (1 tk bn, 2 armd inf bn, 1 mot inf bn)

Mechanised

1 (4th) rapid reaction bde (2 mech inf bn, 1 mot inf bn, 1 AB bn)

COMBAT SUPPORT

1 (13th) arty regt (2 arty bn)

1 engr regt (2 engr bn, 1 EOD bn)

1 CBRN regt (2 CBRN bn)

COMBAT SERVICE SUPPORT

1 log regt (2 log bn, 1 maint bn)

Active Reserve

FORCES BY ROLE

COMMAND

14 (territorial defence) comd

MANOEUVRE

Armoured

1 armd coy

Light

14 inf coy (1 per territorial comd) (3 inf pl, 1 cbt spt pl, 1 log pl)

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

MBT 30 T-72M4CZ (89 T-72M1 in store)

RECCE 50: 34 BPzV *Svatava*; 8 *Pandur* II (KBV-PZ); 8 *Pandur* II (KBV-PZLOK)

IFV 227: 120 BMP-2; 107 *Pandur* II (incl 17 CP, 14 comms, 4 amb); (98 BMP-1; 65 BMP-2 all in store)

APC • **PPV** 1 *Titus*

AUV 141: 21 *Dingo* 2; 120 IVECO LMV

ENGINEERING & MAINTENANCE VEHICLES

AEV 4 *Pandur* II (KOT-Z)

ARV 13+: 10 VPV-ARV (12 more in store); VT-55A; 3 VT-72M4

VLB 6 MT-55A (3 more in store)

MW *Bozena* 5; UOS-155 *Belarty*

NBC VEHICLES BRDM-2RCH

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL • **MANPATS** 9K111-1 *Konkurs* (RS-AT-5 *Spandrel*);

FGM-148 *Javelin*; *Spike*-LR

RCL 84mm *Carl Gustaf*

ARTILLERY 96

SP 152mm 48 M-77 *Dana* (38 more in store)

MOR 48: **81mm** *Expal*; **120mm** 40 M-1982; (45 more in store); **SP 120mm** 8 SPM-85

Air Force 5,850

Principal task is to secure Czech airspace. This mission is fulfilled within NATO Integrated Extended Air Defence System (NATINADS) and, if necessary, by means of the Czech national reinforced air-defence system. The air force also provides CAS for army SAR, and performs a tpt role

FORCES BY ROLE

FIGHTER/GROUND ATTACK

1 sqn with *Gripen* C/D

1 sqn with L-159 ALCA; L-159T1*

TRANSPORT

2 sqn with A319CJ; C295M/MW; CL-601 *Challenger*; L-410FG/UDP-E *Turbolet*

TRAINING

1 sqn with L-159 ALCA; L-159T1*; L-159T2*

ATTACK HELICOPTER

1 sqn with Mi-24/Mi-35 *Hind* D/E

TRANSPORT HELICOPTER

1 sqn with Mi-17 *Hip* H; Mi-171Sh

1 sqn with Mi-8 *Hip*; Mi-17 *Hip* H; PZL W-3A *Sokol*

AIR DEFENCE

1 (25th) SAM regt (2 AD gp)

EQUIPMENT BY TYPE

AIRCRAFT 38 combat capable

FGA 14: 12 *Gripen* C; 2 *Gripen* D

ATK 16 L-159 ALCA

TPT 15: Light 12: 4 C295M; 2 C295MW; 2 L-410FG Turbolet; 4 L-410UVP-E Turbolet; **PAX 3:** 2 A319CJ; 1 CL-601 Challenger

TRG 8: 5 L-159T1*; 3 L-159T2*

HELICOPTERS

ATK 17: 7 Mi-24 Hind D; 10 Mi-35 Hind E

MRH 5 Mi-17 Hip H

TPT • Medium 30: 4 Mi-8 Hip; 16 Mi-171Sh; 10 PZL W3A Sokol

AIR DEFENCE • SAM

Point-defence 9K35 Strela-10 (RS-SA-13 Gopher); 9K32 Strela-2† (RS-SA-7 Grail) (available for trg RBS-70 gunners); RBS-70

AIR-LAUNCHED MISSILES

AAM • IR AIM-9M Sidewinder; **ARH** AIM-120C-5 AMRAAM

BOMBS

Laser-guided: GBU Paveway

Other Forces 6,050

FORCES BY ROLE

SPECIAL FORCES

1 SF gp

MANOEUVRE

Other

1 (presidential) gd bde (2 bn)

1 (honour guard) gd bn (2 coy)

COMBAT SUPPORT

1 int gp

1 (central) MP comd

3 (regional) MP comd

1 (protection service) MP comd

DEPLOYMENT

BOSNIA-HERZEGOVINA: EU • EUFOR • Operation Althea 2

CENTRAL AFRICAN REPUBLIC: UN • MINUSCA 3

DEMOCRATIC REPUBLIC OF THE CONGO: UN • MONUSCO 2

EGYPT: MFO 18; 1 C295M

IRAQ: Operation Inherent Resolve 30; NATO • NATO Mission Iraq

LATVIA: NATO • Enhanced Forward Presence 56; 1 mor pl

LITHUANIA: NATO • Enhanced Forward Presence 35; 1 EW unit

MALI: Operation Barkhane 60; 1 SF unit; EU • EUTM Mali 120; UN • MINUSMA 4

SERBIA: NATO • KFOR 9; UN • UNMIK 2

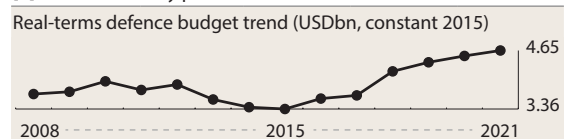
SYRIA/ISRAEL: UN • UNDOF 3

Denmark DNK

Danish Krone DKK		2020	2021	2022
GDP	DKK	2.33tr	2.47tr	
	USD	356bn	397bn	
per capita	USD	61,154	67,920	
Growth	%	-2.1	3.8	
Inflation	%	0.3	1.4	
Def exp [a]	DKK	32.6bn	33.9bn	
	USD	4.98bn	5.44bn	
Def bdgt [b]	DKK	32.2bn	33.8bn	34.5bn
	USD	4.92bn	5.42bn	
USD1=DKK		6.54	6.23	

[a] NATO figure

[b] Includes military pensions



Population 5,894,687

Age	0–14	15–19	20–24	25–29	30–64	65 plus
Male	8.4%	3.0%	3.2%	3.5%	22.4%	9.3%
Female	8.0%	2.9%	3.1%	3.4%	22.1%	10.9%

Capabilities

Denmark maintains a compact but effective force, with a focus on contributing to larger NATO operations. Ties to NATO, NORDEFCO and other regional neighbours have increased. A joint declaration was signed in 2015 with other Nordic states, aimed at deterring Russia. Denmark has opted out of EU military cooperation under CSDP, but in late 2019 the government agreed an action plan to ensure the promotion of Danish interests in the EU's European Defence Fund, which launched in mid-2021. In the foreign- and security-policy strategy 2019–20, released at the end of 2018, the government expressed concerns about Russia, instability in the Middle East and cyber attacks. Current defence-modernisation priorities include the acquisition of the F-35A to replace the air force's F-16 fleet, and the upgrade of armoured vehicles within the mechanised brigades. Other acquisition priorities include EW equipment, UAVs and ASW capabilities. The defence agreement for 2018–23 envisages increased defence spending to deal with a deteriorating security environment. In particular, it is intended to strengthen deterrence, cyber defence and Denmark's role in international operations, as well as support to civilian authorities. The Danish armed forces consist primarily of professional personnel, supplemented by a substantial number of conscripts. The new defence agreement foresees retaining national service and that the annual conscript intake should rise modestly. Denmark is largely reliant on imported equipment for defence, but maintains a small defence industry focused on exports to Europe and North America. The Danish defence industry is mainly active in defence electronics and the design and manufacture of components and subsystems, including subcomponents for the F-35. The Danish armed forces have little ability to deploy independently but have contributed forces to a number of larger multinational deployments.

ACTIVE 15,400 (Army 8,000 Navy 2,250 Air 3,000 Joint 2,150)

Conscript liability 4–12 months, most voluntary

RESERVES 44,200 (Army 34,400 Navy 5,300 Air Force 4,500)

ORGANISATIONS BY SERVICE

Army 8,000

Div and a bde HQ transforming into operational formations

FORCES BY ROLE

COMMAND

1 (MND-N) div HQ

MANOEUVRE

Mechanised

1 (1st) mech bde (1 ISR bn, 3 mech inf bn, 1 SP arty bn, 1 cbt engr bn, 1 sigs bn, 1 log bn)

1 (2nd) mech bde (1 recce bn, 1 tk bn, 1 lt inf bn)

COMBAT SUPPORT

1 CBRN/construction bn

1 EOD bn

1 int bn

1 MP bn

2 sigs bn

COMBAT SERVICE SUPPORT

1 log bn

1 maint bn

1 spt bn

AIR DEFENCE

1 AD bn

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

MBT 44: 18 *Leopard* 2A5 (to be upgraded to 2A7V); 26 *Leopard* 2A7V

IFV 44 CV9035 MkIII

APC 287

APC (T) 30 M113 (incl variants)

APC (W) 257: 83 *Piranha* III (incl variants); 174 *Piranha* V

AUV 140: 84 *Eagle* IV; 56 *Eagle* V

ENGINEERING & MAINTENANCE VEHICLES

AEV 6 *Wisent*

ARV 10 BPZ-2

VLB 6 BRP-1 *Biber*

ANTI-TANK/ANTI-INFRASTRUCTURE

RCL 84mm *Carl Gustaf*

ARTILLERY 50

SP 155mm 15 CAESAR 8×8

MOR 35: **TOWED** 120mm 20 Soltam K6B1; **SP** 120mm 15 *Piranha* V with *Cardom*-10

AIR DEFENCE • SAM • Point-defence FIM-92 *Stinger*

Navy 2,250

Three naval squadrons, headquartered at naval bases in Frederikshavn and Korsør

EQUIPMENT BY TYPE

PRINCIPAL SURFACE COMBATANTS 5

DESTROYERS • DDGHM 3 *Iver Huitfeldt* with 4 quad Inchr with RGM-84L *Harpoon* Block II ASHM, 4 8-cell Mk

41 VLS (to be fitted with SAM), 2 12-cell Mk 56 VLS with RIM-162B ESSM SAM, 2 twin 324mm TT with MU90 LWT, 1 *Millennium* CIWS, 2 76mm guns (capacity 1 med hel)

FRIGATES • FFGHM 2 *Absalon* (flexible support ships) with 4 quad Inchr with RGM-84L *Harpoon* Block II ASHM, 3 12-cell Mk 56 VLS with RIM-162B ESSM SAM, 2 twin 324mm TT with MU90 LWT, 2 *Millennium* CIWS, 1 127mm gun (capacity 2 AW101 *Merlin*; 2 LCP, 7 MBT or 40 vehicles; 130 troops)

PATROL AND COASTAL COMBATANTS 12

PSOH 4 *Thetis* 1 76mm gun (capacity 1 MH-60R *Seahawk*) **PSO** 3 *Knud Rasmussen* with 1 76mm gun, 1 hel landing platform (ice-strengthened hull)

PCC 5 *Diana* (1 other non-operational)

MINE WARFARE • MINE COUNTERMEASURES 6

MCI 4 MSF Mk I

MSD 2 *Holm*

LOGISTICS AND SUPPORT 12

ABU 2 *Gunnar Thorson* (primarily used for MARPOL duties)

AE 1 *Sleipner*

AGS 2 *Holm*

AKL 2 *Seatruck*

AX 1 *Søløven* (DNK *Flyvefisken*)

AXL 2 *Holm*

AXS 2 *Svanen*

Air Force 3,000

Tactical Air Command

FORCES BY ROLE

FIGHTER/GROUND ATTACK

2 sqn with F-16AM/BM *Fighting Falcon*

ANTI-SUBMARINE WARFARE

1 sqn with MH-60R *Seahawk*

SEARCH & RESCUE/TRANSPORT HELICOPTER

1 sqn with AW101 *Merlin*

1 sqn with AS550 *Fennec* (ISR)

TRANSPORT

1 sqn with C-130J-30 *Hercules*; CL-604 *Challenger* (MP/VIP)

TRAINING

1 unit with MFI-17 *Supporter* (T-17)

EQUIPMENT BY TYPE

AIRCRAFT 48 combat capable

FTR 48: 34 F-16AM *Fighting Falcon*; 10 F-16BM *Fighting Falcon* (30 operational)

FGA 4 F-35A *Lightning* II

TPT 8: **Medium** 4 C-130J-30 *Hercules*; **PAX** 4 CL-604 *Challenger* (MP/VIP)

TRG 27 MFI-17 *Supporter* (T-17)

HELICOPTERS

ASW 9 MH-60R *Seahawk*

SAR 8 AW101 *Merlin*

MRH 8 AS550 *Fennec* (ISR) (4 more non-operational)

TPT • Medium 6 AW101 *Merlin*

AIR-LAUNCHED MISSILES

AAM • IR AIM-9L *Sidewinder*; **IIR** AIM-9X *Sidewinder* II; **ARH** AIM-120B AMRAAM

BOMBS

Laser-guided EGBU-12/GBU-24 *Paveway II/III*
INS/GPS guided GBU-31 JDAM

Control and Air Defence Group

1 Control and Reporting Centre, 1 Mobile Control and Reporting Centre. 4 Radar sites

Special Operations Command**FORCES BY ROLE****SPECIAL FORCES**

1 SF unit
1 diving unit

Reserves

Home Guard (Army) 34,400 reservists (to age 50)
2 (local) def region

Home Guard (Navy) 5,300 reservists (to age 50)

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS 30
PB 30: 18 MHV800; 12 MHV900

Home Guard (Air Force) 4,500 reservists (to age 50)

EQUIPMENT BY TYPE

AIRCRAFT • TPT • Light 2 BN-2A *Islander*

DEPLOYMENT

GULF OF GUNIEA: Navy 170; 1 FFGHM

IRAQ: NATO • NATO Mission Iraq 210; 1 SF gp; 1 trg team

LITHUANIA: NATO • Baltic Air Policing 150; 4 F-16AM *Fighting Falcon*

MALI: UN • MINUSMA 2

MIDDLE EAST: UN • UNTSO 10

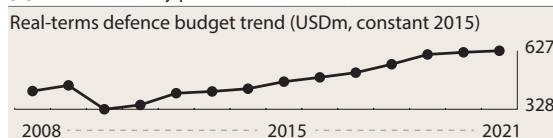
SERBIA: NATO • KFOR 35

Estonia EST

Euro EUR		2020	2021	2022
GDP	EUR	26.8bn	30.2bn	
	USD	30.6bn	36.0bn	
<i>per capita</i>	USD	23,036	27,101	
Growth	%	-3.0	8.5	
Inflation	%	-0.6	3.8	
Def Exp [a]	EUR	630m	646m	
	USD	719m	772m	
Def bdtg [b]	EUR	627m	658m	738m
	USD	716m	786m	
FMA (US)	USD	8m	5m	9m
USD1=EUR		0.88	0.84	

[a] NATO figure

[b] Includes military pensions



Population 1,220,042

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	8.2%	2.5%	2.2%	2.6%	24.0%	7.5%
Female	7.9%	2.3%	2.0%	2.3%	24.6%	13.9%

Capabilities

Estonia has small active armed forces and is reliant on NATO membership as a security guarantor. Security policy is predicated on the goals of ensuring sovereignty and territorial integrity, and there is concern over Russian security policy and military activity. The government's 2017-26 National Defence Development Plan (NDDP) reflects the worsening security environment in the Baltic region. The MoD publishes medium-term development plans on an annual basis. Covering a four-year period, these are intended to ensure that the NDDP's goals will be achieved within the planned time frame. The active armed forces are supplemented by a reserve component. In June 2018, Estonia joined the French-inspired European Intervention Force. A NATO battlegroup based in Estonia became operational in mid-2017 as part of the Alliance's Enhanced Forward Presence. Amari air base hosts a NATO Baltic Air Policing detachment. Estonia is also a member of the UK-led multinational Joint Expeditionary Force. Tallinn hosts NATO's Cybersecurity Centre of Excellence. The NDDP notes a desire to increase the annual conscript intake and active personnel numbers. There is limited organic capability to deploy beyond borders, though Estonian forces take part in EU, NATO and UN missions abroad on a small scale. The NDDP identifies the need for additional armoured mobility and armoured firepower, anti-armour weapons and increased munitions stocks. The country has a niche defence-industrial capability, including ship repair and digital systems.

ACTIVE 7,200 (Army 4,100 Navy 300 Air 500 Other 2,300)

Conscript liability 8 or 11 months (depending on specialisation; conscripts cannot be deployed)

RESERVE 17,500 (Joint 12,000; Territorial Defence 5,500)

ORGANISATIONS BY SERVICE

Army 1,500; 2,600 conscript (total 4,100)

4 def region. All units except one inf bn are reserve based

FORCES BY ROLE

MANOEUVRE

Mechanised

1 (1st) bde (1 recce coy, 1 armd inf bn; 2 mech inf bn, 1 arty bn, 1 AT coy, 1 cbt engr bn, 1 spt bn, 1 AD bn)

Light

1 (2nd) inf bde (1 recce coy, 4 inf bn, 2 arty bn, 1 AT coy, 1 cbt engr bn, 1 spt bn, 1 AD bn)

4 (territorial) inf bn

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

IFV 44 CV9035EE (incl 2 CP)

APC • APC (W) 136: 56 XA-180 *Sisu*; 80 XA-188 *Sisu*

ENGINEERING & MAINTENANCE VEHICLES

AEV 2 Pionierpanzer 2 *Dachs*

ARV 2 BPz-2

VLB 2 *Biber*

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL • MANPATS FGM-148 *Javelin*; *Milan*; *Spike-LR*

RCL 84mm *Carl Gustaf*; 90mm PV-1110

ARTILLERY 192

SP 155mm 6 K9 *Thunder*

TOWED 60: 122mm 36 D-30 (H 63); 155mm 24 FH-70

MOR 126: 81mm 60 B455/NM 95/M252; 120mm 66 2B11/M/41D

AIR DEFENCE

SAM • Point-defence *Mistral*

GUNS • TOWED 23mm ZU-23-2

Navy 200; 100 conscript (total 300)

EQUIPMENT BY TYPE

MINE WARFARE • MINE COUNTERMEASURES 4:

MCCS 1 *Tasuja* (ex-DNK *Lindormen*)

MHC 3 *Admiral Cowan* (ex-UK *Sandown*) (1 in refit)

Air Force 500

FORCES BY ROLE

TRANSPORT

1 sqn with M-28 *Skytruck*

TRANSPORT HELICOPTER

1 sqn with R-44 *Raven II*

EQUIPMENT BY TYPE

AIRCRAFT

TPT • Light 2 M-28 *Skytruck*

TRG 1+ L-39C *Albatros* (leased)

HELICOPTERS • TPT • Light 2 R-44 *Raven II*

Other 1,300; 800 conscript (total 2,100)

Includes Cyber Command, Support Command and Special Operations Forces

FORCES BY ROLE

SPECIAL FORCES

1 spec ops bn

COMBAT SUPPORT

2 MP coy

COMBAT SERVICE SUPPORT

1 log bn

Gendarmerie & Paramilitary

Border Guard

Subordinate to the Ministry of the Interior

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS 6

PCO 1 *Kindral Kurvits* (FIN *Tursas* derivative)

PB 5: 1 *Pikker*; 1 *Raju* (Baltic 4500WP); 2 *Risto*; 1 *Valve*

AMPHIBIOUS • LANDING CRAFT • LCU 3

AIRCRAFT • TPT • Light 2: 1 Beech 305ER *King Air*; 1 Cessna 172R

HELICOPTERS • MRH 3 AW139

UNINHABITED AERIAL VEHICLES • ISR • Light some S-100 *Camcopter*

DEPLOYMENT

IRAQ: Operation *Inherent Resolve* 10 • NATO Mission Iraq 40

LEBANON: UN • UNIFIL 1

MALI: Operation *Barkhane* 75; 1 SF unit; EU • EUTM Mali 10; UN • MINUSMA 2

MIDDLE EAST: UN • UNTSO 3

FOREIGN FORCES

All NATO Enhanced Forward Presence unless stated

France 300; 1 tk sqn

Italy NATO • Baltic Air Policing 150; 4 Eurofighter

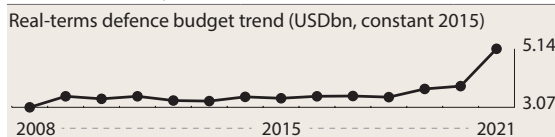
Typhoon

United Kingdom 828; 1 armd regt HQ; 1 tk sqn; 1 armd inf coy(+); 1 cbt engr coy

Finland FIN

Euro EUR		2020	2021	2022
GDP	EUR	236bn	248bn	
	USD	270bn	296bn	
per capita	USD	48,786	53,523	
Growth	%	-2.9	3.0	
Inflation	%	0.4	1.9	
Def bdgt [a]	EUR	3.64bn	4.99bn	5.50bn
	USD	4.15bn	5.96bn	
USD1=EUR		0.88	0.84	

[a] Includes military pensions



Population 5,587,442

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	8.4%	2.8%	2.8%	3.2%	22.2%	9.9%
Female	8.0%	2.6%	2.7%	3.1%	21.7%	12.7%

Capabilities

Finland's armed forces are primarily focused on territorial defence. The country's long border with Russia has focused attention on Russia's military capabilities and plans. The 2021 Defence Report notes that financial constraints have presented challenges to maintaining operational readiness. In October 2020, the government's report on foreign and security policy assessed a security environment that is rapidly changing and deteriorating. An EU member state, Finland's principal multilateral defence relationships include NORDEFCO and the Northern Group, as well as strong bilateral cooperation with Sweden and the US; it is building close ties with NATO short of membership. The country participates in UN peacekeeping missions and contributes to NATO operations. Legislation limits the number of personnel deployed on international crisis-management operations to an upper ceiling of 2,000 troops. Finland maintains a largely conscript-based force and intends to increase the number of personnel in the defence forces over the coming years. In 2015, the air force launched the HX Fighter Program to replace its F/A-18s. A request for quotations was issued in April 2018 and the selection was expected to be announced in 2021. Under the Squadron 2020 programme, the navy will replace patrol boats and minelayers with corvette-sized vessels. Finland's defence industry consists largely of privately owned SMEs, concentrating on niche products for international markets, but it also features some internationally competitive larger companies producing wheeled armoured vehicles and turreted mortar systems.

ACTIVE 19,250 (Army 13,400 Navy 3,150 Air 2,700)

Gendarmerie & Paramilitary 2,700

Conscript liability 165, 255 or 347 days (latter for NCOs, officers or those on 'especially demanding' duties)

RESERVE 238,000 (Army 185,000 Navy 24,000 Air 29,000) Gendarmerie & Paramilitary 12,000

18,000 reservists a year conduct refresher training: total obligation 80 days (150 for NCOs, 200 for officers) between conscript service and age 50 (NCOs and officers to age 60)

ORGANISATIONS BY SERVICE

Army 4,400; 9,000 conscript (total 13,400)

FORCES BY ROLE

Finland's army maintains a mobilisation strength of about 285,000. In support of this requirement, two conscription cycles, each for about 9,000 conscripts, take place each year. After conscript training, reservist commitment is to the age of 60. Reservists are usually assigned to units within their local geographical area. All service appointments or deployments outside Finnish borders are voluntary for all members of the armed services. All brigades are reserve based

Reserve Organisations 185,000

FORCES BY ROLE

SPECIAL FORCES

1 SF bn

MANOEUVRE

Armoured

2 armd BG (regt)

Mechanised

2 (Karelia & Pori Jaeger) mech bde

Light

3 (Jaeger) bde

6 lt inf bde

COMBAT SUPPORT

1 arty bde

1 AD regt

7 engr regt

3 sigs bn

COMBAT SERVICE SUPPORT

3 log regt

HELICOPTER

1 hel bn

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

MBT 100 *Leopard* 2A6; (100 *Leopard* 2A4 in store)

IFV 212: 110 BMP-2/-2MD; 102 CV9030FIN

APC 613

APC (T) 142: 40 MT-LBu; 102 MT-LBV

APC (W) 471: 260 XA-180/185 *Sisu*; 101 XA-202 *Sisu* (CP); 48 XA-203 *Sisu*; 62 AMV (XA-360)

AUV 6 SISU GTP (in test)

ENGINEERING & MAINTENANCE VEHICLES

AEV 5 *Dachs*

ARV 36: 9 BPz-2; 15 MTP-LB; 12 VT-55A

VLB 27: 12 BLG-60M2; 6 *Leopard* 2S; 9 SISU *Leguan*

MW 6+: *Aardvark* Mk 2; KMT T-55; 6 *Leopard* 2R CEV; RA-140 DS

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL • MANPATS NLAW; *Spike*-MR; *Spike*-LR

ARTILLERY 672

SP 122mm 49: 13 K9 *Thunder*; 36 2S1 *Gvozdika* (PsH 74)

TOWED 288: 122mm 234 D-30 (H 63); 155mm 54 K 83/GH-52 (K 98)

MRL 56: 122mm 34 RM-70; 227mm 22 M270 MLRS

MOR 279+: 81mm Krh/71; 120mm 261 Krh/92; SP 120mm 18 XA-361 AMOS

HELICOPTERS

MRH 7: 5 Hughes 500D; 2 Hughes 500E

TPT • Medium 20 NH90 TTH

UNINHABITED AERIAL VEHICLES**ISR**

Medium 11 ADS-95 *Ranger*

AIR DEFENCE**SAM 60+**

Short-range 44: 20 *Crotale* NG (ITO 90); 24 NASAMS II FIN (ITO 12)

Point-defence 16+: 16 ASRAD (ITO 05); FIM-92 *Stinger* (ITO 15); RBS 70 (ITO 05/05M)

GUNS 407+: **23mm** ItK 95/ZU-23-2 (ItK 61); **35mm** GDF-005 (ItK 88); **SP 35mm** 7 *Leopard* 2 ITK *Marksman*

Navy 1,400; 1,750 conscript (total 3,150)

FORCES BY ROLE

Naval Command HQ located at Turku; with two subordinate Naval Commands (Gulf of Finland and Archipelago Sea); 1 Naval bde; 3 spt elm (Naval Materiel Cmd, Naval Academy, Naval Research Institute)

EQUIPMENT BY TYPE**PATROL AND COASTAL COMBATANTS 20**

PCGM 4 *Hamina* with 4 RBS15 Mk3 (MTO-85M) AShM, 1 8-cell VLS with *Umkhonto*-IR (ITO2004) SAM, 1 57mm gun

PBG 4 *Rauma* with 6 RBS15 Mk3 (MTO-85M) AShM

PBF 12 *Jehu* (U-700) (capacity 24 troops)

MINE WARFARE 8**MINE COUNTERMEASURES 3**

MCC 3 *Katanpää* (ITA *Gaeta* mod)

MINELAYERS • ML 5:

2 *Hameenmaa* with 1 8-cell VLS with *Umkhonto*-IR (ITO2004) SAM, 2 RBU 1200 *Uragan* A/S mor, 1 57mm gun (can carry up to 120 mines)

3 *Pansio* with 50 mines

AMPHIBIOUS • LANDING CRAFT 51

LCM 1 *Kampela*

LCP ε50

LOGISTICS AND SUPPORT 7

AG 3: 1 *Louhi*; 2 *Hylje*

AX 4: 3 *Fabian Wrede*; 1 *Lokki*

Coastal Defence**FORCES BY ROLE****MANOEUVRE****Amphibious**

1 mne bde

COMBAT SUPPORT

1 cbt spt bde (1 AShM bty)

EQUIPMENT BY TYPE**COASTAL DEFENCE**

AShM 4 RBS15K

ARTY • 130mm 30 K-53tk (static)

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL • MANPATS *Spike* (used in AShM role)

Air Force 2,050; 1,000 conscript (total 3,050)

3 Air Comds: Satakunta (West), Karelia (East), Lapland (North)

FORCES BY ROLE**FIGHTER/GROUND ATTACK**

2 sqn with F/A-18C/D *Hornet*

ISR

1 (survey) sqn with Learjet 35A

TRANSPORT

1 flt with C295M

4 (liaison) flt with PC-12NG

TRAINING

1 sqn with *Hawk* Mk50/51A/66* (air-defence and ground-attack trg)

1 unit with G-115EA; L-70 *Vinka*

EQUIPMENT BY TYPE**AIRCRAFT** 107 combat capable

FGA 62: 55 F/A-18C *Hornet*; 7 F/A-18D *Hornet*

ELINT 1 C295M

TPT • Light 11: 2 C295M; 3 Learjet 35A (survey; ECM trg; tgt-tow); 6 PC-12NG

TRG 99: 28 G-115EA; 29 *Hawk* Mk50/51A*; 16 *Hawk* Mk66*; 26 L-70 *Vinka*

AIR-LAUNCHED MISSILES

AAM • IR AIM-9 *Sidewinder*; **IIR** AIM-9X *Sidewinder*

ARH AIM-120C AMRAAM

LACM Conventional AGM-158 JASSM

BOMBS

INS/GPS-guided GBU-31 JDAM; AGM-154C JSOW

Gendarmerie & Paramilitary**Border Guard 2,700**

Ministry of Interior. 4 Border Guard Districts and 2 Coast Guard Districts

FORCES BY ROLE**MARITIME PATROL**

1 sqn with Do-228 (maritime surv); AS332 *Super Puma*;

Bell 412 (AB-412) *Twin Huey*; Bell 412EP (AB-412EP)

Twin Huey; AW119KE *Koala*

EQUIPMENT BY TYPE**PATROL AND COASTAL COMBATANTS 43**

PSO 1 *Turva* with 1 hel landing platform

PCC 2 *Tursas*

PB 40

AMPHIBIOUS • LANDING CRAFT 6

UCAC 6

AIRCRAFT • TPT • Light 2 Do-228**HELICOPTERS**

MRH 3: 1 Bell 412 (AB-412) *Twin Huey*; 2 Bell 412EP (AB-412EP) *Twin Huey*

TPT 9: **Medium** 5 AS332 *Super Puma*; **Light** 4

AW119KE *Koala*

Reserve 12,000 reservists on mobilisation

DEPLOYMENT

IRAQ: *Operation Inherent Resolve* 75; 1 trg team; **NATO •** NATO Mission Iraq 5

LEBANON: UN • UNIFIL 162; 1 inf coy

MALI: EU • EUTM Mali 12; UN • MINUSMA 4

MIDDLE EAST: UN • UNTSO 15

SERBIA: NATO • KFOR 20

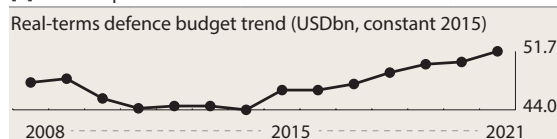
SOMALIA: EU • EUTM Somalia 10

France FRA

Euro EUR		2020	2021	2022
GDP	EUR	2.30tr	2.46tr	
	USD	2.62tr	2.94tr	
per capita	USD	40,299	45,028	
Growth	%	-8.0	6.3	
Inflation	%	0.5	2.0	
Def exp [a]	EUR	46.2bn	48.2bn	
	USD	52.7bn	57.6bn	
Def bdgt [b]	EUR	48.1bn	49.7bn	51.5bn
	USD	54.9bn	59.3bn	
USD1=EUR		0.88	0.84	

[a] NATO figure

[b] Includes pensions



Population 68,084,217

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	9.3%	3.1%	3.0%	2.9%	21.6%	9.1%
Female	8.9%	3.0%	2.9%	2.8%	21.7%	11.7%

Capabilities

France maintains globally deployed forces that are also engaged on enduring operations in Africa. The 2017 Strategic Review reiterated operational commitments in sub-Saharan Africa and the Middle East, as well as a continued presence in the Asia-Pacific. The Programme Budget Law for 2019-25 set out defence-budget increases to support these goals. France plays a leading military role in the EU, NATO and the UN. In 2018, Paris launched the European Intervention Initiative, joined by 11 other European countries, intended to foster a common strategic culture and develop the ability to jointly deploy quickly in case of crises. France is also expanding its capabilities in non-traditional domains, having set up a space command, developed a space strategy and formalised an offensive cyber doctrine. Deployments abroad have demonstrated the ability to support expeditionary forces independently. In mid-2020, the army issued a strategy document, 'Operational Superiority 2030', which called for improved readiness in light of the risk of high-intensity conflict. Domestic deployments persist under *Opération Sentinelle*, with troops deployed on high-visibility patrols. Some strategic military air-transport requirements are dependent on allies and external contractors. The high operational tempo has increased the stress on equipment. The Programme Budget Law seeks to remedy this with a budget increase for maintenance and accelerated modernisation of multi-role tanker-transport and refuelling aircraft. France is also in the process of reducing its footprint in the Sahel and scaling down *Opération Barkhane*; it will focus on the *Takuba* task force. France has a sophisticated defence industry, exemplified by companies such as Dassault, MBDA and Nexter. Most French defence procurements are addressed by domestic firms, and many of these firms export globally. France has called for increased European defence-industrial cooperation and aims to increase its exports to Europe. It is also seeking to invest in future technologies and supports start-ups and innovation in the defence domain.

ACTIVE 203,250 (Army 114,700 Navy 34,700 Air 40,450, Other Staffs 13,400) Gendarmerie & Paramilitary 100,500

RESERVE 41,050 (Army 24,900 Navy 6,250 Air 5,750 Other Staffs 4,150) Gendarmerie & Paramilitary 30,300

ORGANISATIONS BY SERVICE

Strategic Nuclear Forces

Navy 2,200

EQUIPMENT BY TYPE

SUBMARINES • STRATEGIC 4

SSBN 4 *Le Triomphant* with 16 M51 SLBM with 6 TN-75 nuclear warheads, 4 single 533mm TT with SM39 *Exocet* ASHM/F17 mod 2 HWT

AIRCRAFT • FGA 20 *Rafale* M F3 with ASMPA msl

Air Force 1,800

Air Strategic Forces Command

FORCES BY ROLE

STRIKE

1 sqn with *Rafale* B with ASMPA msl
1 sqn with *Rafale* B with ASMPA msl (forming)

TANKER

2 sqn with A330 MRTT; C-135FR; KC-135 *Stratotanker*

EQUIPMENT BY TYPE

AIRCRAFT 20 combat capable

FGA 20 *Rafale* B

TKR/TPT 15: 5 A330 MRTT; 10 C-135FR

TKR 3 KC-135 *Stratotanker*

Paramilitary

Gendarmerie 40

Space

EQUIPMENT BY TYPE

SATELLITES 13

COMMUNICATIONS 4: 2 *Syracuse-3* (designed to integrate with UK *Skynet* & ITA *Sicral*); 1 *Syracuse-4*; 1 *Athena-Fidus* (also used by ITA)

ISR 6: 1 CSO-1; 1 CSO-2; 1 *Helios 2A*; 1 *Helios 2B*; 2 *Pleiades*

ELINT/SIGINT 3 CERES

Army 114,700

Regt and BG normally bn size

FORCES BY ROLE

COMMAND

1 corps HQ (CRR-FR)
2 div HQ

MANOEUVRE

Reconnaissance

1 recce regt

Armoured

- 1 (2nd) armd bde (2 tk regt, 3 armd inf regt, 1 SP arty regt, 1 engr regt)
- 1 (7th) armd bde (1 tk regt, 1 armd BG, 3 armd inf regt, 1 SP arty regt, 1 engr regt)
- 1 armd BG HQ (UAE)

Mechanised

- 1 (6th) lt armd bde (2 armd cav regt, 1 armd inf regt, 1 mech inf regt, 1 mech inf regt, 1 SP arty regt, 1 engr regt)
- 1 (FRA/GER) mech bde (1 armd cav regt, 1 mech inf regt)
- 1 mech regt HQ (Djibouti)

Light

- 1 (27th) mtn bde (1 armd cav regt, 3 mtn inf regt, 1 arty regt, 1 engr regt)
- 3 inf regt (French Guiana & French West Indies)
- 1 inf regt HQ (New Caledonia)
- 2 inf bn HQ (Côte d'Ivoire & Gabon)

Air Manoeuvre

- 1 (11th) AB bde (1 armd cav regt, 4 para regt, 1 arty regt, 1 engr regt, 1 spt regt)
- 1 AB regt (La Réunion)

Amphibious

- 1 (9th) amph bde (2 armd cav regt, 1 armd inf regt, 2 mech inf regt, 1 SP arty regt, 1 engr regt)

Other

- 4 SMA regt (French Guiana, French West Indies & Indian Ocean)
- 3 SMA coy (French Polynesia, Indian Ocean & New Caledonia)

COMBAT SUPPORT

- 1 MRL regt
- 2 engr regt
- 2 EW regt
- 1 int bn
- 1 CBRN regt
- 5 sigs regt

COMBAT SERVICE SUPPORT

- 5 tpt regt
- 1 log regt
- 1 med regt
- 3 trg regt

HELICOPTER

- 1 (4th) hel bde (3 hel regt)

ISR UAV

- 1 UAV regt

AIR DEFENCE

- 1 SAM regt

Special Operation Forces 2,200**FORCES BY ROLE****SPECIAL FORCES**

- 2 SF regt

HELICOPTER

- 1 hel regt

Reserves 22,750 reservists

Reservists form 79 UIR (Reserve Intervention Units) of about 75 to 152 troops, for 'Proterre' – combined land projection forces bn, and 23 USR (Reserve Specialised Units) of about 160 troops, in specialised regt

EQUIPMENT BY TYPE**ARMoured FIGHTING VEHICLES**

- MBT 222 *Leclerc*
- ASLT 245 AMX-10RC
- RECCE 1,456: 40 ERC-90D *Sagaie*; 1,416 VBL/VB2L
- IFV 706: 599 VBCI VCI; 107 VBCI VPC (CP)
- APC 2,616
- APC (T) 49 BvS-10
- APC (W) 2,547: 339 VBMR *Griffon*; 2,151 VAB; 57 VAB VOA (OP)
- PPV 20 *Aravis*

ENGINEERING & MAINTENANCE VEHICLES

- AEV 110: 38 AMX-30EBG; 72 VAB GE
- ARV 44: 27 AMX-30D; 17 *Leclerc* DNG; VAB-EHC
- VLB 48: 20 EFA; 18 PTA; 10 SPRAT
- MW 16+: AMX-30B/B2; 4 *Buffalo*; 12 *Minotaure*

NBC VEHICLES 26 VAB NRBC**ANTI-TANK/ANTI-INFRASTRUCTURE • MSL**

- SP 177: 64 VAB *Milan*; 113 VAB with MMP
- MANPATS *Eryx*; FGM-148 *Javelin*; *Milan*; MMP

ARTILLERY 265+

- SP 155mm 108: 32 AU-F-1; 76 CAESAR
- TOWED 155mm 12 TR-F-1
- MRL 227mm 13 M270 MLRS
- MOR 132+: 81mm LLR 81mm; 120mm 132 RT-F-1

AIRCRAFT • TPT • Light 13: 5 PC-6B *Turbo Porter*; 5 TBM-700; 3 TBM-700B**HELICOPTERS**

- ATK 67: 29 *Tiger* HAP; 38 *Tiger* HAD
- MRH 104: 18 AS555UN *Fennec*; 86 SA341F/342M *Gazelle* (all variants)
- TPT 154: **Heavy** 8 H225M *Caracal* (CSAR); **Medium** 111: 24 AS532UL *Cougar*; 2 EC225LP *Super Puma*; 39 NH90
- TTH; 46 SA330 *Puma*; **Light** 35 H120 *Colibri* (leased)

AIR DEFENCE • SAM • Point-defence *Mistral***AIR-LAUNCHED MISSILES**

- ASM AGM-114 *Hellfire* II; HOT

Navy 35,100**EQUIPMENT BY TYPE****SUBMARINES 8**

- STRATEGIC • SSBN** 4 *Le Triomphant* opcon Strategic Nuclear Forces with 16 M51 SLBM with 6 TN-75 nuclear warheads, 4 single 533mm TT with SM39 *Exocet* ASHm/F17 mod 2 HWT

- TACTICAL • SSN** 4 *Rubis* (1 more severely damaged by fire) with 4 single 533mm TT with SM39 *Exocet* ASHm/F17 mod 2 HWT

PRINCIPAL SURFACE COMBATANTS 22

- AIRCRAFT CARRIERS • CVN** 1 *Charles de Gaulle* with 4 8-cell *Sylver* A43 VLS with *Aster* 15 SAM, 2 sextuple *Sadral Inchr* with *Mistral* SAM (capacity 30 *Rafale* M FGA ac, 2 E-2C *Hawkeye* AEW&C ac, 8 AS365 *Dauphin*/NH90 NFH hel)

DESTROYERS • DDGHM 3

- 1 *Aquitaine* (FREMM FREDa) with 2 quad *Inchr* with MM40 *Exocet* Block 3 ASHm, 4 8-cell *Sylver* A50 VLS with *Aster* 15 SAM/*Aster* 30 SAM, 2 twin 324mm B-515 ASTT with MU90 LWT, 1 76mm gun (capacity 1 NH90 NFH hel)

- 2 *Forbin* with 2 quad *Inchr* with MM40 *Exocet* Block 3 ASHM, 4 8-cell *Sylver* A50 VLS with *Aster* 30 SAM, 2 8-cell *Sylver* A50 VLS with *Aster* 15 SAM, 2 twin 324mm ASTT with MU90 LWT, 2 76mm gun (capacity 1 NH90 NFH hel)

FRIGATES 18**FFGHM 12:**

- 4 *Aquitaine* (FREMM ASM) with 2 8-cell *Sylver* A70 VLS with MdCN (SCALP Naval) LACM, 2 quad *Inchr* with MM40 *Exocet* Block 3 ASHM, 2 8-cell *Sylver* A43 VLS with *Aster* 15 SAM, 2 twin 324mm B-515 ASTT with MU90 LWT, 1 76mm gun (capacity 1 NH90 NFH hel)
- 2 *Aquitaine* (FREMM ASM) with 2 8-cell *Sylver* A70 VLS with MdCN (SCALP Naval) LACM, 2 quad *Inchr* with MM40 *Exocet* Block 3 ASHM, 2 8-cell *Sylver* A50 VLS with *Aster* 15 SAM, 2 twin 324mm B-515 ASTT with MU90 LWT, 1 76mm gun (capacity 1 NH90 NFH hel)
- 1 *Georges Leygues* (mod) with 2 quad *Inchr* with MM40 *Exocet* ASHM, 1 octuple *Inchr* with *Crotale* SAM, 2 twin *Simbad* *Inchr* with *Mistral* SAM, 2 single 324mm ASTT with MU90 LWT, 1 100mm gun (capacity 2 hel)
- 4 *La Fayette* with 2 quad *Inchr* with MM40 *Exocet* Block 3 ASHM, 1 octuple *Inchr* with *Crotale* SAM, 1 100mm gun (capacity 1 AS565SA *Panther* hel)
- 1 *La Fayette* with 2 quad *Inchr* with MM40 *Exocet* Block 3 ASHM, 2 sextuple *Sadral* *Inchr* with *Mistral* 3 SAM, 1 100mm gun (capacity 1 AS565SA *Panther* hel)

FFH 6 *Floreal* with 1 100mm gun (fitted for but not with 1 twin *Simbad* *Inchr* with *Mistral* SAM) (capacity 1 AS565SA *Panther* hel)

PATROL AND COASTAL COMBATANTS 20

- FSM** 6 *D'Estienne d'Orves* with 1 twin *Simbad* *Inchr* with *Mistral* SAM, 2 twin 533mm ASTT, 1 100mm gun
- PSO** 4 *d'Entrecasteaux* (BSAOM) with 1 hel landing platform
- PCO** 6: 3 *La Confiance*, 1 *Lapérouse*; 1 *Le Malin*; 1 *Fulmar*
- PCC** 4: 1 *L'Audacieuse*; 3 *Flamant*

MINE WARFARE • MINE COUNTERMEASURES 17

- MCD** 4 *Vulcain*
- MHC** 3 *Antarès*
- MHO** 10 *Éridan*

AMPHIBIOUS**PRINCIPAL AMPHIBIOUS SHIPS 3**

LHD 3 *Mistral* with 2 twin *Simbad* *Inchr* with *Mistral* SAM (capacity up to 16 NH90/SA330 *Puma*/AS532 *Cougar*/*Tiger* hel; 2 LCT or 4 LCM; 13 MBTs; 50 AFVs; 450 troops)

LANDING CRAFT 40

- LCT** 4 *EDA-R*
- LCM** 11 *CTM*
- LCVP** 25

LOGISTICS AND SUPPORT 33

- ABU** 1 *Telem Mor*
- AG** 2 *Chamois*
- AGB** 1 *Astrolabe* with 1 hel landing platform
- AGE** 2: 1 *Corraline*; 1 *Thetis* (*Lapérouse* mod) (used as trials ships for mines and divers)

AGI 1 *Dupuy de Lome*

AGM 1 *Monge*

AGOR 2: 1 *Pourquoi pas?* (used 150 days per year by Ministry of Defence; operated by Ministry of Research and Education otherwise); 1 *Beautemps-beaupré*

AGS 3 *Lapérouse*

AORH 2 *Durance* with 3 twin *Simbad* *Inchr* with *Mistral* SAM (capacity 1 SA319 *Alouette* III/AS365 *Dauphin*/*Lynx*)

ATS 4 *Loire* (BSAM)

AXL 10: 8 *Léopard*; 2 *Glycine*

AXS 4: 2 *La Belle Poule*; 1 *La Grand Hermine*; 1 *Mutin*

Naval Aviation 6,500**FORCES BY ROLE****STRIKE/FIGHTER/GROUND ATTACK**

- 2 sqn with *Rafale* M F3
- 1 sqn with *Rafale* M F3/F3-R

ANTI-SURFACE WARFARE

- 1 sqn with AS565SA *Panther*

ANTI-SUBMARINE WARFARE

- 2 sqn with NH90 NFH

MARITIME PATROL

- 2 sqn with *Atlantique* 2
- 1 sqn with *Falcon* 20H *Gardian*
- 1 sqn with *Falcon* 50MI

AIRBORNE EARLY WARNING & CONTROL

- 1 sqn with E-2C *Hawkeye*

SEARCH & RESCUE

- 1 sqn with AS365N/F *Dauphin* 2

TRAINING

- 1 sqn with EMB 121 *Xingu*
- 1 unit with SA319B *Alouette* III
- 1 unit with *Falcon* 10MER
- 1 unit with CAP 10M

EQUIPMENT BY TYPE**AIRCRAFT** 54 combat capable

- FGA** 42 *Rafale* M F3-R
- ASW** 12 *Atlantique-2* (10 more in store)
- AEW&C** 3 E-2C *Hawkeye*
- SAR** 4 *Falcon* 50MS
- TPT** 25: **Light** 10 EMB-121 *Xingu*; **PAX** 15: 6 *Falcon* 10MER; 5 *Falcon* 20H *Gardian*; 4 *Falcon* 50MI
- TRG** 6 CAP 10M

HELICOPTERS

- ASW** 26 NH90 NFH
- MRH** 39: 3 AS365F *Dauphin* 2; 6 AS365N *Dauphin* 2; 2 AS365N3; 16 AS565SA *Panther*; 12 SA319B *Alouette* III

UNINHABITED AERIAL VEHICLES

- ISR** • **Light** 4 S-100 *Camcopter*

AIR-LAUNCHED MISSILES

- AAM** • **IIR** *Mica* IR; **ARH** *Mica* RF
- ASM** AASM
- AshM** AM39 *Exocet*
- LACM** *Nuclear* ASMPA

BOMBS

- Laser-guided:** GBU-12/16 *Paveway* II

Marines 2,200**Commando Units 750****FORCES BY ROLE****MANOEUVRE****Reconnaissance**

1 recce gp

Amphibious

2 aslt gp

1 atk swimmer gp

1 raiding gp

COMBAT SUPPORT

1 cbt spt gp

COMBAT SERVICE SUPPORT

1 spt gp

Fusiliers-Marin 1,450**FORCES BY ROLE****MANOEUVRE****Other**

2 sy gp

7 sy coy

Reserves 6,000 reservists**Air and Space Force 40,450****FORCES BY ROLE****STRIKE**1 sqn with *Rafale* B with ASMPA msl1 sqn with *Rafale* B with ASMPA msl (forming)**SPACE**

1 (satellite obs) sqn

FIGHTER1 sqn with *Mirage* 2000-51 sqn with *Mirage* 2000B/C**FIGHTER/GROUND ATTACK**3 sqn with *Mirage* 2000D1 (composite) sqn with *Mirage* 2000-5/D (Djibouti)2 sqn with *Rafale* B/C1 sqn with *Rafale* B/C (UAE)**ELECTRONIC WARFARE**1 flt with C-160G *Gabriel* (ESM); Beech 350ER *King Air***AIRBORNE EARLY WARNING & CONTROL**1 (Surveillance & Control) sqn with E-3F *Sentry***SEARCH & RESCUE/TRANSPORT**5 sqn with CN235M; SA330 *Puma*; AS555 *Fennec* (Djibouti, French Guiana, French Polynesia, Indian Ocean & New Caledonia)**TANKER**

1 sqn with A330 MRTT

TANKER/TRANSPORT1 sqn with C-135FR; KC-135 *Stratotanker***TRANSPORT**

1 VIP sqn with A310-300; A330

2 sqn with A400M

1 sqn with C-130H/H-30 *Hercules*; C-160R *Transall*1 sqn with C-130H/H-30/J-30 *Hercules*; KC-130J *Hercules*

2 sqn with CN235M

1 sqn with *Falcon* 7X (VIP); *Falcon* 900 (VIP); *Falcon* 2000

3 flt with TBM-700A

1 (mixed) gp with C-160 *Transall*; DHC-6-300 *Twin Otter***TRAINING**1 OCU sqn with *Mirage* 2000D1 OCU sqn with *Rafale* B/C1 OCU sqn with SA330 *Puma*; AS555 *Fennec*1 OCU unit with C-160 *Transall*1 (aggressor) sqn with *Alpha Jet**4 sqn with *Alpha Jet**

1 sqn with Grob G120A-F

2 sqn with Grob G120A-F; PC-21

1 sqn with EMB-121

TRANSPORT HELICOPTER2 sqn with AS555 *Fennec*2 sqn with AS332C/L *Super Puma*; SA330 *Puma*; H225M**ISR UAV**1 sqn with MQ-9A *Reaper***AIR DEFENCE**3 sqn with *Crotale* NG; SAMP/T

1 sqn with SAMP/T

EQUIPMENT BY TYPE**SATELLITES** see Space**AIRCRAFT** 280 combat capableFTR 47: 12 *Mirage* 2000-5; 28 *Mirage* 2000C; 7 *Mirage* 2000BFGA 161: 65 *Mirage* 2000D; 53 *Rafale* B; 43 *Rafale* C (*Rafale* being upgraded to F3-R standard)ISR 2 Beech 350ER *King Air*ELINT 2 C-160G *Gabriel* (ESM)AEW&C 4 E-3F *Sentry*TKR 3 KC-135 *Stratotanker*TKR/TPT 17: 5 A330 MRTT; 10 C-135FR; 2 KC-130J *Hercules*TPT 119: **Heavy** 18 A400M; **Medium** 22: 5 C-130H*Hercules*; 9 C-130H-30 *Hercules*; 2 C-130J-30 *Hercules*;6 C-160R *Transall*; **Light** 70: 1 Beech 350i *King Air*; 19CN235M-100; 8 CN235M-300; 5 DHC-6-300 *Twin Otter*;22 EMB-121 *Xingu*; 15 TBM-700; **PAX** 9: 2 A310-300; 1A330; 2 *Falcon* 7X; 2 *Falcon* 900 (VIP); 2 *Falcon* 2000 (2

A340-200 in store)

TRG 127: 72 *Alpha Jet**; 18 Grob G120A-F (leased); 17

PC-21; 13 SR20 (leased); 7 SR22 (leased)

HELICOPTERSMRH 37 AS555 *Fennec*TPT 35: **Heavy** 10 H225M *Caracal*; **Medium** 25: 1AS332C *Super Puma*; 4 AS332L *Super Puma*; 20 SA330B *Puma***UNINHABITED AERIAL VEHICLES**CISR • **Heavy** 8 MQ-9A *Reaper***AIR DEFENCE** • SAM 64: **Long-range** 40 SAMP/T;**Short-range** 24 *Crotale* NG**AIR-LAUNCHED MISSILES**AAM • IR R-550 *Magic* 2; IIR *Mica* IR; ARH *Meteor*; *Mica* RFASM AASM; *Apache***LACM****Nuclear** ASMPA**Conventional** SCALP EG**BOMBS** • **Laser-guided**: GBU-12/-16 *Paveway* II; GBU-49 *Enhanced Paveway* II

Security and Intervention Brigade

FORCES BY ROLE

SPECIAL FORCES

3 SF gp

MANOEUVRE

Other

24 protection units

30 (fire fighting and rescue) unit

Reserves 5,700 reservists

Gendarmerie & Paramilitary 100,500

Gendarmerie 100,500; 30,300 reservists

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

APC • APC (W) 80: 60 VXB-170 (VBRG-170); 20 VAB

ARTILLERY • MOR 81mm some

PATROL AND COASTAL COMBATANTS 39

PB 39: 2 *Athos*; 4 *Géranium*; 24 VCSM; 9 VSMP

HELICOPTERS • TPT • Light 60: 25 AS350BA *Ecureuil*;
20 H135; 15 H145

DEPLOYMENT

BOSNIA-HERZEGOVINA: EU • EUFOR • *Operation Althea*
5

BURKINA FASO: *Operation Barkhane* 400; 1 SF gp; 1
C-130H; 1 DHC-6-300; 2 *Tiger*; 3 AS532UL *Cougar*; 2
H225M; 2 SA342 *Gazelle*

CENTRAL AFRICAN REPUBLIC: 160; EU • EUTM RCA 100
UN • MINUSCA 8

CHAD: *Operation Barkhane* 1,500; 1 mech inf BG; 1 FGA det
with 4 *Mirage* 2000D; 1 tpt det with 1 C-130H; 2 CN235M

CÔTE D'IVOIRE: 950; 1 (Marine) inf bn; 1 hel unit with 1
AS555 *Fennec*; 2 SA330 *Puma*; 2 SA342 *Gazelle*

CYPRUS: *Operation Inherent Resolve* 30: 1 *Atlantique-2*

DEMOCRATIC REPUBLIC OF THE CONGO: UN •
MONUSCO 2

DJIBOUTI: 1,450; 1 (Marine) combined arms regt with (2
recce sqn, 2 inf coy, 1 arty bty, 1 engr coy); 1 hel det with
2 SA330 *Puma*; 2 SA342 *Gazelle*; 1 LCM; 1 FGA sqn with
4 *Mirage* 2000-5; 1 SAR/tpt sqn with 1 CN235M; 2 SA330
Puma

EGYPT: MFO 1

ESTONIA: NATO • Enhanced Forward Presence
(*Operation Lynx*) 300; 1 tk sqn

FRENCH GUIANA: 2,100: 1 (Foreign Legion) inf regt; 1
(Marine) inf regt; 1 SMA regt; 2 PCO; 1 tpt sqn with 3
CN235M; 5 SA330 *Puma*; 4 AS555 *Fennec*; 3 gendarmerie
coy; 1 AS350BA *Ecureuil*; 1 H145

FRENCH POLYNESIA: 900: 1 inf bn; 1 SMA coy; 1 naval HQ
at Papeete; 1 FFGHM; 1 PSO; 1 PCO; 1 AFS; 3 *Falcon* 200
Gardian; 1 SAR/tpt sqn with 2 CN235M

FRENCH WEST INDIES: 1,000; 1 (Marine) inf regt; 2 SMA
regt; 2 FFGHM; 1 AS565SA *Panther*; 1 SA319 *Alouette* III; 1

naval base at Fort de France (Martinique); 4 gendarmerie
coy; 1 PCO; 1 PB; 2 AS350BA *Ecureuil*

GABON: 350; 1 inf bn

GERMANY: 2,000 (incl elm Eurocorps and FRA/GER bde);
1 (FRA/GER) mech bde (1 armd cav regt, 1 mech inf regt)

GULF OF GUINEA: *Operation Corymbe* 1 FFH

IRAQ: *Operation Inherent Resolve* 6; NATO • NATO
Mission Iraq 3

JORDAN: *Operation Inherent Resolve* (*Chammal*) 300: 4 *Rafale*
F3

LA REUNION/MAYOTTE: 1,700; 1 (Marine) para regt;
1 (Foreign Legion) inf coy; 1 SMA regt; 1 SMA coy; 2
FFGHM; 1 PCO; 1 LCM; 1 naval HQ at Port-des-Galets (La
Réunion); 1 naval base at Dzaoudzi (Mayotte); 1 *Falcon*
50M; 1 SAR/tpt sqn with 2 CN235M; 5 gendarmerie coy; 1
SA319 *Alouette* III

LEBANON: UN • UNIFIL 567; 1 mech inf bn(-); 1 maint
coy; 1 tpt coy; VBL; VBCI; VAB; *Mistral*

MALI: *Operation Barkhane* 2,500; 1 mech inf BG; 1 log bn; 1
tpt unit with 1 CN235M; 1 PC-6B; 1 hel unit with 5 *Tiger*;
2 AS532 UL *Cougar*; 5 NH90 TTH; 4 SA342 *Gazelle*; EU •
EUTM Mali 13; UN • MINUSMA 21

MEDITERRANEAN: *Operation Inherent Resolve* 100: 1
DDGHM

NEW CALEDONIA: 1,450; 1 (Marine) mech inf regt; 1
SMA coy; 6 ERC-90F1 *Lynx*; 1 FFGHM; 1 PSO; 1 PCO;
1 base with 2 *Falcon* 200 *Gardian* at Nouméa; 1 tpt unit
with 2 CN235 MPA; 2 SA330 *Puma*; 4 gendarmerie coy; 2
AS350BA *Ecureuil*

NIGER: *Operation Barkhane* 1,000; 1 FGA det with 4 *Mirage*
2000C/D; 1 tkr/tpt det with 1 C-135FR; 1 C-130J-30
Hercules; 1 UAV det with 6 MQ-9A *Reaper*; 1 ISR det with
1 *Atlantique-2*

PERSIAN GULF: EMASOH 100; 1 DDGHM

QATAR: *Operation Inherent Resolve* (*Chammal*) 70; 1 E-3F
Sentry

SAUDI ARABIA: 50 (radar det)

SENEGAL: 350; 1 *Falcon* 50MI

UNITED ARAB EMIRATES: 650: 1 armd BG (1 tk coy, 1
arty bty); *Leclerc*; CAESAR; • *Operation Inherent Resolve*
(*Chammal*); 1 FGA sqn with 7 *Rafale* F3 • EMASOH; 1
Atlantique-2 Western Sahara: UN • MINURSO 2

FOREIGN FORCES

Germany 400 (GER elm Eurocorps)

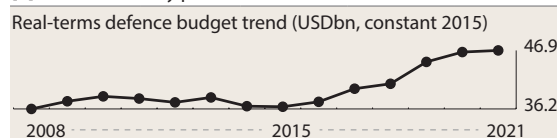
Singapore 200; 1 trg sqn with 12 M-346 *Master*

Germany GER

Euro EUR		2020	2021	2022
GDP	EUR	3.37tr	3.54tr	
	USD	3.84tr	4.23tr	
per capita	USD	46,216	50,788	
Growth	%	-4.6	3.1	
Inflation	%	0.4	2.9	
Def exp [a]	EUR	51.6bn	53.2bn	
	USD	58.9bn	63.5bn	
Def bdgt [b]	EUR	45.6bn	46.9bn	50.3bn
	USD	52.1bn	56.1bn	
USD1=EUR		0.88	0.84	

[a] NATO figure

[b] Includes military pensions



Population 79,903,481

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	6.6%	2.3%	2.6%	2.8%	24.3%	10.3%
Female	6.3%	2.2%	2.6%	2.7%	24.2%	12.9%

Capabilities

The 2016 defence White Paper committed Germany to a leadership role in European defence. It also emphasised the importance of NATO and the need for the armed forces to contribute to collective-defence tasks. The 2018 *Konzeption der Bundeswehr* underlines that collective- and territorial-defence tasks will drive military-modernisation efforts and are of equal standing with international crisis-management operations. The key implication for defence modernisation is that Germany will need to invest in readiness and return to fully equipping operational units, after having experimented in recent years with rotating equipment among units depending on their deployment or training demands. In May 2021, the Federal Ministry of Defence published a paper entitled 'Key Elements of the Bundeswehr of the Future', which outlined organisational measures intended to strengthen the modernisation agenda. Germany is aligning its defence-planning process with capability goals derived from multinational guidance. Berlin has been a key sponsor of the NATO Framework Nations Concept and led the drive to implement Permanent Structured Cooperation on defence in the EU. Close military cooperation has been established with the Czech Republic, France, the Netherlands and Romania, including the affiliation of units. The defence ministry has announced its objective to increase authorised active force numbers. In July 2020, the government launched a new voluntary conscript initiative focused on homeland-security tasks with 1,000 posts. Volunteers will serve for seven months plus five months as reservists over the course of six years. The first recruits, part of a one-year pilot phase, started training in April 2021. This is in addition to the existing voluntary conscript model that requires between seven and 23 months of military service, and which has seen declining numbers of applications in recent years. The armed forces are struggling to improve readiness levels in light of increasing demands on NATO's eastern flank. In 2019, Germany was the lead nation for NATO's Very High Readiness Joint Task Force land

component and is scheduled to provide this role again in 2023, with the earmarked units prioritised for modernisation and upgrades. Shortages of spare parts and maintenance problems are reported in all three services. Germany's defence-industrial base is able to design and manufacture equipment to meet requirements across all military domains, with strengths in land and naval systems. The government is pursuing a policy of closer defence-industrial cooperation in Europe.

ACTIVE 183,400 (Army 62,650 Navy 16,250 Air 27,100 Joint Support Service 27,600 Joint Medical Service 19,950 Cyber 14,350 Other 15,500)

Conscript liability Voluntary conscription only. Voluntary conscripts can serve up to 23 months

RESERVE 30,050 (Army 6,850 Navy 1,200 Air 3,400 Joint Support Service 11,950 Joint Medical Service 3,650 Cyber 1,150 Other 1,850)

ORGANISATIONS BY SERVICE

Space

EQUIPMENT BY TYPE

SATELLITES 7

COMMUNICATIONS 2 COMSATBw (1 & 2)

ISR 5 SAR-Lupe

Army 62,650

FORCES BY ROLE

COMMAND

elm 2 (1 GNC & MNC NE) corps HQ

MANOEUVRE

Armoured

1 (1st) armd div (1 (9th) armd bde (1 armd recce bn, 1 tk bn, 2 armd inf bn, 1 mech inf bn, 1 cbt engr bn, 1 spt bn); 1 (21st) armd bde (1 armd recce bn, 1 tk bn, 1 armd inf bn, 1 mech inf bn, 1 cbt engr bn, 1 spt bn); 1 (41st) mech inf bde (1 armd recce bn, 2 armd inf bn, 1 mech inf bn, 1 cbt engr bn, 1 sigs coy, 1 spt bn); 1 tk bn (for NLD 43rd Bde); 1 SP arty bn; 1 sigs coy)

1 (10th) armd div (1 (12th) armd bde (1 armd recce bn, 1 tk bn, 2 armd inf bn, 1 cbt engr bn, 1 sigs coy, 1 spt bn); 1 (37th) mech inf bde (1 armd recce bn, 2 tk bn, 2 armd inf bn, 1 engr bn, 1 sigs coy, 1 spt bn); 1 (23rd) mtn inf bde (1 recce bn, 3 mtn inf bn, 1 cbt engr bn, 1 spt bn); 1 SP arty bn; 1 SP arty trg bn; 2 mech inf bn (GER/FRA bde); 1 arty bn (GER/FRA bde); 1 cbt engr coy (GER/FRA bde); 1 spt bn (GER/FRA bde))

Air Manoeuvre

1 (rapid reaction) AB div (1 SOF bde (3 SOF bn); 1 AB bde (2 recce coy, 2 para regt, 2 cbt engr coy); 1 atk hel regt; 2 tpt hel regt; 1 sigs coy)

COMBAT SUPPORT

1 engr bn(-) (Joint GER-UK unit)

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

MBT 284: 225 *Leopard* 2A5/A6; 59 *Leopard* 2A7/2A7V (55 *Leopard* 2A4 in store)

RECCE 169 *Fennek* (incl 14 engr recce, 14 fires spt)

IFV 674: 253 *Marder* 1A3/A4; 71 *Marder* 1A5; 350 *Puma*

APC 728

APC (T) 112: 75 Bv-206S; 37 M113 (inc variants)

APC (W) 616: 257 *Boxer* (inc variants); 359 TPz-1 *Fuchs* (inc variants)

AUV 683: 247 *Dingo* 2; 363 *Eagle* IV/V; 73 *Wiesel* 1 Mk20 (with 20mm gun)

ENGINEERING & MAINTENANCE VEHICLES

AEV 51 *Dachs*

ARV 170: 95 BPz-2 1; 75 BPz-3 *Büffel*

VLB 59: 22 *Biber*; 7 *Leopard* 2 with *Leguan*; 30 M3

MW 30: 6 *Fuchs* KAI; 24 *Keiler*

NBC VEHICLES 8 TPz-1 *Fuchs* NBC

ANTI-TANK/ANTI-INFRASTRUCTURE • MSL

SP 102 *Wiesel* ATGM with TOW or MELLs

MANPATS *Milan*; *Spike*-LR (MELLs)

ARTILLERY 296

SP 155mm 121 PzH 2000

MRL 227mm 41 M270 MLRS

MOR 134: **120mm** 94 Tampella; **SP 120mm** 40 M113 with Tampella

HELICOPTERS

ATK 51 *Tiger*

TPT 101: **Medium** 81 NH90; **Light** 20: 13 H135; 7 H145 (SAR)

UNINHABITED AERIAL VEHICLES

ISR 127: **Medium** 39 KZO; **Light** 87 LUNA

AIR-LAUNCHED MISSILES • ASM HOT; PARS 3 LR**Navy 16,250****EQUIPMENT BY TYPE****SUBMARINES 6**

SSK 6 Type-212A (fitted with AIP) with 6 single 533mm TT with DM2A4 HWT

PRINCIPAL SURFACE COMBATANTS 11

DESTROYERS • DDGDM 3 *Sachsen* (F124) with 2 quad Inchr with RGM-84C *Harpoon* Block 1B ASHM, 4 8-cell Mk 41 VLS with SM-2 Block IIIA SAM/RIM-162B ESSM SAM, 2 21-cell Mk 49 GMLS with RIM-116 RAM SAM, 2 triple 324mm SVTT Mk 32 ASTT with MU90 LWT, 1 76mm gun (capacity 2 *Sea Lynx* Mk88A hel)

FRIGATES • FFGHM 8:

3 *Baden-Württemberg* (F125) with 2 quad Inchr with RGM-84C *Harpoon* Block 1B ASHM, 2 21-cell Mk 49 GMLS with RIM-116C RAM Block 2 SAM, 1 127mm gun (capacity 2 NH90 hel)

4 *Brandenburg* (F123) with 2 twin Inchr with MM38 *Exocet* ASHM, 2 8-cell Mk 41 VLS with RIM-7P *Sea Sparrow* SAM, 2 Mk 49 GMLS with RIM-116 RAM SAM, 2 twin 324mm SVTT Mk 32 ASTT with Mk 46 LWT, 1 76mm gun (capacity 2 *Sea Lynx* Mk88A hel)

1 *Bremen* (F122) with 2 quad Inchr with RGM-84C *Harpoon* Block 1B ASHM, 1 octuple Mk 29 GMLS with RIM-7P *Sea Sparrow* SAM, 2 21-cell Mk 49 GMLS with RIM-116 RAM SAM, 2 twin 324mm SVTT Mk 32 ASTT with Mk 46 LWT, 1 76mm gun (capacity 2 *Sea Lynx* Mk88A hel)

PATROL AND COASTAL COMBATANTS • CORVETTES 5

FSGM 5 *Braunschweig* (K130) with 2 twin Inchr with RBS15 Mk3 ASHM, 2 21-cell Mk 49 GMLS with RIM-116 RAM SAM, 1 76mm gun, 1 hel landing platform

MINE WARFARE • MINE COUNTERMEASURES 23

MHO 10: 7 *Frankenthal* (2 used as diving support); 3 *Frankenthal* (mod. MJ332CL)

MSO 1 *Ens Dorf*

MSD 12 *Seehund*

AMPHIBIOUS • LANDING CRAFT 1

LCU 1 Type-520

LOGISTICS AND SUPPORT 23

AG 4: 2 *Schwedeneck* (Type-748); 2 *Stollergrund* (Type-745)

AGI 3 *Oste* (Type-423)

AGOR 1 *Planet* (Type-751)

AOR 2 *Rhön* (Type-704)

AORH 3 *Berlin* (Type-702) (fitted for but not with RIM-116 RAM SAM) (capacity 2 *Sea King* Mk41 hel)

AORL 6 *Elbe* (Type-404) with 1 hel landing platform (2 specified for PFM support; 1 specified for SSK support; 3 specified for MHO/MSO support);

ATF 3: 1 *Helgoland*; 2 *Wangerooge*

AXS 1 *Gorch Fock*

Naval Aviation 2,000**EQUIPMENT BY TYPE**

AIRCRAFT 8 combat capable

ASW 8 AP-3C *Orion*

TPT • Light 2 Do-228 (pollution control)

HELICOPTERS

ASW 22 *Lynx* Mk88A

SAR 21: 11 *Sea King* Mk41; 10 NH90 NFH (*Sea Lion*)

Naval Special Forces Command**FORCES BY ROLE****SPECIAL FORCES**

1 SF coy

Sea Battalion**FORCES BY ROLE****MANOEUVRE**

Amphibious

1 mne bn

Air Force 27,100**FORCES BY ROLE****FIGHTER**

3 wg (2 sqn with Eurofighter *Typhoon*)

FIGHTER/GROUND ATTACK

1 wg (2 sqn with *Tornado* IDS)

1 wg (2 sqn with Eurofighter *Typhoon* (multi-role))

ISR

1 wg (1 ISR sqn with *Tornado* ECR/IDS; 2 UAV sqn with *Heron*)

TANKER/TRANSPORT

1 (special air mission) wg (3 sqn with A310 MRTT;

A319; A321; A340; A350; AS532U2 *Cougar* II; *Global* 5000; *Global* 6000)

TRANSPORT

1 wg (total: 1 sqn with C-160D *Transall*)

1 wg (3 sqn (forming) with A400M *Atlas*)

TRAINING

1 sqn located at Holloman AFB (US) with *Tornado* IDS

1 unit (ENJJPT) located at Sheppard AFB (US) with
T-6A *Texan* II; T-38C *Talon*
1 hel unit located at Fassberg

TRANSPORT HELICOPTER

1 tpt hel wg (3 sqn with CH-53G/GA/GE/GS *Stallion*; 1
sqn with H145M)

AIR DEFENCE

1 wg (3 SAM gp) with M902 *Patriot* PAC-3
1 AD gp with ASRAD *Ozelot*; C-RAM Mantis and trg unit
1 AD trg unit located at Fort Bliss (US) with MIM-
104C/F *Patriot* PAC-2/3
3 (tac air ctrl) radar gp

Air Force Regiment

FORCES BY ROLE

MANOEUVRE

Other

1 sy regt

EQUIPMENT BY TYPE

AIRCRAFT 226 combat capable

FTR 138 Eurofighter *Typhoon*

ATK 68 *Tornado* IDS

ATK/EW 20 *Tornado* ECR*

ISR 1 A319CJ (Open Skies)

TKR/TPT 3 A310 MRTT

TPT 56: **Heavy** 35 A400M; **Medium** 8 C-160D *Transall*;

PAX 13: 1 A321; 2 A340 (VIP); 1 A350 (VIP); 2 A319; 4

Global 5000; 3 *Global* 6000

TRG 109: 69 T-6A *Texan* II, 40 T-38C *Talon*

HELICOPTERS

MRH 15 H145M

TPT 73: **Heavy** 70 CH-53G/GA/GE/GS *Stallion*; **Medium**

3 AS532U2 *Cougar* II (VIP)

UNINHABITED AERIAL VEHICLES • ISR • Heavy 6

Heron 1

AIR DEFENCE

SAM 50

Long-range 30 M902 *Patriot* PAC-3

Point-defence 20 ASRAD *Ozelot* (with FIM-92 *Stinger*)

GUNS 35mm 12 C-RAM *Mantis*

AIR-LAUNCHED MISSILES

AAM • IR AIM-9L/Li *Sidewinder*; IIR IRIS-T; ARH

AIM-120B AMRAAM

LACM Taurus KEPD 350

ARM AGM-88B HARM

BOMBS

Laser-guided GBU-24 *Paveway* III; GBU-48 Enhanced
Paveway II; GBU-54 JDAM

Joint Support Service 27,600

FORCES BY ROLE

COMBAT SUPPORT

3 MP regt

2 NBC bn

COMBAT SERVICE SUPPORT

6 log bn

1 spt regt

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

AUV 451: 206 *Dingo* 2; 245 *Eagle* IV/V

ENGINEERING & MAINTENANCE VEHICLES

ARV 35: 23 BPz-2; 12 BPz-3 *Büffel*

NBC VEHICLES 35 TPz-1 *Fuchs* A6/A7/A8 NBC

Joint Medical Services 19,950

FORCES BY ROLE

COMBAT SERVICE SUPPORT

4 med regt

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

APC • APC (W) 109: 72 *Boxer* (amb); 37 TPz-1 *Fuchs*
(amb)

AUV 42 *Eagle* IV/V (amb)

Cyber & Information Command 14,350

FORCES BY ROLE

COMBAT SUPPORT

4 EW bn

6 sigs bn

DEPLOYMENT

BALTIC SEA: NATO • SNMCMG 1: 1 MHO; 1 AOR

FRANCE: 400 (incl GER elm Eurocorps)

IRAQ: *Operation Inherent Resolve* 80; NATO • NATO
Mission Iraq 10

JORDAN: *Operation Inherent Resolve* 150; 1 A400M

LEBANON: UN • UNIFIL 103; 1 FFGM

LITHUANIA: NATO • Enhanced Forward Presence 558;
1 armd inf bn HQ; 1 armd inf coy(+) with *Leopard* 2A6;
Marder 1A3

MALI: EU • EUTM Mali 120; UN • MINUSMA 426; 1 sy
coy; 1 int coy; 1 UAV sqn

MEDITERRANEAN SEA: EU • EU NAVFOR MED •
Operation Irini 1 AORH; NATO • SNMG 2: 1 AOT

POLAND: 95 (GER elm MNC-NE)

SERBIA: NATO • KFOR 70

SOUTH SUDAN: UN • UNMISS 14

UNITED STATES: Trg units with 40 T-38 *Talon*; 69 T-6A
Texan II at Goodyear AFB (AZ)/Sheppard AFB (TX); NAS
Pensacola (FL); Fort Rucker (AL); Missile trg at Fort Bliss (TX)

WESTERN SAHARA: UN • MINURSO 3

FOREIGN FORCES

France 2,000; 1 (FRA/GER) mech bde (1 armd cav regt, 1
mech inf regt)

United Kingdom 185

United States

US Africa Command: **Army**; 1 HQ at Stuttgart

US European Command: 36,950; 1 combined service HQ
(EUCOM) at Stuttgart-Vaihingen

Army 22,650; 1 HQ (US Army Europe & Africa
(USAREUR-AF) at Wiesbaden; 1 arty comd; 1 SF gp;
1 recce bn; 1 mech bde(-); 1 fd arty bn; 1 MRL bde (2
MRL bn); 1 (cbt avn) hel bde; 1 (cbt avn) hel bde HQ; 1
int bde; 1 MP bde; 1 sigs bde; 1 spt bde; 1 (MDTF) cbt

spt bde(-); 1 SAM bn; 1 ARNG SAM bde(-); 2 (APS) armd bde eqpt set; M1A2 SEPv2/v3 *Abrams*; M3A3 *Bradley*; M2A3 *Bradley*; M1296 *Stryker Dragoon*; M109A6; M119A3; M777A2; M270A1; AH-64D/E *Apache*; CH-47F *Chinook*; UH-60L/M *Black Hawk*; HH-60M *Black Hawk*; M902 *Patriot PAC-3*; M1097 *Avenger*; M-SHORAD Navy 450

USAF 13,300; 1 HQ (US Air Forces Europe & Africa (USAFE)) at Ramstein AB; 1 HQ (3rd Air Force) at Ramstein AB; 1 FGA wg at Spangdahlem AB with (1 FGA sqn with 24 F-16C *Fighting Falcon*); 1 tpt wg at Ramstein AB with 14 C-130J-30 *Hercules*; 2 Gulfstream V (C-37A); 5 Learjet 35A (C-21A); 1 B-737-700 (C-40B) USMC 550

Greece GRC

Euro EUR		2020	2021	2022
GDP	EUR	166bn	177bn	
	USD	189bn	212bn	
<i>per capita</i>	USD	17,657	19,827	
Growth	%	-8.2	6.5	
Inflation	%	-1.3	-0.1	
Def exp [a]	EUR	4.40bn	6.58bn	
	USD	5.02bn	7.86bn	
Def bdgt [b]	EUR	4.36bn	6.47bn	6.15bn
	USD	4.98bn	7.73bn	
USD1=EUR		0.88	0.84	

[a] NATO figure

[b] Includes military pensions

Real-terms defence budget trend (USDbn, constant 2015)



Population 10,569,703

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	7.4%	2.7%	2.8%	2.7%	23.0%	10.1%
Female	7.0%	2.4%	2.5%	2.5%	24.2%	12.6%

Capabilities

Greece's 2014 National Military Strategy identifies safeguarding sovereignty and territorial integrity as principal defence objectives. The armed forces would also be expected to support Cyprus in the event of a conflict. The Force Structure 2013-27 document set out plans to make the armed forces more flexible, rapidly deployable and cost-effective. Greece is a NATO member and has led the EU's Balkan Battlegroup. In recent years, defence-cooperation agreements have been signed with Cyprus, Egypt and Israel while ties are developing with the UAE and Saudi Arabia. There is close cooperation with the US. The Mutual Defense Cooperation Agreement is the cornerstone of US-Greece defence cooperation and provides for a naval-support facility and an airfield at Souda Bay in Crete. The armed forces still contain conscripts but most personnel are regulars and Athens is looking to move to a fully professional force. A force-structure review (2020-34) was approved by the National Security Council in April 2021. Training levels are reportedly good, with a focus on joint operational training. Greece's

deployments involve limited numbers of personnel and focus on the near abroad, although the country contributes to EU, NATO and UN missions. Athens is now in the process of acquiring *Rafale* combat aircraft and frigates from France as part of a newly announced strategic partnership that includes a mutual-assistance clause. Greece has an extensive defence industry focused on the domestic market, capable of manufacturing and developing naval vessels, subsystems, ammunition and small arms.

ACTIVE 143,300 (Army 93,500 Navy 16,400 Air 21,800 Joint 11,600) Gendarmerie & Paramilitary 4,000

Conscript liability 9 months for all services

RESERVE 221,350 (Army 181,500 Navy 5,850 Air 34,000)

ORGANISATIONS BY SERVICE

Army 48,500; 45,000 conscripts (total 93,500)

FORCES BY ROLE

COMMAND

- 2 corps HQ (incl NRDC-GR)
- 1 armd div HQ
- 3 mech inf div HQ
- 1 inf div HQ

SPECIAL FORCES

- 1 SF comd
- 1 cdo/para bde

MANOEUVRE

Reconnaissance

- 4 recce bn

Armoured

- 4 armd bde (2 armd bn, 1 mech inf bn, 1 SP arty bn)

Mechanised

- 10 mech inf bde (1 armd bn, 2 mech bn, 1 SP arty bn)

Light

- 2 inf regt

Air Manoeuvre

- 1 air mob bde
- 1 air aslt bde

Amphibious

- 1 mne bde

COMBAT SUPPORT

- 2 MRL bn
- 3 AD bn (2 with *I-Hawk*, 1 with *Tor M1*)
- 3 engr regt
- 2 engr bn
- 1 EW regt
- 10 sigs bn

COMBAT SERVICE SUPPORT

- 1 log corps HQ
- 1 log div (3 log bde)

HELICOPTER

- 1 hel bde (1 hel regt with (2 atk hel bn), 2 tpt hel bn, 4 hel bn)

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

MBT 1,228: 170 *Leopard* 2A6HEL; 183 *Leopard* 2A4; 500 *Leopard* 1A4/5; 375 M48A5

RECCE 242 VBL

IFV 169 BMP-1

APC • APC (T) 2,130: 91 *Leonidas* Mk1/2; 1,852 M113A1/A2; 187 M577 (CP)

ENGINEERING & MAINTENANCE VEHICLES

ARV 262: 12 *Büffel*; 43 BPz-2; 94 M88A1; 113 M578

VLB 52: 34 M48/M60 AVLB; 10 *Biber*; 8 *Leopard 1* with *Leguan*

MW *Giant Viper*

ANTI-TANK/ANTI-INFRASTRUCTURE**MSL**

SP 558: 195 HMMWV with 9K135 *Kornet-E* (RS-AT-14 *Spriggan*); 363 M901

MANPATS 9K111 *Fagot* (RS-AT-4 *Spigot*); *Milan*; TOW

RCL 687+: 84mm *Carl Gustaf*; 90mm EM-67; SP 106mm 687 M40A1

ARTILLERY 3,518

SP 594: 155mm 442: 418 M109A1B/A2/A3GEA1/A5; 24 PzH 2000; 175mm 12 M107; 203mm 140 M110A2

TOWED 459: 105mm 229: 211 M101; 18 M-56; 155mm 230 M114

MRL 145: 122mm 109 RM-70; 227mm 36 M270 MLRS

MOR 2,320: 81mm 1,700; 107mm 620 M30 (incl 231 SP)

SURFACE-TO-SURFACE MISSILE LAUNCHERS

SRBM • Conventional MGM-140A ATACMS (launched from M270 MLRS)

AIRCRAFT • TPT • Light 18: 1 Beech 200 King Air (C-12C)

2 Beech 200 *King Air* (C-12R/AP *Huron*); 15 Cessna 185 (U-17A/B)

HELICOPTERS

ATK 28: 19 AH-64A *Apache*; 9 AH-64D *Apache*

MRH 60 OH-58D *Kiowa Warrior*

TPT 135: **Heavy** 25: 19 CH-47D *Chinook*; 6 CH-47SD *Chinook*; **Medium** 14 NH90 TTH; **Light** 96: 84 Bell 205 (UH-1H *Iroquois*); 14 Bell 206 (AB-206) *Jet Ranger*

UNINHABITED AERIAL VEHICLES

ISR • **Medium** 4 *Sperver*

AIR DEFENCE

SAM 155+

Medium-range 42 MIM-23B I-*Hawk*

Short-range 21 9K331 *Tor-M1* (RS-SA-15 *Gauntlet*)

Point-range 92+: 38 9K33 *Osa-M* (RS-SA-8B *Gecko*); 54 ASRAD HMMWV; FIM-92 *Stinger*

GUNS • TOWED 727: 20mm 204 Rh 202; 23mm 523 ZU-23-2

National Guard 38,000 reservists

Internal security role

FORCES BY ROLE**MANOEUVRE**

Light

1 inf div

Air Manoeuvre

1 para regt

COMBAT SUPPORT

8 arty bn

4 AD bn

HELICOPTER

1 hel bn

Navy 14,100; 2,300 conscript (total 16,400)**EQUIPMENT BY TYPE****SUBMARINES • SSK 11:**

3 *Poseidon* (GER Type-209/1200) with 8 single 533mm TT with SUT HWT

1 *Poseidon* (GER Type-209/1200) (fitted with AIP technology) with 8 single 533mm TT with UGM-84C *Harpoon* Block 1B ASHM/SUT HWT

3 *Glavkos* (GER Type-209/1100) with 8 single 533mm TT with UGM-84C *Harpoon* Block 1B ASHM/SUT HWT

4 *Papanikolis* (GER Type-214) (fitted with AIP) with 8 single 533mm TT with UGM-84C *Harpoon* Block 1B ASHM/SUT HWT

PRINCIPAL SURFACE COMBATANTS 13**FRIGATES • FFGHM 13:**

4 *Ellis* Batch I (ex-NLD *Kortenaer* Batch 2) with 2 quad Inchr with RGM-84C/G *Harpoon* Block 1B/G ASHM, 1 octuple Mk 29 GMLS with RIM-7M/P *Sea Sparrow* SAM, 2 twin 324mm SVTT Mk 32 mod 9 ASTT with Mk 46 mod 5 LWT, 1 Mk 15 *Phalanx* CIWS, 1 76mm gun (capacity 2 Bell 212 (AB-212) hel or 1 S-70B *Seahawk* hel)

2 *Ellis* Batch II (ex-NLD *Kortenaer* Batch 2) with 2 quad Inchr with RGM-84C/G *Harpoon* Block 1B/G ASHM, 1 octuple Mk 29 GMLS with RIM-7M/P *Sea Sparrow* SAM, 2 twin 324mm SVTT Mk 32 mod 9 ASTT with Mk 46 mod 5 LWT, 1 Mk 15 *Phalanx* CIWS, 2 76mm gun (capacity 2 Bell 212 (AB-212) hel or 1 S-70B *Seahawk* hel)

3 *Ellis* Batch III (ex-NLD *Kortenaer* Batch 2) with 2 quad Inchr with RGM-84C/G *Harpoon* Block 1B/G ASHM, 1 octuple Mk 29 Inchr with RIM-7P *Sea Sparrow* SAM, 2 twin 324mm SVTT Mk 32 mod 9 ASTT with Mk 46 LWT, 1 Mk 15 *Phalanx* CIWS, 1 76mm gun (capacity 2 Bell 212 (AB-212) hel)

4 *Hydra* (GER MEKO 200) with 2 quad Inchr with RGM-84G *Harpoon* Block 1G ASHM, 1 16-cell Mk 48 mod 2 VLS with RIM-162C ESSM SAM, 2 triple 324mm SVTT Mk 32 mod 5 ASTT with Mk 46 LWT, 2 Mk 15 *Phalanx* CIWS, 1 127mm gun (capacity 1 S-70B *Seahawk* ASW hel)

PATROL AND COASTAL COMBATANTS 37

PCGM 6 *Roussen* (*Super Vita*) with 2 quad Inchr with MM40 *Exocet* Block 3 ASHM (of which 2 still fitted with Block 2), 1 21-cell Mk 49 GMLS with RIM-116 RAM SAM, 1 76mm gun

PCFG 8:

3 *Kavaloudis* (FRA *La Combattante* IIIB) with 2 twin Inchr with RGM-84C *Harpoon* Block 1B ASHM, 2 single 533mm TT with SST-4 HWT, 2 76mm gun

4 *Laskos* (FRA *La Combattante* III) with 2 twin Inchr with RGM-84C *Harpoon* Block 1B ASHM, 2 single 533mm TT with SST-4 HWT, 2 76mm gun

1 *Votsis* (ex-GER *Tiger*) with 2 twin Inchr with RGM-84C *Harpoon* ASHM, 1 76mm gun

PCF 4 *Votsis* (ex-GER *Tiger*) with 1 76mm gun

PCO 8:

2 *Armatolos* (DNK *Osprey*) with 1 76mm gun

2 *Kasos* (DNK *Osprey* derivative) with 1 76mm gun

4 *Machitis* with 1 76mm gun

PBF 4 *Aeolos* (ex-US Mk V FPB)

PB 7: 4 *Andromeda* (NOR *Nasty*); 2 *Stamou*; 1 *Tolmi*

MINE WARFARE • MINE COUNTERMEASURES 3

MHO 3: 1 *Evropi* (ex-UK *Hunt*); 2 *Evniki* (ex-US *Osprey*)

AMPHIBIOUS

LANDING SHIPS • LST 5 Chios (capacity 4 LCVP; 300 troops) with 1 76mm gun, 1 hel landing platform

LANDING CRAFT 15

LCU 5

LCA 7

LCAC 3 *Kefallinia* (*Zubr*) with 2 AK630 CIWS (capacity either 3 MBT or 10 APC (T); 230 troops)**LOGISTICS AND SUPPORT 28**

ABU 2

AG 5: 3 *Atlas* I; 2 *Pandora*AGOR 1 *Naftilos*AGS 2: 1 *Stravon*; 1 *Pytheas*AORH 1 *Prometheus* (ITA *Etna*) with 1 Mk 15 *Phalanx* CIWSAORL 2 *Axios* (ex-GER *Luneburg*)AOT 4 *Ouranos*AWT 6 *Kerkini*

AXS 5

Coastal Defence**EQUIPMENT BY TYPE**COASTAL DEFENCE • AShM 2 MM40 *Exocet***Naval Aviation****FORCES BY ROLE****ANTI-SUBMARINE WARFARE**1 div with S-70B *Seahawk*; Bell 212 (AB-212) ASW**EQUIPMENT BY TYPE**

AIRCRAFT 1 combat capable

ASW 1 P-3B *Orion* (4 P-3B *Orion* in store undergoing modernisation)**HELICOPTERS**ASW 18: 7 Bell 212 (AB-212) ASW; 11 S-70B *Seahawk***AIR-LAUNCHED MISSILES**ASM AGM-114 *Hellfire*AShM AGM-119 *Penguin***Air Force 18,800; 3,000 conscripts (total 21,800)****Tactical Air Force****FORCES BY ROLE****FIGHTER/GROUND ATTACK**1 sqn with F-4E *Phantom* II3 sqn with F-16CG/DG Block 30/50 *Fighting Falcon*3 sqn with F-16CG/DG Block 52+ *Fighting Falcon*2 sqn with F-16C/D Block 52+ ADV *Fighting Falcon*1 sqn with *Mirage* 2000-5EG/BG Mk21 sqn with *Mirage* 2000EG/BG**AIRBORNE EARLY WARNING**1 sqn with EMB-145H *Erieye***EQUIPMENT BY TYPE**

AIRCRAFT 231 combat capable

FGA 231: 34 F-4E *Phantom* II; 69 F-16CG/DG Block 30/50 *Fighting Falcon*; 55 F-16CG/DG Block 52+; 30 F-16 C/D Block 52+ ADV *Fighting Falcon*; 19 *Mirage* 2000-5EG Mk2; 5 *Mirage* 2000-5BG Mk2; 16 *Mirage* 2000EG; 2 *Mirage* 2000BG; 1 *Rafale* F3-RAEW 4 EMB-145AEW (EMB-145H) *Erieye***AIR-LAUNCHED MISSILES**AAM • IR AIM-9L/P *Sidewinder*; R-550 *Magic* 2;IIR IRIS-T; *Mica* IR; ARH AIM-120B/C AMRAAM;*Mica* RFASM AGM-65A/B/G *Maverick*

LACM SCALP EG

AShM AM39 *Exocet*

ARM AGM-88 HARM

BOMBS**Electro-optical guided:** GBU-8B HOBOS**Laser-guided:** GBU-10/12/16 *Paveway* II; GBU-24*Paveway* III; GBU-50 Enhanced *Paveway* II

INS/GPS-guided GBU-31 JDAM; AGM-154C JSOW

Air Defence**FORCES BY ROLE****AIR DEFENCE**6 sqn/bty with M901 *Patriot* PAC-22 sqn/bty with S-300PMU1 (RS-SA-20 *Gargoyle*)12 bty with *Skyguard*/RIM-7 *Sparrow*/guns; *Crotale* NG/GR; *Tor*-M1 (RS-SA-15 *Gauntlet*)**EQUIPMENT BY TYPE****AIR DEFENCE**

SAM 81

Long-range 48: 36 M901 *Patriot* PAC-2; 12 S-300PMU1 (RS-SA-20 *Gargoyle*)**Short-range** 33: 9 *Crotale* NG/GR; 4 9K331 *Tor*-M1 (RS-SA-15 *Gauntlet*); 20 RIM-7M *Sparrow* with *Skyguard***GUNS** 59: **20mm** some Rh-202; **30mm** 35+ *Artemis*-30; **35mm** 24 GDF-005 with *Skyguard***Air Support Command****FORCES BY ROLE****SEARCH & RESCUE/TRANSPORT HELICOPTER**1 sqn with AS332C *Super Puma* (SAR/CSAR)

1 sqn with AW109; Bell 205A (AB-205A) (SAR); Bell 212 (AB-212 - VIP, tpt)

TRANSPORT1 sqn with C-27J *Spartan*1 sqn with C-130B/H *Hercules*1 sqn with EMB-135BJ *Legacy*; ERJ-135LR; *Falcon* 7X; *Gulfstream* V**EQUIPMENT BY TYPE****AIRCRAFT**TPT 27: **Medium** 23: 8 C-27J *Spartan*; 5 C-130B *Hercules*;10 C-130H *Hercules*; **Light** 2: 1 EMB-135BJ *Legacy*; 1 ERJ-135LR; **PAX** 2: 1 *Falcon* 7X (VIP); 1 *Gulfstream* V**HELICOPTERS**TPT 31: **Medium** 12 AS332C *Super Puma*; **Light** 19: 12 Bell 205A (AB-205A) (SAR); 4 Bell 212 (AB-212) (VIP, Tpt); 3 AW109**Air Training Command****FORCES BY ROLE****TRAINING**2 sqn with T-2C/E *Buckeye*2 sqn with T-6A/B *Texan* II

1 sqn with P2002JF; T-41D

EQUIPMENT BY TYPE**AIRCRAFT** • TRG 103: 12 P2002JF; 28 T-2C/E *Buckeye*; 20 T-6A *Texan* II; 25 T-6B *Texan* II; 18 T-41D**Gendarmerie & Paramilitary****Coast Guard and Customs 4,000**

EQUIPMENT BY TYPE**PATROL AND COASTAL COMBATANTS 124**PCO 1 *Gavdos* (Damen 5009)

PCC 3

PBF 54

PB 66

AIRCRAFT • TPT • Light 4: 2 Cessna 172RG *Cutlass*; 2 TB-20 *Trinidad***HELICOPTERS • SAR 3** AS365N3**DEPLOYMENT****BOSNIA-HERZEGOVINA:** EU • EUFOR • *Operation Althea* 6**CYPRUS:** Army 950; 1 mech bde (1 armd bn, 2 mech inf bn, 1 arty bn); 61 M48A5 MOLF MBT; 80 *Leonidas* APC; 12 M114 arty; 6 M110A2 arty**IRAQ:** NATO • NATO Mission Iraq 1**LEBANON:** UN • UNIFIL 111; 1 FFGHM**MALI:** EU • EUTM Mali 2**MEDITERRANEAN SEA:** EU • EUNAVFOR MED • *Operation Irini*; 1 FFGHM**SAUDI ARABIA:** Air Force 100; 1 SAM bty with M901 *Patriot* PAC-2**SERBIA:** NATO • KFOR 114; 1 inf coy**FOREIGN FORCES****United States** US European Command: 400; 1 ELINT flt with 1 EP-3E *Aries* II; 1 naval base at Makri; 1 naval base at Souda Bay; 1 air base at Iraklion**Hungary HUN**

Hungarian Forint HUF		2020	2021	2022
GDP	HUF	47.7tr	53.5tr	
	USD	155bn	181bn	
<i>per capita</i>	USD	15,866	18,528	
Growth	%	-5.0	7.6	
Inflation	%	3.3	4.5	
Def exp [a]	HUF	853bn	842bn	
	USD	2.77bn	2.85bn	
Def bdgt [b]	HUF	616bn	778bn	1.00tr
	USD	2.00bn	2.63bn	
USD1=HUF		308.00	295.53	

[a] NATO figure

[b] Includes military pensions

Real-terms defence budget trend (USDbn, constant 2015)



Population 9,728,337

Age	0–14	15–19	20–24	25–29	30–64	65 plus
Male	7.4%	2.7%	2.7%	3.1%	23.6%	8.1%
Female	7.0%	2.5%	2.5%	3.0%	24.3%	13.0%

Capabilities

Hungary published a new National Security Strategy in April 2020 and a new National Military Strategy in June 2021. The strategy documents speak of a deteriorating security environment, marked by great-power competition and an increasing military component. The security strategy also characterises mass migration as a key concern for Hungary. Hungary is implementing the Zrínyi 2026 national-defence and armed-forces modernisation plan. Hungary coordinates policy with the other member states of the Visegrád Group, including on defence, and hosts the NATO Centre of Excellence for Military Medicine. The armed forces participate in international crisis-management missions, notably in the Balkans and Iraq, but have very limited organic capacity to deploy forces beyond national borders. Increasing migration pressure has involved the armed forces in internal border-control operations, assisting national police forces. Announced equipment-modernisation priorities focus on individual-soldier equipment and fixed- and rotary-wing aircraft. In 2019, the government announced that it had raised the level of ambition for the maximum number of Hungarian soldiers deployed on international missions from 1,000 to 1,200. While the air-force-related elements of Zrínyi 2026 had been a focus of attention, at the end of 2018 the ministry also initiated land procurements, including for main battle tanks and self-propelled artillery. In September 2020, a contract for KF41 *Lynx* infantry fighting vehicles was signed and delivery is scheduled to begin in 2022. Hungary's defence-industrial base is limited, though the defence ministry has set up an inter-ministerial working group to boost domestic capacity in the small-arms sector. In 2020, a new defence procurement agency, reporting to the national armaments director, began its work and is intended to coordinate defence and security acquisitions.

ACTIVE 34,200 (Army 11,900 Air 5,950 Joint 16,350) Gendarmerie & Paramilitary 12,000**RESERVE 20,000****ORGANISATIONS BY SERVICE**

Hungary's armed forces have reorganised into a joint force

Land Component 10,450 (incl riverine element)**FORCES BY ROLE****SPECIAL FORCES**

1 SF bde (1 SF bn; 1 AB bn)

MANOEUVRE**Reconnaissance**

1 ISR regt

Mechanised

1 (5th) mech inf bde (3 mech inf bn, 1 cbt engr coy, 1 sigs coy, 1 log bn)

1 (25th) mech inf bde (1 tk bn; 2 mech inf bn, 1 arty bn, 1 AT bn, 1 log bn)

COMBAT SUPPORT

1 engr regt

1 EOD/rvn regt

1 CBRN bn

1 sigs regt

COMBAT SERVICE SUPPORT

1 log regtN

EQUIPMENT NBY TYPE**ARMoured FIGHTING VEHICLES**MBT 48: 4 *Leopard* 2A4HU; 44 T-72M1

IFV 120 BTR-80A/AM
 APC 282
 APC (W) 260 BTR-80
 PPV 22: 10 *Ejder Yalcin* 4x4 (*Gidran*); 12 *MaxxPro Plus*
ENGINEERING & MAINTENANCE VEHICLES
 AEV 5 BAT-2
 ARV 8 VT-55A
 VLB 8 BLG-60; MTU; TMM
NBC VEHICLES 14 BTR-80M-NBC
ANTI-TANK/ANTI-INFRASTRUCTURE
 MSL • MANPATS 9K111 *Fagot* (RS-AT-4 *Spigot*); 9K111-1 *Konkurs* (RS-AT-5 *Spandrel*)
ARTILLERY 31
 TOWED 152mm 31 D-20
 MOR 82mm
PATROL AND COASTAL COMBATANTS • PBR 2
MINE COUNTERMEASURES • MSR 3 *Nestin*

Air Component 5,750

FORCES BY ROLE

FIGHTER/GROUND ATTACK

1 sqn with *Gripen C/D*

TRANSPORT

1 sqn with A319; *Falcon* 7X

TRAINING

1 sqn with Z-143LSi; Z-242L; AS350 *Ecureuil*

ATTACK HELICOPTER

1 sqn with Mi-24V/P *Hind E/F*

TRANSPORT HELICOPTER

1 sqn with Mi-8 *Hip*; Mi-17 *Hip H*; H145M

AIR DEFENCE

1 SAM regt (9 bty with *Mistral*; 3 bty with 2K12 *Kub* (RS-SA-6 *Gainful*))
 1 radar regt

EQUIPMENT BY TYPE

AIRCRAFT 14 combat capable

FGA 14: 12 *Gripen C*; 2 *Gripen D*
 TPT • PAX 4: 2 A319; 2 *Falcon* 7X
 TRG 8: 2 Z-143LSi; 6 Z-242L

HELICOPTERS

ATK 8: 6 Mi-24V *Hind E*; 2 Mi-24P *Hind F*
 MRH 25: 20 H145M (incl 2 SAR); 5 Mi-17 *Hip H*
 TPT 5: Medium 3 Mi-8 *Hip* (10 in store); Light 2 AS350 *Ecureuil*

AIR DEFENCE

SAM • Point-defence 16 2K12 *Kub* (RS-SA-6 *Gainful*); *Mistral*

AIR-LAUNCHED MISSILES

AAM • IR AIM-9 *Sidewinder*; SARH R-27 (RS-AA-10 *Alamo A*); ARH AIM-120C AMRAAM
 ASM AGM-65 *Maverick*; 3M11 *Falanga* (RS-AT-2 *Swatter*); 9K114 *Shturm-V* (RS-AT-6 *Spiral*)

BOMBS • Laser-guided *Paveway II*

Gendarmerie & Paramilitary 12,000

Border Guards 12,000 (to reduce)

Ministry of Interior

FORCES BY ROLE

MANOEUVRE

Other

1 (Budapest) paramilitary district (7 rapid reaction coy)
 11 (regt/district) paramilitary regt

EQUIPMENT BY TYPE

ARMOURED FIGHTING VEHICLES

APC • APC (W) 68 BTR-80

DEPLOYMENT

BOSNIA-HERZEGOVINA: EU • *Operation Althea* 174; 1 inf coy

CYPRUS: UN • UNFICYP 12

IRAQ: *Operation Inherent Resolve* 138; NATO • NATO Mission Iraq 19

LEBANON: UN • UNIFIL 16

MALI: EU • EUTM Mali 20

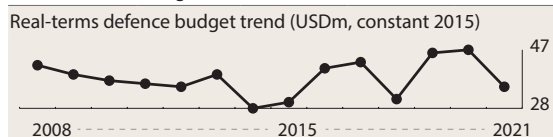
SERBIA: NATO • KFOR 472; 1 inf coy (KTM)

WESTERN SAHARA: UN • MINURSO 6

Iceland ISL

Icelandic Krona ISK		2020	2021	2022
GDP	ISK	2.94tr	3.20tr	
	USD	21.7bn	25.5bn	
per capita	USD	59,643	68,844	
Growth	%	-6.5	3.7	
Inflation	%	2.9	4.3	
Sy Bdgt [a]	ISK	7.07bn	5.53bn	
	USD	52.2m	44.0m	
USD1=ISK		135.42	125.71	

[a] Coast Guard budget



Population 354,234

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	10.3%	3.2%	3.3%	3.5%	22.4%	7.5%
Female	9.9%	3.1%	3.2%	3.4%	21.9%	8.3%

Capabilities

Iceland is a NATO member but maintains only a coastguard service. In 2016, the country established a National Security Council to implement and monitor security policy. The coastguard controls the NATO Iceland Air Defence System, as well as a NATO Control and Reporting Centre that feeds into NATO air- and missile defence and air-operations centres. Increased Russian air and naval activities in the Atlantic and close to NATO airspace have led to complaints from Iceland. Iceland considers its bilateral defence agreement with the US as an important pillar of its security policy and also participates in the security-policy dialogue of NORDEFCO. Iceland joined the UK-led Joint Expeditionary Force in 2021. Iceland hosts

NATO and regional partners for exercises, transits and naval task groups, as well as the Icelandic Air Policing mission. Despite there being no standing armed forces, Iceland makes financial contributions and on occasion deploys civilian personnel to NATO missions. In late 2016, following a joint declaration in June that year, the US Navy began operating P-8 *Poseidon* maritime-patrol aircraft from Keflavik air base. In summer 2019, it was reported that upgrades would include accommodation, dangerous-cargo handling facilities and runway extensions to enable tanker operations. The work is due to be completed in 2023.

ACTIVE NIL Gendarmerie & Paramilitary 250

ORGANISATIONS BY SERVICE

Gendarmerie & Paramilitary

Iceland Coast Guard 250

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS 3

PSOH 2 *Aegir*

PSO 1 *Thor*

LOGISTICS AND SUPPORT • AGS 1 *Baldur*

AIRCRAFT • TPT • Light 1 DHC-8-300 (MP)

HELICOPTERS • TPT • Medium 3 H225 (leased)

FOREIGN FORCES

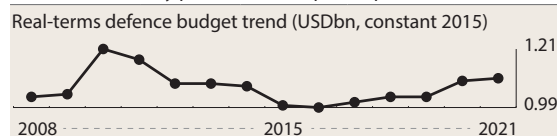
Icelandic Air Policing: Aircraft and personnel from various NATO members on a rotating basis

United States 100; 2 P-8A *Poseidon*

Ireland IRL

Euro EUR		2020	2021	2022
GDP	EUR	373bn	432bn	
	USD	426bn	516bn	
per capita	USD	85,206	102,394	
Growth	%	5.9	13.0	
Inflation	%	-0.5	1.9	
Def bdgt [a]	EUR	1.04bn	1.07bn	1.11bn
	USD	1.19bn	1.28bn	
USD1=EUR		0.88	0.84	

[a] Includes military pensions and capital expenditure



Population 5,224,884

Age	0–14	15–19	20–24	25–29	30–64	65 plus
Male	10.7%	3.2%	3.0%	2.9%	23.6%	6.5%
Female	10.2%	3.1%	2.9%	2.9%	23.4%	7.5%

Capabilities

The armed forces' core mission is defending the state against armed aggression, although a 2015 white paper broadened the scope of the national-security risk assessment beyond tra-

ditional military and paramilitary threats. It listed inter- and intra-state conflict, cyber attacks, terrorism, emergencies and natural disasters, among others. The army maintains substantial EOD capabilities. Ireland is active in EU defence cooperation and continues to contribute to multinational operations. Its forces are well trained for their roles. Ireland is also working to establish a specialist reserve with relevant professional qualifications. It has sufficient logistic capability to sustain its UN deployments but has no strategic-airlift capacity. After the 2015 white paper, Dublin identified a large number of defence projects to be completed over a ten-year period. Key priorities include a mid-life upgrade for the army's *Piranha* armoured personnel carriers, EOD robots and UAVs. Other stated priorities include new armoured vehicles, new aircraft, naval-vessel refits, training facilities and upgrades to military facilities. A 3% rise in the 2020 defence budget is intended to boost military staffing by improving pay and allowances, bases and infrastructure. Ireland has a small, specialist defence industry focused on areas including drivetrain technologies for land systems.

ACTIVE 8,550 (Army 6,950 Navy 900 Air 700)

RESERVE 1,150 (Army 1,400 Navy 150)

ORGANISATIONS BY SERVICE

Army 6,950

FORCES BY ROLE

SPECIAL FORCES

1 ranger coy

MANOEUVRE

Reconnaissance

1 armd recce sqn

Mechanised

1 mech inf coy

Light

1 inf bde (1 cav recce sqn, 4 inf bn, 1 arty regt (3 fd arty bty, 1 AD bty), 1 fd engr coy, 1 sigs coy, 1 MP coy, 1 tpt coy)

1 inf bde (1 cav recce sqn, 3 inf bn, 1 arty regt (3 fd arty bty, 1 AD bty), 1 fd engr coy, 1 sigs coy, 1 MP coy, 1 tpt coy)

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

RECCE 6 *Piranha* IIIH 30mm

APC 101

APC (W) 74: 56 *Piranha* III; 18 *Piranha* IIIH

PPV 27 RG-32M

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL • MANPATS FGM-148 *Javelin*

RCL 84mm *Carl Gustaf*

ARTILLERY 131

TOWED • 105mm 23: 17 L118 Light Gun; 6 L119 Light Gun

MOR 108: 81mm 84 Brandt; 120mm 24 Ruag M87

AIR DEFENCE

SAM • Point-defence RBS-70

Reserves 1,400 reservists

FORCES BY ROLE

MANOEUVRE

Reconnaissance

1 (integrated) armd recce sqn

2 (integrated) cav sqn

Mechanised

1 (integrated) mech inf coy

Light

14 (integrated) inf coy

COMBAT SUPPORT

4 (integrated) arty bty

2 engr gp

2 MP coy

3 sigs coy

COMBAT SERVICE SUPPORT

2 med det

2 tpt coy

Naval Service 900**EQUIPMENT BY TYPE****PATROL AND COASTAL COMBATANTS 7**PSOH 1 *Eithne* with 1 57mm gunPSO 6: 2 *Roisin* (of which 1 in refit) with 1 76mm gun; 4*Samuel Beckett* with 1 76mm gunPCO (2 *Orla* (ex-UK *Peacock*) (in reserve since mid-2019 due to crew shortage) with 1 76mm gun)**LOGISTICS AND SUPPORT • AXS 2****Air Corps 700**

2 ops wg; 2 spt wg; 1 trg wg; 1 comms and info sqn

EQUIPMENT BY TYPE**AIRCRAFT**

MP 2 CN235 MPA

TPT • **Light** 5: 1 Learjet 45 (VIP); 4 PC-12NG

TRG 8 PC-9M

HELICOPTERS:

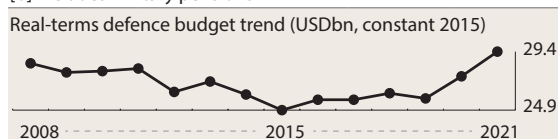
MRH 6 AW139

TPT • **Light** 2 H135 (incl trg/medevac)**DEPLOYMENT****BOSNIA-HERZEGOVINA:** EU • EUFOR • *Operation Althea* 5**DEMOCRATIC REPUBLIC OF THE CONGO:** UN • MONUSCO 3**LEBANON:** UN • UNIFIL 338; 1 mech inf bn(-)**MALI:** EU • EUTM Mali 20; UN • MINUSMA 12**MIDDLE EAST:** UN • UNTSO 11**SERBIA:** NATO • KFOR 13**SYRIA/ISRAEL:** UN • UNDOF 130; 1 inf coy**Italy ITA**

Euro EUR		2020	2021	2022
GDP	EUR	1.65tr	1.78tr	
	USD	1.88tr	2.12tr	
<i>per capita</i>	USD	31,604	35,585	
Growth	%	-8.9	5.8	
Inflation	%	-0.1	1.7	
Def exp [a]	EUR	22.8bn	24.4bn	
	USD	26.1bn	29.2bn	
Def bdgt [b]	EUR	26.0bn	28.3bn	28.6bn
	USD	29.7bn	33.8bn	
USD1=EUR		0.88	0.84	

[a] NATO figure

[b] Includes military pensions



Population 62,390,364

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	6.8%	2.4%	2.4%	2.6%	24.3%	9.6%
Female	6.5%	2.4%	2.4%	2.7%	25.2%	12.6%

Capabilities

Italy is concerned by security challenges in the Euro-Atlantic environment, as well as from Europe's southern flank. A defence white paper was issued in 2015. The latest three-year defence plan for 2020–22 outlined modernisation goals. The 2012 law governing personnel structures will remain but a changed strategic environment meant it needed to be updated. For instance, more personnel were needed in the defence industry. Italy has taken part in NATO's air-policing missions in the Baltic states, Iceland and Romania and since early 2017 has deployed to Latvia as part of the Enhanced Forward Presence. The EUNAVFOR-MED force is headquartered in Rome, while the US Navy 6th Fleet is based in Naples. The country takes part in and hosts NATO and other multinational exercises and continues to support NATO, EU and UN operations abroad. However, Italy is planning to gradually reduce its presence overseas to focus on Europe's southern flank. Italy's logistics capability is enabled by a fleet of medium transport aircraft and tankers. The white paper detailed capability-enhancement programmes including upgrades to main battle tanks and procurement of armoured fighting vehicles, counter-UAV systems and electronic-warfare capabilities. The expected retirement of much of the naval fleet has triggered a long-term replacement plan which includes the potential acquisition of two next-generation destroyers to replace the ageing *Luigi Durand de la Penne*-class vessels. F-35As have been ordered for the air force (and F-35Bs for both the air force and naval aviation). Italy has an advanced defence industry, producing equipment across all the domains, with particular strengths in shipbuilding and aircraft and helicopter manufacturing. The country hosts Europe's F-35 final assembly and check-out facility at Cameri. Italy takes part in European defence-industrial cooperation activities, including PESCO projects.

ACTIVE 161,550 (Army 93,600 Navy 28,700 Air 39,250) Gendarmerie & Paramilitary 176,350

RESERVES 17,900 (Army 13,400 Navy 4,500)

ORGANISATIONS BY SERVICE

Space

EQUIPMENT BY TYPE

SATELLITES 9

COMMUNICATIONS 4: 1 *Athena-Fidus* (also used by FRA); 3 *Sicral*

ISR 5: 4 *Cosmo* (*Skymed*); 1 OPTSAT-3000

Army 96,700

Regt are bn sized

FORCES BY ROLE

COMMAND

1 (NRDC-ITA) corps HQ (1 spt bde, 1 sigs regt, 1 spt regt)

MANOEUVRE

Mechanised

1 (*Vittorio Veneto*) div (1 (*Ariete*) armd bde (1 cav regt, 2 tk regt, 1 armd inf regt, 1 SP arty regt, 1 cbt engr regt, 1 log regt); 1 (*Pozzuolo del Friuli*) cav bde (1 cav regt, 1 amph regt, 1 arty regt, 1 cbt engr regt, 1 log regt); 1 (*Folgore*) AB bde (1 cav regt, 3 para regt, 1 arty regt, 1 cbt engr regt, 1 log regt); 1 (*Friuli*) air mob bde (1 air mob regt, 2 atk hel regt))

1 (*Acqui*) div (1 (*Pinerolo*) mech bde (1 cav regt, 3 armd inf regt, 1 fd arty regt, 1 cbt engr regt, 1 log regt); 1 (*Granatieri*) mech bde (1 cav regt, 1 mech inf regt); 1 (*Garibaldi Bersaglieri*) mech bde (1 cav regt, 1 tk regt, 2 armd inf regt, 1 SP arty regt, 1 cbt engr regt, 1 log regt); 1 (*Aosta*) mech bde (1 cav regt, 1 armd inf regt, 2 mech inf regt, 1 fd arty regt, 1 cbt engr regt, 1 log regt); 1 (*Sassari*) lt mech bde (1 armd inf regt, 2 mech inf regt, 1 cbt engr regt, 1 log regt))

Mountain

1 (*Tridentina*) mtn div (2 mtn bde (1 cav regt, 3 mtn inf regt, 1 arty regt, 1 mtn cbt engr regt, 1 spt bn, 1 log regt))

COMBAT SUPPORT

1 arty comd (1 arty regt, 1 MRL regt, 1 NBC regt)

1 AD comd (3 SAM regt)

1 engr comd (2 engr regt, 1 ptn br regt, 1 CIMIC regt)

1 EW/sigs comd (1 EW/ISR bde (1 EW regt, 1 int regt, 1 STA regt); 1 sigs bde with (7 sigs regt))

COMBAT SERVICE SUPPORT

1 log comd (3 log regt, 4 med unit)

HELICOPTER

1 hel bde (3 hel regt)

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

MBT 150 C1 *Ariete*

ASLT 255 B1 *Centauro*

IFV 426: 165 VCC-80 *Dardo*; 261 VBM 8×8 *Freccia* (incl 20 CP and 36 with *Spike-LR*)

APC 379

APC (T) 148 Bv-206S

APC (W) 198 *Puma* 6×6

PPV 33 VTMM *Orso* (incl 16 amb)

AUV 1,824: 10 *Cougar*; 1,798 IVECO LMV (incl 82 amb); 16 IVECO LMV 2

AAV 15: 14 AAVP-7; 1 AAVC-7

ENGINEERING & MAINTENANCE VEHICLES

AEV 25 *Dachs*; M113

ARV 70: 69 BPz-2; 1 AAVR-7

VLB 30 *Biber*

MW 34: 6 *Buffalo*; 3 *Miniflail*; 25 VTMM *Orso*

NBC VEHICLES 14: 5 VBR NBC; 9 VBR NBC Plus

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL • MANPATS *Spike*

ARTILLERY 959

SP 155mm 70 PzH 2000

TOWED 188: **105mm** 25 Oto Melara Mod 56; **155mm** 163 FH-70

MRL 227mm 22 MLRS

MOR 679: **81mm** 283 Expal; **120mm** 325: 183 Brandt; 142

RT-61 (RT-F1) **SP 120mm** 71: 50 M106A1; 21 VBM 8×8 *Freccia*

AIRCRAFT • TPT • Light 6: 3 Do-228 (ACTL-1); 3 P.180 *Avanti*

HELICOPTERS

ATK 35 AW129CBT *Mangusta*

MRH 14 Bell 412 (AB-412) *Twin Huey*

TPT 141: **Heavy** 16 CH-47F *Chinook* (1 CH-47C *Chinook* in store); **Medium** 53 NH90 TTH (UH-90); **Light** 72: 2 AW169LUH (UH-169B); 29 Bell 205 (AB-205); 28 Bell 206 *Jet Ranger* (AB-206); 13 Bell 212 (AB-212)

AIR DEFENCE

SAM 52+

Long-range 20 SAMP/T

Short-range 32 *Aspide* with *Skyguard*

Point-defence FIM-92 *Stinger*

AIR-LAUNCHED MISSILES

ASM *Spike-ER*

Navy 28,700

EQUIPMENT BY TYPE

SUBMARINES • SSK 8:

4 *Pelosi* (imp *Sauro*, 3rd and 4th series) with 6 single 533mm TT with A184 mod 3 HWT

4 *Salvatore Todaro* (Type-212A) (fitted with AIP) with 6 single 533mm TT with *Black Shark* HWT

PRINCIPAL SURFACE COMBATANTS 17

AIRCRAFT CARRIERS • CVS 2:

1 *Cavour* with 4 8-cell *Sylver* A43 VLS with *Aster* 15 SAM, 2 76mm guns (capacity mixed air group of 20 AV-8B *Harrier* II; F-35B *Lightning* II; AW101 *Merlin*; NH90; Bell 212)

1 *G. Garibaldi* with 2 octuple *Albatros* Inchr with *Aspide* SAM, 2 triple 324mm ASTT with Mk 46 LWT (capacity mixed air group of 18 AV-8B *Harrier* II; AW101 *Merlin*; NH90; Bell 212)

DESTROYERS • DDGHM 4:

2 *Andrea Doria* with 2 quad Inchr with *Otomat* (*Teseo*) Mk2A ASHM, 6 8-cell *Sylver* A50 VLS with *Aster* 15/*Aster* 30 SAM, 2 single 324mm B-515 ASTT with MU90 LWT, 3 76mm guns (capacity 1 AW101 *Merlin*/NH90 hel)

2 *Luigi Durand de la Penne* (ex-*Animoso*) with 2 quad Inchr with *Otomat* (*Teseo*) Mk2A ASHM/*Milas* A/S msl, 1 Mk 13 mod 4 GMLS with SM-1MR Block VI SAM, 1 octuple *Albatros* Inchr with *Aspide* SAM, 2

triple 324mm B-515 ASTT with Mk 46 LWT, 1 127mm gun, 3 76mm guns (capacity 1 NH90 or 2 Bell 212 (AB-212) hel)

FRIGATES • FFGHM 11:

4 *Bergamini* (GP) with 2 quad Inchr with *Otomat* (*Teseo*) Mk2A ASHM, 2 8-cell *Sylver* A50 VLS with *Aster* 15/*Aster* 30 SAM, 2 triple 324mm B-515 ASTT with MU90 LWT, 1 127mm gun, 1 76mm gun (capacity 2 AW101/NH90 hel)

4 *Bergamini* (ASW) with 2 twin Inchr with *Otomat* (*Teseo*) Mk2A ASHM, 2 twin Inchr with MILAS A/S msl, 2 8-cell *Sylver* A50 VLS with *Aster* 15/*Aster* 30 SAM, 2 triple 324mm B-515 ASTT with MU90 LWT, 2 76mm gun (capacity 2 AW101/NH90 hel)

3 *Maestrale* with 4 single Inchr with *Otomat* (*Teseo*) Mk2 ASHM, 1 octuple *Albatros* Inchr with *Aspide* SAM, 2 triple 324mm SVTT Mk 32 ASTT with Mk 46 LWT, 1 127mm gun (capacity 1 NH90 or 2 Bell 212 (AB-212) hel)

PATROL AND COASTAL COMBATANTS 16

PSOH 10:

4 *Cassiopea* with 1 76mm gun (capacity 1 Bell 212 (AB-212) hel)

4 *Comandante Cigala Fuligosi* with 1 76mm gun (capacity 1 Bell 212 (AB-212)/NH90 hel)

2 *Sirio* (capacity 1 Bell 212 (AB-212) or NH90 hel)

PB 6: 2 *Angelo Cabrini*; 4 *Esploratore*

MINE WARFARE • MINE COUNTERMEASURES 10

MHO 10: 8 *Gaeta*; 2 *Lerici*

AMPHIBIOUS

PRINCIPAL AMPHIBIOUS SHIPS • LHD 3:

2 *San Giorgio* (capacity 3-4 AW101/NH90/Bell 212; 3 LCM; 2 LCVP; 30 trucks; 36 APC (T); 350 troops)

1 *San Giusto* with 1 76mm gun (capacity 2 AW101 *Merlin*/NH90/Bell 212; 3 LCM; 2 LCVP; 30 trucks; 36 APC (T); 350 troops)

LANDING CRAFT 24: 15 LCVP; 9 LCM

LOGISTICS AND SUPPORT 53

ABU 5 *Ponza*

AFD 9

AGE 3: 1 *Leonardo* (coastal); 1 *Raffaele Rosseti*; 1 *Vincenzo Martellota*

AGI 1 *Elettra*

AGOR 1 *Alliance*

AGS 3: 1 *Ammiraglio Magnaghi* with 1 hel landing platform; 2 *Aretusa* (coastal)

AKSL 6 *Gorgona*

AORH 1 *Etna* with 1 76mm gun (capacity 1 AW101/NH90/Bell 212 hel)

AORL 2 *Stromboli* with 1 76mm gun (capacity 1 AW101/NH90 hel)

AOT 4 *Panarea*

ARSH 1 *Anteo* (capacity 1 Bell 212 (AB-212) hel)

ATS 6 *Ciclope*

AWT 3: 1 *Bormida*; 2 *Simeto*

AXS 8: 1 *Amerigo Vespucci*; 5 *Caroly*; 1 *Italia*; 1 *Palinuro*

Naval Aviation 2,000

FORCES BY ROLE

FIGHTER/GROUND ATTACK

1 sqn with AV-8B *Harrier* II; TAV-8B *Harrier* II

ANTI-SUBMARINE WARFARE/TRANSPORT

5 sqn with AW101 ASW *Merlin*; Bell 212 ASW (AB-212AS); Bell 212 (AB-212); NH90 NFH

MARITIME PATROL

1 flt with P-180

AIRBORNE EARLY WARNING & CONTROL

1 flt with AW101 AEW *Merlin*

EQUIPMENT BY TYPE

AIRCRAFT 13 combat capable

FGA 13: 9 AV-8B *Harrier* II; 1 TAV-8B *Harrier* II; 3 F-35B *Lightning* II

MP 3 P.180 *Avanti*

HELICOPTERS

ASW 55: 10 AW101 ASW *Merlin*; 7 Bell 212 ASW; 38 NH90 NFH (SH-90)

AEW 4 AW101 AEW *Merlin*

TPT 20: **Medium** 18: 8 AW101 *Merlin*; 10 NH90 MITT (MH-90); **Light** 2 Bell 212 (AB-212)

AIR-LAUNCHED MISSILES

AAM • IR AIM-9L *Sidewinder*; ARH AIM-120 AMRAAM

ASM AGM-65 *Maverick*

AShM *Marte* Mk 2/S

Marines 3,000

FORCES BY ROLE

MANOEUVRE

Amphibious

1 mne regt (1 recce coy, 2 mne bn, 1 log bn)

1 (boarding) mne regt (2 mne bn)

1 landing craft gp

Other

1 sy regt (3 sy bn)

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

AAV 17: 15 AAVP-7; 2 AAVC-7

AUV 70 IVECO LMV

ENGINEERING & MAINTENANCE VEHICLES

ARV 1 AAVR-7

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL • MANPATS *Spike*

ARTILLERY

MOR 32: 81mm 10 Expal; 120mm 22 Brandt

AIR DEFENCE • SAM • Point-defence FIM-92 *Stinger*

Air Force 39,950

FORCES BY ROLE

FIGHTER

4 sqn with Eurofighter *Typhoon*

FIGHTER/GROUND ATTACK

1 (SEAD/EW) sqn with *Tornado* ECR

1 sqn with *Tornado* IDS

1 sqn with F-35A/B *Lightning* II

FIGHTER/GROUND ATTACK/ISR

1 sqn with AMX *Ghibli*

MARITIME PATROL

1 sqn (opcon Navy) with ATR-72MP (P-72A)

TANKER/TRANSPORT

1 sqn with KC-767A

COMBAT SEARCH & RESCUE

1 sqn with AB-212 ICO; AW101 SAR (HH-101A)

SEARCH & RESCUE

1 wg with AW139 (HH-139A); Bell 212 (HH-212)

TRANSPORT

2 (VIP) sqn with A319CJ; AW139 (VH-139A); *Falcon 50; Falcon 900 Easy; Falcon 900EX*

2 sqn with C-130J/C-130J-30/KC-130J *Hercules*

1 sqn with C-27J *Spartan*

1 (calibration) sqn with P-180 *Avanti*/Gulfstream G550 CAEW

TRAINING

1 OCU sqn with Eurofighter *Typhoon*

1 sqn with MB-339PAN (aerobatic team)

1 sqn with MD-500D/E (NH-500D/E)

1 OCU sqn with *Tornado*

1 OCU sqn with AMX-T *Ghibli*

1 sqn with MB-339A

1 sqn with M-346

1 sqn with SF-260EA; 3 P2006T (T-2006A)

1 sqn with AW101 SAR (HH-101A); Bell 212 (HH-212)

ISR UAV

1 sqn with MQ-9A *Reaper*; RQ-1B *Predator*

AIR DEFENCE

2 bty with *Spada*

EQUIPMENT BY TYPE**AIRCRAFT** 225 combat capable

FTR 94 Eurofighter *Typhoon*

FGA 54: 31 AMX *Ghibli*; 8 AMX-T *Ghibli*; 14 F-35A

Lightning II; 1 F-35B *Lightning II*

ATK 34 *Tornado IDS*

ATK/EW 15 *Tornado ECR**

MP 4 ATR-72MP (P-72A)

SIGINT 1 Beech 350 *King Air*

AEW&C 2 Gulfstream G550 CAEW

TKR/TPT 4 KC-767A

TPT 78: **Medium** 33: 11 C-130J *Hercules* (5+ KC-130J tanker pods); 10 C-130J-30 *Hercules*; 12 C-27J *Spartan*; **Light** 37: 17 P-180 *Avanti*; 20 S-208 (liaison); PAX 8: 3 A319CJ; 2 *Falcon 50* (VIP); 2 *Falcon 900 Easy*; 1 *Falcon 900EX* (VIP)

TRG 115: 21 MB-339A; 28 MB-339CD*; 16 MB-339PAN (aerobatics); 2+ M-345; 22 M-346; 26 SF-260EA

HELICOPTERS

MRH 54: 13 AW139 (HH-139A/VH-139A); 2 MD-500D (NH-500D); 39 MD-500E (NH-500E)

CSAR 12 AW101 (HH-101A)

SAR 14 AW139 (HH-139B)

TPT • **Light** 29 Bell 212 (HH-212)/AB-212 ICO

UNINHABITED AERIAL VEHICLES • ISR • Heavy 12: 6 MQ-9A *Reaper*; 6 RQ-1B *Predator*

AIR DEFENCE • SAM • Short-range SPADA

AIR-LAUNCHED MISSILES

AAM • IR AIM-9L *Sidewinder*; IIR IRIS-T; ARH AIM-120C AMRAAM; *Meteor*

ARM AGM-88 HARM

LACM SCALP EG/*Storm Shadow*

BOMBS

Laser-guided GBU-54 Laser JDAM; *Lizard 2*

Laser-guided/GPS Enhanced *Paveway II*; GBU-31/32/38 JDAM; GBU-39 Small Diameter Bomb

Joint Special Forces Command (COFS)**Army****FORCES BY ROLE****SPECIAL FORCES**

1 SF regt (9th *Assalto paracadutisti*)

1 STA regt

1 ranger regt (4th *Alpini paracadutisti*)

COMBAT SUPPORT

1 psyops regt

TRANSPORT HELICOPTER

1 spec ops hel regt

Navy (COMSUBIN)**FORCES BY ROLE****SPECIAL FORCES**

1 SF gp (GOI)

1 diving gp (GOS)

Air Force**FORCES BY ROLE****SPECIAL FORCES**

1 wg (sqn) (17th *Stormo Incursori*)

Paramilitary**Carabinieri****FORCES BY ROLE****SPECIAL FORCES**

1 spec ops gp (GIS)

Gendarmerie & Paramilitary 176,350**Carabinieri 108,250**

The Carabinieri are organisationally under the MoD. They are a separate service in the Italian Armed Forces as well as a police force with judicial competence

Mobile and Specialised Branch**FORCES BY ROLE****MANOEUVRE****Other**

1 (mobile) paramilitary div (1 bde (1st) with (1 horsed cav regt, 11 mobile bn); 1 bde (2nd) with (1 (1st) AB regt, 2 (7th & 13th) mobile regt))

HELICOPTER

1 hel gp

EQUIPMENT BY TYPE**ARMoured FIGHTING VEHICLES**

APC • APC (T) 3 VCC-2

AUV 30 IVECO LMV

PATROL AND COASTAL COMBATANTS • PB 69

AIRCRAFT • TPT • Light: 1 P.180 *Avanti*

HELICOPTERS

MRH 24 Bell 412 (AB-412)

TPT • **Light** 19 AW109

Customs 68,100

(Servizio Navale Guardia Di Finanza)

EQUIPMENT BY TYPE**PATROL AND COASTAL COMBATANTS 166**

PCO 2 *Monti* (Damen Stan Patrol 5509)

PCF 1 Antonio Zara

PBF 140: 19 Bigliani; 5 Corrubia; 9 Mazzei; 79 V-2000; 12 V-5000; 6 V-6000; 10 V-7000

PB 23 Buratti

LOGISTICS AND SUPPORT • AX 1 Giorgio Cini AIRCRAFT

MP 7: 4 ATR-42-500MP; 3 ATR-72-600 (P-72B)

TPT • Light 2 P.180 Avanti

HELICOPTERS

TPT • Light 53: 10 AW109N; 17 AW139; 6 AW169M; 8 Bell 412HP *Twin Huey*; 4 MD-500MC (NH-500MC); 8 MD-500MD (NH-500MD)

DEPLOYMENT

BOSNIA-HERZEGOVINA: EU • EUFOR • *Operation Althea* 50; 1 ISR coy

CENTRAL AFRICAN REPUBLIC: EU • EUTM RCA 2

DJIBOUTI: 147

EGYPT: MFO 75; 3 PB

ESTONIA: NATO • Baltic Air Policing: 150; 4 Eurofighter *Typhoon*

GULF OF ADEN & INDIAN OCEAN: EU • *Operation Atalanta* 150; 1 FFGHM

GULF OF GUINEA: Navy 150; 1 FFGHM

INDIA/PAKISTAN: UN • UNMOGIP 1

IRAQ: *Operation Inherent Resolve (Prima Parthica)* 600; 1 inf regt; 1 trg unit; 1 hel sqn with 4 NH90; **NATO** • NATO Mission Iraq 280

KUWAIT: *Operation Inherent Resolve (Prima Parthica)* 300; 4 *Tornado* ECR; 1 MQ-9A *Reaper*; 1 C-27J *Spartan*; 1 KC-767A; 1 SAM bty with SAMP/T

LATVIA: NATO • Enhanced Forward Presence (*Baltic Guardian*) 200; 1 armd inf coy with C1 *Ariete*; *Centauro* B1; VCC-80 *Dardo*

LEBANON: MIBIL 315; UN • UNIFIL 906; 1 mech bde HQ; 1 mech inf bn; 1 MP coy; 1 sigs coy; 1 hel sqn

LIBYA: MIASIT 400; 1 inf coy; 1 CRBN unit; 1 trg unit

MALI: *Operation Barkhane* 100; EU • EUTM Mali 14; UN • MINUSMA 2

MEDITERRANEAN SEA: EU • EUNAVFOR MED 1 PSOH; NATO • SNMG 2: 1 FFGHM; NATO • SNMCMG 2: 1 MHO

NIGER: MISIN 295; 1 inf coy; 1 engr unit; 1 CRBN unit; 1 med coy; 1 trg unit; 1 ISR unit

PERSIAN GULF: EMASOH 150; 1 FFGHM

SERBIA: NATO • KFOR 638; 1 arty regt BG HQ; 1 Carabinieri unit

SOMALIA: EU • EUTM Somalia 154

WESTERN SAHARA: UN • MINURSO 4

FOREIGN FORCES

United States US European Command: 12,900
Army 4,100; 1 AB bde(-)

Navy 3,600; 1 HQ (US Naval Forces Europe-Africa (NAVEUR-NAVAF)/6th Fleet) at Naples; 1 ASW Sqn with 5 P-8A *Poseidon* at Sigonella

USAF 4,800; 1 FGA wg with (2 FGA sqn with 21 F-16C/D *Fighting Falcon* at Aviano; 1 CSAR sqn with 8 HH-60G *Pave Hawk*); 1 CISR UAV sqn with MQ-9A *Reaper* at Sigonella; 1 ISR UAV flt with RQ-4B *Global Hawk* at Sigonella

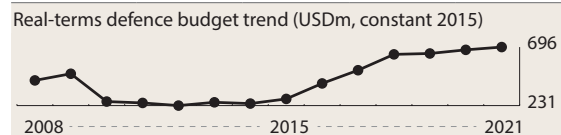
USMC 400; 1 tpt sqn with 6 MV-22B *Osprey*; 2 KC-130J *Hercules*

Latvia LVA

Euro EUR		2020	2021	2022
GDP	EUR	29.3bn	31.1bn	
	USD	33.5bn	37.2bn	
per capita	USD	17,549	19,539	
Growth	%	-3.6	4.5	
Inflation	%	0.1	2.6	
Def exp [a]	EUR	651m	699m	
	USD	743m	835m	
Def bdgt [b]	EUR	663m	699m	738m
	USD	757m	835m	
FMA (US)	USD	8m	5m	9m
USD1=EUR		0.88	0.84	

[a] NATO figure

[b] Includes military pensions



Population 1,862,687

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	7.9%	2.5%	2.2%	2.8%	23.9%	7.0%
Female	7.4%	2.3%	2.1%	2.6%	25.4%	13.8%

Capabilities

Latvia has small armed forces focused on maintaining national sovereignty and territorial integrity but the country depends on NATO membership as a security guarantor. Russia is Latvia's overriding security concern. A National Armed Forces Development plan 2016-28 illustrated a capabilities-based planning process. Principal tasks were to improve early warning, detection and situational awareness, to increase combat readiness and to improve the ability to counter hybrid threats. An update to the State Defence Concept was announced in June 2020 to reflect shifts in Latvia's strategic environment. It identified challenges including new technologies, and low military spending in Europe and the consequent effect on capabilities and crisis response. It emphasised the importance of societal resilience and comprehensive defence as well as the significance of a NATO presence in the region. Latvia has no requirement and therefore no capacity to independently deploy and sustain forces beyond its national boundaries, although the armed forces have taken part in a range of NATO and EU missions. Capability-development projects include engineering, special operations, mechanised infantry, air defence, air surveillance and the National

Guard. Acquisition requirements include self-propelled howitzers, CVR(T) and ATGW systems. Latvia has only a niche defence-industrial capability, with cyber security a focus.

ACTIVE 8,750 (Army 1,700 Navy 550 Air 550 Joint Staff 400 National Guard 1,100 Other 4,450)

RESERVE 11,200 (National Guard 7,200 Other 4,000)

ORGANISATIONS BY SERVICE

Joint 1,900

FORCES BY ROLE

SPECIAL FORCES

1 SF unit

COMBAT SUPPORT

1 MP bn

Army 1,700

FORCES BY ROLE

MANOEUVRE

Mechanised

1 mech inf bde (2 mech inf bn, 1 SP arty bn, 1 cbt spt bn HQ, 1 CSS bn HQ)

National Guard 1,100; 7,200 part-time (8,300 total)

FORCES BY ROLE

SPECIAL FORCES

1 SF unit

MANOEUVRE

Light

1 (2nd) inf bde (4 inf bn; 1 engr bn)

3 (1st, 3rd & 4th) inf bde (3 inf bn; 1 sy bn; 1 spt bn)

COMBAT SUPPORT

1 cyber unit

1 NBC coy

1 psyops pl

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

MBT 3 T-55 (trg)

RECCE 170 FV107 *Scimitar* (incl variants)

APC • APC(W) 4 Patria 6×6

ANTI-TANK/ANTI-INFRASTRUCTURE

MANPATS *Spike-LR*

RCL 84mm *Carl Gustaf*; 90mm Pvpj 1110

ARTILLERY 100

SP 155mm 47 M109A5ÖE

TOWED 100mm (23 K-53 in store)

MOR 53: 81mm 28 L16; 120mm 25 M120

Navy 550 (incl Coast Guard)

Naval Forces Flotilla separated into an MCM squadron and a patrol-boat squadron. LVA, EST and LTU have set up a joint naval unit, BALTRON, with bases at Liepaja, Riga, Ventspils (LVA), Tallinn (EST), Klaipeda (LTU). Each nation contributes 1–2 MCMVs

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS 5

PB 5 *Skrunda* (GER *Swath*)

MINE WARFARE • MINE COUNTERMEASURES 5

MCCS 1 *Vidar* (ex-NOR)

MHO 4 *Imanta* (ex-NLD *Alkmaar/Tripartite*) (3 used in MCM role, 1 used for other duties)

LOGISTICS AND SUPPORT 1

AXL 1 *Varonis* (comd and spt ship, ex-NLD)

Coast Guard

Under command of the Latvian Naval Forces

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS 6

PB 6: 1 *Astra*; 5 KBV 236 (ex-SWE)

Air Force 550

Main tasks are airspace control and defence, maritime and land SAR and air transportation

FORCES BY ROLE

TRANSPORT

1 (mixed) tpt sqn with An-2 *Colt*; Mi-17 *Hip H*; PZL Mi-2 *Hoplite*

AIR DEFENCE

1 AD bn

1 radar sqn (radar/air ctrl)

AIRCRAFT • TPT • Light 4 An-2 *Colt*

HELICOPTERS

MRH 4 Mi-17 *Hip H*

TPT • Light 2 PZL Mi-2 *Hoplite*

AIR DEFENCE

SAM • Point-defence FIM-92 *Stinger*; RBS-70

GUNS • TOWED 40mm 24 L/70

Gendarmerie & Paramilitary

State Border Guard

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS 3

PB 3: 1 *Valpas* (ex-FIN); 1 *Lokki* (ex-FIN); 1 *Randa*

HELICOPTERS

TPT • Light 4: 2 Bell 206B (AB-206B) *Jet Ranger II*; 2

AW109E *Power*

DEPLOYMENT

IRAQ: *Operation Inherent Resolve* 1

MALI: EU • EUTM Mali 4; UN • MINUSMA 1

SERBIA: NATO • KFOR 133; 1 inf coy

FOREIGN FORCES

All NATO Enhanced Forward Presence unless stated

Albania 21; 1 EOD pl

Canada 540; 1 mech inf bn HQ; 1 mech inf coy(+); 1 cbt spt coy

Czech Republic 56; 1 mor pl

Italy 200; 1 armd inf coy

Montenegro 10

Poland 175; 1 tk coy

Slovakia 97; 1 arty bty

Slovenia 40; 1 engr pl

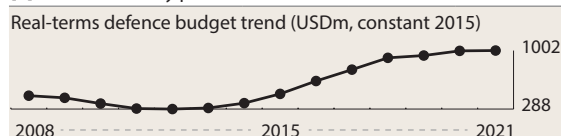
Spain 346; 1 armd inf coy(+); 1 cbt engr coy

Lithuania LTU

Euro EUR		2020	2021	2022
GDP	EUR	48.9bn	52.4bn	
	USD	55.8bn	62.6bn	
per capita	USD	19,981	22,412	
Growth	%	-0.9	4.7	
Inflation	%	1.1	3.0	
Def exp [a]	EUR	1.03bn	1.05bn	
	USD	1.18bn	1.25bn	
Def bdgt [b]	EUR	1.02bn	1.05bn	1.12bn
	USD	1.16bn	1.25bn	
FMA (US)	USD	8m	5m	9m
USD1=EUR		0.88	0.84	

[a] NATO figure

[b] Includes military pensions



Population 2,711,566

Age	0–14	15–19	20–24	25–29	30–64	65 plus
Male	7.9%	2.4%	2.8%	3.1%	22.9%	7.1%
Female	7.5%	2.3%	2.6%	2.8%	25.0%	13.6%

Capabilities

Lithuania's small armed forces focus on maintaining territorial integrity and national sovereignty but the country relies on NATO membership for its security. Like the other Baltic states, it is reliant on NATO's air-policing deployment for a combat-aircraft capacity. Russia is the country's predominant security concern, and this shapes Lithuanian defence policy. In January 2017, Lithuania adopted a new National Security Strategy, reflecting the worsening regional security environment. Better combat readiness is an objective and the mobilisation system is being reformed. The government began a security and defence policy review in 2021, which will be reflected in a new national security strategy. Compulsory military service was reintroduced in 2015. Reforms to defence planning and acquisition management came into force in 2018. There is increased attention to communications security. Lithuania has a limited medium-airlift capability, for use in supporting its forces on multinational deployed operations. It takes an active part in NATO and EU operations. The country is taking delivery of the NASAMS SAM system to improve its ground-based air defences. A Regional Cyber Defence Center was set up in 2021, with US cooperation, encompassing defence but also broader resilience concerns. Lithuania has a small defence-industrial base, with niche capabilities, for instance in helicopter support and maintenance.

ACTIVE 23,000 (Army 14,500 Navy 700 Air 1,500 Other 6,300) Gendarmerie & Paramilitary 14,150

Conscript liability 9 months, 18–23 years

RESERVE 7,100 (Army 7,100)

ORGANISATIONS BY SERVICE

Army 8,850; 5,650 active reserves (total 14,500)

FORCES BY ROLE

MANOEUVRE

Mechanised

1 (1st) mech bde (4 mech inf bn, 1 arty bn, 1 log bn)

Light

1 (2nd) mot inf bde (3 mot inf bn, 1 arty bn)

COMBAT SUPPORT

1 engr bn

COMBAT SERVICE SUPPORT

1 trg regt

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

IFV 30 *Boxer* (*Vilkas*) (in test; incl 2 trg)

APC • APC (T) 256: 234 M113A1; 22 M577 (CP)

APC 50 JLTV

ENGINEERING & MAINTENANCE VEHICLES

AEV 8 MT-LB AEV

ARV 6: 2 BPz-2; 4 M113

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL

SP 10 M1025A2 HMMWV with FGM-148 *Javelin*

MANPATS FGM-148 *Javelin*

RCL 84mm *Carl Gustaf*

ARTILLERY 91

SP 16 PzH 2000

TOWED 105mm 18 M101

MOR 57: 120mm 42: 20 2B11; 22 M/41D; SP 120mm 15

M113 with Tampella

AIR DEFENCE • SAM • Point-defence GROM

Reserves

National Defence Voluntary Forces 5,650 active reservists

FORCES BY ROLE

MANOEUVRE

Other

6 (territorial) def unit

Navy 700

LVA, EST and LTU established a joint naval unit, BALTRON, with bases at Liepaja, Riga, Ventpils (LVA), Tallinn (EST), Klaipeda (LTU)

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS 4

PCC 4 *Zemaitis* (ex-DNK *Flyvefisker*) with 1 76mm gun

MINE WARFARE • MINE COUNTERMEASURES 4

MHC 2 *Skalvis* (ex-UK *Hunt*)

MCCS 1 *Jotvingis* (ex-NOR *Vidar*)

LOGISTICS AND SUPPORT • AAR 1 Šakiai

Air Force 1,500

FORCES BY ROLE

AIR DEFENCE

1 AD bn

EQUIPMENT BY TYPE**AIRCRAFT**

TPT 6: Medium 3 C-27J *Spartan*; **Light 3:** 1 Cessna 172RG;
2 L-410 *Turbolet*

HELICOPTERS

MRH 3 AS365M3 *Dauphin* (SAR)
TPT • Medium 3 Mi-8 *Hip* (tpt/SAR)

AIR DEFENCE • SAM 4+

Short-range 4 NASAMS III
Point-defence FIM-92 *Stinger*; RBS-70

Special Operation Force**FORCES BY ROLE****SPECIAL FORCES**

1 SF gp (1 CT unit; 1 Jaeger bn, 1 cbt diver unit)

Logistics Support Command 1,400**FORCES BY ROLE****COMBAT SERVICE SUPPORT**

1 log bn

Training and Doctrine Command 1,500**FORCES BY ROLE****COMBAT SERVICE SUPPORT**

1 trg regt

Other Units 2,600**FORCES BY ROLE****COMBAT SUPPORT**

1 MP bn

Gendarmerie & Paramilitary 14,150**Riflemen Union 10,600****State Border Guard Service 3,550**

Ministry of Interior

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS • PB 3: 1 *Lokki* (ex-FIN); 1 KBV 041 (ex-SWE); 1 *Bakauskas* (Baltic Patrol 2700)

AMPHIBIOUS • LANDING CRAFT • UCAC 2 *Christina* (Griffon 2000)

AIRCRAFT • TPT • Light 1 Cessna 172RG

HELICOPTERS • TPT • Light 5: 1 BK-117 (SAR); 2 H120 *Colibri*; 2 H135

DEPLOYMENT

CENTRAL AFRICAN REPUBLIC: EU • EUTM RCA 2

IRAQ: NATO • NATO Mission Iraq 2

MALI: EU • EUTM Mali 2; UN • MINUSMA 45

SERBIA: NATO • KFOR 1

UKRAINE: JMTG-U 30

FOREIGN FORCES

All NATO Enhanced Forward Presence unless stated
Belgium 198; 1 mot inf coy

Czech Republic 36; 1 EW unit

Denmark NATO Baltic Air Policing; 150; 4 F-16AM
Fighting Falcon

Germany 558; 1 armd inf bn HQ; 1 armd inf coy(+)

Luxembourg 4

Netherlands 270; 1 armd inf coy

Norway 195; 1 armd inf coy

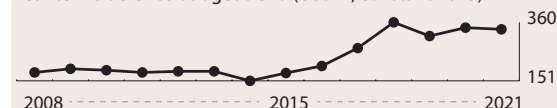
Portugal NATO Baltic Air Policing; 150; 4 F-16AM
Fighting Falcon

Luxembourg LUX

Euro EUR		2020	2021	2022
GDP	EUR	64.1bn	70.1bn	
	USD	73.2bn	83.8bn	
<i>per capita</i>	USD	116,921	131,302	
Growth	%	-1.3	5.5	
Inflation	%	0.0	2.7	
Def exp [a]	EUR	356m	389m	
	USD	406m	465m	
Def bdgt	EUR	341m	348m	420m
	USD	390m	416m	
USD1=EUR		0.88	0.84	

[a] NATO figure

Real-terms defence budget trend (USDm, constant 2015)



Population 639,589

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	8.6%	2.8%	3.2%	3.6%	25.2%	7.0%
Female	8.1%	2.7%	3.0%	3.5%	23.9%	8.5%

Capabilities

Luxembourg maintains a limited military capability to participate in European collective security and crisis management. The 'Defence Guidelines for 2025 and Beyond' were published at the end of 2017. They contain strong statements of support for NATO and EU security policy and contributions to international missions. They also outline ambitious modernisation plans, including a reorganisation of the army, which will take on joint responsibilities, including for ISR, a new air component and a military-cyber cell. Luxembourg has contributed troops to the multinational battlegroup in Lithuania as part of NATO's Enhanced Forward Presence. It is part of the European Multi-Role Tanker Transport Fleet programme, partially funding one A330 MRTT, and has contributed its A400M to a multinational airlift squadron formed jointly with Belgium. The Belgian and Dutch air forces are responsible for policing Luxembourg's airspace. Sustaining the army's personnel strength depends on better recruiting and retention. A review is examining a specialised reserve of civilian experts. The defence guidelines envisage considerable equipment improvements and cooperative development of UAV capabilities with Belgium and the Netherlands. Ambitions for the new air component include tactical-airlift and medical-evacuation capabilities. There is a small but advanced space industry and some foreign defence firms have

a presence, but the country is otherwise reliant on imports. A strategy for defence industry, innovation and research is to be developed as part of the new defence guidelines.

ACTIVE 410 (Army 410) Gendarmerie & Paramilitary 600

ORGANISATIONS BY SERVICE

Army 410

FORCES BY ROLE

MANOEUVRE

Reconnaissance

2 recce coy (1 to Eurocorps/BEL div, 1 to NATO pool of deployable forces)

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

AUV 48 *Dingo* 2

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL • MANPATS NLAW; TOW

ARTILLERY • MOR 81mm 6+

AIRCRAFT • TPT • Heavy 1 A400M

HELICOPTERS • MRH 2 H145M (jointly operated with Police)

Gendarmerie & Paramilitary 600

Gendarmerie 600

DEPLOYMENT

IRAQ: NATO • NATO Mission Iraq 1

LITHUANIA: NATO • *Enhanced Forward Presence* 4

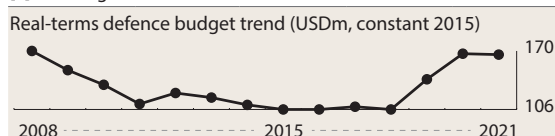
MALI: EU • EUTM Mali 15; UN • MINUSMA 2

MEDITERRANEAN SEA: EU • EUNAVFOR MED 2 *Merlin* IIIC (leased)

Macedonia, North MKD

Macedonian Denar MKD		2020	2021	2022
GDP	MKD	664bn	717bn	
	USD	12.3bn	13.9bn	
<i>per capita</i>	USD	5,939	6,712	
Growth	%	-4.5	4.0	
Inflation	%	1.2	3.1	
Def exp [a]	EUR	8.30bn	11.1bn	
	USD	154m	214m	
Def bdgt	MKD	10.1bn	10.8bn	13.3bn
	USD	188m	209m	
FMA (US)	USD	5m	0m	0m
USD1=MKD		54.04	51.64	

[a] NATO figure



Population 2,128,262

Age	0 – 14	15–19	20–24	25–29	30–64	65 plus
Male	8.3%	2.8%	3.5%	3.7%	25.1%	6.4%
Female	7.8%	2.7%	3.2%	3.5%	24.8%	8.1%

Capabilities

The armed forces' primary goals are safeguarding the state's territorial integrity and sovereignty, as well as contributing to operations under the EU, NATO and UN umbrellas. North Macedonia formally became NATO's 30th member on 27 March 2020. In the same month, it enacted a new Defence Strategy with a focus on capability development, and improved planning based on NATO and EU standards, among other areas. A 2019–2028 Defence Capability Development Plan (DCDP) consolidated long-term development goals aimed at developing collective defence, cooperative security and crisis-management capabilities. A Mid-Term Defence Capabilities Development Plan, adopted in January 2020, is intended to help implement the DCDP. Work on MoD restructuring is under way. The armed forces are fully professional and the country aims to train all units, particularly those with deployable capability, to NATO standards. A number of units are earmarked for participation in NATO-led operations, and troops were deployed to KFOR in November 2020. The armed forces have increased their participation in NATO joint exercises since joining the Alliance. Participation in international peacekeeping missions has increased logistics capability. The country has modest maritime and air wings, and relies on Soviet-era equipment. Acquisition priorities include indirect fire-support, light armoured vehicles, cyber defence and multi-role helicopters. There is little in the way of a domestic defence industry, with no ability to design and manufacture modern equipment.

ACTIVE 8,000 (Army 8,000) Gendarmerie & Paramilitary 7,600

RESERVE 4,850

ORGANISATIONS BY SERVICE

Army 8,000

FORCES BY ROLE

SPECIAL FORCES

1 SF regt (1 SF bn, 1 ranger bn)

MANOEUVRE

Mechanised

1 mech inf bde (1 tk bn, 4 mech inf bn, 1 arty bn, 1 NBC coy, 1 sigs coy)

COMBAT SUPPORT

1 engr bn

1 MP bn

1 sigs bn

COMBAT SERVICE SUPPORT

1 log bde (3 log bn)

Reserves

FORCES BY ROLE

MANOEUVRE Light

1 inf bde

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

MBT 31 T-72A

IFV 11: 10 BMP-2; 1 BMP-2K (CP)

APC 200

APC (T) 46: 9 *Leonidas*; 27 M113; 10 MT-LB

APC (W) 154: 56 BTR-70; 12 BTR-80; 2 *Cobra*; 84 TM-170 *Hermelin*

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL • MANPATS *Milan*

RCL 82mm M60A

ARTILLERY 131

TOWED 70: 105mm 14 M-56; 122mm 56 M-30 M-1938

MRL 17: 122mm 6 BM-21; 128mm 11

MOR 44: 120mm 44

Marine Wing

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS 2

PB 2 *Boticat*

Aviation Brigade

FORCES BY ROLE

TRAINING

1 flt with Z-242; Bell 205 (UH-1H *Iroquois*); Bell 206B

ATTACK HELICOPTER

1 sqn with Mi-24V *Hind E*

TRANSPORT HELICOPTER

1 sqn with Mi-8MTV *Hip*; Mi-17 *Hip H*

AIR DEFENCE

1 AD bn

EQUIPMENT BY TYPE

AIRCRAFT

TPT • Light 1 An-2 *Colt*

TRG 5 Z-242

HELICOPTERS

ATK 2 Mi-24V *Hind E* (8: 2 Mi-24K *Hind G2*; 6 Mi-24V *Hind E* in store)

MRH 6: 4 Mi-8MTV *Hip*; 2 Mi-17 *Hip H*

TPT • Light 6: 2 Bell 205 (UH-1H *Iroquois*); 4 Bell 206B *Jet Ranger*

AIR DEFENCE

SAM • Point-defence 8+: 8 9K35 *Strela-10* (RS-SA-13 *Gopher*); 9K310 *Igla-1* (RS-SA-16 *Gimlet*)

GUNS 40mm 36 L/60

Gendarmerie & Paramilitary 7,600

Police 7,600 (some 5,000 armed)

incl 2 SF units

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

APC • APC (T) M113; APC (W) BTR-80; TM-170

Heimlin

AUV *Ze'ev*

HELICOPTERS

MRH 1 Bell 412EP *Twin Huey*

TPT 3: Medium 1 Mi-171; Light 2: 1 Bell 206B (AB-206B) *Jet Ranger II*; 1 Bell 212 (AB-212)

DEPLOYMENT

BOSNIA-HERZEGOVINA: EU • EUFOR • Operation *Althea* 1

CENTRAL AFRICAN REPUBLIC: EU • EUTM RCA 2

IRAQ: NATO • NATO Mission Iraq 4

LEBANON: UN • UNIFIL 3

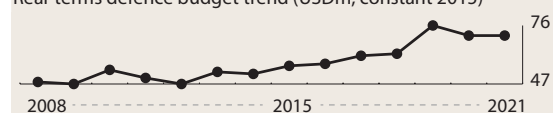
SERBIA: NATO • KFOR 64

Malta MLT

Euro EUR		2020	2021	2022
GDP	EUR	13.1bn	14.0bn	
	USD	14.9bn	16.7bn	
per capita	USD	28,955	31,997	
Growth	%	-8.3	5.7	
Inflation	%	0.8	0.7	
Def bdgt [a]	EUR	70.7m	71.8m	82.7m
	USD	80.7m	85.8m	
USD1=EUR		0.88	0.84	

[a] Excludes military pensions

Real-terms defence budget trend (USDm, constant 2015)



Population 460,891

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	7.4%	2.3%	2.8%	3.6%	24.2%	10.0%
Female	7.0%	2.2%	2.6%	3.2%	22.9%	11.8%

Capabilities

The principal roles for the armed forces are maintaining external security and support for civil emergencies and the police. There is also focus on maritime security in the Mediterranean. The Armed

Forces of Malta Strategy Paper 2016–2026 laid out defence-policy objectives, including operational and organisational reforms. Malta is neutral but is a member of NATO's Partnership for Peace programme. The country also participates in bilateral and multi-lateral exercises. Although deployment capacity is limited, Malta has contributed to European missions. Italy has assisted Malta in meeting some security requirements, including air surveillance, while the European Internal Security Fund is funding some modernisation. Although there is some shipbuilding and ship-repair activity and a small aviation-maintenance industry, these are not defence-specific and Malta relies on imports to equip its armed forces.

ACTIVE 1,700 (Armed Forces 1,700)

RESERVE 260 (Volunteer Reserve Force 110
Individual Reserve 150)

ORGANISATIONS BY SERVICE

Armed Forces of Malta 1,700

FORCES BY ROLE

SPECIAL FORCES

1 SF unit

MANOEUVRE

Light

1 (1st) inf regt (3 inf coy, 1 cbt spt coy)

COMBAT SUPPORT

1 (3rd) cbt spt regt (1 cbt engr sqn, 1 EOD sqn, 1 maint sqn)

COMBAT SERVICE SUPPORT

1 (4th) CSS regt (1 CIS coy, 1 sy coy)

EQUIPMENT BY TYPE

ARTILLERY • MOR 81mm L16

AIR DEFENCE • GUNS 14.5mm 1 ZPU-4

Maritime Squadron 500

Organised into 5 divisions: offshore patrol; inshore patrol; rapid deployment and training; marine engineering; and logistics

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS 8

PCO 1 *Emer*

PCC 1 *Diciotti* (ITA *Saettia* mod) with 1 hel landing platform

PB 6: 4 *Austal 21m*; 2 *Marine Protector*

LOGISTICS AND SUPPORT • AAR 2 *Cantiere Vittoria*

Air Wing

1 base party. 1 flt ops div; 1 maint div; 1 integrated log div; 1 rescue section

EQUIPMENT BY TYPE

AIRCRAFT

TPT • Light 5: 3 Beech 200 *King Air* (maritime patrol);

2 BN-2B *Islander*

TRG 3 *Bulldog* T MK1

HELICOPTERS MRH 6: 3 AW139 (SAR); 3 SA316B

Alouette III

DEPLOYMENT

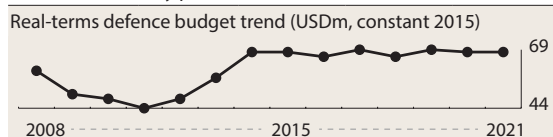
LEBANON: UN • UNIFIL 11

Montenegro MNE

Euro EUR		2020	2021	2022
GDP	EUR	4.19bn	4.60bn	
	USD	4.79bn	5.49bn	
<i>per capita</i>	USD	7,703	8,838	
Growth	%	-15.2	7.0	
Inflation	%	-0.2	2.0	
Def exp [a]	EUR	72.0m	79.0m	
	USD	82.0m	94.0m	
Def bdgt [b]	EUR	64.7m	72.5m	
	USD	73.8m	86.6m	
FMA (US)	USD	5m	0m	0m
USD1=EUR		0.88	0.84	

[a] NATO figure

[b] Includes military pensions



Population 607,414

Age	0–14	15–19	20–24	25–29	30–64	65 plus
Male	9.4%	3.2%	3.3%	3.1%	23.1%	7.2%
Female	8.7%	2.9%	3.1%	3.0%	23.7%	9.3%

Capabilities

According to its defence strategy, Montenegro intends to develop an integrated defence system, capable of defending and preserving independence, sovereignty and national territory. However, the principal concern of the authorities is integrating Montenegro into the collective security system of NATO as well as the EU. A NATO member since 2017, Montenegro has accepted NATO's capability targets and has been aligning its defence-planning process with NATO standards. Reform and professionalisation of the armed forces have been slow, and developments have been focused on structural issues around improving recruitment, outflow and professional development. The armed forces are not designed to have an expeditionary capability, and as such have little logistics capability to support deployments beyond national borders. Personnel have deployed to EU-, UN- and NATO-led operations, although a planned increase in Montenegro's small contribution to KFOR stalled due to internal opposition. Podgorica intends to replace ageing Soviet-era equipment. Procurement priorities include light and medium helicopters and light armoured vehicles, as well as improved communications capacities in accordance with NATO standards. Future plans include the formation of a special-forces unit and an intelligence unit in the land forces. The country's defence industry is capable of producing small arms and ammunition.

ACTIVE 2,350 (Army 1,275 Navy 350 Air Force 225
Other 500) Gendarmerie & Paramilitary 10,100

RESERVE 2,800

ORGANISATIONS BY SERVICE

Army 1,275

FORCES BY ROLE

MANOEUVRE

Reconnaissance

1 recce coy

Light

1 mot inf bn

COMBAT SUPPORT

1 cbt spt bn

1 sigs coy

COMBAT SERVICE SUPPORT

1 med bn

1 spt bn

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

APC • APC (W) 8 BOV-VP M-86

AUV 20 JLTV

ANTI-TANK/ANTI-INFRASTRUCTURE

SP 9 BOV-1

MSL • MANPATS 9K111 *Fagot* (RS-AT-4 *Spigot*);

9K111-1 *Konkurs* (RS-AT-5 *Spandrel*)

ARTILLERY 135

TOWED 122mm 12 D-30

MRL 128mm 18 M-63/M-94 *Plamen*

MOR 105: 82mm 73; 120mm 32

Reserve

FORCES BY ROLE

MANOEUVRE

Light

2 inf bn

COMBAT SUPPORT

1 arty bn

Navy 350

1 Naval Cmd HQ with 4 operational naval units (patrol boat; coastal surveillance; maritime detachment; and SAR) with additional sigs, log and trg units with a separate coastguard element. Some listed units are in the process of decommissioning

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS 4

PCF 2 *Rade Končar*†

PB 2 *Mirna* (Type-140) (Police units)

LOGISTICS AND SUPPORT 1

AXS 1 *Jadrant*†

Air Force 225

Golubovci (Podgorica) air base under army command

FORCES BY ROLE

TRAINING

1 (mixed) sqn with G-4 *Super Galeb*; Utva-75 (none operational)

TRANSPORT HELICOPTER

1 sqn with SA341/SA342L *Gazelle*

EQUIPMENT BY TYPE

AIRCRAFT • TRG (4 G-4 *Super Galeb* non-operational; 4 Utva-75 non-operational)

HELICOPTERS

MRH 16: 1 Bell 412EP *Twin Huey*; 2 Bell 412EPI *Twin Huey*; 13 SA341/SA342L (HN-45M) *Gazelle*

TPT • Light 2 Bell 505 *Jet Ranger X*

Gendarmerie & Paramilitary €10,100

Montenegrin Ministry of Interior Personnel
€6,000

Special Police Units €4,100

DEPLOYMENT

LATVIA: NATO • Enhanced Forward Presence 10

MALI: EU • EUTM Mali 2

SERBIA: NATO • KFOR 2

WESTERN SAHARA: UN • MINURSO 1

Multinational Organisations

Capabilities

The following represent shared capabilities held by contributors collectively rather than as part of national inventories

ORGANISATIONS BY SERVICE

NATO AEW&C Force

Based at Geilenkirchen (GER). Original participating countries (BEL, CAN, DNK, GER, GRC, ITA, NLD, NOR, PRT, TUR, US) have been subsequently joined by five more (CZE, ESP, HUN, POL, ROM)

FORCES BY ROLE

AIRBORNE EARLY WARNING & CONTROL

1 sqn with B-757 (trg); E-3A *Sentry* (NATO standard)

EQUIPMENT BY TYPE

AIRCRAFT

AEW&C 16 E-3A *Sentry* (NATO standard)

TPT • PAX 1 B-757 (trg)

NATO Alliance Ground Surveillance

Based at Sigonella (ITA)

EQUIPMENT BY TYPE

UNINHABITED AERIAL VEHICLES

ISR • Heavy 5 RQ-4D *Phoenix*

NATO Multinational Multi-Role Tanker Transport Fleet (MMF)

Based at Eindhoven (NLD). Six participating countries (BEL, CZE, GER, NLD, NOR & LUX)

EQUIPMENT BY TYPE

AIRCRAFT • TKR/TPT 5 A330 MRTT

Strategic Airlift Capability

Heavy Airlift Wing based at Papa air base (HUN). 12 participating countries (BLG, EST, FIN, HUN, LTU, NLD, NOR, POL, ROM, SVN, SWE, US)

EQUIPMENT BY TYPE

AIRCRAFT • TPT • Heavy 3 C-17A *Globemaster III*

Strategic Airlift Interim Solution

Intended to provide strategic-airlift capacity pending the delivery of A400M aircraft by leasing An-124s. 11 participating countries (BEL, CZE, FIN, FRA, GER, HUN, NOR, POL, SVK, SVN, SWE)

EQUIPMENT BY TYPE

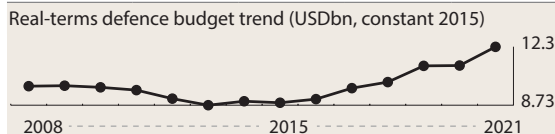
AIRCRAFT • TPT • Heavy 2 An-124-100 (3 more available on 6–9 days' notice)

Netherlands NLD

Euro EUR		2020	2021	2022
GDP	EUR	800bn	844bn	
	USD	913bn	1.01tr	
per capita	USD	52,456	57,715	
Growth	%	-3.8	3.8	
Inflation	%	1.1	1.9	
Def exp [a]	EUR	11.5bn	11.8bn	
	USD	13.1bn	14.1bn	
Def bdgt [b]	EUR	11.0bn	12.4bn	12.2bn
	USD	12.6bn	14.8bn	
USD1=EUR		0.88	0.84	

[a] NATO figure

[b] Includes military pensions



Population 17,337,403

Age	0–14	15–19	20–24	25–29	30–64	65 plus
Male	8.2%	2.9%	3.1%	3.2%	22.8%	9.2%
Female	7.9%	2.8%	3.0%	3.1%	22.8%	11.0%

Capabilities

The 2018 defence review tasks the armed forces with territorial defence and supporting national civil authorities with law enforcement, disaster relief and humanitarian assistance. The Defence Vision 2035 document was published in October 2020. It assessed the future security environment and highlighted ten principles to guide the armed forces' development until 2035. Dutch forces are increasingly integrated with NATO allies, particularly Germany. The army contributes to a Dutch–German tank battalion and its mechanised and air-mobile brigades are integral formations within German divisions. There is also cooperation and integration with the German armed forces in the air and naval domains. The Netherlands has air-policing agreements with France, Belgium and Luxembourg and is a member of the UK-led Joint Expeditionary Force. In October 2021, the government announced that it would deploy a C-130 plus support personnel to Mali (to the UN mission)

from November 2021 to May 2022. The Netherlands, Belgium and Denmark have committed to forming a composite special-operations command. Dutch forces are fully professional and well trained and the Netherlands can deploy and sustain a medium-scale force for a single operation, or a small-scale joint force for an extended period. The Netherlands makes significant contributions to NATO and EU military operations globally. The country has a modern European- and US-sourced equipment inventory. An agreement is in place with Belgium on the joint acquisition of new frigates and minehunters, while the air force is upgrading its *Patriot* missiles and *Apache* helicopters and acquiring F-35 combat aircraft and MQ-9 *Reaper* UAVs. The Netherlands is part of the programme for a multinational NATO unit of A330 transport/tanker aircraft. The country has an advanced domestic defence industry focusing on armoured vehicles, naval ships and air-defence systems, but also hosts a range of subsidiaries of international aerospace firms. Damen Schelde Naval Shipbuilding exports frigates, corvettes and fast-attack craft, while DutchAero manufactures engine components for the F-35. The country also collaborates with Germany on the *Boxer* and *Fennek* armoured vehicles.

ACTIVE 33,600 (Army 15,350 Navy 7,350 Air 6,400 Other 4,500) **Military Constabulary 6,500**

RESERVE 6,000 (Army 3,900 Navy 1,100 Air 800 Other 200) **Military Constabulary 300**

Reserve liability to age 35 for soldiers/sailors, 40 for NCOs, 45 for officers

ORGANISATIONS BY SERVICE

Army 15,350

FORCES BY ROLE

COMMAND

elm 1 (1 GNC) corps HQ

SPECIAL FORCES

4 SF coy

MANOEUVRE

Reconnaissance

1 ISR bn (2 armd recce sqn, 1 EW coy, 2 int sqn, 1 UAV bty)

Mechanised

1 (43rd) mech bde (1 armd recce sqn, 2 armd inf bn, 1 engr bn, 1 maint coy, 1 med coy)

1 (13th) mech bde (1 recce sqn, 2 mech inf bn, 1 engr bn, 1 maint coy, 1 med coy)

Air Manoeuvre

1 (11th) air mob bde (3 air mob inf bn, 1 engr coy, 1 med coy, 1 supply coy, 1 maint coy)

COMBAT SUPPORT

1 SP arty bn (3 SP arty bty)

1 AD comd (1 AD sqn; 1 AD bty)

1 CIMIC bn

1 engr bn

2 EOD coy 1 (CIS) sigs bn 1 CBRN coy

COMBAT SERVICE SUPPORT

1 med bn

5 fd hospital

3 maint coy

2 tpt bn

Reserves 3,900 reservists

National Command

Cadre bde and corps tps completed by call-up of reservists (incl Territorial Comd)

FORCES BY ROLE

MANOEUVRE Light

3 inf bn (could be mobilised for territorial def)

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

RECCE 197 *Fennek*

IFV 117 CV9035NL (32 more in store)

APC • APC (W) 200 *Boxer* (8 driver trg; 52 amb; 36 CP; 92 engr; 12 log)

AUV 248: 98 *Bushmaster* IMV; 150 *Fennek*

ENGINEERING & MAINTENANCE VEHICLES

AEV 10+: *Dachs*; 10 *Kodiak*

ARV 25+: BPz-2; 25 BPz-3 *Büffel*

VLB 22: 16 *Leopard 1* with *Legaun*; 2 *Leopard 2* with *Leguan*; 4 MLC70 with *Leguan*

MW *Bozena*

NBC VEHICLES 6 TPz-1 *Fuchs* NBC

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL • MANPATS *Spike-MR*

ARTILLERY 119:

SP 155mm 18 PzH 2000 (38 more in store)

MOR 101: 81mm 83 L16/M1; 120mm 18 Brandt

AIR DEFENCE • SAM 42+

Long-range 18 M902 *Patriot* PAC-3 (TMD capable)

Short-range 6 NASAMS II

Point-defence 18+: FIM-92 *Stinger*; 18 *Fennek* with FIM-92 *Stinger*

Navy 7,350 (incl Marines)

EQUIPMENT BY TYPE

SUBMARINES 4

SSK 4 *Walrus* with 4 single 533mm TT with Mk 48 ADCAP mod 7 HWT

PRINCIPAL SURFACE COMBATANTS 6

DESTROYERS • DDGHM 4:

3 *De Zeven Provinciën* with 2 quad Inchr with RGM-84C *Harpoon* Block 1B AShM, 5 8-cell Mk 41 VLS with SM-2 Block IIIA/RIM-162B ESSM SAM, 2 twin 324mm SVTT Mk 32 ASTT with Mk 46 LWT, 1 *Goalkeeper* CIWS, 1 127mm gun (capacity 1 NH90 hel)

1 *De Zeven Provinciën* with 2 quad Inchr with RGM-84C *Harpoon* Block 1B AShM, 5 8-cell Mk 41 VLS with SM-2 Block IIIA/RIM-162B ESSM SAM, 2 twin 324mm SVTT Mk 32 ASTT with Mk 46 LWT, 2 *Goalkeeper* CIWS, 1 127mm gun (capacity 1 NH90 hel)

FRIGATES • FFGHM 2 *Karel Doorman* with 2 quad Inchr with RGM-84C *Harpoon* Block 1B AShM, 1 16-cell Mk 48 mod 1 VLS with RIM-7P *Sea Sparrow* SAM, 2 twin 324mm SVTT Mk 32 ASTT with Mk 46 LWT, 1 *Goalkeeper* CIWS, 1 76mm gun (capacity 1 NH90 hel)

PATROL AND COASTAL COMBATANTS

PSOH 4 *Holland* with 1 76mm gun (capacity 1 NH90 hel)

MINE WARFARE • MINE COUNTERMEASURES 6

MHO 6 *Alkmaar* (*Tripartite*)

AMPHIBIOUS

PRINCIPAL AMPHIBIOUS SHIPS • LPD 2:

1 *Rotterdam* with 2 *Goalkeeper* CIWS (capacity 6 NH90/AS532 *Cougar* hel; either 6 LCVP or 2 LCM and 3 LCVP; either 170 APC or 33 MBT; 538 troops)

1 *Johan de Witt* with 2 *Goalkeeper* CIWS (capacity 6 NH90 hel or 4 AS532 *Cougar* hel; either 6 LCVP or 2 LCM and 3 LCVP; either 170 APC or 33 MBT; 700 troops)

LANDING CRAFT 17

LCU 5 LCU Mk II

LCVP 12 Mk5

LOGISTICS AND SUPPORT 8

AGS 3: 1 *Hydrograaf*; 2 *Snellius*

AK 1 *Pelikaan*

AORH 1 *Karel Doorman* with 2 *Goalkeeper* CIWS (capacity 6 NH90/AS532 *Cougar* or 2 CH-47F *Chinook* hel; 2 LCVP)

AS 1 *Mercur*

AXL 1 *Van Kingsbergen*

AXS 1 *Urania*

Marines 2,650

FORCES BY ROLE

SPECIAL FORCES

1 SF gp (1 SF sqn, 1 CT sqn)

MANOEUVRE

Amphibious

2 mne bn

1 amph aslt gp

COMBAT SERVICE SUPPORT

1 spt gp (coy)

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

APC • APC (T) 65 BvS-10 *Viking* (incl 20 CP)

ENGINEERING & MAINTENANCE VEHICLES

ARV 8: 4 BvS-10; 4 BPz-2

MED 4 BvS-10

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL • MANPATS *Spike-MR*

ARTILLERY • MOR 81mm 12 L16/M1

AIR DEFENCE • SAM • Point-defence FIM-92 *Stinger*

Air Force 6,400

FORCES BY ROLE

FIGHTER/GROUND ATTACK

2 sqn with F-16AM/BM *Fighting Falcon*

1 sqn with F-16AM/BM *Fighting Falcon*; F-35A *Lightning* II

ANTI-SUBMARINE WARFARE/SEARCH & RESCUE

1 sqn with NH90 NFH

TANKER/TRANSPORT

1 sqn with C-130H/H-30 *Hercules*

1 sqn with Gulfstream IV

TRAINING

1 OEU sqn with F-35A *Lightning* II

1 sqn with PC-7 *Turbo Trainer*

1 hel sqn with AH-64D *Apache*; CH-47D *Chinook* (based at Fort Hood, TX)

ATTACK HELICOPTER

1 sqn with AH-64D *Apache*

TRANSPORT HELICOPTER

1 sqn with AS532U2 *Cougar* II; NH90 NFH

1 sqn with CH-47D/F *Chinook*

EQUIPMENT BY TYPE

AIRCRAFT 82 combat capable

FTR 61 F-16AM/BM *Fighting Falcon*

FGA 21 F-35A *Lightning* II

TPT 5: **Medium** 4: 2 C-130H *Hercules*; 2 C-130H-30 *Hercules*; PAX 1 Gulfstream IV

TRG 13 PC-7 *Turbo Trainer*

HELICOPTERS

ATK 28 AH-64D *Apache*

ASW 19 NH90 NFH (of which 8 not fitted with sonar)

TPT 33: **Heavy** 25: up to 8 CH-47D *Chinook* (of which 3 to be upgraded to CH-47F, remainder to be retired); 17 CH-47F *Chinook*; **Medium** 8 AS532U2 *Cougar* II

AIR-LAUNCHED MISSILES

AAM • IR AIM-9L/M *Sidewinder*; IIR AIM-9X *Sidewinder* II; ARH AIM-120B AMRAAM

ASM AGM-114K *Hellfire*; AGM-65D/G *Maverick*

BOMBS

Laser-guided GBU-10/GBU-12 *Paveway* II; GBU-24 *Paveway* III (all supported by LANTIRN)

INS/GPS guided GBU-39 Small Diameter Bomb

Gendarmerie & Paramilitary 6,500

Royal Military Constabulary 6,500

Subordinate to the Ministry of Defence, but performs most of its work under the authority of other ministries

FORCES BY ROLE

MANOEUVRE

Other

1 paramilitary comd (total: 28 paramilitary unit)

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

APC • APC (W) 24 YPR-KMar

DEPLOYMENT

BALTIC SEA: NATO • SNMCMG 1: 1 MHO

IRAQ: *Operation Inherent Resolve* 150; 2 trg unit; NATO • NATO Mission Iraq 2

LEBANON: UN • UNIFIL 1

LITHUANIA: NATO • Enhanced Forward Presence 270; 1 mech inf coy

MALI: *Operation Barkhane* 4; EU • EUTM Mali 6; UN • MINUSMA 5

MIDDLE EAST: UN • UNTSO 11

NORTH SEA: NATO • SNMG 1: 1 FFGHM

SYRIA/ISRAEL: UN • UNDOF 1

UNITED STATES: 1 hel trg sqn with AH-64D *Apache*; CH-47D *Chinook* based at Fort Hood (TX)

FOREIGN FORCES

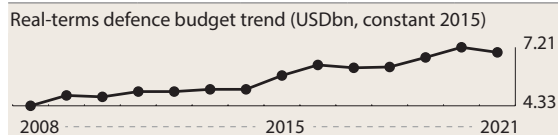
United States US European Command: 450

Norway NOR

Norwegian Kroner NOK		2020	2021	2022
GDP	NOK	3.41tr	3.85tr	
	USD	363bn	446bn	
per capita	USD	67,326	82,244	
Growth	%	-0.8	3.0	
Inflation	%	1.3	2.6	
Def exp [a]	NOK	68.5bn	70.9bn	
	USD	7.27bn	8.20bn	
Def bdgt [b]	NOK	61.0bn	64.5bn	69.0bn
	USD	6.48bn	7.46bn	
USD1=NOK		9.42	8.64	

[a] NATO figure

[b] Includes military pensions



Population 5,509,591

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	9.2%	2.9%	3.1%	3.5%	23.6%	8.2%
Female	8.7%	2.8%	3.0%	3.3%	22.2%	9.4%

Capabilities

Norway sustains small but well-equipped and highly trained armed forces. Territorial defence is at the heart of security policy. A new Long Term Defence Plan was published in October 2020, arguing that the security environment had deteriorated faster than expected. It envisages a gradual increase in personnel numbers and further measures to strengthen readiness and capability in the High North. A US Marine Corps contingent has deployed to Vaernes, on a rotational basis, since January 2017. In August 2018, this was extended for up to five years and a second location added at Setermoen. In April 2021 Norway and the US signed a Supplementary Defense Cooperation Agreement which, among other things, provides authority for US forces to access specific Norwegian facilities and conduct mutual defence activities. Four locations were mentioned as 'focal points' for increased cooperation: Evenes, Rygge and Sola air stations and Ramsund naval station. Norway is not an EU member, but signed a cooperation agreement with the European Defence Agency in 2006. At any one time, around one-third of troops are conscripts. Senior officers reportedly expressed concerns in 2019 that Norway's force structure was too small for defence requirements. A report by the Norwegian chief of defence published in October 2019 argued that in order to address the challenging security situation, the number of combat units in all services should increase. Norway maintains a small presence in a range of international crisis-management missions. Equipment recapitalisation is ongoing. In 2017, the government announced that it would procure four submarines as part of a strategic partnership with Germany. Large procurements will stretch budgets, with the F-35 alone reportedly taking up 27% of all procurement spending between 2019 and 2026. Norway's first P-8 maritime

patrol aircraft flew in 2021; deliveries are expected from 2022. In June 2018, it was announced that a planned upgrade to Norway's main-battle-tank fleet would be pushed to the mid-2020s; current budget forecasts foresee funding being made available for this purpose in 2025–26. Norway has an advanced and diverse defence-industrial base with a high percentage of SMEs and a mix of private and state-owned companies.

ACTIVE 25,400 (Army 8,300 Navy 4,600 Air 4,300 Central Support 7,400 Home Guard 800)

Conscript liability 19 months maximum. Conscripts first serve 12 months from 19–28, and then up to 4–5 refresher training periods until age 35, 44, 55 or 60 depending on rank and function. Conscripted was extended to women in 2015

RESERVE 40,000 (Home Guard 40,000)

Readiness varies from a few hours to several days

ORGANISATIONS BY SERVICE

Army 3,900; 4,400 conscript (total 8,300)

The armoured infantry brigade – Brigade North – trains new personnel of all categories and provides units for international operations. At any time around one-third of the brigade will be trained and ready to conduct operations. The brigade includes one high-readiness armoured battalion (Telemark Battalion) with combat-support and combat-service-support units on high readiness

FORCES BY ROLE

MANOEUVRE

Reconnaissance

- 1 armd recce bn (forming)
- 1 ISR bn
- 1 (GSV) bn (1 (border) recce coy, 1 ranger coy, 1 spt coy, 1 trg coy)

Armoured

- 1 armd inf bde (2 armd bn, 1 lt inf bn, 1 arty bn, 1 engr bn, 1 MP coy, 1 CIS bn, 1 spt bn, 1 med bn)

Light

- 1 lt inf bn (His Majesty The King's Guards)

EQUIPMENT BY TYPE

ARMOURED FIGHTING VEHICLES

- MBT 36 *Leopard* 2A4 (16 more in store)
- RECCE 46: 21 CV9030; 25 HMT *Extenda*
- IFV 91: 76 CV9030N; 15 CV9030N (CP)
- APC 390
 - APC (T) 315 M113 (incl variants)
 - APC (W) 75 XA-186 *Sisu*/XA-200 *Sisu*/XA-203 (amb)
- AUV 140: 20 *Dingo* 2; 120 IVECO LMV (50 more in store)

ENGINEERING & MAINTENANCE VEHICLES

- AEV 27+: 16 CV90 STING; 8 M113 AEV; NM109; 3 *Wisent*-2
- ARV 12: 6 BPz-2; 6 *Wisent*-2
- VLB 36: 26 *Leguan*; 1 *Leopard* 2 with *Leguan*; 9 *Leopard* 1
- MW 9 910 MCV-2

NBC VEHICLES 6 TPz-1 *Fuchs* NBC

ANTI-TANK/ANTI-INFRASTRUCTURE

- MANPATS FGM-148 *Javelin*
- RCL 84mm *Carl Gustaf*

ARTILLERY 191

- SP 155mm 48: 24 K9 *Thunder*; 24 M109A3GN (being withdrawn)
- MOR 143: 81mm 115 L16; SP 81mm 28: 16 CV9030; 12 M125A2

AIR DEFENCE

- SAM • Medium-range NASAMS III

Navy 2,350; 2,250 conscripts (total 4,600)

Joint Command – Norwegian National Joint Headquarters. The Royal Norwegian Navy is organised into five elements under the command of the Chief of the Navy: the fleet (*Marinen*), the Coast Guard (*Kystvakten*), the recruit training school (KNM *Harald Haarfagre*), the naval medical branch and the naval bases (*Haakonsværn* and *Ramsund*)

FORCES BY ROLE

MANOEUVRE

Reconnaissance

- 1 ISR coy (Coastal Rangers)

COMBAT SUPPORT

- 1 EOD pl

EQUIPMENT BY TYPE

SUBMARINES 6

- SSK 6 *Ula* with 8 single 533mm TT with *SeaHake* (DM2A3) HWT

PRINCIPAL SURFACE COMBATANTS • FRIGATES 4

- FFGHM 4 *Fridtjof Nansen* with *Aegis* C2 (mod), 2 quad Inchr with NSM ASHM, 1 8-cell Mk 41 VLS with RIM-162A ESSM SAM, 2 twin 324mm ASTT with *Sting Ray* mod 1 LWT, 1 76mm gun (capacity 1 NH90 hel)

PATROL AND COASTAL COMBATANTS 12

- PCFG 6 *Skjold* with 8 single Inchr with NSM ASHM, 1 76mm gun

- PBF 6 CB90N (capacity 20 troops)

MINE WARFARE • MINE COUNTERMEASURES 4

- MSC 2 *Alta* with 1 twin *Simbad* Inchr with *Mistral* SAM
- MHC 2 *Oksoy* with 1 twin *Simbad* Inchr with *Mistral* SAM

LOGISTICS AND SUPPORT 6

- AGI 1 *Marjata* IV

- AGS 2: 1 *HU Sverdrup* II; 1 *Eger* (*Marjata* III) with 1 hel landing platform

- AORH 1 *Maud* (BMT *Aegir*) (capacity 2 med hel)

- AXL 2 *Reine*

Coast Guard

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS 13

- PSOH 3 *Nordkapp* with 1 57mm gun (capacity 1 med tpt hel)

- PSO 5: 3 *Barentshav*; 1 *Harstad*; 1 *Svalbard* with 1 57mm gun, 1 hel landing platform

- PCC 5 *Nornen*

LOGISTICS AND SUPPORT • ATF 2 *Jarl* (leased)

Air Force 2,900; 1,400 conscript (total 4,300)

Joint Command – Norwegian National HQ

FORCES BY ROLE

FIGHTER/GROUND ATTACK

- 1 sqn with F-16AM/BM *Fighting Falcon*
- 1 sqn with F-35A *Lightning* II

MARITIME PATROL1 sqn with P-3C *Orion*; P-3N *Orion* (pilot trg)**ELECTRONIC WARFARE**1 sqn with *Falcon* 20C (EW, Flight Inspection Service)**SEARCH & RESCUE**1 sqn with *Sea King* Mk43B; AW101**TRANSPORT**1 sqn with C-130J-30 *Hercules***TRAINING**1 sqn with MFI-15 *Safari***TRANSPORT HELICOPTER**2 sqn with Bell 412SP *Twin Huey*

1 sqn with NH90 (forming)

AIR DEFENCE

2 bn with NASAMS III

EQUIPMENT BY TYPE**AIRCRAFT** 71 combat capableFTR 35: 30 F-16AM *Fighting Falcon*; 5 F-16BM *Fighting Falcon* (F-16AM/BM to be retired end of 2021)FGA 31 F-35A *Lightning* IIASW 5: 4 P-3C *Orion*; 1 P-3N *Orion* (pilot trg)EW 2 *Falcon* 20CTPT • Medium 4 C-130J-30 *Hercules*TRG 16 MFI-15 *Safari***HELICOPTERS**

ASW 12 NH90 NFH

SAR 19: 9 AW101; 10 *Sea King* Mk43B

MRH 18: 6 Bell 412HP; 12 Bell 412SP

AIR DEFENCE

SAM • Medium-range NASAMS III

AIR-LAUNCHED MISSILESAAM • IR AIM-9L *Sidewinder*; IIR AIM-9X *Sidewinder* II;

IRIS-T; ARH AIM-120B AMRAAM; AIM-120C AMRAAM

BOMBSLaser-guided EGBU-12 *Paveway* II

INS/GPS guided JDAM

Special Operations Command (NORSOCOM)**FORCES BY ROLE****SPECIAL FORCES**

1 (armed forces) SF comd (2 SF gp)

1 (navy) SF comd (1 SF gp)

Central Support, Administration and Command 5,850; 1,550 conscripts (total 7,400)

Central Support, Administration and Command includes military personnel in all joint elements and they are responsible for logistics and CIS in support of all forces in Norway and abroad

Home Guard 400; 400 conscripts (40,000 reserves)

The Home Guard is a separate organisation, but closely cooperates with all services. The Home Guard is organised in 11 Districts with mobile Rapid Reaction Forces (3,000 troops in total) as well as reinforcements and follow-on forces (37,000 troops in total)

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS • PB 11: 4 *Harek*; 2 *Gyda*; 5 *Alusafe* 1290

DEPLOYMENT**BALTIC SEA:** NATO • SNMCMG 1: 1 AXL**CYPRUS:** UN • UNFICYP 2**EGYPT:** MFO 3

IRAQ: *Operation Inherent Resolve* 60; 1 trg unit; NATO • NATO Mission Iraq 2

JORDAN: *Operation Inherent Resolve* 20

LITHUANIA: NATO • Enhanced Forward Presence 195; 1 armd inf coy; CV9030

MALI: UN • MINUSMA 13; 1 tpt flt with C-130J-30**MIDDLE EAST:** UN • UNTSO 12**BALTIC SEA:** NATO • SNMG 1: 1 AORH**SOUTH SUDAN:** UN • UNMISS 14**FOREIGN FORCES**

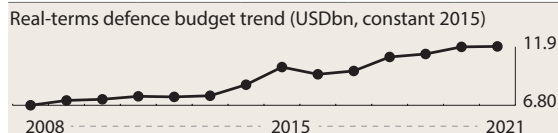
United States US European Command: 1,100; 1 (USMC) MEU eqpt set; 1 (APS) 155mm SP Arty bn eqpt set

Poland POL

Polish Zloty PLN		2020	2021	2022
GDP	PLN	2.32tr	2.53tr	
	USD	596bn	655bn	
<i>per capita</i>	USD	15,699	17,319	
Growth	%	-2.7	5.1	
Inflation	%	3.4	4.4	
Def exp [a]	PLN	53.0bn	51.8bn	
	USD	13.6bn	13.4bn	
Def bdgt [b]	PLN	49.8bn	51.8bn	57.8bn
	USD	12.8bn	13.4bn	
USD1=PLN		3.90	3.86	

[a] NATO figure

[b] Includes military pensions

**Population** 38,185,913

Age	0–14	15–19	20–24	25–29	30–64	65 plus
Male	7.6%	2.4%	2.6%	3.1%	24.9%	7.8%
Female	7.2%	2.2%	2.5%	3.0%	25.2%	11.6%

Capabilities

Territorial defence and NATO membership are central pillars of Poland's defence policy. The primary focus of the 2017–32 defence concept is to prepare the armed forces to deter Russian aggression. Russia is characterised as a direct threat to Poland and to a stable international order. The government continues to pursue a goal of permanently stationing US troops in the country. A bilateral defence cooperation agreement signed with the US in August 2020 provides for an increased enduring rotational presence of about 1,000 US personnel. The US Army's V Corps Headquarters

(Forward) was established in Poznań at the end of 2020. Security and defence cooperation also takes place through the Visegrad Group. There are also defence ties through the Bucharest Nine, which brings together NATO's eastern-flank countries. The 2017–32 defence concept defines an ambition to restore divisions as tactical combat units, rather than administrative units. Recruitment is under way for the Territorial Defence Force, which was launched in 2017 and is intended to reach an end-strength of 53,000 by 2026. Poland has some capacity to independently deploy forces beyond national borders. Defence-acquisition reform has been under way for some time and a central armaments agency is due to begin operating in 2022. Poland intends to build up its own anti-access/area-denial capacity and in the 2017 Defence Concept expressed an interest in research into emerging technologies. A technical-modernisation plan, covering the period 2021–35, was released in October 2019, which extended the planning horizon from ten to 15 years. Warsaw continues plans to strengthen its domestic defence-industrial base, much of which is now consolidated in the state-owned holding company PGZ, using technology transfers and international partnering. Beyond PGZ, several international defence primes have subsidiaries in Poland.

ACTIVE 114,050 (Army 58,500 Navy 6,000 Air Force 14,300 Special Forces 3,150 Territorial 3,800 Joint 28,300) Gendarmerie & Paramilitary 75,400

ORGANISATIONS BY SERVICE

Army 58,500

FORCES BY ROLE

COMMAND

elm 1 (MNC NE) corps HQ

MANOEUVRE

Reconnaissance

3 rece regt

Armoured

1 (11th) armd cav div (2 armd bde, 1 mech bde, 1 arty regt)

Mechanised

1 (12th) mech div (2 mech bde, 1 (coastal) mech bde, 1 arty regt)

1 (16th) mech div (1 armd bde, 2 mech bde, 1 arty regt, 1 AT regt)

1 (18th) mech div (1 armd bde, 2 mech bde, 1 log regt)

Air Manoeuvre

1 (6th) AB bde (3 para bn)

1 (25th) air cav bde (2 air cav bn, 2 tpt hel bn, 1 (casevac) med unit)

COMBAT SUPPORT

2 engr regt

2 ptn br regt

2 chem def regt

COMBAT SUPPORT

2 log bde

HELICOPTER

1 (1st) hel bde (2 atk hel sqn with Mi-24D/V *Hind* D/E, 1 CSAR sqn with Mi-24V *Hind* E; PZL W-3PL *Gluszec*; 2 ISR hel sqn with Mi-2URP; 2 hel sqn with Mi-2)

AIR DEFENCE

3 AD regt

EQUIPMENT BY TYPE

ARMOURED FIGHTING VEHICLES

MBT 797: 126 *Leopard* 2A4 (being upgraded to 2PL); 105 *Leopard* 2A5; 16 *Leopard* 2PL (in test); 232 PT-91 *Twardy*; 318 T-72A/T-72M1/M1R

RECCE 407: 282 BRDM-2; 38 BWR-1 (being upgraded); 87 BRDM-2 R5

IFV 1,611: 1,252 BMP-1; 359 *Rosomak* IFV

APC 372

APC (T) 6 WDSz (OP)

APC (W) 336: 300 *Rosomak* APC (incl variants); 36

AWD RAK (arty CP)

PPV 30 *Maxxpro*

AUV 85: 40 *Cougar* (on loan from US); 45 M-ATV

ENGINEERING & MAINTENANCE VEHICLES

AEV 94+: IWT; 65 MT-LB AEV; 21 *Rosomak* WRT; 8 MID *Bizon*

ARV 122: 28 BPz-2; 68 MT-LB ARV; 26 WZT-3M

VLB 119: 4 *Biber*; 103 BLG67M2; 12 MS-20 *Daglezja*

MW 27: 17 *Bozena* 4; 6 ISM *Kroton*; 4 *Kalina* SUM

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL • **MANPATS** 9K11 *Malyutka* (RS-AT-3 *Sagger*);

9K111 *Fagot* (RS-AT-4 *Spigot*); *Spike*-LR

ARTILLERY 751

SP 410: **122mm** 227 2S1 *Gvozdika*; **152mm** 111 M-77 *Dana*; **155mm** 72 *Krab*

MRL **122mm** 179: 75 BM-21; 29 RM-70; 75 WR-40 *Langusta*

MOR 162: **120mm** 80: 15 2B11; 65 M120; **SP** **120mm** 82 SMK120 RAK

HELICOPTERS

ATK 28 Mi-24D/V *Hind* D/E

MRH 64: 7 Mi-8MT *Hip*; 3 Mi-17 *Hip* H; 1 Mi-17AE *Hip* (aeromedical); 5 Mi-17-1V *Hip*; 16 PZL Mi-2URP *Hoplite*;

24 PZL W-3W/WA *Sokol*; 8 PZL W-3PL *Gluszec* (CSAR)

TPT 37: **Medium** 12: 6 Mi-8T *Hip*; 2 PZL W-3AE *Sokol* (aeromedical); 4 S-70i *Black Hawk*; **Light** 25 PZL Mi-2 *Hoplite*

AIR DEFENCE

SAM 248+

Short-range 20 2K12 *Kub* (RS-SA-6 *Gainful*)

Point-defence 228+: 64 9K33 *Osa*-AK (RS-SA-8 *Gecko*);

20 ZSU-23-4MP *Biala*; GROM; 75 ZUR-23-2KG *Jodek*-G;

6 *Pilica*; *Piorun*; 63 *Poprad*

GUNS 270

SP **23mm** 2 ZSU-23-4

TOWED **23mm** 268 ZU-23-2

Navy 6,000

EQUIPMENT BY TYPE

SUBMARINES • **SSK** 1 *Orzeł* (ex-FSU *Kilo*) with 6 single 533mm TT each with 53-65KE HWT/TEST-71ME

PRINCIPAL SURFACE COMBATANTS • FRIGATES 2

FFH 2 *Pułaski* (ex-US *Oliver Hazard Perry*) (of which 1 used as training ship) with 2 triple 324mm SVTT Mk 32 ASTT with MU90 LWT, 1 Mk 15 *Phalanx* CIWS, 1 76mm gun (capacity 2 SH-2G *Super Seasprite* ASW hel)

PATROL AND COASTAL COMBATANTS 5

CORVETTES • **FSM** 1 *Kaszub* with 2 quad Inchr with 9K32 *Strela*-2 (RS-SA-N-5 *Grail*) SAM, 2 twin 533mm

ASTT with SET-53 HWT, 2 RBU 6000 *Smerch* 2 A/S mor, 1 76mm gun
PSO 1 *Ślązak* (MEKO A-100) with 1 76mm gun, 1 hel landing platform
PCFGM 3 *Orkan* (ex-GDR *Sassnitz*) with 1 quad lnchr with RBS15 Mk3 ASHM, 1 quad lnchr (manual aiming) with 9K32 *Strela-2M* (RS-SA-N-5 *Grail*) SAM, 1 AK630 CIWS, 1 76mm gun

MINE WARFARE • MINE COUNTERMEASURES 20

MCCS 1 *Kontradmirał Xawery Czernicki*
MCO 1 *Kormoran II*
MHO 1 *Krogulec*
MSI 17: 1 *Gopło*; 12 *Gardno*; 4 *Mamry*

AMPHIBIOUS 8

LANDING SHIPS • LSM 5 *Lublin* (capacity 9 tanks; 135 troops)

LANDING CRAFT • LCU 3 *Deba* (capacity 50 troops)

LOGISTICS AND SUPPORT 26

AGI 2 *Moma*
AGS 8: 2 *Heweliusz*; 4 *Wildcat* 40; 2 (coastal)
AORL 1 *Bałtyk*
AOL 1 *Moskit*
ARS 4: 2 *Piast*; 2 *Zbyszko*
ATF 8: 6 *Bolko* (B860); 2 H960
AX 1 *Wodnik* with 1 twin AK230 CIWS
AXS 1 *Iskra*

COASTAL DEFENCE • ASHM 12 NSM

Naval Aviation 1,300

FORCES BY ROLE

ANTI SUBMARINE WARFARE/SEARCH & RESCUE

1 sqn with Mi-14PL *Haze A*; Mi-14PL/R *Haze C*
 1 sqn with PZL W-3RM *Anakonda*; SH-2G *Super Seasprite*

MARITIME PATROL

1 sqn with An-28E/RM *Bryza*

TRANSPORT

1 sqn with An-28TD; M-28B TD *Bryza*
 1 sqn with An-28TD; M-28B; PZL Mi-2 *Hoplite*; PZL W-3T/A

EQUIPMENT BY TYPE

AIRCRAFT

MP 10: 8 An-28RM *Bryza*; 2 An-28E *Bryza*
TPT • Light 4: 2 An-28TD *Bryza*; 2 M-28B TD *Bryza*

HELICOPTERS

ASW 8: 6 Mi-14PL *Haze*; 2 SH-2G *Super Seasprite*
SAR 8: 2 Mi-14PL/R *Haze C*; 4 PZL W-3RM *Anakonda*; 2 PZL W-3WA RM *Anakonda*
TPT • Light 7: 4 PZL Mi-2 *Hoplite*; 1 PZL W-3A; 2 PZL W-3T

Air Force 14,300

FORCES BY ROLE

FIGHTER

2 sqn with MiG-29A/UB *Fulcrum*

FIGHTER/GROUND ATTACK

3 sqn with F-16C/D Block 52+ *Fighting Falcon*

FIGHTER/GROUND ATTACK/ISR

2 sqn with Su-22M-4 *Fitter*

SEARCH AND RESCUE

1 sqn with Mi-2; PZL W-3 *Sokol*

TRANSPORT

1 sqn with C-130E; M-28 *Bryza*

1 sqn with C295M; M-28 *Bryza*

TRAINING

1 sqn with PZL-130 *Orlik*

1 sqn with M-346

1 hel sqn with SW-4 *Puszczyk*

TRANSPORT HELICOPTER

1 (Spec Ops) sqn with Mi-17 *Hip H*

1 (VIP) sqn with Mi-8 *Hip*; W-3WA *Sokol*

AIR DEFENCE

1 bde with S-125 *Newa SC*; S-200C *Vega* (RS-SA-5 *Gammon*)

EQUIPMENT BY TYPE

AIRCRAFT 94 combat capable

FTR 28: 22 MiG-29A *Fulcrum*; 6 MiG-29UB *Fulcrum*

FGA 66: 36 F-16C Block 52+ *Fighting Falcon*; 12 F-16D Block 52+ *Fighting Falcon*; 12 Su-22M4 *Fitter*; 6 Su-22UM3K *Fitter*

TPT 48: **Medium** 5 C-130E *Hercules*; **Light** 39: 16 C295M; 10 M-28 *Bryza* TD; 13 M-28 *Bryza* PT; **PAX** 4: 2 Gulfstream G550; 2 B-737-800 (VIP)

TRG 40: 12 M-346; 28 PZL-130 *Orlik*

HELICOPTERS

MRH 8 Mi-17 *Hip H*

TPT 65: **Medium** 29: 9 Mi-8 *Hip*; 10 PZL W-3 *Sokol*; 10 PZL W-3WA *Sokol* (VIP); **Light** 36: 14 PZL Mi-2 *Hoplite*; 22 SW-4 *Puszczyk* (trg)

AIR DEFENCE • SAM 18

Long-range 1 S-200C *Vega* (RS-SA-5 *Gammon*)

Short-range 17 S-125 *Newa SC*

AIR-LAUNCHED MISSILES

AAM • IR AIM-9 *Sidewinder*; R-60 (RS-AA-8 *Aphid*);

R-73 (RS-AA-11A *Archer*); R-27T (RS-AA-10B *Alamo*);

IIR AIM-9X *Sidewinder II*; **ARH** AIM-120C AMRAAM

ASM AGM-65J/G *Maverick*; Kh-25 (RS-AS-10 *Karen*); Kh-29 (RS-AS-14 *Kedge*)

LACM Conventional AGM-158 JASSM

Special Forces 3,150

FORCES BY ROLE

SPECIAL FORCES

3 SF units (GROM, FORMOZA & cdo)

COMBAT SUPPORT/

1 cbt spt unit (AGAT)

COMBAT SERVICE SUPPORT

1 spt unit (NIL)

Territorial Defence Forces 3,800 (plus 20,000 reservists)

FORCES BY ROLE

MANOEUVRE

Other

15 sy bde

2 sy bde (forming)

Gendarmerie & Paramilitary 75,400

Border Guards 14,300

Ministry of Interior

Maritime Border Guard 2,000**EQUIPMENT BY TYPE****PATROL AND COASTAL COMBATANTS 18**PCC 2 *Kaper*PBF 6: 2 *Stražnik*; 4 IC16MPB 10: 2 *Wisłoka*; 2 *Baltic* 24; 1 Project MI-6**AMPHIBIOUS • LANDING CRAFT**UCAC 2 *Griffon* 2000TDX**Prevention Units (Police) 61,100****Anti-terrorist Operations Bureau n.k.**

Ministry of Interior

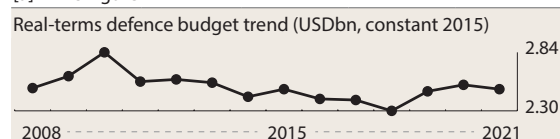
DEPLOYMENT**BOSNIA-HERZEGOVINA:** EU • EUFOR • *Operation Althea* 38**CENTRAL AFRICAN REPUBLIC:** EU • EUTM RCA 1**DEMOCRATIC REPUBLIC OF THE CONGO:** UN • MONUSCO 2**IRAQ:** *Operation Inherent Resolve* 150; NATO • NATO Mission Iraq 30**LATVIA:** NATO • Enhanced Forward Presence 175; 1 tk coy**LEBANON:** UN • UNIFIL 192; 1 mech inf coy**MIDDLE EAST:** UN • UNTSO 3**ROMANIA:** NATO • MNB-SE 220; 1 mech inf coy; *Rosomak***SERBIA:** NATO • KFOR 230; 1 inf coy; UN • UNMIK 1**SOUTH SUDAN:** UN • UNMISS 1**UKRAINE:** JMTG-U 40**WESTERN SAHARA:** UN • MINURSO 1**FOREIGN FORCES**

All NATO Enhanced Forward Presence unless stated

Croatia 80; 1 MRL bty with M91 *Vulkan***Germany** MNC-NE corps HQ: 95**Romania** 102; 1 SP ADA bty**United Kingdom** 140; 1 recce sqn**United States:** 691; 1 mech bn with M1296 *Stryker Dragoon*; M777A2 • *Operation Atlantic Resolve* 4,500; 1 corps HQ (fwd); 1 div HQ (fwd); 1 armd bde; M1A2 SEPv2 *Abrams*; M3A3 *Bradley*; M2A3 *Bradley*; M109A7; 1 CISR UAV sqn with MQ-9A *Reaper***Portugal PRT**

Euro EUR		2020	2021	2022
GDP	EUR	200bn	211bn	
	USD	228bn	252bn	
<i>per capita</i>	USD	22,149	24,457	
Growth	%	-8.4	4.4	
Inflation	%	-0.1	1.2	
Def exp [a]	EUR	2.90bn	3.26bn	
	USD	3.31bn	3.90bn	
Def bdgt	EUR	2.50bn	2.48bn	2.45bn
	USD	2.85bn	2.96bn	
USD1=EUR		0.88	0.84	

[a] NATO figure



Population 10,263,850

Age	0–14	15–19	20–24	25–29	30–64	65 plus
Male	6.8%	2.8%	2.9%	2.7%	23.7%	8.5%
Female	6.5%	2.6%	2.7%	2.7%	25.4%	12.8%

Capabilities

Principal tasks for Portugal's all-volunteer armed forces are homeland defence, maritime security, multinational operations and responding to humanitarian disasters. The 2013 strategic review set out key defence tasks and envisaged a reduction in army strength and organisational changes to divide the services into immediate reaction forces, permanent defence forces and modular forces. Investment plans support Portugal's ambition to field rapid-reaction and maritime-surveillance capabilities for territorial defence and multinational operations. A new military programme law for 2019–30 was approved by parliament, funding the acquisition of five KC-390 aircraft, six offshore-patrol vessels, a replenishment tanker and a multi-purpose logistics ship, as well as cyber-defence and soldier-combat systems. Portugal hosts NATO's cyber-security academy and the country also contributes to EU military structures. There is a close relationship with former dependencies and with the US, which operates out of Lajes air base. All three services have programmes to modernise and sustain existing equipment platforms. There is an active defence industry, though principally in relation to shipbuilding, broader maintenance tasks and the manufacture of components, and small arms and light weapons.

ACTIVE 27,250 (Army 13,700 Navy 7,650 Air 5,900)
Gendarmerie & Paramilitary 24,700

RESERVE 211,700 (Army 210,000 Navy 1,000, Air Force 700)

Reserve obligation to age 35

ORGANISATIONS BY SERVICE**Army 13,700**

5 territorial comd (2 mil region, 1 mil district, 2 mil zone)

FORCES BY ROLE**SPECIAL FORCES**

1 SF bn

MANOEUVRE**Mechanised**

1 mech bde (1 recce sqn, 1 tk regt, 1 mech inf bn, 1 arty bn, 1 AD bty, 1 engr coy, 1 sigs coy, 1 spt bn)

1 (intervention) bde (1 recce regt, 2 mech inf bn, 1 arty bn, 1 AD bty, 1 engr coy, 1 sigs coy, 1 spt bn)

Air Manoeuvre

1 (rapid reaction) bde (1 cdo bn, 1 ISR bn, 2 para bn, 1 arty bn, 1 AD bty, 1 engr coy, 1 sigs coy, 1 spt bn)

Other

1 (Azores) inf gp (2 inf bn, 1 AD bty)

1 (Madeira) inf gp (1 inf bn, 1 AD bty)

COMBAT SUPPORT

1 STA bty

1 engr bn (1 construction coy; 1 EOD unit; 1 ptn br coy; 1 CBRN coy)

1 EW coy

1 MP bn

1 psyops unit

1 CIMIC coy (joint)

1 sigs bn

COMBAT SERVICE SUPPORT

1 maint coy

1 log coy

1 tpt coy

1 med unit

AIR DEFENCE

1 AD bn

Reserves 210,000**FORCES BY ROLE****MANOEUVRE****Light**

3 (territorial) def bde (on mobilisation)

EQUIPMENT BY TYPE**ARMoured FIGHTING VEHICLES****MBT** 37 *Leopard* 2A6**RECCE** 16 VBL**IFV** 30 *Pandur* II MK 30mm**APC** 406**APC (T)** 239: 176 M113A1; 14 M113A2; 49 M577A2 (CP)**APC (W)** 167: 9 V-150 *Commando*; 12 V-200 *Chaimite*; 146 *Pandur* II (incl variants)**ENGINEERING & MAINTENANCE VEHICLES****AEV** M728**ARV** 13: 6 M88A1, 7 *Pandur* II ARV**VLB** M48**ANTI-TANK/ANTI-INFRASTRUCTURE****MSL****SP** 26: 17 M113 with TOW; 4 M901 with TOW; 5 *Pandur* II with TOW**MANPATS** *Milan*; TOW**RCL** • 84mm *Carl Gustaf*; 106mm 45 M40A1**ARTILLERY** 320**SP 155mm** 24: 6 M109A2; 18 M109A5**TOWED** 62: 105mm 39: 17 L119 Light Gun; 21 M101A1;**155mm** 24 M114A1**MOR** 234: 81mm 143; **SP 81mm** 12: 2 M125A1; 10 M125A2; **107mm** 11 M30; **SP 107mm** 18: 3 M106A1; 15 M106A2; **120mm** 50 Tampella**AIR DEFENCE****SAM** • **Point-defence** 20+: 1 M48A2 *Chaparral*; 19 M48A3 *Chaparral*; FIM-92 *Stinger***GUNS** • **TOWED 20mm** 20 Rh 202**Navy 7,600 (incl 950 Marines)****EQUIPMENT BY TYPE****SUBMARINES** 2**SSK** 2 *Tridente* (GER Type-214) (fitted with AIP) with 8 533mm TT with UGM-84L *Harpoon* Block II ASHM/Black *Shark* HWT**PRINCIPAL SURFACE COMBATANTS • FRIGATES** 5**FFGHM** 5:1 *Bartolomeu Dias* (ex-NLD *Karel Doorman*) (MLU ongoing) with 2 quad Inchr with RGM-84C *Harpoon* Block 1B ASHM, 1 16-cell Mk 48 mod 1 VLS with RIM-7M *Sea Sparrow* SAM, 2 twin 324mm SVTT Mk 32 ASTT with Mk 46 LWT, 1 *Goalkeeper* CIWS, 1 76mm gun (capacity 1 *Lynx* Mk95 (*Super Lynx*) hel)1 *Bartolomeu Dias* (ex-NLD *Karel Doorman*) with 2 quad Inchr with RGM-84C *Harpoon* Block 1B ASHM, 1 16-cell Mk 48 mod 1 VLS with RIM-162 ESSM SAM, 2 twin 324mm SVTT Mk 32 ASTT with Mk 46 LWT, 1 *Goalkeeper* CIWS, 1 76mm gun (capacity 1 *Lynx* Mk95 (*Super Lynx*) hel)3 *Vasco Da Gama* with 2 quad Inchr with RGM-84C *Harpoon* Block 1B ASHM, 1 octuple Mk 29 GMLS with RIM-7M *Sea Sparrow* SAM, 2 triple 324mm SVTT Mk 32 ASTT with Mk 46 LWT, 1 Mk 15 *Phalanx* Block 1B CIWS, 1 100mm gun (capacity 2 *Lynx* Mk95 (*Super Lynx*) hel)**PATROL AND COASTAL COMBATANTS** 21**CORVETTES** • FS 2:1 *Baptista de Andrade* with 1 100mm gun, 1 hel landing platform1 *Joao Coutinho* with 1 twin 76mm gun, 1 hel landing platform**PSO** 4 *Viana do Castelo* with 1 hel landing platform**PCC** 5: 1 *Cacine*; 4 *Tejo* (ex-DNK *Flyvisken*)**PBR** 10: 5 *Argos*; 4 *Centauro*; 1 *Rio Minho***LOGISTICS AND SUPPORT** 10**AGS** 4: 2 *D Carlos I* (ex-US *Stalwart*); 2 *Andromeda***AXS** 6: 1 *Sagres*; 1 *Creoula*; 1 *Polar*; 2 *Belatrix*; 1 *Zarco***Marines 950****FORCES BY ROLE****SPECIAL FORCES**

1 SF det

MANOEUVRE**Light**

1 Lt inf bn

COMBAT SUPPORT

1 mor coy

1 MP coy

EQUIPMENT BY TYPE**ANTI-TANK/ANTI-INFRASTRUCTURE**MSL • MANPATS *Milan*; TOWRCL • 84mm *Carl Gustaf*

ARTILLERY • MOR 30+: 81mm some; 120mm 30

Naval Aviation**EQUIPMENT BY TYPE**HELICOPTERS • ASW 5: 4 *Lynx* Mk95 (*Super Lynx*); 1 *Lynx* Mk95A (*Super Lynx*)**Air Force 5,900****FORCES BY ROLE****FIGHTER/GROUND ATTACK**2 sqn with F-16AM/BM *Fighting Falcon***MARITIME PATROL**1 sqn with P-3C *Orion***ISR/TRANSPORT**

1 sqn with C295M

COMBAT SEARCH & RESCUE1 sqn with with AW101 *Merlin***TRANSPORT**1 sqn with C-130H/C-130H-30 *Hercules*1 sqn with *Falcon 50***TRAINING**1 sqn with AW119 *Koala*1 sqn with TB-30 *Epsilon***EQUIPMENT BY TYPE****AIRCRAFT 35 combat capable**FTR 30: 26 F-16AM *Fighting Falcon*; 4 F-16BM *Fighting Falcon*ASW 5 P-3C *Orion*

ISR: 7: 5 C295M (maritime surveillance), 2 C295M (photo recce)

TPT 13: **Medium** 5: 2 C-130H *Hercules*; 3 C-130H-30 *Hercules* (tpt/SAR); **Light** 5 C295M; **PAX** 3 *Falcon 50* (tpt/VIP)TRG 16 TB-30 *Epsilon***HELICOPTERS**TPT 17: **Medium** 12 AW101 *Merlin* (6 SAR, 4 CSAR, 2 fishery protection); **Light** 5 AW119 *Koala***AIR-LAUNCHED MISSILES**AAM • IR AIM-9L/I *Sidewinder*; ARH AIM-120C AMRAAMASM AGM-65A *Maverick*AShM AGM-84A *Harpoon***BOMBS**Laser-guided/GPS GBU-49 Enhanced *Paveyway II*

INS/GPS guided GBU-31 JDAM

Gendarmerie & Paramilitary 24,700**National Republican Guard 24,700****EQUIPMENT BY TYPE****PATROL AND COASTAL COMBATANTS 32**

PBF 12

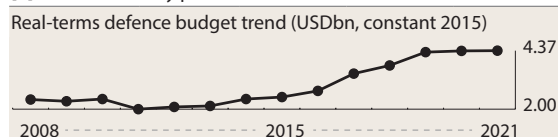
PB 20

HELICOPTERS • MRH 7 SA315 *Lama***DEPLOYMENT****CENTRAL AFRICAN REPUBLIC:** EU • EUTM RCA 55; UN • MINUSCA 189; 1 AB coy**IRAQ:** *Operation Inherent Resolve* 30**LITHUANIA:** NATO • Baltic Air Policing 150; 4 F-16AM *Fighting Falcon***MALI:** *Operation Barkhane* 2; EU • EUTM Mali 11; UN • MINUSMA 67; 1 tpt flt with 1 C295M**MOZAMBIQUE:** EU • EUTM Mozambique 120**NORTH SEA:** NATO • SNMG 1: 1 FFGHM**SOMALIA:** EU • EUTM Somalia 2**FOREIGN FORCES****United States** US European Command: 500; 1 ASW sqn with 5 P-8A *Poseidon*; 1 spt facility at Lajes**Romania ROM**

Romanian Leu RON		2020	2021	2022
GDP	RON	1.06tr	1.18tr	
	USD	249bn	287bn	
<i>per capita</i>	USD	12,868	14,864	
Growth	%	-3.9	7.0	
Inflation	%	2.6	4.3	
Def exp [a]	RON	21.4bn	23.1bn	
	USD	5.05bn	5.61bn	
Def bdgt [b]	RON	22.0bn	23.1bn	24.3bn
	USD	5.18bn	5.61bn	
FMA (US)	USD	5.6m	0m	0m
USD1=RON		4.24	4.12	

[a] NATO figure

[b] Includes military pensions



Population 21,230,362

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	7.2%	2.6%	2.7%	2.9%	26.0%	7.4%
Female	6.8%	2.4%	2.6%	2.7%	26.1%	10.7%

Capabilities

Romania's armed forces are structured around territorial defence, support to NATO and EU missions, and contributing to regional and global stability and security. According to the National Defence Strategy 2020-2024, principal security threats include Russia's increased presence in the Black Sea, hybrid warfare, cyber attacks, terrorism and the economic impact of the coronavirus pandemic. The 2021 Military Strategy highlights the need to improve readiness and to focus on strike capability and manoeuvrability. The government has stated the intention to strengthen operational capabilities and improve cooperation with other NATO

and EU members. There is an ongoing programme to modernise and upgrade the armed forces to NATO standards. Bucharest has signed defence-cooperation agreements with regional allies. There is a strategic partnership with the US. Romania hosts the *Aegis Ashore* ballistic-missile-defence system at Deveselu. There is broad training with NATO and regional allies, and Romania contributes to EU and NATO missions. The inventory is mainly composed of Soviet-era equipment, which is seen as a factor limiting capability. Acquisition plans include armoured vehicles, air-defence radars, surface-to-air missiles (including an upgraded version of *Patriot* from 2022) and corvettes. The Naval Strike Missile will be procured for coastal defence from 2024, while Bucharest has received the first elements of the HIMARS system ordered in 2018. Romania has received second-hand F-16 fighters from Portugal and is considering the acquisition of up to 48 more from the US. The country's defence industry has struggled since 1989. Current production focuses on small arms and ammunition. However, Bucharest is looking to boost the industry through offset agreements and technology transfers.

ACTIVE 71,500 (Army 35,500 Navy 6,800 Air 11,700 Joint 17,500) Gendarmerie & Paramilitary 57,000

RESERVE 55,000 (Joint 55,000)

ORGANISATIONS BY SERVICE

Army 35,500

Readiness is reported as 70–90% for NATO-designated forces (1 div HQ, 1 mech bde, 1 inf bde & 1 mtn inf bde) and 40–70% for other forces

FORCES BY ROLE

COMMAND

- 2 div HQ (2nd & 4th)
- elm 1 div HQ (MND-SE)

SPECIAL FORCES

- 1 SF bde (2 SF bn, 1 para bn, 1 log bn)

MANOEUVRE

Reconnaissance

- 1 recce bde
- 2 recce regt

Mechanised

- 5 mech bde (1 tk bn, 2 mech inf bn, 1 arty bn, 1 AD bn, 1 log bn)

Light

- 1 (MNB-SE) inf bde (3 inf bn, 1 arty bn, 1 AD bn, 1 log bn)
- 2 mtn inf bde (3 mtn inf bn, 1 arty bn, 1 AD bn, 1 log bn)

COMBAT SUPPORT

- 1 MRL bde (3 MRL bn, 1 STA bn, 1 log bn)
- 2 arty regt
- 1 engr bde (4 engr bn, 1 ptn br bn, 1 log bn)
- 2 engr bn
- 3 sigs bn
- 1 CIMIC bn
- 1 MP bn
- 3 CBRN bn

COMBAT SERVICE SUPPORT

- 3 spt bn

AIR DEFENCE

- 3 AD regt

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

MBT 377: 220 T-55AM; 103 TR-85; 54 TR-85 M1
IFV 191: 41 MLI-84 (incl CP); 101 MLI-84M *Jderul*; 49 *Piranha V*
APC 785

APC (T) 76 MLVM

APC (W) 649: 69 B33 TAB *Zimbru*; 37 *Piranha* IIIC; 354 TAB-71 (incl variants); 153 TAB-77 (incl variants)

PPV 60 *Maxxpro*

AUV 480 TABC-79 (incl variants)

ENGINEERING & MAINTENANCE VEHICLES

ARV 55: 3 MLI-84M TEHEVAC; 8 TERA-71L; 44 TERA-77L

VLB 43 BLG-67

NBC VEHICLES 109 RCH-84

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL

SP 158: 12 9P122 *Malyutka* (RS-AT-3 *Sagger*); 98 9P133 *Malyutka* (RS-AT-3 *Sagger*); 48 9P148 *Konkurs* (RS-AT-5 *Spandrel*)

MANPATS *Spike*-LR

GUNS

SP 100mm (23 SU-100 in store)

TOWED 100mm 218 M-1977

ARTILLERY 1,118

SP 122mm 40: 6 2S1 *Gvodzika*; 34 Model 89

TOWED 447: 122mm 96 (M-30) M-1938 (A-19); 152mm 351: 247 M-1981; 104 M-1985

MRL 188: 122mm 170: 134 APR-40; 36 LAROM; 227mm 18 M142 HIMARS

MOR 443: **SP** 82mm 177: 92 TAB-71AR; 85 TABC-79AR; 120mm 266 M-1982

AIR DEFENCE

SAM 96

Short-range 48: 32 2K12 *Kub* (RS-SA-6 *Gainful*); 16 9K33 *Osa* (RS-SA-8 *Gecko*)

Point-defence 48 CA-95

GUNS 65+

SP 35mm 41 *Gepard*

TOWED 24+: 14.5mm ZPU-2; 35mm 24 GDF-003;

57mm S-60

Navy 6,800

EQUIPMENT BY TYPE

PRINCIPAL SURFACE COMBATANTS • FRIGATES 3

FFGH 1 *Marasesti* with 4 twin Inchr with P-22 (RS-SS-N-2C *Styx*) ASHM, 2 triple 533mm ASTT with 53–65 HWT, 2 RBU 6000 *Smerch* 2 A/S mor, 4 AK630M CIWS, 2 twin 76mm guns (capacity 2 SA-316 (IAR-316) *Alouette* III hel)
FFH 2 *Regele Ferdinand* (ex-UK Type-22), with 2 triple STWS Mk.2 324mm TT, 1 76mm gun (capacity 1 SA330 (IAR-330) *Puma*)

PATROL AND COASTAL COMBATANTS 24

CORVETTES 4

FSH 2 *Tetal* II with 2 twin 533mm ASTT with SET-53M HWT, 2 RBU 6000 *Smerch* 2 A/S mor, 2 AK630 CIWS, 1 76mm gun (capacity 1 SA316 (IAR-316) *Alouette* III hel)

FS 2 *Tetal I* with 2 twin 533mm ASTT with SET-53M HWT, 2 RBU 2500 *Smerch* 1 A/S mor, 2 AK230 CIWS, 2 twin 76mm guns
PCFG 3 *Zborul* with 2 twin Inchr with P-22 (RS-SS-N-2C *Styx*) ASHM, 2 AK630 CIWS, 1 76mm gun
PCFT 3 *Naluca* with 4 single 533mm ASTT
PCR 8: 5 *Brutar II* with 2 BM-21 MRL, 1 100mm gun; 3 *Kogalniceanu* with 2 BM-21 MRL, 2 100mm guns
PBR 6 VD141 (ex-MSR now used for river patrol)
MINE WARFARE 11
MINE COUNTERMEASURES 10
MSO 4 *Musca* with 2 RBU 1200 *Uragan* A/S mor, 2 AK230 CIWS
MSR 6 VD141
MINELAYERS • ML 1 *Corsar* with up to 120 mines, 2 RBU 1200 *Uragan* A/S mor, 2 AK230 CIWS
LOGISTICS AND SUPPORT 8
AE 2 *Constanta* with 2 RBU 1200 *Uragan* A/S mor, 2 AK230 CIWS, 2 twin 57mm guns
AGOR 1 *Corsar*
AGS 2: 1 *Emil Racovita*; 1 *Catuneanu*
AOL 1 *Tulcea*
ATF 1 *Grozavu*
AXS 1 *Mircea*

Naval Infantry

FORCES BY ROLE

MANOEUVRE

Light

1 naval inf regt

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

AUV 14: 11 ABC-79M; 3 TABC-79M

Air Force 11,700

FORCES BY ROLE

FIGHTER

2 sqn with MiG-21 *Lancer* C

FIGHTER/GROUND ATTACK

1 sqn with with F-16AM/BM *Fighting Falcon*

GROUND ATTACK

1 sqn with IAR-99 *Soim**

TRANSPORT

1 sqn with An-30 *Clank*; C-27J *Spartan*

1 sqn with C-130B/H *Hercules*

TRAINING

1 sqn with IAR-99 *Soim**

1 sqn with SA316B *Alouette III* (IAR-316B); Yak-52 (Iak-52)

TRANSPORT HELICOPTER

2 (multi-role) sqn with IAR-330 SOCAT *Puma*

2 sqn with SA330L/M *Puma* (IAR-330L/M)

AIR DEFENCE

1 AD bde

COMBAT SERVICE SUPPORT

1 engr spt regt

EQUIPMENT BY TYPE

AIRCRAFT 59 combat capable

FTR 16: 13 F-16AM *Fighting Falcon*; 3 F-16BM *Fighting Falcon*

FGA 23: 6 MiG-21 *Lancer* B; 17 MiG-21 *Lancer* C

ISR 2 An-30 *Clank*

TPT • **Medium** 12: 7 C-27J *Spartan*; 4 C-130B *Hercules*; 1 C-130H *Hercules*

TRG 32: 10 IAR-99*; 10 IAR-99C *Soim**; 12 Yak-52 (Iak-52)

HELICOPTERS

MRH 30: 22 IAR-330 SOCAT *Puma*; 8 SA316B *Alouette III* (IAR-316B)

TPT • **Medium** 24: 12 SA330L *Puma* (IAR-330L); 12 SA330M *Puma* (IAR-330M)

AIR DEFENCE • SAM 17

Long-range 4 MIM-104E/F *Patriot* PAC-2 GEM-T/PAC-3 MSE

Medium-range 13: 5 S-75M3 *Volkhov* (RS-SA-2 *Guideline*); 8 MIM-23 *Hawk* PIP III

AIR-LAUNCHED MISSILES

AAM • **IR** AIM-9M *Sidewinder*; R-73 (RS-AA-11A

Archer); R-550 *Magic 2*; *Python 3* **IIR** AIM-9X *Sidewinder*

II; **ARH** AIM-120C AMRAAM

ASM *Spike-ER*

BOMBS

Laser-guided GBU-12 *Paveyway*; GBU-54 Laser JDAM

INS/GPS guided GBU-38 JDAM

Gendarmerie & Paramilitary €57,000

Gendarmerie €57,000

Ministry of Interior

DEPLOYMENT

BOSNIA-HERZEGOVINA: EU • EUFOR • *Operation Althea* 40

CENTRAL AFRICAN REPUBLIC: EU • EUTM RCA 13

DEMOCRATIC REPUBLIC OF THE CONGO: UN • MONUSCO 6

INDIA/PAKISTAN: UN • UNMOGIP 1

IRAQ: *Operation Inherent Resolve* 1; NATO • NATO Mission Iraq 4

MALI: EU • EUTM Mali 1; UN • MINUSMA 5

MEDITERRANEAN: EU • EU NAVFOR MED • *Operation Irini* 1 ML

POLAND: NATO • Enhanced Forward Presence 102; 1 SP ADA bty with *Gepard*

SERBIA: NATO • KFOR 63; UN • UNMIK 1

SOMALIA: EU • EUTM Somalia 1

SOUTH SUDAN: UN • UNMISS 6

FOREIGN FORCES

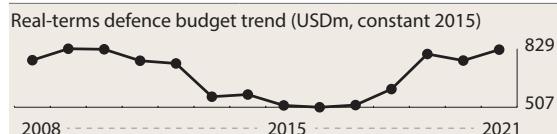
Canada NATO Air Policing: 135; 6 F/A-18A *Hornet* (CF-18)

Poland NATO MNB-SE 220; 1 mech inf coy; *Rosomak*

United States US European Command: 120; 1 *Aegis Ashore* BMD unit with 3 8-cell Mk 41 VLS with SM-3

Serbia SER

Serbian Dinar RSD		2020	2021	2022
GDP	RSD	5.46tr	5.99tr	
	USD	53.0bn	60.7bn	
per capita	USD	7,646	8,794	
Growth	%	-1.0	6.5	
Inflation	%	1.6	3.0	
Def bdtg	RSD	92.4bn	103bn	
	USD	896m	1.04bn	
USD1=RSD		103.16	98.67	



Population 6,974,289

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	7.2%	2.8%	2.8%	3.2%	24.3%	8.5%
Female	6.8%	2.6%	2.6%	3.0%	24.4%	11.8%

Capabilities

Serbia's armed forces focus on territorial defence, internal security and limited support to peacekeeping missions. According to the 2019 national-security strategy, key threats include separatism, ethnic and religious extremism, climate change and further international recognition of Kosovo. The armed forces are modernising to address long-term capability shortfalls and personnel shortages. Priorities include procurements; improving availability, maintenance and readiness levels; and bolstering air-defence systems. Serbia has agreed to deepen cooperation with NATO through an Individual Partnership Action Plan. Belgrade aspires to join the EU but not NATO. Serbia also maintains a close relationship with Russia, from which it has received transfers of military equipment in recent years. The armed forces have reduced in size over the last decade, though annual recruitment goals are not met. The armed forces also lack skilled technicians to operate and maintain advanced systems and suffer from a shortage of pilots. However, a number of items of new equipment were on display in its *Lightning Strike* 2021 exercise, including new or improved versions of various armoured vehicles. Serbia mostly trains with its Balkan neighbours, Russia and NATO countries. It contributes to EU, OSCE and UN peacekeeping missions. Serbia's defence industry focuses on missile and artillery systems, and small arms and ammunition, but the country is reliant on external suppliers for major platforms. Serbia continues to develop its defence industry, with a focus on the aerospace industry.

ACTIVE 28,150 (Army 13,250 Air Force and Air Defence 5,100 Training Command 3,000 Guards 1,600 Other MoD 5,200) Gendarmerie & Paramilitary 3,700

Conscript liability 6 months (voluntary)

RESERVE 50,150

ORGANISATIONS BY SERVICE

Army 13,250

FORCES BY ROLE

SPECIAL FORCES

1 SF bde (1 CT bn, 1 cdo bn, 1 para bn)

MANOEUVRE

Mechanised

1 (1st) bde (1 tk bn, 2 mech inf bn, 1 inf bn, 1 SP arty bn, 1 MRL bn, 1 AD bn, 1 engr bn, 1 log bn)

3 (2nd, 3rd & 4th) bde (1 tk bn, 2 mech inf bn, 2 inf bn, 1 SP arty bn, 1 MRL bn, 1 AD bn, 1 engr bn, 1 log bn)

COMBAT SUPPORT

1 (mixed) arty bde (4 arty bn, 1 MRL bn, 1 spt bn)

2 ptn bridging bn

1 NBC bn

1 sigs bn

2 MP bn

Reserve Organisations

FORCES BY ROLE

MANOEUVRE

Light

8 (territorial) inf bde

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

MBT 229: 199 M-84; 30 T-72MS

RECCE 76: 46 BRDM-2; 30 BRDM-2M

IFV 335: 320 M-80; 3 M80AB1; 12 Lazar-3 IFV

APC 95

APC(T) 44: 12 BTR-50 (CP); 32 MT-LB (CP)

APC (W) 51: 39 BOV-VP M-86; 12 Lazar-3 APC

AUV 25 BOV M16 *Milos*

ENGINEERING & MAINTENANCE VEHICLES

AEV IWT

ARV M84A1; T-54/T-55

VLB MT-55; TMM

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL

SP 48 BOV-1 (M-83) with 9K11 *Malyutka* (RS-AT-3 *Sagger*)

MANPATS 9K11 *Malyutka* (RS-AT-3 *Sagger*); 9K111 *Fagot* (RS-AT-4 *Spigot*)

RCL 90mm M-79

ARTILLERY 449

SP 73+: 122mm 67 2S1 *Gvozdika*; 155mm 6+ B-52 NORA

TOWED 132: 122mm 78 D-30; 130mm 18 M-46; 152mm 36 M-84 NORA-A

MRL 81: 128mm 78: 18 M-63 *Plamen*; 60 M-77 *Organj*;

262mm 3 M-87 *Orkan*

MOR 163: 82mm 106 M-69; 120mm 57 M-74/M-75

AIR DEFENCE

SAM 94+

Short-range 77 2K12 *Kub* (RS-SA-6 *Gainful*);

Point-defence 17+: 12 9K31M *Strela-1M* (RS-SA-9 *Gaskin*); 5 9K35M *Strela-10M*; 9K32M *Strela-2M* (RS-SA-7B *Grail*); Šilo (RS-SA-16 *Gimlet*)

GUNS

SP 40mm 8+ *Pasars-16*

TOWED 40mm 36 Bofors L/70

UNINHABITED AERIAL VEHICLES

CISR • Medium 6 CH-92A

AIR-LAUNCHED MISSILES

ASM FT-8C

River Flotilla

The Serbian–Montenegrin navy was transferred to Montenegro upon independence in 2006, but the Danube flotilla remained in Serbian control. The flotilla is subordinate to the Land Forces

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS 5

PBR 5: 3 Type-20; 2 *Jadar*

MINE WARFARE • MINE COUNTERMEASURES 4

MSI 4 *Nestin* with 1 quad Inchr with 9K32 *Strela-2M* (RS-SA-N-5 *Grail*) SAM

AMPHIBIOUS • LANDING CRAFT

LCVP 4 Type-22 (1 more non-operational)

LOGISTICS AND SUPPORT 3

AG 1 *Šabac* (degaussing vessel also used for patrol and troop transport) (capacity 80 troops)

AGF 1 *Kozara*

AOL 1

Air Force and Air Defence 5,100

FORCES BY ROLE

FIGHTER

1 sqn with MiG-29 *Fulcrum*; MiG-29UB *Fulcrum B*; MiG-29SE *Fulcrum C*

FIGHTER/GROUND ATTACK

1 sqn with IJ-22 *Orao 1**; J-22 *Orao 1*

TRANSPORT

1 sqn with An-2; An-26; Yak-40 (Jak-40); 1 PA-34 *Seneca V*

TRAINING

1 sqn with G-4 *Super Galeb** (adv trg/light atk); SA341/342 *Gazelle*; *Lasta 95*; Utva-75 (basic trg)

ATTACK HELICOPTER

1 sqn with SA341H/342L *Gazelle*; (HN-42/45); Mi-24 *Hind*; Mi-35M *Hind*

TRANSPORT HELICOPTER

2 sqn with H145M; Mi-8 *Hip*; Mi-17 *Hip H*; Mi-17V-5 *Hip*

AIR DEFENCE

1 bde (5 bn (2 msl, 3 SP msl) with S-125M *Neva-M* (RS-SA-3 *Goa*); 2K12 *Kub* (RS-SA-6 *Gainful*); 9K32 *Strela-2* (RS-SA-7 *Grail*); 9K310 *Igla-1* (RS-SA-16 *Gimlet*))

2 radar bn (for early warning and reporting)

COMBAT SUPPORT

1 sigs bn

COMBAT SERVICE SUPPORT

1 maint bn

EQUIPMENT BY TYPE

AIRCRAFT 60 combat capable

FTR 14: 3 MiG-29 *Fulcrum*; 3 MiG-29UB *Fulcrum B*; 8 MiG-29SE *Fulcrum C*

FGA 17 J-22 *Orao 1*

ISR 10 IJ-22R *Orao 1**

TPT • Light 8: 1 An-2 *Colt*; 4 An-26 *Curl*; 2 Yak-40 (Jak-40); 1 PA-34 *Seneca V*

TRG 44: 19 G-4 *Super Galeb**; 11 Utva-75; 14 *Lasta 95*

HELICOPTERS

ATK 6: 2 Mi-24 *Hind†*; 4 Mi-35M *Hind*

MRH 52: 5 H145M; 1 Mi-17 *Hip H*; 5 Mi-17V-5 *Hip*; 2 SA341H *Gazelle* (HI-42); 26 SA341H *Gazelle* (HN-42)/

SA342L *Gazelle* (HN-45); 13 SA341H *Gazelle* (HO-42)/

SA342L1 *Gazelle* (HO-45)

TPT • Medium 8 Mi-8T *Hip* (HT-40)

AIR DEFENCE

SAM 21+

Short-range 21: 6 S-125M *Neva-M* (RS-SA-3 *Goa*); 9 2K12 *Kub* (RS-SA-6 *Gainful*); 6 96K6 *Pantsir-S1* (RS-SA-22 *Greyhound*)

Point-defence 9K32 *Strela-2* (RS-SA-7 *Grail*)†; 9K310 *Igla-1* (RS-SA-16 *Gimlet*)

GUNS • TOWED 40mm 24 Bofors L/70

AIR-LAUNCHED MISSILES

AAM • IR R-60 (RS-AA-8 *Aphid*)

ASM AGM-65 *Maverick*; A-77 *Thunder*

Guards 1,600

FORCES BY ROLE

MANOEUVRE

Other

1 (ceremonial) gd bde (1 gd bn, 1 MP bn, 1 spt bn)

Gendarmerie & Paramilitary 3,700

Gendarmerie 3,700

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

APC • APC (W) 18: 6 *Lazar-3*; 12 BOV-VP M-86

AUV BOV M16 *Milos*

DEPLOYMENT

CENTRAL AFRICAN REPUBLIC: EU • EUTM RCA 7; UN • MINUSCA 76; 1 med coy

CYPRUS: UN • UNFICYP 8

DEMOCRATIC REPUBLIC OF THE CONGO: UN • MONUSCO 1

LEBANON: UN • UNIFIL 177; 1 mech inf coy

MALI: EU • EUTM Mali 3

MIDDLE EAST: UN • UNTSO 1

SOMALIA: EU • EUTM Somalia 6

TERRITORY WHERE THE GOVERNMENT DOES NOT EXERCISE EFFECTIVE CONTROL

In February 2008, Kosovo declared itself independent. Serbia remains opposed to this, and while Kosovo has not been admitted to the United Nations, a number of states have recognised Kosovo's self-declared status.

Kosovo Security Force 2,500; reserves 800

The Kosovo Security Force (KSF) was formed in January 2009 as a non-military organisation with responsibility for crisis response, civil protection and EOD. The new president has reaffirmed the ambition to develop a regular army following NATO standards and to join the Alliance, although NATO members are divided on this and the Alliance is formally against such a development. The KSF has been upgrading its capabilities to some extent, includ-

ing the acquisition of light armoured security vehicles from the United States starting in 2021. NATO has said that should the KSF's mandate evolve, it would have to examine its level of engagement with the force. The KSF is armed with small arms and light vehicles only. The NATO peace-support mission, KFOR, continues to maintain a presence in Kosovo. In March 2021 Kosovo deployed a platoon to Kuwait, where it will reportedly be under the command of the US Iowa National Guard.

Data here represents the de facto situation in Kosovo. This does not imply international recognition as a sovereign state.

FOREIGN FORCES

All under Kosovo Force (KFOR) command unless otherwise specified

Albania 29

Armenia 40

Austria 338; 1 recce coy; 1 mech inf coy; 1 log coy • UNMIK 1 obs

Bulgaria 26

Canada 5

Croatia 142; 1 inf coy; 1 hel flt with Mi-8

Czech Republic 9 • UNMIK 2 obs

Denmark 35

Finland 20

Germany 70

Greece 114; 1 inf coy

Hungary 472; 1 inf coy (KTM)

Ireland 13

Italy 638; 1 arty regt BG HQ; 1 Carabinieri unit

Latvia 133; 1 inf coy

Lithuania 1

Moldova 41 • UNMIK 1 obs

Montenegro 2

Poland 230; 1 inf coy • UNMIK 1 obs

Romania 63 • UNMIK 1 obs

Slovenia 219; 1 mot inf coy; 1 MP unit; 1 hel unit

Sweden 2

Switzerland 165; 1 inf coy; 1 engr pl; 1 hel flt with AS332

Turkey 321; 1 inf coy • UNMIK 1 obs

Ukraine 40 • UNMIK 2 obs

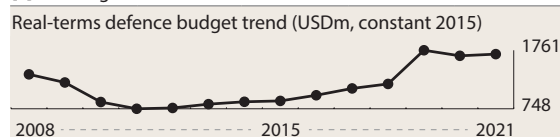
United Kingdom 35

United States 660; elm 1 ARNG inf bde HQ; 1 ARNG recce bn; 1 hel flt with UH-60

Slovakia SVK

Euro EUR		2020	2021	2022
GDP	EUR	91.6bn	97.8bn	
	USD	104bn	117bn	
per capita	USD	19,145	21,383	
Growth	%	-4.8	4.4	
Inflation	%	2.0	2.4	
Def exp [a]	EUR	1.80bn	1.68bn	
	USD	2.05bn	2.00bn	
Def bdgt	EUR	1.62bn	1.68bn	1.86bn
	USD	1.85bn	2.01bn	
USD1=EUR		0.88	0.84	

[a] NATO figure



Population 5,436,066

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	7.7%	2.5%	2.6%	3.2%	25.5%	7.0%
Female	7.3%	2.3%	2.5%	3.0%	25.7%	10.6%

Capabilities

Slovakia is trying to modernise its armed forces and replace obsolete equipment while contributing to international crisis-management missions. A defence white paper in September 2016 set out security priorities and a plan to increase defence capabilities. In 2017, the government approved a new defence strategy, a military strategy and a Long-Term Defence Development Plan. Work on a new security strategy and a new defence strategy began in July 2020 and was due to be completed by the end of the year. A NATO and EU member state, Slovakia cooperates closely with the Visegrád Group framework. Bratislava has signed an agreement to enable air policing and closer integration of air-defence capabilities. After amending the law on conscription in 2017, Slovakia began to implement its Active Reserves pilot project in order to help address shortfalls in specialist capacities, including in engineering. Results of the pilot project fell short of expectations, and Slovakia passed legislation in early 2018 to improve the training conditions for active reservists from mid-2018 onwards. Slovakia has committed to deploying a company-sized unit to NATO's Enhanced Forward Presence, serving with the Canadian-led battlegroup in Latvia, and has also contributed to EU operations and UN peacekeeping missions. Bratislava has begun to replace its small fighter and rotary-wing-transport fleets. Coinciding with the July 2018 NATO summit, the government announced it had selected the F-16, with delivery due between 2022 and 2024. There are also ambitions to replace land equipment and improve the level of technology in the armed forces. Part of Slovakia's defence-industrial base is organised within the state-controlled holding company DMD Group, including KONSTRUKTA Defence, which produces land systems. Other companies focus on maintenance, repair and overhaul services.

ACTIVE 17,950 (Army 10,300 Air 4,000 Central Staff 3,650)

ORGANISATIONS BY SERVICE

Central Staff 3,650

FORCES BY ROLE

SPECIAL FORCES

1 (5th) spec ops bn

Army 10,300

FORCES BY ROLE

MANOEUVRE

Armoured

1 (2nd) armd bde (1 recce bn, 1 tk bn, 2 armd inf bn, 1 mixed SP arty bn)

Mechanised

1 (1st) mech bde (3 armd inf bn, 1 MRL bn, 1 engr bn, 1 NBC bn)

COMBAT SUPPORT

1 MP bn

COMBAT SERVICE SUPPORT

1 spt bde (2 log bn, 1 maint bn, 1 spt bn)

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

MBT 30 T-72M

RECCE 18 BPsVI

IFV 256: 148 BMP-1; 91 BMP-2; 17 BVP-M

APC 101+

APC (T) 72 OT-90

APC (W) 22: 7 OT-64; 15 *Tatrapan* (6×6)

PPV 7+ RG-32M

AUV IVECO LMV

ENGINEERING & MAINTENANCE VEHICLES

ARV MT-55; VT-55A; VT-72B; WPT-TOPAS

VLB AM-50; MT-55A

MW *Bozena*; UOS-155 *Belarty*

ANTI-TANK/ANTI-INFRASTRUCTURE

SP 9S428 with *Malyutka* (RS-AT-3 *Sagger*) on BMP-1;

9P135 *Fagot* (RS-AT-4 *Spigot*) on BMP-2; 9P148 *Konkurs*

(RS-AT-5 *Spandrel*) on BRDM-2

MANPATS 9K11 *Malyutka* (RS-AT-3 *Sagger*); 9K111-1

Konkurs (RS-AT-5 *Spandrel*)

RCL 84mm *Carl Gustaf*

ARTILLERY 57

SP 27: 152mm 3 M-77 *Dana*; 155mm 24: 16 M-2000 *Zuzana*; 8 *Zuzana*-2

MRL 30: 122mm 4 RM-70; 122/227mm 26 RM-70/85

MODULAR

AIR DEFENCE

SAM • Point-defence 9K310 *Igla*-1 (RS-SA-16 *Gimlet*)

Air Force 4,000

FORCES BY ROLE

FIGHTER

1 sqn with MiG-29AS/UBS *Fulcrum*

TRANSPORT

1 flt with C-27J *Spartan*

1 flt with L-410FG/T *Turbolet*

TRANSPORT HELICOPTER

1 sqn with Mi-17 *Hip* H

1 sqn with UH-60M *Black Hawk*

TRAINING

1 sqn with L-39CM/ZAM *Albatros**

AIR DEFENCE

1 bde with 2K12 *Kub* (RS-SA-6 *Gainful*); S-300PMU (RS-SA-10 *Grumble*)

EQUIPMENT BY TYPE

AIRCRAFT 19 combat capable

FTR 11: 9 MiG-29AS *Fulcrum*; 2 MiG-29UBS *Fulcrum*;

TPT 5: Medium 2 C-27J *Spartan*; Light 3: 1 L-410FG *Turbolet*; 2 L-410T *Turbolet*; (4 L-410UVP *Turbolet* in store)

TRG 8: 6 L-39CM *Albatros**; 2 L-39ZAM *Albatros** (1 more in store)

HELICOPTERS

ATK (15: 5 Mi-24D *Hind* D; 10 Mi-24V *Hind* E all in store)

MRH 13 Mi-17 *Hip* H (incl 4 SAR)

TPT • Medium 9 UH-60M *Black Hawk*

AIR DEFENCE • SAM

Long-range S-300PMU (RS-SA-10 *Grumble*)

Short-range 2K12 *Kub* (RS-SA-6 *Gainful*)

AIR-LAUNCHED MISSILES

AAM • IR R-60 (RS-AA-8 *Aphid*); R-73 (RS-AA-11A

Archer); SARH R-27R (RS-AA-10A *Alamo*)

DEPLOYMENT

BOSNIA-HERZEGOVINA: EU • EUFOR • Operation *Althea* 40

CENTRAL AFRICAN REPUBLIC: EU • EUTM RCA 2

CYPRUS: UN • UNFICYP 289; 2 inf coy; 1 engr pl

IRAQ: NATO • NATO Mission Iraq 5

LATVIA: NATO • Enhanced Forward Presence 97; 1 arty bty with M-2000 *Zuzana*

MALI: EU • EUTM Mali 4

MIDDLE EAST: UN • UNTSO 3

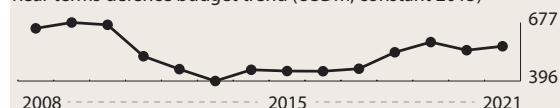
Slovenia SVN

Euro EUR		2020	2021	2022
GDP	EUR	46.9bn	51.0bn	
	USD	53.5bn	60.9bn	
per capita	USD	25,549	28,939	
Growth	%	-4.2	6.3	
Inflation	%	-0.1	1.4	
Def exp [a]	EUR	498m	624m	
	USD	568m	745m	
Def bdgt [b]	EUR	530m	561m	688m
	USD	605m	670m	
USD1=EUR		0.88	0.84	

[a] NATO figure

[b] Includes military pensions

Real-terms defence budget trend (USDm, constant 2015)



Population 2,102,106

Age	0–14	15–19	20–24	25–29	30–64	65 plus
Male	7.6%	2.3%	2.4%	2.6%	25.6%	9.4%
Female	7.2%	2.2%	2.2%	2.4%	23.8%	12.3%

Capabilities

Since joining NATO and the EU in 2004, territorial defence and the ability to take part in peace-support operations have been central to Slovenia's defence strategy. In January 2020, the defence ministry published a white paper that built on the Strategic Defence Review (SDR) of 2016 and the 2019 national-security strategy and acknowledged a deteriorating security environment in Europe. The white paper described mechanised battalion-sized battle groups as the core of Slovenia's future combat capabilities, with the goal of forming the first of these by 2027 and a second by 2030. The 2016 SDR had already defined the formation and equipping of two battalion-sized battlegroups by 2023 as its main goal. By 2035, active forces and the contract reserve are to grow to 8,000 and 2,000 personnel respectively. The white paper indicated that a higher level of defence expenditure would be required to meet modernisation goals. Procurement priorities were defined as wheeled armoured vehicles, self-propelled artillery, short- and medium-range air defence, and helicopters. In January 2021, Slovenia announced that it would procure up to two C-27J *Spartan* transport aircraft. Slovenia acts as the framework nation for the NATO Mountain Warfare Centre of Excellence. Because its small air wing is not equipped to provide air policing, Italy and Hungary currently provide this capability under NATO arrangements. The country contributes to EU, NATO and UN operations and exercises with other member states. Recruitment and retention continue to be a challenge. Slovenia participates in NATO's Enhanced Forward Presence, where it contributes to the Canadian-led battlegroup in Latvia. Its defence industry relies heavily on exports for its revenue and focuses on personal equipment, small arms and ammunition, and CBRN protection and detection.

ACTIVE 6,950 (Army 6,950)**RESERVE 1,200 (Army 1,200)**

ORGANISATIONS BY SERVICE

Army 6,950

FORCES BY ROLE

Regt are bn sized

SPECIAL FORCES

1 SF unit (1 spec ops coy, 1 CSS coy)

MANOEUVRE

Mechanised

1 (1st) mech inf bde (1 mech inf regt, 1 mtn inf regt, 1 cbt spt bn (1 ISR coy, 1 arty bty, 1 engr coy, 1 MP coy, 1 CBRN coy, 1 sigs coy, 1 SAM bty))

1 (72nd) mech inf bde (2 mech inf regt, 1 cbt spt bn (1 ISR coy, 1 arty bty, 1 engr coy, 1 MP coy, 1 CBRN coy, 1 sigs coy, 1 SAM bty))

COMBAT SUPPORT

1 EW coy

COMBAT SERVICE SUPPORT

1 log bde (1 log regt, 1 maint regt (1 tk coy), 1 med regt)

Reserves

FORCES BY ROLE

MANOEUVRE

Mountain

2 inf regt (territorial – 1 allocated to each inf bde)

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

MBT 14 M-84 (trg role) (32 more in store)

APC 115+:

APC (W) 115: 85 *Pandur* 6×6 (*Valuk*); 30 *Patria* 8×8 (*Svarun*)PPV *Cougar* 6×6 JERRV

AUV 24 JLTV

ENGINEERING & MAINTENANCE VEHICLES

ARV VT-55A

VLB MT-55A

NBC VEHICLES 10 *Cobra* CBRN

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL • MANPATS *Spike* MR/LR

ARTILLERY 68

TOWED • 155mm 18 TN-90

MOR 50+: 82mm M-69; 120mm 50 MN-9/M-74

AIR DEFENCE • SAM • Point-defence 9K338 *Igla-S* (RS-SA-24 *Grinch*)

Army Maritime Element 130

FORCES BY ROLE

SPECIAL FORCES

1 SF unit

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS 2

PCC 1 *Triglav* III (RUS *Svetlyak*)PBF 1 *Super Dvora* MkII

Air Element 590

FORCES BY ROLE

TRANSPORT

1 sqn with *Falcon* 2000EX; L-410 *Turbolet*; PC-6B *Turbo Porter*

TRAINING

1 unit with Bell 206 *Jet Ranger* (AB-206); PC-9M*; Z-143L; Z-242L

TRANSPORT HELICOPTER

1 sqn with AS532AL *Cougar*; Bell 412 *Twin Huey*

COMBAT SERVICE SUPPORT

1 maint sqn

EQUIPMENT BY TYPE

AIRCRAFT 9 combat capable

TPT 4: Light 3: 1 L-410 *Turbolet*; 2 PC-6B *Turbo Porter*

PAX 1 *Falcon* 2000EX

TRG 19: 9 PC-9M*; 2 Z-143L; 8 Z-242L

HELICOPTERS

MRH 8: 5 Bell 412EP *Twin Huey*; 2 Bell 412HP *Twin Huey*; 1 Bell 412SP *Twin Huey* (some armed)

TPT 8: Medium 4 AS532AL *Cougar*; **Light** 4 Bell 206 *Jet Ranger* (AB-206)

DEPLOYMENT

BOSNIA-HERZEGOVINA: EU • EUFOR • *Operation Althea* 10

IRAQ: *Operation Inherent Resolve* 6

LATVIA: NATO • Enhanced Forward Presence 40; 1 engr pl

MALI: EU • EUTM Mali 8

MIDDLE EAST: UN • UNTSO 2

SERBIA: NATO • KFOR 219; 1 mot inf coy; 1 MP unit; 1 hel unit

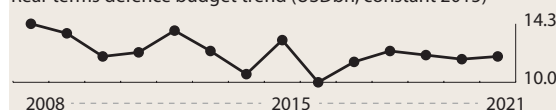
Spain ESP

Euro EUR		2020	2021	2022
GDP	EUR	1.12tr	1.21tr	
	USD	1.28tr	1.44tr	
per capita	USD	27,179	30,537	
Growth	%	-10.8	5.7	
Inflation	%	-0.3	2.2	
Def exp [a]	EUR	11.2bn	12.2bn	
	USD	12.8bn	14.6bn	
Def bdtg [b]	EUR	11.2bn	11.5bn	
	USD	12.7bn	13.8bn	
USD1=EUR		0.88	0.84	

[a] NATO figure

[b] Includes military pensions

Real-terms defence budget trend (USDbn, constant 2015)



Population 47,260,584

Age	0-14	15-19	20-24	25-29	30-64	65 plus
Male	7.5%	2.6%	2.4%	2.5%	25.9%	8.4%
Female	7.1%	2.5%	2.3%	2.3%	25.3%	11.1%

Capabilities

The 2017 National Security Strategy indicated that Spain's defence policy was global in scope, though concerned with threats emanating from the Middle East and sub-Saharan Africa. The army reviewed its force structure in 2015, which resulted in a reorganisation into multipurpose brigades with heavy, medium and light capabilities, optimised for deployable operations. Spain is a member of NATO, continues to support NATO, EU and UN operations abroad, and hosts one of NATO's two Combined Air Operations Centres. The armed forces are well trained and there is a routine exercise programme for both domestic and multinational exercises. The country's equipment and logistic-support capability appears to be sufficient to meet its national commitments and contribution to NATO operations and exercises. In early 2018, Spain launched an equipment-modernisation plan, with funding for the modernisation of army *Chinook* helicopters, for the S-80 submarine programme and for military-communications satellites. Spain's defence industry manufactures across all domains and exports globally. Navantia is the principal, state-owned, shipbuilding firm. The industry is largely integrated within the European defence-industrial manufacturing base.

ACTIVE 122,850 (Army 71,300 Navy 20,350 Air 19,750 Joint 11,450) Gendarmerie & Paramilitary 75,800

RESERVE 14,900 (Army 8,800 Navy 3,150 Air 2,350 Other 600)

ORGANISATIONS BY SERVICE

Space

EQUIPMENT BY TYPE

SATELLITES 3

COMMUNICATIONS 2: 1 *Spainsat*; 1 *Xtar-Eur*

ISR 1 *Paz*

Army 71,300

The Land Forces High Readiness HQ Spain provides one NATO Rapid Deployment Corps HQ (NRDC-ESP)

FORCES BY ROLE

COMMAND

1 corps HQ (CGTAD/NRDC-ESP) (1 int regt, 1 MP bn)

2 div HQ

SPECIAL FORCES

1 comd (3 spec ops bn, 1 int coy, 1 sigs coy, 1 log bn)

MANOEUVRE

Reconnaissance

1 armd cav regt (2 armd recce bn)

Mechanised

2 (10th & 11th) mech bde (1 armd regt (1 armd recce bn, 1 tk bn), 1 mech inf regt (1 armd inf bn, 1 mech inf bn), 1 lt inf bn, 1 SP arty bn, 1 AT coy, 1 AD coy, 1 engr bn, 1 int coy, 1 NBC coy, 1 sigs coy, 1 log bn)

1 (12th) mech bde (1 armd regt (1 armd recce bn, 1 tk bn), 1 mech inf regt (1 armd inf bn, 1 mech inf bn), 1 mtn inf bn, 1 SP arty bn, 1 AT coy, 1 AD coy, 1 engr bn, 1 int coy, 1 NBC coy, 1 sigs coy, 1 log bn)

1 (1st) mech bde (1 armd regt (1 armd recce bn, 1 tk bn), 1 mech inf regt (1 armd inf bn, 1 mtn inf bn), 1 mtn inf

bn, 1 SP arty bn, 1 AT coy, 1 AD coy, 1 engr bn, 1 int coy, 1 NBC coy, 1 sigs coy, 1 log bn)
 2 (2nd/La Legion & 7th) lt mech bde (1 armd recce bn, 1 mech inf regt (2 mech inf bn), 1 lt inf bn, 1 fd arty bn, 1 AT coy, 1 AD coy, 1 engr bn, 1 int coy, 1 NBC coy, 1 sigs coy, 1 log bn)

Air Manoeuvre

1 (6th) bde (1 recce bn, 2 para bn, 1 lt inf bn, 1 fd arty bn, 1 AT coy, 1 AD coy, 1 engr bn, 1 int coy, 1 NBC coy, 1 sigs coy, 1 log bn)

Other

1 (Canary Islands) comd (1 lt inf bde (2 mech inf regt (1 mech inf bn), 1 lt inf regt (1 lt inf bn), 1 fd arty regt, 1 AT coy, 1 engr bn, 1 int coy, 1 NBC coy, 1 sigs coy, 1 log bn); 1 spt hel bn; 1 AD regt)
 1 (Balearic Islands) comd (1 inf regt)
 2 (Ceuta and Melilla) comd (1 recce regt, 1 mech inf bn, 1 inf bn, 1 arty regt, 1 engr bn, 1 sigs coy, 1 log bn)

COMBAT SUPPORT

1 arty comd (1 arty regt; 1 MRL regt; 1 coastal arty regt)
 1 engr comd (2 engr regt, 1 bridging regt)
 1 EW/sigs bde (2 EW regt, 3 sigs regt)
 1 NBC regt
 1 info ops regt (1 CIMIC bn; 1 Psyops bn)
 1 int regt

COMBAT SERVICE SUPPORT

1 log bde (5 log regt; 1 tpt regt; 1 med gp (1 log unit, 2 med regt, 1 fd hospital unit))

HELICOPTER

1 hel comd (1 atk hel bn, 2 spt hel bn, 1 tpt hel bn, 1 sigs bn, 1 log unit (1 spt coy, 1 supply coy))

AIR DEFENCE

1 AD comd (3 SAM regt, 1 sigs unit)

EQUIPMENT BY TYPE

ARMoured FIGHTING VEHICLES

MBT 327: 108 *Leopard* 2A4; 219 *Leopard* 2E

ASLT 84 B1 *Centauro*

RECCE 187 VEC-M1

IFV 225: 204 *Pizarro*; 21 *Pizarro* (CP)

APC 903

APC (T) 473: 20 Bv-206S; 453 M113 (incl variants)

APC (W) 320 BMR-600/BMR-600M1

PPV 110 RG-31

AUV 260 IVECO LMV

ENGINEERING & MAINTENANCE VEHICLES

AEV 27 CZ-10/25E; 1 *Pizarro* CEV (*Castor*) (in test)

ARV 51: 16 *Leopard* REC; 5 BMR REC; 4 *Centauro* REC; 14 *Maxxpro* MRV; 12 M113

VLB 15 M60 AVLB

MW 6 *Husky* 2G

ANTI-TANK/ANTI-INFRASTRUCTURE

MSL • MANPATS *Spike*-LR; TOW

ARTILLERY 1,571

SP 155mm 95 M109A5

TOWED 287: 105mm 223: 56 L118 Light Gun; 167 Model 56 pack howitzer; 155mm 64 SBT 155/52 SIAC

MOR 1,189: 81mm 777; SP 81mm 10 VAMTAC with *Cardom* 81mm; 120mm 402

COASTAL DEFENCE • ARTY 155mm 19 SBT 155/52 APU SBT V07

HELICOPTERS

ATK 24: 6 *Tiger* HAP-E; 18 *Tiger* HAD-E

TPT 85: **Heavy** 17 CH-47D *Chinook* (HT-17D); **Medium** 47: 16 AS332B *Super Puma* (HU-21); 12 AS532UL *Cougar*; 6 AS532AL *Cougar*; 13 NH90 TTH; **Light** 21: 5 Bell 212 (HU.18); 16 H135 (HE.26/HU.26)

UAV • ISR • **Medium** 6: 2 *Searcher* MkII-J (PASI); 4 *Searcher* MkIII (PASI)

AIR DEFENCE

SAM 77+

Long-range 18 M901 *Patriot* PAC-2

Medium-range 38 MIM-23B *I-Hawk* Phase III

Short-range 21: 8 NASAMS; 13 *Skyguard/Aspide*

Point-defence *Mistral*

GUNS • TOWED 35mm 67: 19 GDF-005; 48 GDF-007

AIR-LAUNCHED MISSILES • ASM *Spike*-ER

Navy 20,350 (incl Naval Aviation and Marines)

EQUIPMENT BY TYPE

SUBMARINES 2

SSK 2 *Galerna* with 4 single 533mm TT with F17 mod 2 HWT

PRINCIPAL SURFACE COMBATANTS 11

DESTROYERS • DDGHM 5 *Alvaro de Bazan* with *Aegis* Baseline 5 C2, 2 quad Inchr with RGM-84F *Harpoon* Block 1D AShM, 6 8-cell Mk 41 VLS with SM-2 Block IIIA/RIM-162B ESSM SAM, 2 twin 324mm SVTT Mk 32 mod 9 ASTT with Mk 46 mod 5 LWT, 1 127mm gun (capacity 1 SH-60B *Seahawk* ASW hel)

FRIGATES • FFGH 6 *Santa Maria* with 1 Mk 13 GMLS with RGM-84C *Harpoon* Block 1B AShM, 2 triple 324mm SVTT Mk 32 ASTT with Mk 46 mod 5 LWT, 1 *Meroka* mod 2B CIWS, 1 76mm gun (capacity 2 SH-60B *Seahawk* ASW hel)

AMPHIBIOUS

PRINCIPAL AMPHIBIOUS SHIPS 3:

LHD 1 *Juan Carlos I* (capacity 18 hel or 10 AV-8B FGA ac; 4 LCM-1E; 42 APC; 46 MBT; 900 troops)

LPD 2 *Galicia* (capacity 6 Bell 212 or 4 SH-3D *Sea King* hel; 4 LCM or 2 LCM & 8 AAV; 130 APC or 33 MBT; 540 troops)

LANDING CRAFT • LCM 12 LCM 1E

LOGISTICS AND SUPPORT 2

AORH 2: 1 *Patino* (capacity 3 Bell 212 or 2 SH-3D *Sea King* hel); 1 *Canabria* (capacity 3 Bell 212 or 2 SH-3D *Sea King* hel)

Maritime Action Force

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS 23

PSOH 6 *Meteoro* (*Buques de Accion Maritima*) with 1 76mm gun

PSO 5: 3 *Alboran* each with 1 hel landing platform; 2 *Descubierta* with 1 76mm gun

PCO 4 *Serviola* with 1 76mm gun

PCC 3 *Anaga* with 1 76mm gun

PB 4: 2 P-101; 2 *Toralla*

PBR 1 *Cabo Fradera*

MINE WARFARE • MINE COUNTERMEASURES 6

MHO 6 *Segura*

LOGISTICS AND SUPPORT 30**AGI 1** *Alerta***AGOR 2** (with ice-strengthened hull, for polar research duties in Antarctica)**AGS 3:** 2 *Malaspina*; 1 *Castor***AKR 1** *Ysabel***AP 1** *Contra maestre Casado* with 1 hel landing platform**ASR 1** *Neptuno***ATF 3:** 1 *Mar Caribe*; 1 *Mahon*; 1 *La Grana***AXL 10:** 6 *Contra maestre*; 4 *Guardiamarina***AXS 8****Naval Aviation 850****FORCES BY ROLE****FIGHTER/GROUND ATTACK**1 sqn with AV-8B *Harrier II Plus***ANTI-SUBMARINE WARFARE**1 sqn with SH-60B/F *Seahawk***TRANSPORT**1 (liaison) sqn with Cessna 550 *Citation II*; Cessna 650 *Citation VII***TRAINING**

1 sqn with Hughes 500MD8

1 flt with TAV-8B *Harrier***TRANSPORT HELICOPTER**

1 sqn with Bell 212 (HU-18)

1 sqn with SH-3D *Sea King***EQUIPMENT BY TYPE****AIRCRAFT** 13 combat capable**FGA 13:** 12 AV-8B *Harrier II Plus*; 1 TAV-8B *Harrier* (on lease from USMC)**TPT • Light 4:** 3 Cessna 550 *Citation II*; 1 Cessna 650 *Citation VII***HELICOPTERS****ASW 20:** 4 SH-3D *Sea King* (tpt); 12 SH-60B *Seahawk*; 4 SH-60F *Seahawk***MRH 9** Hughes 500MD**TPT • Light 7** Bell 212 (HA-18)**AIR-LAUNCHED MISSILES****AAM • IR** AIM-9L *Sidewinder*; **ARH** AIM-120 *AMRAAM***ASM** AGM-65G *Maverick*; AGM-114K/R *Hellfire II***AShM** AGM-119 *Penguin***Marines 5,350****FORCES BY ROLE****SPECIAL FORCES**

1 spec ops bn

MANOEUVRE**Amphibious**

1 mne bde (1 recce unit, 1 mech inf bn, 2 inf bn, 1 arty bn, 1 log bn)

Other

1 sy bde (5 mne garrison gp)

EQUIPMENT BY TYPE**ARMoured FIGHTING VEHICLES****APC • APC (W) 34:** 32 *Piranha IIIC*; 1 *Piranha IIIC* (amb); 1 *Piranha IIIC EW* (EW)**AAV 18:** 16 AAV-7A1/AAVP-7A1; 2 AAVC-7A1 (CP)**ENGINEERING & MAINTENANCE VEHICLES****AEV 4** *Piranha IIIC***ARV 3:** 1 AAVR-7A1; 1 M88; 1 *Piranha IIIC***ARTILLERY 30****SP 155mm** 6 M109A2**TOWED 105mm** 24 Model 56 pack howitzer**ANTI-TANK/ANTI-INFRASTRUCTURE****MSL • MANPATS** *Spike-LR*; TOW-2**AIR DEFENCE • SAM • Point-defence** *Mistral***Air Force 19,750**

The Spanish Air Force is organised in 3 commands – General Air Command, Combat Air Command and Canary Islands Air Command

FORCES BY ROLE**FIGHTER**2 sqn with Eurofighter *Typhoon***FIGHTER/GROUND ATTACK**5 sqn with F/A-18A/B MLU *Hornet* (EF-18A/B MLU)**MARITIME PATROL**1 sqn with P-3A/M *Orion***ISR**1 sqn with Beech C90 *King Air*1 sqn with Cessna 550 *Citation V*; CN235 (TR-19A)**ELECTRONIC WARFARE**1 sqn with C-212 *Aviocar*; *Falcon 20D***SEARCH & RESCUE**1 sqn with AS332B/B1 *Super Puma*; CN235 VIGMA1 sqn with AS332B *Super Puma*; CN235 VIGMA; H215 (AS332C1) *Super Puma*1 sqn with C-212 *Aviocar*; CN235 VIGMA**TANKER/TRANSPORT**

1 sqn with A400M

TRANSPORT1 VIP sqn with A310; *Falcon 900*

1 sqn with A400M

1 sqn with C-212 *Aviocar*

2 sqn with C295

1 sqn with CN235

TRAINING1 OCU sqn with Eurofighter *Typhoon*1 OCU sqn with F/A-18A/B (EF-18A/B MLU) *Hornet*1 sqn with Beech F33C *Bonanza*2 sqn with C-101 *Aviojet*1 sqn with C-212 *Aviocar*

1 sqn with PC-21

1 sqn with T-35 *Pillan* (E-26)2 (LIFT) sqn with F-5B *Freedom Fighter*1 hel sqn with H120 *Colibri*

1 hel sqn with S-76C

TRANSPORT HELICOPTER1 sqn with AS332M1 *Super Puma*; AS532UL *Cougar* (VIP)**ISR UAV**1 sqn with MQ-9A *Reaper* (forming)**EQUIPMENT BY TYPE****AIRCRAFT** 175 combat capable**FTR 88:** 69 Eurofighter *Typhoon*; 19 F-5B *Freedom Fighter***FGA 84:** 20 F/A-18A *Hornet* (EF-18A); 52 EF-18A MLU; 12 EF-18B MLU**ASW 3** P-3M *Orion*

MP 8 CN235 VIGMA
 ISR 2 CN235 (TR-19A)
 EW 3: 1 C-212 *Aviocar* (TM.12D); 2 *Falcon* 20D
 TPT 69: **Heavy** 10 A400M; **Light** 51: 3 Beech C90 *King Air*; 15 Beech F33C *Bonanza*; 10 C-212 *Aviocar* (incl 9 trg); 12 C295; 8 CN235; 3 Cessna 560 *Citation V* (ISR);
 PAX 8: 2 A310; 1 A330 (to be converted to MRTT tkt/tpt configuration); 5 *Falcon* 900 (VIP)
 TRG 97: 59 C-101 *Aviojet*; 2 PC-21; 36 T-35 *Pillan* (E-26)

HELICOPTERS

TPT 41: **Medium** 19: 5 AS332B/B1 *Super Puma*; 4 AS332M1 *Super Puma*; 4 H215 (AS332C1) *Super Puma*; 2 AS532UL *Cougar* (VIP); 4 NH90 TTH; **Light** 22: 14 H120 *Colibri*; 8 S-76C

UNINHABITED AERIAL VEHICLES • CISR • **Heavy** 4 MQ-9A *Reaper* (unarmed)

AIR DEFENCE • SAM

Short-range *Skyguard/Aspide*

Point-defence *Mistral*

AIR-LAUNCHED MISSILES

AAM • IR AIM-9L/JULI *Sidewinder*; IIR IRIS-T; SARH AIM-7P *Sparrow*; ARH AIM-120B/C AMRAAM
 ARM AGM-88B HARM
 ASM AGM-65G *Maverick*
 ASHm AGM-84D *Harpoon*
 LACM Taurus KEPD 350

BOMBS

Laser-guided: GBU-10/12/16 *Paveway* II; GBU-24 *Paveway* III; EGBU-16 *Paveway* II; BPG-2000
INS/GPS guided: GBU-38 JDAM

Emergencies Military Unit (UME) 3,500

FORCES BY ROLE

COMMAND

1 div HQ

MANOEUVRE

Other

5 Emergency Intervention bn

1 Emergency Support and Intervention regt

COMBAT SUPPORT

1 sigs bn

HELICOPTER

1 hel bn opcon Army

Gendarmerie & Paramilitary 75,800

Guardia Civil 75,800

17 regions, 54 Rural Comds

FORCES BY ROLE

SPECIAL FORCES

8 (rural) gp

MANOEUVRE

Other

15 (traffic) sy gp

1 (Special) sy bn

EQUIPMENT BY TYPE

PATROL AND COASTAL COMBATANTS 64

PSO 1 with 1 hel landing platform

PCC 2

PBF 34

PB 27

AIRCRAFT • TPT • **Light** 3: 2 CN235-300; 1 King Air 350i

HELICOPTERS

MRH 20: 2 AS653N3 *Dauphin*; 18 Bo-105ATH

TPT • **Light** 21: 8 BK-117; 13 H135

DEPLOYMENT

BOSNIA-HERZEGOVINA: EU • EUFOR • *Operation Althea* 2

CENTRAL AFRICAN REPUBLIC: EU • EUTM RCA 8

DJIBOUTI: EU • *Operation Atalanta* 1 P-3M Orion

GULF OF ADEN & INDIAN OCEAN: EU • *Operation Atalanta* 1 FFGHM

GULF OF GUINEA: Navy 50; 1 PCO

IRAQ: *Operation Inherent Resolve* 150; 1 trg unit; 1 hel unit with CH-47D *Chinook*; AS532 *Cougar*; NATO • NATO Mission Iraq 115

LATVIA: NATO • Enhanced Forward Presence 346; 1 armd inf coy(+); 1 cbt engr coy

LEBANON: UN • UNIFIL 625; 1 mech bde HQ; 1 mech inf bn(-); 1 engr coy; 1 sigs coy; 1 log coy

MALI: EU • EUTM Mali 540; 1 hel unit with 3 NH90 TTH; UN • MINUSMA 1

MEDITERRANEAN SEA: NATO • SNMCMG 2: 1 PSOH

NORTH SEA: NATO • SNMG 1: 1 DDGHM

SENEGAL: *Operation Barkhane* 65; 2 C295M

SOMALIA: EU • EUTM Somalia 20

TURKEY: NATO • *Operation Active Fence* 150; 1 SAM bty with M901 *Patriot* PAC-2

FOREIGN FORCES

United States US European Command: 3,250; 4 DDGM; 1 air base at Morón; 1 naval base at Rota