

NORTHERN EUROPEAN AND TRANSATLANTIC SECURITY (NOTS)

Germany's Military Capability 2020

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The changing geopolitical environment has prompted a reassessment of German security and defence policy. While still closely tied to multilateral institutions, Germany has the ambition to assume greater responsibility for international security. The German Armed Forces have started a process of modernisation and transformation towards the task of collective and territorial defence. However, previous drawdowns and cutbacks have resulted in significant personnel and materiel shortages, which will take time to overcome. Since the federal elections in 2017, the political parties of the coalition government are more divided on security and defence issues at the same time as they undergo a leadership transition, which makes it difficult for Germany to assume the responsibility of a major European power in the field of security and defence.

SECURITY AND DEFENCE POLICY

The new geopolitical environment characterised by increasing competition between great powers and weakened multilateral institutions is challenging the basics of German security and defence policy. Having pursued a culture of restraint towards military operations abroad since the founding of the Federal Republic of Germany in 1949, in 2014 German political leaders argued that Germany, due to its political and economic strength, should take greater responsibility for international security. This ambition was reiterated in the 2016 *White Paper on German security policy and the future of the Bundeswehr* (the German Armed Forces), and has resulted in enhanced German engagement on NATO's eastern flank and in international military operations.¹ However, the support of the political parties for this policy direction dropped already in the federal elections of September 2017. The mounting divisions between the Christian Democrats and the Social Democrats in the current coalition government and the leadership crisis of the major political parties make it difficult for Germany to agree on a joined-up strategy to handle the present challenges.²

German security and defence policy rests on a firm belief in multilateral organisations and the rules-based international order. While the 2016 White Paper

enumerates several challenges to German security, it highlights that Russia is calling the European security order into question through its actions and military modernisation, which has prompted a response from both NATO and the EU.³ NATO solidarity remains fundamental to German security and the Bundeswehr has taken active part in NATO's assurance and deterrence measures on the eastern flank, including a leading role in NATO's enhanced Forward Presence (eFP) in Lithuania. NATO's defence planning forms the basis for national defence modernisation efforts and has prompted multinational capability development and the setting-up of multinational force structures. Germany has been part of integrated military units, with France and the Netherlands, since the end of the Cold War; the Franco-German Brigade was established in the late 1980s and the German-Netherlands Corps in the middle of the 1990s. The Czech Republic, Romania and Lithuania have recently affiliated army brigades to the German force structure, while Germany and Poland are in the process of cross-affiliating units.⁴

Germany is also a longstanding supporter of defence integration in the EU. Germany wants to strengthen the EU's ability to act and has proposed the creation of a European Defence Union, to serve as a political framework for recent EU defence initiatives. However, contrary to

1 Germany, The Federal Government, *White Paper 2016 on German security policy and the future of the Bundeswehr*.

2 Puglierin, Jana, 'Stuck in a holding pattern', *Berlin Policy Journal*, 29 August 2020.

3 Germany, *White Paper 2016*, p. 31–32.

4 Hagström Frisell, Eva and Sjökvist, Emma. *Military cooperation around framework nations: A European solution to the problem of limited defence capabilities*. FOI-R--4672--SE (Stockholm: Swedish Defence Research Agency – FOI, 2019), p. 15–25; and Müller, Björn. "Affiliations" – Shaping Europe's defence at NATO's eastern flank – are sluggish business', *Pivot Area*, 22 April 2020.

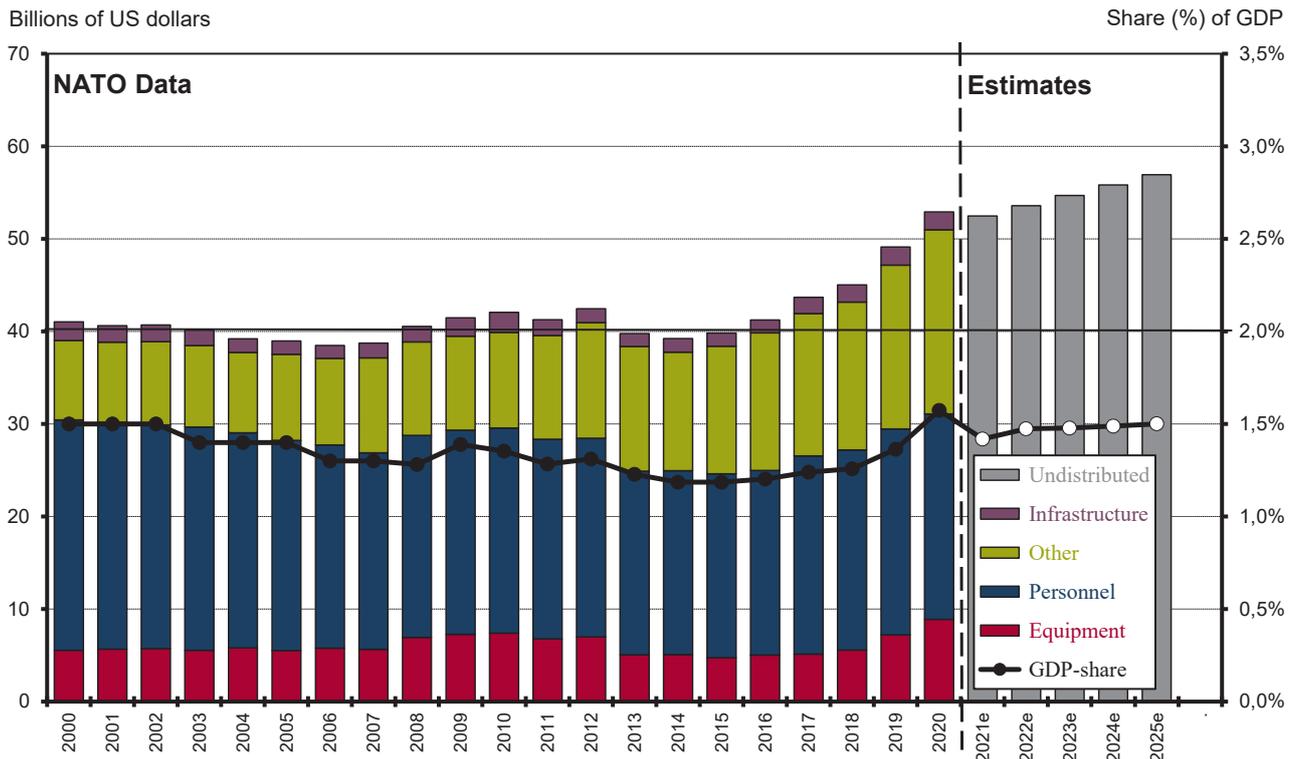


Figure: The military expenditures of Germany 2000–2025: Billions of US dollars/2015 prices (columns) and as share (%) of GDP (curved line)

Source: Bergstrand, Bengt-Göran, *NATO military expenditures*, Working Document (Stockholm: Swedish Defence Research Agency – FOI, October 2020).

NB: Estimates based on budget data for 2021 and on the assumption that Germany will (again) spend around 1.5% of GDP on defence in 2025.

French ambitions of European strategic autonomy, Germany stresses that EU defence efforts should be complementary to and contribute to a stronger European pillar in NATO.⁵

Since 2014, the German Armed Forces have changed direction, away from the downsizing and restructuring of the previous defence reforms. The reform launched in 2011 put a cap on the number of personnel in the Bundeswehr and halted conscription as the basis for recruitment. It introduced the concept of “dynamic availability management”, which inter alia meant that only 70 per cent of the required materiel should be at the disposal of the Bundeswehr’s units. The remainder would be transferred between units before exercises and international engagements. These measures, together with cuts in maintenance

and spare parts, resulted in low levels of readiness in the Bundeswehr and “hollow” force structures.⁶

In recent years, the Ministry of Defence has attempted to reverse the downward trends in the areas of finances, personnel and materiel. In 2018, the new concept of the Bundeswehr defined the task of collective and territorial defence as a basic requirement for staffing and equipping the Bundeswehr’s units.⁷ However, the operational readiness of the Bundeswehr remains low and continues to be an issue of concern for the Ministry of Defence.⁸

MILITARY EXPENDITURES

After having fallen by about a third after the end of the Cold War, when Germany was a frontline state, German military expenditures remained relatively stable from 2000

5 Bundesministerium der Verteidigung, ‘Speech by Federal Minister of Defence at the Bundeswehr University Munich’, 7 november 2019.

6 Hagström Frisell, Eva, ‘Tyskland’, in Pallin, Krister (ed.), *Västlig militär förmåga: En analys av Nordeuropa 2017* (Stockholm: Swedish Defence Research Agency – FOI, 2018), p. 125.

7 Bundesministerium der Verteidigung, *Die Konzeption der Bundeswehr*, 3 August 2018.

8 For example, in February 2020, Defence Minister Kramp-Karrenbauer launched a new initiative for operational readiness; see Bundesministerium der Verteidigung, ‘Rede von Kramp-karrenbauer: “Bundeswehr fit machen für die Zukunft”’, 6 February 2020.

to 2014. Germany did not reduce its military expenditures in the aftermath of the financial crisis of 2008, but, as a share of GDP, the military expenditures decreased from 1.5 per cent in 2000 to 1.2 per cent in 2014. Since reaching a low point in 2014, the military expenditures have steadily increased. Between 2014 and 2020, the military expenditures grew by a third, from USD 39.3 billion to USD 52.9 billion, equivalent to an average annual growth rate of more than 5 per cent. Germany also increased its investment in equipment during this period, from 13 per cent of overall defence expenditures in 2014 to 17 per cent in 2020.

However, considering Germany's political and economic weight, Germany has received repeated criticism from NATO and the US, particularly President Donald Trump, for not spending enough on defence. The German military expenditures' share of GDP, at 1.4 per cent in 2019, is considerably lower than that of the United Kingdom, 2.1 per cent, and France, 1.8 per cent. While the Christian Democrats reiterate their support for NATO's defence investment pledge of 2014, the Social Democrats question it and want to take Germany's spending in the fields of development cooperation and the reception of refugees into account in the debate on burden-sharing.⁹ There is also a debate between those who want to raise the defence budget and those who argue that such increases should not risk Germany's financial stability. In 2019, the Minister of Defence, a Christian Democrat, declared Germany's ambition to spend 1.5 per cent of GDP on defence by 2024 and 2 per cent by 2031, a goal that was not endorsed by the Finance Minister, a Social Democrat.¹⁰

These political circumstances make it somewhat difficult to estimate German military expenditures in coming years. Incidentally, with the economic decline caused by the coronavirus pandemic in 2020, Germany is allocating about 1.6 per cent of its GDP to defence

this year, as illustrated by the graph. Budget plans suggest that military expenditures will be stable in real terms in 2021, which, together with an economic recovery, will reduce the share of GDP to 1.4 per cent in 2021.¹¹ The forecast for 2022–2025 is then based on the assumption that Germany will (again) spend 1.5 per cent of GDP on defence in 2025, meaning that military expenditures will rise at a rate around 1.4 per cent annually, or at a rate less than a third of the rate of increase characterising 2015–2020, and amount to about USD 57 billion, in 2025.¹²

ARMED FORCES

According to the 2018 concept of the Bundeswehr, the German Armed Forces should be able to undertake the tasks of collective and territorial defence, international crisis management, homeland defence and national crisis management, international cooperation with partners, and humanitarian and disaster relief.¹³ NATO's requirements for collective defence drive the modernisation efforts and the Bundeswehr plans to return to fully equipped operational units in three steps. By 2023, the ambition is to have one fully manned and equipped brigade on stand-by for NATO's Very High-Readiness Joint Task Force (VJTF); by 2027, one modernised mechanised division; and, by 2031, three combat-ready mechanised divisions.¹⁴ Early indications are, however, that these targets will be difficult to meet due to persisting materiel shortages and the fact that the Bundeswehr in the coming years will continue to shift materiel between units prior to exercises and deployments.¹⁵

The force structure of the Bundeswehr is divided into three main services – Army, Navy and Air Force – and three joint support services – Joint Support Service, Joint Medical Service, and Cyber and Information Domain Service. The joint support services host a significant number of soldiers and combat service support capabilities, for example six

9 Delcker, Janosh, 'Schulz to Trump: Forget about 2 percent defence spending', *Politico*, 10 April 2017.

10 Bundesministerium der Verteidigung, 'Speech by Federal Minister of Defence'.

11 Bundesministerium der Finanzen, *Eckwertebeschluss der Bundesregierung zum Regierungsentwurf des Bundeshaushalts 2021 und zum Finanzplan 2020 bis 2024*, Section VI and table Bundeshaushalt 2021 und Finanzplan 2020 bis 2024, March 2020.

12 Regarding the possibility of allocating 2 per cent of GDP to defence in 2031, the following comment could be made. If we assume that German GDP would increase by 1.28 per cent annually in the years 2025–31 – the rate the IMF forecasted as the average growth rate for the years 2020–24, before the coronavirus pandemic – Germany would have a GDP of around USD 4212 billion in 2031. Allocating 2 per cent of GDP to defence would then provide military expenditures of about USD 84 billion in 2031, suggesting that military expenditures between 2025–2031 must rise around 6.6 per cent annually, or at a rate even higher than in the years 2015–2020.

13 Bundesministerium der Verteidigung, *Die Konzeption der Bundeswehr*, p. 19–20.

14 Bundesministerium der Verteidigung, 'Fähigkeitsprofil der Bundeswehr: Ein Schritt nach dem anderen', 16 December 2019; and 'Chapter Four: Europe', in International Institute of Strategic Studies, *The military balance*, (London: Routledge), 2020, p. 75.

15 'Ausrüstung und Personal: Bundeswehr zweifelt an eigener Einsatzfähigkeit', *Der Spiegel*, 20 December 2019.

logistics battalions, which in other countries form part of the three main services (see Table 9.2). The Joint Support Service also plays a prominent role in ensuring support to other NATO countries that are transiting troops through Europe. The Bundeswehr's command structure has not, until now, been tailored for collective and territorial defence; Germany relies on multinational command structures for these tasks, while the Bundeswehr's international missions are run by the Joint Operations Command, in Berlin-Gatow.¹⁶

Army

The personnel strength of the German Army is 63,500 soldiers. The main units are one light rapid reaction division and two mechanised divisions, the 1st and the 10th.¹⁷ The rapid reaction division consists of two air mobile brigades in Germany and the Netherlands, the special operations forces command, two transport helicopter regiments with NH-90 helicopters and one attack helicopter regiment with Tiger helicopters. Parts of the division are tasked to be at high readiness nationally for rapid deployments to international operations or evacuation operations of German citizens. In the second half of 2020, the division forms the core of a multinational EU Battlegroup, having approximately 2500 soldiers from the 26th Parachute Regiment at high readiness.¹⁸ In June 2020, however, the case of lingering far-right extremism within the special operations forces led to the disbanding of one of four combat companies and the halting of the participation of the remaining force in international operations and exercises until reforms had been undertaken to address the problem.¹⁹

The 1st Mechanised Division is made up of units based in northern Germany and the Netherlands. The division contains three mechanised brigades in Germany and one in the Netherlands, one artillery, one combat engineer, and

one telecommunications battalion. The 10th Mechanised Division draws on units based in southern Germany and France. The division consists of two mechanised brigades, one mountain infantry brigade, the Franco-German infantry brigade and three artillery battalions. As a rule, the brigades consist of three to four manoeuvre battalions, one armoured reconnaissance battalion, one combat engineering battalion and one sustainment battalion. In total, the German Army has five armoured battalions equipped with Leopard 2A6/A7 tanks and nine mechanised battalions with armoured combat vehicles, Marder and Puma. The current modernisation plan aims to increase the number of tanks, armoured vehicles and artillery pieces in the German Army. As a first step, the Ministry of Defence has decided to gradually form a sixth armoured battalion, equipped with modernised Leopard 2A7 tanks, in the 10th Division.²⁰

The two mechanised divisions have in recent years increasingly contributed to NATO's deterrence and defence posture on the eastern flank. The 10th Division has since 2017 provided successive half-year rotations of the core of the eFP battlegroup in Lithuania. The contribution amounts to 450 soldiers, including heavy materiel such as Leopard 2 tanks and armoured combat vehicles.²¹ The 1st Division was in 2019 responsible for Germany's contribution of a reduced brigade to the VJTF and, in 2020, during the stand-down period of the VJTF, the 9th Mechanised Brigade, in Münster, is held at 30-days' readiness. The 37th Mechanised Brigade of the 10th Division had the same role in 2015 and will take on the responsibility for the VJTF, for the second time, in 2023.²² The German contributions to the VJTF in 2015 and 2019, however, revealed that there is a need to shift a large amount of material and equipment from other parts of the Bundeswehr to the units on standby, which will most likely remain the case in the preparations for the VJTF in 2023.²³

16 Wiegold, Tomas, 'Straffere Bundeswehr-Führung für Landes- und Bündnisverteidigung: Luftwaffe plant Umstrukturierung', *Augen Geradeaus! blog*, 11 February 2020.

17 For information on the organisation of the German Army, see Bundeswehr, 'Heer'.

18 Bundeswehr, 'Eingreiftruppe der EU ist einsatzbereit', 19 May 2020.

19 Bennhold, Katrin, 'Germany disbands Special Forces group tainted by far-right extremists', *New York Times*, 1 July 2020.

20 Winter, Chase, 'German army forms sixth tank battalion', *DW*, 6 December 2018.

21 Wiegold, Tomas, 'Kommandowechsel beim NATO-Bataillon in Litauen: "Marienberger Jäger" stellen siebte Rotation', *Augen Geradeaus! blog*, 6 February 2020.

22 Fiorenza, Nicholas, 'German Panzergrenadierbrigade 37 prepares for digitalisation', *Jane's*, 23 January 2020.

23 Bartels, Hans-Peter, *Presentation of the 60th annual report of the Parliamentary Commissioner for the Armed Forces*, 29 January 2019.

Navy

The German Navy employs approximately 17,000 sailors and airmen. The navy is organised in two flotillas and one maritime air command.²⁴ The 1st Flotilla has its home ports on the Baltic Sea coast, in Kiel, Eckenförde and Warnemünde. It hosts the navy's smaller ships and submarines that operate in coastal waters, including 5 corvettes, 10 mine countermeasures ships, 3 submarines and 4 support ships. The navy's special operations forces command and the marine infantry battalion also form part of the flotilla. The 2nd Flotilla is based on the North Sea coast, in Wilhelmshaven. It consists of the navy's larger vessels, including 10 frigates and 4 support ships. The maritime air command is located in Nordholz and consists of two maritime air squadrons operating maritime patrol aircraft (P-3C Orion) and maritime helicopters for anti-submarine warfare, search and rescue, and transport (Sea Lynx and Sea King).

In recent years, the German Navy has suffered from overstretch, due to increasing operational engagements, combined with personnel and materiel shortages. The navy regularly takes part in NATO's standing maritime groups in the Baltic and Mediterranean Seas and in several UN and EU operations. In 2020, a German submarine was for the first time placed under NATO command, to contribute to the assurance measures in the Baltic Sea.²⁵ The wide-ranging operational commitments have led to enhanced needs for maintenance. At the same time, old platforms are phased out, while their replacements are delayed. In 2020, the first of a total of 18 NH90 Sea Lion helicopters, which will replace the ageing Sea King, was delivered.²⁶ By 2021, a total of four new frigates, for stabilisation operations (F-125), are scheduled to be delivered.²⁷ Between 2023 and 2026, five additional corvettes (K-130) will be delivered to handle delays in the development of the new multi-role frigate (MKS 180). The German Navy furthermore cooperates with the Netherlands to obtain access to their larger Joint Support Ships and to train the German marine infantry battalion together with the Netherlands Marine Corps.²⁸

Air Force

The German Air Force has approximately 28,000 airmen. The Air Force Command in Cologne-Wahn is responsible for the training and development of the units of the German Air Force, while the Air Operations Center, in Kalkar-Uedem, exercises the operational command of units when they take part in exercises or operations.²⁹ The latter is co-located with NATO's air operations centre, which also hosts several operational collaborations in the air domain.

The German Air Force is organised in 6 tactical air wings (4 with Eurofighter aircraft and 2 with Tornado aircraft), 3 transport wings (with Airbus A400M, Transall C-160 and various transport aircraft), 1 special operations forces helicopter squadron and 1 air defence wing armed with Patriot batteries. Each of the tactical air wings can muster the equivalent of two squadrons. Germany also takes part in a multinational multi-role tanker unit, which gives access to additional aircraft for transports, medical evacuations and air-to-air refuelling. Furthermore, the air force has one mobile air defence group armed with short-range batteries for base protection, based in the Netherlands.

The German Air Force patrols the German air space, contributes to NATO's integrated air defence and undertakes international operations. The air force regularly provides rotations of 4–5 fighter aircraft to Baltic Air Policing (BAP). In recent years, the material readiness of the air force has been considerably low due to ageing aircraft, delays in the introduction of new platforms and cutbacks of maintenance and spare parts. Recent reports also claim that there is a shortage of combat pilots.³⁰

Since 2018, the air force has started to develop the multi-role capability of the Eurofighter, by equipping the aircraft with laser-guided air-to-ground munition (GBU-48). In the coming years, Germany also needs to decide on the replacement of the ageing Tornado attack aircraft, which is a dual-use aircraft capable of carrying US nuclear weapons, as part of NATO's nuclear sharing. The Tornado is reaching the end of its life cycle and maintenance costs will increase significantly after 2025. In April 2020, the

24 For information on the organisation of the German Navy, see Bundeswehr. 'Marine'.

25 Bundeswehr. "U33" von Ostsee-Aufklärungsfahrten zurück', 25 May 2020.

26 Manarache, Martin, 'German Navy accepts first NH90 Sea Lion maritime helicopter', *Naval News*, 2 June 2020.

27 Vavasseur, Xavier, 'Second F125 Baden-Württemberg-Class frigate delivered to Germany', *Naval News*, 3 March 2020.

28 Hagström Frisell, 'Tyskland', p. 127.

29 For information on the organisation of the German Air Force, see Bundeswehr. 'Luftwaffe'.

30 Witting, Folker, 'German Air Force short on pilots, not planes', *DW*, 4 September 2019.

Table: Personnel and materiel in the German Armed Forces

Personnel/Materiel	Numbers in 2020	Planned reforms towards 2025
Personnel^a		
Regular force	175,000	Plans for a total force of 203,000 by 2025.
Voluntary force	9000	
Reserves	29,000 ^b	
Materiel^c		
Tanks	245 (225 Leopard 2A6, 20 Leopard 2A7)	84 additional Leopard 2 tanks to be modernised by 2023.
Armoured combat vehicles	558 (383 Marder, 268 Puma)	
Heavy artillery pieces	162 (121 PzH 2000, 41 MARS I and II)	12 PzH 2000 and 18 MARS I to be modernised by 2021.
Attack helicopters	51 Tiger	
Surface combatants	15 (1 F-122 frigate, 4 F-123, 3 F-124, 2 F-125, 5 K-130 corvettes)	2 new F-125 frigates to be delivered by 2021. 5 new K-130 corvettes to be delivered in 2023-2026.
Submarines	3 (212A)	
Combat aircraft	225 (140 Eurofighter, 85 Tornado)	
Transport aircraft	57 (12 Transall C-160, 32 A400M, 5 A310 MRTT, 2 A340, 2 A319, 4 Global 5000)	Transall C-160 will be replaced by a total of 53 A400M by 2026.
Air defence batteries	16 (14 Patriot, 2 Mantis)	

NB: a. Personnel numbers from January 2020; Bundeswehr, Personalzahlen, b. ‘Chapter Four: Europe’, p. 109, c. The numbers reflect the reported total stock of weapon systems in Germany. However, only a part of these systems are at the disposal of the Bundeswehr’s units and of the latter only 30–70 per cent are reported to be available for operations. The numbers are based on the latest publicly available report on the material readiness of the major weapon systems of the Bundeswehr, from 2017, or updated information available at the Bundeswehr website. Bundesministerium der Verteidigung, *Bericht zur materiellen*.

Ministry of Defence presented plans to split the order between 93 Eurofighter and 45 F/A-18 (30 E/F Super Hornets for the dual-use, and 15 EA-18G Growler for the electronic warfare role). However, as for all major acquisition programmes, the German Parliament has to approve the decision and leading Social Democratic parliamentarians have questioned Germany’s continued participation in NATO’s nuclear sharing.³¹

Personnel and materiel

The trend reversals in the fields of personnel and materiel announced by the Ministry of Defence are so far hardly noticeable. The total number of personnel in the Bundeswehr has increased slightly since 2016 and amounted to 184,000 soldiers in January 2020.³² The increase in personnel numbers is mainly a result of

prolonging the service of staff on time-limited contracts and not of an increase in the recruitment of new soldiers. The number of voluntary service members remains low, at approximately 9000 soldiers, compared to the stated ambition of 15,000. The major challenge in the recruitment of new soldiers and officers lies in the high competition from the labour market. The Bundeswehr has particular trouble recruiting IT specialists, mechanics and medical staff.³³ The ambition of the Ministry of Defence is to increase the total number of soldiers to 203,000 by 2025.³⁴

The availability of materiel in the Bundeswehr is another problem. Although the reports on the readiness of specific weapon systems are no longer public, the overall level of materiel readiness was reported to be 70 per cent in 2019, which is the same level as in 2017 and 2018, and no improvement from the policy direction of 2011. The

31 Gotkowska, Justyna, *Germany’s compromise plans: the Super Hornet combat aircraft for nuclear sharing*, OSW Analyses, 27 March 2020; and Mützenich, Rolf. ‘Germany and nuclear sharing: In these critical times funds are limited and we must have a serious debate on every expense – including military expenses’, *International Politics and Society*, 15 May 2020.

32 Bundeswehr, ‘Personalzahlen der Bundeswehr’, January 2020.

33 Hagström Frisell, ‘Tyskland’; and interview, Berlin, March 2020.

34 Bundeswehr, ‘Die Trendwende Personal’.

practice of shifting material and equipment between units before deployments gives a higher material readiness in units committed to NATO or to international operations. The highest levels of materiel readiness – over 70 per cent – are reported for Leopard 2 tanks, the Boxer armoured personnel carrier, frigates and the Eurofighter fighter aircraft. The lowest levels of readiness – below 40 per cent – are reported for new weapon systems that experience problems during their introduction, for example the Puma armoured fighting vehicle, the A400-M air transport aircraft, the special operation forces helicopter and the NH90 transport helicopter. The materiel readiness of ageing weapons systems, which require frequent maintenance, such as the maritime patrol aircraft P-3C Orion and the fighter/attack aircraft Tornado, is below 50 per cent. Keeping in mind that the numbers of platforms are lower in the navy and the air force, the lack of spare parts and maintenance capability has a more prominent effect on the operational capability of these services.³⁵

The former Parliamentary Commissioner for the Armed Forces, Hans-Peter Bartels, has for several years highlighted the Bundeswehr's problems of materiel readiness. In his latest report, he claimed that the whole system of procurement and maintenance of the Bundeswehr needs to be fundamentally reformed. The centralised structures and processes introduced in the previous period of downsizing are not fit for the purpose. They cannot ensure rapid rearmament and robust maintenance.³⁶

ASSESSMENT OF MILITARY CAPABILITY

The German Ministry of Defence has started a process of transformation to staff and equip the Bundeswehr for the task of territorial and collective defence. The modernisation is planned to take place in steps towards 2031. The German Army, Navy and Air Force are already taking part in NATO's deterrence and defence measures on the eastern flank and in several international operations. In addition, Germany has significant combat service support capabilities and can provide support to allies transiting through Europe. However, persisting personnel and materiel shortages negatively impact the operational readiness of the Bundeswehr.

The German short notice operational capability is comprised of a mix of units already deployed to the Baltics, on standby for NATO and the EU, or placed at high readiness nationally. In the army, during the second half of 2020, the light rapid reaction division has a parachute regiment, including helicopters, at high readiness for the EU Battlegroup. The division is also tasked to maintain a capability to deploy up to 1000 soldiers within three days, most likely made up of one battalion from the air-mobile brigade and one reduced battalion of special operations forces, supported by attack and transport helicopters.

The 1st Division has a reduced mechanised brigade on 30-days' readiness in 2020, as part of the Immediate Follow-On Forces Group of the NRF, while the 10th Division has a reduced mechanised battalion deployed to Lithuania, as part of eFP. Considering that the 10th Division regularly provides rotations to the eFP Battlegroup and is preparing to stand up one full brigade for the VJTF in 2023, it would likely be able to muster two additional mechanised battalions within a week. The access to combat support capabilities and the readiness of the remaining units in the two mechanised divisions is uncertain.

In total, this suggests that 2–3 air-mobile infantry battalions and 3–4 mechanised battalions would be available at their home bases within one week. Since 2017, the Bundeswehr has enhanced its capability to move forces to the Baltics through the regular eFP rotations, and practised the rapid deployment of the VJTF to Norway and Poland. Considering Germany's role as a logistics hub of NATO, the access to combat service support and logistics is judged to be satisfactory, nationally. However, the lack of political willingness to commit to the use of force and the German Parliament's inability to take rapid decisions in a conflict situation may impede a quick mobilisation of forces.

The German Navy regularly takes part in NATO's standing maritime groups and international missions. Taking into account that the overall level of material readiness of Germany's frigates is approximately 70 per cent, but that they are simultaneously engaged in international

35 Bundesministerium der Verteidigung, 'Neuer Bericht zur Materiellen Einsatzbereitschaft vorgelegt', 5 December 2019.

36 Bartels, *Presentation of the 60th annual report*; and Bartels, Hans-Peter, *Presentation of the 61st annual report of the Parliamentary Commissioner for the Armed Forces*, 28 January 2020.

operations in the Mediterranean, less than half – and in some cases more likely one third – of the total number of ships would be available in one week. This suggests that the German Navy would be able to deploy a maximum of 3–4 frigates, 1–2 corvettes, 4–5 minehunters, 1–2 submarines, 2–3 maritime patrol aircraft (P-3C Orion) and 10–12 maritime helicopters (Sea Lynx and Sea King), including support ships.³⁷

The German Air Force undertakes regular rotations of 4–5 fighter aircraft to the Baltics as part of NATO's air policing mission, contributes to NATO's integrated air defence and takes part in international operations. Considering that the level of material readiness varies significantly between different systems, with the highest availability of the Eurofighter and the lowest availability for the A400M and the special operations forces helicopters, less than half – and in some cases more likely one-third – of the total number of aircraft would be available within one week. This suggests that the German Air Force would be able to deploy a maximum of 2–3 fighter squadrons (Eurofighter), 1–2 attack squadrons (Eurofighter and Tornado), half a squadron of reconnaissance aircraft (Tornado), 2–3 air transport squadrons (A400M, Transall C-160, MRTT and various aircraft for personnel transport), half a special operations forces helicopter squadron and 2–3 air defence groups (Patriot and Mantis).³⁸ Some of these aircraft would likely have to ensure the defence of German airspace.

With longer time for preparations, up to three months, larger parts of the German force structure would be available. The ambition of the modernisation of the German Army is to have three combat-ready armoured divisions

within three months by 2031. This suggests that today only parts of the army would be available within three months, perhaps a maximum of two brigades in each division, whereas only one brigade would have full capability. The available capabilities in the navy and the air force would perhaps rise to half of the total number of ships and aircraft in three months. However, many of the personnel and materiel shortcomings would take longer than three months to overcome. In a sustained effort, the available ships and aircraft would furthermore have to rotate and regularly undergo maintenance.

The future development of Germany's military capability depends on how the trend reversals launched by the Ministry of Defence in the areas of finances, personnel, and materiel will progress. The ongoing reforms require a fundamental transformation of mind-set towards the task of territorial and collective defence, including strengthened command and control structures and logistics support. The planned changes in the coming five years include the ambition of having one fully-equipped brigade at high readiness for the VJTF in 2023, setting up one new tank battalion, acquiring five new corvettes, and developing the air-to-ground attack capability of the Eurofighter. The replacement of the Tornado dual-use attack aircraft will most likely take place after 2025. The planned reforms will improve, but not significantly increase, the number of forces available at short notice. Further modernisation efforts are contingent on sustained political and financial support. It is not certain, however, that the parties in the current or future coalition governments will be able to agree on raising the defence budget to 1.5 per cent of GDP by 2024 and to 2 per cent of GDP in 2031. ■

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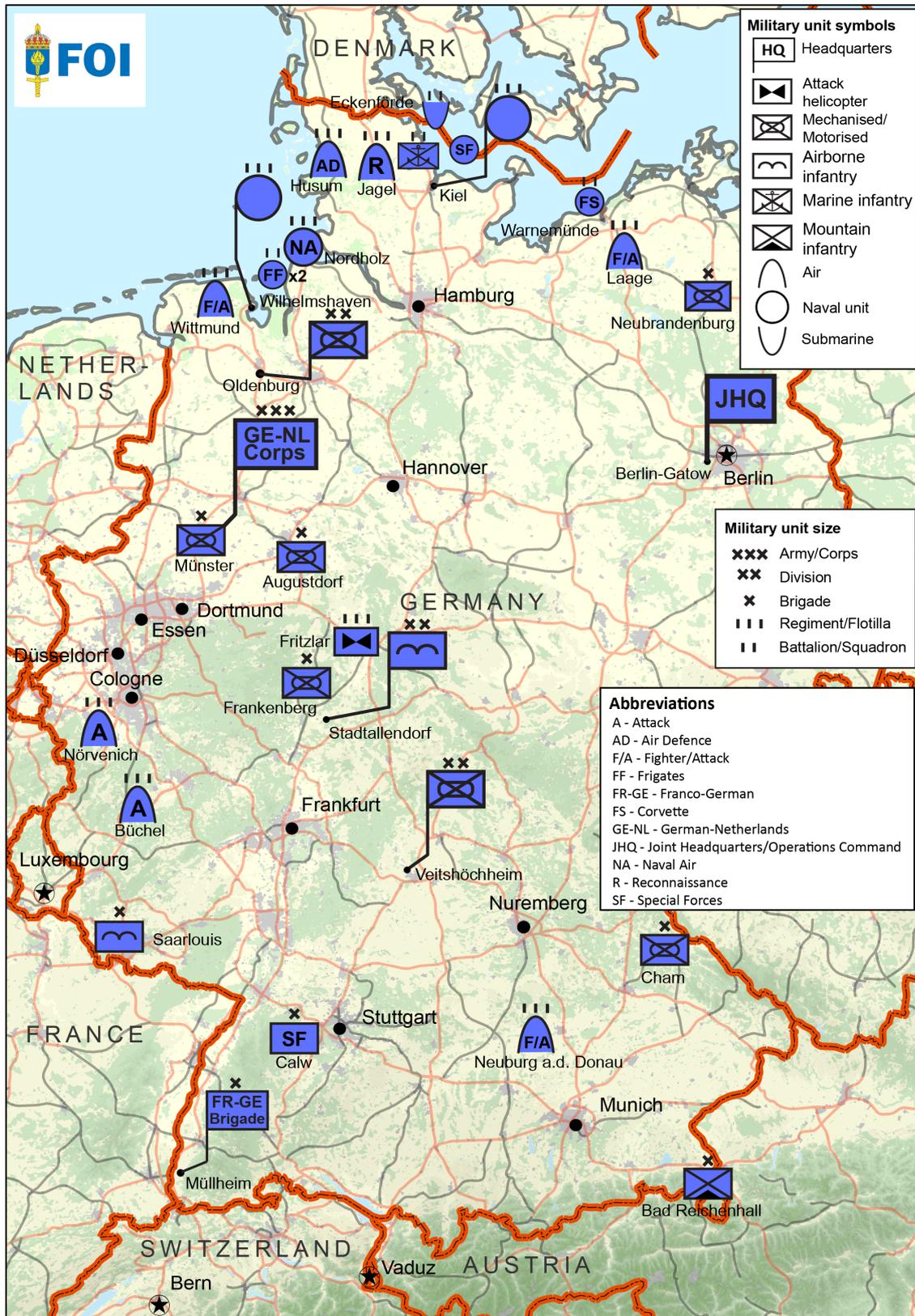
³⁷ The assessment is based on the average operational readiness of the major weapon systems of the Bundeswehr, in the latest publicly available report, from 2017, or updated information available at the Bundeswehr website; Bundesministerium der Verteidigung, *Bericht zur materiellen Einsatzbereitschaft der Hauptwaffensysteme der Bundeswehr 2017*, 26 February 2018.

³⁸ Ibid.

Table: Force structure of the German Armed Forces

	Organisation 2020	Planned reforms towards 2025	Assessment of forces available at short notice
Joint	Joint Operations Command Joint Support Service (6 logistics battalions, 1 special engineer regiment, 3 military police regiments, 2 NBC battalions) Joint Medical Command Cyber and Information Domain Service (6 IT battalions, 4 electronic warfare battalions, 1 centre for geo-information)	1 additional logistics battalion from 2020.	
Army	Rapid Response Forces Division (1 air-mobile brigade, 1 special operations forces command, 1 attack helicopter regiment, 2 transport helicopter regiments) 1st Mechanised Division (3 mechanised brigades, 1 armoured battalion (in the Netherlands), 1 artillery battalion, 1 combat engineer battalion, 1 telecommunications battalion) 10th Mechanised Division (2 mechanised brigades, 1 mountain infantry brigade, 2 infantry battalions (in the French-German Brigade), 3 artillery battalions)	1 additional armoured battalion from 2021.	1 air-mobile battalion on stand-by for EU Battlegroups in the second half of 2020. 1.5 air-mobile battalion and special operations forces at high readiness Up to 1 attack helicopter battalion 1–2 mechanised battalions on 30-days' readiness for NRF. Half a mechanised battalion deployed to eFP in Lithuania. 2 mechanised battalions on 30 days readiness or higher.
Navy	1st Flotilla (1 corvette squadron, 1 mine counter measures squadron, 1 submarine squadron, 1 special operations forces command, 1 marine infantry battalion, 1 support squadron) 2nd flotilla (2 frigate squadrons, 1 support squadron) Maritime Aircraft Command (1 maritime patrol squadron, 1 maritime helicopter squadron)	1 additional corvette squadron from 2026.	1–2 corvettes 4–5 minehunters 1–2 submarines 3–4 frigates 2–3 maritime patrol aircraft 10–12 maritime helicopters
Air Force	Air Operations Center Air Force Command ^a 3 fighter air wings 2 attack air wings 1 reconnaissance wing 3 air transport wings 1 tanker transport unit 1 special operation forces, helicopter squadron 1 air defence wing 1 air defence group (in the Netherlands)	Developing the capability of Eurofighter to conduct air-to-ground attacks.	2–3 fighter squadrons 1–2 attack squadrons Half a reconnaissance squadron 2–3 air transport squadrons 1–2 tanker aircraft Half a helicopter squadron 1–2 air defence groups

NB: a. Each of the air wings consists of several squadrons. The number of aircraft in each squadron varies between the type of aircraft. In the case of Germany, the fighter, attack and reconnaissance wings contain the equivalent of two squadrons of 15–20 aircraft each. The air transport wings consist of the equivalent of 1–3 squadrons of 8–12 aircraft each.



Map: Overview of German armed forces and their basing

NB: Design by Per Wikström. The map covers mainly operational headquarters and manoeuvre forces.

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