

II. Regional developments in military expenditure, 2022

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Global military expenditure—which rose to an estimated US\$2240 billion in 2022—is distributed unevenly around the world. States in the Americas accounted for the largest share of the total, 43 per cent. It was followed by Asia and Oceania with a 26 per cent share, Europe with 21 per cent, and the Middle East with an estimated 8.2 per cent share. Africa accounted for the smallest share, 1.8 per cent of world military spending.¹

This section reviews the main trends in military expenditure in 2022 and over the decade 2013–22 from a regional perspective. It describes how specific developments have affected national decision-making on military spending, as well as subregional and regional trends. For analysis of global trends see section I.

Africa

Military expenditure in Africa was \$39.4 billion in 2022. Spending in the region fell for the first time since 2018, down 5.3 per cent in real terms compared to 2021 and 6.4 per cent lower than in 2013. The fall in 2022 was the largest relative drop in the region since 2003. The 4 countries in North Africa (Algeria, Libya, Morocco and Tunisia) accounted for 48 per cent of Africa's military spending, while the 44 countries in sub-Saharan Africa accounted for the remaining 52 per cent.

North Africa

At \$19.1 billion in 2022, military expenditure by North African countries was 3.2 per cent lower than in 2021 but still 11 per cent higher than in 2013 (see figure 5.4). Algeria and Morocco make up most of the military spending in the subregion: together, they accounted for 74 per cent of the total in 2022.

Amid historical rivalries and the ongoing territorial dispute over the Western Sahara, Algeria's military spending fell by 3.7 per cent in 2022, while spending in Morocco fell slightly, by 0.2 per cent.² Despite the minor decrease,

¹ All figures for spending in 2022 are quoted in current 2022 US dollars. Except where otherwise stated, figures for increases or decreases in military spending are expressed in constant 2021 US dollars, often described as changes in 'real terms' or adjusted for inflation. For sources and methods of the SIPRI Military Expenditure Database, see SIPRI Military Expenditure Database, 'Sources and methods'.

² Rachidi, I., 'Morocco and Algeria: A long rivalry', Sada, Carnegie Endowment for International Peace, 3 May 2022; and 'Timeline: Algeria and Morocco's diplomatic disputes', Al Jazeera, 15 Jan. 2023.

Algeria remained the largest spender in the subregion, at \$9.1 billion. This is 1.8 times larger than Morocco's military spending, which in 2022 stood at \$5.0 billion.

Sub-Saharan Africa

Military expenditure in sub-Saharan Africa was \$20.3 billion in 2022, down 7.3 per cent from 2021 and 18 per cent lower than in 2013.³ The decrease in 2022 was the second largest of all subregions (behind only Central Asia) and occurred after a 6.7 per cent increase in 2021.

The subregion's largest military spender, Nigeria, has had a volatile expenditure pattern in recent years. In 2021 a supplementary budget pushed military spending up by 56 per cent to strengthen the country's military capabilities against a range of security challenges, ranging from banditry and farmer–herder conflict to armed conflicts against non-state armed groups such as Boko Haram and Islamic State–West Africa Province.⁴ In 2022, however, Nigeria's military spending fell by 38 per cent to \$3.1 billion, mainly because the 2022 supplemental budget made no allocation to the military. In 2022 Nigeria was devastated by the worst seasonal floods in a decade, displacing over 1 million people and destroying farmland.⁵ Thus, whereas 73 per cent of the 2021 supplementary budget was for the military, the 2022 supplemental budget focused on rebuilding infrastructure damaged or destroyed by the floods.⁶ Furthermore, a debt crisis also strained public finances, including allocations to the military.⁷

Military spending in South Africa, the second largest in the subregion, continued to decline in 2022. At \$3.0 billion, spending was down for the second consecutive year; 8.4 per cent lower than in 2021 and 21 per cent lower compared to 2013. In the parliamentary debate on the military budget for 2022, the defence minister, Thandi Modise, acknowledged that poor economic performance had put severe pressure on finances and, as a result, the downward trend in military spending continued.⁸

³ The total for sub-Saharan Africa excludes the Comoros and Sao Tome and Principe, which are not in the SIPRI Military Expenditure Database and are assumed to have low expenditure, and Djibouti, Eritrea and Somalia, for which data is not available.

⁴ Nextier, *Nigeria's Security Situation Analysis Report* (Nextier: Abuja, 2022); and George, L., 'Nigeria's oil output at 32-year low as thieves hobble output', Reuters, 9 Sep. 2022. On armed conflict in Nigeria see chapter 2, section I, in this volume.

⁵ Onukwue, A., 'Nigeria's worst floods in a decade have displaced over a million people', World Economic Forum, 20 Oct. 2022.

⁶ Iroanusi, Q., 'Three days to year-end, Senate passes supplementary budget for 2022', *Premium Times* (Abuja), 28 Dec. 2022; and Nigerian Budget Office of the Federation, 'Supplementary appropriation bill 2021', p. 4.

⁷ Clowes, W., 'Debt repayments consume 80% of Nigeria's revenue collection', Bloomberg, 3 Jan. 2023.

⁸ Modise, T., 'Minister Thandi Modise: Defence Dept budget vote 2022/23', South African government, 24 May 2022.

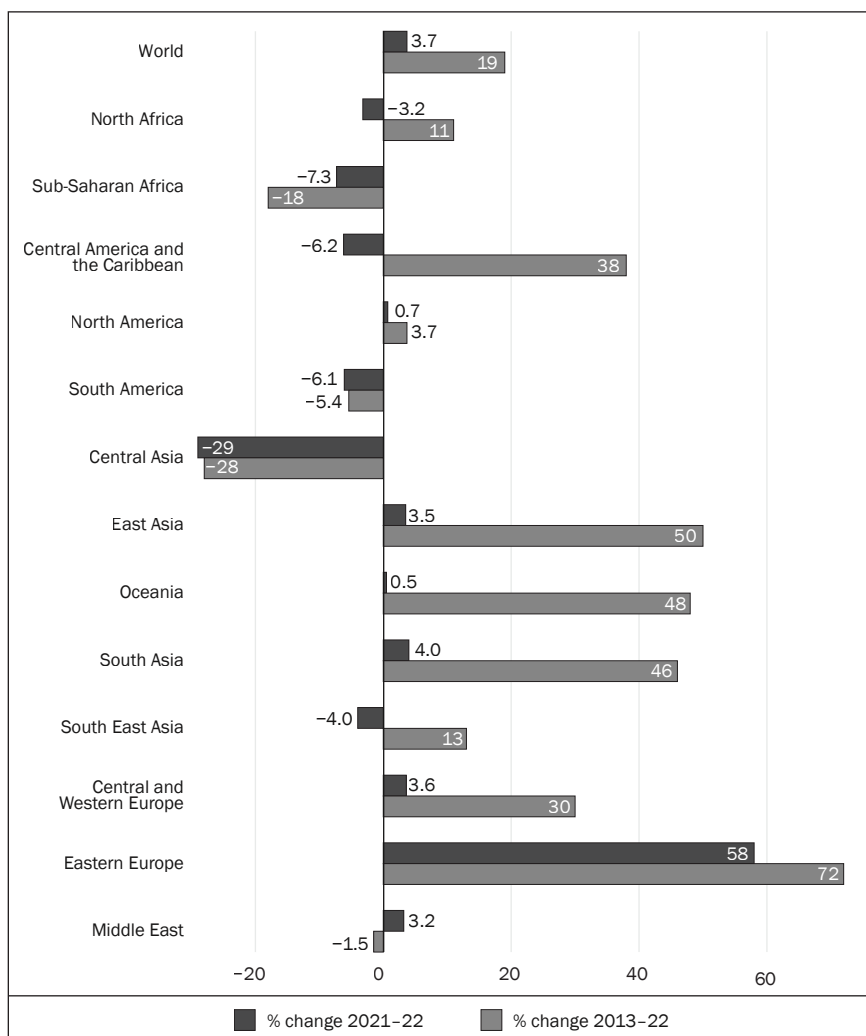


Figure 5.4. Changes in military expenditure by subregion, 2013–22 and 2021–22

South Africa's nominal military spending is projected to remain unchanged until 2025 under the country's Medium Term Expenditure Framework (MTEF).⁹ With average inflation at around 5.5 per cent, further decreases in military expenditure are expected in the coming years. In response to the MTEF's budgetary constraints, the South African National Defence Force is already planning to reduce its personnel levels by 3000 between 2023 and 2025.¹⁰

⁹ South African National Treasury, *Medium Term Budget Policy Statement 2022* (National Treasury: Pretoria, 26 Oct. 2022).

¹⁰ Martin, G., 'SANDF to shed 3000 members over the next three years', DefenceWeb, 4 Aug. 2022.

Despite the general fall in sub-Saharan Africa's military spending, there were substantial increases in Ethiopia and Togo. Ethiopia's military spending rose at the fastest rate of any African country, up 88 per cent to \$1.0 billion in 2022. The increase coincided with a government offensive against the Tigray People's Liberation Front (TPLF).¹¹ Togo's military spending increased by 80 per cent to \$337 million in 2022, the second-highest rate of growth in Africa. The increase coincided with the intensification of attacks by violent Islamist militants that began in November 2021.¹² In addition to the government implementing a state of emergency in northern Togo in June 2022, the military conducted military exercises and operations to combat the militants in the region.¹³

The Americas

Military spending by countries in the Americas totalled \$961 billion in 2022, 0.3 per cent higher than in 2021 and up by 3.5 per cent from 2013. Spending fell in South America and in Central America and the Caribbean in 2022, but rose in North America, mainly due to the growth in the United States. North American countries (i.e. the USA and Canada) accounted for 94 per cent of total regional spending in 2022, with 4.8 per cent in South America, and 1.2 per cent in Central America and the Caribbean.

North America

North American military spending reached \$904 billion in 2022. This was an increase of 0.7 per cent compared to 2021 and 3.7 per cent higher than in 2013. At \$26.9 billion, Canada's military spending was 3.0 per cent higher than in 2021 despite historic levels of inflation.¹⁴ Following Russia's invasion of Ukraine in February 2022, Canada announced additional military spending of 8 billion Canadian dollars (US\$6.1 billion) over the five financial years 2022/23–2027/28, as well as a new defence policy review.¹⁵

¹¹ 'Eritreans hunted down as military call-up intensifies over Ethiopia's Tigray war', BBC News, 12 Oct. 2022; Amnesty International, 'Ethiopia: Fears of fresh atrocities loom in Tigray as conflict intensifies', 24 Oct. 2022; and 'Ethiopia govt. says army controls 70 percent of Tigray', Defense Post, 11 Nov. 2022. On the armed conflict and peace process in Tigray see also chapter 2, section II, in this volume.

¹² 'Togo : Attaque terroriste signalée près de la frontière avec le Burkina' [Togo: Terrorist attack reported near the border with Burkina], Togo First, 10 Nov. 2021; and Koffi, M. F., 'Togo extends state of emergency due to militant attacks', Voice of America, 7 Sep. 2022.

¹³ Koffi (note 12); 'Facing threat, Togo forces simulate "jihadist" attack', Defense Post, 21 Oct. 2022.

¹⁴ Gordon, J., 'Canada inflation up near 40-year high; calls mount for 75-bps rate hike', Reuters, 22 June 2022.

¹⁵ Canadian Department of National Defence, 'Defence spending: Budget 2022', Appearance before the House of Commons, Standing Committee on National Defence, 27 Apr. 2022; and Canadian Department of Finance, 'Canada's leadership in the world', 7 Apr. 2022.

Table 5.4. Components of US military expenditure, fiscal years 2018–22

Figures are current US\$ b. unless otherwise stated. Figures may not add up to the given totals because of the conventions of rounding.

Component	2018	2019	2020	2021	2022
Department of Defense (DOD)	601	654	690	718	742
Military personnel	146	156	161	173	167
Operations and maintenance	257	272	279	286	294
Procurement	113	125	139	141	145
RDT&E	77	89	100	106	119
Other (construction, housing etc.)	8.6	12	11	12	17
Department of Energy, atomic energy military activities	21	23	24	26	29
Other military-related activities	10	9.3	10	11	11
National Intelligence Program, military-related activities	[45]	[45]	[47]	[46]	[49]
Department of State, international security assistance ^a	6.8	6.8	6.7	6.7	6.7
Transfers to fund southern border wall construction	..	-3.6	..	..	..
Supplemental appropriations to the DOD	..	..	..	..	34.4
Supplemental appropriations to the State Department related to Ukraine	..	..	..	..	4.7
Total	682	734	778	806	877
Military expenditure as share of GDP (%)	3.3	3.4	3.7	3.5	3.5

.. = not applicable; [] = estimated figure; GDP = gross domestic product; RDT&E = research, development, testing and evaluation.

^aThis international security assistance consists of International Military Education and Training (IMET), Foreign Military Finance (FMF), and peacekeeping.

Sources: SIPRI Military Expenditure Database, Apr. 2023; US Department of Defense (DOD), Office of the Under Secretary of Defense (Comptroller), various documents, various years; Federation of American Scientists (FAS), Intelligence Resource Program, 'Intelligence budget data'; US Department of State, *Congressional Budget Justification: Department of State, Foreign Operations and Related Programs*, various years; and McGarry, B. W., 'Department of Defense supplemental funding for Ukraine: A summary', Congressional Research Service (CRS) Insight, 13 Feb. 2023.

The United States. US military spending in 2022 was \$877 billion. Despite nominal growth of 8.8 per cent, the real increase in 2022 was a marginal 0.7 per cent. The United States remained by far the largest military spender in the world, allocating three times more than the second largest spender, China. US military expenditure, according to SIPRI methodology, includes spending by the Department of Defense (DOD), the Department of Energy, the Department of State, funding for the National Intelligence Program and supplemental appropriations related to the war in Ukraine among other things (see table 5.4).

The small size of the increase in US military spending in 2022 was primarily due to the highest levels of inflation since 1981.¹⁶ The Covid-related supply chain disruptions, labour shortages and pent-up consumer demand pushed inflation upwards. Russia's war in Ukraine and the resulting increase in food and energy prices further exacerbated it.¹⁷ Between 2021 and 2022, nominal US military expenditure rose by 8.8 per cent, but an inflation rate of 8.1 per cent in the same period meant that expenditure rose by only 0.7 per cent in real terms. The Federal Reserve—the US central bank—expects that inflation will average around 3.5 per cent in 2023.¹⁸ This means that the 4.1 per cent increase in the DOD's budget for fiscal year 2023 proposed by US President Joe Biden may result once more in a marginal real-terms increase in US military spending in 2023.¹⁹

A major development in 2022 was the military expenditure that the US Congress appropriated in response to Russia's invasion of Ukraine.²⁰ Although the USA has been a provider of military assistance to Ukraine since at least 2002, the scope and size of the aid drastically increased in 2022. Before Russia's full-scale invasion of Ukraine, US military aid to Ukraine was primarily in the form of Foreign Military Finance (FMF) and International Military Education and Training (IMET) and through the Ukraine Security Assistance Initiative (USAI).²¹ Between 2014 and 2021, military aid from these three assistance programmes averaged about \$280 million per year, growing from \$9.2 million in 2014 to \$538 million by 2021 (in constant US dollars; see table 5.5). In 2022, SIPRI estimates that US military aid to Ukraine shot up to \$19.9 billion (in current dollars), the largest ever recorded amount of military assistance donated by any country to any recipient in the world in a single year. This was the majority (64 per cent) of the \$31.3 billion of military-related supplemental spending related to the war in Ukraine in 2022. In addition to military aid to Ukraine, this expenditure involved supplemental funding to the DOD and the Department of State, expenditure to support the operations

¹⁶ Desilver, D., 'In the US and around the world, inflation is high and getting higher', Pew Research Center, 15 June 2022.

¹⁷ Amaglobeli, D. et al., 'Response to high food, energy prices should focus on most vulnerable', IMF Blog, International Monetary Fund (IMF), 7 June 2022; and Smialek, J., 'New inflation developments are rattling markets and economists. Here's why', *New York Times*, 15 Sep. 2022.

¹⁸ Banerji, G., 'Fed officials raise estimates for inflation, unemployment in 2023', *Wall Street Journal*, 14 Dec. 2022.

¹⁹ US Department of Defense, 'The Department of Defense releases the president's fiscal year 2023 defense budget', 28 Mar. 2022.

²⁰ McGarry, B. W., 'Department of Defense supplemental funding for Ukraine: A summary', Congressional Research Service (CRS) Insight, 13 Feb. 2023.

²¹ US Department of State, *Congressional Budget Justification: Department of State, Foreign Operations and Related Programs—Fiscal Year 2023* (Department of State: Washington, DC, 2022); and Arabia, C. L., Bowen, A. S. and Welt, C., 'US security assistance to Ukraine', Congressional Research Service (CRS) Insight, 27 Feb. 2023.

Table 5.5. US military aid to Ukraine, 2014–21

Figures are constant (2021) US\$ m.

Programme	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
FMF	7	54.0	90.0	109	102	74.0	120	115	1 203	1 874
IMET	2.2	2.2	3.2	2.4	2.9	3.1	3.0	3.0	2.8	24.8
PDA	–	–	–	–	–	–	–	–	11 661	11 661
USAI	–	–	257	167	212	229	268	420	5 553	7 106
Other military assistance	0.02	0.02	1.7	0.02	–	–	–	–	–	1.8
Total	9.2	56.2	352	278	317	306	391	538	18 420	20 668

FMF = Foreign Military Finance; IMET = International Military Education and Training; PDA = Presidential Drawdown Authority; USAI = Ukraine Security Assistance Initiative.

Sources: Office of the Under Secretary of Defense (Comptroller), various documents, various years; US Department of State, *Congressional Budget Justification: Department of State, Foreign Operations and Related Programs*, various years; and McGarry, B. W., 'Department of Defense supplemental funding for Ukraine: A summary', Congressional Research Service (CRS) Insight, 13 Feb. 2023.

of the USA and its allies in Europe, and expansion of US arms-industrial production capacity to speed up weapon replenishment (see section III).²²

The three main assistance programmes and authorities through which military aid was disbursed to Ukraine in 2022 were the Presidential Drawdown Authority (PDA), the USAI and FMF. A fourth category, IMET, was much smaller: only \$3 million in 2022.²³

The 1961 Foreign Assistance Act gives the US president the authority to direct, via a PDA, the secretary of state to transfer 'defense articles and defense services' from existing DOD stocks to a foreign country (i.e. Ukraine) without congressional authorization in response to an unforeseen emergency.²⁴ Of the \$19.9 billion in military aid given to Ukraine, \$12.6 billion (63 per cent) was expenditure to replenish US stocks of equipment sent to Ukraine under the various PDAs.²⁵ While the use of PDAs to provide military assistance is

²² US House of Representatives, Committee on Appropriations, 'Ukraine Supplemental Appropriations Act, 2022', [10 Mar. 2022]; and US House of Representatives, Committee on Appropriations, 'Additional Ukraine Supplemental Appropriations Act, 2022', [10 May 2022].

²³ Arabia et al. (note 21); and Masters, J. and Merrow, W., 'How much aid has the US sent Ukraine? Here are six charts', Council on Foreign Relations, 22 Feb. 2023.

²⁴ Yousif, E., 'Ukraine aid strains US defense stockpiles', Stimson, 25 July 2022; US Department of State, Bureau of Political-Military Affairs, 'Use of presidential drawdown authority for military assistance for Ukraine', Fact sheet, 20 Mar. 2023; and Foreign Assistance Act, US Public Law no. 87–195, signed into law 4 Sep. 1961, as amended.

²⁵ US House of Representatives, 'Ukraine Supplemental Appropriations Act, 2022' and 'Additional Ukraine Supplemental Appropriations Act, 2022' (note 22).

not new, the number and monetary value in 2022 were unprecedented.²⁶ President Biden directed 27 PDAs to Ukraine in 2022, with values ranging from \$100 million to \$1 billion.²⁷

Military aid under the USAI totalled \$6.0 billion in 2022 (30 per cent of US military aid to Ukraine).²⁸ Unlike the PDAs, under the USAI the US government procures military equipment from the arms industry.²⁹ Military aid sent to Ukraine via the USAI is generally slower than under the PDA and is designed to strengthen the capabilities of the Ukrainian armed forces over the long term.³⁰

Supplemental funding for FMF, which falls under the budget of the State Department, amounted to \$4.7 billion in 2022, of which \$1.3 billion (6.5 per cent of US military aid to Ukraine) went to Ukraine. The remaining \$3.4 billion has been provided to other European allies and partners.³¹ FMF, which includes financial assistance and loans, may have been used by European allies and partners that have provided security assistance to Ukraine to replenish their military stocks.³²

Despite the record levels of military aid that the USA sent to Ukraine in 2022, it amounted to only 2.3 per cent of total US military spending. In comparison, the USA's spending on modernizing and improving its own military capabilities (i.e. procurement and research and development, R&D) totalled \$264 billion in 2022, or 30 per cent of total US military spending. The other main spending categories were personnel (19 per cent) and operation and maintenance (34 per cent).

Central America and the Caribbean

Military spending in Central America and the Caribbean fell by 6.2 per cent in 2022 to \$11.2 billion. Over the decade, however, military spending rose 38 per cent. The use of military forces to curb armed criminal activity remains the main driver of military spending in the region.³³

²⁶ White House, 'Drawdown under Section 506(a)(1) of the Foreign Assistance Act of 1961 for France to support its counterterrorism efforts in Mali, Niger, and Chad', Presidential memorandum, 11 Aug. 2014; and Lopez, C. T., 'US provided more than \$1 billion in security assistance to Ukraine in past year', US Department of Defense, 4 Mar. 2022.

²⁷ Arabia et al. (note 21).

²⁸ US House of Representatives, 'Additional Ukraine Supplemental Appropriations Act, 2022' (note 22).

²⁹ US Department of Defense, 'Biden administration announces additional security assistance for Ukraine', 3 Feb. 2023.

³⁰ US Department of Defense (note 29); and White House (note 26).

³¹ US Department of State, *Congressional Budget Justification: Department of State, Foreign Operations and Related Programs—Fiscal Year 2024* (Department of State: Washington, DC, 2023), p. 218.

³² US Department of State, Bureau of Political-Military Affairs, 'US security cooperation with Ukraine', Fact sheet, 24 Feb. 2023.

³³ On armed conflict between state forces and armed gangs in Central America see Caparini, M., 'Armed conflict in North America and the Caribbean', *SIPRI Yearbook 2022*, pp. 82–87.

Military spending in Mexico, the subregion's largest military spender, fell by 9.7 per cent in 2022 to \$8.5 billion. Military spending as a share of government expenditure fell from 2.5 per cent in 2021 to 2.2 per cent 2022, with budget allocations favouring health expenditure over the military.³⁴ Nearly one-fifth of Mexico's military expenditure is spent on the National Guard—a militarized police force created in 2019 to combat organized crime. Since its establishment, its budget has increased by 33 per cent. In 2022 the Mexican Congress approved a set of reforms whereby the operational, administrative and budgetary control of the National Guard was transferred to the defence ministry, the Secretariat of National Defence. The reallocation was criticized by civil society organizations as the use of military forces in public security missions in Mexico has been associated with major violations of human rights.³⁵ Due to its militarized nature, SIPRI has included spending on the National Guard in Mexico's military expenditure since its creation.

In 2022 the government of El Salvador launched a series of major military operations across several cities in response to rising levels of gang violence.³⁶ One operation, a siege of the town of Soyapando, engaged over 10 000 troops.³⁷ This offensive pushed military spending to the highest level since the end of the 1979–92 civil war: a 12 per cent growth to \$422 million.

Military expenditure by the Dominican Republic rose by 16 per cent in 2022 to \$761 million. The growth can be attributed to a security crisis in neighbouring Haiti: Haitian President Jovenel Moïse was assassinated in unclear circumstances in July 2021, followed a few weeks later by a major earthquake.³⁸ Since then, instability has ensued, with gang violence and political disarray sending migrants towards the border with the Dominican Republic. The Dominican government responded with more investment in military operations and procurement.³⁹

³⁴ Pérez, M., Ramos, R. and Monroy, J., 'Más recursos en salud; menos a Sedena y Comar' [More resources for health; less for the Secretariat of National Defence and the Mexican Commission for Refugee Assistance], *El Economista*, 9 Sep. 2021.

³⁵ United Nations, Office of the High Commissioner for Human Rights, 'México: El traspaso de la Guardia Nacional a la Secretaría de la Defensa Nacional es un retroceso para la seguridad pública basada en los derechos humanos' [Mexico: The transfer of the National Guard to the Ministry of National Defence is a step backwards for human rights-based public security], Press release, 9 Sep. 2022.

³⁶ Nayib Bukele desplegará policías y militares para cercar las ciudades de El Salvador contra los pandilleros' [Nayib Bukele to deploy police and military to seal off El Salvador's cities from gang members], *El País*, 24 Nov. 2022.

³⁷ Murphy, M., 'El Salvador: El impresionante despliegue de 10.000 soldados por parte de Nayib Bukele contra las maras en un municipio aledaño a la capital' [El Salvador: Nayib Bukele's massive deployment of 10 000 troops against gangs in a municipality near the capital], BBC News, 4 Dec. 2022.

³⁸ 'Haiti president's assassination: What we know so far', BBC News, 1 Feb. 2023.

³⁹ Herrera, J., 'Gobierno de Abinader ha invertido más que sus antecesores en equipos militares para proteger frontera y espacio aéreo' [Abinader's government has invested more than his predecessors in military equipment to protect the border and airspace], *Acento*, 16 Feb. 2023.

South America

South America's military spending fell by 6.1 per cent in 2022 to \$46.1 billion. This was 5.4 per cent lower than in 2013. The 2022 drop was largely due to a decline in Brazilian military expenditure.

A fall of 7.9 per cent in 2022 took military spending in Brazil to \$20.2 billion, 14 per cent lower than in 2013. The military burden fell to 1.1 per cent in 2022 from 1.2 per cent in 2021. During his 2019–22 presidency, Jair Bolsonaro built a close relationship with the armed forces, although this did not translate into more funding for the military.⁴⁰ Rather, military spending dropped in every year of the Bolsonaro administration, with an overall 16 per cent cut between 2019 to 2022. Simultaneously, however, there was a shift in the composition of expenditure from investment in military equipment to personnel costs. That shift was implemented by a 2019 law that restructured and improved the salary conditions and benefits for military personnel.⁴¹ After its enactment, spending on personnel rose from 72 per cent of total military expenditure in 2019 to 77 per cent in 2022.

Plans to modernize Argentina's armed forces have faced setbacks. In 2020 Argentina created the National Defence Fund (Fondo Nacional de la Defensa, Fondef) to finance arms acquisitions and reverse previous failures in military procurement practices.⁴² However, the country's poor economic performance has been a major obstacle to the implementation of Fondef. In 2022 military expenditure fell by 32 per cent to \$2.6 billion. The decline was mainly due to soaring inflation, at 72 per cent in 2022.

Asia and Oceania

The combined military expenditure in Asia and Oceania was \$575 billion in 2022, an increase of 2.7 per cent from 2021 and of 45 per cent from 2013. This continued an uninterrupted upward trend dating back to at least 1989, the earliest year for which SIPRI has an estimate for regional military spending.⁴³ The regional increase in 2022 was due primarily to China, India and Japan, which collectively accounted for 73 per cent of total regional spending in 2022. Five of the top 15 global spenders in 2022 are in Asia and Oceania: China

⁴⁰ Hunter, W. and Vega, D., 'Populism and the military: Symbiosis and tension in Bolsonaro's Brazil', *Democratization*, vol. 29, no. 2 (2022).

⁴¹ Brazilian Law no. 13 954 of 16 Dec. 2019, *Diário Oficial da União*, 17 Dec. 2019 (in Portuguese).

⁴² 'Fondo Nacional de la Defensa' [National Defence Fund], Law no. 27 565, enacted 17 Sep. 2020, *Boletín Oficial de la República Argentina*, 1 Oct. 2020. See also Tian, N. et al., 'Regional developments in military expenditure, 2020', *SIPRI Yearbook 2021*, pp. 260–61.

⁴³ No data is available for North Korea, Turkmenistan or Uzbekistan for 2013–22 and they are not included in the totals for Asia and Oceania. Data for Viet Nam is not available for the years 2019–22 and for Afghanistan for 2022. Incomplete data for Tajikistan, which indicates an increase, is included in the total.

(ranked 2nd), India (ranked 4th), the Republic of Korea (South Korea, ranked 9th), Japan (ranked 10th) and Australia (ranked 13th).

Of the 26 states in Asia and Oceania for which data was available, 13 increased their military spending in 2022. Despite this, strong economic recovery in the region meant that the military burden fell in all but four countries. At the same time, several countries in the region recorded significant decreases in military spending in 2022: the largest by Kazakhstan (–33 per cent), followed by Sri Lanka (–31 per cent) and the Philippines (–25 per cent).

Central Asia

Military expenditure by the three countries in Central Asia for which data is available fell by 29 per cent in 2022 to \$1.4 billion. This was the steepest annual subregional decline. Over the decade, military spending fell by 28 per cent. The decrease, however, hardly affected estimates for Asia and Oceania because Kazakhstan, Kyrgyzstan and Tajikistan accounted for only 0.2 per cent of regional spending.

The subregional decline was principally the result of a 33 per cent spending cut by Kazakhstan, by far the largest spender in the subregion, to \$1.1 billion. This marked its third consecutive year of decreasing military spending, in line with the 2020–22 multi-year budget, which included efforts to reduce personnel costs.⁴⁴ At 0.5 per cent of GDP, Kazakhstan had the second lowest military burden in Asia and Oceania (after only Papua New Guinea at 0.3 per cent).

East Asia

Military expenditure in East Asia increased by 3.5 per cent in 2022, reaching a total of \$397 billion. Over the decade 2013–22 military spending in the subregion grew by 50 per cent, representing the highest increase in Asia and Oceania and globally second only to Eastern Europe. The increase in 2022 also marked the 28th consecutive year of rising spending in East Asia. The three major spenders in the subregion were China, which accounted for 74 per cent of the total, followed by South Korea and Japan, representing 12 per cent each. Spending by Taiwan made up 3 per cent of the subregional total.

Military spending by China, the world's second largest spender, reached an estimated \$292 billion in 2022, an increase of 4.2 per cent since 2021 and of 63 per cent since 2013. China's military spending has increased for 28 consecutive years, the longest streak by any country in the SIPRI Military Expenditure Database. However, the growth rate in 2022 was the second

⁴⁴ Ashimov, A., 'Kazakhstan to modernise armed forces' weaponry in defence-spending plan', Caravanerai, 14 Feb. 2020; and Kazinform, 'Defense spending to fall in Kazakhstan in 2020', Strategy 2050, 5 Feb. 2020.

lowest annual growth since 1995, only higher than the increase of 2.6 per cent in the previous year. China's military burden remained unchanged from 2021 at 1.6 per cent of GDP.

The consistent increase in China's military spending reflects the ongoing modernization of its armed forces, the People's Liberation Army (PLA). The current spending priorities follow the guiding principles for the PLA under the 14th five-year plan (for 2021–25), with a focus on boosting the arms-industrial base and promoting emerging military technologies, including military applications of artificial intelligence (AI).⁴⁵ These priorities were reaffirmed by the 20th congress of the Communist Party of China, held in October 2022.⁴⁶

SIPRI's military expenditure data for China differs from the official national defence budget: the SIPRI figure for 2022 is 33 per cent, or 489 billion yuan (\$73 billion), higher than the figure published in the official state budget. The annually published national defence budget excludes important elements of what SIPRI defines as military expenditure, some of which are listed in other sections of the official state budget. Since 2020, SIPRI's estimate of Chinese military expenditure has included six components.⁴⁷ Official information is available for four of the components: national defence, the People's Armed Police, pension payments to demobilized and retired soldiers, and additional military construction spending. Together, these four categories accounted for 91 per cent of China's total spending in 2022. Estimates are made for the two remaining components: the China Coast Guard and additional funding for military research, development, testing and evaluation. The combined share of these two components was 8.7 per cent of the total in 2022.

Japan allocated \$46.0 billion to its military in 2022, up by 5.9 per cent from 2021 and by 18 per cent from 2013. Japan's military policy is undergoing a significant shift, abandoning its post-World War II era cap on military spending of 1.0 per cent of GDP. At 1.1 per cent of GDP, the Japanese military burden in 2022 exceeded the cap for the third consecutive year and was the highest since 1960. The latest National Security Strategy, published in December 2022, aims to increase the country's security spending to 2.0 per cent of GDP by 2027.⁴⁸ As well as the military budget, the target covers the budgets for the Japan Coast Guard, public security infrastructure and other civil defence costs.

⁴⁵ Xinhua, [(Two Sessions authorized for release) Draft planning outline: Accelerate the modernization of national defence and the military to achieve unity of a prosperous country and a strong military], 3 May 2021 (in Chinese).

⁴⁶ Xi, J., 'Hold high the great banner of socialism with Chinese characteristics and strive in unity to build a modern socialist country in all respects', Report to the 20th National Congress of the Communist Party of China, 16 Oct. 2022.

⁴⁷ Tian, N. and Su, F., *A New Estimate of China's Military Expenditure* (SIPRI: Stockholm, Jan. 2021).

⁴⁸ Japanese Ministry of Defense (MOD), 'National security strategy of Japan', Dec. 2022.

Also in December 2022, the Japanese government presented its 2023 budget which includes a 26 per cent nominal increase in the budget for the armed forces, the Japanese Self-Defense Forces (JSDF).⁴⁹ To fund these announced increases, the Japanese government proposed a combination of spending cuts in other areas, tax increases and the use of non-tax revenues such as government construction bonds.⁵⁰ The Japanese government cites a deteriorating security environment as the main rationale for increasing the country's military spending. It identifies three primary security threats for Japan: China's growing assertiveness, the unpredictable military activities of the Democratic People's Republic of Korea (DPRK, or North Korea) and Russian aggression, exemplified by the invasion of Ukraine.⁵¹

Military expenditure in South Korea fell by 2.5 per cent to \$46.4 billion in 2022, ending a 22-year streak of real-terms increases. The decline was largely a result of inflation, with the military budget having a nominal increase of 2.9 per cent. South Korea's military expenditure is mainly driven by the perceived nuclear and conventional missile threat from North Korea.⁵² South Korean President Yoon Suk-yeol, who took office in May 2022, has adopted a harsher stance towards North Korea compared to the policy of rapprochement and dialogue under the previous administration.⁵³ In 2022 North Korea conducted a record-breaking total of over 90 missile tests.⁵⁴ In response, President Yoon proposed higher military spending in 2023 to improve capabilities for air defence and pre-emptive and retaliatory strikes by the armed forces.⁵⁵

Oceania

In 2022 total military expenditure in Oceania totalled \$35.3 billion, 0.5 per cent more than in 2021. Spending rose by 48 per cent over the decade 2013–22.

The increases were mainly due to growth in military spending by Australia, which accounted for 92 per cent of the subregion's total in 2022. Its spending of \$32.3 billion was 0.3 per cent higher than in 2021 and 47 per cent higher than in 2013. Australia continues to perceive growing geopolitical threats in its neighbourhood and globally, from China's military modernization to Russia's

⁴⁹ Japanese Ministry of Defense, [Defence programs and budget of Japan (draft): 2023 budget summary], Dec. 2022 (in Japanese).

⁵⁰ Watanabe, K., [Key points of FY2023 defence-related budget], Japanese Ministry of Finance, Dec. 2022 (in Japanese).

⁵¹ Liang, X. and Tian, N., 'The proposed hike in Japan's military expenditure', SIPRI Commentary, Jan. 2023.

⁵² On North Korean nuclear forces see chapter 7, section VIII, in this volume.

⁵³ Yeung, J., Hancocks, P. and Seo, Y., 'South Korea's new leader says age of appeasing North Korea is over', CNN, 28 May 2022.

⁵⁴ Choe, S., 'Tracking North Korea's missile launches', *New York Times*, 23 Dec. 2022.

⁵⁵ Kim, J., 'Yoon Suk-yeol seeks record defense budget to counter North Korean threats', NK News, 30 Aug. 2022.

invasion of Ukraine.⁵⁶ Following a change of government after elections in May 2022, the new Labor government reaffirmed the goal of spending at least 2.0 per cent of GDP on the military.⁵⁷ Included in this figure is the 475 million Australian dollars (US\$329 million) in military aid that Australia provided to Ukraine during 2022, making it the largest donor of military assistance to Ukraine in Asia and Oceania.⁵⁸

South Asia

In 2022 military expenditure in South Asia rose to \$98.3 billion, representing a 4.0 per cent increase from 2021 and a 46 per cent increase from 2013. Following the Taliban takeover in August 2021, information on military expenditure for Afghanistan was not available for 2022.

Changes in South Asia's expenditure were primarily the result of increases by India, its biggest spender, which accounted for 83 per cent of the sub-regional total in 2022. Despite increasing its military spending by 6.0 per cent in 2022 to \$81.4 billion, India dropped from being third to fourth largest spender in the world. Its military spending in 2022 was 47 per cent higher than in 2013.

India's military spending growth reaffirms the government's commitment to military modernization amid border tensions with China and Pakistan.⁵⁹ This is supported by a continued rise in expenditure on capital outlays (23 per cent of total spending). This budget line funds equipment upgrades for the armed forces, as well as construction of more infrastructure along India's disputed border with China, where border clashes broke out again in December 2022.⁶⁰ Personnel expenses (e.g. salaries and pensions) remained the largest expenditure category in the Indian military budget, accounting for half of all spending.

In line with efforts to encourage self-reliance in arms development and production, 68 per cent of the capital outlays budget was earmarked for domestic equipment procurement in 2022, up from 64 per cent in 2021.⁶¹ To support privately owned arms companies, 25 per cent of military R&D costs were allocated to the such companies, and the Indian Ministry of Defence

⁵⁶ Kassam, N., *Lowy Institute Poll 2022* (Lowy Institute: Sydney, June 2022).

⁵⁷ Australian Department of Defence, 'Delivering on our commitment to keep Australians safe', Media release, 25 Oct. 2022.

⁵⁸ Australian Department of Defence, 'Additional support for Ukraine', Press release, 27 Oct. 2022.

⁵⁹ On India's border tensions see Davis, I. and Yuan, J., 'Armed conflict and peace processes in South Asia', *SIPRI Yearbook 2022*, pp. 120–24.

⁶⁰ Indian Ministry of Defence, 'Defence gets Rs 5.94 lakh crore in Budget 2023–24, a jump of 13% over previous year', Press release, 1 Feb. 2023.

⁶¹ Indian Ministry of Defence, 'Self reliance in defence sector', Press release, 19 Dec. 2022.

also established a Technology Development Fund (TDF) to finance indigenous production by small and medium-sized enterprises and start-ups.⁶²

At \$10.3 billion, Pakistan's military spending in 2022 was 2.0 per cent lower than in 2021 but 46 per cent higher than in 2013. The real-terms decline can be mostly attributed to inflation.⁶³ Notably, Pakistan spent the highest share of total government expenditure on the military (18 per cent) in Asia and Oceania.

Grappling with a deep economic crisis and high inflation of 48 per cent, Sri Lanka reduced its military spending by 31 per cent in 2022 to \$1.1 billion. As a result, its military burden fell from 1.9 per cent in 2021 to 1.4 per cent. The spending reductions are expected to continue in the coming years, as the government has announced cuts to the number of armed personnel of one-third by 2023 and one-half by 2030.⁶⁴

South East Asia

The military spending by the nine countries in South East Asia with available data decreased by 4.0 per cent in 2022 to \$43.1 billion, continuing the decline since 2020. Over the decade 2013–22 spending increased by 13 per cent. The subregion is home to the two countries with the highest military burden in Asia and Oceania: Myanmar (3.0 per cent) and Singapore (2.8 per cent). Military spending information has not been publicly available for Laos since 2014 and for Viet Nam since 2019.

Singapore, South East Asia's largest military spender, increased its spending by 2.8 per cent in 2022 to reach \$11.7 billion. The increase was mainly attributed to resumption of projects affected by the Covid-19 pandemic.⁶⁵ Military spending in Indonesia, the subregion's second largest spender, grew by 1.3 per cent to \$9.0 billion after a decrease of 9.0 per cent in 2021. Indonesia had the lowest military burden in the subregion (at 0.7 per cent of GDP), casting doubt on its ability to fund its military modernization programmes, including the procurement of submarines and combat aircraft from South Korea.⁶⁶

Increases in Singapore and Indonesia were offset by substantial reductions by the subregion's third and fourth spenders, Thailand and the Philippines, which cut spending by 11 per cent and 25 per cent, respectively. This was the second consecutive year of decrease in Thailand's spending, prompted by the

⁶² Indian Ministry of Defence, 'Funding under Technology Development Fund scheme of DRDO enhanced to Rs 50 crore per project from Rs 10 crore', Press release, 19 Dec. 2022.

⁶³ 'As Pakistani rupee drops to record low, FM blames politics', Al Jazeera, 20 July 2022.

⁶⁴ 'Sri Lanka to slash military by a third to cut costs', Al Jazeera, 13 Jan. 2023.

⁶⁵ Singaporean Ministry of Finance (MOF), *Revenue and Expenditure Estimates for the Financial Year 2022/2023* (MOF: Singapore, 2022), pp. 63–76.

⁶⁶ Indonesian Cabinet Secretariat, 'Gov't issues regulation on 2020–2024 National Defense Policy', 24 Jan. 2021; and Smith, J., "'No going back" for S. Korea, Indonesia defence cooperation after jet funding dispute', Reuters, 17 Feb. 2023.

continued economic impact of the Covid-19 pandemic. The sharp decline in Philippine military spending followed two consecutive years of increases.

Europe

Total military spending in Europe in 2022 amounted to \$480 billion, 13 per cent higher than in 2021, and marking a 38 per cent increase from 2013. Six of the top 15 global spenders in 2022 are in Europe: Russia (ranked 3rd), the United Kingdom (ranked 6th), Germany (ranked 7th), France (ranked 8th), Ukraine (ranked 11th) and Italy (ranked 12th). Russia's invasion of Ukraine in February 2022 was undoubtedly the main driver of the high year-on-year increase across the whole region.

Central and Western Europe

Military expenditure in Central and Western Europe increased by 3.6 per cent to \$345 billion in 2022, the highest figure since the end of the cold war. Over the decade 2013–22, the countries of Central and Western Europe increased their overall military expenditure by 30 per cent. Countries in Western Europe accounted for 90 per cent of the subregional total throughout the decade.

The United Kingdom's military expenditure reached \$68.5 billion in 2022, up by 3.7 per cent from 2021 and by 9.7 per cent since 2013. This was the sixth consecutive year of increase. The rise in British spending in 2022 was primarily due to its military aid to Ukraine—the second largest after the USA—which was estimated to have totalled \$2.5 billion in 2022. The country's military burden remained stable at 2.2 per cent of GDP.

The short-lived administration led by Prime Minister Elizabeth Truss made a commitment to raise military spending to 3 per cent of GDP by 2030.⁶⁷ However, given the financial constraints facing the country, the commitment was subsequently deferred by her successor, Rishi Sunak, until 2023.⁶⁸ The final decision will now follow a reassessment of the 2021 Integrated Review of Security, Defence, Development and Foreign Policy.⁶⁹

With an increase of 2.3 per cent, Germany's military expenditure reached \$55.8 billion in 2022—this meant that it overtook France to become the second largest spender in Central and Western Europe, after the UK. SIPRI's

⁶⁷ Truss, L., British Prime Minister, Speech at the UN General Assembly, 22 Sep. 2022.

⁶⁸ British Treasury, *Autumn Statement 2022* (His Majesty's Stationery Office: London, Nov. 2022), p. 34.

⁶⁹ British government, *Global Britain in a Competitive Age: The Integrated Review of Security, Defence, Development and Foreign Policy* (Her Majesty's Stationery Office: London, Mar. 2021); and Chuter, A., 'UK refuses to make defense spending commitments amid strategy review', *Defense News*, 17 Nov. 2022.

estimate includes military aid to Ukraine, totalling around \$2 billion in 2022, making Germany the second highest European donor.

Soon after the Russian invasion of Ukraine, Chancellor Olaf Scholz declared the event a *Zeitenwende* or 'epochal tectonic shift' for Germany. He stated that the country would aim for a military burden of 2.0 per cent of its GDP by 2025, up from 1.4 per cent in 2022.⁷⁰ To meet that goal, he also announced the establishment of an extra-budgetary fund of €100 billion (\$105 billion) aimed at increasing the military capabilities of the armed forces, to be spent over five years.⁷¹ The fund was left untouched in 2022, but from 2023 onwards it will cover major procurement programmes: 38 per cent will go to air systems, 21 per cent to land systems and 12 per cent to naval systems. Command and control systems will receive 27 per cent, and the remaining 2 per cent will be split between personal equipment and R&D on AI.⁷²

Military spending by Poland reached \$16.6 billion in 2022, the highest figure to date, marking an 11 per cent increase compared to 2021 and a 95 per cent increase over the decade 2013–22. The military burden was 2.4 per cent, the country's highest since 1993 and the third highest in Central and Western Europe, after Greece and Lithuania.

In March 2022 the Polish government passed the Homeland Defence Act to reorganize its national defence policy and raise the military burden to 3.0 per cent in 2023.⁷³ This target was later revised to 4.0 per cent of GDP.⁷⁴ Among the measures in the new law is a plan to increase the number of soldiers (professionals and reservists) from 143 500 to around 300 000 in order to respond to 'the increasingly difficult geopolitical situation in the region'.⁷⁵ This troop increase would provide Poland with one of the largest land armies in the European Union (EU).⁷⁶ The act also includes a new fund to support the modernization of the armed forces. The fund is to be financed through the issuing of new debt and aims to provide resources to sustain the procurement

⁷⁰ Nienaber, M. and Kowalcze, K., 'Germany to hike defense budget by up to €10 billion in 2024', Bloomberg, 15 Feb. 2023; and Morris, L., Brady K. and Stern, D. L., 'Germany pledged a military revamp when Ukraine war began. Now it's worse off', *Washington Post*, 17 Feb. 2023.

⁷¹ Marksteiner, A., 'Explainer: The proposed hike in German military spending', SIPRI Commentary, 25 Mar. 2022; and von der Burchard, H. and Rinaldi, G., 'Germany backtracks on defense spending promises made after Ukraine invasion', Politico, 5 Dec. 2022.

⁷² German Federal Chancellery, 'Entwurf eines Gesetzes über die Feststellung des Bundeshaushaltsplans für das Haushaltsjahr 2023' [Draft law on the determination of the Federal budget plan for the financial year 2023], German Bundesrat, Drucksache no. 20/3100, 5 Aug. 2022.

⁷³ Ustawa z dnia 11 marca 2022 r. o obronie Ojczyzny [Act of 11 March 2022 on homeland defence], *Dziennik Ustaw Rzeczypospolitej Polskiej*, 23 Mar. 2022 (in Polish). See also Adamowski, J., 'Europe goes on shopping spree to fill capability gaps', *Defense News*, 6 Sep. 2022.

⁷⁴ 'Poland to ramp up defense budget to 4% of GDP', Deutsche Welle, 30 Jan. 2023.

⁷⁵ Polish Prime Minister's Chancellery, 'More troops and more money for defence—The Council of Ministers adopted a draft Homeland Defence Act', 22 Feb. 2022.

⁷⁶ Polish Prime Minister's Chancellery (note 75).

effort. It is unclear what sum the fund aims to raise, and the auction of the first batch of issued bonds was cancelled without explanation.⁷⁷

In 2022 Finnish military expenditure reached \$4.8 billion, an increase of 36 per cent compared to 2021—Finland's highest annual increase since 1962. This raised Finland's military burden from 1.3 per cent to 1.7 per cent. The country shares a 1300-kilometre border with Russia, and the decision to allocate extra funding to military expenditure came after the invasion of Ukraine, which 'brought about fundamental changes in Finland's security environment' and led to it applying to join the North Atlantic Treaty Organization (NATO).⁷⁸ The increase was mainly assigned to procurement, which constituted roughly one-third of total military expenditure.

The European Union established the European Defence Fund (EDF) in 2017 to foster military R&D collaboration among companies across its member states. In July 2022 the European Commission announced the results of its 2021 call for proposals, with \$1.2 billion (\$1.3 billion) being split among 61 projects.⁷⁹ This sum is included in the total military expenditure of the subregion for 2022, and effectively makes the EU the 25th largest military spender in Central and Western Europe.

The European Peace Facility (EPF) was established in 2021 as an off-budget mechanism alongside the EU's Multiannual Financial Framework 2021–27.⁸⁰ Countries' contributions to the fund are included in estimates of national military spending. The EPF replaced and expanded the scope of pre-existing mechanisms, allowing for the financing of military action under the EU's Common Foreign and Security Policy (CFSP). During 2022 it was mainly used to fund and coordinate military aid to Ukraine, which amounted to \$3.2 billion.⁸¹

Eastern Europe

Military spending in Eastern Europe increased by 58 per cent in 2022 to \$135 billion. This upsurge was due to Russia's war against Ukraine, which unsurprisingly drove the military spending of both states upwards. Between 2013 and 2022, East European military expenditure grew by 72 per cent.

⁷⁷ Ciślak, J., 'Odwwołano sprzedaż obligacji na rzecz Funduszu Wsparcia Sił Zbrojnych' [Bond sale the Armed Forces Support Fund cancelled], *Defence24*, 24 Oct. 2022 (in Polish).

⁷⁸ Finnish Ministry of Defence, 'Supplementary budget strengthens defence capability', 20 May 2022; and Finnish Ministry of Defence, 'Finland and NATO'. On the NATO applications of Finland and Sweden see chapter 1, section V, in this volume.

⁷⁹ European Commission, Directorate-General for Defence Industry and Space, 'Results of the EDF 2021 calls for proposals: EU invests €1.2 billion in 61 defence industrial cooperation projects', 20 July 2022.

⁸⁰ Council of the EU, 'Timeline—European Peace Facility', 24 Mar. 2023.

⁸¹ European External Action Service, 'The European Peace Facility', *Strategic Compass*, Jan. 2023.

Russia. In 2022 Russia's estimated total military expenditure reached \$86.4 billion, a 9.2 per cent increase over 2021 and 15 per cent over 2013. This was equivalent to 4.1 per cent of Russia's GDP in 2022, up from 3.7 per cent in 2021. Figures for Russia's military expenditure in 2022 are highly uncertain given the increasing opaqueness of Russian financial authorities since the invasion of Ukraine.⁸² The 2022 estimate of Russia's total military expenditure is based on two documents: budgetary execution documents as of 1 August 2022, which were released on 1 September but are no longer available on the Russian Treasury website;⁸³ and an audit of the 2023–25 Budget Law by the Russian Accounts Chamber issued in October 2022.⁸⁴

Despite the limited available information, some analysis is possible. For instance, available data shows how the costs of the war increased compared to initial plans. In the 2022–24 Budget Law, voted at the end of 2021, the 'national defence' budget line (which accounts for almost 80 per cent of Russia's total military expenditure) was initially planned to be 3502 billion roubles (\$50.1 billion).⁸⁵ The estimated actual spending, based on October 2022 documents, was 4679 billion roubles (\$67.0 billion), a 34 per cent nominal increase from the first budget.⁸⁶ This growth rate was above Russia's estimated inflation rate of 14 per cent in 2022.⁸⁷

Within this overall spending figure, some key spending categories increased during the year.⁸⁸ The increases concerned mainly classified spending under the budget category 'armed forces of the Russian Federation', which rose by 52 per cent in nominal terms from the initial budget for 2022 to 2316 billion roubles (\$33.2 billion). This classified spending is generally assumed to include procurement of military equipment and maintenance—two spending categories likely to have required additional resources due to the war. Classified spending dedicated to military R&D also increased, as did expenditure for the troops of the national guard, Rosgvardiya, which was up by 23 per cent from the initial budget to 349 billion roubles (\$5.0 billion). These paramilitary troops are also deployed in Ukraine, alongside the regular armed forces.⁸⁹ Another interesting line item is 'mobilization and extra forces

⁸² See e.g. Cooper, J., 'Implementation of the Russian Federal Budget during January–July 2022 and spending on the military', SIPRI Background Paper, Oct. 2022.

⁸³ Russia Federal Treasury, [Budget execution report as of 1 August 2022: Federal budget], 1 Sep. 2022 (in Russian). As of Feb. 2023, data from 1 Jan. 2022 remained accessible, but no more recent information.

⁸⁴ Russian Accounts Chamber, [Opinion of the Accounts Chamber of the Russian Federation on the draft federal law 'On the federal budget for 2023 and for the planning period 2024 and 2025' (main provisions)] (Accounts Chamber: Moscow, 2022), p. 20 (in Russian).

⁸⁵ Russian Ministry of Finance, [On the federal budget for 2022 and for the planning period of 2023 and 2024], Dec. 2021, p. 49.

⁸⁶ Russian Accounts Chamber (note 84), p. 20.

⁸⁷ International Monetary Fund, World Economic Outlook Database, Oct. 2022.

⁸⁸ Cooper (note 82), table 5.

⁸⁹ 'Putin orders \$81,500 payment to families of National Guards who die in Ukraine', Reuters, 6 June 2022.

training'. The revised budget for the period up to 1 August 2022 lists spending under this category as 17.1 billion roubles (\$245 million), up 106 per cent in nominal terms from actual spending in 2021.⁹⁰

By the end of 2022, Western sanctions had not yet significantly hampered Russia's economy and its financial capacity.⁹¹ After almost a full year of sanctions, the Russian economy appeared to have resisted better than anticipated by some Western commentators at the start of the war, suggesting that Russia still had sufficient resources to sustain its war effort.⁹² Indeed, whereas in April 2022 the International Monetary Fund (IMF) had initially predicted an 8.5 per cent contraction in Russia's GDP in 2022, by January 2023 this had been revised to a smaller contraction of 2.2 per cent.⁹³ However, these figures rely on official Russian statistics that may not be reliable. Furthermore, GDP data would include the increase in production of military equipment.

A key factor when it comes to the resilience of Russia's economy and funding the war has been revenue from commodity exports. Russia is the largest exporter of oil to global markets.⁹⁴ Just as for the trade in goods, Russia has established new trading patterns for its oil exports to circumvent sanctions. Although Russia sells its oil at lower prices than other producers, it has increased exports significantly to countries that were not previously among its main customers, such as China, India and Türkiye.⁹⁵ Nonetheless, in January 2023 revenue from oil exports was down 40 per cent compared to January 2022, which will make Russia's budgeting harder.⁹⁶ Despite this, oil and gas revenue is still expected to account for 34 per cent of total government income in the 2023 budget.⁹⁷

The gradual loss of revenue from commodity exports means that the Russian government will increasingly need to resort to other sources of income to cover budgetary deficits. The Russian Ministry of Finance has identified the main sources for financing the federal budget deficit for the coming years as the National Wealth Fund (NWF) and state loans.⁹⁸ As a consequence, the value of the NWF—the country's sovereign wealth fund, which was

⁹⁰ Russia Federal Treasury (note 83).

⁹¹ On the impact of trade restrictions on Russia see chapter 12, section III, in this volume.

⁹² 'How new sanctions could cripple Russia's economy', *The Economist*, 27 Feb. 2022.

⁹³ International Monetary Fund (IMF), *World Economic Outlook: War Sets Back the Global Recovery* (IMF: Washington, DC, Apr. 2022), p. 6; and International Monetary Fund (IMF), *World Economic Outlook Update: Inflation Peaking Amid Low Growth* (IMF: Washington, DC, Jan. 2023), p. 4.

⁹⁴ International Energy Agency (IEA), 'Oil market and Russian supply', Feb. 2022.

⁹⁵ 'Russia sanctions: What impact have they had on its oil and gas exports?', BBC News, 26 Jan. 2023; and Kurmanaev, A. and Reed, S., 'How Russia is surviving the tightening grip on its oil revenue', *New York Times*, 7 Feb. 2023.

⁹⁶ Zhdannikov, D., Aizhu C. and Verma, N., 'Lost Russian oil revenue is bonanza for shippers, refiners', Reuters, 8 Feb. 2023.

⁹⁷ Russian Ministry of Finance, [Budget for citizens 2023–2025: Draft Federal Law on the Federal Budget for 2023 and for the planning period 2024 and 2025], Nov. 2022, p. 4 (in Russian).

⁹⁸ Russian Ministry of Finance (MOF), [Budget for citizens to the Federal Law on the Federal Budget for 2023 and for the planning period 2024 and 2025] (MOF: Moscow, 2022), p. 10 (in Russian).

established in 2008 during the global financial crisis—is expected to decrease significantly, from 13 546 billion roubles (\$184 billion) at the start of 2021 to 5947 billion roubles (\$75.4 billion) at the start of 2025.⁹⁹ In addition, the Russian government can count on a large foreign reserve, which stood at around \$580 billion at the end of 2022—among the largest in the world.¹⁰⁰ Russia could also sell some of this foreign currency or gold reserves. However, around \$300 billion of its foreign assets have been frozen by sanctions.¹⁰¹ Additionally, some costs of the war may be extra-budgetary. For example, some oblasts may have taken on the responsibility to compensate the families of dead or wounded soldiers, while some regions have also paid for volunteer military battalions.¹⁰²

Ukraine. In 2022 Ukraine's estimated total military expenditure reached \$44.0 billion, a growth of 640 per cent since 2021. As a consequence, while Russia's military spending was 11 times larger than Ukraine's in 2021, this ratio narrowed to just 2:1 in 2022. Its spending over the decade 2013–22 increased by 1661 per cent.

In addition to its own military spending, Ukraine has also received substantial financial and equipment-related military assistance from several countries. Financial military aid to Ukraine is estimated to have totalled at least \$30 billion in 2022, excluding the value of military equipment stocks donated to Ukraine. Direct financial military assistance is accounted for in the SIPRI estimates of military spending of the donor countries. In addition, general financial support and loans sustaining Ukraine's public finances could contribute indirectly to Ukraine's military budgeting.

Ukraine's total military expenditure represented 34 per cent of its GDP in 2022, up from 3.2 per cent in 2021. This made Ukraine the country with the largest military burden in the world by far. The increase in military burden was due to a combination of the huge rise in military spending with a severe economic contraction. According to IMF estimates, Ukraine's GDP declined by 35 per cent in 2022.¹⁰³ Nonetheless, the IMF considered that Ukraine's economy remained resilient despite the ongoing war.¹⁰⁴

⁹⁹ Raymond, H., 'Sovereign Wealth Funds as domestic investors of last resort during crises', *Economie Internationale*, vol. 123, no. 3 (2010); and Russian Ministry of Finance (note 98), p. 11.

¹⁰⁰ Bank of Russia, 'International reserves of the Russian Federation (end of period)', 17 Feb. 2023; and Bank of Finland Institute for Emerging Economies (BOFIT), 'Russia's foreign currency and gold reserves hit record high', BOFIT Weekly, 21 Jan. 2022.

¹⁰¹ 'Sanctions have frozen around \$300 bln of Russian reserves, FinMin says', Reuters, 13 Mar. 2022.

¹⁰² Cooper (note 82), p. 7.

¹⁰³ International Monetary Fund (note 87).

¹⁰⁴ McMahon, M. and Liboreiro, J., 'IMF praises Ukraine's economic resilience as "astonishing" while country pushes for \$15-billion loan', Euronews, 21 Feb. 2023.

Middle East

Estimated military expenditure in the Middle East rose by 3.2 per cent to \$184 billion in 2022. This was 1.5 per cent lower than in 2013.¹⁰⁵ The regional rise in 2022 was largely due to 16 per cent growth in military spending by Saudi Arabia, the largest spender in the region and the fifth in the world.

Six of the 10 largest military burdens are in the Middle East: Saudi Arabia (7.4 per cent), Qatar (7.0 per cent), Oman (5.2 per cent), Jordan (4.8 per cent), Israel (4.5 per cent) and Kuwait (4.5 per cent). The military burden fell in almost all countries in the region in 2022, except for Qatar (0.5 percentage points increase), Iran (0.4 percentage points increase) and Jordan (unchanged at 4.8 per cent). While Qatar's military burden increased because military spending rose at a faster pace than the economy, Iranian military spending increased amid economic contraction.

Military spending in Israel fell for the first time since 2009. The 4.2 per cent decrease left military spending at \$23.4 billion in 2022, but still 26 per cent higher than in 2013. Expenditure in 2022 did not follow the approved budget, which had projected a significant rise.¹⁰⁶ Nor did it meet the 3–4 per cent growth projections of the 2030 Security Concept adopted in 2018.¹⁰⁷ Israel has been cutting public expenditure since mid 2021 to reduce its deficit, and in December 2022 it finally achieved a budget surplus of 0.5 per cent of GDP.¹⁰⁸ The reduction in military spending took place despite growing clashes between the Israeli military forces and Palestinian militants, as well as intensified strikes on Syria.¹⁰⁹

Saudi Arabia continued to lead a military coalition against Houthi forces in Yemen. The eight-year-long conflict worsened again in 2022, as missile and air strikes by both sides intensified.¹¹⁰ Saudi Arabia's military spending grew by 16 per cent in 2022 to reach an estimated \$75.0 billion. However, Saudi Arabian military expenditure has been very volatile. The increase in 2022 was the first since 2018, and spending has been on an overall downward trend since the start of the country's involvement in the conflict in Yemen, in 2015: spending fell by 23 per cent between 2015 and 2022. Both the decline since

¹⁰⁵ This total excludes Syria and Yemen, for which it was impossible to make a reliable series of estimates for inclusion in the regional total.

¹⁰⁶ Ahronheim, A., 'Israel finally has a budget, and so does the IDF—Analysis', *Jerusalem Post*, 4 Nov. 2021.

¹⁰⁷ Israeli Prime Minister's Office, 'PM Netanyahu presents "2030 Security Concept" to the Cabinet', 15 Aug. 2018.

¹⁰⁸ Israeli Ministry of Finance, 'Estimated execution of the state budget: January–December FY2022', 11 Jan. 2023.

¹⁰⁹ Al Tahhan, Z. and Humaid, M., 'Six major developments that shaped 2022 for Palestinians', *Al Jazeera*, 26 Dec. 2022; and Al-Khalidi, S., 'Israeli attacks squeeze Iranian aerial supplies to Syria, sources say', *Al Jazeera*, 2 Sep. 2022. On the conflicts involving Israel see chapter 2, section I, in this volume.

¹¹⁰ Robinson, K., 'Yemen's tragedy: War, stalemate, and suffering', Council on Foreign Relations, 21 Oct. 2022. See also chapter 2, section II, in this volume.

2015 and the 2022 rise can be at least partly attributed to variations in oil prices in the international market.

In 2022 Türkiye's military spending fell for the third straight year, to \$10.6 billion, a decrease of 26 per cent compared to 2021. Despite a nominal spending increase of 28 per cent, soaring inflation as part of the country's widespread economic woes resulted in the biggest annual real-terms decrease in Turkish military expenditure since at least 1949.