## I. Developments in arms transfers, 2016–20

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The volume of international transfers of major arms in 2016-20 was at almost the same level as in 2011-15 (see box 9.1). This meant that the volume remained at its highest level since 1989-93, the period during which the cold war ended. The volume of transfers in 2016–20 was 12 per cent higher than in 2006-10 and 42 per cent higher than in 2001-2005, but was still 35 per cent lower than the peak reached in 1981–85, at the height of the cold war (see figure 9.1).2

The five largest exporters of major arms in 2016-20 were the United States, Russia, France, Germany and China (see section II). The five largest importers were Saudi Arabia, India, Egypt, Australia and China (see section III).

The region that received the largest volume of imports of major arms in 2016-20 was Asia and Oceania, accounting for 42 per cent of the global total.3 However, arms imports by states in Asia and Oceania fell by 8.3 per cent between 2011–15 and 2016–20. Arms imports by states in Africa (-13 per cent) and the Americas (-43 per cent) also fell and their shares of the global total decreased between the two periods. In contrast, the flow of arms to states in the Middle East increased by 25 per cent and the region's share of the global total rose from 26 per cent to 33 per cent. This is a higher share than in any of the seven consecutive five-year periods since 1981–85. Arms imports by states in Europe increased by 12 per cent between 2011–15 and 2016–20, and the region accounted for 12 per cent of the global total.

### The Covid-19 pandemic and international arms transfers

Since there can be significant year-on-year fluctuations in deliveries of major arms, SIPRI usually compares consecutive multi-year periods normally five-year periods. This provides a more stable measure of trends in transfers of major arms. However, the data is recorded by year and SIPRI also publishes information on annual volumes of deliveries (see e.g. figure 9.1). This data shows that the volume of global transfers of major

<sup>&</sup>lt;sup>1</sup> The estimated volume for 2016-20 was 0.5% lower than for 2011-15, but as data on deliveries of major arms is not exact, the difference between the periods is not significant enough to draw conclusions of change.

<sup>&</sup>lt;sup>2</sup> Except where indicated, the information on the arms deliveries and orders referred to in this section is taken from the SIPRI Arms Transfers Database. For a definition of 'major arms' and a description of how the volume of transfers is measured see box 9.1. The figures here may differ from those in previous editions of the SIPRI Yearbook because the Arms Transfers Database is updated annually.

<sup>&</sup>lt;sup>3</sup> On SIPRI's regional coverage see the list of conventions in this volume and the SIPRI website.

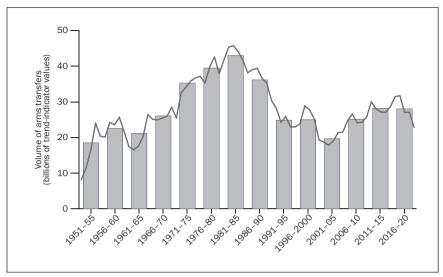


Figure 9.1. The trend in international transfers of major arms, 1950–2020

*Note*: The bar graph shows the average volume of arms transfers for 5-year periods and the line graph shows the annual totals. See box 9.1 for an explanation of the SIPRI trend-indicator value.

Source: SIPRI Arms Transfers Database, Mar. 2021.

arms in 2020 was exceptionally low—16 per cent lower than in 2019 and 20 per cent below the annual average in 2011–19—and therefore deserves some further discussion.

The drop in arms transfers in 2020 might be partly due to the disruption to arms suppliers' planned production and delivery schedules arising from the Covid-19 pandemic. Many arms-supplying states implemented measures to deal with the impact of the pandemic on the global economy. Some arms-supplying states and arms-producing companies were more negatively affected by the pandemic than others; however, in most cases the effects appeared to be only temporary and, by the end of 2020, most suppliers had managed to mitigate the worst of the disruption caused by the pandemic. The examples below from the three largest arms-supplying states—the USA, Russia and France—show the variation in impact.

In the USA, Lockheed Martin, the world's largest arms-producing company (see section V), announced that, out of a planned total of 141, it had delivered only 120 F-35 combat aircraft to the USA and international customers in 2020.<sup>4</sup> Nonetheless, the company delivered 52 F-35s for export in 2020, compared with 47 in 2019. Some other major US arms-production

<sup>&</sup>lt;sup>4</sup>Jennings, G., 'Update: Lockheed Martin reports reduced F-35 deliveries for 2020 due to Covid-19', *Jane's Defence Weekly*, 3 Feb. 2021.

programmes experienced delays at the start of the pandemic, but most appeared to be back on schedule by the end of 2020, and it seems that major arms export programmes were barely affected. 5 Similarly, the French company Dassault Aviation Group was able to fulfil the planned delivery of 13 Rafale combat aircraft to export customers in 2020, despite some temporary pandemic-induced delays in April that year.<sup>6</sup> In contrast, the disruption to some Russian arms companies' delivery schedules caused by the pandemic appeared to be more significant. According to Russian Deputy Defence Minister Alexander Fomin, in 2020 Russia postponed the delivery of weapon systems to a number of foreign customers due to 'the impossibility of accepting foreign specialists for pre-shipment inspections in Russia and sending Russian representatives to deliver and service military products in the customers' territories'. This seems to have included deliveries of arms to several of Russia's largest arms trade partners, including Algeria, Egypt and India.

While the pandemic-induced global economic crisis may have disrupted some planned arms-production and delivery schedules, it appears to have had a minimal impact during 2020 on future international arms transfers. According to publicly available sources, no major arms export contracts were cancelled or significantly cut in 2020 in response to the economic downturn—although it is possible that in some cases information about such decisions remains outside the public domain. Conversely, many states maintained their pre-pandemic arms-procurement planning and signed new large arms-import contracts in 2020, despite the economic impact of the pandemic. For example, Germany decided on a plan to buy 45 F/A-18E and F/A-18G combat aircraft: Australia started final negotiations for 29 AH-64E combat helicopters; Brazil ordered 4 MEKO-A100 frigates; Egypt ordered 43 AH-64Es and 2 FREMM frigates (of which the first was delivered in 2020); Japan ordered 105 F-35 combat aircraft; Morocco ordered 24 F-16V combat aircraft and 24 AH-64Es; and Poland ordered 32 F-35s.

This suggests that, in general terms, rather than being directly influenced by the pandemic, the overall drop in arms transfers in 2020 may have been related to other supply- and demand-side factors. For example, shifts in national armament procurement cycles are normal and the drop in 2020 could simply reflect this. Other factors could include gaps between deliveries of arms resulting from changes in the relations between suppliers and recipients, and non-pandemic-related economic conditions such as pre-pandemic low oil prices that have led to reductions in income for oil-

<sup>&</sup>lt;sup>5</sup> Metha, A. and Insinna, V., 'Chaos, cash and Covid-19: How the defense industry survived—and thrived-during the pandemic', Defense News, 15 Mar. 2021.

<sup>&</sup>lt;sup>6</sup> Dassault Aviation Group, 2020 Short Form Annual Financial Report (Dassault Aviation Group: Paris, 4 Mar. 2021), p. 13.

<sup>&</sup>lt;sup>7</sup> Stepanov, A., [The Red Sea under the keel], Rossiyskaya Gazeta, 27 Dec. 2020 (in Russian).

# **Box 9.1.** Definitions and methodology for SIPRI data on international arms transfers

The SIPRI Arms Transfers Database contains information on deliveries of major arms to states, international organizations and non-state armed (i.e. rebel) groups from 1950 to 2020. A new set of data is published annually, replacing the data in earlier editions of the SIPRI Yearbook or other SIPRI publications.

### Definitions

SIPRI's definition of 'transfer' includes direct sales, licences for production in the recipient state, aid, gifts, and most loans or leases. The recipient must be the armed forces or paramilitary forces or intelligence agency of another state, a non-state armed group, or an international organization, which use the equipment for military purposes.

The SIPRI Arms Transfers Database only includes 'major arms', which are defined as (a) most aircraft, including unmanned aerial vehicles; (b) air defence missile systems and larger air defence guns; (c) air refuelling systems; (d) most armoured vehicles; (e) artillery over 100 millimetres in calibre; (f) engines for combat-capable aircraft and other larger aircraft, for combat ships and larger support ships, and for armoured vehicles; (g) guided munitions (missiles, torpedoes, bombs and shells); (h) sensors (radars, sonars and many passive electronic sensors); (i) most ships; (f) ship-borne weapons (naval guns, missile launch systems and anti-submarine weapons); (k) reconnaissance satellites; and (l) most gun or missile-armed turrets for armoured vehicles.

In cases where an air refuelling system, engine, sensor, naval gun or other ship-borne system, or turret (items c, f, h, j and l) is fitted on a platform (vehicle, aircraft or ship), the transfer only appears as a separate entry in the database if the item comes from a different supplier from that of the platform.

#### The SIPRI trend-indicator value

SIPRI has developed a unique system for measuring the volume of transfers of major arms using a common unit, the trend-indicator value (TIV). The TIV is intended to represent the transfer of military resources. Each weapon has its own specific TIV. Second-hand and second-hand but significantly modernized arms are given a reduced TIV. SIPRI calculates the volume of transfers by multiplying the weapon-specific TIV with the number of arms delivered in a given year. SIPRI TIV figures do not represent the financial values of arms transfers.

producing states, some of which have been among the largest importers of major arms in recent years.

The uncertainty about the extent to which the pandemic was a cause for the fall in arms transfers in 2020 is also highlighted by the fact that several arms-supplying states that were hit hard by the pandemic had higher levels of arms deliveries in 2020 than in some other years in the period 2011–19. For example, US arms exports were at a higher level in 2020 than in three years in 2011–19 and French arms exports were at a higher level than in five years in that period. Some arms-importing states showed a similar trend. For instance, Australia's volume of arms deliveries in 2020 was higher than in any year in 2011–19.