10. World nuclear forces

Overview

At the start of 2021, nine states—the United States, Russia, the United Kingdom, France, China, India, Pakistan, Israel and the Democratic People’s Republic of Korea (DPRK, or North Korea)—possessed approximately 13,080 nuclear weapons, of which 3,825 were deployed with operational forces (see table 10.1). Approximately 2,000 of these are kept in a state of high operational alert.

Overall, the number of nuclear warheads in the world continues to decline. However, this is primarily due to the USA and Russia dismantling retired warheads. Global reductions of operational warheads appear to have stalled, and their numbers may be rising again. At the same time, both the USA and Russia have extensive and expensive programmes under way to replace and modernize their nuclear warheads, missile and aircraft delivery systems, and nuclear weapon production facilities (see sections I and II).

The nuclear arsenals of the other nuclear-armed states are considerably smaller (see sections III–IX), but all are either developing or deploying new weapon systems or have announced their intention to do so. China is in the middle of a significant modernization and expansion of its nuclear arsenal, and India and Pakistan also appear to be increasing the size of their nuclear weapon inventories. North Korea’s military nuclear programme remains central to its national security strategy, although in 2020 it did not conduct any tests of nuclear weapons or long-range ballistic missile delivery systems.

The availability of reliable information on the status of the nuclear arsenals and capabilities of the nuclear-armed states varies considerably. The USA, the UK and France have declared some information. Russia refuses to publicly disclose the detailed breakdown of its nuclear forces, even though it shares the information with the USA. China releases little information about force numbers or future development plans. The governments of India and Pakistan make statements about some of their missile tests but provide no information about the status or size of their arsenals. North Korea has acknowledged conducting nuclear weapon and missile tests but provides no information about the size of its nuclear arsenal. Israel has a long-standing policy of not commenting on its nuclear arsenal.

The raw material for nuclear weapons is fissile material, either highly enriched uranium (HEU) or separated plutonium. China, France, Russia, the UK and the USA have produced both HEU and plutonium for use in their nuclear weapons; India and Israel have produced mainly plutonium; and Pakistan has produced mainly HEU but is increasing its ability to produce plutonium.
North Korea has produced plutonium for use in nuclear weapons but may have produced HEU as well. All states with a civilian nuclear industry are capable of producing fissile materials (see section X).

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