

7. World nuclear forces

Overview

At the start of 2012 eight states possessed approximately 4400 operational nuclear weapons. Nearly 2000 of these are kept in a state of high operational alert. If all nuclear warheads are counted—operational warheads, spares, those in both active and inactive storage, and intact warheads scheduled for dismantlement—the United States, Russia, the United Kingdom, France, China, India, Pakistan and Israel together possess a total of approximately 19 000 nuclear weapons (see table 7.1).

All five legally recognized nuclear weapon states, as defined by the 1968 Treaty on the Non-Proliferation of Nuclear Weapons (Non-Proliferation Treaty, NPT)—China, France, Russia, the UK and the USA—appear determined to remain nuclear powers for the indefinite future. Russia and the USA have major modernization programmes under way for nuclear delivery systems, warheads and production facilities (see sections I and II in this chapter). At the same time, they continue to reduce their nuclear forces through the implementation of the bilateral 2010 New START treaty, which entered into force in 2011, as well as through unilateral force reductions. Since Russia and the USA possess by far the two largest nuclear weapon arsenals, one result has been that the total number of nuclear weapons in the world has been declining. The nuclear arsenals of the other three legally recognized nuclear weapon states are considerably smaller, but all are either deploying new weapons or have announced their intention to do so (see sections III–V). China is the only legally recognized nuclear weapon state that appears to be expanding the size of its nuclear forces.

The availability of reliable information about the nuclear weapon states' arsenals varies considerably. France, the UK and the USA have recently disclosed important information about their nuclear capabilities. In contrast, transparency in Russia has decreased as a result of its decision not to publicly release detailed data about its strategic nuclear forces under New START, even though it shares the information with the USA. China remains highly non-transparent as part of its long-standing deterrence strategy, and little information is publicly available about its nuclear forces and weapon production complex.

Reliable information on the operational status of the nuclear arsenals and capabilities of the three states that have never been party to the NPT—India, Israel and Pakistan—is especially difficult to find. In the absence of official declarations, the available information is often contradictory or incorrect. India and Pakistan are expanding their nuclear strike capabilities, while Israel appears to be waiting to see how the situation in Iran develops (see

Table 7.1. World nuclear forces, January 2012

All figures are approximate.

Country	Year of first nuclear test	Deployed warheads ^a	Other warheads ^b	Total inventory
United States	1945	2 150 ^c	5 850	-8 000 ^d
Russia	1949	1 800 ^e	8 200 ^f	-10 000 ^g
United Kingdom	1952	160	65	225
France	1960	290	10	-300
China	1964	..	200 ^h	-240
India	1974	..	80–100 ^h	80–100
Pakistan	1998	..	90–110 ^h	90–110
Israel	-80 ^h	-80
North Korea	2006	? ⁱ
Total		~4 400	~14 600	-19 000

^a ‘Deployed’ means warheads placed on missiles or located on bases with operational forces.

^b These are warheads in reserve, awaiting dismantlement or that require some preparation (e.g. assembly or loading on launchers) before they become fully operationally available.

^c In addition to strategic warheads, this figure includes c. 200 non-strategic (tactical) nuclear weapons deployed in Europe.

^d The US Department of Defense nuclear stockpile contains c. 4900 warheads. Another c. 3100 retired warheads are scheduled to be dismantled by 2022.

^e These are warheads earmarked for delivery by deployed strategic launchers (inter-continental ballistic missiles, submarine-launched ballistic missiles and long-range bombers).

^f This figure up to 4000 non-strategic (tactical) nuclear weapons for use by short-range naval, air force and air defence forces. In 2010 the Russian Government declared that all tactical nuclear weapons were in storage and not deployed.

^g This includes a military stockpile of c. 4500 nuclear warheads and another c. 5500 retired warheads await dismantlement.

^h The nuclear stockpiles of China, India, Pakistan and Israel are not thought to be fully deployed.

ⁱ North Korea conducted nuclear test explosions in 2006 and 2009, but there is no public information to verify that it possesses operational nuclear weapons.

sections VI–VIII). A ninth state—the Democratic People’s Republic of Korea (DPRK, or North Korea)—has demonstrated a military nuclear capability. However, there is no public information to verify that it possesses operational nuclear weapons (see section IX).

The raw material for nuclear weapons is fissile material, either highly enriched uranium (HEU) or separated plutonium. The five nuclear weapon states have produced both HEU and plutonium. India, Israel and North Korea have produced mainly plutonium, and Pakistan mainly HEU for weapons (see section X).

The figures presented on nuclear forces in this chapter are estimates based on public information and contain some uncertainties, as reflected in the notes to the tables.