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At the dawn of the nuclear age, the United States hoped to maintain a monopoly on its new weapon, but the secrets for making nuclear weapons soon spread. Four years after the United States dropped atomic bombs on Japan in August 1945, the Soviet Union detonated its first nuclear device. The United Kingdom (1952), France (1960), and China (1964) followed. Seeking to prevent the nuclear weapon ranks from expanding further, the United States and other like-minded states negotiated the nuclear Nonproliferation Treaty (NPT) in 1968. In the decades since, several states have abandoned nuclear weapons programs, but others have defied the NPT. India, Israel, and Pakistan have never signed the treaty and possess nuclear arsenals. Iraq initiated a secret nuclear program under Saddam Hussein before the 1991 Persian Gulf War. North Korea announced its withdrawal from the NPT in January 2003 and has tested nuclear devices since that time. Iran and Libya have pursued secret nuclear activities in violation of the treaty’s terms, and Syria is suspected of doing the same. Still, nuclear nonproliferation successes outnumber failures and dire forecasts decades ago that the world would be home to dozens of states armed with nuclear weapons have not come to pass.

Nuclear-Weapon States:

The nuclear-weapon states (NWS) are the five states—China, France, Russia, United Kingdom, and the United States—officially recognized as possessing nuclear weapons by the NPT. Although the treaty legitimizes these states’ nuclear arsenals, it also establishes that they are not supposed to build and maintain such weapons in perpetuity. Article VI of the treaty holds that each state-party is to “pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament.” In 2000, the five NWS committed themselves to an “unequivocal undertaking…to accomplish the total elimination of their nuclear arsenals.” But for now, the five continue to retain the bulk of their nuclear forces. Because of the secretive nature with which most governments treat information about their nuclear arsenals, the figures below are best estimates of each nuclear-weapon state’s nuclear holdings, including both strategic warheads and lower-yield devices referred to as tactical weapons:

China: 100-200 warheads.
France: Approximately 350 strategic warheads.
Russia: 2,787 strategic warheads[1], approximately 2,000 operational tactical warheads, and approximately 8,000 stockpiled strategic and tactical warheads.
United Kingdom: Less than 160 deployed strategic warheads.
United States: 2,126 strategic warheads[1], approximately 500 operational tactical weapons, and approximately 6,700 reserve strategic and tactical warheads.
Defacto Nuclear-Weapon States:

Three states—India, Israel, and Pakistan—never joined the NPT and are known to possess nuclear weapons. Claiming its nuclear program was for peaceful purposes, India first tested a nuclear explosive device in 1974. That test spurred Pakistan to ramp up work on its secret nuclear weapons program. India and Pakistan both publicly demonstrated their nuclear weapon capabilities with a round of tit-for-tat nuclear tests in May 1998. Israel has not publicly conducted a nuclear test, does not admit to or deny having nuclear weapons, and states it will not be the first to introduce nuclear weapons in the Middle East. Nevertheless, Israel is universally believed to possess nuclear arms. The following arsenal estimates are based on the amount of fissile material—highly enriched uranium and plutonium—that each of the states is estimated to have produced. Fissile material is the key element for making nuclear weapons. India and Israel are believed to use plutonium in their weapons, while Pakistan is thought to use highly enriched uranium.

**India:** Up to 100 nuclear warheads.

**Israel:** Between 75 to 200 nuclear warheads.

**Pakistan:** Between 70 to 90 nuclear warheads.

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**Iran:** No known weapons or sufficient fissile material stockpiles to build weapons. However, the International Atomic Energy Agency (IAEA), the institution charged with verifying that states are not illicitly building nuclear weapons, concluded in 2003 that Iran had undertaken covert nuclear activities to establish the capacity to indigenously produce fissile material. The IAEA is continuing its investigation and monitoring of Tehran’s nuclear program.

**North Korea:** Has separated enough plutonium for up to 12 nuclear warheads.

**Syria:** In September 2007, Israel conducted an airstrike on what U.S. officials have alleged was the construction site of a nuclear research reactor similar to North Korea’s Yongbyon reactor. Intelligence officials briefed members of congress on the airstrike eight months later in April 2008, discussing the evidence leading to their judgment that the site was an undeclared nuclear reactor. While the extent of Syrian-North Korean nuclear cooperation is unclear, it is believed to have begun in 1997. Subsequent IAEA investigations into the U.S. claims uncovered traces of undeclared man-made uranium particles at both the site of the destroyed facility and Syria’s declared research reactor. Syria has failed to provide adequate cooperation to the IAEA in order to clarify the nature of the destroyed facility and procurement efforts that could be related to a nuclear program.

**States That Had Nuclear Weapons or Nuclear Weapons Programs at One Time:**

Belarus, Kazakhstan, and Ukraine inherited nuclear weapons following the Soviet Union’s 1991 collapse, but returned them to Russia and joined the NPT as non-nuclear-weapon states. South Africa secretly developed and dismantled a small number of nuclear warheads and also joined the NPT in 1991. Iraq had an active nuclear weapons program prior to the 1991 Persian Gulf War, but was forced to verifiably dismantle it under the supervision of UN inspectors. The U.S.-led March 2003 invasion of Iraq and subsequent capture of Iraqi leader Saddam Hussein definitively ended his regime’s pursuit of nuclear weapons. Libya voluntarily renounced its secret nuclear weapons efforts in December 2003. Argentina, Brazil, South Korea, and Taiwan also shelved nuclear weapons programs.

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**States of Immediate Proliferation Concern:**

Iran is pursuing an uranium enrichment program and other projects that could provide it with the capability to produce bomb-grade fissile material and develop nuclear weapons within the next several years. In contrast, North Korea has the material to produce a small number of nuclear weapons, announced its withdrawal from the NPT, and tested nuclear devices. Uncertainty persists about how many additional nuclear devices North Korea has assembled beyond those it has tested. In September 2005, Pyongyang “committed to abandoning all nuclear weapons and existing nuclear programs.”

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**ENDNOTE 1.** SORT limits the United States and Russia to 2,200 strategic warheads each.