



Today, over 25,000 nuclear weapons are maintained around the globe, more than 2,200 of which are on alert, ready for use in minutes or hours. As during the Cold War,

the United States and Russia maintain the vast majority of nuclear weapons—more than 96 percent of the world's total.

	Warheads on Long-Range Missiles	Warheads on Long-Range Aircraft	Warheads on Mid- and Short Range Systems	Total Deployed Warheads	Warheads Held in Reserve	Warheads Awaiting Destruction	Total
<b>Russia</b>	1,666	838	2,000	<b>4,504</b>	10,600 <sup>a</sup>		<b>15,104</b>
<b>United States</b>	1,702	500	500	<b>2,702</b>	2,500	4,200	<b>9,402</b>
<b>France</b>	240		60	<b>300</b>	?		<b>300</b>
<b>China</b>	26		150	<b>176</b>	65 <sup>b</sup>		<b>240</b>
<b>Britain</b>	150			<b>150</b>	50 <sup>b</sup>		<b>200</b>
<b>Israel</b>							<b>80</b>
<b>Pakistan</b>							<b>60</b>
<b>India</b>							<b>50</b>
<b>North Korea</b>							<b>5-15<sup>c</sup></b>
<b>Total</b>	3,784	1,338	2,710	<b>7,831</b>			<b>25,441-25,451</b>

**Note: All numbers are estimates.**

Sources: *Bulletin of Atomic Scientists "Nuclear Notebook"*; Jeffrey Lewis, *New America Foundation*; *Institute for Science and International Security*.

a As many as 25% of these weapons may be awaiting destruction

b Britain, China, and France may all maintain some warheads in reserve, but accurate estimates of those numbers are difficult to obtain.

c North Korea's nuclear status is unclear. It is estimated to have enough fissile material to produce 5 to 15 nuclear weapons. The country conducted underground nuclear tests of weapons in 2006 and 2009. Whether North Korea has built any other weapons is unknown.

The number of nuclear weapons worldwide peaked in the mid-1980s at around 70,000 warheads. Most of the nuclear weapons deployed today would explode with a force roughly 8 to 100 times larger than the bombs dropped on Hiroshima and Nagasaki (which averaged the equivalent of 18,000 tons of TNT). The deployed warheads are primarily on long-range land- or submarine-based ballistic missiles that can deliver the warheads thousands of miles with great accuracy.

Only the deployed weapons in the U.S. and Russian arsenals have ever been limited by treaty, beginning in the 1970s with the Strategic Arms Limitation Treaty (SALT). By the end of 2012, the United States plans to reduce its deployed long-range weapons to 2,200; Russia plans to reduce to approximately 2,000. These reductions meet the terms of the Treaty Between the United States of America and the Russian Federation on Strategic Offensive Reductions, more commonly known as SORT or the

Moscow Treaty. This treaty expires at the end of 2012, at which point there will be no limits on the arsenals of either nation unless they negotiate a new treaty.

## WHY THIS MANY WEAPONS?

For the United States, about which the most is known, the president and other civilian leaders determine the overall purpose of U.S. nuclear forces and the types of missions for which they will be used. The actual numbers and weapon characteristics follow from more specific targeting decisions made by the Department of Defense. These decisions still rely on policies and assumptions about fighting and winning a nuclear war, which are a relic of the Cold War. The decisions made by the Department of Defense ultimately results in a long list of targets that U.S. nuclear forces must be able to destroy: missile silos, air bases, communication and command centers, and other military and industrial installations.<sup>1</sup>

For the United States, typically two or more warheads are assigned to each target so that there is a high probability of destroying it. These targeting decisions then set the required numbers and types of warheads in the U.S. nuclear arsenal. The base level of 2,200 warheads set by the Moscow Treaty thus indicates that U.S. nuclear doctrine requires being able to destroy roughly 1,000 targets after 2012. Presumably, most of these targets are in Russia and China.

## DELIVERY VEHICLES: HOW THE WEAPONS WOULD REACH THEIR TARGETS

**U.S. nuclear delivery vehicles** consist of 14 submarines armed with long-range submarine-launched ballistic missiles, 488 ground-based long-range missiles armed with one to three warheads each, 72 long-range bombers, and many more short-range aircraft capable of carrying nuclear weapons. The United States also maintains several hundred nuclear weapons in six countries in Europe, making it the only country to base its nuclear

<sup>1</sup>Kristiansen, H. 2001. The matrix of deterrence: U.S. strategic force structure studies. Online at: <http://www.nukestrat.com/pubs/matrix.pdf>.

weapons on foreign territory.

**Russian nuclear delivery vehicles** consist of 11 submarines armed with long-range submarine-launched ballistic missiles, 430 ground-based long-range missiles armed with 1 to 10 warheads each, 79 long-range bombers, and many more short-range aircraft capable of carrying nuclear weapons. A new class of Russian ballistic missile submarine is scheduled to be deployed later this year.

**French nuclear delivery vehicles** consist of four submarines armed with long-range submarine-launched ballistic missiles and 60 mid-range and 10 short-range aircraft capable of carrying supersonic missiles.

**British nuclear delivery vehicles** consist of four submarines armed with long-range submarine-launched ballistic missiles; British officials have stated that each submarine will carry no more than 48 warheads.

**Chinese nuclear delivery vehicles** consist of six different kinds of land-based missiles, only two of which can reach the United States. It is believed that many of these forces are not on alert and would therefore require hours or days to launch. China developed one submarine with mid-range submarine-launched ballistic missiles that may never have been deployed; China also has a small number of bombers capable of carrying nuclear bombs. It is now developing both new missiles and submarines, but at a slow rate.

Little is known about the nuclear forces of **India, Israel,** and **Pakistan**, including how many (if any) are operationally deployed and, if so, on what types of delivery vehicles. Both India and Pakistan have active programs to develop short- and mid-range missiles.

**North Korea** has Nodong missiles, which can reach Japan, and is increasing its missile capability through its development of a satellite launch vehicle. It has not successfully launched a long-range missile, and it is not known whether it has developed a nuclear warhead that can be delivered by missile.

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