Current status

There are various estimates on the size of China's nuclear arsenal. Some estimates suggest China currently has approximately 170 nuclear warheads including approximately 110 operationally deployed nuclear missiles, approximately 60 warheads stored for its submarine-launched ballistic missiles, and bombers. Each of those nuclear ballistic missiles carries a single warhead, which are normally separated from the missiles.10 The Federation of American Scientists argues that China has a total stockpile of 250 nuclear weapons.11 In April 2013, China published a new white paper that gives an overview of China's military strategy and arms control policy. As in previous defence papers and other official documents the white paper does not reveal any basic information on the size of China's current nuclear capability or nuclear arsenal.12 Unlike the other nuclear weapon states, which are maintaining their current arsenal levels or are slowly decreasing, China is believed to be slowly increasing the size of its nuclear weapons arsenal.13

China has not declared publically that is has ended the production of highly enriched uranium (HEU) and plutonium for nuclear weapons, though it is believed that China stopped production of HEU in 1987 and plutonium by 1990. China's military inventory would be about 16±4 tons of weapon-grade HEU and 1.8±0.5 tons of weapon-grade plutonium.14

Modernization

China's April 2013 white paper notes that a strategic task of its modernisation efforts is to build a strong defence and powerful armed forces.15 It is concerned with maintaining what it sees as a "limited" and "effective" nuclear arsenal and its modernization programme has focused on increasing the "survivability" of its land-based strategic missiles. It is reportedly phasing out its older missiles and replacing them with new ones in order to increase their range and sophistication.16 It is expected that after this is accomplished, China will speed up the modernization of its sea-based strategic force. China has been reported to be replacing its first generation ballistic nuclear missile-carrying submarines.17 US missile "defence" will be a major driving force for China's nuclear weapon modernization, as some Chinese officials are concerned that even a limited missile "defence" system could neutralize China's nuclear force.

China was reported to be phasing out its older missiles, DF-3A and the DF-4, and replacing them with new DF-21 medium range missiles, approximately 55–60 of which are nuclear capable.18 In addition, China has deployed four other nuclear-capable ballistic missiles, the DF-5A, DF-31, DF-31A, and JL-2.19 These developments in missile capability will both increase the range and sophistication of land-based systems and nuclear-powered ballistic missile submarines.20 Estimates in November 2013 indicate that China has about 148 land-based nuclear ballistic missiles that can carry one warhead each. China also has additional warheads for their submarine launched ballistic missiles (SLBMs) as well as bombs for air delivery.21

A 2013 US Department of Defense report states that China may be developing intercontinental ballistic missiles (ICBM) with multiple independently targetable re-entry vehicles (MIRV) capability, as well as other technologies to counter other countries' ballistic missile defence systems.22 China has also been reported to be replacing its first generation ballistic nuclear missile-carrying submarines.23 Some analysts have argued that China is currently modernizing its sea-based strategic force in order to secure a second-strike force.24

Economics

It is difficult to estimate the cost of China's nuclear weapon force, however, assuming that China consistently maintains 5% of its overall military expenditure for its nuclear weapons programme, China would have spent between US$4.5 and $9 billion on its nuclear programme in 2011.25 A recent report by Global Zero estimates that China's nuclear cost to be $7.6 billion in 2011.26

International law and doctrine

China has signed but not ratified the Comprehensive Test Ban Treaty (CTBT). Most estimates assume China will ratify the CTBT only after the United States does. China officially supports the commencement of negotiations of a fissile materials cut-off treaty (FMCT) at the Conference on Disarmament, but US plans to develop its missile “defence” capabilities will likely affected China's willingness to participate in FMCT negotiations. If China remains concerned about US missile "defence," it could seek to develop more fissile materials to fuel additional ICMBs. In terms of disarmament, China is bound by article VI of the NPT to negotiate the elimination of its arsenal, though has consistently demanded the US and Russia reduce their arsenals first.

Public discourse and multilateral engagement

China is one of the least transparent of the nuclear-armed states. There is scant public debate about nuclear weapons in China. After US President Obama outlined his “vision” of a nuclear weapon free world, an online survey conducted by e People's Daily newspaper indicated that 51% of respondents wanted nuclear disarmament while 49% did not.27 China has not attended either of the conferences on the humanitarian impact of nuclear weapons in Norway or Mexico and has not commented publically on this initiative or the accompanying joint statements in multilateral fora. It also did not participate in the open-ended working group on nuclear disarmament in 2013.