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Congressional Testimony

**CHINA, INDIA, AND PAKISTAN—
GROWING NUCLEAR CAPABILITIES
WITH NO END IN SIGHT**

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Mr. Chairman, Ranking Member Donnelly, and Members of the Subcommittee on Strategic Forces, thank you for the invitation to testify on regional nuclear capabilities and their impact on U.S. security. I will focus my attention today on a segment of the Asian nuclear space, namely China, India, and Pakistan, their strategic interactions, and the impact of their nuclear weapons modernization on each other and on the United States. The nuclear weapon programs in these three countries are worthy of attention because they are active, expanding, and diversifying at a time when the overall global trend remains a continuing contraction of nuclear inventories. As requested by you, Mr. Chairman, my testimony will explore why this is the case and what challenges ensue from such expansion.

China

Unlike India and Pakistan, China is formally a nuclear weapon state under the nuclear Non-Proliferation Treaty (NPT). China is also a major nuclear power possessing advanced, repeatedly tested, and diverse nuclear weapons designs, diverse delivery systems, and a centralized command and control network that is intended to ensure that the leadership of the Chinese Communist Party can exercise effective command of the country's nuclear weaponry.

In contrast to the United States and the former Soviet Union, China historically maintained a small nuclear force consisting primarily of land-based missiles whose warheads were stored separately, with the delivery vehicles maintained routinely in un-alerted status in silos or caves. This relatively relaxed posture was viewed as sufficient to protect Chinese security during the Cold War because Beijing believed that the positive externalities of mutual U.S.-Soviet nuclear deterrence bestowed on China sufficient protection. Because even a small number of survivable nuclear weapons capable of reaching an adversary's homeland could wreak unacceptable damage, Chinese leaders sought to maintain relatively modest forces that through a combination of opacity, sheltering, and sometimes limited mobility, could survive the remote contingencies of direct nuclear attack at a time when these dangers were limited principally by the political constraints of strong bipolar competition.

With the ending of the Cold War and with the progressive rise of Chinese power, Beijing—whether it publicly admits it or not—has come to view the United States as its principal strategic competitor. Given China's recognition of the sophistication of U.S. nuclear and conventional forces in the face of Beijing's desire to reclaim the strategic primacy it once enjoyed in Asia, Chinese nuclear modernization became inevitable. This modernization, which consists principally of efforts to increase the survivability of its nuclear deterrent in the face of what it perceives to be a formidable U.S. nuclear threat supplemented by other major regional dangers from Russia, India, and other prospective nuclear powers, has taken the following form: the deployment of new land-based solid-fueled ballistic missiles of varying ranges (to include intercontinental-range ballistic missiles); ballistic missile submarines with weapons capable of reaching the continental United States; new highly survivable nuclear weapon storage sites; and a robust national command and control system that incorporates a resilient, dedicated nuclear command and control segment.

The number of nuclear warheads in the Chinese arsenal has also progressively increased as the nuclear delivery systems have been augmented, but there still significant uncertainties about the existence and the number of nuclear gravity bombs and tactical nuclear weapons in the Chinese arsenal. The total size of the Chinese nuclear weapons inventory today is widely believed to consist of some 250 nuclear warheads, but the accuracy of these or any other numbers is debatable. China

has a substantial fissile material stockpile consisting of some 16 metric tons of highly enriched uranium and some 1.8 metric tons of weapon-grade plutonium, so there are no practical constraints on its ability to produce an arsenal of any size it chooses. Given the choices China makes in regard to delivery systems, it could deploy anywhere up to an additional 150 warheads over the next ten years.

At arsenal levels of such size, the Chinese nuclear force will be oriented fundamentally towards deterring nuclear use (or the threat of use) against China by maintaining a survivable retaliatory capacity during conflicts with any nuclear-armed state and by maintaining the capacity for escalation dominance vis-à-vis weaker nuclear adversaries. Toward these ends, China will continue to reiterate its “no first use” nuclear policy, though what that doctrine means precisely is unclear.

China today views the United States as its principal active nuclear and conventional threat, followed by India in the nuclear realm. Russia remains a latent nuclear threat and although it was historically an important driver of Chinese nuclear planning, Russia has receded considerably in Chinese calculations today. North Korea, Taiwan, and Japan remain longer-term sources of strategic uncertainty for Beijing, with nuclear threats remaining a current or prospective challenge in all three cases. The most pressing practical contingencies involving Chinese nuclear use in the prospective future, however, involve employment against U.S. forces to forestall defeat or signal a willingness to risk further escalation in the context of a successful U.S. intervention in a Taiwan crisis or in another crisis of similar magnitude in East Asia (for example, on behalf of Japan), and the use of tactical (or other) nuclear weapons in a conflict with India.

India

The rivalry between China and India since their birth as modern states after the Second World War created the preconditions for a nuclear rivalry between them—a competition that was inflamed when China first tested nuclear weapons in 1964 driven by its antagonism to the United States and its emerging split with the Soviet Union. The first Chinese nuclear test, coming two years after India’s defeat in the 1962 Sino-Indian conflict, precipitated the Indian nuclear weapons program, which in turn first demonstrated its capacity in 1974. Despite the supposed Chinese disdain of India, Beijing began to systematically target India with nuclear weapons after the latter’s first nuclear test, and sometime in the late-1980s transferred a nuclear weapon design and fissile material to Pakistan, at least in part as a strategy of containing India. New Delhi responded to the Chinese challenge with additional nuclear tests in 1998, declared itself to be a nuclear weapon state, and began to overtly develop its nuclear deterrent since—aimed at both China and Pakistan.

India today is believed to possess an arsenal of some 100 nuclear weapons, though this figure is highly uncertain. The country is thought to have produced close to 600 kilograms of weapons-grade plutonium, though it is unclear whether all this material has been machined into warheads. India can produce extremely large quantities of weapons-grade plutonium, should it chose to use its power reactors currently outside of safeguards for this purpose. To date, however, there is no evidence that India has embarked on any crash program to enlarge its nuclear arsenal, despite its having the technical capacity to do so. If India persists in producing about 5-6 nuclear weapons annually (as it is believed to have done since 1998), the India nuclear deterrent would consist of some less than 200 nuclear weapons by 2025—assuming the public assessments of its current inventory are correct. These weapons will be deployed aboard primarily mobile, solid-fueled, ballistic missiles of up to

intermediate range, though these will be supplemented by a limited number of legacy gravity weapons and a small but growing number of sea-launched ballistic missiles. All Indian nuclear weapons currently are maintained routinely in de-mated condition, though whether this posture will persist after the four ballistic missile submarines are eventually inducted into its arsenal is unclear.

The heart of India's current nuclear modernization program, which is centered on developing and inducting mobile, solid-fueled intermediate-range ballistic missiles, deploying ballistic missile submarines, developing a ballistic missile defense system, building weapon storage and integration sites, and completing its command and control network, is aimed principally at refurbishing its deterrence capability vis-à-vis China. The threats emerging from Pakistan are significant, but Indian policy makers judge that their current deterrent against Islamabad is generally adequate. The deterrence gap versus China, however, is considerable and it will not be bridged until India acquires the capacity to range the Chinese heartland with missiles of adequate reach.

Even when the effort to reach this goal is completed—an endeavor that will continue well beyond 2025—it is likely that New Delhi will persist with its currently relaxed nuclear posture so long as current trends in Sino-Indian and Indo-Pakistani relations persist. This posture is predicated on the requirement of a “minimum” deterrent (whose numerical size is not publicly known) and a strict “no first use” policy (which is likely to subsist durably because of India's general conventional military superiority over Pakistan and its still substantial, though decaying, operational military superiority over China along their disputed border). As long as these conditions obtain, there is little incentive for India to violate its “no first use” policy, which is oriented fundamentally towards deterring nuclear attack (or threats of attack) emerging from Pakistan and China.

Pakistan

The contrast between India and Pakistan on “no first use” could not be greater. Unlike India, which is both stronger than Pakistan and no pushover where China is concerned, Pakistan is a weak state that is unfortunately growing even weaker as a result of its awful strategic choices. Pakistan's security competition with India, which dates back to the creation of the two countries as independent states, is multi-dimensional in nature and involves territorial, religious, and power-political dimensions. These grievances have combined in unhelpful ways to make Pakistan the anti-status quo power in the Indian subcontinent. Having fought four unsuccessful wars with India in an effort to secure its strategic aims, Pakistan switched to a dangerous and provocative strategy in the last decades of the 20th century—a strategy of supporting terrorist groups aimed at enervating India through “a thousand cuts,” even as Pakistan began to feverishly expand its nuclear arsenal in an effort to prevent New Delhi from retaliating with conventional forces.

The post-2001-02 shift in Indian policy, which holds out the threat of conventional retaliation to Pakistani-supported terrorist attacks (despite the overarching presence of nuclear weapons in the subcontinent), has only deepened Pakistan's dependence on nuclear weapons further, resulting in an acceleration of its weapons program. Today, the Pakistan arsenal includes both gravity weapons and ballistic missiles of up to medium range as well as cruise missiles, glide bombs, and a plethora of new and diverse tactical nuclear weapons. The Pakistani nuclear arsenal is judged by many reputable scholars to consist of some 90-110 weapons, though at the current pace of growth the force could easily expand to over three times that number within a decade.

Pakistan's strategic weaponry is believed to be deployed in de-mated condition routinely in peacetime. Whether that posture will apply to the newer tactical systems is unclear. Pakistan's nuclear doctrine, unlike India or China's, is centered fundamentally on first use, and it is oriented primarily towards defeating India's conventional superiority in the event of conflict. Although Pakistan's nuclear forces are intended, strictly speaking, for deterrence and not war fighting, Islamabad's emerging tactical capabilities could inadvertently push Pakistan towards the latter.

The external dangers of deterrence breakdown, which could precipitate the catastrophe of Pakistani nuclear use against India, are complemented by internal dangers as well. Pakistan's internal fissures, it is often feared, could bleed into its armed forces, resulting in risks to the security of its nuclear weaponry. Although the Pakistani military has made enormous investments in enhancing nuclear security (aided by the United States) in recent years, fears about the loss or compromise of its nuclear weaponry because of domestic dangers still persist—and not unreasonably so.

Taking Stock

When all three states are synoptically considered, therefore, the following contingencies remain the most pressing from the viewpoint of U.S. strategic interests for the reasons adduced below:

- 1) Chinese use or threats of use of nuclear weaponry to deter U.S. military intervention on behalf of Taiwan or other American allies in Asia.

Of the three nuclear weapons states that are the subject of this testimony, only China conceives of its nuclear arsenal as having direct utility for deterring U.S. military operations directed against its interests at various locations along the Asian rimland. Any contingency that brings U.S. forces in confrontation with China would represent a dangerous predicament and would require both local conventional and overall nuclear superiority for political and military success. Any failure on this score could not only precipitate immediate operational reverses that would frustrate the realization of U.S. political aims, but it could lead over time to the erosion of the U.S. alliance system in East Asia, the future acquisition of nuclear weapons by current American allies, and the eventual loss of American primacy in the Indo-Pacific. For all these reasons, preparing seriously to ensure success in this contingency should remain at the top of American strategic priorities. The recent innovations centered on the "AirSea Battle" concept indicate that the Pentagon has taken the emerging Chinese threats to the U.S. ability to aid its East Asian allies seriously, though it is unclear whether force planning for nuclear escalation vis-à-vis China has been adequately integrated into the current war plans. If this lacuna is real, it could prove costly in the context of a conflict—and could undermine the confidence of the allies in the viability of the U.S. nuclear umbrella.

- 2) Pakistani "use" of nuclear weapons as cover to support continued terrorist attacks against India.

Although this contingency derives from Pakistan's ability to exploit the deterrence capability inherent in its nuclear reserves for revisionist ends—and represents the dominant threat levied by the Pakistani military against India now for some three decades—it embodies the most likely route to nuclear deterrence breakdown in South Asia. Neither Indian nor U.S. nuclear

capabilities are directly useful in defeating this threat, but U.S. and international political pressure on Pakistan, which has been employed episodically, might offer a means of mitigating its worst dangers. The most likely antidote that could alter such Pakistani behavior, however, would be the rising costs of terrorist blowback within Pakistan—which is, unfortunately, an expensive way of getting Pakistan to change course.

- 3) Pakistani nuclear use against India or against Indian military forces in the context of Indian retaliation against Pakistani-supported terrorist attacks against India.

This contingency arises if India decides to retaliate against Pakistan through the large scale use of military force for punitive purposes. Any significant employment of Indian military force obviously carries the risk of a Pakistani nuclear response, which is why Indian leaders have shied away from exercising major conventional war options that require especially the large scale use of land forces. Should India contemplate major military operations, however, it is likely that the United States would intervene, but mainly through energetic diplomacy as it did in 2001-02 and again in 2008. It is unlikely that the United States would choose to intervene militarily to prevent either conflict escalation or nuclear weapons employment for a host of operational reasons, though some kinds of trans- or post-conflict assistance might be feasible: in such circumstances, the most important U.S. capabilities that would be relevant would be intelligence, surveillance and reconnaissance (ISR) assets, capabilities required for noncombatant evacuation operations, and Nuclear Emergency and Support Teams (NEST) and other assets essential for post-detonation assistance and recovery (if nuclear use has occurred). Because of the large numbers of U.S. citizens normally resident or traveling in India, and the complexity of evacuation operations in a nuclear environment, this scenario can be more stressing than is commonly realized. The most useful U.S. contribution towards preventing a Pakistani use of nuclear weapons in such a scenario—and the Indian nuclear retribution that would result thereafter—would be to press Pakistan to exit the terrorism business or risk being left alone (or, even worse, the object of international sanction) if a major Indian military response ensues in the aftermath of any pernicious terrorist attack. Other than this, there is little that the United States can do to preserve deterrence stability between two asymmetrically-sized states where the gap in power promises to become even wider tomorrow than it is today.

- 4) Pakistani loss of control over nuclear assets in the context of conventional military operations against India OR a compromise of nuclear security in peacetime in Pakistan.

This scenario, which has been discussed considerably in recent years both in India and in the United States, would also be highly complex in the demands it places on the U.S. military, depending on the details of the contingency. U.S. ISR elements, special operations forces, and other quick reaction capabilities would be highly relevant in such a contingency—as would close coordination with the government of Pakistan and its armed forces. The United States has already aided Pakistan significantly in regards to nuclear weapons protection, but there are obvious limits to further assistance beyond a point, not least because of the deep-rooted Pakistani fears about the United States seeking access and information about the location of Pakistan's nuclear weaponry.

- 5) Chinese or Indian nuclear coercion against the other in the context of a border crisis OR in the limiting case, the actual use of nuclear weapons to stave off battlefield defeat.

This last contingency, admittedly remote today, would put a high premium on U.S. ISR assets as well as, obviously, active U.S. diplomacy. At the present, it is unlikely that the United States would find itself involved in such a conflict except as a concerned bystander, but if this situation were to change as U.S.-Indian ties grow deeper over time, U.S. conventional and nuclear forces might acquire new roles for extended deterrence and reassurance with respect to India. Until then, however, U.S. ISR capabilities and diplomacy would represent the instruments most relevant to coping with such a scenario.

Implications for the United States

The broad range of nuclear challenges arising from a consideration of the problems involving China, India and Pakistan suggest several important conclusions as far as U.S. strategic forces are concerned.

First, U.S. nuclear forces will continue to remain the ultimate backstop where American national security is concerned. The notion that these forces will become irrelevant any time soon, or that their abolition can be contemplated, is a dangerous fantasy. Eliminating nuclear weapons globally must instead take a backseat to protecting U.S. nuclear dominance and maintaining the effectiveness of the U.S. nuclear deterrent over the long term.

Second, the progressive growth of Chinese, Indian, and Pakistani nuclear forces over the next ten years—and the likelihood of further proliferation elsewhere in years to come—implies that any further reduction of U.S. nuclear forces beyond the New Start treaty ought to be eschewed. Given the complexity of the emerging nuclear environment—a world that is best described as asymmetric nuclear multipolarity—the United States must seek to maintain the requisite superiority of the total force that permits it to achieve conventional success in regional contingencies while preserving the advantages currently enjoyed by U.S. nuclear forces. Given the onerous U.S. extended deterrence commitments in Europe and Asia, American nuclear parity with Russia must not diminish to a point where parity with China slinks into reach.

Third, the United States must think seriously about the threat of nuclear deterrence breakdown in Asia as a time when the continent will host many nuclear powers whose arsenals vary in capacity, architecture and doctrine. The desire to reduce the salience of nuclear weaponry in global politics is estimable. That means that U.S. nuclear weapons ought not to be brandished unnecessarily. However, it does not imply forgetting that U.S. nuclear weapons are still essential for deterring not only nuclear attacks (or the threats thereof) on the United States and its allies but also major conventional attacks as well, while still remaining useful as tactical warfighting instruments in certain specific, admittedly limited, contingencies where conventional weapons currently remain ineffective. As a general rule, therefore, the desire to reduce the salience of nuclear weapons in world politics should not extend to devaluing the utility of nuclear weapons for deterrence because these instruments will continue to remain the *ultima ratio* in an environment that only promises more, not less, proliferation.