

Containing Nuclear Weapons

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NUCLEAR-FREE ZONES ARE AN IMPORTANT NONPROLIFERATION TOOL

When the treaty arrangements of the Central Asian Nuclear-Weapon-Free Zone came into effect in March 2009, U.N. Secretary-General Ban Ki-moon welcomed the new agreement as a significant step in global efforts to control nuclear weapons. In acceding to the treaty, the countries of the region — Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan — pledged to not research, develop, manufacture, stockpile, acquire, possess, or maintain control over nuclear weapons or other nuclear explosive devices. The signatory countries also pledged to refrain from receiving or extending any service to others with respect to nuclear weapon technologies.¹ The U.N. secretary general applauded the agreement for reinforcing other nuclear-free zone agreements in augmenting and buttressing the Nuclear Non-Proliferation Treaty (NPT).² The secretary-general noted that the Central Asian Nuclear-Weapon-Free Zone agreement was exceptional in several respects. It was the first regional treaty of its kind in the Northern Hemisphere. It was also the first nuclear zone agreement whose signatories explicitly included the pledge to comply with the Comprehensive Nuclear-Test-Ban Treaty.

What was perhaps even more exceptional about the agreement was that it brought the five Central Asian states together in close cooperation in pursuing the crucial common goal of promoting international security on a regional basis. For countries that had been stymied by disagreements over regional cooperation for the two decades since independence following the dissolution of the Soviet Union, the Central Asian Nuclear-Weapon-Free Zone stands out as a truly exceptional example of state-to-state cooperation. Economic and political differences following the difficult transition from the communist system had bedeviled efforts to achieve common

policies throughout the Central Asian region on trade, customs, currencies and commerce. Disputes over competition between hydroelectric power generation and agricultural water users had split upstream and down-stream neighbors in ways that escalated into intense competition over access to the region's most precious resources.

Like any collective security agreement, the nuclear-free zone treaty is partly based on the collective goal of enhancing security and partly based on the opposite side of the same coin — the concomitant but more urgent goal of averting danger. The Central Asian states, having emerged from the Soviet era as victims of the environmental and social damage caused by the development and testing of weapons of mass destruction, were not responding to a hypothetical threat; they were responding on the basis of bitterly learned lessons from the past. When Kazakhstani President Nursultan Nazarbayev took office in 1991, his very first official decree closed the nuclear weapons testing range in his country.

Only a few years ago, strategists regarded Central Asia as being on the periphery of security affairs. Following the collapse of the Soviet Union and the retreat of Cold War animosities, the U.S.-Russian nuclear balance shifted from confrontation to cooperation. Both countries ended nearly 50 years of expansion of nuclear armaments. The two countries embarked on measured and coordinated deceleration and dismantlement with a new focus on cooperative nuclear materials protection and accounting programs. In these circumstances, the Central Asian countries managed to wrest at least implicit assurances that the relaxation in the Cold War conditions offered the protection of what was regarded as a "security umbrella." The threat of the use of nuclear weapons in the Central Asian region began to seem unlikely, even remote. Soviet and U.S. arsenals began

to shrink, and neighboring China's arsenal, since the country's first nuclear test explosion in 1964, remained small.

The revelation that Pakistan was carrying out nuclear tests in May 1998 was a bombshell that shook international security in Central and South Asia. Pakistan's nuclear arsenal was designed as a deterrent against neighboring India's nuclear arsenal, but Pakistan's entry into the ranks of nuclear powers changed the security complexion of the region. Al-Qaida's terrorist attack on the U.S. in September 2001 refocused international attention on deteriorating security in South and Central Asia. The U.S.-led military campaign against terrorism in Afghanistan and the subsequent actions of the NATO-led International Security Assistance Force, refocused attention on Central Asia.

The urgency of maintaining strategic stability throughout Central Asia was dramatically compounded by recent developments in Iran. It has become clear that Iran has embarked on efforts to develop an independent nuclear capacity outside of the verification and monitoring infrastructure of the international community. Iran's uranium enrichment program is portrayed as a peaceful program, yet it creates nuclear technology that could be shifted to weapons application, threatening a fundamental shift in the strategic balance in the Middle East, South Asia and Central Asia. The Central Asian "security umbrella" of the past has evaporated. In its place a new threat has emerged. Central Asian states are surrounded by towering nuclear powers with strategic intentions not easily constrained by traditional deterrence policies. The influence of Central Asia's "nuclear neighbors" has profound implications not only for the region's nuclear-free zone, but for how those states interact in the forthcoming efforts to strengthen international security, the nonproliferation regime, and the stabilization of Afghanistan and Southwest Asia.

NONPROLIFERATION AND THE NUCLEAR-FREE ZONE

The idea of a nuclear-free zone is not new, but features of the Central Asian Nuclear-Weapon-Free Zone, or CANWFZ, are unique. Other treaties have created zones through banning the acquisition, development, manufacture, possession, stockpiling



Kazakhstani President Nursultan Nazarbayev stands near a monument to a nuclear explosion in Semipalatinsk in eastern Kazakhstan. The area was once a nuclear test site for the Soviet Union.

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and deployment of nuclear explosive devices and technologies. These zones include Africa (Treaty of Pelindaba); Latin America and Caribbean nations (Treaty of Tlatelolco); the South Pacific (Treaty of Rarotonga); Southeast Asia (Treaty of Bangkok); and Antarctica (Antarctic Treaty). These treaties forbid parties to assist or encourage testing of nuclear weapons, to dump radioactive waste, or to deploy or station nuclear weapons on their territory for themselves or for other states. The entire Southern Hemisphere is covered by nuclear-free zones. Jurisdiction of the zones affects only terrestrial space and air traffic; it does not control maritime traffic, which is subject to the doctrine of “open seas” (*mares liberum*).

Nuclear-free zones operate in the context of the nonproliferation treaty. The NPT was negotiated during the late 1960s and entered into force in March 1970. The treaty was designed to achieve three goals: 1) to assure that peaceful use of nuclear energy as the common heritage of mankind was open to all; 2) to stem the proliferation of nuclear weapons; and 3) to facilitate universal nuclear disarmament. The treaty distinguished between states possessing nuclear weapons and those not possessing nuclear weapons, seeking to legally prohibit the proliferation of weapons through the acquisition or transfer to non-nuclear states and the disarmament of the nuclear states.

The NPT provides for the establishment of nuclear-free zones, on the condition that nuclear powers endorse the

establishment of the agreement. The U.N. in general is a strong proponent of expanding such zones to incrementally expand the area outside of the likely range of nuclear weapons use in the event of failed nuclear deterrence. Cordoning off weapons-free areas, proponents assert, can build a “peace in parts” that cumulatively leads to conditions in which nuclear weapons are not useful instruments for deterrence, protection or the achievement of aggressive goals, thus rendering them “impotent and obsolete.”

At the time NPT went into effect, the five nuclear-weapon states were China, France, the Soviet Union, the United Kingdom and the United States. These states were also the five permanent members of the United Nations Security Council. Following the dissolution of the U.S.S.R., the country’s nuclear weapons passed to the control of the Russian Federation. Currently, 189 states are party to the NPT.

The “teeth” of the NPT is the safeguards framework under the auspices of the International Atomic Energy Agency (IAEA). These safeguards are designed to curb the dispersion of nuclear explosive materials and technologies through monitoring and observing facilities using nuclear materials that are or could be related to weapons technologies. When the NPT was adopted, supporters assumed IAEA oversight would be sufficient to monitor nuclear development and deter countries from conducting unsanctioned nuclear weapons development programs. However, following the 1991 Gulf War, it was discovered that Saddam Hussein

had a vigorous but clandestine nuclear weapons research and development program.³ The danger of “breakaway technology” being more easily concealed than in the past brought the IAEA to the realization that a more robust set of monitoring conditions must be adopted. In 1995, the IAEA began adopting more exacting oversight procedures. In 1997, the IAEA adopted additional measures under the heading of the “additional safeguards protocol.”⁴ These measures provide for enhanced, and in some cases invasive, oversight. About 170 countries have safeguard agreements and 139 have additional protocol agreements with the IAEA.⁵

The major powers have been supportive of nuclear-free zones in principle, but are wary in practice as to how the zones are established and maintained. For instance, the U.S. position has been that nuclear-free zones should be designed in such a way that they provide actual security guarantees and do not simply create the impression of security — perhaps leading to a false sense of security. The general conditions that the U.S. has identified include: 1) The initiative must come from the states in the region; 2.) All important states must participate in the zone; 3) Compliance provisions must be adequately verified; 4) No existing security arrangements should be disturbed; 5) Zones should effectively prohibit the development or possession of any nuclear device; 6) Zones should not affect existing rights under international law and 7) Zones should not impose restrictions on the high seas freedom of navigation.⁶

Kazakhstan’s leadership has taken a courageous and bold path in nonproliferation in general and in calling for specific efforts to prevent proliferation. Kazakhstan has a well-established record as a world leader in nonproliferation efforts. Aside from President Nazarbaev’s closure of the country’s nuclear testing range, Kazakhstan signed the Lisbon Protocol to the START I Treaty in May 1992. In December 1993, Kazakhstan ratified the NPT. A year later, Kazakhstan removed more than 600 kilograms of highly enriched uranium from the Ulba metallurgical plant in Ostkamen, transferring it to the U.S. On April 21, 1995, Kazakhstan announced that the country had transferred to Russia all the nuclear warheads that it had inherited from the Soviet period. A month later, the U.S. Senate unanimously passed Resolution 122, commending Kazakhstan for its historic decisions in advancing the goal of nonproliferation. In July 2006, speaking to the French newspaper *Le Monde*, Nazarbayev appealed to Iranian leaders to abandon nuclear ambitions and follow Kazakhstan’s development strategy.⁷

Technological and political changes have begun to fray the fabric of the nuclear nonproliferation agreement as many developing countries that previously had been willing to forswear nuclear ambitions have changed course, either developing nuclear weapons themselves or surreptitiously beginning scientific programs that put the world’s most dangerous weapons within reach. In September 2006, Kazakhstan hosted an international meeting at which the Central Asian nuclear-free zone was established. Nazarbayev told the U.N. General Assembly in 2007 that the lack of

international consensus is leading to a dramatic weakening of the collective security system and “the international community is running out of legitimate levers capable of stopping the spread of weapons of mass destruction.”⁸

URANIUM ENRICHMENT AND NUCLEAR AMBITIONS

Iran is openly conducting an ambitious and expensive program to enrich uranium, in defiance of international pressure. The IAEA has continuously and strenuously monitored Iran’s actions since the first alarm was raised in 2003 that Iran was attempting to violate provisions enforced by the IAEA. Iran’s leaders have insisted that their actions do not violate legitimate international rights. Indeed, NPT and its accompanying international agreements do not ban uranium enrichment for bona fide commercial and scientific purposes. However, these agreements also do not provide sufficient means to prevent peaceful nuclear applications from being used to cloak weapons development programs. Iran’s nuclear ambitions imply that it is time to reassess the practical meaning of the “Atoms for Peace” idea in present circumstances.

On the basis of documented violations of international fissile materials safeguards and responding to warnings that Iran was attempting to develop a surreptitious nuclear weapons program, the U.N. Security Council has passed a series of resolutions directing Iran to halt uranium enrichment.⁹ The timeline includes:

- In July 2006, the security council issued a resolution (UNSCR 1696) demanding that Iran suspend uranium enrichment and charged the IAEA with monitoring and oversight of Iran’s enrichment.
- In December 2006, the security council issued a second, more pointed resolution (UNSCR 1737) demanding that Iran suspend all uranium enrichment and imposed sanctions pending cessation.
- A few months later, the IAEA reported that Iran had failed to comply with a number of measures, including the demand to stop uranium enrichment.
- In March 2007, the security council issued yet another resolution (UNSCR 1747) demanding cessation of uranium enrichment and imposing even stiffer sanctions. Iranian Foreign Minister Manouchehr Mottaki rejected the resolution as “illegitimate,” claiming that Iran’s nuclear program was peaceful and therefore outside the U.N.’s jurisdiction.
- In March 2008, the security council adopted yet another resolution (UNSCR 1803) reaffirming resolution 1737 in calling for Iran to suspend enrichment and imposing more extensive economic sanctions.
- A month later, President Mahmoud Ahmadinejad announced that Iran had begun expanding uranium enrichment and was installing 6,000 new centrifuges in the enrichment cascade.¹⁰
- In June 2010, the security council adopted the most extensive resolution (UNSCR 1929), repeating its demands on Iran.

Iran's insistence on uranium enrichment challenges the very basis of the concept of "peaceful use of nuclear science." The basic idea of the "Atoms for Peace" program crafted by President Dwight Eisenhower was to contain nuclear proliferation while making the benefits of nuclear science available to all. Announcing his plan at the U.N. in December 1953, Eisenhower strongly distinguished between scientific and weapons-related uses of nuclear science. He wanted to foster scientific advances and commerce while diligently controlling nuclear armaments. Eisenhower imagined the U.N. would create an international watchdog agency that, if conditions matured, could eventually have custodial powers over fissionable materials.

The NPT, enacted in 1970, proceeded from the spirit of "Atoms for Peace," claiming that the "benefits of peaceful applications of nuclear technology ... should be available for peaceful purposes to all Parties to the Treaty." But does "Atoms for Peace" imply today that every country has the right to enrich uranium? The pledge of international cooperation implied one set of policies given the technology of 1953 but may imply other policies given the technology of today. In 1953, uranium enrichment was a highly visible and relatively easily monitored process. The U.S. enriched uranium at very large, energy-intensive facilities such as Oak Ridge's Y-12 electromagnetic plant and the K-25 gaseous diffusion plant. At the time, the K-25 facility was built, it occupied the largest building in the world. Now technology has changed. Centrifuge enrichment technology is more easily concealed than the more traditional gaseous diffusion technology. Newly emerging laser enrichment technology may be even more easily concealed.

A country need not enrich uranium domestically to secure the benefits of nuclear power. If any country, including Iran, wants to use sub-weapons-grade enriched uranium for peaceful purposes, suppliers from France, Russia and the U.S. can provide that service with IAEA oversight. But uranium enrichment in today's circumstances is not something that is easily monitored from afar. If a country — or some rogue entity — is surreptitiously enriching uranium, the IAEA cannot be confident that diversion for weapons applications is not taking place. A country capable of its own enrichment of U235 to 3 percent to 5 percent, for use in light-water reactors or research reactors, can also enrich its own to the level of 95 percent for weapons.

The world is witnessing a sea change in the distribution of power associated with nuclear technology. Some veteran diplomats have concluded that the world is now facing a critical opportunity to turn events around to work toward "a world free of nuclear weapons."¹¹ At the same time, a number of additional countries have announced plans to acquire large nuclear reactors. Some observers speculate that most of these countries "are interested in developing a nuclear program capable of more than merely boiling water to run turbines that generate electricity. At least four have made it clear that they are interested in hedging their security bets with a nuclear weapons option. For these states, developing purportedly peaceful nuclear energy is the weapon of choice."¹²

Some observers speculate that nuclear powers have even begun to perceive disunity and horizontal proliferation as beneficial. As one observer put it, "Russia is accepting the Iranian regional status because it doesn't see Iran as a threat but as a partner in balancing the presence of [the] U.S. and Turkey in [the] Middle East, and most important, Central Asia."¹³ Whatever the speculation, this is not the official Russian position. Russians insist they are opposed to Iranian nuclear weapons and to the unmonitored enrichment of uranium by Iran. As Russian Foreign Minister Sergei Lavrov summed it up: "We think that there is no economic rationale for Iran to continue with a program of uranium enrichment. We will convince the Iranians that the cessation of that program will be valuable to Iran itself because it will bring them to the negotiating table."¹⁴

FORCE OF LAW

The question is how to make possible the benefits of nuclear science while restraining dangerous applications. Many believe the force of law is the most important mechanism and that nuclear weapons-free zones bring the technology under the control of legal regulation. For this reason, the CANWFZ agreement was applauded by international organizations and jurists. In general, purposive and internally consistent international agreements are commonly regarded by international jurists as beneficial because they bring international behavior under the auspices of a transparent and stable regulatory framework.

International law, while typically regarded as different in character from national, domestic law, is based on legal principles first articulated by Hugo Grotius in the early 17th century. Grotius stressed that states are entitled to national sovereignty and to equality before the law. They're also entitled to territorial integrity, political independence and freedom from foreign intervention, domination or interference in domestic affairs. These principles continue to be the foundation of laws and practices among states. An international treaty is regarded as a legitimate mechanism to cooperate in mutually advantageous ways. It legally binds the state. But the question remains: Does it constrain the state in practice? Even more importantly, does it constrain a nonstate actor or a renegade entity that may be acting on the territory of a state that does not have the capacity to contain the actor?

SELF-ENFORCING COMMITMENTS

The fundamental question is whether nuclear weapon-free zones add to international security or detract from it. The ancient legal principle that "there is no right without a remedy" is cited to underscore that when an international system contains no single, central, legitimate and authoritative entity that ultimately decides all unresolved questions of international affairs, there are only instrumental means for adjudicating matters of right and law. In the best of all worlds, international treaties and international organizations fulfill these functions based on trust, voluntary compliance and the panoply of sanctions they wield.



An abandoned Soviet nuclear weapons testing site is shown near Semipalatinsk, Kazakhstan. The site was closed by President Nursultan Nazarbayev after Kazakhstan gained independence in 1991.

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But there are reasons to be skeptical of assurances based on good faith alone. When the stakes are as high as decisions regarding the most dangerous weapons, skepticism may be prudent. Good faith alone may not be enough. For instance, North Korea denied repeated IAEA requests for information and access and ultimately expelled IAEA inspectors. Libya, Iran and North Korea secretly acquired centrifuge enrichment technology in a covert marketing scheme masterminded by Pakistani engineer A.Q. Khan. These activities were intended to build facilities capable of producing fissile material for nuclear weapons. Yet these countries deliberately ignored IAEA requests and obligations for information.

Two key issues should be addressed. First, self-enforcing treaty arrangements typically specify the conduct of monitoring, observation, and verification through an activity or entity. The absence of a mutually agreed upon procedure or an entity capable of conducting independent monitoring suggests that the treaty is not self-enforcing. The CANWFZ treaty provides for consultative meetings but does not establish an organization to independently monitor, observe and verify. Second, the CANWFZ treaty explicitly forbids the manufacture, possession or receipt of nuclear weapons but the treaty is ambiguous regarding the transportation of nuclear weapons under the control of other states. The presence of nuclear weapons on the territory of any of the Central Asian signatory states might be a violation of national law, but this does not constitute a violation of the CANWFZ treaty.

The IAEA oversees issues of monitoring, verification and recommendation. It is an agency with the capacity to analyze with authoritative technical capacity. But the IAEA is not a police agency. It does not have the capacity to enforce law

and impose sanctions directly by itself. In such circumstances, the general rule is that security agreements are valuable providing that they constrain and guide, but only if they do so in a way that is essentially self-enforcing. □

¹ An English language version of the CANWFZ treaty may be found at the website of the James Martin Center for Nonproliferation Studies. See <http://cns.miis.edu/inventory/pdfs/apcanwz.pdf>

² Statement issued by the Spokesperson for U.N. Secretary-General Ban Ki-moon <http://www.un.org/News/Press/docs/2009/sgsm12143.doc.htm>

³ See David Albright and Mark Hibbs. 1991. "Iraq's Nuclear Hide-And-Seek," *The Bulletin of the Atomic Scientists*, September 1991, Vol. 47, No. 7. <http://www.thebulletin.org/issues/1991/s91/s91albright.html>.

⁴ Since that time credible accounts have since emerged about how the Iraqi nuclear weapons development program was conducted specifically so as to elude IAEA safeguards. See Mahdi Obeidi and Kurt Pitzer, *The Bomb in My Garden: The Secrets of Saddam's Nuclear Mastermind* (Hoboken, NJ: John Wiley & Sons, 2004).

⁵ For the current status of safeguard agreements, see the IAEA Status List. http://www.iaea.org/OurWork/SV/Safeguards/sir_table.pdf

⁶ See Scott Parrish, "Prospects for the Establishment of a Central Asian Nuclear-Free-Zone," *The Nonproliferation Review* (Spring 2001), p. 148, footnote 12.

⁷ Nursultan Nazarbayev, "My Advice to Iran," *Le Monde* (July 13, 2006). Reprinted in the *Kazakhstan News Bulletin* 6, No. 28 (July 2006) <http://www.kazakhembus.com/newsbulletin.html>

⁸ Statement by H.E. Mr. Nursultan A. Nazarbayev, President of the Republic of Kazakhstan, during the general debate at the Sixty-second Session of the United Nations General Assembly New York, 25 September, 2007, p. 2. <http://www.un.org/webcast/ga/62/2007/pdfs/kazakhstan-en.pdf>

⁹ The UN Security Council resolutions cited here are freely available. See http://www.un.org/Docs/sc/unsc_resolutions08.htm

¹⁰ Nazila Fathi and William J. Broad, "Iran Says It's Installing New Centrifuges," *The New York Times* (April 9, 2008).

¹¹ George P. Shultz, William J. Perry, Henry A. Kissinger and Sam Nunn, "A World Free of Nuclear Weapons," *The Wall Street Journal* (January 4, 2007), p. A15.

¹² Falling Behind: International Scrutiny of the Peaceful Atom, A Report of the Nonproliferation Policy Education Center On the International Atomic Energy Agency's Nuclear Safeguards System Final Updated Report (September 2007) Available at <http://www.npec-web.org>

¹³ Luciano Zaccara, "The Nuclear Question and the Regional Leadership in Middle East and Central Asia." To appear in *Conceptions and approaches to the regional security: experience, problems and prospects of interaction in Central Asia: Proceedings the Fifth Annual Conference on Security* (Almaty, June 7, 2006) (Almaty: Kazakhstan Institute for Strategic Studies, 2006). Available at <http://www.kisi.kz/site.html?id=956>

¹⁴ See Sergei Lavrov, "My prizvali k chestnomy razgovoru," [We called for candid discussion]. *Vremya*. (December 26, 2007). <http://www.vremya.ru/2007/238/5/194983.html>