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Routledge

Implications of Iran's Uranium Enrichment Programme for Regional Security

Gregory Gleason

The UN Security Council has passed a series of resolutions directing Iran to cease uranium enrichment. The resolutions are designed to bring pressure to bear on Iran in order to persuade the country's authorities to demonstrate full compliance with the fundamental convention on nuclear science and nuclear armaments, the Nuclear Non-proliferation Treaty (NPT). The success or failure of UN efforts to dissuade Iran from pursuing nuclear technologies outside the framework of international oversight holds significant implications for international security. The success or failure of these efforts holds profound implications for security within the Middle Eastern and Eurasian regions. There are differences of opinion on how to most effectively and equitably bring Iran into compliance with international conventions. International attention is increasingly focused on three policy postures with respect to Iran's enrichment programme: postpone, prevent or prepare for the ramifications of a nuclear Iran. This paper weighs the implications of these policy alternatives, describing the effects of Iran's uranium enrichment programme on security throughout the Central Asian region.

Iran has been and continues to be engaged in a uranium enrichment programme that has all the characteristics of the preliminaries of a nuclear weapons programme. Iran is currently continuing its uranium enrichment programme despite multilateral efforts to dissuade it from this course. The prospects of the emergence of a nuclear-armed state with a history of ideologically driven foreign aggression and a reputation for flaunting international standards of policies and practices, signifies the world is edging toward a fateful decision. As France's former President Nicolas Sarkozy expressed it plainly and bluntly, the international community must recognize the impending political reality: we can expect 'either an Iranian bomb or the bombing of Iran'.[1]

For those who believe that the international community should be oriented toward greater security and progress, it is clear that the world's nations should strive to seek fewer, not more nuclear weapons. The central problem becomes finding ways to postpone or prevent or, should those options fail, prepare for a more proliferated world. Given the stakes involved in a conflict involving nuclear weapons, postponing is always a practical measure. The technical challenges of uranium enrichment being

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what they are, whether these challenges are natural or man-made, events have added some time for deliberation and have apparently prolonged to some extent the tempo of Iran's uranium enrichment programme.[2] However, postponing is not preventing. Force should always be a last resort, but it should never be a late resort. If diplomatic channels prove unsuccessful, the use of force has historically been the sine quo non in international politics in matters of deterrence and coercion.

However costly and disruptive the use of force or the threat of force may be, many observers have concluded that military intervention to prevent incorrigible nuclear proliferation at some point is nevertheless unavoidable if it prevents a yet more tragic development. Several analysts have long viewed Iran's nuclear research and development efforts as a prologue to a weapons programme.[3] Alan Kuperman in the pages of *The New York Times* argued 'We have reached the point where air strikes are the only plausible option with any prospect of preventing Iran's acquisition of nuclear weapons.'[4] At the same time, it is widely recognized that military solutions, by themselves, do not always resolve the most important questions. Sometimes the use of force changes minds that should have been changed before by other means. Moreover, sometimes the use of force gives rise to yet other questions, merely postponing more difficult choices.

For these reasons, many political, military and academic observers are divided on the utility of forceful intervention in producing a durable solution to the problem of an Iranian nuclear weapons programme. Navy Admiral Mike Mullen, the previous Chairman of the US Joint Chiefs of Staff, frequently raised questions as to whether the military option was the most promising way to address the problem of potential weapons development in Iran.[5] In a similar vein, Marc Lynch observed 'America's interest in preventing Iran from acquiring nuclear weapons and reassuring Israel sufficiently to prevent a disastrous war remain urgent. But the United States cannot deal effectively with Iran in this new environment by containing it.'[6]

Whether Iran's uranium enrichment programme becomes a weapons programme or whether it is deterred or indefinitely postponed from reaching this objective, the attempt by Iran to develop enriched uranium in large quantities is having a profound effect on political relations throughout the Middle East and Eurasia. This paper assesses the various aspects of Iran's enrichment programme, identifying a 'coalition of purpose' that promises to promote both regional development and stability.

Energy and Iran

Energy is important for Iran. Hydrocarbons are the major sustaining factor in Iran's domestic and foreign policies. Iran holds the world's third largest proven oil reserves and the world's second largest natural gas reserves. Iran is a major oil and gas producer. In recent years, Iran has been a major crude oil exporter, occupying the position of the world's fourth largest exporter of crude oil after Saudi Arabia, Russia and the United Arab Emirates.[7] During this same period, Iran's natural gas consumption has exceeded production. Natural gas accounts for half of Iran's total domestic energy consumption, the remaining half being produced through oil, hydroelectric power generation and a small proportion of other renewable power

generation. Electric power consumption has grown rapidly in the past two decades, rising from a little over 19 billion kilowatt hours in 1980 to over 200 billion kilowatt hours in 2009. Electricity demand is expected to grow in Iran in the next decade at a similar rate.[8] Without the vast hydrocarbon resources it possesses, Iran's recent past and its unfolding future would be much different.

However, for political as well as economic reasons, hydrocarbons have not been regarded by Iranian leaders as a sufficient energy resource for the country's future. For many years, Iranian political leaders have looked at nuclear power as a major potential additional source of power to meet Iran's growing energy needs. Nuclear power as a parallel contributor to hydrocarbons as source of energy played an important role in the economic plans of the Pahlavi regime before its demise in 1979. Nuclear power has played an important role in the calculations of the Islamic Republic of Iran since that time. Ample energy supplies constitute a major factor in improving Iran's domestic economic situation as well as extending Iran's commercial influence throughout the Middle Eastern region. Its ability to play a commanding role in energy markets throughout the Middle East allows Iran to 'punch above its weight'.[9] Iran's ability to use its energy influence unquestionably can directly translate into greater political influence throughout the region and throughout the world.

At the same time that nuclear energy holds the promise of economic advancement, nuclear energy also has the Janus-faced quality of bearing at once both economic as well as political ramifications. Maintaining advanced nuclear technologies capable of supporting a civilian nuclear programme dedicated to the production of electric power, medical technologies and other peaceful benefits of nuclear science at the same time holds the potential that the technologies may be diverted to nuclear weapons technologies. A civilian nuclear power programme is not by itself a weapons programme and it is perfectly possible to maintain a nuclear power generation programme and use nuclear technologies for medical and other applications and, at the same time, provide abundant assurances to neighbours and to the international community as a whole that there is no risk of diverting nuclear science for a weapons programmes. However, unless there is sufficient transparency, openness and honesty to assure the international community as a whole that nuclear programmes are truly oriented exclusively to peaceful ends, the Nuclear Non-proliferation Treaty (NPT) calls for restraint in the use of nuclear technologies, particularly uranium enrichment and nuclear reprocessing technology. The NPT calls for enforcement of this restraint by the international community. Iran for several years has not been willing to provide these peaceful assurances.

The key to these assurances consists basically of two things, uranium enrichment technology and nuclear materials reprocessing technology. The nuclear fuel cycle passes through a series of stages. The main risks of the surreptitious diversion of nuclear materials are at the stage of nuclear separation of the highly fissile uranium isotope at the 'front end' of the fuel cycle and involving chemical separation of reactor waste materials at the 'back end' of the fuel cycle. Uranium enrichment by itself is not equal to nuclear armaments. However, 'weaponization' technology is not the greatest hurdle in a nuclear weapons programme. The greatest technical hurdle in any nuclear weapons programme is amassing quantities of fissile nuclear materials necessary for nuclear explosives.

Iran's Uranium Enrichment

Iran is conducting openly and in defiance of international pressures an ambitious and expensive programme to enrich uranium. The most recent report of the International Atomic Energy Agency (IAEA) on Iran's uranium enrichment programme, circulated by the IAEA in May 2011, concluded 'Contrary to the relevant resolutions of the Board of Governors and the Security Council, Iran has not suspended its enrichment related activities ...' in the Natanz and Fordow facilities.[10] This observation follows a long history of IAEA documented violations of international fissile materials safeguards. IAEA monitoring was initiated by the UN Security Council in response to warnings that Iran was attempting to develop a surreptitious nuclear weapons programme.

The UN Security Council has passed a series of resolutions directing Iran to halt uranium enrichment.[11] In July 2006, the UN 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 activities. In December 2006, the UN Security Council issued a second, more pointed resolution (UNSCR 1737) demanding that Iran suspend all uranium enrichment and imposed sanctions pending cessation. In February 2007, 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 UN Security Council issued yet another resolution (UNSCR 1747) again demanding cessation of uranium enrichment and imposing yet greater sanctions. Iran's Foreign Minister at the time, Manouchehr Mottaki, rejected the UN resolution as 'illegitimate', claiming that Iran's nuclear programme was peaceful and therefore outside the UN's jurisdiction. In March 2008, the UN Security Council adopted yet another resolution (UNSCR 1803) reaffirming resolution 1737 in calling for Iran to suspend enrichment activity and imposing a more extensive complex of economic sanctions.

In April 2008, President Mahmoud Ahmadinejad announced that Iran had begun the process of expanding its uranium enrichment activities and was installing 6000 new centrifuges in the enrichment cascade.[12] In June 2010, the UN Security Council adopted the most extensive resolution (UNSCR 1929), demanding that Iran suspend uranium enrichment and imposing the most extensive economic sanctions. In July 2011, the spokesman for the Iranian Ministry of Foreign Affairs acknowledged that Iran had supplied new information to the IAEA that it was installing a new generation of uranium centrifuges.[13]

The IAEA has been continuously and strenuously monitoring Iran's actions since the first alarm was raised in 2003 that there is evidence that Iran is attempting to violate provisions of the IAEA's standards. Iran's leaders have insisted that their actions are not in violation of legitimate international rights. Indeed, the NPT and its accompanying international agreements and covenants do not foreclose 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 as cloaks for weapons development programmes. Iran's nuclear ambitions imply that it is time to reassess the practical meaning of the ideas of 'Atoms for Peace' in the present circumstances.

Atoms for Peace

The 'Atoms for Peace' plan was first introduced when Dwight Eisenhower addressed the UN General Assembly in 1953 calling for restraining the proliferation of nuclear weapons and the promotion of the peaceful uses of nuclear technology. Eisenhower said America would support the distribution of the benefits of nuclear technology to the entire world but America would be resolute in opposing the spread of nuclear weapons. Eisenhower called on other countries which had begun to unravel the mysteries of the nuclear Genie—in particular the Soviet Union—to join the USA in the cooperative control of nuclear technology. Eisenhower's original Atoms for Peace plan was based on what he thought at the time could be maintained as a clear distinction between the beneficial and armaments-related uses of nuclear science. The idea of this distinction between peaceful and weapons-related purposes was carried forward and institutionalized in the NPT.

The NPT came into force in 1970, expressly stating that the 'benefits of peaceful applications of nuclear technology ... should be available for peaceful purposes to all Parties to the Treaty'. The NPT specifies that the IAEA has the right to implement safeguards to prevent the diversion of fissionable nuclear materials for weapons purposes. However, the NPT also provides signatory countries with the assurances of the inviolability of peaceful activities. NPT Section IV states that 'Nothing in this Treaty shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes.' This assurance assumes that the distinction between peaceful and weapons-related purposes can be easily made.

At the time the NPT came into effect, the five nuclear weapon states were China, France, the USSR, UK and the USA. These states were also the five permanent members of the UN Security Council. This configuration remained in place during the height of the cold war animosities. The numbers of nuclear weapons in the hands of the 'nuclear powers', so-called 'vertical proliferation' increased during this period but at the same time the 'horizontal proliferation' of nuclear weapons to non-nuclear states was restrained. The important exception to this was the first test of the emergence of a policy of nuclear ambiguity in Israel which may have acquired nuclear weapons capability as early as 1969 and the case of the acquisition of nuclear capability by India in May 1974, outside the strictures of the NPT. During the period leading up to and immediately following the Soviet dissolution of the USSR in 1991, the nuclear weapons of the Soviet nuclear arsenal were passed to the control of the Russian Federation.

Currently, there are 189 states that are parties to the NPT. Four non-party states are known or believed to possess nuclear weapons. India, Israel and Pakistan never signed the NPT. India, Pakistan and North Korea tested and declared that they possess nuclear weapons (India, 1974; Pakistan, 1998; North Korea, 2006). Israel has not acknowledged testing or possessing nuclear weapons. North Korea acceded to the NPT in 1985, violated it and withdrew in January 2003.

The 'teeth' of the NPT is the safeguards framework under the auspices of the IAEA. The safeguards framework is designed to curb the dispersion of nuclear explosive

materials and technologies through monitoring and observation of facilities using nuclear materials which are or could be related to weapons technologies. At the time of the adoption of the NPT, it was widely viewed that IAEA safeguards based on oversight would be sufficient to monitor nuclear developments and deter countries from conducting unsanctioned nuclear weapons development programmes. However, following Operation Desert Storm in the 1991 Gulf War, it was discovered that Saddam Hussein had maintained a vigorous but clandestine nuclear weapons research and development programme.[14] The danger of 'breakaway technology' being more easily concealed than in the past brought the IAEA to the recognition that a more robust set of monitoring conditions must be adopted. In 1995, the IAEA began adopting more exacting oversight procedures. In May 1997, the IAEA Board of Directors adopted the model additional protocol. In 1997, the IAEA adopted additional measures under the heading of the 'additional safeguards protocol'.[15] These measures provide for enhanced and in some cases invasive oversight. A total of 170 countries have safeguard agreements and 139 have additional protocol agreements with the IAEA.[16]

The NPT enacted in 1970 proceeded from the spirit of the 'Atoms for Peace' plan, claiming that the 'benefits of peaceful applications of nuclear technology ... should be available for peaceful purposes to all Parties to the Treaty'. However, 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 today. In 1953, uranium enrichment was a highly visible and relatively easily monitored process. The USA 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 the 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 yet more easily concealable.

Domestic uranium enrichment is not a requirement of any country in order to secure the benefits of nuclear power. If any country, including Iran, wants to use sub-weapons grade enriched uranium for peaceful purposes there are numerous suppliers, including French, Russian and American, that can provide that service with appropriate IAEA oversight. However, uranium enrichment in today's circumstances is not something that is easily monitored from a distance. 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 3–5 per cent for the use in light-water reactors or research reactors can also enrich its own to the level of 95 per cent 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 in order to work towards 'a world free of nuclear weapons'.[17] At the same time, a number of new countries have announced plans to acquire large nuclear reactors. Some observers speculate that if most of these countries

> are interested 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.[18]

Non-proliferation and Nuclear-Free Zones

Technological and political changes have begun to fray the fabric of the nuclear non-proliferation agreement as many developing countries that previously had been willing to forswear nuclear ambitions have turned to nuclear ambitions, either developing nuclear weapons themselves or surreptitiously beginning scientific programmes that put the world's most dangerous weapons within their reach. In September 2006, Kazakhstan hosted an international meeting at which the Central Asian Nuclear Free Zone was established. Nursultan Nazarbayev expressed to the UN 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'.[19]

The race to ever-increasing levels of armaments in the region is 180 degrees different from the other most notable trend in the region—the trend toward seeing security through forbearance and mutual cooperation in the context of a 'coalition of purpose'. The emergence of the 'Central Asian Nuclear Free Zone' (CANFZ) is an example of a coalition of purpose. The CANFZ came into effect in March 2009. UN 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.[20] The UN Secretary-General applauded the agreement for reinforcing the other nuclear-free zone agreements in augmenting and buttressing the Nuclear NPT.[21] The Secretary-General noted that the agreement forming the CANFZ agreement was exceptional in several respects. It was the first regional treaty agreement of its kind in the northern hemisphere. It was the first nuclear zone agreement whose signatories explicitly included the pledge to comply with the Comprehensive Nuclear Test Ban Treaty (CTBT).

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 past two decades since independence following the dissolution of the USSR, the CANFZ 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 bedevilled 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 up-stream and down-stream neighbours in ways that magnified into intense competition over access to the region's most precious resources. During the post-Soviet period, numerous attempts to establish common markets, a common 'economic space' and even a 'Central Asian Union' were foiled time and time again by resort to self-serving opportunism. Yet the CANFZ managed to overcome the temptation of pursuing short-term gains for a long-term common benefit to be gained from collective security.

Like any collective security agreement, the CANFZ is partly based on the acknowledgment of 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 period of Soviet power as victims of the environmental and social damage caused by weapons of mass destruction (WMD) development and testing programmes, were not responding to a hypothetical threat; they were responding on the basis of bitterly learned lessons from the past. Looking backward, there are lessons for the Central Asian states that speak eloquently. When Kazakhstan's president Nursultan Nazarbayev took office in 1991, the very first official decree he promulgated was to close the nuclear weapons testing range in the Kazakh republic.

Nazarbayev proceeded to take a series of wise and even visionary steps in turning away from the short-term advantages that could have been gained through using Kazakhstan's post-Soviet nuclear assets to parlay these into security advantages in the region. In May 1992, Kazakhstan signed the Lisbon Protocol to the START I Treaty. In December 1993, Kazakhstan ratified the NPT. In November 2004, Kazakhstan removed more than 600 kg of high-enriched uranium (HEU) from the Ulba metallurgical plant in Ostkamen, transferring it to the USA. On 21 April 1995, Kazakhstan announced that the country had transferred to Russia all the nuclear warheads that it had inherited from the Soviet period. In May 2005, the US Senate unanimously passed Resolution 122, commending Kazakhstan for its historic decisions in advancing the goal of nuclear non-proliferation. In July 2006, Nazarbayev in the French newspaper *Le Monde*, appealed to Iranian leaders, urging them to abandon nuclear ambitions and follow Kazakhstan's development strategy.[22]

The idea of a nuclear-free zone is not new, but there are features of the Central Asian Nuclear Weapon Free Zone (CANWFZ) that are unique. Other treaties have created nuclear-free zones through banning the acquisition, development, manufacture, possession, stockpiling and deployment of nuclear explosive devices and technologies. These zoned areas include Africa (Treaty of Pelindaba); Latin America and Caribbean nations (Treaty of Tlatelolco); the South Pacific (Treaty of Rarotonga); South-east Asia (Treaty of Bangkok); and Antarctica (Antarctic Treaty). These treaties commit parties to not test, allow, assist or encourage testing of nuclear weapons; they commit parties to not dump radioactive waste; they commit parties to not deploy or station nuclear weapons on their territory either for themselves or for the benefit of other states. The entire southern hemisphere is covered by nuclear-free zones. Jurisdiction of the zones only affects terrestrial space and air traffic; it does not control maritime traffic which is subject to the doctrine of 'open seas' (*mares liberum*).

The nuclear-free zones operate in the context of the NPT. Originally, the NPT was designed to achieve three goals: (1) to assure the 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 original NPT provided for the establishment of nuclear-free zones, on the condition that the nuclear power states endorse the establishment of the agreement. The UN in general is a strong proponent of expanding nuclear-weapon-free zones to incrementally expand the area outside of the likely range of nuclear weapons use in the event of failure of nuclear deterrence. Cordoning off weapons-free areas, proponents assert, incrementally can build a 'peace in parts' that cumulatively can help to lead to the conditions in which nuclear weapons are not useful instruments either for deterrence, protection or even the achievement of aggressive goals, thus rendering them 'impotent and obsolete'.

The major powers have been supportive of nuclear-free zones in principle but wary in practice of how the zones are established and maintained. For instance, the US position has been that nuclear-free zones should be designed in such a way that they provide actual security guarantees and that they do not simply create the impression of security, perhaps leading to a false sense of security. The general conditions that the USA 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 freedoms of navigation.[23]

Enrichment Alternatives

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 US and Turkey in Middle East, and most important, Central Asia.'[24] Whatever the speculation, this is not the Russian official position. Russian officials have insisted that 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.[25]

For several years, Russian leaders have proposed that Iran and other countries in similar situations simply avail themselves of the services of nuclear fuel suppliers and avoid the risks and costs of expensive and disruptive uranium enrichment programmes. Iranian leaders, however, have rejected the proposal that they contract for nuclear fuel supplies from other leading countries because it institutionalizes their dependence upon developed countries. Iran specifically rejected the Russian proposal.[26] Russia was emerging as the world's largest producer of commercial low-enriched uranium (LEU) and the idea of gaining the prestige of being the world's LEU supplier of last resort fitted into the Kremlin's effort to reinvent its strategic industries and improve its global image. Western diplomats were less than enthusiastic for the Russian proposal at first because they were focused on restraining new nuclear dual use technology. Russia's role as a supplier of equipment and services for the construction of Iran's civil nuclear power facility at Bushehr in southern Iran raised questions in the minds of many Western observers who feared that Russia might be playing both sides of the deal—calling for restraint with Iran's nuclear programmes while at the same time cashing in on the transfer of technology to Iran.[27]

Russia has gone yet a step further and proposed an alternative that would satisfy all Iran's concerns. In December 2010, the Russian government sponsored the opening of the nuclear 'fuel reserve' at the International Uranium Enrichment Center in remote Siberian Russia. The fuel reserve is a preliminary step to establishing an IAEA 'fuel bank'. The fuel bank concept in theory is designed to offer assurances to developing countries that they can rely upon reactor fuel suppliers without fear of being subject to political manipulation. The fuel bank is designed to function as an IAEA-supervised facility committed to serving as a disinterested guarantor of fuel supplies for nuclear power reactors. The rationale of guaranteeing nuclear fuel supplies is that it would discourage a country from experiencing any necessity to embark on 'nuclear self-reliance' by developing indigenous uranium enrichment capabilities. While creating an indigenous enrichment capability would allow countries to fuel their own nuclear power stations with LEU as well as service other peaceful applications, it would nevertheless put countries closer to the increasingly difficult to define threshold between peaceful uses and weapons applications. Any action that would move countries away from this threshold would have the effect of promoting nuclear non-proliferation and could contribute to nuclear disarmament. The fuel bank idea, consequently, plays an important intermediate role in the broadly supported, two-pronged goal of promoting nuclear power and nuclear science while simultaneously reining in tendencies that would lead to nuclear proliferation.

Regional Stability

At the time of the breakup of the USSR, both Russia and the USA brought an end to 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 programmes. In this set of circumstances, the Central Asian countries managed to wrest at least implicit assurances that the relaxation in the cold war conditions offered protection of what

was regarded as a 'security umbrella'. The threat of the use of nuclear weapons in the Eurasian region began to seem unlikely, even remote. The Soviet and US arsenals began to shrink and neighbouring China's relatively modest nuclear arsenal, virtually unchanged since the country's first nuclear test explosion in 1964, remained minimal in size.

Pakistan's carrying out of a series of nuclear testing explosions in May 1998 was a bombshell that altered the international security situation in Central and South Asia. Pakistan's nuclear arsenal was designed as a deterrent against neighbouring India's nuclear arsenal, but Pakistan's entry into the ranks of nuclear powers changed the security complexion of the South Asian region.

The al Qaeda terrorist attack on the USA in September 2001 refocused international attention on the deteriorating security situation in South Asia and in the Central Asian region. The US-led military campaign to counter terrorism in Afghanistan, Operation Enduring Freedom (OEF), and the subsequent NATO-led International Security Force (ISAF) refocused attention on Central Asia. The dangers inherent in Pakistan's nuclear capacities in a region marred by political instability, have been yet further magnified by the gradual erosion of confidence in the ability of the NPT regime to continue to corral and contain nuclear weapons technology.

The urgency of maintaining strategic stability throughout the Central Asian region 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 programme is portrayed as a peaceful programme, yet it brings nuclear technology that could be swiftly shifted to weapons applications, threatening to fundamentally shift the strategic balance throughout the Middle East, South Asia and Central Asia. The Central Asian 'security umbrella' of the past has evaporated. In its place, a new situation has emerged. The Central Asian states are surrounded by towering nuclear powers with strategic intentions not aligned in ways easily constrained by traditional deterrence policies. The influence of Central Asia's 'nuclear neighbours' has profound implications not only for the region's nuclear-free zone, but also how the Central Asian states interact in the forthcoming efforts to strengthen international security, the non-proliferation regime, and the stabilization of Afghanistan and South-west Asia.

It is not a necessary conclusion that a nuclear-empowered Iran would be more aggressive than Iran's foreign policy has been in the past. The nuclear weapon has proved to be a more substantial defensive weapon than an offensive weapon. Offensive weapons tend to be those most effective at capturing or dominating territory. Nuclear weapons because of the sheer scale of the destructive and enduring consequences of their use do not seem to be well suited to many of the objectives of historical aggression on empirical grounds alone.

The emergence of Iran as a nuclear power in the region is not only a question of Iran's foreign policy aims and strategies, but is also a question of what it portends for the other countries of the region. The Iranian nuclear weapons programme will have the effect of goading other countries in the region to adopt their own self-protective nuclear armaments programmes. To fail to do so would seem derelict. The risk that

a newly emergent nuclear power in the Middle East would induce other states to counter by adopting their own nuclear programmes poses the risk of a runaway acceleration of weapons programmes.[28]

'Coalition of Purpose'

The ineffectiveness of diplomatic efforts to curtail Iran's enrichment programme has caused international alarm. The prospect of a nuclear-armed Iran ignites anxiety in the international community as a whole and in the Middle Eastern region in particular. The IAEA oversees the issues of monitoring, verification and recommendation. It is a technical agency with the capacity to analyse with authoritative technical capacity. However, the IAEA is not a police agency. It does not have the capacity to enforce the law and impose sanctions itself directly. In such circumstances, the general rule is that security agreements are valuable providing they constrain and guide, but only if they do so in a way that is essentially self-enforcing. A security agreement is flawed if it creates a hazard in allowing the existence of incentives to obscure, conceal or mislead. An agreement which creates the 'mirage of security' may be worse than no agreement at all. The reality of security is the objective.

Notes

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Gregory Gleason is Professor of Political Science at the University of New Mexico, and the author of *Federalism and Nationalism: The Struggle for Republican Rights in the USSR* (1991), *Central Asian States: Discovering Independence* (1997) and *Markets and Politics in Central Asia* (2003) as well as scholarly articles in *Asian Perspective*, *Communist and Post-Communist Studies*, *Europe–Asia Studies*, *International Studies Perspectives*, *Problems of Post-Communism* and other journals.

Address for correspondence: George C. Marshall European Center, College of International Security Studies, Gernackerstrasse 2, 82467 Garmisch-Partenkirchen, Germany. Email: gleasong@unm.edu