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Central Asia

EDITOR'S NOTE

After a period of being overlooked by many in the international community, Central Asia is once again at the centre of many security and development issues. While some refer to a renaissance of the Great Game, others stress the very contemporary security challenges faced by the region. A region rich in resources, it is also a region of fragile states, disputed borders, resource conflicts and trans-regional threats.

"Central Asia at the Crossroads" explores regional security interests, border and natural resource issues, small arms stockpiles, and sources of internal instability and conflict. It looks at how external influences are affecting the conflicting drives among Central Asian states to compete, or to cooperate, to resolve their security challenges.

The next issue of *Disarmament Forum* will consider the contribution of arms control measures to Middle Eastern peace and security. The issue will revisit ACRS to see what lessons from this groundbreaking process could have relevance today. The issue will also consider development of a regional cooperative security framework, as well as proposals for a WMD-free zone. The non-proliferation implications of the resurgence of interest in civilian nuclear power will also be discussed.

Once again, UNIDIR had a very active presence in New York for the annual First Committee of the United Nations General Assembly. UNIDIR Director Dr Patricia Lewis spoke twice during the thematic debate (on nuclear weapons and on UN disarmament structures and forums). UNIDIR held side events on space security (co-sponsored with the Global Security Institute and the Governments of the People's Republic of China and the Russian Federation), information security (sponsored with the Government of the Russian Federation) and the views of Member States on an Arms Trade Treaty. For a thorough overview of the issues discussed in the First Committee and their outcomes, it is worth reading Reaching Critical Will's *First Committee Monitor* at <www.reachingcriticalwill.org>.

This year's First Committee was also the occasion to launch the Disarmament and Non-Proliferation Education portal on the UN Cyberschoolbus web site. The site, developed by the UN Department of Public Information, in cooperation with the Office for Disarmament Affairs, includes age-appropriate educational resources for intermediate and secondary school students and their teachers on nuclear disarmament, small arms and light weapons, and landmines. Visit <www.cyberschoolbus.un.org/dnp>.

A collaboration between UNIDIR's Disarmament as Humanitarian Action project and the Geneva Forum, known as Disarmament Insight, encourages "outside the box thinking" on multilateral disarmament and arms control issues. Disarmament Insight has held several events this year to which specialists from a range of disciplines have been invited to speak on topics of relevance to arms control practitioners. We are delighted that podcasts of several of the presentations are now available.

Dr Philip Ball, author of the best-selling book *Critical Mass: How One Thing Leads to Another,* talks about the physics of social behaviour. Professor Paul Seabright, author of *The Company of Strangers: a Natural History of Economic Life,* discusses what is known about levels of violence since prehistoric times as part of a presentation entitled "How Have Human Beings Tamed Our Warring Instincts?". And Professor Frans de Waal, one of the world's foremost primatologists, explores what multilateral practitioners can learn from our closest relatives in the animal kingdom about negotiating, the nature of conflict and reconciliation in his talk "War and Peace and Primates". You can listen to these podcasts and others by connecting to <www.disarmamentinsight.blogspot.com>—and don't forget to read the latest post on the Disarmament Insight blog while you're there!

Kerstin Vignard

Strategic concerns in Central Asia

Martha Brill Olcott

Over the past 16 years the international community has gone from seeing the independence of the Central Asian states as primarily a source of security threats to regarding the region as potentially a real strategic prize, despite its proximity to Afghanistan and the seemingly endless civil war and internal confusion there. Much of the change in perception comes from increased knowledge of the region's energy reserves.

The changes in the international community's assessment of the importance of the Central Asian states are also partly the result of a significantly altered global security environment. The terrorist attacks of 11 September 2001 brought about major changes in the ways in which the United States (US) exercised its global power. Since the planning of the 2001 US invasion of Afghanistan, Central Asia has become something of a priority for US military planners and policy makers. Moreover, US military action in Iraq has led to the shaking up of the status quo in much of the broader Middle East, including Iran and Turkey. It has also led to a worsening of relations between the Russian Federation and the United States and with Europe, where most countries (the United Kingdom obviously excluded) initially opposed the US-led invasion, but have subsequently refrained from public criticism of the war effort. Given this environment, the Central Asian states appear less fragile than they did in the first years of their independence.

The region may appear less fragile, but it continues to harbour serious long-term security risks. Geography as well as the drawing of state boundaries means that ethnic groups, resources and infrastructure are spread across borders. The newly independent states are of necessity highly interdependent, although, perhaps understandably, the leaders of the new states seem concerned more with state-building and short-term national interests than with region-wide cooperation and development. It will only be by enhanced regional cooperation, however, that the five Central Asian states will find solutions to their security problems. In addition to this, in all five states economic and political reforms are incomplete, which has resulted in a build-up of unsolved problems. Unfortunately, excluding efforts in the commercial sector, the international community's engagement has been fitful, with limited resources offered to help the Central Asians tackle the serious challenges the region faces.

Five independent states

The Central Asia region consists of five independent republics. Kazakhstan, by far the largest state in terms of territory, is politically perhaps the most stable. It also has the largest economy, with a range

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of natural resources (including oil and gas), a large agricultural sector and a number of oil and gas pipelines running through the country. It shares a border of over 7,000km with the Russian Federation. Uzbekistan, south of Kazakhstan and lying in the centre of the region, has the largest population in Central Asia (approximately 26 million people). It is seeking to develop its mineral and oil resources, but still depends heavily on cotton cultivation and the old Soviet-era centralized command economy. Politically it is one of the most authoritarian regimes in Central Asia, and it is its religious centre. Turkmenistan, west of Uzbekistan and sharing a border with Iran, is rich in oil and especially in gas. Kyrgyzstan is a mountainous state bordering China. It has some mineral resources (including gold), hydroelectric power and mixed agriculture. An early proponent of radical economic reform, Kyrgyzstan's foreign debt is roughly 80% of its gross domestic product[1] but the country's politicians have refused to accept heavily indebted poor country status because of the stigma attached to the label.[2] Finally, Tajikistan is the poorest of the Soviet Union successor states. It suffered a five-year civil war almost immediately after independence (1992–1997), has limited mineral resources and is highly indebted. It does have hydroelectric power potential and its border with Afghanistan means it may benefit from development efforts there—the United States is already funding the construction of a bridge between the two countries.

While all five states have undergone some economic and political reform since independence, most are still led by former Communist Party or economic figures and power remains resolutely in the hands of a few. Corruption is a problem throughout the region and this is compounded by the illegal narcotics trade: many states lie on transit routes for narcotics from Afghanistan.

Securing statehood

When the Soviet Union collapsed in late 1991 and Central Asian republics became independent and subject to international law, there was much concern within the international community about whether these countries would be able to transform themselves into fully sovereign states without endangering the security of their own citizens or the safety of those living in neighbouring states. This worry has not diminished over the past 16 years as a succession of crises seemed to threaten regional security, including the presence of Al-Qaeda-sponsored terror camps across the border in Afghanistan (which proved only a periodic annoyance in the form of small Islamic Movement of Uzbekistan forays into Kyrgyzstan and Uzbekistan in an effort to spread its influence) and civil war in Tajikistan (which in fact never did flow beyond Tajikistan's borders).

Tajikistan has not been the only state to face internal security threats. In Uzbekistan, a demonstration in Andijon in May 2005 got far beyond authorities' control. Following a prison break to release local businessmen charged with being part of an extremist religious group—charges which many considered to be false—a large crowd gathered. The bulk of the demonstrators, though, seem to have gathered to protest their deteriorating living conditions. Government troops started shooting in an effort to take back control of a main square; over two hundred (there are no wholly reliable official or unofficial tallies) largely unarmed civilians were killed.

In Kyrgyzstan, President Askar Akayev was ousted by public demonstrations in the "Tulip Revolution" of March 2005. Since then, Kyrgyzstan remains in a kind of political limbo: efforts to rewrite the constitution and substantially weaken the powers of the president have been unsuccessful; Akayev's successor, Kurmanbek Bakiyev, has broken with most of his former fellow opposition leaders; pro-democracy elements are unhappy; and Bakiyev seems dependent on many of the "shadow", or illicit, Kyrgyz economic interests that abandoned Akayev in his last weeks in office**,** a crucial loss of support for the embattled leader.

This tight link between business interests—both legal and illegal—and the state is a significant concern throughout the region. Corruption is rife in Central Asia as members of ruling elites profit from foreign sales of natural resources, and in some places even from illegal drugs trafficking. While close ties between politicians and business ensure loyalty to the regime and therefore a degree of stability, any sign of weakness among those in power is likely to be seized upon by those competing for access to resources and by a frustrated population, creating a risk of violence in the struggle for political power.

So far, however, the region has weathered these storms intact, and while the states may not be strong, the sovereign statehood of all five countries now appears to be accepted by its neighbours. The border with China has been demarcated; all five Central Asian states as well as the Russian Federation have now agreed upon the borders with China, which is a positive break from the Soviet past. Additionally, troops from all these states have been moved well behind their respective border zones. The effort of demarcation even led to the creation of the Shanghai Cooperation Organisation (SCO).[3]

Although Moscow may behave in a more paternalistic fashion toward the states than some of them may wish, there is fundamental acceptance of their sovereignty. Initially, many (including some of the leaders in the region) feared that the Russian Federation would turn the Central Asian states into a kind of new Warsaw Pact, with Russia controlling their economic and defence policies. This was a particular worry of the Kazakhs, given their enormous border with the Russian Federation and their population of approximately six million ethnic Russians at independence.

Relations with the Russian Federation

The Russian Federation at first expected to wield dominant influence over the Central Asian states.[4] Almost all the countries now eager to insulate the Central Asians from what they view as potentially pernicious Russian influence were in the beginning quite content to see the Russian Federation help keep order in this region. Turkey and the United States were the only North Atlantic Treaty Organization (NATO) members to set up embassies in all Central Asian countries (although Turkey passed on Tajikistan, which is the only non-Turkic state). Most Western European states, meanwhile, were willing to set up a couple of embassies—in the case of Kazakhstan several countries originally shared a single building—while meeting their diplomatic obligations through their embassy in Moscow for the majority of states in the region. Tashkent (Uzbekistan) and Almaty (the capital of Kazakhstan until 1997, when Astana was founded) had the largest numbers of foreign envoys, and even today not all European Union (EU) members have direct representation in every Central Asian country.

The Russian Federation, of course, was obliged to engage the Central Asian states from the time of the disintegration of the Soviet Union. In the first years, Moscow's preoccupation was with determining ownership, as all parties concerned tried to work out which of the Soviet communal assets belonged to Moscow and which were the possessions of the newly independent states.

Central Asia had been under Russian control since before the Soviet era, and the Russian leadership believed that this would likely continue. It seemed inconceivable to Kremlin policy makers that these five newly independent states were capable of exercising their sovereignty—Moscow held the purse strings for the entire region, supplying all the states with currency until 1993.

However, the challenges of creating a Russian state proved complex and consuming. What extra energy for foreign policy the Russian leaders had they applied in the Caucasus, which they saw as more of a core interest, and more closely tied to the deteriorating situation in Chechnya.

The decision by Moscow's financial reformers to cut the Central Asian republics loose from the ruble was primarily designed to help control Russia's escalating inflation. As long as Russia was providing currency to these states without setting their economic policies and foreign investment strategies, or controlling their hard currency reserves, it would not be able to control its inflation problems. But none of the Central Asian states (save war-torn Tajikistan) would accept such control over its policies. In 1993, Kyrgyzstan left the ruble zone. Then all left but Tajikistan, which continued to receive currency from the Russian Federation until 2000, after the civil war and the national reconciliation process had concluded. Ironically, Moscow's fiscal decision created the preconditions that essentially forced the Central Asian states to develop their own foreign economic strategies.

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When the Russian Federation had regained internal stability (which did not really occur until after Vladimir Putin's presidency began in 2000), its leaders sought to exercise influence in Central Asia anew. But when Putin held his introductory meetings with his presidential counterparts in Central Asia he discovered a group of men far more confident in their ability to set their countries' international priorities than his predecessor Boris Yeltsin had encountered in meetings with virtually the same group of men. They were also a group with increasingly disparate interests and priorities.

The United States in Central Asia

Much of the United States' concern in Central Asia has been related to pipeline politics. The United States became drawn into the issue after Chevron had trouble working out problems in the construction of a pipeline from the Tengiz oilfield in western Kazakhstan across Russia to the port at Novorossiysk on the Black Sea, which began in 1992. The construction of this pipeline, owned and managed by the Caspian Pipeline Consortium (which includes Kazakh, Omani and Russian representation), was effectively a condition for Chevron to obtain the licence to develop Kazakhstan's Tengiz field, to which they first negotiated rights in the last years of Soviet rule. The pipeline was eventually built, opening in late 2001, but Tengizchevroil is having difficulty getting the Russian government, whose control of the Soviet-built pipeline system in Russia gives it monopoly transit power, to agree to expand capacity. Thus the notion of an alternative route for Kazakh oil and gas—one which does not cross Russia—remains very much alive for both the United States and gas customers in Europe.

For their part, Central Asia's leaders looked to the United States from the very first days of independence, hoping that Washington would take an interest and that the United States would somehow take to their cause in a fashion roughly analogous to their embrace of the former Warsaw Pact countries. They recognized that they would, by necessity of their shared geography (and their landlocked nature), maintain close ties to the Russian Federation, but each leader wanted to develop a unique international face for his country.

Although perhaps momentarily stunned by the speed of the dissolution of the Soviet Union, some Central Asian leaders like Uzbek premier Islam Karimov seemed to welcome it. Kazakhstan's Nursultan Nazarbayev recognized that independence could bring special problems given that there was no natural geographical divide between Kazakhstan and the Russian Federation, and that ethnic Russians lived on both sides of the border. At first he worked hard to prevent the Soviet Union's collapse, but when dissolution proved inevitable, Nazarbayev moved to consolidate his position, and the independence of his country, very quickly. Nazarbayev was aided by the proactive posture of the United States, seemingly with strong personal pressure from Secretary of State James Baker, who travelled to several of the "orphaned" Soviet republics, including both Kazakhstan and Kyrgyzstan, in mid-December 1991. Nazarbayev hosted the second "founding" of the Commonwealth of Independent States (CIS) on 21 December 1991 in Almaty.[5]

Baker was particularly concerned to make sure that the Soviet Union's strategic nuclear arsenal (now physically located in Belarus, Kazakhstan and Ukraine, as well as the Russian Federation) was dismantled under United States or international supervision, or returned to the Russian Federation. Nazarbayev understood that this was a defining test for Kazakhstan; agreeing to disarm under US auspices would give it immediate international stature. Nuclear disarmament has remained a defining issue of Kazakhstan's foreign policy ever since, and was the building-block for a US–Kazakh strategic relationship that has weathered corruption cases revolving around Nazarbayev's personal finances and a sense in Washington that Kazakhstan could have done more to democratize its political system. The relationship has also withstood the United States' refusal to back Kazakhstan's bid to chair the Organization for Security and Co-operation in Europe (OSCE) in 2009, which would make it the first CIS member state to hold this post. Washington, though, did support the postponement of the OSCE's decision for a year, to give Kazakhstan a chance to demonstrate a stronger commitment to political reform.

Baker's trip to Kyrgyzstan was a reward to Kyrgyzstan's founding president Askar Akayev for his seeming embrace of democratic principles. Akayev, a scientist with a background in Communist Party oversight of academia, had been seized with enthusiasm for political reform under Gorbachev, and was brought to power as head of the Kyrgyz parliament by a disgruntled and divided Kyrgyz party organization in October 1990. Kyrgyzstan was the first Central Asian state to leave the ruble zone, the first to agree to an economic macro-stabilization programme, and the first (and to date only) Central Asian country to join the World Trade Organization (WTO). Yet, as discussed above, in early 2005 Akayev was ousted.

Akayev's removal dealt the greatest blow to US influence in the region. Some Central Asian and Russian leaders believed that Akayev's departure was the result of US support for pro-democracy groups in Kyrgyzstan. The success of the Rose Revolution in Georgia and the Orange Revolution in Ukraine had already made the former Communist Party functionaries leading the Soviet successor states feel at risk from what they understood to be "machinations" in Washington. The Tulip Revolution in Kyrgyzstan and the events in Andijon, Uzbekistan in 2005 made all of Central Asia's leaders more willing to accept political advice from Kremlin strategists and even to engage in much more systematic security cooperation with Russia.

China's role in Central Asia

China's size and economic potential make it at least a silent presence in virtually every setting of importance involving the Central Asian states—and sometimes a visible and vocal one.

China's proportional economic presence is largest in Kyrgyzstan and Kazakhstan. Kyrgyzstan sees itself as a gateway to China because both are members of the WTO. The Chinese already dominate much of light industry in Kyrgyzstan, especially in the north, and the Chinese represent virtually the only group eager to invest in that small and poor Central Asian country.

While the Kazakhs sometimes grumble about pressure from China, and the Chinese complain of bad business practices among their Kazakh partners, the two countries are cementing a longer-term relationship. China is a major investor in Kazakhstan's oil industry—to ensure increased access to Caspian oil and gas reserves. The Kazakhs and Chinese are also sponsoring a new joint 2,900km oil pipeline from Atyrau on the Caspian Sea to Alashankou on the Kazakh–Chinese border.

Beijing is also on the verge of becoming a rival to Moscow in Turkmenistan. Beijing and Ashkhabat have signed a long-term cooperation agreement for the development of greenfield gas projects in Turkmenistan. China has also secured transit rights to bring this gas across Uzbekistan and Kazakhstan up to the Chinese border.

China is even interested in surplus electric power. Kazakhstan is planning a joint project with China to develop a US$ 4 billion coal-fired power plant at Ekibastuz, near the Russian–Chinese border. Kyrgyzstan is also interested in selling hydroelectric power to China.

The Kazakhs and the Kyrgyz understand that the fates of their countries cannot be fully separated from that of China. Yet there is little indication that they have become more nervous of China in the past few years. In fact, the opposite seems to be true. Both countries seem more comfortable in their ability to manage this relationship. But the relationship remains more problematic than the one with the Russian Federation, because China's potential economic power seems almost limitless, and the needs of its growing population could overwhelm those of the Central Asians. For the short term, however, China's posture toward the Central Asian states seems quite predictable and generally supportive. And the Chinese are likely to continue to offer loans to the region's poorer states. In other words, it seems that the Chinese will continue to proceed in Central Asia as they have for the last several years, with a strong sense of confidence that time is on their side, and that they are entering the region to stay.

Energy wealth

Central Asia's importance on the international stage stems primarily from its energy resources. Many of the issues affecting the region are being played out through the energy sector, not least the competition for strategic influence.

Perhaps less immediately or globally significant, but of considerable regional importance, is hydroelectric potential. Kyrgyzstan hopes to be able to develop an export-oriented hydroelectric power industry to substitute income from gold production, as its gold reserves are being depleted. The Kyrgyz and Tajiks, however, are competing for many of the same external investment funds in the hydroelectric sector, and Tajikistan's reserves are a better match with Afghanistan's needs—which is what much of development assistance is keen to supply.

Many of the issues affecting the region are being played out through the energy sector.

Kazakhstan and Turkmenistan, respectively, have enough oil and gas to become serious "swing providers", compensating for shortfalls in Persian Gulf or Russian supplies. Much of Europe is seeking to reduce its dependence on the Russian Federation for energy, with the support of the United States, and China, India and much of the rest of East Asia are seeking to secure additional energy supplies, preferably not from the volatile Middle East.

The Russian Federation remains an important economic partner to all five Central Asian states, however, and still holds a monopolist or near-monopolist position in the export of Turkmen and Kazakh oil and gas reserves, given its control over the pipeline system that runs through its territory. The European Union and the United States remain convinced that this threatens the security of these states (and, more importantly, the security of Europe's gas supply).[6] The opening up of the Baku–Tbilisi–Ceyhan pipeline, connecting Azerbaijan to Turkey and bypassing the Russian Federation, offers a new route for the shipment of Kazakh oil to Europe; it will travel by freight across the Caspian Sea to Baku once the Kashagan oilfield moves from the exploration phase to the exploitation phase. However, this is at present not scheduled to occur until 2010; five years late and with a much longer payback period due to monumentally higher than projected costs, which has increased ill-feeling in what was already a tense relationship between Kazakhstan and the Western oil consortium (led by Eni, but including Shell and ExxonMobil as well as Total as major partners).

In contrast to these problems with the European and US consortium, and difficulties over the expansion of the Caspian Pipeline Consortium notwithstanding, the Kazakhs have found it a bit easier to do business with the Russians in the past few years, and are pleased to be getting a higher price

for their gas (upward of US$ 140 per 1000 cubic metres[7]). They also have hopes of collecting transit income for Turkmen gas, if a new pipeline along the Caspian coast is realized. This is a project between Kazakhstan, the Russian Federation and Turkmenistan, which was revived in May 2007. In addition, Kazakhstan hopes to receive transit income from a pipeline that would bring Turkmen gas to China.

China is eager to buy up as much of Central Asia's energy resources as possible and the Tajiks, Turkmen and Uzbeks are interested in taking advantage of the low-interest loans it has offered. The Kazakhs and Kyrgyz remain more wary of this traditional historic rival, who is viewed with more suspicion than the Russian Federation. But Chinese involvement in the Central Asian energy sector could create a more cooperative environment between two traditional rivals, the Kazakhs and the Uzbeks, both of whom benefit from transit fees created by the shipment of Turkmen gas across their territory.

Key security issues

Migration

Kazakhstan and Kyrgyzstan are not just wary of the Chinese economy. They also fear an influx of Chinese settlers, and Kazakh and Kyrgyz nationalists are full of unsubstantiated stories of how this migratory process has already started.

The one migration, which occurs both legally and illegally, that no one can question is that of Central Asian workers. Remittances from workers abroad now make up an increasingly important source of income for the population of Kyrgyzstan; these workers find employment in both the Russian Federation and Kazakhstan. Tajikistan's economy has also been heavily dependent upon remittances since its civil war, when Tajikistan not only lost most of its ethnic Russian population but also many Tajiks with connections in the Russian Federation. Most of this first group remained in Russia. After Russia's economy began its recovery, large numbers of additional Tajik workers began a kind of migratory trek. The more successful of them returned home once they had accumulated enough money to invest in small businesses, especially after 2000, when the new currency was introduced and the legal environment became more supportive of private investment, but many remain abroad.

Although the Eurasian Economic Community (EurAsEc), whose members include Kazakhstan, Kyrgyzstan, the Russian Federation, Tajikistan and most recently Uzbekistan, aspires to be a free trade zone, full employment rights throughout the "common" economic space have not been guaranteed. This means that the several million migrant workers who work year-round or seasonally in the Russian Federation remain at risk. If Russia were ever to close its doors to this labour force, as Russian nationalist groups regularly press for, then social pressures would increase in each of the Central Asian countries. Uzbekistan, whose economy remains very closed, and whose citizens work in Kazakhstan, Kyrgyzstan and Russia, would be particularly at risk.

The receiving countries—both Kazakhstan and the Russian Federation, even Kyrgyzstan—are wary of the potential security risks that the migrant labour population poses; risks to social stability in the localities in which they work; the risk of "importing" extremist religious ideology; or the risk of illegal drug trafficking or other forms of illicit trade.

The illegal drugs trade

Central Asia is a key region for the trafficking of illegal drugs from Afghanistan. Tajikistan was the "bottleneck for drugs trafficking to the north" particularly before 11 September 2001.[8] European, US and United Nations assistance programmes have since increased interdiction rates, and with better

controls here more drugs are instead passing from Afghanistan across other Central Asian countries and Iran.

A substantial amount of drug money was actually used to jump-start certain sectors of the economy in Tajikistan, and it undoubtedly helped support the revival of the home construction industry and the service sector more generally. The illegal drugs trade also seems to have helped ordinary Kyrgyz in southern Kyrgyzstan keep afloat, providing income to small traders who would otherwise have no livelihood. But in southern Kyrgyzstan in particular drug-based organized crime has overshadowed many forms of legal business, as drug barons have sought to become legitimate businessmen by buying up large amounts of commercial property. This has contributed to the bribery of politicians and voters and the general instability of political life.[9]

By contrast, in both Turkmenistan and Uzbekistan the drug trade seems to be more managed by government, which reaps financial rents from the trade. The one positive consequence of this is that the government maintains a hold over organized crime, so—unlike in Kyrgyzstan and Tajikistan—it lacks an independent source of financial power. Earnings from illegal drugs trafficking serve as another incentive for the ruling elite to remain loyal to the current regime and another impediment to economic reform.

Religious extremism

The Central Asian countries have been struggling to contain the political risks associated with religious extremism since the collapse of the Soviet Union. Islam began flourishing throughout Central Asia in the last years of Soviet rule, due to a relaxation of state management of culture and religion. Uzbekistan, the region's historic seat of Islamic learning, developed the most vibrant religious life in the region, ranging from a revival of Hanafi teachings (the dominant school of Islamic law in Central Asia) to the spread of more radical (locally termed "Wahhabist") forms of Islam. The Uzbek government began cracking down on the latter in the mid-1990s, fearing that religious ferment could contribute to the breakdown of secular political institutions (as it was doing in neighbouring Tajikistan during its civil war). While many radical Islamists fled the country to fight in Tajikistan and then in Afghanistan, other radical groups, such as Hizb-ut-Tahrir, began to spread their ideology.

The question of what does or does not pose a threat to security can be very subjective. Some extreme members of Hizb-ut-Tahrir seem prepared to entertain the possibility of using force to advance their goals. The majority of the organization, however, is focused on using peaceful means to spread its message, a message that is by definition seditious as it seeks to undermine the secular nature of the state. Europe and the United States do not always see eye to eye with their Central Asian, Chinese or Russian colleagues over what constitutes religious extremism, or what constitutes an appropriate response. In Central Asia, the concern of Europe and the United States is not so much the banning of groups like Hizb-ut-Tahrir—many of which are no longer able to operate freely in parts of Western Europe either—but rather the way in which those accused of illegal religious activities are treated in the region, most particularly in Uzbekistan, but also to a lesser extent in Kyrgyzstan and Turkmenistan. The main focus of attention is the use of torture to extract confessions and more generally the lack of due process. Western observers from non-governmental organizations, governments and academia argue that these practices increase support for radical religious groups, increasing the security risk. Central Asian governments maintain that they are necessary to meet the extraordinary threats that their societies face, and they claim that there is a double standard being applied in the "war on terror"—where Western democracies are permitted to take extreme actions and they are not.

In fact, it is very likely that the terrorist potential of these various groups is much lower than that of cells of jihadis in Spain or the United Kingdom, which in recent years have seen terrorist-inspired

violence on a much greater scale than has been seen in Central Asia. Unlike in Central Asia, however, these incidents did not call into question the legitimacy of the state, which did occur in the aftermath of the Andijon disturbances in Uzbekistan, and which Central Asian elites fear could occur in the event of subsequent religious-inspired disturbances. There are remnants of the Islamic Movement of Uzbekistan that have the capacity to infiltrate back into the region and it would not be difficult for fringe groups to develop the capacity for armed action.

Regional cooperation on security

Many issues threatening the security of Central Asian states are region-wide: migration, radical Islam, illegal narcotics trafficking, and even potential conflicts over the ways in which natural resources, most particularly hydroelectric power, are developed. But to date, despite all the talk of the need for effective forms of regional cooperation, no effective solution has been found to make the five states of the region subjugate national concerns to overarching regional ones.

Four of the five Central Asian states are members of the Moscow-sponsored Collective Security Treaty Organization (CSTO). Only Turkmenistan, due to its avowed doctrine of "positive neutrality" is not a member, although this could change as Niyazov's successor Gurbanguly Berdymukhammedov reconsiders the country's foreign policy stance. The CSTO states have also increased their security cooperation under the aegis of the Shanghai Cooperation Organisation, engaging in joint military exercises of unprecedented scale in 2007, which focused on recapturing a small city from the control of terrorists. However, these exercises were dominated by China and Russia, and Uzbekistan refused to do more than send an observer mission, leaving few in the region confident that the SCO will emerge as an effective source of a coordinated multilateral military response.

These activities have not precluded the Central Asian states' continued membership of NATO's Partnership for Peace programme and their engagement in various bilateral relationships and training projects with NATO member states. The United States still has an airbase in Kyrgyzstan, although there is growing public pressure for its removal—some claim that this is likely being instigated by various political elements in the Russian Federation. The Germans were able to remain in Uzbekistan even after the United States was asked to leave and NATO forces have some limited basing facilities in Tajikistan as well.

While the states of Central Asia are eager to remain on good terms with Washington as well as Brussels and Europe's national capitals, the heyday of US military influence in the region, and likely that of NATO as well, does seem to have passed, at least for the foreseeable future. While the Central Asian states are likely to continue to look to the West as their preferred source of technical assistance as they continue to reform their militaries, their political shift away from the West and increased security cooperation with the Russian Federation may in fact result in reduced access for the purposes of intervention and even for timely and useful advice regarding whatever security threats the region may find itself confronting.

The Central Asian states no longer view themselves as sharing an extensive list of security goals with NATO countries. From a Central Asian perspective, the Russian Federation's ambitions appear containable for now, especially since continued EU and US pressure is likely to keep Moscow paying commercially competitive prices for their gas; and China's potentially hegemonic behaviour seems a long way off. Most important, both China and the Russian Federation share the Central Asian leaders' sense of what is and what is not good statecraft, and do not accuse them of advancing policies that create the very security risks that all agree must be alleviated.

The Central Asian states have each managed their relations with the major international actors relatively well, but they have done far less well creating any sort of durable formula for regulating

relations with one another. Right now there are no major rifts threatening to boil over, but should there be a weaker ruler in Tashkent, or a stronger one in Dushanbe, long-standing rivalries could become very problematic. As it is, Uzbek suspicion of Kyrgyzstan and Tajikistan (as well as of Turkmenistan, with whom it shares access to water) seriously diminish the likelihood that a region-wide free trade regime will develop in the region. Moreover, the relative lack of tensions in the Uzbek–Kazakh relationship is also partly the product of personality, through long years of forced close association between Islam Karimov and Nursultan Nazarbayev. However, it is very hard to predict what the coming to power of a new generation, particularly in Kazakhstan and Uzbekistan, will mean for the region as a whole. Right now Nazarbayev in particular serves as something of a stabilizing force, enjoying the respect of the younger leaders in Tajikistan, Turkmenistan and Kyrgyzstan. In the absence of strong regional cooperative mechanisms, it will be difficult for any of the new generation to become a force for stability, and few in Central Asia will be eager to defer to Chinese, EU, Russian or US pressure to play such a role.

Notes

1. "Kyrgyz Asked to Chip in to Repay State Debt", *Reuters*, 1 August 2007, at <uk.reuters.com/article/oddlyEnoughNews/idUKL0183745620070802>.
2. "Kyrgyz Government Rejects IMF Debt-Relief Scheme", *RadioFreeEurope/RadioLiberty*, 20 February 2007.
3. Created in 1996 and initially called the Shanghai Five, the organization comprised China, Kazakhstan, Kyrgyzstan, the Russian Federation and Tajikistan. In 2001 it became the SCO and Uzbekistan joined. It has since taken on an expanded security mission to identify common threats and coordinate a cooperative response in dealing with them.
4. The so-called Kozyrev Doctrine, a foreign policy concept officially adopted in April 1993, dictated that the main goal of Russian foreign policy was to create "a belt of security" around Russia's borders. This document put forward a number of priorities for Russian foreign policy in Central Asia, including Russian primacy as a conflict mediator within the CIS, guaranteeing the rights of Russian citizens in the near abroad, and establishing Russia's place as the first among equals in military, economic and political multilateral frameworks in Central Asia. (See Alexander A. Sergounin, 1998, *Russia: A Long Way to the National Security Doctrine,* Copenhagen Peace Research Institute, March.)
5. The founding of the CIS was first agreed by the leaders of Belarus, Russia and Ukraine on 8 December 1991, but this was deemed a constitutional coup by Mikhail Gorbachev, as the Soviet Union was still in existence. This second founding in Almaty was attended by ten of the Soviet Union's constituent states (Armenia, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan), and represented the official creation of the CIS. Azerbaijan and Georgia have since joined. Turkmenistan left in 2005.
6. The European Commission estimates that the EU's dependence on natural gas imports will increase from 57% to 84% by 2030 (European Commission, no date, *Gas: Security of Gas Supply,* at <ec.europa.eu/energy/gas/sos/index_en.htm>). This has prompted a great deal of nervousness among European governments about the security of their energy supply and the desire among some in European circles to diversify the EU's sources of energy and means of transport.
7. "Kazakhstan's Growing Gas Exports to Go Russia's Way", *Eurasia Daily Monitor,* 17 May 2007.
8. UN Office for Drug Control and Crime Prevention, 2000, *Global Drug Report 2000,* Oxford, Oxford University Press, p. 8.
9. Nine states were at 142nd place (out of 163) on Transparency International's Corruption Perceptions Index of 2006. Three of these were in Central Asia: Kyrgyzstan, Tajikistan and Turkmenistan.

Central Asia: regional security and WMD proliferation threats

Togzhan KASSENOVA

All countries of Central Asia—Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan—inherited elements of the vast Soviet weapons of mass destruction (WMD) production complex. Among the activities in which WMD facilities in Central Asia were engaged were uranium mining, plutonium production, the fabrication and testing of biological and chemical weapons, and the storage and testing of nuclear weapons. Early international efforts to address this proliferation threat emphasized ensuring that the Russian Federation became the only legatee of Soviet nuclear weapons; other proliferation risks posed by WMD materials, technology and expertise received less attention.

Materials that currently pose WMD-related threats in Central Asia can be classified into three main groups: nuclear weapon-related material, including fissile material (highly enriched uranium and plutonium) and radioactive material ("orphan", or abandoned, sources); biological weapon-related materials and technologies; and chemical weapon-related materials and technologies. The leading WMD-related risk in Central Asia is the possibility of the theft of materials and their sale by smugglers or through brokers to terrorist or proliferant states. Another risk is the leakage of expertise either through the sale of critical information or through "brain drain". A related risk is the possibility that Central Asian states could be used as a transit corridor for smuggling WMD-related materials and expertise originating from outside of the region.

This paper discusses the fragile security environment in Central Asia post-2001, the greatest proliferation risks in the region, and details some of the national, regional and international responses.

A new security environment in Central Asia after 2001

The 11 September 2001 terrorist attacks in the United States had direct and indirect effects on every country in the world. In Central Asia, the developments were particularly decisive because of the United States-led military campaigns in Afghanistan (2001) and Iraq (2003). The military operation in Afghanistan has been especially significant as the geographical proximity of Afghanistan to the Central Asian states and political, religious, social and economic factors all make the region dependent on stability in its neighbour.

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Although the overthrow of the Taliban regime in Afghanistan promised a generally positive impact on developments in the region, it has not been a panacea; serious problems in the reconstruction and political stabilization of Afghanistan remain and have the potential to destabilize the already fragile regimes in Central Asia. Some observers within Central Asia are disappointed in the failure of the United States' engagement to have a positive influence on regional security.[1] The fact that the Taliban movement has not been eradicated completely—that, although considerably weakened, it still exhibits signs of life in some parts of Afghanistan and neighbouring Pakistan—is a matter of concern both for Central Asia and for the wider international community.

Some observers within Central Asia are disappointed in the failure of the United States' engagement to have a positive influence on regional security.

Radical Islamist sentiment in the region has escalated against a background of growing anti-Americanism since the US-led operation in Afghanistan (and later in Iraq), which has been exploited by fundamentalist movements. The Islamic Movement of Uzbekistan (IMU), whose stated goal since 1999 has been the overthrow of the government of Uzbek president Islam Karimov and its replacement with a caliphate, was considerably weakened in the immediate aftermath of the war in Afghanistan in 2001, but since December 2002 has carried out some terrorist acts in the region.[2] The IMU has also expanded its goal to include the whole of Central Asia and the Muslim-populated part of China (Xinjiang), and in 2001 renamed itself the Islamic Movement of Turkestan (IMT).[3] Reports indicate that IMU/IMT guerrillas have operated with Al-Qaeda and Taliban units.[4] If true, this indicates a worrying trend of radical Islamist movements from within Central Asia linking with international terrorist organizations. Another source of concern for Central Asian states is the activities of Hizb-ut-Tahrir in the region (most active in Tajikistan and Kyrgyzstan).

The true extent of Islamist revival in Central Asia is a question of debate, but its presence is indisputable. While the post-Soviet revival of fundamentalist Islam in Central Asia can be partly attributed to factors such as political oppression, economic hardship and social problems, increased foreign involvement in Afghanistan has also played a part. Overall, the impact of fundamentalist Islam in Central Asia and beyond is often exaggerated from one extreme to the other by different political groups seeking to achieve a variety of goals. Some fear that Central Asian governments (all of which are, to varying degrees, authoritarian regimes) sometimes use the pretext of counter-terrorism to crack down on internal dissent.

A related challenge to regional stability is posed by drug trafficking from Afghanistan into Central Asia and Europe. In 2007 Afghanistan cultivated 193,000 hectares of opium poppies and produced 8,200 tons of opium, thus reaching a position of disturbing "leadership" on the world opium market (Afghanistan is the world's near-exclusive supplier of the drug, with 93% of the global opiates market).[5] It is widely recognized that drug smuggling is closely linked to insurgency, finances most of the radical Islamist groups like the Taliban, and spreads corruption among warlords and sometimes even government officials. Moreover, smuggling routes are often used not just for drugs, but also for bringing terrorists across borders.[6] Such extremely porous borders and still far from ideal export control systems make the region susceptible to illicit smuggling of WMD-related material and expertise, potentially either originating from Central Asian countries or passing though them.

The third major consequence of the 2001 attacks and the subsequent military operation in Afghanistan has been the emergence of new geopolitical pressures in Central Asia. Initially, Kyrgyzstan and Uzbekistan allowed US military forces to use their military and air bases in support of the operation in Afghanistan, and Kazakhstan agreed to allow US military aircraft to use its airports for emergency landings. These decisions resulted in closer strategic military and political cooperation between these Central Asian states and the United States.

The geopolitical context for US–Uzbek relations, however, changed significantly after 2005. In May of that year in the Uzbek town of Andijon (Fergana Valley), thousands protested against the growing poverty, corruption and repression of people who practise Islam outside of the tight restrictions on religion established by the Uzbek government.[7] Hundreds were reportedly killed by law enforcement officers. The Uzbek government has denied any wrongdoing and has stated that the protests were organized by Islamic fundamentalists. The US government criticized Tashkent for what looked like a bloody reprisal against dissenting people by an authoritarian regime.[8] Tashkent, stung by Western criticism, kicked US troops out of the Karshi-Khanabad base and appears to have turned to China and the Russian Federation for strategic partnership.

Although Central Asia had traditionally been in Russia's sphere of security interests, the long-term presence of US military bases in the region has significantly altered the degree of Russian influence. Nonetheless, Russia—and China—are not ready to give up on the idea of exercising significant influence in Central Asia. The shifting geopolitical paradigm (e.g. Uzbekistan swinging between a strategic partnership with the United States on the one hand and with Russia and China on the other; the unpredictable and shifting Kyrgyz–Russian and Kyrgyz–US relationship; and Kazakhstan's "multi-vector" foreign policy of manoeuvring between the interests of major powers) demonstrates that great powers are continuing their struggle for dominance in the region, while Central Asian states continue to depend on these powers in terms of providing for their own security. None of this provides a good foundation for a predictable and stable security environment in the region.

The long-term impact of the 2001 terrorist attacks on the United States, the anti-Taliban military campaign in Afghanistan, and the 2003 war in Iraq on geopolitics in Central Asia remains to be seen. The long-term implications for regional security continue to evolve. On the one hand, the removal of the Taliban in Afghanistan certainly contributed to regional stability in the long run. The active involvement of the United States in Central Asia—shaped by its interest in the region's political and economic stability—has also had a positive impact. At the same time, these very factors are potentially disruptive. The presence of US bases in Central Asia, potential political unrest, the ongoing economic and social crises in neighbouring Afghanistan, and the geopolitical redistribution of power among the traditional key players from outside the region could all contribute to instability in Central Asia.

Current WMD proliferation threats

Nuclear and radioactive material

The continued presence of fissile and radioactive material in the countries of Central Asia poses a persistent proliferation risk. Obtaining fissile material such as highly enriched uranium (HEU) or plutonium is one of the most important steps separating terrorists from a nuclear device of very destructive power, while acquiring certain types of radioactive material is the principal hurdle to creating a radiation dispersal device (RDD) or "dirty bomb". Central Asia is a potential source for both types of material.

HEU remains at several sites in Central Asia. Kazakhstan has three HEU-fuelled research reactors,[9] and its overall amount of HEU is believed to be about 10,590–10,940kg.[10] The Mangyshlak Atomic Energy Combine (MAEK) in Aktau, Kazakhstan, is the site of the BN-350 fast breeder reactor, which produced plutonium prior to being shut down in 1999.[11] To date, 2,900kg of HEU fuel from BN-350 have been removed to the fuel processing facility in Ust-Kamenogorsk and blended down to low-enriched uranium (LEU);[12] the remaining material at the facility includes spent fuel that contains some three tons of better than weapon-grade plutonium.[13] While this material is packed in special casks and stored at MAEK's storage pool, reducing the risks of theft,[14] spent fuel constitutes a proliferation

risk due to its high plutonium component; it will be better secured only by being removed from the facility completely and placed in long-term storage.[15] Concerns about security are partly driven by Aktau's location on the shore of the Caspian Sea. The United States Department of Energy (DOE) assists Kazakhstan with providing long-term storage. In its most recent budget request (for fiscal year 2008), the DOE is asking for US$ 31.7 million for this purpose. It is planned that all BN-350 spent fuel will be moved to the Baikal waste site (at Semipalatinsk) by 2010.[16]

Uzbekistan has one operating HEU-fuelled research reactor.[17] In 2004 the United States repatriated 11kg of fresh HEU fuel assemblies from Tashkent to the Russian Federation, and in April 2006 63kg of spent HEU fuel were transported to the Mayak facility in Russia. Uzbekistan now has less than 56kg of HEU (all of which is irradiated fuel), and has committed to converting its only operating reactor to LEU.[18]

Lax accounting for fissile material during the Soviet era provides grounds for concern that not all the fissile material in Central Asia may be accounted for. The Soviet system encouraged facility managers to manipulate production figures, even those involving fissile material. The nuclear facilities would produce extra uranium or plutonium without registering it as insurance against a possible shortfall in future production.[19] There can be no guarantee that the region is clear of all fissile material, although there is no evidence of significant amounts of unaccounted material in Central Asia.

Not all the fissile material in Central Asia may be accounted for.

Another potential proliferation threat in Central Asia is the significant number of "orphan" radiation sources. These are sources abandoned by medical, scientific and industrial users who are either unable or unwilling to dispose of them properly, leaving them vulnerable to theft. Some of these sources could be used in unsophisticated radiological devices. It is also possible that sources could be stolen from industrial, medical or research facilities currently in use. According to the chairman of the Kazakhstan Atomic Energy Committee, Timur Zhantikin, and based on Soviet-era data, about 100,000 radiation sources were present in Kazakhstan in 1992. In 2005, Kazakh government officials admitted that they were unaware of the whereabouts of at least 20,000 radiation sources still believed to be in the country.[20] That same year it was announced that Kazakhstan would start a nationwide inventory of radioactive sources used by industrial enterprises and institutions, as well as search for orphan radioactive sources. It is believed that this process is under way. Also in 2005, and despite domestic instability in the aftermath of the "Tulip Revolution", Kyrgyzstan managed to conduct a partial search for lost or abandoned radioactive sources. About 1,000 items of radioactive material deemed to be vulnerable to theft or terrorism were secured or disposed of by October 2005. According to Kyrgyz authorities, there were 500 additional items to secure, and an unidentified amount of radioactive material was still missing.[21]

A study of the safety of commercial radioactive sources concluded that only a small fraction of such sources present a proliferation risk.[22] Therefore, the risk posed by radioactive sources should not be exaggerated. The main challenge for the Central Asian states regarding these sources is the lack of comprehensive inventory information, which would make it possible to determine how many potentially dangerous radiation sources are in each country, and how many are currently unaccounted for. During the Soviet era, not all radioactive sources in the Central Asian republics were registered with local government officials (e.g. radioactive sources used by the military and thus controlled by the federal authorities in Moscow were not covered by local registration requirements). In addition, under a project known as "Gamma Kolos", radiation sources containing caesium-137 (an isotope suitable for a radioactive device) were sent to Kyrgyzstan, Turkmenistan and possibly other Central Asian republics for use in agricultural experiments. Officials from the International Atomic Energy Agency (IAEA) believe that 100–1,000 of these sources are unaccounted for in the former Soviet Union, and that some of them are probably in Central Asia.[23]

Numerous organizations and facilities that ceased to exist in the chaotic aftermath of the Soviet collapse are sites of currently unaccounted radioactive sources. Many of these organizations simply abandoned radiation sources as they deserted the facilities. The privatization of formerly state-owned enterprises in the region has also contributed to the problem of lost radioactive sources—many were not properly transferred to the new owners.[24]

Biological components

Four main biological-weapon proliferation threats exist in Central Asia.

Vozrozhdeniye Island in the Aral Sea, divided between Kazakhstan and Uzbekistan, was used during the Soviet era to fabricate and test biological weapons (BW). Buried caches of anthrax spores on the Uzbek side of the island were decontaminated and at present, scientists in Kazakhstan and Uzbekistan conduct disease surveillance campaigns on the island and check for plague and other diseases. The scientists fear that other pathogens tested on the island during Soviet times might still be there and could spread to the mainland through rodents.[25] The United States is currently discussing possible cooperative projects with Uzbekistan to characterize the pathogens circulating among the fauna in the Aral Sea.[26]

Remaining micro-organisms on Vozrozhdeniye Island pose a potential proliferation risk because of the shrinkage of the Aral Sea and the increasing proximity of the island to the mainland. The potential for birds and rodents to carry diseases to the mainland, and the possibility of people who come to the island in search of scrap metal becoming carriers of disease are both causes for concern.

Collections of strains, pathogens and micro-organisms remain at bioresearch facilities throughout the territory of Central Asia, such as the Scientific Center for Quarantine and Zoonotic Diseases (formerly the Anti-Plague Institute) and the Scientific Research Agricultural Institute in Kazakhstan, and the Institute of Virology and the Tashkent Center for Prophylaxis and Quarantine of Most Hazardous Infections in Uzbekistan. These collections are vulnerable to theft. For example, there have been several documented attempts to gain access to Kazakhstan's Center for Quarantine and Zoonotic Diseases.[27]

Although security at these facilities has improved significantly and the US government provides funding to consolidate the number of facilities housing especially dangerous pathogens, risk persists. Apart from the above-mentioned main facilities there remains a wide network of laboratories from the Soviet era belonging to the Sanitary Epidemiological Services, of scientific centres and institutes working under the auspices of the Ministries of Health and Agriculture, and of smaller field stations of the former anti-plague network, which all work with highly dangerous infectious agents, field strains and museum cultures. These facilities are a potential source of BW agents for terrorists or proliferant states.[28]

Beyond collections and research, *natural foci of especially dangerous diseases,* such as bubonic plague, tulaeremia, Crimean-Congo hemorrhagic fever, anthrax and others are found throughout Central Asia. While at first the presence of such diseases might seem to be only a public health issue, potential proliferation risks are associated with these agents. The existence of natural foci of highly infectious diseases calls for research on vaccines and on means of epidemic prevention, which in turn requires research facilities to have extensive collections of strains and pathogens. The presence of such collections is a matter of concern if they are not properly protected. In theory, an experienced microbiologist could isolate the plague bacterium from infected humans or rodents and attempt to transform it into a biological weapon or could isolate a virulent (disease-causing) strain of anthrax bacterium from infected animals and humans and cultivate it; however, significant technical challenges would make it extremely difficult to achieve this goal.[29]

There are a number of scientists in Central Asia with *chemical and biological expertise*, which could be turned to weapon production. This potential threat is amplified by the slow conversion of BW-related facilities. For example, the US-sponsored dismantlement of the world's largest anthrax bioweapon production facility in Stepnogorsk (Kazakhstan) was implemented successfully and ahead of schedule, but bilateral Kazakhstan–US conversion projects aimed at establishing a drug packaging line in Stepnogorsk did not have the same degree of success.[30] The reason behind the failure was the non-performance of the US contractor chosen to do the job; the US Department of Defense (DOD) had to terminate its contract with this contractor in 1997. In the same year Congress prohibited the use of the DOD's Cooperative Threat Reduction funding for any further defence conversion projects.[31] In recent years two US-administered programmes[32] have begun to include bioscientists, but the number of scientists engaged is relatively small.

Chemical weapons threats

Chemical weapons (CW) were developed, tested and stored in various parts of Central Asia. The Chemical Research Institute situated in Nukus (Uzbekistan) was a part of the Soviet CW programme, and Ustyurt Plateau (Uzbekistan) was used for testing chemical defence equipment in hot weather conditions. In June 2002, US military forces stationed in Uzbekistan to support operations in Afghanistan announced that they had detected traces of nerve and mustard gas at Karshi-Khanabad air base. Prior to this episode, the presence of CW agents at Karshi-Khanabad was unknown. It is unlikely that any recoverable agents were involved or that there was any proliferation risk in this particular case. However, such cases indicate that a full account of the legacy of the Soviet-era chemical weapons programme is still lacking.

During the Soviet era, a part of Kazakhstan's Pavlodar Chemical Plant was designated for CW production, yet never entered into operation. When independent Kazakhstan acceded to the Chemical Weapons Convention (CWC) the government did not need to declare the plant since the production of chemical weapons never took place.[33] Since Soviet times, some of the production equipment has been sold off. The main proliferation threat at the plant concerns some specialized equipment such as high-nickel-steel production reactors, which are well suited for manufacturing highly toxic and corrosive metals and whose fate is unclear.

The primary CW proliferation concerns in Central Asia relate to dual-use chemicals (a concern that is not unique to Central Asia) and the factor of the "unknown" (e.g. the possibility that there may be equipment or material of proliferation concern that has not so far been located). As a result of this legacy, Central Asia remains a possible (albeit not likely) source of CW-related materials, technology and expertise.

Confronting the threats

Since the break-up of the Soviet Union, a number of steps have been taken by the Central Asian governments and the international community to address the region's WMD legacy. These measures can be analysed on three levels: national, regional and international.

National responses

The national responses of Central Asian countries to WMD threats consist of the domestic measures the states have taken to secure WMD-related material and technology, prevent the "brain drain" of specialists with WMD expertise, and limit the potential illegal export of material and expertise from and through their territories.

One aspect of the national response involves decisions about joining the treaties and agreements that form the basis of the international non-proliferation regime. All five Central Asian states have joined the Treaty on the Non-proliferation of Nuclear Weapons (NPT) as non-nuclear-weapon states. They have also all signed the Comprehensive Nuclear-Test-Ban Treaty (CTBT), the Chemical Weapons Convention and the Biological and Toxin Weapons Convention (BTWC). In addition, all five states have signed not only IAEA Safeguards Agreements but also Additional Protocols committing them to even more intrusive and comprehensive IAEA verification measures.

The efforts of the five states to establish a sound national export control system have had mixed results. Overall, the Central Asian governments are continuing to develop the necessary legislation and to design and implement measures to strengthen export control systems, though the current level of control in Kyrgyzstan, Tajikistan and Turkmenistan remains weak—much more can and should be done. The Central Asian states have not been able to commit sufficient human and financial resources to this task, whether because of a genuine lack of resources or insufficient political commitment.

United Nations Security Council resolution 1540, adopted in 2004, requires that all states put in place and enforce effective accounting and physical protection measures, as well as border and export controls, to prevent trafficking of WMD and related materials. It recognizes that national governments are responsible for establishing effective domestic controls, but also acknowledges that some states may require assistance with implementation, and invites states in a position to provide such assistance to do so. An example of such assistance in Central Asia includes workshops organized by the James Martin Center for Nonproliferation Studies in Kazakhstan in 2006 (funded by the Norwegian Foreign Ministry and the MacArthur Foundation) and in Kyrgyzstan in 2007 (funded by the Norwegian Foreign Ministry and Carnegie Corporation of New York), aimed specifically at implementation of resolution 1540 in these countries.[34]

In terms of specific national challenges, Kazakhstan's main non-proliferation goal in the early 1990s was to remove nuclear weapons from its territory, which was accomplished in April 1995. As a capstone to these efforts, Kazakhstan signed (1996) and ratified (2001) the CTBT, putting an end to the long history of nuclear tests on its territory. The country is now concerned with securing its remaining nuclear material, providing adequate physical protection for nuclear and biological research facilities, recovering and securing orphaned radioactive sources, and preventing the natural spread of extremely dangerous diseases. Among the Central Asian states, Kazakhstan has the most developed export control system and is the only state to belong to one of the international export control regimes (the Nuclear Suppliers Group). However, even in Kazakhstan there is still considerable room for improvement.[35]

Uzbekistan's main non-proliferation goal is also to secure or dismantle its Soviet WMD inheritance. Uzbekistan has HEU and LEU at an operational nuclear research reactor near Tashkent and it continues to produce uranium at Navoi Mining and Metallurgy Combine. The country also inherited two former BW facilities, where security has been improved.

By contrast, Kyrgyzstan does not currently have important WMD-related facilities. Its main challenge is its geographic location, which makes it a potential transit route for WMD-related materials and technology. Kyrgyzstan is in vital need of strong export controls and a strengthened border control system. It is working on improving its border control, but its capabilities remain underdeveloped.[36]

Tajikistan has a uranium milling plant (and may once have had an enrichment facility) at the Vostochnyi Rare Metal Industrial Association (Vostokredmet) in Chkalovsk; it also has a plant in Taboshar that used to manufacture solid-propellant rocket motors for Soviet strategic missiles.[37] So it faces the task of adequately securing the materials and technology at those sites. Like all the other Central Asian states, Tajikistan also has unaccounted "orphan" radioactive sources on its territory. Tajikistan's location requires an improvement in the existing export control system, currently characterized as very weak.[38]

In 1997 Tajikistan adopted a Law on Export Control., but its difficult economic situation means that Tajikistan has to rely on foreign states for assistance.

Turkmenistan has no WMD-related infrastructure or materials on its territory, apart from a reported abandoned uranium mine in the north-west of the country.[39] Its priority goal should be the development of export controls, as its export control system seems to be the weakest in the whole former Soviet Union.[40] Turkmenistan is the only Central Asian state that does not have a law on export control. Some presidential decrees were adopted that outlined goods that required licence for import or export. However, they were considered to be export control decrees but not non-proliferation export decrees (since their primary goal was to protect Turkmenistan's domestic market by controlling the flow of items in and out of the country).

Regional efforts

In addition to individual national efforts, there have been some region-wide non-proliferation endeavours. In 2006 the five Central Asian states established a nuclear-weapon-free zone (NWFZ), which reiterated their adherence to non-proliferation values. By establishing a NWFZ the states agreed to ban nuclear weapons from the region and accepted stricter safeguards to prevent proliferation.[41]

International cooperation

International involvement has been an important catalyst for national efforts to address proliferation threats in Central Asia. The main source of external assistance is the United States, as the US government has been concerned with potential WMD proliferation in the former Soviet Union since the early 1990s. US-funded cooperative non-proliferation programmes are financed by the US Departments of Defense, State, Energy and Commerce, as well as some other government agencies. These programmes originated under the legislation passed by US Senators Richard Lugar and Sam Nunn in 1991. Countries other than the United States also provide substantial resources to assist Central Asia; major contributors include Canada, Japan, the United Kingdom and other EU countries.

With assistance from the Cooperative Threat Reduction (CTR) programme, Kazakhstan removed all nuclear weapons and intercontinental ballistic missiles from its territory and destroyed all the silos associated with these weapons. CTR also helped shut down the former nuclear test site at Semipalatinsk and financed the dismantlement of the BW facility in Stepnogorsk (both in Kazakhstan) and the CW research facility in Nukus (Uzbekistan). The CTR programme provided funds for projects to establish a new laboratory complex for anti-plague research at the Kazakh Scientific Center for Quarantine and Zoonotic Diseases. CTR funds also paid for improved safety and security in the Scientific Research Institute in Otar (Kazakhstan), and in three bioresearch institutes in Uzbekistan (the Institute of Virology, the Center for Prophylaxis and Quarantine of Most Hazardous Infections and the Samarkand Veterinary Institute).[42] The CTR programme provides opportunities for bioscientists to work on biosafety and biosecurity projects as well. For example, Kazakh scientists mapped and completed the genetic fingerprinting of 93 isolates of anthrax found in Kazakhstan. Also, they were able to participate in a joint diagnosis of avian influenza in Georgia and Kazakhstan and diagnosed and identified the source of an outbreak of Congo-Crimean hemorrhagic fever (a tick, in Uzbekistan).[43]

Vozrozhdeniye Island has been partly decontaminated thanks to financial and technical assistance. The United States provided Uzbekistan with US$ 6 million to dismantle former BW infrastructure and disinfect Uzbekistan's part of the island.

Kazakhstan's government asked the United States for assistance in the early 1990s when almost 600kg of inadequately secured HEU fuel was discovered at the Ulba Metallurgical Plant in

Ust-Kamenogorsk. This amount was reportedly enough to build 20–25 nuclear bombs.[44] In 1994 the HEU fuel was removed to a safe location in the United States.[45]

Several non-proliferation assistance programmes are helping Central Asia with the development of regulatory frameworks for export control and providing training and equipment for export control officials, border guards and customs inspectors. For example, the US State Department, Customs Service and Department of Commerce have been active in providing assistance through seminars, workshops and training for Central Asian specialists in order to enhance the countries' export and border control capabilities.

The International Science and Technology Center (ISTC), an international organization financed by Canada, the European Union, Japan, Norway, the Republic of Korea and the United States, provides employment to former Soviet weapons specialists who seek to turn their skills to civilian use. While initially the ISTC focused on employing former nuclear scientists, with time it has recognized the need to provide alternative employment to BW and CW experts. The ISTC provides grants for peaceful research projects, thus reducing the potential threat of experts selling critical knowledge. Its activities in Central Asia should be expanded even further to help prevent the leakage of WMD know-how from the region. The Science and Technology Center in Ukraine (STCU) funded by the EU, the United States and Canada, an organization identical in structure and function to the ISTC, is also dealing with this issue. At present, Kazakhstan, Kyrgyzstan and Tajikistan are parties to the ISTC, and Uzbekistan is a member of the STCU. The Global Initiatives for Proliferation Prevention (GIPP) programme, administered by the US Department of Energy, is also aimed at preventing "brain drain" from the former Soviet republics by engaging scientists in collaborative commercially viable projects.[46]

An important contribution to government-led efforts is being made by the non-profit Nuclear Threat Initiative (NTI, co-chaired by former US Senator Sam Nunn and media magnate Ted Turner). For example, NTI is helping Kazakhstan with the elimination of HEU stockpiles by assisting with blend-down of HEU and by supporting conversion for the Alatau nuclear research reactor.

Conclusion

The geopolitical situation in Central Asia remains unstable. In addition, there are insecure WMD-related materials located in the region and areas of terrorist activity can be found nearby. Overall, the geopolitical conditions in modern Central Asia together with the Soviet WMD legacy in the region create a dangerous combination of security risks and threats to Central Asia itself and the world.

The geopolitical conditions in modern Central Asia together with the Soviet WMD legacy in the region create a dangerous combination of security risks.

The WMD proliferation threats in Central Asia thus require unfailing attention from both national governments and the international community. Although important work on reducing proliferation risks in the region has been completed in the last decade and a half, much remains to be done. It is critical that additional measures be taken. Sustained political and financial support is necessary if non-proliferation measures in the region are to be effective and durable.

The current three-layered response to existing WMD proliferation threats at national, regional and international levels is laudable but would benefit from additional commitment on behalf of the Central Asian states and international donors. The Central Asian republics are limited in how they can implement non-proliferation policies; a lack of financial and human resources is by far the biggest problem, although not the only one. At the regional level, the five Central Asian states have succeeded in reaching agreement on the creation of a NWFZ, but the urgency of current challenges suggests a need for greater cooperation, especially in the export and border control areas. At the level of international assistance programmes, significant achievements have been reached in terms

of reducing proliferation threats. More attention, however, needs to be paid to conversion and to the environmental and socio-economic needs of the Central Asian countries to complement the dismantlement of WMD infrastructures, if positive long-term results are to be achieved.

Notes

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5. *Afghanistan Opium Survey 2007: Executive Summary,* United Nations Office on Drugs and Crime and the Government of Afghanistan (Ministry of Counter Narcotics), August 2007, p. iv, at <www.unodc.org/pdf/research/AFG07_ExSum_web.pdf>.
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28. Kenes Ospanov, "Organizatsiya meropriyatii po preduprezhdeniyu bioterrorizma", paper delivered at the Biological Weapons Nonproliferation Training Seminar, Center for Nonproliferation Studies, Almaty, Kazakhstan, 12–14 May 2003.
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32. ISTC and Global Initiatives for Proliferation Prevention (GIPP). GIPP was previously called Initiatives for Proliferation Prevention. In 2006, it was expanded to include another programme—Nuclear Cities Initiative (NCI)—and to reflect broader geographical application (e.g. work with WMD scientists in Libya and Iraq). In mid-2006 the original agreement was not renewed and NCI ceased to exist.
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41. For a detailed review of the Central Asian NWFZ, see the article by Jozef Goldblat in this issue of *Disarmament Forum*.
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Denuclearization of Central Asia

Jozef GOLDBLAT

The idea of a nuclear-weapon-free zone in Central Asia was put forward by the President of Uzbekistan at the United Nations General Assembly in September 1993.[1] In February 1997 the Presidents of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan, meeting in Almaty, issued a declaration that called upon all interested countries to support the idea of declaring Central Asia a nuclear-weapon-free zone (NWFZ). During the subsequent nine years, experts from the five Central Asian republics were meeting, in and outside the region, to negotiate a treaty establishing such a zone. At the request of the countries concerned, the meetings were chaired by the Director of the UN Regional Centre for Peace and Disarmament in Asia and the Pacific. The United Nations became, for the first time, directly involved in working out a nuclear-weapon-free-zone agreement. A representative of the International Atomic Energy Agency (IAEA) participated as a technical adviser, whereas the author of the present article acted as an independent political and legal adviser. The Treaty on a Nuclear-Weapon-Free Zone in Central Asia, called the Semipalatinsk Treaty after the place of its signing in Kazakhstan, was signed by the foreign ministers of the five states on 8 September 2006.[2]

Origins of denuclearization initiatives

In March 1960 a committee of ten nations—five from the North Atlantic Treaty Organization (NATO) and five from the Warsaw Treaty Organization (WTO)—convened in Geneva. The task of this new international body was to consider Soviet and United States proposals for general and complete disarmament. Three months later, following a dramatic walkout of the delegates of the WTO countries, the committee collapsed. The event was widely noticed by the world press.

Talks on the abolition of all weapons of war were later conducted in the Eighteen-Nation Committee on Disarmament, but they, too, were doomed to fail. In an atmosphere of high political tension no one was able to provide a satisfactory answer to such a fundamental question as what would be the political order governing international relations in a completely disarmed world, or which mechanisms and procedures would be used to settle disputes among states and maintain peace. The more immediate obstacle to any arms control agreement was the fact that negotiators were unable to determine which weapons, and how many of them, could be safely sacrificed in the first stage of the disarmament process. The Soviet Union insisted that one should start with a very

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substantial reduction in military power and eliminate the danger of nuclear war. The Western powers argued that they could not accept radical first-stage measures and give up their nuclear deterrent until confidence was established between East and West, and until an international peace force was created to replace national forces.

After it had ceased to be a Cold War propaganda issue for the Soviet Union and the United States, general and complete disarmament became a mantra "ritually" included in UN resolutions or preambles to multilateral arms control agreements. The attention of the world community turned to specific, partial arms control measures. This is when the prevention of the spread of nuclear weapons among states became the subject of negotiations that led to the conclusion, in 1968, of the Treaty on the Non-proliferation of Nuclear Weapons, or Non-proliferation Treaty (NPT). At the same time, there was a revival of proposals for regional approaches to nuclear disarmament, harking back to the 1957 Rapacki Plan for the denuclearization of Central Europe. For it became clear that the incentives to acquire nuclear weapons may emerge from regional considerations, and that countries confident that their enemies in the region do not posses nuclear weapons may not be inclined to acquire such weapons themselves. Nuclear-weapon-free zones have thus gradually become part and parcel of the nuclear non-proliferation regime. Not only do the treaties that have established the zones unconditionally prohibit the possession of nuclear weapons by non-nuclear-weapon states, but they also, in certain respects, go much further than the Non-proliferation Treaty, for instance, in the field of environmental security.

Nuclear-weapon-free zones have gradually become part and parcel of the nuclear non-proliferation regime.

Guidelines for nuclear-weapon-free zones

In 1999 the United Nations Disarmament Commission formulated a set of principles to guide states in setting up nuclear-weapon-free zones. The main guidelines are summarized here.[3]

- Nuclear-weapon-free zones should be established on the basis of arrangements freely arrived at among the states of the region concerned.
- Assistance should be provided, including through the United Nations, to the states concerned in their efforts to establish a zone.
- The status of a nuclear-weapon-free zone should be respected by all states party to the treaty establishing the zone, as well as by states outside the region.
- The nuclear-weapon states (as defined by the NPT) should be consulted during the negotiation of the treaty and of its relevant protocol or protocols.
- The obligations of the parties should be legally binding.
- States party to a nuclear-weapon-free zone remain free to decide for themselves whether to allow visits by foreign ships and aircraft to their ports and airfields, transit of their airspace by foreign aircraft and navigation by foreign ships in or over their territorial sea, archipelagic waters or straits that are used for international navigation.
- States party to existing nuclear-weapon-free zones should ensure that their adherence to other international agreements does not entail any obligation contrary to their obligations under the NWFZ treaties.
- A nuclear-weapon-free zone should provide for an effective prohibition of the development, manufacturing, control, possession, testing, stationing or transporting by the states party to the treaty of any type of nuclear explosive device for any purpose, and should stipulate that states parties do not permit the stationing of any nuclear explosive devices by any other state within the zone.

- A nuclear-weapon-free zone should provide for effective verification of compliance with the commitments made by the parties to the treaty.
- A nuclear-weapon-free zone should not prevent the use of nuclear science and technology for peaceful purposes

The above guidelines are mere recommendations. It is up to the states in the region to decide how to establish a zone. Given the dissimilar geographical circumstances, as well as different political, cultural, economic and strategic considerations of the states concerned, there can be no uniform pattern of denuclearized zones. The differences may relate to the scope of the obligations assumed by the parties; the responsibilities of extra-zonal states; the geographical area subject to denuclearization; the verification arrangements; and the conditions for the entry into force of the zonal agreement as well as for its denunciation.

During the past 40 years the nuclear-weapon-free area of the world has considerably expanded. By now, four regional denuclearization agreements have entered into force: the 1967 Treaty of Tlatelolco regarding Latin America and the Caribbean, the 1985 Treaty of Rarotonga regarding the South Pacific, the 1992 Joint Declaration on the Denuclearization of the Korean Peninsula (not operational) and the 1995 Bangkok Treaty regarding South-East Asia. The 1996 Treaty of Pelindaba regarding Africa and the 2006 Treaty of Semipalatinsk regarding Central Asia have been signed but are not yet in force. Certain uninhabited areas have also been formally denuclearized. They include Antarctica, outer space, the moon and other celestial bodies, as well as the seabed, the ocean floor and the subsoil thereof.[4]

Review of the Central Asian NWFZ

Obligations

The most important non-proliferation obligation assumed by the parties to the Semipalatinsk Treaty is not to allow the stationing of nuclear weapons on their territories. The term "stationing" is defined—for the purpose of the treaty—as implantation, emplacement, stockpiling, storage, installation and deployment. The conduct of nuclear test explosions by other states at a place under the jurisdiction or control of the parties is not allowed either. Most other obligations are the same as those previously contracted under the NPT, namely, not to acquire and not to seek to acquire or obtain control over nuclear weapons or other nuclear devices.

Following the example of the Pelindaba Treaty, the Semipalatinsk Treaty bans even research related to the manufacture of nuclear weapons. However, the presence in the zone of nuclear-related support facilities, such as communication, surveillance and intelligence-gathering facilities, is not prohibited. These facilities form part of the strategic system to be used in a nuclear attack and, at the same time, constitute primary targets for such an attack.

Area of application

The Central Asian NWFZ (CANWFZ) covers the land territory, all waters (harbours, lakes, rivers and streams) and the air space above them that belong to Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.

The Caspian Sea, though lying in the Central Asian region, has not been included in the NWFZ, because only two out of five littoral states (Kazakhstan and Turkmenistan), are covered by the zone. (As a nuclear-weapon state, the Russian Federation is not party to the zone.) Nor can the territorial waters of the parties become part of the CANWFZ—as is the case with other denuclearization treaties—because the Caspian Sea is a landlocked sea not subject to the Law of the Sea regime; there

is no legally recognized division line between territorial and international waters. It therefore proved necessary to leave the Caspian Sea, in its entirety, outside the geographic scope of the CANWFZ.

In the course of negotiations a proposal was made to allow states having common borders with the zonal states to join the CANWFZ. Consulted on this subject, the nuclear-weapon states advised not to open up such a possibility, most probably because an expansion of the zone could amount to the inclusion of war-torn Afghanistan or Iran, which is accused of violating the nuclear non-proliferation rules. The proposal was dropped.

Transit

Each party is free to resolve issues related to transit through its territory by air, land or water, including visits by foreign ships to its ports and landing of foreign aircraft at its airfields. This means that transit of nuclear weapons may be allowed or refused, but the decisions "should not be prejudicial" to the purposes and objectives of the treaty.

Since neither the frequency nor the duration of transit is limited by the treaty, it is not clear to what extent transit differs from stationing. With the proviso mentioned above, total absence of nuclear weapons in the CANWFZ, as envisaged in Article VII of the NPT (dealing with the right of states to conclude regional denuclearization treaties), cannot be guaranteed. Introduction of nuclear weapons into the zone, even for a short time, would defeat the sought goal of regional denuclearization. Moreover, transit of nuclear weapons allowed by one zonal state might affect the security of another.

In any event, because the nuclear-weapon states refuse—as a matter of policy—to disclose the whereabouts of their nuclear weapons, they are unlikely to request permission for transit of nuclear-weapon-carrying ships or aircraft. They would rather enter the zone without asking for permission, and this has already happened. The right of zonal states to deny transit of nuclear weapons will remain hypothetical as long as the nuclear-weapon states keep the contents of their transiting ships and aircraft secret.

Environmental security

As a result of past activities related to the development, production or storage of nuclear explosive devices by the Soviet Union, large territories of Central Asia have been contaminated. Until 1963 nuclear test explosions were conducted in the atmosphere and measures necessary to protect the population were not observed.

The treaty contains an undertaking to rehabilitate the affected territories. The disposal of other states' radioactive waste in the territory of a state party to the treaty is forbidden. This prohibition has been incorporated in the article dealing with the basic non-proliferation undertakings (Article 3). The only other nuclear-weapon-free-zone treaty providing for environmental security measures is the Rarotonga Treaty, which bans the dumping of radioactive matter at sea.

Peaceful uses, verification and protection

The Semipalatinsk Treaty confirms the right to use nuclear energy for peaceful purposes. To prevent diversion of this energy from peaceful uses to nuclear weapons or other nuclear explosive devices, the signatories are obliged to accept verification measures in the form of comprehensive nuclear safeguards administered by the IAEA. Such safeguards are applied to the nuclear activities of all non-nuclear-weapon-states party to the NPT, but the states of the CANWFZ have also undertaken to join the Additional Protocol, which strengthens the safeguards, and to do so not later than 18 months after

entry into force of the CANWFZ treaty. Supplying nuclear material or equipment to non-nuclear-weapon states that refuse to sign the Additional Protocol is forbidden, but supplying such material or equipment to nuclear-weapon states is not.

Nuclear facilities and nuclear material in domestic use, transport and storage as well as in international transport must be protected, at least as effectively as under the 1980 Convention on the Physical Protection of Nuclear Material and the recommendations and guidelines developed by the IAEA.

The provisions dealing with peaceful uses, verification of compliance and prevention of unauthorized use, or handling or theft, could have been more elaborate, especially with regard to the enrichment of uranium and reprocessing of plutonium. A clear specification of what is and what is not allowed in this field could help avoid misunderstandings and disputes, such as the one concerning the nuclear programme of Iran.

Consultations and settlement of disputes

Annual meetings of the parties' representatives are to be held on a rotating basis, and extraordinary meetings may be convened at the request of any party in order to review compliance or other questions related to the implementation of the treaty. Disputes must be settled through negotiation or through other means (presumably such as mediation or arbitration) deemed necessary by the parties.

Unlike other NWFZ treaties, the Semipalatinsk Treaty does not envisage the establishment of an organization or a secretariat to monitor the implementation of the treaty and deal with administrative matters. It is the depositary state (Kyrgyzstan) that will be responsible for all communications related to consultative meetings. Given the small number of parties, the creation of a special international implementing body did not seem necessary.

Other agreements

The main peculiarity of the CANWFZ is that certain states of the zone are bound by the security arrangements agreed within the framework of the Commonwealth of Independent States (CIS) and included in the 1992 Tashkent Collective Security Treaty. The signatories to the Tashkent Treaty are obliged to render all necessary assistance, including military assistance, in response to an aggression against a party to it. The type of weapon that may or may not be used in providing assistance is not specified.

At the insistence of the Russian Federation—the dominating power of the CIS—reluctant to see its political influence in the post-Soviet countries further diminished, the following proviso was inserted in the draft Article 12 of the Semipalatinsk Treaty: "This Treaty does not prejudice the rights and obligations of the Parties under other international treaties, which they may have concluded prior to the date of the entry into force of this Treaty."

France, the United Kingdom and the United States strongly opposed this proviso. They argued that by allowing for other agreements to take precedence over the provisions of the Semipalatinsk Treaty, Article 12 undermined the effect of the treaty as a whole. To meet this objection, the Central Asian negotiators added a sentence saying that "the Parties shall take all necessary measures for effective implementation of the aims and purposes of this Treaty in accordance with the main principles contained therein". Since this addition was found unsatisfactory to the French, UK and US negotiators, and since the Central Asian negotiators refused to delete Article 12 altogether, the three nuclear-weapon states voted against the 2006 UN General Assembly resolution welcoming the setting up of a nuclear-weapon-free zone in Central Asia.[5] They also threatened not to sign the protocol

intended to accompany the treaty (see the section on security assurances, below) unless Article 12 was appropriately modified. All the same, the refusal to sign cannot make acts contrary to the provisions of the treaty justifiable. (The nuclear-weapon states refused to sign the protocols to some other NWFZ treaties as well, but they did so for other reasons.)

Assuming that the term "military", used in the Tashkent Treaty, covers nuclear forces, the use of such forces in defence will not be rendered impossible by restrictions on their deployment imposed by the Semipalatinsk Treaty. The presence of nuclear weapons on the territory of an aggressed non-nuclear-weapon state is not necessary to defend that state, because nuclear missiles can be launched from an area lying outside the zone. The Tashkent Treaty does not deal with the same subject matter as the Semipalatinsk Treaty. The first contains an obligation to defend an allied country. The second prohibits the stationing of nuclear forces in the denuclearized zone, be it in times of peace or of war. In other words, the two treaties cannot be considered incompatible.

Final clauses

The treaty will enter into force 30 days after the date of deposit of the fifth instrument of ratification. It is of unlimited duration and is not subject to reservations.

Any party may withdraw from the treaty, if it decides that extraordinary events, related to the subject matter of the treaty, have jeopardized its supreme national interests. Like in the Pelindaba Treaty, the withdrawal will take effect 12 months after notification of withdrawal containing a statement of the extraordinary events has been received by the depositary. This is an improvement over the NPT, under which only three months' advance notice is required. The longer the delay, the higher the probability that the complying states will persuade the state wishing to defect not to do so. On the other hand, the intention to withdraw from the NPT must be notified both to states parties and the United Nations Security Council, whereas only states party to the treaty and to the protocol are to be notified in the case of withdrawal from the Semipalatinsk Treaty. This is a shortcoming, for involving the UN Security Council in the process of withdrawal may deter states from shedding their treaty obligations. To make their obligations irreversible, the parties could give up the right to resort to the withdrawal clause, as they have given up the right to make reservations, or they could have recourse to the withdrawal clause only under restrictive conditions.

Amendments proposed by the parties must be submitted to the consultative meeting of states parties and may be adopted there, but only by consensus. They will enter into force for all parties upon ratification by all.

The treaty is deposited with the Kyrgyz Republic, which will register it pursuant to Article 102 of the UN Charter.

Main rules of procedure

The first annual consultative meeting of the parties is to take place in Dushanbe, Tajikistan, no later than two months after the entry into force of the treaty. Extraordinary consultative meetings may be convened, at the request of any party, whenever the motion is seconded by two other parties.

The host party, through its representative, will chair annual and extraordinary consultative meetings and will act as chair until the next annual meeting. The decisions of consultative meetings must be taken by consensus.

The five nuclear-weapon states, as recognized under the NPT, as well as representatives of relevant international organizations, may be invited to attend annual as well as extraordinary consultative

meetings as observers. English and Russian will be the working languages of the meetings. The cost of holding the meetings, except transportation and accommodation, will be borne by the host country.

Issues to be resolved

Apparent contradictions

As explained above, Article 12 of the Semipalatinsk Treaty, which deals with the status of "other agreements", remains highly controversial. It is unlikely that the parties to the treaty would yield to the pressure exerted by three nuclear-weapon states and agree to amend it. It is also unlikely that the nuclear-weapon states would drop their objection to the present formulation; their attitude has given rise to a supposition that—for strategic reasons—these states are not all interested to the same degree in seeing a CANWFZ established. However, both sides are willing to continue consultations. An attempt could be made to devise a compromise formula without modifying the text of the treaty. The following possibilities seem to be worth considering.

Article 12 of the Semipalatinsk Treaty, which deals with the status of "other agreements", remains highly controversial.

In a joint statement, issued in the form of a binding international agreement, some high-level officials (preferably foreign ministers) of the Central Asian states would adopt a common understanding of the contentious provision. They would pledge that in settling disputes related to this provision they would base themselves on, and act in conformity with, Article 30 of the 1969 Vienna Convention on the Law of Treaties.

According to this article of the Vienna Convention, when a treaty specifies that it is not to be considered incompatible with an earlier treaty dealing with the same subject matter, the earlier treaty applies only to the extent that its provisions are compatible with those of the later treaty. Reference to this generally accepted rule of international law *(lex posterior derogat legi priori)* could allay the apprehension that Article 12 degrades the value of the entire treaty.

In a similar but more explicit statement, the five parties would agree that any treaty, which they had concluded earlier, and which dealt with the same subject matter as the Semipalatinsk Treaty, would apply only to the extent that its provisions were compatible with the Semipalatinsk Treaty.

Security assurances

Under UN Security Council resolution 984, adopted in 1995, the five parties to the Semipalatinsk Treaty are beneficiaries of negative security assurances applicable to all non-nuclear-weapon states party to the NPT.[6] These assurances are called "negative" because they amount to a no-use obligation, as distinct from "positive" assurances containing an obligation to assist.

According to this resolution, France, the Russian Federation, the United States and the United Kingdom will not use nuclear weapons against non-nuclear-weapon states party to the NPT, *except* in the case of an invasion or any other attack on them, their territories, their armed forces or other troops, their allies, or on a state to which they have a security commitment, carried out or sustained by such a non-nuclear-weapon state in association or alliance with a nuclear-weapon state. The conditional nature of these assurances has considerably diminished their value. Indeed, the elaborate exceptions to the assumed obligation not to use nuclear weapons can be read as an allowance to use them under the circumstances determined by the user. (Only China's assurances not to use nuclear weapons against non-nuclear-weapon states party to the NPT are unconditional.) Moreover, in the opinion of many jurists, resolution 984 has no binding legal force. It does not call for a specific action. It simply

takes note "with appreciation" of the relevant statements made by each of the powers recognized by the NPT as nuclear-weapon states.

As a quid pro quo for the renunciation of nuclear weapons by the states of the zone, China, France, the Russian Federation, the United Kingdom and the United States are expected to provide legally binding negative security assurances. A protocol offering such assurances to the parties to the Semipalatinsk Treaty remains to be agreed, but it will be of doubtful value if it simply reiterates the assurances spelled out in resolution 984.

Conclusions

The Semipalatinsk Treaty, the first multilateral nuclear arms control agreement signed since 1996, is also the first to establish a NWFZ located entirely in the northern hemisphere. In spite of the deficiencies described above, its importance cannot be overestimated.

Situated in the heart of the Asian continent, which hosts as many as five (presumably six) states possessing nuclear weapons (two of which border the CANWFZ), the Semipalatinsk Treaty covers a territory that is nearly five times as large as that of France, and which is extraordinarily rich in energy resources. By imposing equal constraints on the movements and deployments of the great powers' nuclear forces, this treaty may help build up geopolitical stability and security in Central Asia. It is, therefore, a valuable asset for the cause of non-proliferation.

Moreover, the envisaged regular meetings of the parties to the treaty may attenuate rivalries among the countries in the region and foster the good neighbourly relations necessary for the planned regional cooperative undertakings in the field of environmental security. A pledge to respect the denuclearized status of the Central Asian zone, formally given by the nuclear-weapon states, would help bring about universal recognition of the zone. It would reinforce the regional denuclearization endeavours begun with Kazakhstan's renunciation of the weapons left on its territory after the dissolution of the Soviet Union and the closure of the Semipalatinsk nuclear test site. The divergent interpretations of certain provisions of the treaty could be straightened out without delaying its ratification.

Notes

1. Address by Mr Islam A. Karimov, President of the Republic of Uzbekistan, 6th Plenary Meeting of the United Nations General Assembly, 28 September 1993, UN document A/48/PV.6, 5 October 1993.
2. A non-certified copy of the full text of the treaty can be found at <disarmament.un.org/TreatyStatus.nsf>.
3. For the guidelines in full, see *Establishment of Nuclear-weapon-free Zones on the Basis of Arrangements Freely Arrived at among the States of the Region Concerned: Chairman's Working Paper,* UN document A/CN.10/1999/WG.I/WP.1, Disarmament Commission, 19 March 1999.
4. The treaties concerned are: the Antarctic Treaty of 1959, the Outer Space Treaty of 1967, the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies of 1979, and the Sea-bed Treaty of 1971.
5. UN General Assembly resolution 61/88 of 6 December 2006.
6. UN Security Council resolution 984 (1995), UN document S/RES/984(1995), 11 April 1995.

Risks to security in Central Asia: an assessment from a small arms perspective

Christina Wille

The security agenda in Central Asia has shifted. The risk of civil wars and strife spreading across borders is no longer seen as the central concern as was the case in the 1990s. Today, religious extremism, terrorism, the illegal narcotics trade and state collapse are considered to be the main security threats. Perspectives on these threats differ, however. Governments tend to highlight the threat to state stability, whereas others are more concerned with human security.

This article discusses contemporary risks to security in Central Asia from a perspective gained from research on small arms. Small arms research helps to assess threats to human security as it examines conflicts and insecurity among communities and individuals and the vulnerabilities experienced by certain population groups. It is equally concerned with the security of states, as small arms proliferation can undermine and weaken state structures to the extent that a state becomes incapable of providing law and order; state forces' use of small arms also affects governance and security.

Small arms assessments can therefore be a useful indicator of a deteriorating security situation, as they seek to identify the number of weapons available, in particular to users that constitute the most severe safety threat. Research focuses on estimation of stockpile holdings and assesses user practices and objectives. Assessments of stockpile management procedures have shown that in many cases leakages can contribute to uncontrolled small arms proliferation in times of crisis, a factor that often fuels conflicts.

Initial research on small arms in Central Asia was driven by the expectation of a strong link between arms availability and conflict risk. The civil war in Tajikistan saw large numbers of small arms move into the hands of opposition forces and had a significant influence on political discourse. In 2000 a researcher wrote that "… given the proportion the proliferation of small arms has already assumed within these countries, it can be argued that the easy availability of small arms itself may become the decisive factor transforming political disagreements into full-scale armed confrontations."[1]

This view of Central Asia being awash with small arms posing a significant threat to security was challenged by fieldwork conducted in Kyrgyzstan, which indicated low levels of firearm ownership within the general population. Suggesting that Kyrgyzstan was perhaps an "Anomaly in Central Asia", the researchers highlighted the need for "disaggregating regional generalizations" and suggested that small arms availability and risks might be much greater in post-conflict Tajikistan.[2] Subsequent fieldwork in Tajikistan, however, found that small arms proliferation among the general population

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was also remarkably low there and that most civil war weapons had been reintegrated into the state security apparatus.[3]

This article follows the classic approach to small arms research by focusing on determining the number of small arms available among three distinct user groups: the civilian population, the state security forces and non-state armed groups. Past incidents are analysed to assess the threat posed by the availability of small arms among the groups identified as presenting a security risk. The article concludes that small arms proliferation outside of state structures is limited in Central Asia. Internal security agents enforce the strict laws on civilian possession and maintain close control over the population. Uncontrolled proliferation of firearms is unlikely to become a major security risk provided government control mechanisms continue to function in this manner. Armed opposition forces, including Islamic extremists and terrorists, do not pose a significant insurgency risk to the state on the basis of their existing stockpiles, and are unlikely to acquire significant quantities of firearms unless aided by members of state forces. Nonetheless, they continue to be a disruptive force.

Stockpile management structures and practices in several locations within Central Asia pose a risk of leakage.

Available numbers show that the state security forces are by far the most significant holders and users of small arms in Central Asia. The main security concerns therefore relate to the practices and use of small arms by state authorities. Available information suggests that stockpile management structures and practices in several locations within Central Asia pose a risk of leakage and that this could potentially destabilize the security situation.

Moving beyond the analysis of patterns of small arms holdings, this article considers the motivation and incentives influencing the use of small arms. The close links that some sections of the security forces have developed with both legal and illegal business activities since independence pose a hidden security risk in Central Asia. Involvement in the narcotics trade in Tajikistan and distribution of revenues from natural resources to security forces in Uzbekistan and Turkmenistan have created systems of expectation, patronage and loyalty that undermine prospects of better governance. There are also concerns that changes in power structures could trigger violent confrontations between factions within the security forces.

Small arms in Central Asia

Small arms and the Soviet legacy

Central Asia as a geographic entity is subject to multiple definitions. For the purposes of this article we consider the countries south of the Russian Federation and east of the Caspian Sea, and which were part of the Soviet Union until 1991. These are Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.[4] The history of these states has had important impacts on patterns of small arms ownership; the laws controlling civilian possession of firearms and the operational procedures of the security forces are essentially a Soviet legacy in all five states.

The continuity in legal arrangements governing small arms in the post-Soviet era reflects the broader pattern of political transition in Central Asia. Independence was gained largely by default as the Soviet Union collapsed, rather than through large-scale, home-grown resistance to Soviet rule. The leaders of the newly independent Central Asian states came from the elites that had dominated politics during the final years of the Soviet Union, and they demonstrated little interest in institutional reform.[5] They continued to depend on key state security forces (in particular those of the Ministries of the Interior) to maintain control, and did not seek to change the strict legal framework that controlled private firearm possession.

Researching small arms in Central Asia is challenging. Few facts and figures on weapon holdings and related security issues are published, and the attitude that it is preferable not to share information prevails. Another difficulty is that statements are subject to bias. Government representatives prefer to represent their countries as stable, secure and effectively controlled.[6] At the same time, government perceptions of external threats to security, such as terrorism and illegal drug trafficking, can appear inflated. Opposition figures and non-governmental organizations may also exaggerate the extent of instability, while taking pains to deny the presence of small arms at their demonstrations. These motivational biases are evident in the significant divergence of reports from official and non-official sources.[7]

It is just as difficult to establish exact procedures by which the security services manage their weapons stockpiles. Formal procedures have been carried over from the Soviet era, but these are often not adhered to. However, the extent of malpractice is difficult to establish with limited information, and based only on incidents where malpractice has come to light as a result of a particular crisis. It is likely that practices vary considerably throughout the region, but it is beyond this paper to examine variations in detail. This article draws on the results of fieldwork carried out by the Small Arms Survey (SAS) in Kyrgyzstan in 2003 and Tajikistan in 2004, as well as research carried out by International Alert in Kazakhstan. Fieldwork has not been possible in Uzbekistan and Turkmenistan, due to restrictions on research.

Civilian gun ownership

Very few private citizens in Central Asia own a gun. If all citizens were to pool their firearms, they would be far outnumbered by those of state security forces. Fieldwork carried out by the Small Arms Survey in 2003 and 2004 in Kyrgyzstan and Tajikistan found that private family firearm ownership was neither widespread nor popular and there was little demand for guns.[8] In Kyrgyzstan in 2002 there were 7,410 registered hunters, who, according to their association, owned some 15,000 registered hunting guns.[9] In Tajikistan, the Ministry of the Interior stated in 2003 that there were 10,000 registered hunting guns.[10] The Small Arms Survey estimates that between 23,000 and 67,000 guns were in private ownership in Tajikistan in 2004, which included weapons caches from the civil war. For Kazakhstan, International Alert quotes "indirect sources" that the estimated number of weapons owned by civilians was around 65,000.

Table 1. Firearms per inhabitant in Kazakhstan and Tajikistan

	Estimated number of firearms in civilian possession	*Estimated population*[a]	*Number of firearms per 100 inhabitants*
Kazakhstan	65,000[b]	15,233,844	0.4
Tajikistan	23,000–67,000[c]	6,944,506	0.3–1

Sources

[a] International Institute for Strategic Studies, 2007, "Central and South Asia", *The Military Balance 2007,* pp. 301–330.

[b] John Heathershaw, Emil Juraev, Michael von Tangen Page and Lada Zimina, 2004, *Small Arms Control in Central Asia,* International Alert Eurasia Series no. 4, p. 24.

[c] Stina Torjesen, Christina Wille and S. Neil MacFarlane, 2005, *Tajikistan's Road to Stability: Reduction in Small Arms Proliferation and Remaining Challenges,* Small Arms Survey Occasional Paper no. 17, p.16.

The low level of private firearm ownership is particularly apparent if firearm numbers are related to population figures. Statistically, only about one person in 100 owns a weapon in Tajikistan (Table 1). In reality, this figure will be lower, as gun owners usually have more than one firearm. One person in 200–400 people may have between two and four firearms.

These are very low ownership rates compared with other countries, notably the United States, where there is nearly one gun per citizen (see Table 2). Even allowing for the possibility of underestimation in the figures for Kazakhstan and Tajikistan, it is clear that private gun ownership in Central Asia is very low by international standards. Small arms observers in Kyrgyzstan have observed an increase in demand for private firearms in the aftermath of the "Tulip Revolution" of March 2005.[11] However, numbers are still very small, underlining the overall point that private firearm possession is not a common phenomenon in Central Asia (a total of 335 new firearms licences were issued in 2005 compared with 176 in 2004).[12]

Table 2. Estimated gun ownership per 100 inhabitants

State	*Guns per 100 inhabitants*
Tajikistan	0.3–1
Kazakhstan	0.4
Japan	0.6
Netherlands	2
Brazil	1–17
Sweden	24
United States	83–96

Source: Stina Torjesen, Christina Wille and S. Neil MacFarlane, 2005, *Tajikistan's Road to Stability: Reduction in Small Arms Proliferation and Remaining Challenges,* Small Arms Survey Occasional Paper no. 17, p. 91.

The low level of private firearm ownership is a consequence of the legal framework and cultural attitudes inherited from the Soviet Union. In the Soviet Union, firearm possession was limited exclusively to hunters registered with the hunters' association and law enforcement officials. Kazakhstan, Kyrgyzstan and Tajikistan have made few changes to these provisions, and while no specific information is known about private gun ownership in Uzbekistan and Turkmenistan, the Soviet heritage of these regimes would suggest that ownership rates are very low.

Gun crime remains rare in most Central Asian states, with political killings in Kyrgyzstan being a notable exception (as discussed below). Reported levels of homicide and armed robbery are very low in all Central Asian states.[13] While the true extent of crime remains without doubt under-reported, focus groups in Kyrgyzstan and Tajikistan confirmed the overall impression that the threats of crime and violent crime are not perceived as significant by ordinary citizens. Central Asian states differ in this respect from many countries where small arms assessments have been carried out and where the overriding concern has been the threat to human security from crime as a consequence of lawlessness and conflict.

Small arms stockpiles in Central Asia

Security forces are the primary holders of small arms in Central Asia, in contrast to most of the developed Western world.[14] No state in Central Asia discloses figures on the extent of its arsenals.

Table 3. Estimated size of state bodies holding firearms

	IISS estimates	*SAS estimates*
Kazakhstan		
Army	46,800	
Air Force	19,000	
MVD (Ministry of the Interior)	20,000	
State Border Protection Forces	12,000	
Maritime Border Guard	3,000	
Presidential Guard	2,000	
Government Guard	500	
Total	*103,300*	
Kyrgyzstan		
Army	8,500	10,900
Air Force	4,000	
Border guards	5,000	5,000
MVD		17,000
SNB (National Security Service)		1,200
Total	*17,500*	*34,100*
Tajikistan		
Army	7,600	8,000
Air Force	800	
Border guards	5,300	1,200
MVD		20,000–28,000
Drug Control Agency		350
Presidential Guard		1,000–2,000
Other ministries and agencies		5,000
Total	*13,700*	*35,550–44,550*
Turkmenistan		
Army	21,000	
Navy	700	
Air Force	4,300	
Total	*26,000*	
Uzbekistan		
Army	40,000	
Air Force	15,000	
Internal security troops	19,000	
National Guard	1,000	
Total	*75,000*	

Sources

SAS estimates: Kyrgyzstan: S. Neil MacFarlane and Stina Torjesen, 2004, *Kyrgyzstan: A Small Arms Anomaly in Central Asia?* Small Arms Survey Occasional Paper no. 12, p. 14; Tajikistan: Stina Torjesen, Christina Wille and S. Neil MacFarlane, 2005, *Tajikistan's Road to Stability: Reduction in Small Arms Proliferation and Remaining Challenges*, Small Arms Survey Occasional Paper no. 17, p. 95.

IISS estimates: International Institute for Strategic Studies, 2007, "Central and South Asia", *The Military Balance 2007,* pp. 301–330.

Estimates can be derived from an assessment of the size of the security forces (see Table 3), but this information is not complete. The Small Arms Survey has derived estimates of the size of the various forces. The Ministry of the Interior (MVD) is the most important security organ in both Kyrgyzstan and Tajikistan, employing some 17,000 personnel in Kyrgyzstan and 20,000–28,000 in Tajikistan. The armed forces are relatively small in comparison, numbering just under 11,000 in Kyrgyzstan and 8,000 in Tajikistan.[15] However, Kyrgyzstan and Tajikistan may not be representative of the broader pattern for the region; according to information published in *The Military Balance 2007,* Kazakhstan and Uzbekistan maintain much larger armies, suggesting that these two countries would hold the most significant stockpiles of small arms in the region. Turkmenistan appears to lie between the two groups of states. It should be noted, however, that the estimates in Table 3 are incomplete because of the lack of data for internal security forces such as the Ministry of the Interior and the successor organs to the KGB (Committee for State Security), which are very important in the region.

There are great uncertainties in estimating stockpiles from the strength of the armed forces. The ratio of firearms per person varies between countries, and there are no specific estimates for Central Asia. However, based on international comparisons it would be reasonable to suggest that in Central Asia the number of firearms held by the armed forces is roughly equal to the number of service personnel.

Experts agree that the army inventories are in poor condition and resemble those of the former Soviet Union. The most common weapons are Kalashnikovs (AK-47s, AK-74s and AKM Kalashnikovs), Makarov pistols and Dragunov sniper rifles.[16] There is no evidence of large-scale modernization of inventories or substantial imports of weapons in recent years.[17]

Calculating the security risk: past use and threat of use of small arms

Stockpiles and leakages

Stockpile leakages were one of the main sources of weapons in the Tajik civil war 1992–1997. The war was fought between the United Tajik Opposition, comprised of Islamic and democratic opposition groups, and supporters of the secular regime who sought continuity with the Soviet period. The two factions fought each other largely through regionally-based militias and acquired their weapons through local community leaders. The militias supporting former Communist Party First Secretary Rakhmon Nabiyev's election to the presidency had particular access to national law enforcement structures for supplies, and also received weapons from the governments of the Russian Federation and Uzbekistan.[18] The opposition purchased some guns in Afghanistan and used stocks from the security forces when available. Members of the Russian Army unit stationed on the Tajik–Afghan border, the 201st Motorized Rifle Division, reportedly sold their stocks to both sides in the conflict.[19] The easy availability of government stocks in the context of disintegrating central power and increasing political tensions accelerated the outbreak of war.

Ten years after the end of the war in Tajikistan, leakages from government stockpiles continue in Central Asia. Thefts from stockpiles have been reported in Kyrgyzstan. For the period 1993–2002 the Military Prosecutor's Office in Kyrgyzstan assessed a total of 1,100 cases of theft, and more than 30 officers and 500 soldiers were charged with criminal offences. Between 2000 and 2002, seven incidents of large-scale firearms theft by military personnel were registered.[20]

The management of government stockpiles is a matter of concern in Kazakhstan too. According to International Alert, there has been no official inventory carried out in Kazakhstan since independence. Attempts to undertake one have reportedly met resistance from the military. It has been alleged that arson has even taken place in order to cover up the loss of weapons from stockpiles.[21]

At present, while apparently frequent, leakages are not occurring on a sufficient scale to threaten regional stability because there is no large-scale demand for arms. However, past experience indicates that weakly managed security forces, which are unable to prevent leakages, constitute a significant risk factor in turning low-level political stand-offs into armed confrontations during periods of political instability, in particular when the security forces have a stake in the confrontation. Being the most significant holders of small arms in the region, management and control over the security forces is crucial for future stability.

Management and control over the security forces is crucial for future stability.

Mountain caches: threats from Islamic fundamentalism

Political and radical Islamic groups have long been regarded as a threat by the secular governments of Central Asia. Today, the Islamic Movement of Uzbekistan (IMU) is the most prominent organization openly challenging President Islam Karimov's regime in Uzbekistan. This insurgent group fought in the Tajik civil war and, operating in the Fergana Valley, mounted successful incursions from Tajikistan into Kyrgyzstan and Uzbekistan (where it is banned) in 1999 and 2000.

There is evidence that Islamic fundamentalist groups have been weakened as a result of international action in the "war on terror" coupled with crackdowns led by Central Asian governments. The United States-led Operation Enduring Freedom in Afghanistan in particular has substantially weakened the IMU. The IMU leader Juma Namangani was killed in the fight for Kunduz in northern Afghanistan in 2001, where he sided with Taliban and Al-Qaeda fighters. Islamist sympathizers remain in Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan, possibly organized as sleeper cells.[22] However, there does not appear to be a significant risk of insurgency at present, though terrorist attacks are a concern.

In Tajikistan, since the 1997 peace accords, Emomali Rahmon's regime has gradually removed all former warlords not loyal to the government from positions of power. Some opposition leaders have maintained private caches of weapons, but at present they do not pose a significant threat to the government; the opposition is no longer coherently organized and seems unable to attract new supporters—disaffected young men who might become new recruits have tended to leave Tajikistan for work in the Russian Federation and elsewhere.[23]

Hizb-ut-Tahrir, another radical Islamic group in Central Asia, seeks to unite all Muslim countries in a unitary Islamic state ruled by Shariah law and thereby challenges the secularism and even existence of Central Asian states. The movement is officially committed to non-violence, however, and only splinter groups may possibly seek to obtain stockpiles for violent attacks.

Despite the apparently successful countermeasures against opposition groups, Kyrgyzstan, Tajikistan and Uzbekistan have experienced terrorist or insurgent attacks in the recent past. Most activists come from radical groups based in the Fergana Valley, a region split between the three countries. Governments in the region claim that attacks in 2006 were perpetrated by affiliates to the IMU and Hizb-ut-Tahrir. However, the veracity of these claims is somewhat unclear.[24]

The acquisition of firearms may have been one of the main aims of recent attacks. A Kyrgyz–Tajik border post was attacked on 12 May 2006 by a group of armed men: two Kyrgyz and three Tajik border guards were killed, and 19 assault rifles and one heavy machine-gun were stolen. The law enforcement agencies in both countries have responded with force to these attacks, resulting in shoot-outs between state officials and gunmen. A number of those arrested or killed have been found in possession of illegal weapons.[25] These incidents have also highlighted the vulnerabilities of security forces and the lack of serious stockpiles among insurgents.

Some observers have argued that the tactics used by Central Asian governments against anyone suspected of sympathizing with radical Islam may have increased the pool of fundamentalist sympathizers. However, there does not appear to be a significant risk of insurgency at present, as the nature of terrorist and insurgent operations suggests that insurgents do not have major capabilities, and it seems unlikely that they will acquire the organizational capacity and large weapon stockpiles necessary to mount a serious challenge to state power. At present, insurgent organizations constitute a "disruptive but manageable force",[26] and this is unlikely to change as long as no new havens for terrorist groups or easy supplies of weapons emerge within the region. The security incidents, however, highlight the importance of adequate stockpile protection to prevent terrorist groups from gaining access. In particular, as weapon sources in Afghanistan have been reduced, government stockpiles in Central Asia are now some of the most obvious sources of firearms.

Violence and the threat of violence connected to illegal business

Events over the last two years in Kyrgyzstan have highlighted what appears at present to be the most serious and perhaps overlooked security concern in Central Asia. The Tulip Revolution of March 2005 in Kyrgyzstan led to a violent aftermath. After the president fled the country, there were two days of lawlessness and looting in the capital Bishkek. In the months after the revolution, a number of influential politicians, officials and business people were the victims of contract killings and violent attacks.

Arms availability has increased as a result, as discussed above, but this in itself does not constitute the real security threat. The real concern stems from the context in which weapons have been used in Kyrgyzstan. The events surrounding the Tulip Revolution brought the close ties between business, organized crime and state structures into the open. The violence that followed the revolution was to a large extent funded by organized crime. Opposition to Akayev's regime came from a variety of interest groups, and the absence of clear opposition structures and a lack of funds among many of the more idealistic groups made it possible for criminal leaders to join the movement. Their interest was mainly in usurping the Akayev family—reported to control much of the state's assets—and competing for access to markets (both legal and illegal).[27] The political changes since the revolution have strengthened the hold of organized crime on politics.[28]

For 10 years prior to the Tulip Revolution (1995–2005), known drug barons occupied seats in parliament, making them immune to prosecution. After the revolution, when Feliks Kulov was Prime Minister (September 2005 to December 2006), three deputies with known criminal connections were assassinated, along with one person who was seeking to become a deputy. Some observers believe that, following these assassinations, criminal bosses have become more reluctant to become directly involved in politics, and instead prefer to work through connections to politicians.

The connections between illegal and legal businesses and the security forces are not unique to Kyrgyzstan. In Tajikistan there is evidence of considerable involvement by government and security officials in the illegal narcotics trade. This appears to have been an important source of revenue for both sides during the civil war.[29] The peace accord integrated warlords from both sides into the state security forces, with the consequence that criminal elements were brought into the heart of the security apparatus. One of the most telling indicators of this connection is the near absence of violence associated with the illegal narcotics trade on one of the world's most significant transit routes (narcotics from Afghanistan pass through Tajikistan and Kyrgyzstan to the Russian Federation and the European Union). Large parts of the illegal drugs trade in Tajikistan are thought to be protected by state security forces working in collusion with criminals.[30] This ensures short-term stability, but undermines the state's ability to address organized crime, with long-term consequences for economic

development. There is also a risk of violence erupting as it did in Kyrgyzstan should there be changes in power structures in the future.

Natural resource revenues and the security forces

In Turkmenistan and Uzbekistan massive security apparatuses are supported by natural resource revenues from oil and gas. In Uzbekistan the Karimov regime distributes natural resource revenues among those in charge of the National Security Service and the Ministry of the Interior, which controls the police. This ensures the security forces' continued support for the regime in a situation where ordinary and unarmed citizens show increasing signs of frustration with the deteriorating economic situation. The events of 13 May 2005 in Andijon, when security forces killed between 300 and 500 demonstrators (according to the OSCE Office for Democratic Institutions and Human Rights), illustrate the extent to which the security forces are prepared to support the Karimov regime.[31]

The dependence of the security forces on natural resource revenues also constitutes a hidden threat to stability. The International Crisis Group predicts that the security services in Uzbekistan would vigorously defend business interests in the natural resource sector, as it provides them with a major source of income.[32] It is reported that wealthy and influential individuals within Uzbekistan who are presently outside the regime maintain links with organized crime.[33] This carries the risk that such individuals would seek to use their connections to increase their access to power if an opportunity arose. There is a potential of large-scale violence between groups competing for access to revenues.

In Turkmenistan the state security services are also closely linked to natural resource revenues. Gas revenues have allegedly been paid into a Deutsche Bank account to which key figures in government and the security services have personal access.[34] These individuals appear to be offered access to gas revenues in exchange for suppressing potential threats to the regime, both among the elite and at the grass roots.

Conclusion

The analysis of small arms stockpiles and ownership and use patterns confirms some key assumptions usually held by governments in the region about state stability and effectiveness in countering terrorism and religious extremism. Opposition groups and terrorists who would like to see the secular governments in Central Asia tumble do not have the necessary weapons capability to mount a serious threat. Practices inherited from the Soviet period also ensure that controls on private activities make the emergence of highly capable armed opposition movements unlikely in present circumstances.

Human security concerns do not stem from large-scale, uncontrolled small arms proliferation among non-state actors. Moreover, with the exception of the use of explosives in Tashkent, Uzbekistan, terrorist attacks have been primarily targeted at state security forces or institutions linked to the security sector, and have not attempted to harm ordinary citizens in public places. Crime rates are low, and controls on private firearm ownership make incidents of armed violence between civilians an extremely rare event.

Small arms analysis points instead to some serious, and relatively hidden, security threats in the region. These originate from the governance of the state security forces. There is evidence that powerful individuals within the security forces expect to be financially rewarded for the position they take in political power struggles, for their facilitation of legal and illegal business and for ensuring that the state's legitimate threat of use of force can be utilized for private or factional interests.

The sanctioned use or threat of force by individuals and structures within the security forces contributes to present stability, but under more strained conditions there is an implicit threat that weapons held by the state security apparatus could be used for private factional interests. Events in Kyrgyzstan have shown that violence is likely to erupt at times of a power struggle: the end of one regime will create a vacuum that emerging powers, including criminal business interests, will seek to fill. Such instability may over the long term increase the demand for private firearm ownership.

The absence of violence gives a misleading impression. At first sight, it appears that the illegal narcotics trade in Central Asia is benign as levels of violence are kept low and ordinary citizens do not suffer the violent effects of illegal business in Central Asia in the same way as the narcotics trade is associated with violence in many European or North American cities.

But the involvement of security forces in organized crime constitutes the main long-term threat to the future security and stability of the region because of the easy availability of arms to these groups. The lack of accountability among state security forces also constitutes a serious constraint to good governance and opportunities for long-term economic development that would lift the population of Central Asia out of poverty. If recent experience is anything to go by, vulnerable groups and opponents to the regimes are likely to experience harassment or even violence from state security forces. The ability of the most powerful and well-connected individuals to increase their wealth through natural resource revenues and illegal business decreases the incentive to create economic conditions for sustainable economic development. In the long run such practices are not conducive to creating security and stability.

Visible proliferation of small arms and open violence are not the only indicators of security problems. States that appear strong because they successfully prevent armed external opposition and violence among citizens can still have serious internal weaknesses that threaten state and human security and need to be addressed through security sector reform.

Notes

1. Bobi Pirseyedi, 2000, *The Small Arms Problem in Central Asia: Features and Implications,* Geneva, UNIDIR, p. 86.
2. S. Neil MacFarlane and Stina Torjesen, 2004, *Kyrgyzstan: A Small Arms Anomaly in Central Asia?* Small Arms Survey Occasional Paper no. 12, p. 1.
3. Stina Torjesen, Christina Wille and S. Neil MacFarlane, 2005, *Tajikistan's Road to Stability: Reduction in Small Arms Proliferation and Remaining Challenges,* Small Arms Survey Occasional Paper no. 17, at <www.smallarmssurvey.org/files/sas/publications/o_papers_pdf/2005-op17-tadjikistan.pdf>.
4. During the Soviet era, Middle Asia consisted of Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan and did not include Kazakhstan. Soon after independence, during a meeting in Tashkent, Central Asian leaders decided that Kazakhstan belonged in the Central Asian Region.
5. President Akayev in Kyrgyzstan is something of an exception. He was elected President in 1991 because he did not belong to any of the dominant political factions at the time; he was, however, a member of the Communist Party.
6. MacFarlane and Torjesen, 2004, op. cit., pp. 2–3.
7. MacFarlane and Torjesen, 2004, op. cit. and Torjesen, Wille and MacFarlane, 2005, op. cit.
8. MacFarlane and Torjesen, 2004, op. cit. and Torjesen, Wille and MacFarlane, 2005, op. cit.
9. S. Neil MacFarlane and Stina Torjesen, 2007, *Small Arms in Kyrgyzstan, Post-revolutionary Proliferation,* Small Arms Survey Occasional Paper no. 12, revised and updated, at <www.smallarmssurvey.org/files/sas/publications/o_papers.html>, p. 26.
10. Torjesen, Wille and MacFarlane, 2005, op. cit., p. 17.
11. The Tulip Revolution resulted in the overthrow of President Askar Akayev following protests against the results of parliamentary elections held in February and March 2005. President Akayev fled Kyrgyzstan shortly after the outbreak of violence and signed a resignation statement at the Kyrgyz embassy in Moscow in April 2005.
12. MacFarlane and Torjesen, 2007, op. cit., p. 63.
13. MacFarlane and Torjesen, 2004, op. cit., p. 20 and Torjesen, Wille and MacFarlane, 2005, op. cit., p. 35.
14. Aaron Karp, 2006, "Trickle and Torrent, State Stockpiles", in Small Arms Survey, *Small Arms Survey 2006: Unfinished Business,* Oxford, Oxford University Press, p. 37.

15. Until 2005 Tajikistan depended on 12,000 troops from the Russian Federal Border Guard for control of its southern border with Afghanistan. Since 2004 Tajik border forces have gradually taken over this role, but continue to rely on Russian advisers. (Library of Congress—Federal Research Division, 2007, *Country Profile Tajikistan,* at <lcweb2.loc.gov/frd/cs/profiles/Tajikistan.pdf>, pp. 16–17.)
16. MacFarlane and Torjesen, 2007, op. cit., p. 25.
17. The Stockholm International Peace Research Insitute (SIPRI) review on military spending found low rates of 1–2% of GDP for four of the Central Asian countries and 3.8% for Turkmenistan. (Sam Perlo-Freeman and Petter Stalenheim, 2003, "Military Expenditure in the South Caucasus and Central Asia", in Alyson J.K. Bailes et al., *Armament and Disarmament in the Caucasus and Central Asia,* SIPRI, at <editors.sipri.se/pubs/CentralAsia.pdf>, pp. 15–16). Very little of the defence budget has been spent on arms. For the period 1992–2002 Kazakhstan accounted for nearly all reported imports in the region according to SIPRI trend indicator values. These were limited to aircrafts and air defence equipment and did not include SALW. (Björn Hagelin, 2003, "Arms Transfers to the South Caucasus and Central Asia Compared, 1992–2002", in Alyson J.K. Bailes et al., op. cit., pp. 21–24) .
18. Torjesen, Wille and MacFarlane, 2005, op. cit., pp. 9 and 57.
19. Torjesen, Wille and MacFarlane, 2005, op. cit., pp. 65–66 and 88.
20. MacFarlane and Torjesen, 2007, op. cit., pp. 28–29.
21. John Heathershaw, Emil Juraev, Michael von Tangen Page and Lada Zimina, 2004, *Small Arms Control in Central Asia,* International Alert Eurasia Series no. 4, at <www.international-alert.org/publications/getdata.php?doctype=Pdf&id=44>, p. 22.
22. Svante E. Cornell, 2006, "The Narcotics Threat in Greater Central Asia: From Crime-Terror Nexus to State Infiltration?" *China and Eurasia Forum Quarterly,* vol. 4, no. 1, at <www.silkroadstudies.org/new/docs/CEF/Quarterly/February_2006/Svante_Cornell.pdf>, p. 59. The information on IMU cells in Kazakhstan is based on "US Diplomat Sees Growing Terrorism Challenge in Central Asia", *RadioFreeEurope/RadioLiberty,* 30 October 2003, at <www.rferl.org/features/2003/10/30102003165203.asp>, quoting Elizabeth Jones, US Assistant Secretary of State for Europe and Eurasia.
23. Torjesen, Wille and MacFarlane, 2005, op. cit.
24. Experts have pointed out that law enforcement agencies in Kyrgyzstan, Tajikistan and Uzbekistan have a tendency to use the labels IMU and Hizb-ut-Tahrir indiscriminately (MacFarlane and Torjesen, 2007, op. cit., p. 62).
25. MacFarlane and Torjesen, 2007, op. cit., pp. 61–62.
26. Cornell, op. cit., p. 59.
27. MacFarlane and Torjesen, 2007, op. cit., p. 58.
28. Cornell, op. cit., p. 64.
29. Cornell, op. cit., p. 54.
30. Cornell, op. cit., p. 55.
31. OSCE Office for Democratic Institutions and Human Rights, 2005, *Preliminary Findings on the Events in Andijan, Uzbekistan, 13 May 2005,* Warsaw, 20 June, at <www.osce.org/documents/odihr/2005/06/15233_en.pdf>, p. 23.
32. International Crisis Group, 2007, *Central Asia's Energy Risks,* Asia Report no. 133, 24 May, at <www.crisisgroup.org/home/index.cfm?id=4866>, p. 3.
33. Ibid., p. 6.
34. Global Witness, 2007, *Germany Must Launch Full Inquiry into Turkmen Funds in German Banks,* press release, 3 July 2007, at <www.globalwitness.org/media_library_detail.php/558/en/germany_must_launch_full_inquiry_into_turkmen_fund>.

The governance of Central Asian waters: national interests versus regional cooperation

Jeremy ALLOUCHE

> The water that serveth all that country is drawn by ditches out of the river Oxus, into the great destruction of the said river, for which cause it falleth not into the Caspian Sea as it hath done in times past, and in short time all that land is like to be destroyed, and to become a wilderness for want of water, when the river of Oxus shall fail.
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> Anthony Jenkinson, 1558[1]

Central Asia[2] is defined by its relationship to a precious natural resource: water. In fact, water is such an essential element of the region's identity that once Central Asia was known in classical Greek texts as Transoxiana, which literally means the land on the other side of the Oxus River (now the Amu Darya).

It was water that drew international attention to the region shortly after the independence of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan: specifically, the fate of the Aral Sea. The Aral Sea has been shrinking since the 1960s, when the Soviet Union decided to divert the region's two major rivers, the Amu Darya and the Syr Darya, for irrigation purposes. Central Asia was to become a massive centre for cotton production. Today, irrigated agriculture still drives the economies of most of the downstream states in the region: Turkmenistan, and more especially Uzbekistan, rely heavily on cotton production. And the Aral Sea is a massive ecological disaster. Its volume has decreased by 90% and it has divided into two highly saline lakes.[3] Four-fifths of all fish species have disappeared and the effects on the health and livelihoods of the local population have been catastrophic.

But the Central Asian water crisis is not just about the fate of the Aral Sea. It is about the management of the entire basin. Indeed, Central Asian leaders are currently more concerned with the resources of the region's many rivers than with environmental issues. It could be assumed that Central Asia is water scarce, given the status of the Aral Sea. But the water crisis in Central Asia is due to the way water has been allocated and managed; it is not a crisis of quantity but of distribution. The region as a whole has significant water resources: Kazakhstan, for example, claims more than 85,000 rivers and streams, and 56% of its 100km^3 annual river flow is formed on the territory of Kazakhstan itself.[4] The main problem lies in the imbalance in water allocations. At independence, downstream states withdrew 82% of water (Uzbekistan withdrew 52%, Turkmenistan 20% and Kazakhstan 10%). In contrast, the total water withdrawal of the upstream states (Afghanistan, Kyrgyzstan and Tajikistan) was just 17%. Agreements were signed to maintain these allocations and thus assure cotton production in downstream states, but they pay no heed to the changes that have occurred since the collapse of the

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Soviet Union, and the fact that there are now five independent states in the region, each with their own water policies, and all demanding an increase in allocations.

It is questionable whether the current governance of Central Asia's waters is sustainable. If current trends in water use continue, tensions over rights and allocations are bound to increase. Potential water conflicts risk both the stability of the region and the security of its population.

It is questionable whether the current governance of Central Asia's waters is sustainable.

This article is divided into two parts. First it outlines the main hydrological characteristics of the region and describes the problems of the regional water governance system since independence. It then looks at the water policies of the various players in the region and how these are contributing to the Central Asian water crisis. It should be acknowledged that information on events in this region must be analysed carefully, as much is unsubstantiated.

Hydrological characteristics

Central Asia is highly dependent on its two main rivers, the Amu Darya and the Syr Darya. Other important rivers are the Murgab, the Zeravshan, the Ili, the Emel, the Irtysh, the Atrek, the Chu, the Talas, the Assa and the Tedzhen (see Map 1).

The Amu Darya is 1,415km long and has the highest water-bearing capacity of the region. It originates at the confluence of the Panj and Vakhsh rivers. The river, or its major tributaries, flows along the borders of and across four states—Tajikistan, Afghanistan, Turkmenistan and Uzbekistan—entering, leaving, and re-entering the last two states several times. Tajikistan contributes 80% of the flow generated in the Amu Darya river basin, followed by Afghanistan (8%), Uzbekistan (6%) and Kyrgyzstan (3%). Turkmenistan and Iran together contribute around 3% (most of which is formed in Iran).[5]

Although it carries less water than the Amu Darya, the Syr Darya is the longest river in Central Asia (2,212km). It flows from the Tien Shan mountains, along the borders of and across four states—Kyrgyzstan, Uzbekistan, Tajikistan and Kazakhstan—before flowing into the Aral Sea. Kyrgyzstan contributes 74% of the river flow, followed by Kazakhstan (12%), Uzbekistan (11%) and Tajikistan (3%).[6] Both river basins have an extended network of dams, reservoirs and irrigation canals, resulting in one of the most complex water systems in the world.

In addition, there are a number of other transboundary rivers. China and Kazakhstan share some 20 rivers, among which are the Ili and the Irtysh.[7] The Irtysh also flows in the Russian Federation. China shares the Tarim with Kyrgyzstan, as well as others that have their sources in Kyrgyzstan and flow into China. Afghanistan is the upstream state for the Murgab and the Tedzhen, which it shares with Turkmenistan (the Tedzhen is also shared with Iran). The Chu, Talas and Assa rivers flow through Kyrgyzstan and Kazakhstan. Lastly, the Atrek runs between Turkmenistan and Iran.

Tajikistan, Kyrgyzstan and Uzbekistan are the most vocal states in debates about water governance. Tajikistan has a very important strategic position thanks to its upstream position on the Amu Darya and Kyrgyzstan controls the flow of the Syr Darya, but these states have little other bargaining power in the region. Uzbekistan is a far more significant regional power and most of Uzbekistan's territory (98%) is located in the Aral Sea basin; half of the Aral Sea basin's population lives in Uzbekistan. Turkmenistan shares Uzbekistan's interest in developing irrigated agriculture (at the expense of hydropower) for the Aral Sea basin. Kazakhstan is a riparian of the Aral Sea and the Ili and Irtysh rivers. Its main concern relates to the ecological status of these rivers. China and the Russian Federation have important influence over the governance of Central Asian waters, primarily as important strategic partners, but also as riparians to the Irtysh, Ili and Ob rivers. Afghanistan and Iran are the least concerned with water issues in Central Asia. Only a small portion of the Aral Sea basin headwaters are located in

Map 1. Central Asian waters

Source: Map no. 3763, Rev. 6, June 2005, United Nations Cartographic Section.

Iran. Afghanistan has not been an important actor in the region's water management due to internal political turmoil, but it will likely assert a greater presence in the region's water management systems as the country becomes more stable.

Regional water governance

Under the Soviet system, water management was highly centralized.[8] However, with independence, water issues—like many others—rapidly became a national rather than a regional concern. Issues like land leasing and water rights had to be settled on a bilateral basis rather than by Moscow, and control over territory meant direct control over resources that could produce hard currency or improve a state's strategic position. The high stakes involved in clarifying territorial rights quickly became evident: intraregional flows of subsidized energy stopped and some transportation links were severed.

So it is perhaps surprising that, just a few months after independence, the five ministers of water management in Central Asia signed an agreement on Cooperation in the Field of Joint Water Resources Management and Conservation of Interstate Sources, which recognized "the community and unity of the region's water resources".[9] According to the agreement, each Central Asian state "is obliged to prevent actions on its territory which can infringe on the interests of the other Parties and cause damage to them, lead to deviation from agreed values of water discharges and pollution of water sources".[10] Furthermore, the five Central Asian states agreed to continue with the allocation quotas set during the Soviet era.[11]

This rapid post-independence cooperation can be explained by concerns with bringing in the cotton harvest. The region did not want irrigated agriculture to be jeopardized by transition. Thus the agreement does not represent a real cornerstone of Central Asian cooperation in water management; cooperation simply entailed the perpetuation of past practices.

Since 1992, however, there have been additional regional water agreements. One follow-up agreement, on Joint Activities for Addressing the Crisis of the Aral Sea and the Zone around the Sea, Improving the Environment and Ensuring the Social and Economic Development of the Aral Sea Region, signed on 26 March 1993, instituted a policy organ, the Interstate Council for the Aral Sea (ICAS), and an executive organ, the International Fund for Saving the Aral Sea (IFAS). Subsequently, ICAS and IFAS were united into a newly defined IFAS as the region's supreme policy organization on water resource management.

Together with the Interstate Commission for Water Coordination (ICWC), which was created following the 1992 agreement, the basic institutional structure of the water management system in the Aral Sea basin would appear to be organized around two principal agencies. The ICWC is the technical authority, regulating and supervising the allocation of water resources and related infrastructure. The IFAS is the political authority that guides and sanctions the work of the ICWC via principles and policies agreed among the member states. This is a relatively comprehensive framework.

Unfortunately, however, this institutional framework is not really governing the region's waters. There are numerous unresolved disputes and tensions over water among the Central Asian states and some of their neighbours. The IFAS–ICWC system is not functioning effectively for a number of reasons. The most important one is that these institutions have mainly been created under the impulse of international agencies (in particular the World Bank) and states have been quite reluctant to cooperate. The result is that many commitments and agreements are not honoured.[12] Furthermore, mutual suspicion obstructs constructive engagement. The management of the ICWC is currently dominated by officials from Uzbekistan, leading to suspicions that it favours that country's national interests. Additionally, cooperation among the states still depends on relations among individual heads of state; most decisions are taken during bilateral talks between presidents rather than through regional arrangements. The last major problem is the lack of coordination between development agencies, which are all developing different projects at different levels. Competing and multiple donor aid programmes conducted in isolation from each other diminish the potential role of IFAS–ICWC. As a result, the governance system for Central Asian waters has more or less come to a standstill.

Today, all states are questioning water allocations despite having agreed current allocations. This is primarily because of energy needs in upstream states. Prior to independence, these energy needs were met by low-cost coal and gas imports from downstream states. Today downstream states such as Kazakhstan are asking upstream countries to pay market prices.[13] So instead of emptying their reservoirs in the summer for the irrigation of downstream cotton fields, as they used to do, upstream states now have an interest in storing the water to use for hydroelectric power in the winter. However, most attempts by the upstream countries to increase their water quotas for hydroelectric purposes have been countered by Uzbekistan, Turkmenistan and Kazakhstan, who need to maintain current allocations for agricultural production, and in fact would like to increase their allocations further.

Water allocation is clearly the major issue in the governance of Central Asian waters. However, there have also been a certain number of border and interethnic incidents related to water ownership. There are unresolved border issues between Uzbekistan and Kazakhstan, Uzbekistan and Kyrgyzstan, and Kyrgyzstan and Tajikistan, which relate to access to water and land. As the International Crisis Group (ICG) observes, local conflicts over water rights could escalate into national disputes.[14]

Not only is there no effective water governance system in place in Central Asia, national policies are increasing tensions and conflicts over water—making the need for a good governance system all

the more pressing. These national policies will each be examined in order to understand the urgency of the Central Asian water crisis and its implications for regional security.

National water policies

Tajikistan

The Tajik government has two main objectives. First, like most Central Asian countries, it would like to expand irrigated land over its territory, possibly by intakes from the Zeravshan River. After independence, Tajikistan increased its irrigated area by 200,000ha, and it intends to increase this area further.[15]

However, most countries downstream are more concerned by Tajikistan's second objective—increasing its hydropower capacity. At the opening of the second Central Asia/South Asia Electricity Trade Conference in 2006, the Tajik president recalled that the total capacity of functioning hydroelectric power plants in Tajikistan amounts to only 3.2% of its hydro-energy resources and stated that this share should be increased.[16] The Tajik government wishes to relaunch the Soviet hydroplant projects at Rogun and Sangtuda, on the Vakhsh River. The Rogun plant was begun in the 1980s but stopped when the Tajik civil war began. A massive flood in 1993 then destroyed most of what had already been built. The government is seeking a foreign strategic partner for the project (see below for details on Russian involvement). Completion of the plant will cost an estimated US$ 2.3 billion.[17] A smaller hydropower station is planned at Sangtuda.

Uzbekistan has already objected to the construction of the Rogun dam (particularly the third stage—to a height of 335m) as it claims it would give Tajikistan control of the flow of water to Uzbekistan's Surxondaryo (Surkhandarya) and Qashqadaryo (Kashkadarya) provinces. (The first two stages of the project would not put Tajikistan in full control of the river as the live storage would be below 40% of the mean annual flow, and the Vakhsh River contributes only 25% of the total Amu Darya flow.[18]) Considering Uzbekistan's opposition, even if Tajikistan were able to attract the necessary investment for the projects, the country would be faced with significant problems in selling the power generated, as the current electrical energy grid in the region is centred on Tashkent, the capital of Uzbekistan. To resolve this problem, Tajikistan is teaming up with Kyrgyzstan to create a north–south transmission line to link the two states with Kazakhstan and bypass Uzbekistan altogether.[19]

Land and water rights are also a concern in Tajikistan's relations with its neighbours. There have been low-level disputes along the Kyrgyz–Tajik border, particularly in the Fergana Valley and the Tajik enclave of Vorukh in Kyrgyzstan.[20] Tensions were thought to have been resolved following low-level talks and an agreement between the Tajik province of Sughd and the Kyrgyz province of Batken in June 2001.[21] However, in 2003 several incidents were reported along the border and the Vorukh enclave still seems to be a point of discord between the two governments.[22]

Kyrgyzstan

Conflictual as Tajikistan's relations with other Central Asian states on water issues are, the situation in Kyrgyzstan is perhaps even more critical—at least in its relation with downstream countries on the Syr Darya. The control of strategic water infrastructure is an important stake in its relations with downstream countries: one report claimed in 1996 that Uzbekistan threatened to use military force to seize the Toktogul dam and reservoir on the Kyrgyz section of the Syr Darya if Kyrgyzstan attempted to alter the existing distribution policy.[23]

The Kyrgyz government would like to increase its hydropower generating capacity with the Toktogul II project. However, downstream countries object as they consider that Kyrgyzstan already releases too much water from the current dam during the winter period and not enough during the summer (cotton fields in Uzbekistan and Kazakhstan were flooded in the winters of 1993, 1998 and 2001). In 2001, an official meeting on water allocations was held, but no agreement was reached.

The Kyrgyz government's second goal is to ensure food self-sufficiency. Kyrgyzstan wishes to expand irrigation, with possible increases in intake from transboundary rivers in the Chu, Jalal-Abad and Osh provinces. This project has not yet been criticized by downstream countries, as their primary preoccupation remains the hydropower project. In fact, there has been some cooperation: in yet another new institutional arrangement, Kyrgyzstan and Kazakhstan have formed a Commission for the Chu and Talas Rivers, aimed at discussing better usage of transborder water resources.[24]

Turkmenistan

Turkmenistan's primary objective in water management is to ensure food security. The government wishes to put 450,000ha of land under irrigation by reusing drainage and run-off water. Turkmenistan has a very tense relationship with Uzbekistan over water use—both countries depend heavily on irrigation agriculture, and both rely almost totally on the Amu Darya for their irrigation. At independence, rumours circulated of a small-scale secret war between the two states over the river's resources. Over the years, there have been persistent reports of Uzbek troops taking control of water installations on the Turkmen bank of the river by force, as well as military tensions along the Buxoro (Bukhara)–Lebap border. While these reports are unsubstantiated,[25] they are indicative of simmering tensions between the two states. Both countries have routinely engaged in accusations of overuse and misuse of water supplies. Tensions were compounded by a difficult personal relationship between the presidents of Uzbekistan and Turkmenistan.

These frictions have not yet been translated into open, large-scale military conflict, but Turkmenistan's new project to construct an artificial lake in the Kara Kum desert, the Golden Century Lake (or Lake Turkmen), is likely to aggravate problems.[26] The scheme, to be completed in 2010, is meant to guarantee Turkmenistan's water security and create some 4,000km^2 of farmland; it will also prevent flooding in Turkmenistan by drainage water from Xorazm (Khorezm) in Uzbekistan (another source of discord between the states).[27] According to the International Crisis Group, "there is also an ethnic dimension to the project—an estimated one million ethnic Uzbeks living in the Dashkhovuz Province of Turkmenistan are to be resettled to the Karakum Desert once the lake has been completed".[28] In addition to concerns about population movements, this project has inevitably raised concerns in Uzbekistan that water will be drained from the Amu Darya to maintain the lake's water level.

Other tensions between the two states have arisen over shared irrigation systems around the Tuyamuyun reservoir. The reservoir belongs to Uzbekistan, but is located in Turkmenistan. A Russian newspaper reported that in the early 1990s Uzbekistan established contingency plans for the occupation of north-eastern Turkmenistan (including the reservoir).[29] The situation in 2007 seems more stable but joint management of the reservoir is not assured, and this lack of coordination could cause new flooding in Uzbekistan's Qoraqalpog'iston (Karakalpakstan) and Xorazm regions and parts of Turkmenistan's Dashkhovuz region.[30]

Uzbekistan

Uzbekistan was the centrepiece of Russian and then Soviet strategy to reduce dependence on British and US cotton. Today, it is the second largest exporter of cotton in the world, selling over 800,000

metric tons every year. Cotton is therefore a key source of hard currency for the Uzbek government and an important component of state control over its population, as land tenure and cotton sales are tightly managed by state or quasi-state bodies.[31]

Uzbekistan's key water management objective is to maintain the position that it established during the Soviet era, i.e. that of being awarded increasing allocations. Uzbekistan has achieved food security, and now it would like to develop additional irrigated areas in order to produce a food surplus to export to neighbouring countries. One possibility that Uzbekistan is exploring with Kazakhstan and the Russian Federation is the diversion of the Ob and Irtysh rivers. The project consists of building a canal from Siberia, across Kazakhstan, to Uzbekistan. It is in fact an old Soviet plan, and backers include Moscow's mayor, Yuri Luzhkov (a possible future Russian president), as well as many Central Asian leaders and a growing number of Russian scientists. In theory, the project would solve the problem of the limited extra water resources available to Uzbekistan. The project would also enable the Russian Federation to play a greater role in the region and especially in Uzbekistan (see below).

The canal would have a devastating environmental impact. There are fears about the salinization of water during transfer, which would make it unusable for irrigation. Other concerns relate to the danger of putting two different ecosystems into contact and climatological risks. There are also some important technical issues: a breach could flood large territories between Siberia and Central Asia. Furthermore, the financial and geopolitical costs to Central Asia would be very high.[32]

Beyond inter-state tensions over water allocation, land conflicts in border zones also involve water rights. Tensions persist between Kyrgyz and Uzbeks in the Fergana Valley. It has been reported that four Uzbek territory enclaves in Kyrgyzstan, in particular Sokh and Shakhrimardan, have been the source of considerable difficulties in relations between the two countries, "because Uzbekistan has consistently lobbied to be granted a corridor to the enclaves and because the demarcation [of the borders] has also involved complex issues of water rights".[33] The Andijon reservoir, lying in a border area and currently leased to Uzbekistan, increases tensions. Kyrgyzstan claims that it does not receive any compensation for the lease and according to ICG, Uzbekistan refuses to enter into negotiations.[34]

Beyond inter-state tensions over water allocation, land conflicts in border zones also involve water rights.

Kazakhstan

As the most downstream country in the Syr Darya basin, Kazakhstan has had conflictual relations over water use with Uzbekistan, further upstream. Kazakhstan has accused Uzbekistan of arbitrarily controlling the river's flow, with the effect of periodically ruining agriculture in southern Kazakhstan.[35]

Border issues and water rights are another area of concern. The demarcation of the border is unclear, and as reported by ICG:

> the border issue is of particular concern for Kazakhstan, since the southern provinces are among the most densely populated areas of the country, and disagreements about water, arable lands and pastures in the area come at a time when social tensions are already palpable because of economic recession, declining living standards and high unemployment.[36]

The last major water issue for Kazakhstan concerns use of water from the Irtysh and Ili rivers. This problem is now becoming a significant area of concern for the Kazakh government in its relations with China (see below).

Afghanistan

Afghanistan is potentially a significant player in Central Asian water management: 40% of its territory and 33% of its population are within the Aral Sea basin. Micklin has calculated that 12.5% of the Aral Sea basin water resources originate in Afghanistan.[37] These figures are highly contested as estimates of the country's contribution to the annual flow vary from 10km^3 to 20 km^3.[38] All the same, it is clear that only a fraction is currently used for irrigation. Qaseem Naimi, for example, states that only 385,000ha of land are under irrigation in northern Afghanistan.[39]

With the end of the civil war, it would be naive to think that Afghanistan will rehabilitate its agricultural sector without increasing its intake from the rivers it shares with the Central Asian countries. The Ministry of Irrigation, Water Resources and Environment is currently developing a long-term undertaking to pump water from the Amu Darya into a canal to be transported to Mazar-e-Sharif. Future Central Asian water management initiatives will certainly need to take Afghanistan's demands into account.

China

China is an increasingly important actor in the governance of Central Asian waters. The Chinese authorities have begun a massive state-sponsored population migration into its western Xinjiang territory, and claim the region may bulge with as many as 40 million new inhabitants.[40] Agricultural development in the province is a priority: cotton occupies close to half of Xinjiang's arable land and Beijing considers the massive exportation of textiles to be of vital strategic interest.[41]

China is already using some of the Irtysh waters to provide water to the Karamay oil fields.[42] Further development in the province is to be facilitated through diversion schemes for the Irtysh and the Ili. This includes constructing a canal (22m wide and 300km long) to divert water from the Irtysh to Lake Ulungur in Xinjiang. In October 2004, the Chinese ambassador to Kazakhstan, Pei Shouxiao, affirmed that his country was counting on using as much as 40% of the Irtysh's effluence.[43]

These plans would endanger access to water for inhabitants of northern Kazakhstan and Kazakhstan's development projects in this part of the territory, in particular its new capital city of Astana. It would also affect industry in the area, which is highly dependent upon these rivers, and navigation on the Irtysh, which is an important transport axis with the Russian Federation.[44] Lastly, the project could have a serious environmental impact.

China's use of water from the Ili River is already having significant consequences on Lake Balkhash, one of the 20 largest lakes in the world. Many specialists argue that Lake Balkhash is in serious danger of following the sad fate of the Aral Sea. Mels Eleusizov, the head of Kazakhstan's "Tagibat" environmental movement and a former presidential candidate, has said that the lake "is in a very vulnerable position, receiving 80 percent of its water from the Ili".[45] In 2001, China and Kazakhstan signed an agreement to facilitate cooperation on transboundary water management including the Ili, but despite annual meetings no specific yearly water allocation has been agreed on. China and Kazakhstan held talks on the problem quite recently, but China spurned Kazakhstan's proposal to send China large stocks of free or heavily subsidized food for 10 years in exchange for a commitment from China to allow an unimpeded flow of river water into the lake.[46]

The Russian Federation

The last actor that plays a major role in the governance of Central Asian waters is the Russian Federation. It is interested in reasserting its political influence over the region and one way of doing so is to increase

Central Asia's dependence. For example, the Soviet-era Ob and Irtysh diversion schemes—once again under consideration—would make Kazakhstan and Uzbekistan heavily reliant on Russian water.[47] Another method of ensuring dependence is the provision of finance for infrastructure projects. Despite a false start with the Russian aluminium company Rusal (the collaboration between the company and the Tajik government broke down due to disagreements over financing and the height of the dam), the Russian Federation has re-affirmed its intention to be a partner in the Rogun hydroelectric project in Tajikistan.[48] Unified Energy System, the Russian state-controlled electricity giant, is already working on the Sangtuda power station in Tajikistan, and the Russian Federation is considering participation in the Toktogul II project in Kyrgyzstan.

Russian diplomacy has also been at work to create a water and energy consortium in Central Asia. By combining the two key resources of the region, water and energy, the consortium may evolve governance toward solving the many water-related disputes among the Central Asian states. The proposed consortium received support from member states at the summit of the Eurasian Economic Community in August 2006.[49] It was discussed again in September 2006 during an informal meeting in Kazakhstan. To kick-start the initiative the Tajik president, Emomali Rahmon, actually proposed the use of the Sarez Lake to supply pure drinking water to all Central Asian countries via a new water pipeline.[50] A few days afterward, Rahmon and his Uzbek counterpart, Islam Karimov, discussed prospects for cooperation between the two countries and problems related to hydroelectric power.[51] Energy and water have long been bound together in Central Asia, and the proposed combination of energy and water in a regional governance arrangement seems to constitute a welcome innovation. There appears to be real hope that such an approach could lead to a workable governance system. However, given the Soviet legacy in terms of water policy, this hope may prove exaggerated.

The Russian Federation dominates the Central Asian energy market, but the most powerful countries in the region, Uzbekistan and Kazakhstan, are establishing new energy partnerships with China.[52] This is encouraging potentially dangerous competition between China and the Russian Federation. The Russian Federation could end up becoming more involved in Tajikistan and Kyrgyzstan's hydroelectric projects, which could result in important changes in the water allocation situation. The Russian Federation could therefore develop the Siberian diversion scheme in order to keep its most powerful allies in the region under its auspices and gain an even more preponderant role in the region.

Conclusion

Despite a very advanced water cooperation agreement signed by all five newly independent Central Asian states in 1992, water has become a source of serious tensions in the region. Instead of honouring and implementing the 1992 agreement and the many subsequent agreements, states constantly reiterate their sovereignty over water and use water to accumulate state power and strategic influence.

All five Central Asian states have enacted property laws in which water and land are classified as state assets. Water policies are antagonizing neighbours and in some cases leading to conflict. Current water management practices, where each state is exploiting water at the expense of its neighbours while paying lip service to cooperation, are not sustainable. Efforts to institute an effective regional water governance system have proved ineffective, and increasing tensions are threatening regional security. Without genuine cooperation in the region, one might expect political and economic instability, and increased local violence. The region remains highly dependent upon agricultural development, so for the foreseeable future water will inevitably play a role in tensions between the different communities living in this region. Central Asia's complex transboundary water system demands that leaders cooperate to find solutions that maximize efficiency, prevent tensions and ensure everyone's security.

Notes

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The Proliferation Security Initiative: advancing commitment and capacity for WMD interdictions

The proliferation crises of the late 1990s and early 2000s led the United States (US) to conclude that the traditional non-proliferation architecture was not sufficient to prevent the proliferation of weapons of mass destruction (WMD) to the states and non-state actors that particularly alarm Washington. The major non-proliferation treaties and export control regimes had failed to prevent India and Pakistan from becoming nuclear powers, and Libya, the Democratic People's Republic of Korea (DPRK) and other states had attempted to follow suit—to varying degrees of success. Even Al-Qaeda voiced its aspiration to acquire WMD capabilities. In late 2003, the exposure of the nuclear smuggling network orchestrated by Pakistani metallurgist A.Q. Khan revealed the ease with which various states and non-state actors had been able to capitalize on gaps in the non-proliferation regime.

The non-proliferation treaties lack effective mechanisms to enforce compliance. The less formal export control regimes suffer from the same lack of effective enforcement provisions, and have a limited membership. The United States government therefore concluded that more robust and less cumbersome enforcement mechanisms should be deployed—namely the interdiction of suspicious WMD-related transfers. Acknowledging that the United States could not undertake interdictions on its own, in May 2003 George W. Bush introduced the idea of the Proliferation Security Initiative (PSI), a coalition of like-minded states with the objective of making the interdiction of suspicious WMD-related transfers an effective non-proliferation instrument. Four months later, Australia, France, Germany, Italy, Japan, the Netherlands, Poland, Portugal, Spain, the United Kingdom and the United States committed to a Statement of Interdiction Principles. They pledged:

> to establish a more coordinated and effective basis through which to impede and stop shipments of WMD, delivery systems, and related materials flowing to and from states and non-state actors of proliferation concern, consistent with national legal authorities and relevant international law and frameworks, including the UN Security Council.[1]

More precisely, the signatories promised to work toward strengthening the national and international legal basis for interdictions. Every signatory also pledged to board and search suspicious vessels flying its flag; to consider consenting to other states boarding and searching its vessels; and to require suspicious aircraft transiting its airspace to land for inspection. The signatories furthermore committed to inspect suspicious vessels, aircraft and other means of transportation in trans-shipment points on their territory. Lastly, they promised to dedicate appropriate resources for interdictions, to exchange relevant information and to strengthen mechanisms to coordinate joint interdiction operations.[2]

In accordance with the current US administration's preference for multilateralism à la carte, the PSI is not a formal international organization imposing legally binding obligations on member states. The PSI is rather a set of activities intended to strengthen states' commitment and capacity to create the preconditions for interdictions and to participate in interdiction operations. Its rationale is to embed states in a series of activities such as high-level plenary meetings, interdisciplinary expert meetings and joint training exercises to facilitate cooperative working relations, the exchange of best practices and sustained dialogue. Active participants neither enter a formal commitment, nor are they bound to take part in all related activities. States that prefer an even more informal arrangement can endorse the Interdiction Principles but limit their engagement to low-key, case-by-case involvement. Presently, fewer than 20 states are active participants and more than 60 states have endorsed the Interdiction Principles.[3]

Most PSI-related activities thus far have focused on maritime interdictions. This paper will therefore do the same, as it considers the potential of the PSI, what it has achieved thus far, and what the next steps should be.

The potential impact of the PSI

Interdicting illicit transfers of WMD, their delivery means and related materials is by no means a novel activity. However, the PSI could make such interdictions more effective for non-proliferation. By habituating states to creating the preconditions for interdictions and taking an active part in interdiction operations, the PSI could not only complicate proliferation but also help deter states and non-state actors from engaging in proliferation in the first place; it could become a crucial part of the non-proliferation architecture.

The PSI could not only complicate proliferation but also help deter states and non-state actors from engaging in proliferation in the first place.

Before the introduction of the PSI, the legal foundation for maritime interdiction was rather weak.[4] States were free to criminalize the use of their ports and national waters for illicit shipments in their domestic legislation. In territorial waters (12 nautical miles from the coastline) the United Nations Convention on the Law of the Sea (UNCLOS) confers the right of innocent passage on foreign vessels. This right of innocent passage is forfeited if the vessel constitutes a threat to the peace, good order or security of the coastal state. However, transporting WMD, their delivery means and related materials is not among the acts explicitly declared non-innocent in the convention.[5] Nonetheless, states can enact domestic legislation declaring the illicit transfer of WMD-related materials on their territorial waters to be a non-innocent act if they so wish. In international waters, interdicting foreign vessels is prohibited, unless the flag state consents to boarding or the vessel in question does not fly a flag, is suspected to be a pirate vessel or transport slaves, or is used for unauthorized broadcasting.[6]

The PSI is an opportunity to create the momentum to expand the legal foundation for interdicting suspicious vessels. It could encourage states to criminalize the use of their ports as well as their national and territorial waters for the illicit transfer of WMD-related materials, or even to establish a global norm that would compel states to do so. The PSI could also encourage states to conclude bilateral or multilateral ship-boarding agreements for high-seas interdictions or even arrange for an international mechanism—possibly at the United Nations—to authorize such interdictions. In the long run, the PSI could advance the emergence of new customary law and make proliferation a further exception to the UNCLOS prohibition on intercepting foreign vessels in international waters.

The impact of the PSI depends on having a significant number of states on board with the willingness and the capacities to detect, board and search suspicious shipments. It also depends on the ability of states to cooperate with each other. For instance, the interdiction of the German-owned vessel BBC China in late 2003 was possible because Germany had been alerted by British and US

intelligence that a vessel in the Mediterranean was suspected to be carrying centrifuge components to Libya. Germany thereupon ordered the vessel to dock in an Italian port.[7] The PSI could spur states to strengthen their domestic capacities for WMD-related interdictions and assist others in doing so. It could even build a commitment to work toward an international norm binding states to strengthen their domestic capacities relevant to interdictions. The interdisciplinary Operational Experts meetings and joint training exercises, and other PSI-related activities, could evolve into effective mechanisms for the exchange of information and the coordination of common interdiction operations.

Finally, the PSI could encourage states to take an active part in interdiction operations. Individual states and international organizations had resorted to interdictions prior to the PSI: the United States and the North Atlantic Treaty Organization have intercepted suspicious vessels, as have India, Singapore and other states.[8] The global scope of the PSI is a major part of what makes it different to previous WMD-related interdictions. Yet for this global scope to be truly effective, it will be fundamental to win the support of states neighbouring the DPRK, Iran and others that are known or suspected to be involved in proliferation. Likewise, it will be crucial to win the support of states that control major transit routes such as the Suez Canal and the Malacca Strait, as well as states that have major trans-shipment ports on their territory.

Even if more and more states come to embrace the PSI, intercepting WMD-related transfers will always be very ambitious. It is incredibly difficult to detect shipments transporting very small amounts of hazardous materials.[9] Besides, most materials necessary to manufacture WMD and their delivery means are dual use items and are therefore immune to interception in the absence of convincing evidence that they are intended for use in WMD programmes.[10] The PSI is certainly, therefore, no replacement for the other pillars of the non-proliferation regime. Nor does it supersede other efforts to strengthen non-proliferation instruments or address the root causes of proliferation.[11] Nonetheless, precisely because very small amounts of hazardous materials constitute an enormous threat if they fall into the wrong hands, a single successful interdiction can have a huge impact. Indeed, the above-mentioned interdiction of the BBC China may not have been the only factor putting pressure on the Libyan government, but it is believed to have contributed to persuading it to renounce its WMD programme.[12]

Achievements and limitations

Many states initially eyed the PSI with scepticism and were reluctant to provide support. States such as China and the Russian Federation feared the PSI might curtail international trade and harm their export industries.[13] Japan and the Republic of Korea were afraid that the PSI might overly provoke the DPRK—which appeared to be the unofficial main target of the initiative.[14] States were also concerned the PSI might undermine their sovereignty, given bold statements from US officials such as former Secretary of Defense Donald Rumsfeld's announcement that the United States would be ready to conduct maritime interdictions anywhere as long as the potential advantages for US security outweigh the costs.[15] Then, the US Under Secretary of State for Arms Control (John Bolton) downplayed the failure of the 2005 NPT Review Conference by referring to the value of the PSI, which gave rise to concerns that the initiative would erode international law.[16] Many states were worried that the PSI might be intended to replace the existing multilateral, treaty-based, non-proliferation regime.

The general crisis of the United States' legitimacy in the international community—exacerbated by the invasion of Iraq—has undermined its ability to promote the PSI.[17] In fact, many states feared that openly participating in a US-led initiative might compromise their domestic legitimacy or their international reputation, or even make them a target for terrorists.

With time, however, opposition to the PSI has gradually diminished. Acknowledging that even their closest European allies believed that the initiative was promoted too aggressively and at the expense of other non-proliferation instruments, US officials have toned down their rhetoric. The United States, Australia, Japan and other states have conducted outreach activities to allay concerns and raise awareness of the objectives and limits of the PSI.[18] Canada has established a web site on behalf of the PSI that is meant to reach out to reluctant states and clarify misconceptions.[19] It has also become clear that, contrary to initial apprehensions, the United States has not rampantly interdicted suspicious vessels without concern for international law. Consequently, states have become more inclined to strengthen the legal and technical basis to allow for PSI-related interdictions and to take an active part in interdictions. Still, many states—including those key to the success of the PSI—remain reluctant.

Legal foundation

The United States, in an effort to address widespread concerns that the PSI might contravene international law, has been the prime driving force behind various attempts to ground the PSI in national and international law. At first, the United States went to great lengths to win support for a UN Security Council resolution that would explicitly endorse the PSI and provide legitimacy for WMD-related interdictions. This did not entirely succeed, but in April 2004 the Security Council adopted a resolution—resolution 1540—which, if effectively implemented, would strengthen the legal foundation for interdicting suspicious vessels originating from or bound for non-state actors. Resolution 1540 declares proliferation of WMD and their delivery means to be a threat to international peace and security and obliges all states to "adopt and enforce appropriate effective laws which prohibit any non-State actor to … transfer … nuclear, chemical or biological weapons and their means of delivery, in particular for terrorist purposes". Member States are also obliged to establish effective trans-shipment controls to prevent proliferation.[20]

Resolution 1540 does not alter the legal limitations on interdicting foreign vessels in international waters, however. The United States therefore set out to conclude bilateral, formally reciprocal, ship-boarding agreements with individual states, which refer to interdictions in international waters. Since late 2004, the United States has concluded seven such agreements, six of which are with so-called flag of convenience states—Belize, Cyprus, Liberia, Malta, Marshall Islands and Panama (the other agreement is with Croatia). The agreements provide for rapid consent procedures with respect to the boarding, searching and seizure of commercial and private vessels that are suspected to transfer WMD, their means of delivery or related materials to and from "States or non-State actors of proliferation concern".[21]

The United States, together with the United Kingdom, also sought support for amending the Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation (SUA Convention), first adopted in 1988. The SUA Convention binds its signatories to take appropriate action against individuals committing specified unlawful acts against ships. In October 2005, a review conference finally adopted amendments. These amendments compel signatory states to outlaw, among other things, the intentional use of non-military ships for the transport of biological, chemical and nuclear arms as well as related materials if these items are intended to be used for specified illegal purposes. The amendments also provide for a multilateral ship-boarding agreement. All signatory states agree to consider authorizing other signatory states to board and search their vessels in international waters if the vessels in question are suspected to be involved in illicit proliferation.[22]

Despite this progress, the legal foundation for the interdiction of suspicious vessels remains porous. UN Security Council resolution 1540 does not compel states to criminalize proliferation to and from states and thus create a solid legal basis for interdictions in national and territorial waters. By

signing the recent amendments to the SUA Convention, states would bind themselves to criminalize WMD proliferation to any actor "of concern". However, signing the SUA amendments is voluntary and in February 2007 only 18 states had done so. The amendments have not yet come into force.[23] Entering bilateral or multilateral ship-boarding agreements merely provides for expedited mechanisms to facilitate interceptions. Moreover, the agreements are optional, and will not necessarily attract those states whose participation would be most important.

Other attempts to expand the legal foundation for high-seas interdictions are still inconclusive. At the outset, the United States tried to use the self-defence provision established in Article 51 of the UN Charter as a justification for interdiction. But this was what stoked fears that the PSI might undermine international law, and not even its closest European allies have been willing to support this move.[24] US efforts for the Security Council to adopt a generic resolution authorizing the interdiction of suspicious WMD-related shipments per se have also failed. China in particular, but many other states too, opposed the idea that the Security Council would provide the United States with what they considered to be a free hand to interdict any vessel it deemed suspicious in international waters.[25]

Operational capacities

The past four years have brought progress with respect to strengthening operational capacities for the detection of suspicious shipments and carrying out interdictions. Numerous joint training exercises have been conducted that have brought together representatives of various specialized agencies such as law enforcement, customs and intelligence, the military and transportation, not only from active PSI participants but also from other states.[26] The interdisciplinary training exercises appear to have helped states improve cooperation among their different specialized domestic agencies relevant to the preparation and mounting of interdictions.[27]

In addition, capable states have assisted others with strengthening their domestic interdiction capacities.[28] There have also been efforts to support states in implementing the PSI-relevant obligations established in UN Security Council resolution 1540. The 1540 Committee has endeavoured to identify states' needs and forge contacts between states needing technical assistance and actors that are able to provide such assistance. Partly facilitated by the 1540 Committee, international organizations, individual states, regimes and non-governmental organizations (NGOs) have all started to provide technical assistance to states.[29]

There have also been improvements in facilitating cooperation among the various states that actively participate in the PSI or have at least endorsed the Interdiction Principles.[30] One strategy to foster dialogue and develop an effective cooperation mechanism has been the Operational Experts meetings.[31] These meetings have served as a platform for active PSI participants to come together and exchange experiences, agree on specific goals and measures, and prepare joint training exercises.[32] Some Operational Experts meetings have also been attended by representatives of the shipping industry in order to facilitate coordination between the shipping industry and public authorities.

The joint training exercises have been vital to foster cooperation not only among the active PSI participants but with non-participating states that are invited to take part as observers. So far, 26 training exercises have been conducted, focusing on sea, land and air interdictions. Their main objective has been to invigorate the interoperability of the various interdiction-relevant specialized agencies of the participating and observing states. The training exercises seem to have been helpful in advancing the operational compatibility of agencies and facilitating the exchange of information.[33]

Regional cooperation appears to have been strengthened. Germany hosted the first regional Operational Experts meeting in 2005 in Hamburg. In the Asia–Pacific region, the United States has promoted the Regional Maritime Security Initiative (RMSI) to foster cooperation and strengthen the

domestic operational capacities of the states in the region. The RMSI encountered fierce opposition from Indonesia and Malaysia, which were alarmed by the prospect of the US Navy patrolling the Malacca Strait. Despite this, promotion of the RMSI is believed to have been conducive to Indonesia, Malaysia and Singapore concluding an agreement on the coordination of patrols in the Malacca Strait in 2004.[34]

For all improvements that have been made, operational shortcomings are still widespread. For instance, implementation of resolution 1540 proceeds slowly. The 1540 Committee has difficulties in acting as an assistance broker. International organizations, regimes, individual states and NGOs have certainly not yet exhausted their assistance capacities.[35] There is also room for improvement as far as cooperation among states is concerned. The informal, flexible character of the PSI certainly has its advantages, but it also has negative implications. Without an international administrative structure, the high turnover of government officials and experts gives rise to repetitive debates at meetings. In the absence of a coordinating body, government officials and experts are overburdened in terms of attending all relevant PSI-related meetings; there is no one to ensure that meetings are harmonized with one another in terms of their scope and timing.[36]

Interdictions and deterrence

It is difficult to assess what impact the PSI has had so far in terms of actual interdictions and deterring proliferation. There is no secretariat to keep track of the number and details of interdictions, and individual states do not provide comprehensive information. Indeed, much information is classified in order to protect the source of intelligence or to conceal the support of states that believe their involvement in PSI-related activities might discredit them. US officials occasionally provide information on past interdictions and assert that the PSI is highly effective. US Under Secretary of State for Arms Control and International Security Robert G. Joseph has claimed that PSI partners prevented about two dozen shipments of WMD- and missile programme-related materials to "countries of concern" between April 2005 and April 2006.[37] According to a statement by Secretary of State Condoleezza Rice in May 2005, PSI partner states have intercepted, among others, shipments of ballistic missile- and nuclear programme-related items to Iran.[38]

Even if there were reliable public information on the number and details of the interdictions that have so far been carried out, it would still be difficult to assess the relation between the launch of the PSI and these interdictions. It is unclear whether these interdictions would not have taken place anyway. The interception of the BBC China, for instance, which has so far been referred to as the most significant PSI success story, probably would have occurred in the absence of the PSI. Furthermore, whether a specific number of interdictions can be considered to be an indicator for the effectiveness of the PSI depends on whether the initiative deters proliferation or not. If the PSI fails to deter states and non-state actors from getting involved in proliferation, a small number of interdictions might actually suggest that the PSI has not been overly effective with respect to intercepting suspicious shipments. But if the PSI does deter proliferation—be it as a result of successful interdictions or well-covered training exercises—a small number of interdictions would not necessarily suggest that the PSI is ineffective in terms of intercepting shipments.

The dearth of unclassified information also makes it difficult to assess to what extent the reluctance of many key states to openly commit to the PSI and participate in interdiction operations impairs the initiative. In spite of intense lobbying on the part of the United States, states such as China, India, Indonesia, the Republic of Korea and Saudi Arabia still shy away from openly endorsing the PSI and becoming active participants. Yet there are indications that such states occasionally appear to be willing to take an active part in individual interdictions as long as they do not draw much public attention.

China, for instance, is believed to have acted on the advice of US intelligence and intercepted on its territory at least one train suspected of carrying nuclear precursor materials to the DPRK.[39] Information on the full extent of such low-key case-specific participation is not publicly accessible, however.

The way ahead

The potential of the PSI is clearly significant, yet more than four years after its introduction, its impact appears to be mixed. States' commitment needs to be strengthened. The active PSI participants should continue to expand the legal foundation of interdictions, invigorate their domestic interdictions-related capabilities and improve cooperation. Ultimately, the impact of the PSI will largely be a function of the involvement of those states that are geo-strategically important. Efforts to persuade and support reluctant states to engage more substantially in PSI-related activities should therefore be intensified. The support of these states will not be won without taking their concerns into account. This will necessarily involve accepting compromises, at least for the short term. Yet, if the PSI takes these states' concerns seriously and succeeds in accustoming states to supporting interdictions, accepting compromises today will likely pay off tomorrow.

Ultimately, the impact of the PSI will largely be a function of the involvement of those states that are geo-strategically important.

Strengthening the legal and operational preconditions for interdictions

The active PSI participants should expedite accession to and implementation of existing PSI-relevant legal documents, such as resolution 1540, and step up endeavours to encourage other states to do the same. The 1540 Committee, individual states, relevant international organizations, regimes and NGOs should also do more to facilitate and provide assistance to states with respect to enacting legislation. More states should sign and ratify the recent amendments to the SUA Convention.

Committed states should also continue to create legal foundations for interdictions. The United States could consider negotiating additional bilateral ship-boarding agreements, while others could consider concluding their own agreements. The United States and other states should also explore how support might be won for a Security Council resolution that would go beyond resolution 1540 and oblige states not only to outlaw proliferation to and from non-state actors but also to and from states. Security Council authorization of interdictions on a case-by-case basis, as suggested by some, seems impractical. The Council would have to make its decision within a very short time frame, and moreover it would depend on intelligence from states, something which states have traditionally been reluctant to provide.

Individual states, relevant international organizations, regimes and NGOs should also advance their efforts to expand the operational preconditions for interdictions; to boost domestic capabilities to detect and intercept suspicious WMD-related shipments and to bring perpetrators to justice. Mechanisms to facilitate cooperation among states involved in the PSI should also be improved. There is no need to establish an elaborate bureaucracy, but a point of contact or a small informal secretariat could help to coordinate regular consultations as well as the various PSI-related meetings and training exercises. Such a body would also ensure the institutional memory of the initiative. The Point of Contact of the Missile Technology Control Regime, which is located in the French Ministry of Foreign Affairs, could serve as a model. The Canadian government might set up such a body since it currently maintains a web site on the PSI.

Take states' concerns into account

To motivate states to support the PSI, their reservations must be taken into account. The United States and the other active PSI participants should on all accounts refrain from carrying out interdictions not consistent with international law (it is unclear whether all interdictions that have so far occurred within the framework of the PSI have been consistent with international law). The United States should also beware of stretching existing international law to justify interdictions—it should ensure its attempt to use Article 51 of the UN Charter remains permanently forgotten. Lastly, committed states should avoid pushing to expand the legal basis for high-seas interdictions if there is strong resistance. Pushing aggressively for a Security Council resolution authorizing WMD-related interdictions would not only be to no avail but would also risk gambling away the confidence in the PSI that has been built during the past years.

Furthermore, if the United States wants to win global support, it must restore its international legitimacy, in particular in terms of its non-proliferation policy but also beyond. Many non-nuclear-weapon states criticize the United States—and the other nuclear-weapon states—for not taking their disarmament obligations seriously and thus not fulfilling their share of the non-proliferation bargain. Many also accuse the United States of applying double standards, granting exceptions to their allies—as exemplified by the US–India nuclear deal—while working toward enforcing rules against states it considers to be "of concern". The use of questionable intelligence to justify the invasion of Iraq has considerably damaged the United States' reputation in the world. To recoup credibility, the United States should develop and present specific steps to meet its disarmament obligations. It should also avoid applying double standards when dealing with states that violate non-proliferation obligations or with states that seek closer cooperation in regard to civilian use of nuclear energy.

To win the necessary support for the PSI, instead of pressing reluctant states to embrace the PSI fully and openly and so alienating them, active participants should encourage states to participate in selected interdictions and other PSI-related activities in an inconspicuous manner. China, whose participation is fundamental for the effectiveness of the PSI given its proximity to the DPRK, seems already disposed to take part in interdiction operations on a case-by-case basis provided it does not attract much attention. With time, as such states grow accustomed to PSI norms and practices, their reservations against a more comprehensive and consistent involvement may diminish.

Conclusion

In many respects, present efforts to strengthen the PSI are heading in the right direction. The legal and operational foundations for interdictions are gradually being strengthened. Concerns that the PSI might be inconsistent with or erode international law are increasingly being dispelled. There are indications that key states appear at times ready to participate in individual interdictions. In the near future, it will be important to maintain momentum and to ensure that states become attuned to PSI-related activities and come to view interdictions as one of a number of useful non-proliferation instruments.

The United States not only came up with the idea of the PSI but is obviously among the states that would benefit most from its success: it is among the most likely targets of a WMD attack. At the same time, the United States is in a unique position to strengthen the PSI. Given its capabilities and expertise as well as its strong civilian and military presence in many parts of the world, the United States is in an excellent position to help states strengthen their domestic legal and operational capacities relevant to interdictions. Given its special status in the international system, the United States is uniquely qualified to shape the evolution of international law and establish effective mechanisms to

share intelligence and cooperate in interdiction operations. Visible endeavours by the United States to build a reputation as a benign rather than self-interested superpower will be crucial to win truly broad support for the PSI.

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Notes

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3. See <www.state.gov/t/isn/c19310.htm>. See also, for example, Center for Nonproliferation Studies, *Inventory of International Nonproliferation Organizations and Regimes,* "Proliferation Security Initiative", last updated 28 September 2006, at <cns.miis.edu/pubs/inven/pdfs/psi.pdf>.
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14. See Andrew Newman and Brad Williams, 2005, "The Proliferation Security Initiative: The Asia-Pacific Context", *The Nonproliferation Review,* vol. 12, no. 2, pp. 303–322.
15. See Valencia, op. cit.
16. Background conversation with a government official, 26 April 2007.
17. Ibid.
18. Newman and Williams, op. cit.
19. The PSI web site is at <www.proliferationsecurity.info>.
20. United Nations Security Council resolution 1540 (2004), UN document S/RES/1540(2004), 28 April 2004, available at <disarmament2.un.org/Committee1540>, paragraphs 2 and 3.
21. Fabio Spadi, 2006, "Bolstering the Proliferation Security Initiative at Sea: A Comparative Analysis of Ship-boarding as a Bilateral and Multilateral Implementing Mechanism", *Nordic Journal of International Law,* vol. 75, no. 2, pp. 249–278. The term "of concern" is not defined in any agreement; and this lack of specificity is frequently criticized.
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28. See Huisken, op. cit. See also background conversation with a government official, 15 May 2007.
29. Monika Heupel, 2007, *Implementing UN Security Council Resolution 1540: A Division of Labor Strategy*, Carnegie Papers no. 87, at <carnegieendowment.org/files/cp87_heupel_final.pdf>.
30. Author's interview with Colonel Mike Haché, Head of the Canadian Operational Experts Delegation to the PSI, 27 April 2007.
31. The unofficial PSI web site provides an overview of past Operational Experts meetings (there have been 18 at the time of writing), see <www.proliferationsecurity.info/meetings.html>.
32. Interview with Colonel Mike Haché, Head of the Canadian Operational Experts Delegation to the PSI, 27 April 2007.
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UNIDIR FOCUS

NEW PUBLICATION

Celebrating the Space Age: 50 Years of Space Technology, 40 Years of the Outer Space Treaty

This year marks not only the fortieth anniversary of the Outer Space Treaty but also the fiftieth anniversary of the launch by the Soviet Union on 4 October 1957 of the world's first artificial satellite. Sputnik I ushered in the space age and paved the way for technological and scientific progress.

Today, there are hundreds of satellites in various orbits and space-based assets have rapidly become a crucial element in our daily lives. This growing and ever more diverse use of outer space has brought with it legitimate concerns about the security of space-based assets and generated much-needed debate—including in the Conference on Disarmament—about the nature of space security.

Outer space is most certainly wealth of enormous potential—almost the entire world depends on communications via satellite, the poorest of people now have their local and regional economies empowered by wireless technology, farmers in developing and developed countries alike check weather conditions and market prices daily online, and health care and education reaches people who otherwise would be unreachable. Space debris from accidental or deliberate collisions and the weaponization of space would halt all such important developments.

The challenge today is to preserve both the security of outer space objects and the unrestricted access to outer space by all nations. The 2007 conference "Celebrating the Space Age: 50 Years of Space Technology, 40 Years of the Outer Space Treaty" is the sixth conference held by UNIDIR on the issue of space security, the peaceful uses of outer space and the prevention of an arms race in outer space. This volume features the conference report as well as presentations from the conference.

Participants at the conference reflected on the anniversaries celebrated in 2007 and how the Space Age has shaped, and continues to shape, the world of today. The necessity of making human use of outer space sustainable was a common theme, and there were discussions of the challenges and threats faced by all states in this regard. Various understandings of and approaches to space security were put forward, as well as concrete proposals on how to guarantee that outer space is preserved as an environment to be used peacefully by humankind, for the good of humankind.

In each issue of *Disarmament Forum*, UNIDIR Focus highlights one activity of the Institute, outlining the project's methodology, recent research developments or its outcomes. UNIDIR Focus also describes a new UNIDIR publication. You can find summaries and contact information for all of the Institute's present and past activities, as well as sample chapters of publications and ordering information, online at <www.unidir.org>.

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ACTIVITY

Analysis of States' Views on an Arms Trade Treaty

At the Sixty-first General Assembly in 2006, a resolution was adopted that called on the Secretary-General to seek Member States' views on the development of an Arms Trade Treaty (ATT) and to establish a group of governmental experts to commence work on such a treaty in 2008.

Following adoption of the resolution, the Secretary-General invited Member States to submit their views on the feasibility, scope and draft parameters of a legally binding instrument establishing common international standards for the import, export and transfer of conventional weapons. More than 80 states have provided submissions. The Secretary-General delivered a report on the results of this consultation process to the General Assembly at its Sixty-second session.

With the assistance of the Governments of Finland and the United Kingdom, UNIDIR is undertaking a two-part study involving an in-depth analysis of states' views on an ATT. The first part of the study provided a statistical overview of states' views, identifying the central ideas and dominant themes. The analysis was presented at a side-event of the First Committee of the Sixty-second General Assembly.

The second part of the study will identify divergent approaches to an ATT, discuss the implications of specific proposals, and explore regulatory alternatives in the development of an ATT. This analysis will be presented at a meeting of practitioners and experts in December 2007.

UNIDIR's two-part study will allow Member States and experts to compare the information and proposals contained in states' views on an ATT across themes, countries and regions, as well as through statistical clustering. UNIDIR's analysis will advance discussions on an ATT through identification of areas of consensus and divergence, as well as neglected areas. The study's examination of the possible scope of a future treaty will serve as a useful input to the group of governmental experts tasked to meet in 2008.

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