

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

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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.

Anthony Jenkinson, 1558<sup>1</sup>

Central Asia<sup>2</sup> 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.<sup>3</sup> 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<sup>3</sup> annual river flow is formed on the territory of Kazakhstan itself.<sup>4</sup> 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.

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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).<sup>5</sup>

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%).<sup>6</sup> 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.<sup>7</sup> 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.<sup>8</sup> 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".<sup>9</sup> 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".<sup>10</sup> Furthermore, the five Central Asian states agreed to continue with the allocation quotas set during the Soviet era.<sup>11</sup>

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.<sup>12</sup> 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.<sup>13</sup> 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.<sup>14</sup>

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.<sup>15</sup>

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.<sup>16</sup> 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.<sup>17</sup> 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.<sup>18</sup>) 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.<sup>19</sup>

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.<sup>20</sup> 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.<sup>21</sup> 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.<sup>22</sup>

#### 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.<sup>23</sup>

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.<sup>24</sup>

## 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,<sup>25</sup> 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.<sup>26</sup> The scheme, to be completed in 2010, is meant to guarantee Turkmenistan's water security and create some 4,000km<sup>2</sup> of farmland; it will also prevent flooding in Turkmenistan by drainage water from Xorazm (Khorezm) in Uzbekistan (another source of discord between the states).<sup>27</sup> 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".<sup>28</sup> 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).<sup>29</sup> 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.<sup>30</sup>

## 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.<sup>31</sup>

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.<sup>32</sup>

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".<sup>33</sup> 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.<sup>34</sup>

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## 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.<sup>35</sup>

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.<sup>36</sup>

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.<sup>37</sup> These figures are highly contested as estimates of the country's contribution to the annual flow vary from 10km<sup>3</sup> to 20 km<sup>3</sup>.<sup>38</sup> 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.<sup>39</sup>

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.<sup>40</sup> 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.<sup>41</sup>

China is already using some of the Irtysh waters to provide water to the Karamay oil fields.<sup>42</sup> 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.<sup>43</sup>

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.<sup>44</sup> 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".<sup>45</sup> 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.<sup>46</sup>

## 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.<sup>47</sup> 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.<sup>48</sup> 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.<sup>49</sup> 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.<sup>50</sup> 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.<sup>51</sup> 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.<sup>52</sup> 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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2. Throughout this paper, the term "Central Asia" refers to the area in Asia extending from the Caspian Sea in the west to China in the east. To the north, the area borders the Russian Federation, and to the south, Afghanistan and Iran.
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10. Ibid., Article 3.
11. Ibid., preamble.
12. See, for example, Kai Wegerich, 2004, "Coping with Disintegration of a River-basin Management System: Multi-dimensional Issues in Central Asia", *Water Policy*, vol. 6, no. 4, pp. 335–344.
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