Introduction

The allocation and use of the water resources of Central Asia is one of the most difficult issues to arise out of the break-up of the Soviet Union. In outline the question is simple: how should the waters of the great Central Asian rivers, the Syr Darya and Amu Darya, be used? To generate much-needed hydropower electricity in the mountainous countries in which they rise? Or for irrigation in the energy-rich downstream countries? Added into the mix is the fact that due largely to over-use for irrigation, both rivers flow (notionally, at least) into the depleted wastes of the environmental disaster that is the Aral Sea.

In Soviet times the situation was simple: major decisions were made by Moscow. Independence changed that. Now, beyond the issue of how the existing Soviet-era infrastructure should be operated (for irrigation or hydropower), tensions are rising over the proposed construction of significant new hydropower projects in the upstream countries. Indeed water issues are seen to pose a significant threat to regional security. In February 2009 Uzbekistan’s President Karimov told his cabinet that country’s water was under threat and invoked the need to safeguard the interests of future generations of Uzbeks.

As the European Union (EU) noted in 2008, water management is the most sensitive environmental issue in Central Asia, which, if not addressed, could develop into a serious security threat for the entire region in the medium term. These observations, which were contained in a joint progress report on the EU’s Central Asia Strategy, appear to be coming true: at the time of writing, freight traffic delays on the Uzbekistan side of the Uzbek-Tajik threaten to inflict serious damage to the already troubled Tajik economy, as well as to cause disruption to an important supply route used by US and NATO troops in Afghanistan.

The aim of this paper is to describe the basic problem and the efforts undertaken both by the Central Asian States and the international community, including the EU, to seek a resolution. It traces recent developments relating to the planned construction of dams, the modification of energy supplies and the periodic issue of increasingly bellicose statements from the capitals in the region. Finally it looks into the challenge for establishing a modern international legal order to govern the region’s strategic water resources.

The shared rivers of Central Asia

Both the Amu Darya and the Syr Darya are trans-boundary watercourses. The Amu Darya River is formed in Tajikistan from two tributaries, the Vaksh River which rises in Tajikistan (although one of its tributaries the Kyzleu River flows into Tajikistan from Kyrgyzstan) and the Pyanch River which rises in Tajikistan but which forms part of Tajikistan’s border with Afghanistan. Thereafter it flows through Turkmenistan and Uzbekistan before terminating in the Aral Sea.

The Syr Darya is formed from two tributaries,
the Naryn River and the Kara Darya both of which rise in the Kyrgyzstan. Thereafter it flows through Uzbekistan, Tajikistan and Kazakhstan before also terminating in the Aral Sea.

Although the largest, the Amu Darya and Syr Darya are not the only shared rivers of Central Asia. The Chui and Talas Rivers are shared between Kyrgyzstan and Kazakhstan while a number of smaller rivers flow from Kyrgyzstan into China. Conversely the Irtush and Illy Rivers flow from China into Kazakhstan, with the Irtush continuing into Russia.

**Soviet experience**

During the Soviet period, Central Asia was treated as one economic area and its development was planned accordingly. In turn, water management was focused on achieving the production objectives of the overall regional economic development plan.

Regarding the Aral Basin, decisions were made in Moscow in the 1960s to focus on the development of cotton production in the Uzbek Soviet Socialist Republic, and subsequently on rice production in the Kazakh Soviet Socialist Republic, with a view to achieving self-sufficiency in these products. Major investments were made in the construction of dams, reservoirs, canals and other hydro-structures to promote and manage the transfer of water from its sources in the mountains of the Kyrgyz and Tajik republics to the main growing areas fed by massive irrigation schemes in Uzbek and Kazakh republics.

The borders between the separate soviet socialist republics (SSR), which in many ways were little more than administrative boundaries within the Soviet Union, were effectively disregarded in the construction process. Irrigation canals, such as the South Fergana Canal, passed through several SSRs. Dams and other hydro-structures were built in one SSR to benefit crop production in another, either partially or wholly. Perhaps the clearest example is the Toktogul Reservoir. With a total volume of 19 billion cubic metres it was formed on the Naryn River in the Kyrgyz SSR flooding a large area of valuable arable land in the process. Although the series of dams that form the Toktogul Cascade are ‘dual purpose’ in the sense that the impounded water is used for both irrigation and hydropower generation, only a tiny fraction of this water was capable of being used for irrigation in the Kyrgyz SSR. The remainder was conveyed by canal to irrigate fields in the downstream republics.

Furthermore, the development of potentially irrigable land in the upstream republics was sometimes deliberately restricted so as to make more water available for the development of valuable new agricultural areas downstream.

Nevertheless, soviet planners and decision-makers did take account of the valuable role of the upstream republics as the formation zone for Central Asia’s rivers. The costs of water management within the upstream republics were paid or subsidized from Soviet central funds. These included the costs of water resource monitoring and data collection as well as the operation of inter-state irrigation canals. It also included the costs of constructing and maintaining flood protection infrastructure such as embankments and dikes as well as the costs of afforestation and the remediation of damage caused by floods, landslides and mud-floods.

In addition, the upstream republics received other benefits such as the provision of cheap fuel and electricity as well as social benefits to take account of their relative poverty as mountain regions within the USSR. In other words, even though the development of water resources infrastructure within the upstream republics was restricted, their contribution to the development of the greater Central Asian, or even Soviet, economy was recognized and compensated.

However, although Moscow treated the Central Asian soviet republics as one economic area, this does not mean that there was not competition among the SSRs for water. Each of the republics sought to maximize its entitlements to water resources at the expense of the others. During the Soviet period, the issue of water sharing among the Central Asian soviet republics was considered in detail on three occasions, the last time in the early 1980s. While negotiations and discussions took place between the republics themselves, the Soviet Ministry of Amelioration and Water Resources in Moscow coordinated the process. Final decisions on water allocation were made in Moscow, either by the Soviet Ministry or the Soviet Central Planning Agency (Gosplan) or on some occasions by the Central Committee of the Soviet Communist Party. Water resource allocations were then formally recorded in a series of bilateral or multilateral protocols between the soviet republics.

In addition, in 1986 ‘River Basin Organizations’ (the Russian acronyms for which are ‘BVO’) were established for the Syr Darya and Amu Darya rivers to improve the management of water resources that were the subject of agreements between more than two soviet republics. The BVOs were also given responsibilities for the operation of certain major dams and diversion structures. However, the Syr Darya BVO had less impact on water resource management in the Kyrgyz SSR than in the downstream soviet republics. In part this is because the Kyrgyz SSR refused, to the extent possible, to cooperate with the BVO, seeing it as a mechanism for the downstream soviet republics to increase their control over ‘its’ water resources.

In any event, the net result of the water sharing arrangements was that at the end of the Soviet era, the upstream soviet republics were entitled to use only a fraction of the water formed annually within their territories. The Kyrgyz SSR was, for example, obliged to allow some 76 percent of the water that rose within its borders to flow downstream into the neighbouring republics.

**Independence and its impacts**

The independence of the five Central Asian States in 1991 changed everything in terms of water resources management. Administrative boundaries became international borders and the Aral Sea Basin became an international drainage basin subject to the rules of international law, or more specifically, international water course law.

At the same time nothing changed. The rivers continued to flow, the infrastructure remained in place, the need for water was not changed, albeit that some of the larger canals were now ‘trans-boundary canals’ (possibly a new concept in international law). From a purely technical point of view the design of the canals, dams and other hydraulic works meant that a high degree of routine cooperation between the new countries was necessary to keep the systems in operation.

Consequently, questions of water use and water sharing were among the first to be confronted by the new Central Asian states. Straightaway, a further challenge arose. International law was not a strength of the newly independent states of Central Asia. This is hardly surprising as Soviet foreign policy was made in Moscow and the need for international law, and international lawyers, in the region was slight.

The first major attempt to consider the matter at a high level was at an inter-ministerial meeting in Almaty in February 1992. The outcome of this meeting was the Almaty Agreement _On Joint..._
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Management of Water Resources of 18 February 1992, which affirmed the Soviet-era water sharing arrangements. The fact that this agreement was signed by the ministers responsible for water resources in their respective countries, rather than by government level delegations, has led some to question its validity. The agreement also led to the establishment of the ‘Inter-state Coordination of Water Resources Commission’ (the ‘ICWC’) which is responsible for the allocation of water in respect of canals and structures canals controlled by the BVOs which remain in place.

A number of other regional agreements followed, many of which focused on the Aral Sea. These were followed by agreements concerning the use and allocation of the waters of the Syr Darya and Amu Darya. One of these was the Agreement between the Governments of the Republic of Kazakhstan, the Kyrgyz Republic and the Republic of Uzbekistan on the Use of Water and Energy Resources in the Syr Darya Basin. This agreement also led to the establishment of the ‘Inter-state Co-ordination of Water Resources Commission’ (the ‘ICWC’) which is responsible for the allocation of water in respect of canals and structures canals controlled by the BVOs which remain in place.

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to assist. It calls for ‘all relevant factors and circumstances’ to be taken into account including:

a) geographic, hydrographic, hydrological, climatic, ecological and other factors of a natural character;

b) the social and economic needs of the watercourse States concerned;

c) the population dependent on the watercourse in each watercourse State;

d) the effects of the use or uses of the watercourses in one watercourse State on other watercourse States;

e) existing and potential uses of the watercourse;

f) conservation, protection, development and economy of use of the water resources of the watercourse and the costs of measures taken to that effect;

g) the availability of alternatives, of comparable value, to a particular planned or existing use.

But in practice while these factors offer some guidance they leave many questions as to how the issue of ‘equitable and reasonable’ use should be applied in Central Asia, as elsewhere. For example, the downstream countries have a greater population dependent on the shared rivers than the upstream States does this mean that they are entitled to a proportionately greater share of water? On the other hand the social and economic needs of the (poorer) upstream States are arguably greater. Should a distinction be drawn between the use of water for food crops and cash crops? What of the conservation argument? Uzbekistan, which has ratified the Watercourse Convention, has argued that the construction of new dams will further reduce flows into the Aral Sea and that new dams should be opposed on environmental grounds. But on the other hand much of the destruction of that sea has been caused by overwatering cotton crops of the downstream States. In short, what is ‘equitable and reasonable’ use? And how can the notion of equitable and reasonable use be reconciled with the duty not to cause significant harm to downstream States? And in any event what level of harm is ‘significant’.

The Watercourse Convention goes on to provide, in Article 11, that in the absence of agreement or custom to the contrary, no use of an international watercourse enjoys inherent priority over other uses. The only other guidance is that special regard must be given to the ‘requirements of vital human needs’ although this notion is not further developed.

A full discussion of these issues is far beyond the scope of this paper. Suffice it to say that international law does not provide clear answers to these issues (or indeed a number of other specific issues such as the rights and duties of the Central Asian States over the trans-boundary canals).

What is tolerably clear is that the upstream countries cannot simply do as they like. The notion of full upstream sovereignty, the so-called ‘Harmon doctrine’, is not good law. More specifically they are under a duty to inform the downstream States before undertaking planned measures, such as the construction of dams, to notify and consult with them and to negotiate in a meaningful way if consultations do not lead to agreement. But by the same token, there is no downstream veto either: if no agreement can be reached, provided the upstream States have genuinely sought to negotiate, the downstream States appear to enjoy no veto per se on future upstream measures.

In short, international law offers no simple solution to the complexities of the use of the shared waters of Central Asia. Ultimately the question of what amounts to the equitable and reasonable use of the Syr Darya and Amu Darya Rivers can be resolved in two ways: by negotiation among the parties or by an independent court or tribunal. It is no doubt partly because the issue is so difficult to resolve, and so fraught with the risk that a ‘mistake’ might be made, that the authoritarian rulers of Central Asia have shied away from reaching an definitive resolution in the form of a negotiated agreement. After all once an agreement is reached sovereignty over the water is effectively determined for good. The degree of complexity means that there is endless scope for second guessing outcomes. No Central Asian President wants to be criticized as the person who signed away part of his country’s sovereignty, who didn’t ‘get a good deal’, who didn’t ‘win’, who didn’t ‘get one over on the neighbours’.

In these circumstances the status quo, however uncomfortable it may sometimes be, probably seems to be the ‘safest’ solution. Of course population growth and climate change will sooner or later impact the Central Asia’s rivers, but all else being equal these are problems that can best be left for the future. The problem, though, is that all else is no longer equal given planned new dam construction. In other words the status quo is no longer feasible.

**International community**

Since the point when disputes over water in the region became ‘international’ with the independence of the five Central Asian States, the international community has in turn been rather active in terms of water issues in the region. The primary response has been largely through numerous development/technical assistance projects focusing on a range of water and water related issues. Indeed the region has been subject to a flood of such projects, doused with an alphabet soup of donor agencies and their project acronyms.

All of the major multilateral donors have been involved in water projects including the World Bank, the Global Environment Facility (GEF), various United Nations Agencies and bodies including the United Nations Environment Programme (UNEP), the United Nations Development Program the Food and Agriculture Organization (FAO), and the United Nations economic commissions for Europe and Asia (UNECE and UNESCAP). In addition to the EU numerous bilateral donors have also been involved including the United States Agency for International Development (USAID), the German GTZ/ Britain’s Department for International Development (DFID), Swiss Cooperation, Canada’s CIDA, and so on. Projects have also been promoted by the International Water Management Institute (IWMI) and the Global Water Partnership (GWP).

Many projects have, of course been undertaken at the purely national dealing with irrigation, drinking water supply and national policy programs. However quite a number of projects have been regional in scope. Some, particularly those supported by the GEF and a number of World Bank projects, have been focused on the problems of the Aral Sea. Others, including projects funded by USAID, have explicitly specifically sought to develop and realize solutions to the main trans-boundary water issues in Central Asia. It is of course beyond the scope of this paper to review all of these projects. Some of the earlier EU projects, such as the Water Resources Management and Agricultural Production Project (WARMAP) included an element with a particular focus on international issues even discussing draft agreements and providing (much needed) advice on international water law.

Suffice it to say that such projects have not been effective. In retrospect it is not surprising that these attempts failed. Of course there was and probably is still a need for training and capacity building but the problem is that projects take place at the level of senior officials. Even when ministers participate there are always

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6 For example the boundary negotiations concluded between Kyrgyzstan and China in the later 1990s led to extreme and vocal criticism of the then President Akayev in what was at that time a rather free press.
limits as to what can be achieved within a technical assistance project unless there is sufficient political will. And as described in the previous section, that political will has been lacking.

Moving from directly addressing the issue of water sharing and water use, a series of subsequent EU projects have addressed integrated water resource management (IWRM) and now ‘water governance’. The idea is that by working at the basin or sub-basin level looking at national coordination a model of cooperation can be developed. Several comments though need to be made. First of all Uzbekistan has marginalized itself from these multinational projects (and a recent attempt to revive trans-boundary cooperation by bringing groundwater into the equation failed with the cancellation of a proposed project examining transboundary conjunctive is surface and groundwater use). Second, the current EU Water Governance Project is largely focused on water quality issues, which are in turn the main focus of EU water law. No doubt important, addressing these questions is almost entirely irrelevant to the main issue of the sharing and allocation of water resources. Dialogues have been held under the EU Water Initiative but these two are mostly national level. In short in practice the EU’s policy is basically more of the same: technical assistance.

Of course the EU like any international donor is in a difficult position in trying to assist five states (in fact six because Afghanistan as a riparian of the Amu Darya has to be involved in any solution to the issue of Central Asia’s shared rivers). And of course water is not the only factor that falls to be taken into account. Understandably the EU is unwilling to be used, to be pushed into a corner or forced to take sides. However, waiting until all five countries ask for assistance is a somewhat cautious approach and one that means that the fine words of the EU’s Central Asia strategy in terms of promoting integrated water resources management and ‘upstream-downstream’ solidarity are likely to remain just that: fine words.

So what happens next and what role could the EU play?

As alluded to above the period of the status quo is beginning to draw to an end. Both of the upstream countries intend to build new large hydropower dams. Tajikistan has made the construction of the huge Rogun Dam, which if built as originally designed will become the world’s highest dam, a matter of national priority. Where the funding will come from is not entirely clear. An earlier agreement that the Russian aluminium giant Rusal would build the dam fell through in a series of disputes over the dam height and thus the economic parameters of the project. While on-going national attempts, such as the ‘voluntary’ donation of pay-cheques, by Tajik citizens, and the sale to them of Rogun shares, will be unlikely to raise sufficient funds, it would unwise to assume that a financier will not be found. Russia participated in the completion of the Sangtuda 1 Dam, while Iran is contributing to the completion of the Sangtuda 2 Dam and may have a further role to play. Russia, and Russian companies, are still potential investors and China is hovering in the wings. A key factor that must be taken into account is the huge demand for electricity not only in Tajikistan itself but also in Afghanistan and even Pakistan. Indeed the World Bank has investigated the infrastructure requirements for such investments.

As regards Kyrgyzstan, the intention is to complete the Kambarata 2 Dam, where construction has already started, and to build the much larger Kambarata 1 Dam. Russia has agreed to fund this dam on the basis of a huge loan, although there is currently some dispute as to whether the loan agreement is still in force.

It seems that both upstream countries now accept the need to consult with Uzbekistan, which has been protesting ever more loudly about the lack of information from the mountain states and the risks to its very future that the construction of these dams would pose. In other words they have moved on from the untenable position that as the dams were originally designed in Soviet times in the full knowledge of the then downstream SSRs consultation was redundant.

Russia has indeed sought to promote consultation but, as a major trading partner with Uzbekistan, and indeed all five of the Central Asian states, finds itself in a tricky position, not least if it proceeds with the funding of Kambarata I. The proposed construction of Rogun provided a good example of the risks for Russia. An apparent flip-flop in January 2009 by the Russian President over the need for Tajikistan to consult Uzbekistan resulted in strong protests Dushanbe culminating President Rahmon’s threatening to boycott two important summits in Moscow.7

The other regional power, China, is a potential investor and anyway has baggage of its own. China was one of three states to vote against the Watercourse Convention and concerning the use of shared Central Asian watercourses, current and planned abstractions from the transboundary Irtush and Illi Rivers by China threaten to have major adverse downstream impacts in Kazakhstan.8

Given the ongoing tensions caused by the use by the United States of the Ganci Airbase at Manas Airport in Bishkek it is hard to see that country playing a very active role in terms of water mediation and the promotion of effective consultation on the construction of the proposed dams.

So does this not leave some scope for the EU to operate at a diplomatic level, backed up with technical support, to promote the process of consultation over these new projects? After all, as the Council’s Special Representative has noted, the EU and the Member States have particular experience of the creation of effective trans-boundary river mechanisms such as the Rhine, Meuse, Scheldt and Danube Commissions, albeit mechanisms that are primarily concerned with water quality issues. In addition the legal professions of the EU have strong expertise in international water law. Of course Europe probably has insufficient clout to act by itself. More reasonable might be a combined approach with the World Bank and possibly other United Nations bodies, in which Europe’s say is not insignificant. In other words there is need for pro-active EU diplomacy. After all, as noted in the progress report cited in the introduction to this paper, water issues are one of the biggest threats to security in Central Asia. There is at least consensus that the overall water resources of Central Asia are both substantially underdeveloped and currently suffering failure to arrange mutually beneficial coordination in their exploitation. The pursuit of a sustainable cooperative order, grounded in treaty level international law, must therefore be continued, and the EU can be a promoter of such efforts.

7 Najibullah, F. Central Asia’s Great Water Game http://www.rferl.org/Content/Central_Asias_Great_Water_Game/1379034.html
About EUCAM

The Fundación para las Relaciones Internacionales y el Diálogo Exterior (FRIDE), Spain, in co-operation with the Centre for European Policy Studies (CEPS), Belgium, has launched a joint project entitled “EU Central Asia Monitoring (EUCAM)”. The (EUCAM) initiative is an 18-month research and awareness-raising exercise supported by several EU member states and civil society organisations which aims:
- to raise the profile of the EU-Central Asia Strategy;
- to strengthen debate about the EU-Central Asia relationship and the role of the Strategy in that relationship;
- to enhance accountability through the provision of high quality information and analysis;
- to promote mutual understanding by deepening the knowledge within European and Central Asian societies about EU policy in the region; and
- to develop ‘critical’ capacity within the EU and Central Asia through the establishment of a network that links communities concerned with the role of the EU in Central Asia.

EUCAM focuses on four priority areas in order to find a mix between the broad political ambitions of the Strategy and the narrower practical priorities of EU institutions and member state assistance programmes:

• Democracy and Human Rights
• Security and Stability
• Energy and Natural Resources
• Education and Social Relations

EUCAM will produce the following series of publications:
- A bi-monthly newsletter on EU-Central Asia relations will be produced and distributed broadly by means of an email list server using the CEPS and FRIDE networks. The newsletter contains the latest documents on EU-Central Asia relations, up-to-date information on the EU’s progress in implementing the Strategy and developments in Central Asian countries.
- Policy briefs will be written by permanent and ad hoc Working Group members. The majority of the papers examine issues related to the four core themes identified above, with other papers commissioned in response to emerging areas beyond the main themes.
- Commentaries on the evolving partnership between the EU and the states of Central Asia will be commissioned reflecting specific developments in the EU-Central Asian relationship.
- A final monitoring report of the EUCAM Expert Working Group will be produced by the project rapporteurs.

This monitoring exercise is implemented by an Expert Working Group, established by FRIDE and CEPS. The group consists of experts from the Central Asian states and the members countries of the EU. In addition to expert meetings, several public seminars will be organised for a broad audience including EU representatives, national officials and legislators, the local civil society community, media and other stakeholders.

EUCAM is sponsored by the Open Society Institute (OSI) and the Netherlands Ministry of Foreign Affairs. The project is also supported by the Czech Republic Ministry of Foreign Affairs, the Spanish Ministry of Foreign Affairs and Cooperation and the United Kingdom Foreign and Commonwealth Office.

About FRIDE

FRIDE is a think tank based in Madrid that aims to provide original and innovative thinking on Europe’s role in the international arena. It strives to break new ground in its core research interests – peace and security, human rights, democracy promotion and development and humanitarian aid – and mould debate in governmental and nongovernmental bodies through rigorous analysis, rooted in the values of justice, equality and democracy.

As a prominent European think tank, FRIDE benefits from political independence, diversity of views and the intellectual background of its international staff. Since its establishment in 1999, FRIDE has organised or participated in the creation and development of various projects that reinforce not only FRIDE’s commitment to debate and analysis, but also to progressive action and thinking.

About CEPS

Founded in Brussels in 1983, the Centre for European Policy Studies (CEPS) is among the most experienced and authoritative think tanks operating in the European Union today. CEPS serves as a leading forum for debate on EU affairs, and its most distinguishing feature lies in its strong in-house research capacity, complemented by an extensive network of partner institutes throughout the world.

CEPS aims to carry out state-of-the-art policy research leading to solutions to the challenges facing Europe today and to achieve high standards of academic excellence and maintain unqualified independence. CEPS also provides a forum for discussion among all stakeholders in the European policy process and builds collaborative networks of researchers, policymakers and business representatives across the whole of Europe.