

## CENTRAL ASIA DEALS WITH ITS WATER PROBLEMS: A VIEW FROM KYRGYZSTAN

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The region has a conflict-rich history, including on ethnic grounds. Such conflicts have also been appearing during the post-Soviet period, although in very different forms. The newly independent states of Central Asia have not found it easy to establish their sovereignty. Age-long relations among its ethnic groups were often destroyed during the process, dealing a serious blow to the interests of its nationalities and states. Whereby the initial stages of these conflicts are often not apparent to the casual observer. Until shots are fired, houses burned down, and blood spilled, politicians frequently fail to believe that such conflicts exist in their states, and society only catches on after they escalate into open warfare.

At first glance, many conflicts in Central Asia can be classified as ethnic, that is, they look like clashes of diverging interests among members of

different nationalities. But ethnic diversity as such is often far from the deep-rooted cause of these conflicts. In most situations, they are caused by a struggle for resources. In the past, these resources were necessary for physical survival, with wars and natural disasters being considered everyday occurrences. In today's world, the struggle for these riches is most frequently related not so much to survival, as to the desire for a more comfortable existence. The beginning of globalization provided much greater opportunities to compare the lifestyle of different nationalities and states, especially of those living side by side. For the political elites however, the struggle for resources was always conditioned by the desire to take control over and keep a hold of political power. And in Central Asia, it was also conditioned by the political elites' struggle for property, that is, for economic gain.

### Water—A Source of Life and ... Conflicts

Many aspects of Central Asia's present-day development are related to the struggle for resources, for example, the situation with regional security and cooperation. The problem of water supply is one of the most striking examples of how the struggle for resources is hindering integration and aggravating interstate contradictions and ethnic discrepancies. Water has always been a vital and objectively necessary resource in Central Asia, not only for human survival, but also for the development of their civilizations. Documents bring us information about how conflicts relating to water use also occurred many centuries ago. For example, Turkmen legends mention the old riverbed of the Amudarya and perfidious Khiva clans, whose actions led to the drying up of the Sarakamysh Lake and forced migration of the local tribes.

These events come to the surface in relation to a project being carried out today by Turkmenistan involving the building of gigantic artificial lakes in Karakumy. One of them, the Zeid artificial lake, will be joined to the Amudarya by a 25-kilometer canal. Water from this river will feed the new reservoir. Work is going on at the site around the clock. The planned width of the canal is 100 m, with a depth of 15 m. Specialists are flabbergasted by these indices, since they are really enormous for structures of this kind. Other parameters of the artificial lake are also impressive: it is more than 100 km in radius, and the water surface will occupy an area of approximately 40,000 hectares. Zeid will be able to take 3 billion cubic meters of water.

And this is far from Turkmenistan's only project. In May 2000, the country's president, Saparmurad Niyazov, announced the beginning of work on a reservoir in Karakumy, to which drainage water from all the velaiats of the country will be channeled via collectors. This project, which earned the name of Turkmen Lake, became the republic's largest construction site. Ashghabad's plans are truly grandiose. But they are obviously related to the problem of regional security, integration, and the region's sustainable development on the whole. For Turkmenistan will take the water for its new reservoirs from the Amudarya. Its insufficient runoff has already largely provoked the crisis of the Aral Sea. It used to be the fourth largest closed water area in the world, but today it has lost more than 60% of its volume. Its water level has dropped by more than 16 m. The Aral's exposed seabed, which constitutes 40-50,000 sq km, is dispersing hundreds of thousands of tons of sand and toxic salts. More than 150,000 people have already left Karakalpakia, which in some places is essentially unfit for habitat.

The water resources of the Amudarya basin have long been exhausted. This is the largest river in Central Asia, and, particularly in its middle and lower reaches, it is literally dissected by a system of canals. What is more, the extent to which the new large-scale Turkmen projects are taking into account the interests of other countries in the region is a very serious question, to which there is still no answer. Whatever the case, this example shows that water and everything associated with it is a source of potential conflicts.

These conflicts may not only be interstate. A case in point is the situation at the beginning of 1992 in Dushanbe: the alternative meetings in the capital of Tajikistan, on Shakhidon and Ozodi squares. And the main demands of the power instigating these meetings, which was later called the demo-Islamic opposition, was the removal of specific figures (S. Kenjaev and R. Nabiev). But the speeches of the opposition leaders also criticized the authorities, saying that the republic was "criminally," in their words, resolving some of the problems related to water. The poorly planned building of powerful hydropower plants in some cases led to ethnic groups being forced to resettle elsewhere. This aroused discontent, which was skillfully used during aggravation of the political struggle between the regional clans. As a result, a civil war began which lasted for several years. Water, as we see, was among the reasons—albeit not the main, but still related—for the development of the internecine strife.

## Kyrgyzstan in the Epicenter of a Conflict of Interests

Here we will look at only one side of the water problem, whereby we will try to view the situation from the standpoint of Kyrgyzstan, which is not the most developed state in the region.

The Central Asian countries can provisionally be divided into two groups. The first consists of Kyrgyzstan and Tajikistan, and the second of Kazakhstan, Uzbekistan, and Turkmenistan. The first group of states does not have large supplies of hydrocarbons, which constitute quite a large share of Kazakhstan and Turkmenistan's export. But on the other hand, the region's rivers originate in Kyrgyzstan and Tajikistan, and these republics are trying to develop their hydropower industry. However, the second group of states, particularly Uzbekistan, needs large amounts of water to meet its agrarian needs, since more than 90% of Central Asia's gross crop growing product is produced on irrigated land. In Kazakhstan, almost 75% of water drawoff goes to meet the needs of agriculture.

And this is the gist of many contradictions among the region's states. The thing is that to ensure continuous operation of its hydropower plants, Kyrgyzstan must create special conditions for using the available hydro resources. These conditions, strictly speaking, consist of saving water and accumulating it in reservoirs during the summer, and expending it mainly in the winter. But the second group of countries in the region needs most of its water for irrigation, that is, in the summer, when the crops ripen, for which it should be accumulated in the winter.

Kyrgyzstan's natural and geographical features largely precondition the standpoint upheld by the republic's leadership with respect to its regional neighbors. The local relief makes it impossible to fully develop most of those agricultural industries which Kazakhstan and Uzbekistan are intensively developing. And apart from the mining sphere and transportation infrastructure in the high mountain area, Kyrgyzstan's natural conditions are primarily a hindrance and not a help in building up industry. At the same

time, the republic's mountains act as a kind of natural barrier to the movement of moist air masses and promote their accumulation. The country's water supplies are characterized by the following indices: full river runoff amounts to 51.2 cubic km, potential volumes of subterranean water to 13 cubic km, lake volumes to 1,745 cubic km, glacier supplies to 650 cubic km, precipitation to 104 cubic km, gross moisture content of the territory to 73.1 cubic km, and evaporation to 52.8 cubic km.

Admittedly, according to scientists, the glacierization area is steadily receding. According to their forecasts, by 2025, the glacierization area in Kyrgyzstan will shrink on average by 30-40%, which will lead to a decrease in water content of 25-35%. This circumstance will aggravate the problem of supplying the region with water even more. For example, whereas in Asia as a whole, surplus resources constitute 77.2% of the total runoff, in Central Asia, this index is already 0%! And this is even taking into account that the increase in water consumption in Central Asia was significantly less than in other regions of the mainland: between 1980 and 2000, it amounted to 1.29-fold in Central Asia, to 1.75-fold in South Asia, and to 1.64-fold in Asia as a whole. In other words, water, as a vital resource for the population's livelihood and industrial and agricultural development in Central Asia, is clearly in short supply. This, without a doubt, is one of the main factors limiting the progressive development of any given state.

For example, Kazakhstan, which is located in the zone of insufficient water content, constantly experiences a shortage of drinking water. In terms of its supply, the republic occupies last place among the CIS countries: it has 37,000 cubic m of water a year per sq km of its territory, and only 6,000 cubic m per person. The intensity of water intake in Kazakhstan has long exceeded natural water replenishment. The shortage of water is creating a serious threat to the state's sustainable development. This is also due to the fact that only 56% of surface water resources are formed on average in the republic (different years are characterized by different water content indices), and the other 44% comes from neighboring countries.

Kyrgyzstan is still a state with the highest supply of water resources. On average, there are 258,000 cubic m of water a year per sq km of the republic (in the CIS states this index is 212,000 cubic m). As scientists emphasize, Kyrgyzstan is the only Central Asian country whose water resources are fully formed on its own territory. There are more than 35,000 watercourses on its mountain summits, which form the annual supply of drinking water, approximately 51 billion cubic m, that is, almost half of the region's entire watercourse.

The republic's water resources are inseparably related to one of the leading branches of its economy, power engineering. At this juncture, we should take a small excursion into history. In 1914, there were only five small power plants in Kirghizia with a total capacity of 265 kW. It was the industrialization policy alone that led to a gigantic upswing in this sphere. The Bolsheviks were correct in their assumption that power engineering could become the backbone of the republic's economic development. Essentially all capacities were built in the Soviet era, and prospective facilities for construction were also defined, which the government of independent Kyrgyzstan has been trying to complete for many years. In 2000, 17 power stations with a total capacity of 3.6 million kW were functioning in the republic.

The main place in power engineering is occupied by hydropower plants, which produce the cheapest electricity. Of the fifteen hydropower plants, the most well-known complex is on the Naryn River, which includes five hydropower plants. The most important elements of this cascade are the Toktogul reservoir and the Toktogul hydropower plant. The latter went into operation in 1976, its capacity is equal to 1,200,000 kW. Other hydropower plants of this cascade are not as grandiose: the capacity of the Kiurp-Saikaia is 800,000 kW, and of the Uch-Kurganskaia, 180,000 kW. There are also several unfinished hydropower plants in the republic which do not meet the projected indices. They include the Tash-Kemirskaia hydropower plant, with a capacity of 450,000 kW, and the Shamaldy-Saikaia hydropower plant of 240,000 kW. What is more, several small hydropower plants are in operation, with a capacity of up to 42 MW, which annually produce up to 125 million kW/h of electricity. It is considered that the country's gross hydropower potential amounts to 142 billion kW/h, technical potential to 73 billion kW/h, and economic potential to 48 billion kW/h. In terms of the last two indices for the CIS countries, Kyrgyzstan yields only to Russia and Tajikistan.

Of Central Asia's total hydropower potential, Tajikistan accounts for about 70% (this republic's hydropower potential is estimated at 31,385,000 kW), and Kyrgyzstan for 21%, where, in addi-

tion to hydropower plants, there are also two thermal power plants (in Bishkek and Osh), with a capacity of 609,000 kW and 22 MW, respectively. On the whole, power engineering provides approximately 20% of the country's GDP. What is more, according to specialists, only 8-9% of its hydropower potential is currently being used.

Nevertheless, such impressive indices are a source of certain problems in Kyrgyzstan's relations with its regional neighbors. As we already noted, in Central Asia there are two groups of states. Along with the obvious difference in the range of export commodities compared with Kazakhstan, Turkmenistan, and partially Uzbekistan, in Kyrgyzstan there are no major industrial branches requiring significant resources of water. The gross water consumption of the republic's entire industrial sector amounts to 525 million cubic m (approximately 5.7% of its total consumption). But for the states in the second group, particularly for Uzbekistan, the shortage of water is catastrophic in the direct sense of the word. The water deficit in several areas of the country, in particular in Karakalpakia, makes it possible to talk about a social and environmental crisis. There is not only insufficient water for agrarian, but also for the population's everyday needs. As a result, the problem of its supply has long reached the level of interstate relations and become a topic of acute disagreements.

It should be noted that in Soviet times, a solution was always found to the problem of water supply for the needs of the national economy. But conflicts arose after the Soviet Union collapsed and the integrated management mechanism was destroyed. Whereby, as early as 18 February, 1992, the newly independent countries of the region signed an agreement in Alma-Ata on the joint use of Central Asia's water supplies, including on the need to retain the existing management system of the resources of the Amudarya and Syrdarya basins. They later confirmed this decision in Nukus (on 20 September, 1995) and in Kzyl-Orda (on 19 April, 1996). But in practice, they were all trying to achieve their own ends, so the agreement mechanism did not work as efficiently as it should have, although attempts were repeatedly made to establish it on a market basis. In general terms, the system was supposed to look as follows: Kyrgyzstan and Tajikistan, sacrificing their interests, agreed to supply water in large amounts in the summer, receiving natural gas, coal and oil in the winter in return. Dozens of meetings of the leaders of the Central Asian states at various levels were devoted to discussing the aspects of this system, which mainly concerned delivery volumes and prices.

## **Conflict of Arguments: A No-Win Contest**

From the viewpoint of official Tashkent, Bishkek, by holding onto water in the summer, uses it for producing electricity which is not consumed in the republic, but exported. On the other hand, Uzbekistan needs water in the summer for feeding its population, that is, its need looks more justified. But this stance is not without its flaws. Tashkent uses a large amount of water for industrial needs and growing cotton, which, by the way, like electricity, is exported. On the other hand, Uzbek experts note that whereas in the 1980s, the republic grew cotton on approximately 2 million ha, this area has currently shrunk to 1.5 million ha, and cotton production has been cut back from 5.7 million tons to 3 million tons (the 2000 harvest). In so doing, in their opinion, the reduction in this index partially (by 1 million t) occurred precisely due to transfer of the Naryn River to the "energy" regime, whereby the winter runoff doubled and the summer runoff decreased by half. Consequently, the land irrigated with water from Kyrgyzstan became less productive in the summer, and Bishkek was able to increase its electricity production by 80% in the winter. Finally, Tashkent claims that due to the winter drainage of water in Kyrgyzstan, more than 130,000 ha of land have been submerged in Uzbekistan over the past ten years.

Continuing this practice threatens Uzbekistan not only with a significant decrease in its ability to provide the population with water in such large cities as Namangan, Andizhan, Kokand, and Ferghana, but could also lead to a deterioration in the epidemiological situation in these densely populated regions, or have disastrous consequences in general.

It is difficult for Bishkek to take into account Tashkent's demands, that is, give it larger amounts of water in the summer, for several other reasons. Kyrgyzstan is one of the poorest republics in the region as it is. It cannot resolve this problem without modernizing many facilities of its national economy, which requires investments. The republic also requires enormous funds for power engineering, which needs constant renewal of its basic stock. Suffice it to say that the auxiliary equipment of the Toktogul hydropower plant has already exhausted its mechanical resource. Reconstruction with complete replacement of equipment must be carried out at the Uch-Kurganskaia hydropower plant. And on the whole, more than 70% of the network and structures of the country's water supply and irrigation system is in need of urgent reconstruction and refurbishing. Therefore, in response to the complaints of its neighbors, Bishkek often asks them to pay for reconstructing and maintaining its hydropower complexes.

What is more, Kyrgyzstan does not have a large surplus of water, on the contrary, it is even feeling its shortage. For example, whereas in 1999, the highest index of the water volume in the Toktogul reservoir reached 16.3 billion cubic m (with a projected potential of 19.5 billion), in 2002, it dropped to 8.8 billion cubic m. The Toktogul hydropower plant was designed to operate under particular conditions: it stops working in the winter, and during this time its neighbors supply the republic with energy resources. Other technical problems are also becoming obvious. In particular, the water flowage in the Toktogul reservoir is dropping, and the prime cost of electricity production is increasing. The latter is directly related to the drop in water level in this reservoir: at a water volume of 16 billion cubic m, 2.3 cubic m are required to produce one kW/h, while at a volume of 10 billion cubic m, this index rises to 3.03 cubic m, and at 6 billion cubic m to as much as 4.5 cubic m. This means that at essentially the same passage of water through the hydropower plant turbines, the amount of electricity produced decreases by half.

Kyrgyz experts claim that the volume of water the republic "transfers" to its regional neighbors amounts to 17.572 cubic km, including 6.591 cubic km to Kazakhstan, 9.559 cubic km to Uzbekistan, and 1.442 cubic km to Tajikistan. In turn, Kyrgyzstan is receiving 402 million cubic m of water from its neighbors, including 325 million cubic m from Uzbekistan, and 77 million cubic m from Tajikistan (the Kairakkum reservoir).

From time to time, disputes flare up in Bishkek about the water use conditions in the Central Asian states. They are becoming a topic of discussion in the country's parliament, filling the pages of the main newspapers, and are constantly raised on television and radio programs. In so doing, a very attractive thesis is frequently put forward: "water is a commodity, and a commodity must be paid for." This means that the neighboring republics should pay for the water Kyrgyzstan "delivers" to them.

Attempts to enforce this argument in the norms of national legislation were made during the discussion and approval of the Law on Interstate Use of Water Facilities and Water Resources of the Kyrgyz Republic. The same thing can be seen in the actions of parliamentary deputies who refused to ratify several interstate agreements, for example, On the Use of Water Facilities of Interstate Water Use on the Chu and Talas Rivers. These actions even aroused an international response. For example, during an official visit to Kyrgyzstan in 2001, Kazakhstan President Nursultan Nazarbaev stated that this law does not have a legal basis, money should not be charged for irrigation water, this contradicts international law and is totally unacceptable to Kazakhstan. The parliamentary deputies of Kyrgyzstan essentially presumed that a fee would not be charged for all the water of the rivers that flow from the republic to neighboring states, but only for part of it, but that part is quite significant—21 billion cubic m.

These same parliamentary deputies published open letters to the president and first vice premier of Kazakhstan explaining their position and, in particular, presented very interesting data. In Soviet times, more than 2 billion Soviet rubles were spent to build Kirghizia's irrigation facilities. Between 1986 and 1991 alone, more than 68.3 billion cubic m of water were delivered from the Toktogul reservoir to the fields of neighboring Union republics. For this amount of water and the electricity it consequently did not produce, Kirghizia obtained 11,155,000 tons of coal, 3,598,000 tons of heating oil, and 76.5 million cubic m of natural gas from Uzbekistan and Kazakhstan. But after the collapse of the Soviet Union, these deliveries stopped and Kirghizia's neighbors demanded high prices for their payment. Only the Toktogul hydropower plant provided Uzbekistan and Kazakhstan with the possibility of increasing the area of irrigated land by 400,000 ha, as well as raise the supply of irrigation water from 70% to 90% for another

918,000 ha. The Uch-Kurganskaia hydropower plant made it possible to additionally irrigate more than 45,000 ha of land in Uzbekistan, and the Andizhan reservoir (with a volume of 1.7 billion cubic m), 340,000 ha. At present, Kyrgyzstan uses only 260 million cubic m from the Papan hydropower plant, with a capacity of 700 million cubic m of water, for its own needs. On the whole, with the help of these reservoirs, Uzbekistan could supposedly double the area of its cotton fields. But this data is somewhat dubious, since clear elements of subjectivism and political engagement were included in the method for calculating them. What is more, discrepancies can frequently be found in the indices presented. But discrepancies in details should not eclipse the main point—does a state have the right to charge for water or not.

Kyrgyz experts scrupulously estimated the detriment to the republic from the exploitation of hydro-power facilities, which they call interstate, although in this case this term is very disputable. Building these facilities led to the submersion of 47,000 ha of fertile land in Kyrgyzstan, which in cost terms amounts to 129.5 million soms (in 2001 prices) in annual losses. The annual loss from not producing electricity during the fall and winter, on the other hand, is equal to 61.5 million dollars. Between 1992 and 2000, the debt of neighboring countries which consume Kyrgyzstan's water resources amounted, according to the same estimates, to 140.8 million dollars. In the indicated period, neighboring states were supplied with more than 78 billion cubic m of water free of charge from the Toktogul reservoir alone, whereas Bishkek had to pay more than 669.3 million dollars for natural gas, oil, and coal. Kyrgyz experts claim that the annual economic gain from the use of their country's water resources and facilities amounts to 360 million dollars for Uzbekistan, 240 million dollars for Kazakhstan, and 60 million dollars for Tajikistan. And due to non-regulation of the drainage from the Toktogul reservoir, Uzbekistan alone could be deprived of about 35% of the profit it should receive from exporting the cotton it will no longer be able to grow. But the parliamentary deputies of Kyrgyzstan presumed the republic would be receiving very little by charging for water—around 2% of the above-mentioned economic gain. More than 25 million dollars are allotted from its budget for the maintenance and operation of the republic's irrigation facilities. And the amount of compensation its neighbors pay comes to 14.8 million dollars a year, that is, less than 0.1 cent per cubic m of water. This is tens of times lower than similar rates in other countries, which the Kyrgyz experts used as their reference point.

On the other hand, Bishkek does not like the situation where it is forced to deliver water to its neighbors free of charge, but buy fuel from them at high prices. So the disputes and conflicts are frequently over the price of this fuel, which the republic is simply unable to pay for on time and in full.

In response to its non-payment, Uzbekistan usually stopped deliveries of natural gas, whereby frequently in mid-winter at the peak of the cold season. As a result, escalation of the conflict was observed in Kyrgyzstan, since in the absence of blue fuel in the winter electricity consumption dramatically rises (by 10 million kW a day). It is impossible to prevent its overconsumption since the cold prompts the freezing people to make an active social protest. As a result, the republic's leadership had to adopt measures aimed at increasing the production of electricity, which, in turn, leads to an increase in water drainage by several hundreds of million cubic m. This flow bears down on Uzbekistan, destroys dams, submerges farm land and even some population settlements in its part of the Ferghana Valley, arousing justified protests from the local residents. And since this part of the Ferghana Valley is more populated and has fewer jobs, any aggravation in social tension here is fraught with dangerous consequences. So we end up with a vicious circle of mutual complaints.

## Not Every Commodity Has Its Buyer

In principle, international law permits the possibility of treating water not only as a state's personal property, but also as a commodity which can be sold to interested entities, including other countries. In several international documents, water is viewed not only as a natural resource, but also as an economic commodity. And in world practice, there have been cases when payments for water, for submerged areas, for spending on reservoir exploitation, and so on have been made between different countries. But nev-

ertheless, the details are always important in jurisprudence. Professionals working in this sphere precisely delineate the problem, depending on which water they are talking about. There are natural and man-made waterways, internal (within the limits of one state) and those on the territory of several states. The legal conditions for using the water in them cannot be identical, and are not.

As far as Kyrgyzstan goes, the matter concerns the possibility of selling the water of transborder rivers: the Chu, Talas, Naryn, Karadarya, Aksai, Saryjas, and Chatkal. But with respect to these rivers, international law does not recognize the unlimited possibilities of any state located on the banks of this river to carry out any actions with its water at its own discretion (arbitrarily) which may be of detriment to other countries also located on the banks of the river in question. This approach was stipulated for example in the international convention On the Protection and Use of Transboundary Watercourses and International Lakes, adopted in Helsinki on 17 March, 1992. In keeping with this document, certain states (in the terminology of the convention—"coastal states") should refrain from measures which could lead to a negative transborder effect. (Kyrgyzstan is not a party to this convention.) The prosperity of the states which use the water of these rivers is based precisely on the legal recognition of the need for mutually advantageous use of the benefits the water of these natural waterways entail. In other words, general prosperity is only possible on the basis of natural and inevitable limitations of the rights of each individual state regarding the use of the water.

From this it follows that based on international law, attempts by one state to unilaterally impose conditions on its neighbors whereby the water of transborder rivers is treated as a commodity are unlikely to be successful. And not because Bishkek simply has nothing with which to ensure compulsory implementation of these conditions, but mainly due to the fact that by applying such measures it will largely be contradicting the generally accepted norms of international law. And the fact that the republic itself consumes only about 7% of the water annually accumulated in its reservoirs is still not sufficient and indisputable legal reason for it to insist on a unilateral solution to the problem.

However, in so doing, Kyrgyzstan cannot be accused of trying to achieve its own ends, without taking into account the interests of its neighbors. The situation with water use in the region really is extremely complicated. There is a conflict of interests among the sides and no doubt a solution must be found to this situation. The declarative approach, expressed in the formula "let's leave everything as is," is unacceptable here, since it does not suit all the republics concerned. But the Central Asian countries have adopted such declarations twice: an agreement signed in 1992 by Kazakhstan, Uzbekistan, Kirghizia, and Tajikistan enforces the formula of equal rights of the states to the use of water resources, and it is also set forth in the Nukus declaration of 1995, where the matter concerns the adherence of the regional states to implementing documents adopted earlier on water use.

A compromise is necessary, but it cannot be reached. For example, Kazakhstan and Uzbekistan have repeatedly rejected Kyrgyzstan's arguments. It should be recognized that there are egoistic elements in the stances of all the parties to the conflict. For the situation itself largely arose because the system of compromise created during Soviet times was destroyed, and nothing new was created in its place. During the Soviet era, the development of irrigation agriculture in Uzbekistan and Kazakhstan was largely related precisely to the fact that the Union republics of the region were supplied with water and energy and could introduce hundreds of thousands of hectares of new land into agricultural turnover with the help of the reservoirs and hydropower plants built in Kirghizia.

The irrigation resources of Kirghizia's reservoirs were originally oriented toward supplying water to Kazakhstan and Uzbekistan: Kirghizia itself was allotted a limit of 11.9 cubic km of water (25% of its total resources), and the neighboring republics received 35.3 cubic km (75%). In so doing, a compromise of interests was reached on the basis of the mechanisms of the centralized planning system of revenue redistribution. Some of the profit from the sale of the agricultural products grown went to the budget of the Kirghiz SSR. Kyrgyz sources claim, for example, that during the 22 years of operation of the Toktogul hydropower plant alone, Uzbekistan and Kazakhstan received more than 6.9-7 billion dollars in clear profit, during the twenty years of operation of the Orto-Tokoisk reservoir, Kazakhstan received more than 550-600 million dollars in clear profit, and from the Kirov reservoir, 150 million dollars. As a result of the use of Kirghizia's water resources, neighboring republics supposedly obtained a total of 7.6-8 billion

dollars in clear profit. But only 500 million rubles was annually allotted to the budget of the latter. In other words, from the viewpoint of the Kyrgyz side, the operating cost of Kirghizia's irrigation facilities was included in the price of the end product of Uzbekistan and Kazakhstan's agrarian sector, which means we can say it has the right to count on a certain percentage of the profit obtained from the sale of this product.

From time to time, official Bishkek demands compensation from its neighbors. In particular, it insists on a payment of 109.78 million dollars for the operation of the Nizhne-Naryn cascade of hydropower plants under irrigation conditions, that is, not counting the production of electricity. And it also thinks that this sum is 7-fold lower than the revenue obtained by Uzbekistan and Kazakhstan when using water for irrigation. It must be noted that there is a certain logic in these arguments. But this is not enough to incorporate it into the tedious language of interstate agreements, since the other sides, for entirely understandable reasons, prefer not to pay attention to such arguments. What is more, in our opinion, Kyrgyz experts are right who suggest looking for a solution to the conflict not on the basis of "selling water as a commodity," but by creating a mechanism for Bishkek's participation in the profit of the agriculture of neighboring states. But this alternative has its difficulties too, since the situation with cooperation and integration in Central Asia leaves much to be desired. Nevertheless, from our viewpoint, the search for mutually acceptable solutions to the problem of joint water use has its prospects. This requires stepping up the work of the Interstate Coordination Water Management Commission created as early as the beginning of 1992. The convention mentioned above about the use of transborder waterways just happens to be aimed at organizing cooperation among the riverside parties "on the basis of equality and reciprocity" (Art. 3.6 and Art. 9.1).

It should be kept in mind that the region's water resources are currently being used essentially to the max. Kyrgyzstan, as we have noted, has potential advantages in this respect compared with some of its neighbors, but these advantages have to be realized, which is quite difficult. On the whole, in terms of per capita water supply, the region does not look very attractive. (This index amounts to approximately 3,000 cubic m a year in Central Asia, which, according to the U.N. classification, places the region in the category of those which are insufficiently provided for.) Nevertheless, as U.N. experts believe, 500 cubic m of water resources per person a year is the limit below which sustainable development is impossible, that is, the situation in Central Asia is still not threatening. But it must be improved, which is only possible on the basis of interstate cooperation. Otherwise, the shortage of water could bring about a mass of negative consequences for the region's entire sustenance system.

## Water Cannot Wait for Diplomats

The situation took an abrupt turn for the worse again at the beginning of 2004. Due to abundant rainfall, the level of water in the Toktogul (Kyrgyzstan), Kairakkum (Uzbekistan), and Shardarin (Kazakhstan) reservoirs significantly rose, which are connected by one of the largest (but not navigable) rivers in Central Asia, the Syrdarya. In so doing, the low-lying regions of the Kzyl-Orda Region (Kazakhstan) suffered the most. In earlier times, such problems were resolved by draining the surplus from the Shardarin reservoir into the Arnasai low-lying area (Uzbekistan). But in 2003, Uzbekistan built dams, as a result of which the outflow of water drastically decreased and the Shardarin reservoir began to fill to the critical point. Kazakhstan had two alternatives in this situation: either to drain all the surplus water into the Syrdarya, which would have inevitably led to flooding of the city of Kzyl-Orda, or fill this reservoir to the limit. But in the latter case, the danger arose of destroying the dam of the Shardarin state regional power plant, which was holding back this entire mass of water.

The situation again aroused interstate disputes. According to statements from the Kyrgyz side, in keeping with annually signed intergovernmental agreements, in recent years the republic supplied Uzbekistan and Kazakhstan with between 1.5 and 2.2 billion kW/h of electricity, whereby the water outflow amounted to between 5 and 6.5 billion cubic m. By the end of 2003, approximately 17 billion cubic m of

water had accumulated in the Toktogul reservoir. The winter outflow of water in recent years has been fluctuating; in 1999 it amounted to an average of 535 cubic m a month, in 2000, to 550, in 2001 to 522, in 2002 to 492, and in 2003 to 589 cubic m.

In 2003, Uzbekistan refused to sign a new agreement on purchasing electricity in Kyrgyzstan, the representatives of which suggested during the negotiations that the question of deliveries of heating oil and coal for the operation of the Bishkek thermal power plant should be resolved, which would make it possible to reduce the outflow of water. But an efficient solution to this problem was not found.

The dam broke at the end of February, and to combat the flooding in several regions, Kazakhstan had to introduce a state of emergency. This showed once again that the policy being conducted in the region has significant drawbacks. After all, not long before this, in December 2003, Bishkek and Astana signed a Treaty on Alliance Relations, assuming obligations to carry out “coordinated actions in the sphere of rational and mutually beneficial use of water facilities and water-energy resources in compliance with international agreements.”

The mass media and parliaments of Kyrgyzstan, Kazakhstan, and Uzbekistan began discussing the water topic in tones which clearly accused their neighbors, whereby they showed no qualms about their choice of expressions and evaluations. At times the viewpoints expressed directly fomented ethnic strife.

In the region’s states which have only recently begun building truly democratic societies such conflicts frequently rapidly escalate into ethnic confrontations. For it is easiest of all to accuse one’s neighbor of all one’s misfortunes, particularly if he is the member of a different ethnic group to boot. This only adds fuel to the fire. And it is often impossible to prevent it from getting out of hand on time precisely because the domestic policy of the region’s states is not truly democratic.

All the same, the passions gradually died down. Possibly with the arrival of Russian and Kazakhstani business in Kyrgyzstan, which has become much stronger during recent years, the republic’s power engineering industry will also see better times. Then it will be possible to finish building the Shamaldy-Saiskaia and Kambar-Atinskaia hydropower plants, as well as implement joint projects, including to restore, reconstruct, and modernize current facilities, engage in joint construction and use of the Kambaratin cascade of hydropower plants, and export electricity to third countries.

So the best way to resolve the mentioned conflicts is to develop specific—and not too declarative—multilateral cooperation among the states of the region. And the unilateral actions some countries are carrying out today, no matter how much they are justified by concern for the well-being of a specific nationality, are only aggravating the situation and delaying resolution of the problem of regional security and integration of the republics of Central Asia.