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Features of the regulatory framework for cooperation among the Central Asian countries in ensuring water security and overcoming interstate contradictions

Abstract. Having gained independence, the Central Asian countries updated their national security issues, an integral part of which was ensuring water security and establishing multilateral cooperation to overcome the conflict potential in their relations.

The problem of interstate regulation of the water issue has been aggravated by the fact that water security is in close interconnection with the problem of energy and human security in these countries and the region as a whole. At the same time, at the beginning of the practice of joint water use, the newly independent republics did not have a regulatory framework and practical experience in transboundary water distribution and neutralization of disputes and conflicts outside the Soviet institutional and legal framework.

The article therefore discusses interstate relations between the Central Asian countries on the issue of sharing transboundary rivers of the Aral Sea basin. The article presents the hydrography and the percentage of transboundary rivers runoff, and the water relations development dynamics of the above-mentioned countries is considered from 1991 to the present.

The article also provides analysis of the political and legal relationships and the degree of participation of these countries in regional initiatives. It reveals the mechanisms of bilateral and multilateral initiatives, including the principles and directions of the work of the International Fund for saving the Aral Sea and Programs to assist the Aral Sea basin countries as exemplary mechanisms in ensuring social and water-ecological security.

Also, the article shows possible scenarios for the situation in the next 30 years and forecasts the likelihood of destabilization in the region.

The authors conclude that the most productive mechanism for ensuring the region's water, energy and social security remains an integrated approach with the active implementation of the principles of integrated water resources management. The authors are convinced in the need to establish more expanded "network" relations at the inter-state level, as well as at the level of regional, subregional and international organizations and improve legal and institutional structures.

Keywords: integrated use and protection of water resources, ICWC - Interstate Commission for Water Coordination, IFAS - International Fund for saving the Aral Sea, BWO - Basin water management organizations, ASBP-Aral Sea basin program, IWRM - integrated water resources management, mechanism for joint distribution and water use.

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Introduction. After the collapse of the Soviet Union, distribution of water resources in the Central Asian republics became an acute issue.

Previously, before 1991, there was a balanced water use system, which provided certain "energy compensations" to those states that are located upstream of the main rivers of the region from the downstream and midstream republics of the Soviet Union in exchange for uninterrupted supplies of water for irrigation and electricity.

However, this system ceased to exist with the independence of the Central Asian republics. The borders between them, previously of administrative nature, became international state borderlines. Large rivers became transboundary, and the issue of water distribution has acquired an international dimension. So, since the 1990s, a "zone of regional tension" has arisen associated with the uneven distribution of water resources between the upstream and downstream states.

Targets and goals. Today, joint diplomatic steps and initiatives are an uncontested option

for resolving crisis in bilateral and multilateral relations between Central Asian countries in matters of regulating water security.

The purpose of this work is to show the significance of the regulatory platform built by these states to overcome political disagreements in resolving the region's water problems. At the same time, we carried out a physical-geographical analysis of water resources, an analysis of bilateral and multilateral agreements, and a review of the interests of actor countries.

History. Starting the study, it is necessary to analyze the current water situation in Central Asia, which causes mutual tension in "hydro-political" relations between the countries in the region.

To carry out such an analysis, we propose to refer to materials provided by the specialist of the Information Center of the Interstate Commission for Water Coordination in Central Asia, Rysbekov Yu. In his work, he provides a detailed description of hydrography, water supply level in Central Asian republics, as well as position of these countries based on availability of water resources and the state of the latter.

At the same time, in order to draw up a more complete picture of the water management status and assess the hydrological potential of the transboundary rivers of the Aral Sea basin and the hydroenergetic potential of the Central Asian countries, we suggest referring to digital data prepared by experts from the Regional Information System on the Use of Water and Land Resources in the Aral Sea Basin (CAWater-IS) and presented in the table below (Figure 1) [1].

The analysis of the data makes it possible to compare the level of water supply of the neighboring countries, assess the degree of their "water dependence" and show the interconnectedness of water issues with socio-economic policies.

Country	**River basin**		**Total in the Aral Sea basin**	
	Syrdarya	Amudarya	km³	%
Kazakhstan (downstream)	2,516	-	2,516	2,2
Kyrgyzstan (upstream)	27,542	1,654	29,196	25,2
Tajikistan (upstream)	1,005	58,732	59,737	51,5
Turkmenistan(downstream)	-	1,405	1,405	1,2
Uzbekistan (downstream)	5,562	6,791	12,353	10,6
Afghanistan and Iran	-	10,814	10,814	9,3
Total in the Aral Sea basin	36,625	79,396	116,021	100

Figure 1 - Surface water resources of the Aral Sea basin (average annual flow, km3 / year). http://www.cawater-info.net/aral/water.html

So, according to figure 1, we see that the longest (3019 km) and second largest river basin (219 thousand km²) is the transboundary river Syrdarya, 75.2% of which flows in Kyrgyzstan, crosses 4 republics and flows into the Aral Sea.

As for the more full-flowing (309 thousand km²) Amudarya, the length of which is 2540 km, it begins on the territory of Afghanistan, by the confluence of the Panj and Vakhsh rivers. Its main flow is formed on the territory of Tajikistan (74%), then flowing along the Afghan-Uzbek border, crossing Turkmenistan, it returns to Uzbekistan and flows into the Aral Sea, losing large water reserves along the way, through evaporation and widespread use in irrigation and household needs.

The distribution of the share of wastewater from the Syrdarya and Amudarya rivers is presented in the following Figure 2, which shows the individual share of runoff by country and the share of irrigated land in the region.

Country	Syrdarya (%)	Amudarya (%)	Total	Irrigated land (thousand hectars)
Kazakhstan (downstream)	6,9	-	6,9	786
Kyrgyzstan (upstream)	75,2	-	75,2	415
Tajikistan (upstream)	2,7	74	76,7	719
Turkmenistan(downstream)	-	2,27	2,27	1714
Uzbekistan (downstream)	15,2	8,5	23,7	4259
Afghanistan and Iran	-	13,9	13,9	-
Total in the Aral Sea basin				

Figure 2 - Formation of drains of the Syrdarya and Amudarya into the Aral Sea basin and the proportion of irrigated land in the region.

Compiled by the authors of the article (digital data retrieved from the info portal http://www.cawater-info.net/aral/water.html).

Thus, the average annual flow of all rivers to the Aral Sea basin is 115.6 km³. This volume includes 78.4 km³ of Amudarya drain and 37.14 km³ of Syrdarya runoff [2].

Based on the data above, we see that there is a significant uneven distribution of the runoff across countries and the share of countries in the irrigated lands of the region. Thus, Uzbekistan, occupying the 3rd place in the formation of the total runoff of transboundary rivers, is the leader in terms of the area of land irrigation with these waters, and vice versa Tajikistan, taking the first place in the total runoff is in the penultimate fourth place, in terms of the share of land irrigation. That is, there is a situation when countries that need large amounts of water for irrigation of large sown areas are directly dependent on the policies of the upstream countries, which, having large reserves, prefer to use it for hydropower purposes. At the same time, the irrigation of large crop areas and the cultivation of irrigated agricultural crops (cotton, rice, melons and gourds), on the territory of the downstream states, is somewhat a burden on their scarce water reserves.

It must be understood that the transboundary rivers of the Aral Sea basin represent a single closed system, the state of which determines the socio-ecological well-being of both the Aral Sea and the entire Central Asian region.

Further, in order to find out the reasons and prerequisites for mistrust in resolving water management issues in the mutual relations of Central Asian countries, we turn to the position and policy of each of the states.

First of all, we will present an overview of the downstream countries, that is, those countries on the territory of which transboundary rivers form a minimum percentage of runoff, but which are the "recipients" of water.

In Figure 2, we see that the "water dependence" of countries is formed not only from the runoff volume, but also from the irrigation level, as well as from the volume of consumption and annual use.

By comparing the data presented in the table, we can determine the degree of water dependence of each of the countries.

Kazakhstan. A vulnerable factor for the country's water security is the uneven provision of internal regions with water for hydro-energy needs and for drinking.

Meanwhile, the "water supply" of southern Kazakhstan and the lower Syrdarya river de-

pends on the work of the Kairakkum (Tajikistan), Toktogul (Kyrgyzstan), Charvak (Uzbekistan) reservoirs and canals passing through the territory of neighboring Uzbekistan.

Taking into account this factor, in 2008, by the Decree of the President of the Republic of Kazakhstan N. Nazarbayev, the National Plan for Integrated Water Resources Management and Improving the Efficiency of Water Use of the Republic of Kazakhstan for 2009–2025 was approved.

In accordance with paragraph 4.7 of the document, the solution of the problem of joint water use in transboundary river basins requires the expansion of cooperation between Kazakhstan and neighboring countries with the aim of a simultaneous transition to integrated water resources management throughout the transboundary basin [3]. Consequently, Kazakhstan's position on water issues is that the solution of all issues on water use should be considered comprehensively and collectively [4].

Uzbekistan. In a similar position of a downstream country is Uzbekistan. Less than 25% of the flow of the Amudarya and Syrdarya is formed in the country, respectively, more than 90% of the water resources used by Uzbekistan are formed in the territory of neighboring states. Most of the large (Naryn, Surkhandarya, Zeravshan, etc.) and small rivers flow through Uzbekistan within the middle and lower reaches.

Important water sources of the Syrdarya river, the waters of the Sokh, Andijan, and Kasansay reservoirs are located on the territory of Kyrgyzstan. The water supply of Bukhara and Navoi regions and up to 70% of the irrigated lands of Kashkadarya region depend on the stable operation of hydraulic facilities located on the territory of Turkmenistan. At the same time, the water supply of the Jizzakh and Syrdarya depends on the work of the Kairakkum hydroelectric complex, and on the flow of the Zeravshan river - Samarkand, Navoi, Kashkadarya and Jizzakh regions. In turn, the Dustlik canal, passing through Uzbekistan, feeds about 130 thousand hectares of land in South Kazakhstan [5].

For 25 years, the Uzbek side has preferred to blame upstream Tajikistan and Kyrgyzstan for the scarcity and uneven use of water resources, emphasizing their role in exacerbating the Aral Sea disaster.

However, the Development Strategy for Uzbekistan for 2017-2021 provides comprehensive reforms in agricultural sector in order to reduce water consumption by increasing the efficiency of water use [6].

Turkmenistan. Regarding the politics of Turkmenistan, the following aspects should be taken into account:

- in the Turkmen territory there are more than half of the water area of the Tuyamuyun hydroelectric complex, supplying the Republic of Karakalpakstan, Khorezm region of Uzbekistan and Dashkhovuz region of Turkmenistan with water, as well as head water intakes and other infrastructure facilities of the Amu-Bukhara and Karshi machine canals of Uzbekistan. At the same time, drainage waters from the irrigated lands of Kashkadarya, Bukhara and Khorezm regions of Uzbekistan are discharged onto the Turkmen territory.

Given this, the situation has some duality. Firstly, given the climatic conditions and the desert nature of the relief, Turkmenistan, with a total flow of transboundary rivers of only 2.27% and irrigating 1,714 thousand hectares of agricultural crops, is, in our opinion, the most in need for fresh water. Secondly, given the nature of the flow of the Amudarya through Turkmenistan and its return to Uzbekistan, the presence of an extensive system of irrigation canals, Turkmenistan is in the rank of "upper" states in relation to Uzbekistan, depending on the season of the year.

In 2016, the Parliament of Turkmenistan adopted the New Code of Turkmenistan, the basis of which was the accession of Turkmenistan to the UNECE Convention dated 2012. By adopting this code, Turkmenistan takes the obligation to comply with the principles of the Convention when resolving water management issues and cooperating with countries and international organizations in water issues. The most important of these principles is the principle of integrated

water resources management (hereinafter, IWRM) and participation in basin water management organizations (hereinafter, BWO) [7].

Kyrgyzstan. Regarding the positions of the upstream Kyrgyzstan and Tajikistan, it is necessary to take into account their high level of water supply, the increasing potential and the desire of states to generate and export energy by increasing the capacity of hydropower plants, seeing this as an opportunity to strengthen energy security and a promising source of income. So, Kyrgyzstan, on the territory of which more than 75% of the surface runoff of the Aral Sea basin is formed, is interested in the intensive development of its hydropower potential.

According to independent expert Erkin Mateyev, the country has 252 large and medium-sized rivers, and the potential is estimated at 18.5 million kW of power and more than 140-160 billion kWh of electricity. Despite the fact that 94% of the country's total share of electricity in the country is generated by hydroelectric power, hydropower potential is used only by 9 percent [8]. Moreover, Kyrgyzstan proposed to reconsider the mechanisms of mutual agreements with neighboring countries for the use of their hydroelectric facilities in the irrigation regime. For this purpose, proposals were put forward such as to introduce a payment for water as a separate resource of economy or to pay compensation for the maintenance of water infrastructure. [9, p. 97]. Water relations are regulated by the Water Code of the Kyrgyz Republic of January 12, 2005, which also proclaims the IWRM principles [10].

Tajikistan. The republic, which occupies a leading position in the world in terms of the availability of hydropower potential, occupies a special place in the "water hierarchy". Within that, up to 80% of the Amudarya river flow and almost the entire Zarafshan river flow are formed here. The runoff of the Amudarya river is deformed by the Nurek and Rogun reservoirs on the Vakhsh river.

Tajikistan continues to promote the idea of building large hydropower plants on transboundary rivers and intends to actively develop hydropower. Thus, on September 9, 2019, the second Rogun unit of the six planned was launched. After the full commissioning of the hydropower plant, it is expected that it will provide the whole country with cheap energy and will allow exporting it to Afghanistan and Pakistan. These efforts of Tajikistan are synchronized with how Tajikistan actively positions itself in the international arena in environmental matters. Thus, President E.Rahmon launched the International Decade of Action initiative "Water for Sustainable Development, 2018-2028", which was supported by the UN General Assembly, which earlier adopted the relevant resolution on December 21, 2016. This initiative started on March 22, 2018 on the International Water Day.

As for the domestic water policy, on October 9, 2019, at the 15th meeting of the Governing Committee of the National Political Dialogue, the National Water Strategy for the period until 2030 was presented, according to which the water issue is an integral part of national security.

Given the detailed political and geographical characteristics and the current "hydro-political" situation, there remains an urgent need to maintain and deepen the regulatory framework for the integrated management of transboundary water resources in Central Asia.

In this matter, we agree with the previously-mentioned expert Rysbekov Yu., who believes that only the existence of a regulatory framework for interstate cooperation is an effective way to neutralize threats to water security in Central Asia.

Moreover, according to the Director of the Institute of Geography of the Ministry of Education and Science of Kazakhstan, Ahmetkal Medeu, by 2040 the water shortage will be about 15.5 cubic kilometers, that is, the amount of water in the region will be reduced by a third, with the demand growing up to 40%. And here we should take into consideration the fact that out of 8 water basins, 7 are transboundary and Kazakhstan is completely dependent on neighboring countries in that point [11].

These forecasts once again confirm that in matters of transboundary water resources it is necessary to overcome purely state interests and apply a comprehensive integrated basin ap-

proach, as is the practice in Europe, the basis of which are contractual relations.

Research Methods. The theoretical and methodological basis of the study is a combination of approaches developed by political science, history, geography and philosophy.

The article used the historical-political method when considering the dynamics of the water relations development; event analysis to study the state of interstate relations; the analogy method was used to predict a possible scenario for the situation in the region.

The empirical basis of the study is the analysis of official documents and agreements, international and interdepartmental memoranda, official data and reports of interstate water commissions.

Theoretical analysis and understanding of the foreign policy priorities of the CA countries were carried out in accordance with the rules of the methodology and logic of scientific knowledge.

Results / discussion. Regional level of legal cooperation and the practice of joint concessions.

The starting point of the joint contractual relations of the CA countries in rational use of water and energy resources of transboundary rivers (hereinafter referred to as the TBR) and the neutralization of the conflict potential in mutual relations in the field of water use was the Framework Agreement on Cooperation in Joint Management and protection of transboundary water resources, signed in Almaty on February 18, 1992 [12]. Under this agreement, the existing water distribution system, inherited from the Soviet era, was to be maintained until the development of new rules on the basis of international treaties.

This agreement actually created a single body - the Interstate Commission for Water Coordination (hereinafter, ICWC), which makes decisions by consensus, and its executive bodies: Basin water organizations (hereinafter, BWO) “Amudarya” and “Syrdarya”. This agreement was confirmed by the Decision of the Heads of CA states in Kyzylorda on March 26, 1993 and their “Agreement on joint actions to solve the problem of the Aral Sea and its coast, environmental rehabilitation and ensuring the socio-economic development of the Aral Sea”, and later - “Agreement on the Status of the International Fund for saving the Aral Sea and its organizations” dated April 9, 1999. [13].

At the International conference in Nukus (Uzbekistan) on September 20, 1995, the heads of CA states solemnly proclaimed their commitment to the ideas of equality and interstate cooperation on water issues. In the adopted Nukus Declaration, the presidents of the five states of the region reiterated their “commitments for full cooperation at the regional level based on mutual respect, good neighborliness and determination” on the water and energy issue of Central Asia. [14, p. 98].

This was followed by the Bishkek Statement on May 6, 1996, which for the first time recognized the need “to accelerate the development of a new water allocation strategy and economic management practices in water and energy resources use” [15].

The next year, the Kazakh party completed the construction of a sand dam that divided the Aral Sea into two reservoirs. The western, Uzbek, part of the sea was then cut off from the runoff of the Syrdarya and continued to dry out, but the water level in the eastern Kazakhstani part began to rise [16, p. 73].

After the destruction of the dam, in 2003, Kazakhstan, with the support of the World Bank, began construction of a full-fledged dam with a hydraulic shutter to discharge water into the South Aral, in the Uzbek part. The Kokaral dam was commissioned in 2005 and allowed to raise water level to 42 meters of absolute height above sea level: it is 14 meters higher than in the South Aral, but 11 meters lower than in the 1970s.

Among other agreements, the 1998 Agreement on the Shared Use of Water and Energy Resources of the Syrdarya Basin should be mentioned. This agreement had the potential to consolidate equitable use of resources. But the conflict potential between the basin states was espe-

cially great here, because Kyrgyzstan has the capability to regulate most of the Naryn runoff, and hence the Syrdarya [17, p. 8].

By signing this agreement, the countries developed a mutually beneficial water use mechanism, the rules of which were as follows: Kyrgyzstan committed to discharge most of the water in summer, in exchange for the obligation of the plain republics to supply Kyrgyzstan with electricity in winter.

So, Uzbekistan has committed to supply natural gas, and Kazakhstan - coal and fuel. The number of deliveries is negotiated annually. However, the Agreement is unstable and is often violated by all parties. Periodically, interruptions in energy supplies to Kyrgyzstan occur. The Kyrgyz government, without guarantees for energy supplies, begins to use the Toktogul reservoir on the Naryn River, a tributary of the Syrdarya in energy generation mode rather than with irrigation purposes. This means that Kyrgyzstan discharges water from the reservoir in winter. In turn, these actions cause the destruction of dams and flooding of agricultural land in the "lower" countries and the shortage of water needed for irrigation in summer.

Under these conditions, Kazakhstan was forced to build the Koksaray reservoir and a counter-regulator in 2011 to deal with floods along the Syrdarya River in South Kazakhstan and Kyzylorda regions.

An important mechanism of "water diplomacy" may become the creation and operation of the Water and Energy Consortium in Central Asia" (hereinafter referred to as the WEC in Central Asia), the need for which was emphasized back in 1998, at the time of signing the "Agreement on Cooperation in the Field of Environmental Protection and rational nature management". WEC CA can become a universal mechanism for resolving water management issues and reducing confrontation on the most sensitive issues. However, disputes over "shares" in the consortium, unwillingness to compromise, low level of trust and regional political rivalry impede the implementation of this project.

It is noteworthy that at the Summit of the heads of founder states of the International Fund for saving the Aral Sea (hereinafter, IFAS), which was held in Turkmenistan in 2018, the First President of Kazakhstan N. Nazarbayev proposed to re-create the international water and energy consortium in Central Asia, as well as improve the organizational structure and its contractual legal base.

Also, it is assumed that the "Framework Convention on Environmental Protection for Sustainable Development in Central Asia" adopted on November 23, 2006 in Ashgabat, containing a number of principles and significant provisions regarding water resources will be of great importance for international legal regulation of these issues.

At present, the Convention is not signed by all parties and is awaiting signature by the remaining countries of the region.

The practice of bilateral cooperation. Intraregional level. An important bilateral agreement regulating water management relations and preventing the emergence of threats to water security is the Kyrgyz-Kazakhstani Agreement on the Use of the Waters of the Chu and Talas Rivers signed in 2000. In accordance with this agreement, the Kazakhstani side is to partly compensate Kyrgyzstan the costs of maintaining the interstate water infrastructure. This agreement is valid up to date; it regulates the costs of maintaining hydraulic structures on the Chu and Talas rivers, and is evaluated by both parties as exemplary.

To solve problems associated with the unsatisfactory implementation of the Kazakh-Kyrgyz-Uzbek agreement in 1998, Kazakhstan took the initiative to create Syrdarya Water and Energy Consortium. In December 2001, Kazakhstan and Kyrgyzstan signed a preliminary agreement to create the consortium, but Uzbekistan refused to join.

In June 2001, the Kyrgyz parliament passed a law concerning the collection of fees from countries that use Kyrgyz water resources. According to this document, the Kyrgyz government was to require water consumers to participate in the financing of Kyrgyz waterworks. The law was

perceived with irritation in Uzbekistan and Kazakhstan [18, p. 74]. Subsequently, Bishkek softened its initial position, limiting itself to requiring payments from countries located downstream of rivers passing through Kyrgyz territories only for water passing through Kyrgyz reservoirs and canals.

In March 2002, Uzbekistan, on the basis of the agreement with Kyrgyzstan, undertook an obligation to partly cover the costs of operating the Toktogul reservoir in exchange for a guarantee of water supply during the irrigation period.

The activities, significance and prospects of IFAS in strengthening water, environmental and social security. A certain understanding and practical approach to the problem in the early 1990s led the countries of the region to take important timely initiatives.

Together with the decision to create an interstate body for water management of the ICWC in Central Asia, the parties formed the International Fund for saving the Aral Sea in 1993, the founders of which were all five Central Asian republics.

The objectives of IFAS were the financing of joint projects and programs for the environmental improvement of the Aral Sea basin and raising the level of social status of the region's population. Over the period of operation of IFAS and its organizations, they have become an effective platform for "water diplomacy" and the elaboration of bilateral and multilateral documents. A number of treaties and agreements on cooperation in the field of water allocation, joint management, use and protection of water resources in the region have been adopted. In December 2008, IFAS received observer status at the UN [19].

IFAS is trying to achieve its goals and objectives by implementing the provisions of "the Aral Sea Basin Programs" (hereinafter, the ASBP). As of 2019, three Aral Sea Basin Programs were implemented and the ASBP-4 is being developed.

The first ASBP-1 was called the "Program of concrete actions to improve the environmental situation in the Aral Sea basin for the next 3-5 years, taking into account the socio-economic development of the region" and was approved on January 11, 1994 in Nukus.

More detailed information on the implementation of projects, areas of work, financing and the results of all three ASBP programs is available on the information portal of the IFAS Executive Directorate in Kazakhstan [20].

The next, ASBP-2, adopted on August 28, 2003, identified the main priorities in improving the environmental and socio-economic situation in the region for the period from 2003 to 2009. The Program included 14 priority areas [21].

On December 9, 2010, at the coordination conference organized by the IFAS Executive Committee, the Third Aral Sea Basin Program for 2011-2015 (ASBP-3) was approved. Its main goal was to improve the living conditions of the peoples in the region by applying the principles of IWRM, developing mechanisms for integrated use of resources and protecting the environment. The program covered four areas: integrated water resources management, environmental, socio-economic, improvement of institutional and legal mechanisms [22].

On January 30, 2018, the IFAS Board decided to develop the ASBP-4. To date, preparatory work is carried out by the regional working groups which have combined the efforts of IFAS, ICWC CA, "Cross-Border Resource Management", the Interstate Commission for Sustainable Development (ICSD), the German Society for International Cooperation (GIZ), the project of the EU "Nexus in Central Asia", implemented jointly with the Regional Environmental Center for Central Asia (CAREC) and other authorized structures from all 5 Central Asian states, national experts and international partners.

Thus, the activities of IFAS and its partners in the implementation of the ASBP projects are the most effective mechanisms capable of uniting the efforts of the entire Central Asian "five" and their partners on the water issue in the Aral Sea basin.

As of 2019, the work of the first three ASBPs has been completed, but the tasks have been partially implemented. In more detail, the results of the large-scale work on water resources and

the ecology of Central Asia are presented in the Report on the IFAS activity on their information portal [23].

The ASBP-4 project is expected to cover the period until 2030, complete unfinished projects, strengthen the political, legal and institutional component and become part of global efforts to implement the commitments of the Paris Agreement on Climate Change and the UN Sustainable Development Concept.

In general, the vigorous activity of the participants of all three previous ASBPs over the past 27 years and the prospects for common efforts within the framework of the PABM-4 will contribute to the implementation of the initial stage of "water diplomacy" in Central Asia and the development of the Central Asian Water Strategy.

It is expected that the Strategy will form the basis of the UN Global Water Strategy to unite and ensure water, energy and food security in Central Asia, without harming the ecosystem.

Factors hindering water security in the region. Melting glaciers and desertification as a result of rising temperatures.

Since the mid-20th century, the average temperature in the southern part of Central Asia has increased by 0.5 º C, which provoked the melting of glaciers and depletion of water reserves and raised the issue of desertification. The vulnerability factor of the economies of the region from climatic conditions is that the well-being of the population is highly dependent on agricultural income. According to forecasts, grain yields may decline by 37% by 2030, and countries have high aridity indicators [24].

Reduction of water resources. This factor is important both for water and energy security in the region. As noted above, 90% of hydropower production in Tajikistan and Kyrgyzstan depends on water resources. By 2050, the water flow in the Syrdarya basin may decrease by 2-5%, and in the Amudarya basin by 10-15%, which will worsen the water shortage [25].

Population growth. According to the ICWC, in 1990 the total population of the region was 33.7 million people. According to the Institute of Demography of the Higher School of Economics, as of January 1, 2019, the population of the region reached 73.3 million people [26]. The total population growth in 2019, in comparison with 1990, amounted to more than 39 million people. Moreover, according to the UN estimates, an increase in population up to 82 million people is expected by 2030 [27].

Under these conditions, today there is a sharp decline in the specific water supply in the region, the rate of which has decreased over the past forty years from 8.4 thousand m^3 / year per person to 2.5 thousand m^3 / year and continues to decline.

According to ICWC forecasts, by 2040 water availability may drop to a critical level of 1.5 thousand cubic meters per year per person, due to increased consumption and growth of economies and population in the region [28].

The factor of Afghanistan. The transboundary rivers Panj and Amudarya are located in the northern part of the country. Thus, the Amudarya originates in Afghanistan through the confluence of the Panj (60%) and Vakhsh (40%) rivers and flows along the northern border of Afghanistan with Tajikistan and Turkmenistan at length of more than 1,125 km, then continuing its route of 1,415 km along the desert terrain of Uzbekistan and Turkmenistan, the river flows into the Aral.

Also, the Murghab and Tedjen rivers belonging to the Aral Sea basin begin in Afghanistan. The military conflict with the USSR and all subsequent conflicts caused enormous damage to agriculture and led to the desolation of the entire irrigation system and Afghanistan for long fell out of the negotiation space of the Central Asian countries and mutually beneficial water use.

In case of establishing irrigation system and plans to create hydropower facilities, Afghanistan will actively use the potential of water in the upper part of the rivers. Only for irrigation, the claims of the Islamic Republic on the Panj runoff will amount to 3.3 km^3 per year or 11.6% of the annual runoff of this river [29, p. 61].

With the fall of the Taliban regime, the international community, represented by the United

Nations and Western countries began to pay attention to water management issues and assist the civil administration of H.Karzai in restoring irrigation. A national plan for the restoration and development of irrigation was drawn up and projects began to be funded. By 2008, the Government had prepared two documents defining the position of Afghanistan in relation to transboundary water issues: "Afghanistan's Transboundary Water Policy" and "National Water Security Strategy".

This document indicated that neighboring countries, without consulting with Afghanistan as a source of water in the upper reaches, increase water consumption, which may cause potential conflicts on the northern border of the country due to the importance of water-intensive industries such as cotton growing. It is noteworthy that in 2009 Afghanistan adopted the Law on Water, in which it paid special attention to IWRM [30, p.4].

Moreover, in 2014 the authorities of Afghanistan proposed to draw a new agreement with the Central Asian countries on the division of the Amudarya waters, which the neighbors did not accept. Despite this, international financial institutions are ready to finance the restoration of agriculture and the construction of hydrotechnical facilities within the Amudarya basin. Under these conditions, an increase in water consumption may reach 3-4 thousand cubic meters per year per person. Given the launch on September 9, 2019, 2 units of the Rogun HPP in Tajikistan and the prospects for the construction of four more units, it is expected that with the start of the implementation of the projects on the Afghan side, the situation will get even worse.

So, in addition to complex interstate problems in inter-sectoral interaction between the countries concerning water resources, there are also changing natural, climatic and social conditions, as well as the Afghan factor. In the future, with passive approach to resolving the above-mentioned problems, it may bring to an even more complicated geopolitical situation, and vice versa, they can become a platform for joined efforts and mutually beneficial cooperation, an example of which are several bilateral regional agreements, IFAS activities and implementation of the obligations undertaken within the framework of the UN initiatives.

Conclusion. Forecasts and scenarios for the development of the situation in the region and proposals for overcoming crises.

So, in the region today there is an ambiguous situation regarding the regulation of water use and the formation of mechanisms that can take on the role of a stabilizer in interstate relations and a guarantor of water security in the region.

In order to assess the degree of protection of the population of the Aral Sea basin within international standards, we turn to the 2013 UN Document "Water Security and the Global Water Agenda". The document has the following definition: "water security is the ability of the population to have sustainable access to an adequate amount of acceptable water quality to maintain livelihoods, human well-being and socio-economic development ..." [31, p. 4].

Taking into account political and geographical characteristics of the transboundary rivers of the Aral Sea basin, the set of established "hydro-political" and energy interests, the presence of imperfect legal practice of interstate and regional cooperation, the activation of traditional and new challenges mentioned above, the presence of the Afghanistan factor, it is fair to say that water security in Central Asian republics undergoes tremendous pressure and requires detailed attention and an integrated approach at all levels (local, state, interstate, basin, inter-regional and within the UN). Delay in the decision and the lack of desire for consensus on these issues is fraught with their aggravation and a decrease in general level of regional and international security.

The basis for such judgments in our opinion is the established order of things and the conclusions made in the report "Global Water Security" prepared by the US CIA. It indicates, in particular, that in the next thirty years, problems around water resources in the Amudarya basin may lead to "an increase in regional tensions for water". In the next ten years, the likelihood of using water resources as a weapon or the realization of terrorist goals will grow" [32]

With the vulnerability of water resources to expected climate changes, the absence of clear agreed regional mechanisms for joint water use and environmental protection, taking into account

future factors, it can be assumed that the above forecasts can come true if certain actions are not taken to prevent such scenarios.

Thus, we have formulated some provisions that will help formulate approaches and implement a block of comprehensive measures that will strengthen water-energy and regional security in Central Asia:

1. To constantly improve and use institutional and legal framework that responds to challenges in a timely manner;

2. To promote successful and quality work of regional and subregional institutions and agreements. The basis of such interstate cooperation today are the 1992 "Agreement on cooperation in the field of joint management, use and protection of water resources", the 1998 intergovernmental "Agreement on the use of water and energy resources of the Syrdarya river basin";

3. To formulate, in agreement with partners, a clear national policy taking into consideration the interests of the entire population of the Aral Sea basin, expressed in statements, decrees of the heads of states, in bilateral and multilateral agreements;

4. To maintain a positive work experience and improve organizational structure and legal framework of IFAS;

5. To develop and implement the ASBP-4, elaborated until 2030, taking into account the experience of the first three ASBP programs from 1994 to 2015;

6. To improve the legal activity of ICWC, increase the number of its participants from the energy sector and environmental organizations;

7. To implement a policy of digitalization, public awareness, automation, improving the accuracy of the runoff and strengthening the control of its accounting, as the main tools to increase the availability of water in the region;

8. To actively cooperate with international organizations and programs within the UN and other regional organizations and accede to international conventions.

9. To study and incorporate the European experience in integrated water resources management as part of the implementation of the principle of integrated water resources management.

Integrated water resources management at the regional level, based on common interests and principles of IWRM, synchronized with a similar approach at the national level and compliance with the national laws of the countries in the region, will contribute to the proper management of water, land, energy and other resources, including human resources.

Список литературы

1. Поверхностные водные ресурсы бассейна Аральского моря (среднегодовой сток, км3/год) // Региональная информационная система по использованию водно-земельных ресурсов в бассейне Аральского моря [Электрон. ресурс]. - 2019.- URL: http://www.cawater-info.net/aral/water.htm (дата обращения: 8.12.2019).

2. Ибатуллин С. Проблемы бассейна Аральского моря и значение регионального сотрудничества [Электрон. ресурс]. - URL: https://www.unece.org/fileadmin/DAM/SPECA/documents/ecf/2010/AralSea.pdf (дата обращения: 8.12.2019).

3. Как в Казахстане обстоят дела с водным вопросом [Электрон. ресурс]. - 2019. - URL: https://kursiv.kz/news/ekonomika/2019-02/kak-v-kazakhstane-obstoyat-dela-s-vodnym-voprosom (дата обращения: 9.12.2019).

4. Казахстан озвучил позицию по водному вопросу в Центральной Азии [Электрон. ресурс]. - 2019. - URL: https://www.inform.kz/ru/kazahstan-ozvuchil-poziciyu-po-vodnomu-voprosu-v-central-noy-azii_a3507789 (дата обращения: 8.12.2019).

5. Рысбеков Ю.Х. Трансграничные водные ресурсы Центральной Азии: политические и правовые аспекты бесконфликтного использования. Научно-информационный центр МКВК [Электрон. ресурс]. - URL: http://cawater-info.net/reta/documents/pdf/rysbekov280405.pdf (дата обращения: 8.12.2019).

6. Персинг У. Узбекистан и Таджикистан - катализаторы регионального сотрудничества в сфере водопользования [Электрон. ресурс]. – 2018. - URL: https://russian.eurasianet.org/node/65131 (дата обращения: 9.12.2019).

7. Водный кодекс Республики Туркменистан [Электрон. ресурс]. – 2018. - URL: https://online.zakon.kz/Document/?doc_id=38999429#pos=159;-184 (дата обращения: 9.12.2019).
8. Матеев Э.Мнение: Малые ГЭС как альтернатива для Кыргызстана [Электрон. ресурс]. – 2018. - URL: https://knews.kg/2018/12/11/mnenie-malye-ges-kak-alternativa-dlya-kyrgyzstana/(дата обращения: 9.12.2019).
9. Жильцов С., Бименова А. Политика стран ЦА в области использования водных ресурсов трансграничных рек // Центральная Азия и Кавказ. – 2015. – Т.18. Выпуск 1.- С. 90-100.
10. Водный Кодекс Кыргызстана от 12 января 2005 года №8. В редакции от 30 июля 2019 года №107 [Электрон. ресурс]. – 2019. - URL: http://cbd.minjust.gov.kg/act/view/ru-ru/1605?cl=ru-ru (дата обращения: 9.12.2019)
11. Кризис водных ресурсов: количество воды в ЦА сократится на треть [Электрон. ресурс]. – 2019. URL: https://24.kz/ru/news/social/item/339017-krizis-vodnykh-resursov-kolichestvo-vody-v-tsa-sokratitsya-na-tret (дата обращения: 9.12.2019).
12. Алматинское Соглашение о сотрудничестве в области совместного управления и охраны трансграничных водных ресурсов от 18 февраля 1992 года [Электрон. ресурс]. – 1992. - URL: http://www.icwc-aral.uz/contacts_ru.htm (дата обращения: 9.12.2019).
13. Соглашение о совместных действиях по решению проблемы Аральского моря и Приаралья, экологическому оздоровлению и обеспечению социально-экономического развития Аральского региона. [Электрон. ресурс]. – 1993. – URL: http://www.icwc-aral.uz/statute13_ru.htm (дата обращения: 9.12.2019).
14. Сидорова Л. Государства Центральной Азии: проблемы совместного использования трансграничных водных ресурсов //Центральная Азия и Кавказ. - 2008. - № 1 (55). - С.98-104.
15.Вопросы межгосударственного водораспределения [Электрон. ресурс]. – 2019. – URL:. http://www.cawaterinfo.net/bk/water_land_resources_use/docs/interstate_water.html (дата обращения: 9.12.2019).
16. Международные отношения в Центральной Азии. Под редакцией Богатурова А.Д. - М.: Аспект Пресс. – 2011. – 550 с.
17. Эшмент Б. Распределение водных ресурсов в Центральной Азии. Исследование. – Алм.: Фонд им. Фридриха Эберта. - 2011. – 27 с.
18.Богатуров А., Дундич А., Троицкий Е. Центральная Азия: «отложенный нейтралитет» и международные отношения в 2000-х годах. Очерки текущей политики. – М.: НОФМО, 2010. – 104 с.
19. Ибатуллин С. Проблемы Бассейна Аральского моря и значение регионального сотрудничества [Электрон. ресурс]. – 2010. - URL: https://www.unece.org/fileadmin/DAM/SPECA/documents/ecf/2010/AralSea.pdf (дата обращения: 10.12.2019).
20. ПБАМ-1. [Электрон. ресурс]. - 2019. - URL: http://www.ifas.kz/ru/page/pbam-1(дата обращения: 10.12.2019)
21. Вторая Программа бассейна Аральского моря была разработана в соответствии с Решением Глав Государств в Душанбе 6 октября 2002 года [Электрон. ресурс]. – 2019. – URL: https://aral.uz/wp/asbp/asbp2/ (дата обращения: 10.12.2019).
22. Что такое ПБАМ-3. [Электрон. ресурс]. – 2016. - URL: http://ru-ec-ifas.waterunites-ca.org/main/192-dokument-pbam-3-s-predlozheniyami-i-zamechaniyami-stran-ca.html (дата обращения: 10.12.2019).
23.Отчет о деятельности МСФА 2013-2016. [Электрон. ресурс]. – 2016. - URL: http://www.cawater-info.net/library/rus/ifas/report_ifas.pdf (дата обращения: 10.12.2019).
24. Почему Казахстан рискует терять 7 миллион тонн зерна в год. [Электрон. ресурс]. – 2010. - URL: https://forbes.kz//process/expertise/pochemu_kazahstan_mojet_teryat_7_mln_tonn_zerna_v_god/ (дата обращения: 10.12.2019).
25. Центральная Азия может понести масштабные потери из-за изменения климата. [Электрон. ресурс]. – 2019. - URL: https://eadaily.com/ru/news/2019/06/26/centralnaya-aziya-mozhet-ponesti-masshtabnye-poteri-iz-za-izmeneniya-klimata (дата обращения: 10.12.2019)
26. 15 новых независимых государств. Численность населения на начало года,1950-2019. [Электрон. ресурс]. – 2019. - URL: http://www.demoscope.ru/weekly/ssp/sng_pop.php (дата обращения: 10.12.2019).
27. Демография Центральной Азии к 2100 году (инфографика) [Электрон. ресурс]. – 2017. – URL: https://caa-network.org/archives/10783 (дата обращения: 11.12.2019).
28. Просто добавь воды: воды в Центральной Азии всем может не хватить [Электрон. ресурс]. – 2017. – URL: https://ru.sputniknews.kz/economy/20171123/3843115/prosto-dobav-vody-v-centralnoj-azii-vsem-mozhet-ne-hvatit.html (дата обращения: 10.12.2019).
29. Зонн И.С., Жильцов С.С., Семенов А.В., Костяной А.Г. Водная политика Афганистана в Центральной Азии // Вестник Московского университета имени С.Ю.Витте. - 2018. - Серия1. Экономика и управление. №3(26). - С.54 – 66.

30. Кинг М., Стюртеваген Б. Эффективное использование водных ресурсов Афганистана [Электрон. ресурс]. – 2010. - URL: http://amudaryabasin.net/sites/amudaryabasin.net/files/resources/Afghanistan_Water.pdf (дата обращения: 12.12.2019).
31. «Безопасность водоснабжения и Глобальная повестка дня в области водных ресурсов» [Электрон. ресурс]. – 2019. - URL: https://www.un.org/ru/sections/issues-depth/water/ (дата обращения: 12.12.2019).
32. Томберг И. Энергетика Центральной Азии: проблемы и перспективы. [Электрон. ресурс]. – 2012. - URL: https://russiancouncil.ru/analytics-and-comments/analytics/energetika tsentralnoy-azii-problemy-i-perspektivy/ (дата обращения: 13.12.2019).

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Особенности нормативно-правовой базы сотрудничества стран ЦАР в сфере обеспечения водной безопасности и преодоления межгосударственных противоречий

Аннотация. Получив независимость, страны Центральной Азии обновили свои вопросы национальной безопасности, неотъемлемой частью которых было обеспечение водной безопасности и установление многостороннего сотрудничества для преодоления конфликтного потенциала в их отношениях.

Проблема межгосударственного регулирования водной проблемы усугубляется тем фактом, что водная безопасность тесно связана с проблемой энергетики и безопасности человека в этих странах и регионе в целом. В то же время, в начале практики совместного водопользования у новых независимых республик не было нормативно-правовой базы и практического опыта по трансграничному водораспределению и нейтрализации споров и конфликтов за пределами советской институциональной и правовой базы. Поэтому в статье рассматриваются межгосударственные отношения между странами Центральной Азии по вопросу совместного использования трансграничных рек бассейна Аральского моря. В статье представлена гидрография и процент стока трансграничных рек, а также динамика развития водных отношений в указанных странах с 1991 г. по настоящее время.

Также приводится анализ политических и правовых отношений и степени участия этих стран в региональных инициативах. Раскрываются механизмы двусторонних и многосторонних инициатив, в том числе принципы и направления работы Международного фонда спасения Арала и Программы оказания помощи странам бассейна Аральского моря в качестве образцовых механизмов обеспечения социальной и водно-экологической безопасности. Показаны возможные сценарии развития ситуации на ближайшие 30 лет и прогнозируется вероятность дестабилизации в регионе.

Авторы приходят к выводу, что наиболее продуктивным механизмом обеспечения водной, энергетической и социальной безопасности региона остается комплексный подход с активным внедрением принципов комплексного управления водными ресурсами. Авторы убеждены в необходимости установления более расширенных «сетевых» отношений на межгосударственном уровне, а также на уровне региональных, субрегиональных и международных организаций и совершенствования правовых и институциональных структур.

Ключевые слова: комплексное использование и охрана водных ресурсов, МКВК - Межгосударственная координационная водохозяйственная комиссия, МФСА - Международный фонд спасения Арала, БВО - Бассейновые водохозяйственные организации, Программа ПБАМ - бассейн Аральского моря, ИУВР - интегрированное управление водными ресурсами, механизм для совместного распределения и водопользования.

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Су қауіпсіздігін қамтамасыз ету және мемлекетаралық қайшылықтарды еңсеру саласындағы ОАА елдерінің арасындағы ынтымақтастықтың нормативтік-құқықтық базасының ерекшеліктері

Аңдатпа. Тәуелсіздік алғаннан кейін Орталық Азия елдері өздерінің ұлттық қауіпсіздігі мәселелерін жаңарта бастады, олардың ажырамас бөлігі судағы қауіпсіздікті қамтамасыз ету және қатынастардағы қақтығыстық әлеуетті еңсеру үшін көпжақты ынтымақтастық орнату болды.

Су проблемасын мемлекетаралық реттеу проблемасы су қауіпсіздігі осы елдерде және тұтастай алғанда аймақтағы энергетикалық және адам қауіпсіздігі проблемасымен тығыз байланысты екендігімен күрделене түседі. Сонымен бірге, суды бірлесіп пайдалану тәжірибесінің басында жаңа тәуелсіз республикаларда нормативтік-құқықтық база және кеңестік институционалдық-құқықтық шеңберден тыс жерлердегі судың таралуы және даулар мен жанжалдарды бейтараптандыру тәжірибесі болмады.

Сондықтан мақалада Арал теңізі бассейнінің трансшекаралық өзендерін бөлу мәселесі бойынша Орталық Азия елдері арасындағы мемлекетаралық қатынастар талқыланады. Мақалада трансшекаралық өзендер ағысының гидрографиясы мен пайызы, сондай-ақ 1991 жылдан бастап қазіргі уақытқа дейін аталған елдердегі су қатынастарының даму динамикасы көрсетілген.

Мақалада сондай-ақ саяси және құқықтық қатынастардың талдауы және осы елдердің аймақтық бастамаларға қатысу деңгейі көрсетілген. Әлеуметтік және су-экологиялық қауіпсіздікті қамтамасыз етудің үлгі тетіктері ретінде Аралды құтқарудың халықаралық қорының және Арал теңізі бассейні елдеріне көмек көрсету бағдарламасының қағидаттары мен бағыттарын қоса алғанда, екіжақты және көпжақты бастамалардың тетіктері ашылды. Мақалада сондай-ақ алдағы 30 жылдағы жағдайдың мүмкін болатын сценарийлері көрсетілген және аймақта тұрақсыздық ықтималдығы туралы айтылған.

Авторлар аймақтағы су, энергетикалық және әлеуметтік қауіпсіздікті қамтамасыз етудің ең тиімді механизмі су ресурстарын кешенді басқару қағидаттарын белсенді іске асырумен интеграцияланған тәсіл болып қала береді деген қорытындыға келді. Авторлар мемлекетаралық деңгейде, сондай-ақ аймақтық, субөңірлік және халықаралық ұйымдар деңгейінде «желілік» қатынастарды кеңейту және құқықтық және институционалдық құрылымдарды жетілдіру қажеттілігіне сенімді.

Түйін сөздер: су ресурстарын кешенді пайдалану және қорғау, СВСБ - Мемлекетаралық координациялық су комиссиясы, ХҚЕС - Аралды құтқарудың халықаралық қоры, BWO - бассейндік су ұйымдары, ASBP-Арал бассейні бағдарламасы, СРБМ - су ресурстарын біріктірілген басқару, суды бірлесіп бөлу және пайдалану тетігі.

References

1. Poverhnostnyie vodnyie resursyi basseyna Aralskogo morya (srednegodovoy stok, km3/god), Regionalnaya informatsionnaya sistema po ispolzovaniyu vodno-zemelnyih resursov v basseyne Aralskogo morya. [Surface water resources of the Aral Sea basin (average annual flow, km3 / year)] - 2019 [Electronic resource]. Available at: http://www.cawater-info.net/aral/water.htm (accessed: 8.12.2019).
2. Ibatullin S. Problemyi basseyna Aralskogo morya i znachenie regionalnogo sotrudnichestva [The problems of the Aral Sea basin and the importance of regional cooperation] [Electronic resource]. Available at: https://www.unece.org/fileadmin/DAM/SPECA/documents/ecf/2010/AralSea.pdf (accessed 8.12.2019).
3. Kak v Kazahstane obstoyat dela s vodnyim voprosom? [How are water issues in Kazakhstan?] [Electronic resource]. - 2019. Available at: https://kursiv.kz/news/ekonomika/2019-02/kak-v-kazakhstane-obstoyat-dela-s-vodnym-voprosom (accessed: 9.12.2019).
4. Kazahstan ozvuchil pozitsiyu po vodnomu voprosu v Tsentralnoy Azii [Kazakhstan voiced position on water issue in Central Asia] [Electronic resource] - 2019. Available at: https://www.inform.kz/ru/kazahstan-ozvuchil-poziciyu-po-vodnomu-voprosu-v-central-noy-azii_a3507789 (accessed: 8.12.2019).
5. Ryisbekov Yu.H. Transgranichnyie vodnyie resursyi Tsentralnoy Azii: politicheskie i pravovyie aspektyi beskonfliktnogo ispolzovaniya. Nauchno-informatsionnyiy tsentr MKVK [Transboundary water resources of Central Asia: political and legal aspects of conflict-free use. ICWC Scientific Information Center] [Electronic resource]. Available at: http://cawater-info.net/reta/documents/pdf/rysbekov280405.pdf (accessed: 8.12.2019).

6. Persing U. Uzbekistan i Tadzhikistan - katalizatoryi regionalnogo sotrudnichestva v sfere vodopolzovaniya [Uzbekistan and Tajikistan - catalysts for regional cooperation in the field of water use] [Electronic resource] – 2018. Available at: https://russian.eurasianet.org/node/65131 (accessed: 9.12.2019).
7. Vodnyiy kodeks Respubliki Turkmenistan [Water Code of the Republic of Turkmenistan] [Electronic resource] – 2018. Available at: https://online.zakon.kz/Document/?doc_id=38999429#pos=159;-184 (accessed: 9.12.2019).
8. Mateev E. Mnenie: Malyie GES kak alternativa dlya Kyirgyizstana [Opinion: Small hydropower plants as an alternative for Kyrgyzstan] [Electronic resource] – 2018. Available at: https://knews.kg/2018/12/11/mnenie-malye-ges-kak-alternativa-dlya-kyrgyzstana/ (accessed: 9.12.2019).
9. Zhiltsov S., Bimenova A. Politika stran TsA v oblasti ispolzovaniya vodnyih resursov transgranichnyih rek [Central Asian countries' policy in the use of water resources of transboundary rivers], Tsentralnaya Aziya i Kavkaz [Central Asia and the Caucasus], 1 (18), 90-100 (2015).
10. Vodnyiy Kodeks Kyirgyizstana ot 12 yanvarya 2005 goda [Water Code of Kyrgyzstan dated January 12, 2005] #8. V redaktsii ot 30 iyulya 2019 goda #107 [Electronic resource]. – 2019. Available at: http://cbd.minjust.gov.kg/act/view/ru-ru/1605?cl=ru-ru (accessed: 9.12.2019).
11. Krizis vodnyih resursov: kolichestvo vodyi v TsA sokratitsya na tret [Water resources crisis: the amount of water in Central Asia will be reduced by a third] [Electronic resource] – 2019. Available at: https://24.kz/ru/news/social/item/339017-krizis-vodnykh-resursov-kolichestvo-vody-v-tsa-sokratitsya-na-tret (accessed: 9.12.2019).
12. Almatinskoe Soglashenie o sotrudnichestve v oblasti sovmestnogo upravleniya i ohranyi transgranichnyih vodnyih resursov ot 18 fevralya 1992 goda [Almaty Agreement on cooperation in the field of joint management and protection of transboundary water resources dated February 18, 1992] [Electronic resource] – 1992. Available at: http://www.icwc-aral.uz/contacts_ru.htm (accessed: 9.12.2019).
13. Soglashenie o sovmestnyih deystviyah po resheniyu problemyi Aralskogo morya i Priaralya, ekologicheskomu ozdorovleniyu i obespecheniyu sotsialno-ekonomicheskogo razvitiya Aralskogo regiona. [Agreement on joint actions in solving the problem of the Aral Sea and its coast, environmental rehabilitation and socio-economic development of the Aral region] [Electronic resource] – 1993. Available at: http://www.icwc-aral.uz/statute13_ru.htm (accessed: 9.12.2019).
14. Sidorova L. Gosudarstva Tsentralnoy Azii: problemyi sovmestnogo ispolzovaniya transgranichnyih vodnyih resursov [Central Asian states: problems of joint use of transboundary water resources], Tsentralnaya Aziya i Kavkaz. [Central Asia and the Caucasus], 1 (55), 98-104 (2008).
15.Voprosyi mezhgosudarstvennogo vodoraspredeleniya [Issues of interstate water distribution] [Electronic resource] – 2019. Available at: http://www.cawater info.net/bk/water_land_resources_use/docs/interstate_water.html (accessed: 9.12.2019).
16. Mezhdunarodnyie otnosheniya v Tsentralnoy Azii [International relations in Central Asia]. Edited by A. Bogatirov] (Aspekt Press, Moscow, 2011, 550 p.).
17. Eshment B. Raspredelenie vodnyih resursov v Tsentralnoy Azii [Water distribution in Central Asia] Research (Friedrich Ebert Fund, Almaty, 2011, 27 p.).
18. Bogaturov A., Dundich A., Troitskiy E. Tsentralnaya Aziya: «otlozhennyiy neytralitet» i mezhdunarodnyie otnosheniya v 2000-h godah [Central Asia: "Deferred Neutrality" and International Relations in the 2000s.] Ocherki tekuschey politiki [Essays on current politics.] (NOFMO, Moscow, 2010, 104 p.).
19. Ibatullin S. Problemyi Basseyna Aralskogo morya i znachenie regionalnogo sotrudnichestva [The problems of the Aral Sea Basin and the importance of regional cooperation] [Electronic resource]. – 2010. Available at: https://www.unece.org/fileadmin/DAM/SPECA/documents/ecf/2010/AralSea.pdf (accessed: 10.12.2019).
20. PBAM-1. [ASBP-1] [Electronic resource] - 2019. Available at: http://www.ifas.kz/ru/page/pbam-1 (accessed: 10.12.2019).
21. Vtoraya Programma basseyna Aralskogo morya byila razrabotana v sootvetstvii s Resheniem Glav Gosudarstv v Dushanbe 6 oktyabrya 2002 goda [The second Aral Sea Basin Program was developed in accordance with the Decision of the Heads of State in Dushanbe on October 6, 2002] [Electronic resource] – 2019. Available at: https://aral.uz/wp/asbp/asbp2/ (accessed: 10.12.2019).
22. Chto takoe PBAM-3? [What is ASBP-3?] [Electronic resource] – 2016. Available at: http://ru-ec-ifas.waterunites-ca.org/main/192-dokument-pbam-3-s-predlozheniyami-i-zamechaniyami-stran-ca.html (accessed: 10.12.2019).
23. Otchet o deyatelnosti MSFA 2013-2016. [IFRS 2013-2016 Report]. [Electronic resource] – 2016. Available at: http://www.cawater-info.net/library/rus/ifas/report_ifas.pdf (accessed: 10.12.2019).
24. Pochemu Kazahstan riskuet teryat 7 million tonn zerna v god. [Why Kazakhstan risks losing 7 million tons of grain per year] [Electronic resource] – 2010. Available at: https://forbes.kz//process/expertise/pochemu_kazahstan_

mojet_teryat_7_mln_tonn_zerna_v_god/ (accessed: 10.12.2019).
25. Tsentralnaya Aziya mozhet ponesti masshtabnyie poteri iz-za izmeneniya klimata. [Central Asia can suffer massive losses due to climate change.] [Electronic resource] – 2019. Available at: https://eadaily.com/ru/news/2019/06/26/centralnaya-aziya-mozhet-ponesti-masshtabnye-poteri-iz-za-izmeneniya-klimata (accessed: 10.12.2019).
26. 15 novyih nezavisimyih gosudarstv. Chislennost naseleniya na nachalo goda, 1950-2019. [15 new independent states. Population at the beginning of the year, 1950-2019] [Electronic resource]. – 2019. Available at: http://www.demoscope.ru/weekly/ssp/sng_pop.php (accessed: 10.12.2019).
27. Demografiya Tsentralnoy Azii k 2100 godu (infografika) [Demographics of Central Asia by 2100 (infographic)] [Electronic resource]. – 2017. Available at: https://caa-network.org/archives/10783 (accessed: 11.12.2019).
28. Prosto dobav vodyi: vodyi v Tsentralnoy Azii vsem mozhet ne hvatit [Just add water: water in Central Asia may not be enough for everyone]. [Electronic resource] – 2017. Available at: https://ru.sputniknews.kz/economy/20171123/3843115/prosto-dobav-vody-v-centralnoj-azii-vsem-mozhet-ne-hvatit.html (accessed: 10.12.2019).
29. Zonn I.S., Zhiltsov S.S., Semenov A.V., Kostyanoy A.G. Vodnaya politika Afganistana v Tsentralnoy Azii [Afghanistan Water Policy in Central Asia], Bulletin of S.U.Witte Moscow University, Series "Economics and Management", 3 (26), 54 – 66 (2018).
30. King M., Styurtevagen B. Effektivnoe ispolzovanie vodnyih resursov Afganistana [Efficient use of water resources in Afghanistan]. [Electronic resource] – 2010. Available at: http://amudaryabasin.net/sites/amudaryabasin.net/files/resources/Afghanistan_Water.pdf (accessed: 12.12.2019).
31. «Bezopasnost vodosnabzheniya i Globalnaya povestka dnya v oblasti vodnyih resursov» [Water Security and the Global Water Agenda]. [Electronic resource] – 2019. Available at: https://www.un.org/ru/sections/issues-depth/water/ (accessed: 12.12.2019).
32. Tomberg I. Energetika Tsentralnoy Azii: problemyi i perspektivyi. [Energy of Central Asia: problems and prospects]. [Electronic resource] – 2012. Available at: https://russiancouncil.ru/analytics-and-comments/analytics/energetika tsentralnoy-azii-problemy-i-perspektivy/ (accessed: 13.12.2019).

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