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**KAMBAR-ATA HYDROELECTRIC POWER PLANT:
MULTILATERALISM AS A TOOL OF REGIONAL WATER SECURITY**

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Abstract. This article examines the Kambar-Ata (Kambarata-1) Hydroelectric Power Plant project as a case study of multilateral cooperation in addressing transboundary water security challenges in Central Asia. The research analyzes the trilateral partnership between Kazakhstan, Kyrgyzstan, and Uzbekistan in developing this 1,860 MW facility on the Naryn River. The study traces the project’s evolution from Soviet-era origins through failed bilateral attempts to the current multilateral framework established in 2023-2024. Using qualitative analysis of international agreements, policy documents, and expert assessments, the article demonstrates how multilateral cooperation mechanisms can overcome traditional water-energy tensions in the region. The findings reveal that the Kambar-Ata project represents a paradigm shift from zero-sum competition to shared benefits distribution, with equal ownership shares and proportional electricity allocation among partners. The involvement of international financial institutions, such as the World Bank and the EBRD, provides technical expertise and legitimacy while helping to mobilize the estimated \$4.2 billion required for construction. The article concludes that this multilateral approach addresses both upstream hydropower generation needs and downstream irrigation requirements, offering a replicable model for managing transboundary water resources. The success of this framework depends on sustained political commitment, transparent governance structures, and equitable benefit-sharing mechanisms that balance national interests with regional water security imperatives.

Keywords: Kambar-Ata hydroelectric power plant, multilateralism, transboundary water cooperation, Central Asia, regional security, water-energy nexus, Kazakhstan, Kyrgyzstan, Uzbekistan, hydropower development, international cooperation

Introduction

Central Asia faces critical water security challenges stemming from the complex interplay of transboundary river management, competing national

interests, and increasing climate pressures. The region's two major river systems, the Amu Darya and Syr Darya, originate in the water-rich upstream countries of Kyrgyzstan and Tajikistan but flow through the water-scarce downstream nations of Kazakhstan and Uzbekistan. This geographical reality creates fundamental tensions between upstream hydropower generation priorities and downstream agricultural irrigation needs. The collapse of the Soviet Union in 1991 dismantled the centralized water-energy exchange system that had previously coordinated these competing demands, leaving Central Asian states to navigate water diplomacy through bilateral and multilateral frameworks of varying effectiveness.

The Kambar-Ata Hydroelectric Power Plant project, located on the Naryn River in Kyrgyzstan, represents a significant departure from previous approaches to transboundary water management in the region (Figure 1).



Figure 1 – Location of the Kambar-Ata Hydroelectric Power Plant

First conceived during the Soviet era with construction beginning in 1986, the project was abandoned following the USSR's dissolution. Subsequent attempts at bilateral cooperation, including Russian involvement from 2008 to 2015, failed to materialize due to funding constraints and political complications. The current trilateral framework, formalized through agreements signed in 2023-2024 between Kazakhstan, Kyrgyzstan, and Uzbekistan, marks a new chapter in regional water cooperation characterized by shared ownership, proportional benefit distribution, and extensive international institutional support.

Despite numerous bilateral and multilateral agreements since independence, Central Asia continues to struggle with effective transboundary water governance. Existing cooperative frameworks, including the Interstate Commission for Water Coordination established by the 1992 Almaty Agreement, have proven largely ineffective in resolving water-energy conflicts [1]. The region faces water losses of up to 40% due to outdated Soviet-era infrastructure and management practices, while population growth and climate change intensify resource pressures [2]. Climate modelling studies further suggest that flows of the Amu Darya and Syr Darya may decline by roughly 10-20% under warming scenarios, largely due to glacier retreat and changing precipitation patterns [3].

The primary objective of this research is to analyze how the Kambar-Ata project's multilateral framework addresses longstanding water security challenges in Central Asia. Specific research questions include: How is the trilateral partnership structured? What historical tensions are addressed? How do international financial institutions contribute to project legitimacy and sustainability? What implications does this model hold for future transboundary water cooperation in the region? By examining these questions, this study aims to identify the conditions under which multilateral cooperation can successfully transform water from a source of regional tension into a platform for integration and shared prosperity.

Description of Materials and Methods

Literature Review and Theoretical Framework

Scholarly literature on transboundary water management emphasizes that cooperation among riparian states is essential for equitable and sustainable resource governance [4]. International water law principles, including the duty to cooperate, equitable utilization, and the obligation not to cause significant harm, provide normative foundations for transboundary agreements [5]. However, the effective implementation of these principles depends on political will, institutional capacity, and power dynamics among states [6]. Research on Central Asian water governance highlights the persistence of Soviet-era allocation systems despite changed political and economic realities, creating structural obstacles to adaptive management [5].

The water-energy nexus presents particular challenges in Central Asia, where upstream countries rich in hydropower potential prioritize electricity generation while downstream nations depend on coordinated water releases for irrigation-intensive agriculture. This asymmetry generates what scholars characterize as a hydro-hegemonic relationship, wherein downstream states with greater economic and political power historically opposed upstream dam construction despite their own energy security needs [4]. Recent diplomatic shifts, particularly following political transitions in Uzbekistan and Kyrgyzstan, have created opportunities for moving beyond zero-sum framings toward cooperative arrangements that acknowledge interdependencies.

Multilateralism theory suggests that international cooperation institutions can facilitate agreement by reducing transaction costs, providing information, and creating credible commitment mechanisms. In the context of shared water resources, multilateral frameworks potentially offer advantages over bilateral approaches by enabling broader stakeholder participation, distributing costs and benefits across multiple parties, and engaging international actors who can provide technical expertise and financial resources. The involvement of international development banks and multilateral organizations can enhance project legitimacy while imposing governance standards that increase transparency and accountability.

Theoretically, multilateralism is best understood not merely as cooperation among several states but as a distinct institutional form that coordinates state

behavior according to generalized principles of conduct rather than case-by-case bargaining [7]. Neoliberal institutionalist scholarship further argues that international regimes can sustain cooperation even in the absence of a dominant hegemonic power, by lowering transaction costs, providing reliable information, and enabling issue-linkage among participating states [8]. Applied to transboundary rivers, this institutionalist logic underpins the benefit-sharing paradigm, which reframes water negotiations away from zero-sum allocation disputes toward the joint production and distribution of benefits to, from, through, and beyond the river [9]. This shift from volumetric water-sharing to benefit-sharing helps explain why the Kambar-Ata framework emphasizes proportional electricity allocation and joint ownership rather than fixed water quotas.

The broader literature on transboundary water conflict and cooperation similarly emphasizes that formal treaties and joint infrastructure, rather than water scarcity per se, are among the strongest predictors of sustained cooperation between riparian states [10]. Studies specific to Central Asia trace how the erosion of the Soviet-era barter system generated recurring disputes over the operating regime of upstream reservoirs, while noting that these disputes rarely escalated into open conflict [11]. Case-study research on other regional hydropower projects, notably the Rogun Dam in Tajikistan, illustrates how downstream opposition can be softened through diplomatic engagement, donor involvement, and reframing of large dams as regional public goods rather than unilateral national projects [12]. More recent scholarship on the securitization of water in Central Asia highlights how domestic political transitions and generational leadership change have reshaped threat perceptions around upstream hydropower, opening space for cooperative arrangements that would previously have been politically unfeasible [13]. Comparative geopolitical analyses of Kyrgyz hydropower development further suggest that the alignment of national energy strategies with international project-finance logics, rather than water availability alone, ultimately determines whether large dam projects move from proposal to construction [14]. Taken together, this body of work indicates that the Kambar-Ata case both draws on and extends existing theoretical models of transboundary cooperation, benefit-sharing, and hydro-diplomacy in Central Asia.

Beyond this broader theoretical and regional literature, a smaller body of scholarship has focused directly on the Kambar-Ata project itself, though largely along disconnected disciplinary lines. Geopolitical analyses have examined the involvement of non-regional powers, such as Russia, Iran, China, the United States and the EU, in financing and negotiating Kambar-Ata and other Central Asian hydropower projects, arguing that external actors have not consistently played a stabilizing role and have at times used the water-energy nexus as a geopolitical lever [15]. Legal and water-security-oriented studies have situated the project within the broader framework of Soviet-era water allocation, the 1992 Almaty Agreement, and the unresolved disputes surrounding the Rogun and Kambar-Ata dams, showing how shifting Russian and Chinese financing commitments repeatedly stalled construction over the past two decades [16]. From an engineering and dam-safety perspective, geophysical monitoring and 3D

geomechanical modelling of the neighboring Kambar-Ata-2 blast-fill dam have demonstrated both the technical feasibility and the seismic vulnerabilities of blast-fill dam construction in the Naryn river gorge, offering directly relevant technical context for assessing the structural risks facing the still-unbuilt Kambarata-1 facility [17]. Most recently, GIS-based ecological impact assessments using remote sensing and terrain analysis have quantified the environmental footprint of the future Kambarata-1 reservoir, finding that its location within a confined gorge limits the loss of floodplain and riparian ecosystems relative to steppe habitats, and that downstream ecological effects are likely to be minor given the reservoir's position immediately upstream of the already-modified Toktogul reservoir [18]. Taken together, this project-specific literature underscores that assessments of Kambar-Ata have so far proceeded largely in parallel along geopolitical, legal, engineering and ecological lines, with comparatively little cross-disciplinary synthesis – a gap that the multilateral-cooperation framing of the present study aims to help bridge.

Research Methodology

This study employs qualitative research methods, combining document analysis with systematic examination of policy statements, international agreements, and expert assessments. Primary sources include the 2023 trilateral roadmap agreement, ministerial statements from successive coordination meetings, and technical documentation prepared by the World Bank and other international financial institutions supporting the Kambar-Ata project. Secondary sources encompass scholarly literature on transboundary water governance, regional security analyses, and media coverage of diplomatic developments related to the project.

The analytical framework draws on international relations theories of multilateral cooperation and regime effectiveness, examining how institutional design features influence outcomes in transboundary resource management. Key variables studied include ownership structure, historical water distribution tensions, and the role of third-party actors. The research traces the evolution of cooperation frameworks from initial bilateral attempts through the current trilateral arrangement, identifying critical junctures and enabling factors that facilitated the transition to multilateral collaboration.

Data collection focused on publicly available documents from government sources, international organizations, and academic publications. Content analysis identified recurring themes related to cooperation mechanisms, stated interests of participating countries, and anticipated challenges to project implementation. The research limitations include reliance on official sources that may not fully capture informal dynamics and the ongoing nature of project development, which prevents definitive assessment of long-term outcomes.

Results and Discussion

The Trilateral Partnership Structure

The economic landscape of water management in Central Asia is fundamentally shaped by resource disparity. As noted by Medeu et al. (2025),

while Kazakhstan, Uzbekistan, and Turkmenistan act as energy exporters, Tajikistan and Kyrgyzstan remain significantly dependent on energy imports. This imbalance directly shapes their national strategies regarding transboundary river management, often prioritizing national security over regional cooperation [19]. Within this framework, the Syr Darya basin functions as a “regional security complex” where conflicting national priorities can obstruct integrated management efforts [19].

In this regard, the Kambar-Ata multilateral framework represents a fundamental shift in Central Asian water cooperation through its emphasis on shared ownership and equitable participation. The June 2024 ministerial agreement established that Kyrgyzstan will hold a 34% ownership share in the project, with Kazakhstan and Uzbekistan each receiving 33% [20] (Figure 2).

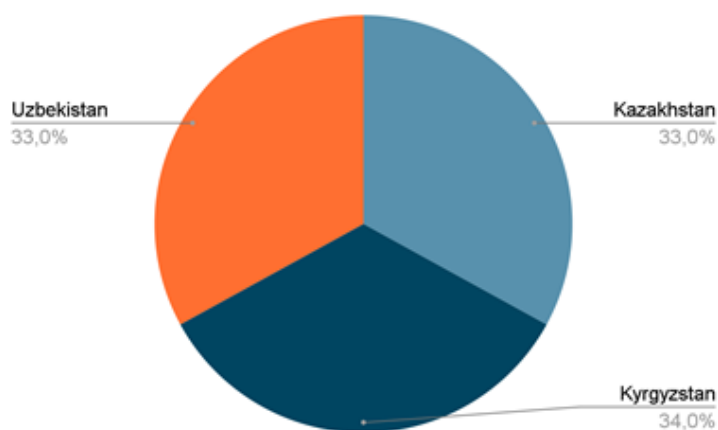


Figure 2 – Ownership shares in the Kambar-Ata HPP project

This nearly equal distribution reflects political recognition that successful project implementation requires balancing the interests of the host country with meaningful participation from downstream partners. Electricity generation will be allocated proportionally to ownership shares, with provisions for seasonal adjustments and market-driven flexibility to accommodate varying demand patterns [20].

The operational structure includes creation of a joint-stock company in Kyrgyzstan responsible for project execution, with governance mechanisms ensuring representation from all three countries. Decision-making regarding the power plant’s operation mode requires consensus among parties, particularly concerning agreed water release volumes. This arrangement addresses the core tension in Central Asian water management by institutionalizing coordination between electricity generation schedules and downstream irrigation needs. Rather than leaving water releases to unilateral decisions by the upstream country, the multilateral framework creates binding commitments to consider all parties’ requirements.

The estimated project cost of \$4.2 billion significantly exceeds the financial capacity of any single Central Asian state, making multilateral cost-sharing

The Kambar-Ata-1 project addresses a “wicked problem” of post-Soviet Central Asian geopolitics: the collapse of the integrated Central Asian Power System (CAPS) (Figure 3). Under the USSR command economy, a seasonal barter system existed where upstream republics (Kyrgyzstan and Tajikistan) released water in the summer for downstream irrigation in exchange for winter energy deliveries (coal and gas) from Kazakhstan and Uzbekistan. The system consisted of approximately 30% hydropower plants in upstream countries and 70% thermal power plants in downstream countries [22].



Figure 3 – Schematic map of the main 220-500 kV power lines of the CAPS

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By the early 2000s, Kyrgyzstan increasingly operated the Toktogul reservoir in “energy mode,” prioritizing winter electricity production over summer irrigation releases. This shift generated recurrent tensions, including winter flooding risks in southern Kazakhstan and reduced summer flows affecting Uzbekistan’s irrigation-dependent agriculture [24] [25].

Large upstream dam projects became particularly contentious. Uzbek leadership under Islam Karimov framed such projects as threats to downstream food security and regional stability, contributing to stalled attempts to advance Kambar-Ata-1 during the late 2000s, including negotiations involving Russian investment [23] [26]. A significant diplomatic shift occurred after 2016, when Uzbekistan under Shavkat Mirziyoyev adopted a more regionally cooperative foreign policy orientation [27].

However, Kazakhstan has also played a critical stabilizing role in reframing Kambar-Ata-1 from a zero-sum upstream–downstream dispute into a shared regional infrastructure initiative. In particular, Kazakhstan has consistently advocated multilateral approaches within the framework of the International Fund for Saving the Aral Sea (IFAS). By promoting the principle that water should function as a mechanism of regional cooperation rather than confrontation, Astana has supported basin-level dialogue and institutional confidence-building [23]. Moreover, Kazakhstan’s decision to participate financially in Kambar-Ata-1 marks an important evolution from downstream complaint to shared governance.

Wegerich argues that joint ownership structures reduce the classical hydro-hegemonic asymmetry described in Central Asian water scholarship [28]. By internalizing both costs and benefits, downstream countries gain influence over operational regimes, including seasonal discharge coordination affecting reservoirs such as Shardara.

Under President Kassym-Jomart Tokayev, Kazakhstan has emphasized modernization of energy infrastructure and regional electricity trade integration. Long-term power purchase agreements and cross-border transmission upgrades enhance the financial viability of upstream hydropower while reducing incentives for unilateral water releases. Market-based electricity trade mechanisms increasingly substitute for the informal barter system of the 1990s, reflecting a transition toward institutionalized regional energy markets [29].

The emerging trilateral framework effectively internalizes transboundary externalities within a shared governance structure. Rather than framing water allocation as a zero-sum security dilemma, participating states are embedding cooperation within joint infrastructure ownership and commercial energy exchange. This evolution corresponds with broader theoretical arguments that economic interdependence and institutionalization reduce conflict risks within regional security complexes [30].

International Institutional Support and Legitimacy

The involvement of international financial institutions, particularly the World Bank, plays a critical role in enhancing technical feasibility, financial credibility, and political legitimacy.

Technically, international financial institutions provide updated feasibility assessments, dam safety evaluations, environmental and social impact assessments, and climate resilience modeling—areas that exceed the domestic capacity of individual Central Asian states. Compliance with international safeguard standards reduces investment risk and enhances long-term sustainability [20].

Politically, international financial institutions' engagement serves as a neutral platform for coordination among historically contentious partners. Multilateral convenings in European diplomatic venues during 2023–2024 illustrate how external actors create structured spaces for high-level negotiation and donor alignment. Such institutional scaffolding mitigates information asymmetries, reduces mistrust, and strengthens governance transparency.

Beyond financial support, international involvement establishes accountability mechanisms through procurement standards, environmental safeguards, and monitoring frameworks. While these requirements increase procedural complexity, they provide downstream stakeholders with assurances regarding ecological impacts and water-flow management. For Kyrgyzstan, external engagement brings not only capital but also implementation capacity necessary for a large-scale hydropower project.

Regional Security Implications

The Kambar-Ata framework's emphasis on multilateral cooperation extends beyond water management to broader regional security dynamics. Central Asia's chronic energy deficits—particularly acute during winter months due to seasonal hydropower dependence and aging thermal infrastructure—underscore the need for new generation capacity [31] [32]. The projected 5.6 billion kWh annually from Kambar-Ata-1 would contribute to reducing winter shortages and enhancing system stability.

The project's contribution to regional energy security may reduce structural vulnerabilities linked to fuel import dependence and fragmented grid management. Scholars have long argued that the breakdown of Soviet-era coordination transformed technical interdependence into political leverage [26]. By contrast, institutionalized infrastructure co-ownership can reduce securitization of resource interdependence [30]. Success in this high-profile initiative could therefore generate trust spillovers facilitating cooperation in other sensitive domains, including border management and trade integration—areas where functional cooperation has historically lagged behind political declarations [33].

The timing of the Kambar-Ata agreement coincides with broader geopolitical recalibration in Central Asia. Regional states have increasingly pursued “multi-vector” foreign policies aimed at diversifying partnerships while preserving sovereignty [28]. The trilateral Kambar-Ata framework represents intra-regional institutionalization that, while dependent on international financial support, maintains Central Asian ownership in governance design. This balance reflects patterns identified in post-Soviet regionalism literature, where external actors facilitate but do not fully determine institutional outcomes [34].

Environmental considerations add urgency to regional cooperation on water infrastructure. Climate change impacts in Central Asia include accelerated glacier retreat in the Tien Shan and Pamir ranges, altered hydrological regimes, and increased seasonal variability [24] [35]. These trends intensify uncertainty in the Syr Darya basin and reinforce the importance of adaptive reservoir management. The planned reservoir capacity of approximately 5.4 billion cubic meters would expand storage flexibility, potentially mitigating interannual variability.

However, large dams also entail ecological and social trade-offs. Research on Central Asian hydraulic infrastructure highlights risks including downstream ecosystem alteration, sedimentation dynamics, and population displacement [24] [28]. The incorporation of environmental and social impact assessments in project preparation aligns with international safeguard norms that aim to mitigate such risks through structured oversight and stakeholder consultation.

Challenges and Sustainability Considerations

Despite the promising framework, significant implementation challenges remain. Large hydropower projects globally are associated with extended construction timelines, cost overruns, and governance risks [36]. A projected construction period of approximately ten years introduces exposure to political turnover, macroeconomic volatility, and shifting regional alignments. Early commissioning of initial generating units may provide symbolic and financial momentum, but sustained intergovernmental coordination will be required.

Financial sustainability depends on both capital mobilization and long-term revenue reliability. The project's commercial logic partly rests on cross-border electricity exports through the CASA-1000 transmission initiative, designed to connect Central Asian producers (Kyrgyzstan, Tajikistan) with South Asian markets (Afghanistan, Pakistan) (Figure 4).



Figure 4 – Electricity integration in Central and South Asia after CASA-1000

Scholarly analyses note that CASA-1000's viability depends on political stability in transit states and consistent regulatory frameworks [31]. Instability in Afghanistan and transmission security concerns represent structural uncertainties affecting projected revenue flows.

Governance arrangements present additional complexity. Joint-stock hydropower structures in transboundary contexts often face tension between host-state sovereignty and investor-state influence [28]. Concentration of formal authority within a Kyrgyz legal entity may generate downstream concerns regarding operational transparency, while strict consensus requirements could impede timely decision-making. Comparative research on transboundary river basin institutions suggests that durable cooperation depends on transparency, monitoring mechanisms, and dispute-resolution procedures embedded in formal agreements [37].

The broader regional context presents both opportunity and constraint for institutional diffusion. Successful implementation could influence perceptions surrounding other controversial hydropower projects, including Rogun Dam in Tajikistan. Rogun has similarly generated downstream apprehension and geopolitical contestation [24]. However, transboundary basins differ in hydrology, political economy, and power asymmetries, limiting direct institutional transferability.

Ultimately, the Kambar-Ata framework's regional security significance will depend not only on technical completion but on whether the cooperative process consolidates norms of multilateral water governance. As regional security complex theory suggests, shifts from securitized rivalry toward institutionalized interdependence require sustained practice rather than singular agreements [30].

Conclusion

The Kambar-Ata Hydroelectric Power Plant project represents a significant evolution in Central Asian transboundary water governance, moving from historical patterns of bilateral conflict toward multilateral cooperation frameworks emphasizing shared ownership and mutual benefit. The trilateral partnership among Kazakhstan, Kyrgyzstan, and Uzbekistan demonstrates that upstream and downstream countries can overcome traditional water-energy tensions through institutional designs that align incentives and distribute both costs and returns equitably. The nearly equal ownership shares, proportional electricity allocation, and consensus-based operational decision-making create structural interdependencies that transform water from a source of regional competition into a platform for integration.

International institutional involvement through the World Bank, European Bank for Reconstruction and Development and other multilateral organizations provides essential technical expertise, financial resources, and legitimacy that enable project implementation while establishing accountability mechanisms through environmental and social safeguards. This combination of regional ownership and international partnership offers a potentially replicable model for addressing transboundary resource management challenges in contexts where historical mistrust and capacity constraints have impeded cooperation.

The research findings indicate that multilateralism serves as an effective tool for regional water security when several conditions are met: political leadership committed to cooperative rather than zero-sum approaches; institutional

frameworks ensuring equitable participation and transparent governance; international actors providing resources and neutral convening capacity; and benefit-sharing mechanisms that distribute returns proportionally while accommodating varying national priorities. The Kambar-Ata project's success in meeting these conditions remains contingent on sustained political commitment, effective financial mobilization, and adaptive governance capable of managing emerging challenges during the extended construction and operational periods ahead.

Beyond immediate energy and water benefits, the Kambar-Ata framework's broader significance lies in its potential to establish new norms and expectations for regional cooperation in Central Asia. Success could inspire similar multilateral approaches to other infrastructure projects, environmental challenges, and economic integration initiatives. The project thus represents both a practical response to pressing energy deficits and water management needs, and a diplomatic investment in building institutional capacity and trust that can support broader regional stability and prosperity in an era of increasing global uncertainty and climate change pressures.

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ҚАМБАР-АТА СУ ЭЛЕКТР СТАНЦИЯСЫ: КӨПЖАҚТЫЛЫҚ АЙМАҚТЫҚ СУ ҚАУІПСІЗДІГІНІҢ ҚҰРАЛЫ РЕТІНДЕ

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Аннотация. Бұл мақалада Орталық Азиядағы трансшекаралық су қауіпсіздігі мәселелерін шешуде көпжақты ынтымақтастықтың тәжірибелік мысалы ретінде Камбар-Ата (Камбарата-1) су электр станциясы жобасы зерттеледі. Зерттеу Нарын өзеніндегі 1,860 МВт қуатты бұл құрылысты дамытуда Қазақстан, Қырғызстан және Өзбекстан арасындағы үшжақты әріптестікті талдайды. Жұмыс жобаның кеңестік кезеңнен бастап сәтсіз екіжақты әрекеттер арқылы 2023-2024 жылдары қалыптасқан қазіргі көпжақты шеңберге дейінгі эволюциясын қарастырады. Халықаралық келісімдер, саяси құжаттар және сарапшылық бағалаулардың сапалық талдауын пайдалана отырып, мақалада көпжақты ынтымақтастық механизмдері аймақтағы дәстүрлі су-энергетикалық қақтығыстарды қалай жеңе алатыны көрсетіледі. Нәтижелер Камбар-Ата жобасы нөлдік қосындылы бәсекелестіктен ортақ пайда бөлуге өтуді білдіретінін, серіктестер арасында тең меншік үлестері мен электр энергиясын

пропорциялық түрде бөлуді қамтитынын көрсетеді. Дүниежүзілік банк, ЕҚДБ, т.с.с халықаралық қаржы институттарының қатысуы техникалық сараптама мен заңдылықты қамтамасыз ете отырып, құрылысқа қажетті шамамен 4,2 миллиард долларды жұмылдыруға көмектеседі. Мақалада бұл көпжақты тәсіл жоғарғы ағыстағы су энергиясын өндіру қажеттіліктері мен төменгі ағыстағы суару талаптарын қанағаттандырып, трансшекаралық су ресурстарын басқарудың қайталанатын моделін ұсынатыны туралы қорытынды жасалады. Бұл шеңбердің табысы тұрақты саяси міндеттемеге, мөлдір басқару құрылымдарына және ұлттық мүдделерді аймақтық су қауіпсіздігі императивтерімен теңестіретін әділ пайда бөлу механизмдеріне байланысты.

Тірек сөздер: Камбар-Ата гидроэлектр станциясы, көпжақтылық, трансшекаралық су ынтымақтастығы, Орталық Азия, аймақтық қауіпсіздік, су-энергетика байланысы, Қырғызстан, Қазақстан, Өзбекстан, гидроэнергетиканы дамыту, халықаралық ынтымақтастық

ГИДРОЭЛЕКТРОСТАНЦИЯ КАМБАР-АТА: МНОГОСТОРОННОСТЬ КАК ИНСТРУМЕНТ РЕГИОНАЛЬНОЙ ВОДНОЙ БЕЗОПАСНОСТИ

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Аннотация. В данной статье рассматривается проект гидроэлектростанции Камбар-Ата (Камбарата-1) как практический пример многостороннего сотрудничества в решении проблем трансграничной водной безопасности в Центральной Азии. Исследование анализирует трехстороннее партнерство между Казахстаном, Кыргызстаном и Узбекистаном в разработке этого объекта мощностью 1860 МВт на реке Нарын. Работа прослеживает эволюцию проекта от советских истоков через неудачные двусторонние попытки к нынешней многосторонней структуре, сформированной в 2023-2024 годах. Используя качественный анализ международных соглашений, политических документов и экспертных оценок, статья демонстрирует, как механизмы многостороннего сотрудничества могут преодолеть традиционные водно-энергетические противоречия в регионе. Результаты показывают, что проект Камбар-Ата представляет собой парадигмальный сдвиг от конкуренции с нулевой суммой к распределению общих выгод с равными долями владения и пропорциональным распределением электроэнергии между партнерами. Участие международных финансовых институтов, включая Всемирный банк, ЕБРР и др. обеспечивает техническую экспертизу и легитимность, помогая мобилизовать примерно 4,2 миллиарда долларов, необходимых для строительства. В статье делается вывод, что этот многосторонний подход учитывает как потребности в гидроэнергетике верхних стран, так и требования к ирригации нижних стран, предлагая воспроизводимую модель управления трансграничными водными ресурсами. Успех этой структуры

зависит от устойчивой политической приверженности, прозрачных структур управления и справедливых механизмов распределения выгод, которые уравнивают национальные интересы с императивами региональной водной безопасности.

Ключевые слова: гидроэлектростанция Камбар-Ата, многосторонность, трансграничное водное сотрудничество, Центральная Азия, региональная безопасность, водно-энергетическая связь, Кыргызстан, Казахстан, Узбекистан, развитие гидроэнергетики, международное сотрудничество

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