

Brief information about the project

Name of the project	AP26103599 Challenges and Opportunities for Regional Cooperation in Sustainable Water Resources Management in Central Asia
Relevance	The relevance of this study is обусловлена тем, что water resources play a pivotal role in sustainable development, as reducing poverty and achieving economic growth is difficult without them. At the same time, water scarcity is emerging as a global challenge, further exacerbated by the uneven distribution of resources across the world and the transboundary nature of rivers. In Central Asia, this issue is particularly acute. In the context of increasing pressure on water resources driven by climate change, urbanization, and rising consumption, the study of challenges and opportunities for regional cooperation in sustainable water management is of growing importance for political scientists and international relations scholars. Central Asia is already experiencing tensions among states over the allocation of water resources, particularly between countries such as Kyrgyzstan, Tajikistan, and Uzbekistan. Analyzing the causes of these conflicts and developing strategies for their prevention require a deep understanding of political dynamics and historical context. Exploring opportunities for joint water resource management can help identify pathways for dispute resolution and the establishment of effective cooperation mechanisms, thereby contributing to regional stability.
Purpose	The purpose of this project is to analyze regional cooperation, identify new approaches, and develop mechanisms to strengthen sustainable water resource management in Central Asia. The project seeks to identify new opportunities for strengthening regional water cooperation in the region. Its interdisciplinary nature arises from the necessity to integrate scientific perspectives from the fields of politics, economics, ecology, law, and sociology to effectively address the challenges and opportunities associated with regional water cooperation. This comprehensive approach facilitates a deeper understanding of the complex interrelations among geopolitics, economics, ecology, sociology, and law.
Objectives	To achieve the stated aim of the research project, the following objectives have been defined: 1) Conduct a comprehensive analysis of the availability, quality and distribution of water resources in region,

	including data on rivers, lakes, glaciers and groundwater. This analysis will, first, assess the sustainability of resources to determine whether current water supplies can meet the needs of the population and ecosystems; second, identify problem areas to pinpoint regions facing water scarcity, which will aid in targeted infrastructure planning; third, establish a balance between the use of water resources and their restoration, which is essential for ecosystem protection; and fourth, create a conceptual foundation for interstate and regional cooperation in water resource management, particularly relevant in a region with shared water sources. 2) Analyze existing national and regional water resource management strategies in CA to identify functional and non-functional approaches. This will highlight the strengths and weaknesses of these strategies, aiming to enhance effectiveness of policy decisions, reduce tensions through agreements, strengthen cooperation, integrate new stakeholders, attract international assistance and raise public awareness, thereby contributing to sustainable development. 3) Identify the main challenges to regional water cooperation in CA. This task will, determine the relationship between region's demographic growth and increasing pressure on water resources; assess how the negative impacts of climate change might affect the quantity and quality of water resources in CA; third, evaluate economic losses from outdated infrastructure that exacerbate associated costs; and fourth, analyze the role of anthropogenic impacts, such as construction of new hydraulic structures. 4) Identify conflicts of interest among Central Asian states regarding dialogue and cooperation, which can lead to more sustainable management of water resources at the regional level. Identifying conflicts surrounding transboundary water resources and their geopolitical aspects will help pinpoint areas of tension and potential contradictions of interest, facilitating the development of joint management mechanisms that consider the interests of all parties. 5) Assess the weaknesses of existing political mechanisms for regional water cooperation in Central Asia, such as the Interstate Water Coordination Commission (ICWC), the International Fund for Saving the Aral Sea (IFAS), and bilateral and multilateral initiatives. 6) Study successful global and regional practices in water resource management cooperation and adapt them to
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	local conditions to develop a theoretical-conceptual and comprehensive model capable of effectively addressing the project's objectives. 7) Conduct expert consultations with stakeholders, including representatives from governmental bodies of Central Asian countries, international and regional organizations, local NGOs, academic institutions, and local communities, to gather constructive opinions and proposals for enhancing regional water cooperation. 8) Develop recommendations based on comprehensive analyses for improving interstate and regional interactions, including the creation of new systemic mechanisms and strategies. 9) Formulate conclusions and recommendations in the form of a final report, which will be presented to stakeholders and used for further research and development initiatives
Expected and achieved results	Expected results. The project aims to achieve both theoretical-methodological and practical results, specifically: 1) Analyze the availability, quality, and distribution of water resources in Central Asia to identify problem areas and assess existing threats and risks; 2) Review national and regional water management strategies by identifying their strengths and weaknesses to optimize policy decisions and improve cooperation effectiveness; 3) Identify key challenges for regional cooperation related to demographic growth, climate change, outdated infrastructure, and anthropogenic impact, to aid in the development of effective, targeted measures to address these challenges; 4) Analyze conflicts of interest among Central Asian states to pinpoint areas of tension and develop mechanisms for joint water management that accommodate the interests of all parties; 5) Assess existing political mechanisms (e.g., ICWC, IFAS, etc.) to identify weaknesses and provide recommendations for improvement; 6) Examine global and regional cooperation practices in water resource management to adapt successful approaches to local conditions; 7) Organize expert consultations with representatives from government bodies, NGOs, and academic communities to collect constructive opinions and proposals for enhancing cooperation; 8) Formulate recommendations to improve inter-state and regional interaction, including the development of new mechanisms and strategies;

	9) Summarize the findings of the comprehensive analysis and present recommendations in a final report, which will be delivered to stakeholders and relevant Kazakhstani entities to support the development of new water management initiatives. The practical significance of this project is rooted in its potential to provide an objective assessment of the development of regional water cooperation in Central Asia. The materials, scientific methodologies, and results produced by the project can be employed in subsequent research by relevant Kazakhstani institutions. The findings have the capacity to inform new scientific directions, particularly in the areas of integration processes, water security, and diplomacy.
Research team members with their identifiers (Scopus Author ID, Researcher ID, ORCID, if available) and links to relevant profiles	1. Baikushikova Gulnara — Project Leader, PhD, Chief Researcher, Head of the Department of International Relations and World Economy. h-Index: 4, Scopus Author ID: 57192167179, ORCID ID: 0000-0001-6081-2615 2. Delovarova Leyla. — Leading Researcher, Project Executor. h-Index: 2, Scopus Author ID: 55858531800, ORCID ID: 0000-0003-3163-5933 3. Yermekbayev Adilbek — Leading Researcher, Project Executor. h-Index: 4, Scopus Author ID: 57209836474, ORCID ID: 0000-0002-8464-8220 4. Sarybayev Meyram — Leading Researcher, Project Executor. h-Index: 2, Scopus Author ID: 57202092354, ORCID ID: 0000-0001-8420-9255 5. Apsattarova Gulzada — Researcher. ORCID ID: 0000-0001-6004-1574 6. Utkelbay Rysbek — Researcher. h-Index: 1, Scopus Author ID: 57551846000, ORCID ID: 0000-0003-3493-7777 7. Mukhanov Zhanibek. — Junior Researcher. ORCID ID: 0009-0000-1062-3082
Usage	The recommendations will be presented to the relevant stakeholders and appropriate structures in Kazakhstan for the development of new initiatives in the field of water resource management
Priority compared to real-world alternatives	The project holds a clear priority over comparable initiatives, as it integrates a comprehensive analysis of the region's water resources with the development of concrete, practically applicable mechanisms for interstate cooperation, while taking into account conflicts of interest and contemporary challenges
List of publications with links to them	Two articles have been published in journals recommended by the Committee for Quality Assurance in Scientific and Higher Education Activities (CQASHE): 1. Концептуализация климатической дипломатии в контексте водных вызовов Центральной Азии // Вестник КазНУ. Серия Международные отношения и международное право No3 (111). 2025.

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Patents	-