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STRUCTURE OF THE INTERNATIONAL FUND FOR SAVING THE ARAL SEA AND ITS HISTORICAL SIGNIFICANCE IN STABILIZING THE ECOLOGICAL SITUATION IN THE REGION

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Abstract
This article provides a scholarly analysis of the establishment, structure, operational directions, and role of the International Fund for Saving the Aral Sea (IFAS) in ensuring ecological sustainability in the Central Asian region. The study is conducted following the IMRAD (Introduction, Methods, Results, and Discussion, Conclusion) framework and is based on historical processes, statistical indicators, and reports of international organizations. The Introduction and Methodology sections cover the root causes of the regional ecological crisis and the scientific approaches employed in its study.

Keywords: Aral Sea, IFAS, ecological sustainability, ASBP, transboundary water resources, international cooperation.

INTRODUCTION

Until the mid-20th century, the Aral Sea was recognized as the fourth-largest inland water body in the world. Covering an area exceeding 68,000 square kilometers, it was directly linked to the livelihoods and daily lives of millions of people in the Aral Sea region. However, beginning in the 1960s, the inflows of the Syr Darya and Amu Darya rivers drastically declined. The primary cause of this process was the Soviet Union's policy of expanding cotton cultivation, which

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reduced the volume of water reaching the Aral Sea from 55–60 cubic kilometers per year to just 10–15 cubic kilometers.

The shrinkage of the Aral Sea is regarded as one of the major global ecological disasters. Saline dust and salts lifted from the dried seabed have spread across Central Asia, adversely affecting soil fertility, public health, and the regional climate. During the 1980s and 1990s, the region experienced water scarcity, agricultural crises, drinking water shortages, and numerous socio-economic challenges. These developments also intensified inter-state tensions.

These severe conditions prompted the five independent states of Central Asia—Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan—to establish an international organization at the regional level to address the ecological catastrophe. In 1993, based on a decision adopted in the city of Nukus, the International Fund for Saving the Aral Sea (IFAS) was established. The primary objectives of IFAS are to resolve ecological problems in the Aral Sea region, manage transboundary water resources equitably, and enhance the welfare of the local population.

RESEARCH METHODS

The methodological approaches applied in this study are as follows:

Document Analysis Key statutes of IFAS, decisions of the Council of Heads of State, documents of the Aral Sea Basin Program (ASBP), and annual reports of the Executive Committee of IFAS were examined. These documents enabled the analysis of the organization's structure, operational principles, and practical outcomes.

Literature Review Scientific articles from databases such as Springer, Elsevier, Wiley, Scopus, and Web of Science were reviewed, along with open-access sources on Google Scholar and ResearchGate. This literature provided information on the ecological state of the Aral Sea, IFAS's institutional development, and its role in international cooperation.

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Reports of International Organizations Reports from organizations such as the UN, World Bank, UNEP, UNDP, GEF, and IUCN were used as primary sources. Notably, the results of the Aral Sea Basin Program projects implemented by the World Bank provided important statistical data.

Statistical Analysis Statistical indicators, including the reduction in the area and volume of the Aral Sea, changes in water levels, air temperature and humidity, and soil salinization rates, were collected and analyzed. Data from FAO, World Bank Data, and national statistical committees served as the basis for this analysis.

Comparative Method The restoration of the Northern Aral Sea (following the construction of the Kokaral Dam) was compared with the ecological crisis in the Southern Aral Sea. This comparison played a crucial role in evaluating the effectiveness and limitations of IFAS activities.

DISCUSSION AND RESULTS

The ecological crisis of the Aral Sea has generated not only environmental but also socio-economic problems in the Central Asian region. Historical research indicates that the misallocation of water resources and outdated technologies in the agricultural system led to the disruption of local ecosystems. At the same time, the weakness of regional cooperation has complicated the international control of ecological hazards.

Global experience shows that if ecological monitoring and sustainable water management systems are implemented, the environmental situation in the Aral Sea region can improve significantly. Recognizing the critical importance of interstate coordination and the effective management of resources, the leaders of Central Asian states convened in Tashkent in 1993 with the goal of achieving these objectives and preserving the common future by establishing a new fund.

The International Fund for Saving the Aral Sea (IFAS) was established in 1993 at the initiative of the Central Asian states—Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan—in Tashkent. The Fund was organized to address regional ecological problems, manage water resources collectively, and mitigate

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the ecological crisis of the Aral Sea. Today, it functions as the central coordinator in implementing water and ecological projects.

The Fund has developed as a crucial interstate institution. Its governance system was structured as follows to achieve common objectives:

Council of Heads of State – the highest decision-making body of IFAS, responsible for resolving all strategic issues.

Executive Committee (EC IFAS) – organizes operational activities and coordinates all projects.

National Units – offices located in each member state to assist in project implementation.

Through this institutional structure, IFAS has become a significant mechanism not only for addressing ecological problems but also for the management of regional water resources.

The Aral Sea Basin Program (ASBP) is one of the most important initiatives of IFAS and has been implemented in the following phases:

ASBP-1 (1994–1997) – aimed at studying the ecological situation in the Aral Sea region and implementing priority social projects. It was the initial regional ecological program carried out by IFAS, with the primary goal of mitigating the ecological crisis of the Aral Sea and ensuring sustainable management of water resources in the region.

The main results in key areas were as follows:

Water Resource Management: Within ASBP-1, several studies were conducted in the Amu Darya and Syr Darya basins to improve the efficiency of water allocation and usage. Based on these studies, recommendations were developed to enhance water distribution and utilization.

Ecological Monitoring: Efforts were made to establish ecological monitoring systems, enabling continuous observation and assessment of environmental conditions in the basin areas.

Socio-Economic Analysis: Analyses of the socio-economic situation in the region were conducted, identifying measures to mitigate the social and economic impacts of the ecological crisis.

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Cooperation and Coordination: Special attention was paid to strengthening regional collaboration and ensuring interstate coordination, facilitating effective approaches to address regional ecological problems.

ASBP-1 served as an important step in developing ecological cooperation among Central Asian states, laying the foundation for subsequent programs ASBP-2 and ASBP-3. Through these programs, integrated approaches were developed to improve the ecological situation in the Aral Sea basin.

ASBP-2 (1998–2002) – focused on the initial institutional measures for water resource management and the development of ecological monitoring systems. This program was implemented by the Central Asian states to reduce the ecological crisis of the Aral Sea and ensure sustainable regional development. It achieved significant results in ecological, social, and economic spheres. Within the program, comprehensive measures were implemented in the Amu Darya and Syr Darya basins to improve water resource management. These efforts allowed for the development of recommendations to increase the efficiency of water allocation and usage and laid the foundation for the establishment of sustainable water management systems.

The introduction of ecological monitoring systems enabled continuous observation and evaluation of environmental conditions in the basins, serving as an essential tool for identifying and implementing measures aimed at improving the ecological situation.

Socio-economic analyses provided insights into the impact of the ecological crisis on the local population and facilitated the formulation of necessary measures to improve quality of life and reduce social consequences of environmental risks. The program also emphasized strengthening regional cooperation, with interstate coordination mechanisms supporting effective approaches to resolving ecological problems and fostering sustainable collaboration among Central Asian states.

As a result, ASBP-2 became a critical step in ensuring ecological sustainability, promoting efficient water management, and supporting socio-economic development in the Aral Sea basin, while laying the foundation for ASBP-3. The outcomes of this program created favorable conditions for sustainable regional development.

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ASBP-3 (2003–2010) – aimed at strengthening interstate cooperation, improving ecological infrastructure, and introducing water-saving technologies.

The program paid special attention to reinforcing interstate collaboration. Regional coordination systems were established, and joint strategies for water management in the Amu Darya and Syr Darya basins were developed. These efforts facilitated the reduction of ecological risks and enhanced the regional sharing of experience in resource management. Improving ecological infrastructure was a significant focus of the program. Water distribution and monitoring systems were upgraded, and infrastructure projects aimed at ecological sustainability were implemented, significantly contributing to environmental improvement and the reduction of ecological risks in the basin. The introduction of water-saving technologies increased the efficiency of water use in agriculture and industry. Modern irrigation systems and water-saving techniques played an important role in mitigating ecological hazards and ensuring sustainable water management.

Consequently, ASBP-3 became a key program in enhancing ecological sustainability, promoting interstate cooperation, and introducing water-saving technologies in the Aral Sea basin. The systems and experiences developed through this program serve as the foundation for future ecological initiatives.

ASBP-4 (2011–present) – focuses on ensuring water and energy security under climate change and expanding international cooperation. Since 2011, ASBP-4 has been implemented by IFAS. Its primary objectives include securing water and energy resources in Central Asia under climate change conditions, preventing regional ecological problems, and promoting international cooperation.

Sustainable water management systems have been further developed, with water-saving technologies, automated monitoring systems, and integrated management strategies introduced in the Amu Darya and Syr Darya basins. These measures improved water use efficiency and helped mitigate ecological risks arising from climate change.

Energy security measures integrated water and energy infrastructure management. Efficient approaches to water allocation and hydropower resource use contributed to regional energy stability and reduced the risk of ecological

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crises.

ASBP-4 also prioritized regional and international cooperation. Collaborative projects with international organizations, donors, and ecological experts facilitated scientific research and environmental initiatives, promoting ecological sustainability and effective regional policy-making in the Aral Sea region. Scientifically, ASBP-4 has demonstrated high efficiency. Integrated water and energy systems, climate adaptation strategies, and international scientific and technological cooperation have played a crucial role in strengthening regional ecological sustainability and ensuring water-energy security. Simultaneously, the program yielded significant practical results in reducing ecological risks, improving resource management, and enhancing the socio-economic conditions of the population.

Hundreds of projects under ASBP have positively impacted the lives and health of thousands of people. The restoration of the Northern Aral Sea exemplifies the effectiveness of these programs.

Specifically, the partial restoration of the Northern Aral Sea and the prevention of ecological crises in this area, although small in scale relative to the overall disaster, represented an invaluable achievement. The construction of the Kokaral Dam in Kazakhstan in 2005 raised water levels, resulting in:

Revitalization of fisheries and local economies.

Moderation of the regional climate.

Partial recovery of the ecosystem's biodiversity.

This project demonstrated that while complete restoration of the Aral Sea is not feasible, partial rehabilitation has substantial ecological and social significance.

Under IFAS initiatives, social projects in the Aral Sea region have included:

Improving drinking water supply.

Developing healthcare services, particularly for maternal and child health.

Raising awareness of ecological risks and fostering environmental protection culture.

IFAS has also achieved notable success in international cooperation. Projects have been implemented in collaboration with the World Bank, UN, OSCE, UNEP, and other organizations, continuing to have practical significance today. These

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partnerships have helped raise global awareness of the Aral Sea issue and attracted financial and technical support to the region.

Strengths of IFAS activities include:

Regional Integration: IFAS is the sole institution uniting all five Central Asian states, fostering collaboration on ecological and water management issues, creating a collective factor beyond national interests.

Global Recognition: Through the Aral Sea issue, Central Asia gained international acknowledgment as a region facing ecological crisis, with IFAS acting as a primary bridge.

Partial Restoration Experience: The partial recovery of the Northern Aral Sea and the replanting of vegetation in the formerly desertified areas created a new ecosystem in the Aralkum desert, benefiting regional fauna—one of IFAS's most important achievements.

International Financial Support: Funding from the World Bank, UNEP, UNDP, and other organizations facilitated the implementation of thousands of projects.

Challenges and limitations include:

Financial Dependence: IFAS has limited own funds and relies mainly on donor contributions and member states' support.

Political Disagreements: Interstate conflicts over water resource management occasionally arise due to differing national interests.

Project Sustainability: Some projects were implemented with temporary donor funding and did not achieve long-term sustainability.

Regional Disparities: While the Northern Aral Sea partially recovered, the Southern Aral remains almost completely dried.

The role of IFAS in addressing these regional challenges through international cooperation is invaluable. Its activities are recognized globally as a modern example of ecological diplomacy. The UN General Assembly granted IFAS observer status, enabling the Aral Sea issue to enter the global environmental agenda. Cooperation with the World Bank, including the construction of the Kokaral Dam, and UNDP-supported drinking water projects exemplify IFAS's success in international collaboration. Reflections on the organization's activities are crucial for shaping its future prospects. In the future, IFAS should establish

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strategic plans and pursue the following objectives to maintain regional and global significance:

Develop climate adaptation strategies: Climate change in Central Asia exacerbates Aral Sea problems, making climate adaptation a primary future focus.

Introduce green technologies: Water-saving technologies, renewable energy, and ecological infrastructure development are essential.

Promote regional socio-economic sustainability: IFAS should support not only ecological but also economic and social projects.

Establish sustainable financial mechanisms: Reducing donor dependency by developing permanent financial sources is critical.

CONCLUSION

The International Fund for Saving the Aral Sea (IFAS) has emerged as an unparalleled ecological and diplomatic institution in the history of Central Asia. It has played a crucial role in mitigating the consequences of the Aral Sea crisis, coordinating transboundary water resources, and promoting ecological sustainability in the region. As a result of IFAS's activities, the Northern Aral Sea has been partially restored, thousands of social projects have been implemented, and the Aral Sea issue has gained global recognition.

However, financial dependence, political disagreements, and regional disparities continue to limit its effectiveness. In the future, IFAS must establish sustainable financial mechanisms, widely implement green technologies, and develop climate adaptation strategies.

In summary, the history of IFAS represents not only the fight against an ecological disaster but also a significant example of regional cooperation among Central Asian states. This experience holds relevance for the global environmental governance system. Strengthening regional cooperation remains a key necessity. Within the framework of IFAS, joint management of water resources, the integration of ecological monitoring systems, and collaborative project implementation can make a substantial contribution to the ecological sustainability and socio-economic development of the region. Clear regulations regarding water allocation and use will serve as an important factor in preventing regional conflicts.

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The implementation of modern technologies is crucial for improving the environmental conditions in the region. Water-saving and environmentally safe technologies can enhance the efficiency of agricultural irrigation systems and industrial enterprises. Additionally, advanced methods for wastewater treatment and reuse help preserve the ecological environment and ensure efficient resource utilization.

Measures to enhance ecological sustainability in the Aral Sea region should be implemented continuously. Restoring vegetation cover, implementing ecological measures to combat wind erosion and salinization, and conducting specialized rehabilitation projects in arid and saline lands can significantly improve local environmental conditions.

Developing social and healthcare systems is an essential factor in ensuring the quality of life and health of the local population. Monitoring ecological risks and diseases, implementing preventive measures, and improving healthcare systems can enhance living standards and strengthen environmental health.

Expanding international financial and scientific assistance plays a key role in enhancing the region's ecological sustainability and research potential. Increasing funding through IFAS and other international organizations and introducing scientific research and technological solutions to the region will improve the effectiveness of ecological projects and contribute to long-term sustainable development.

Engaging the local population in ecological projects and enhancing their environmental literacy can contribute to sustainable development. Educating the public through training programs, seminars, practical workshops, and mass media can effectively raise ecological awareness and serve as an important tool in strengthening regional ecological sustainability.

REFERENCES

1. Mirziyoyev Sh.M. Buyuk kelajagimizni mard va oliyjanob xalqimiz bilan birga quramiz. – Toshkent: O‘zbekiston, 2017.
2. Mirziyoyev Sh. M. Qaror №123: Orolbo‘yi hududida ekologik holatni yaxshilash bo‘yicha chora-tadbirlar. – Toshkent, 2019.

Modern American Journal of Social Sciences and Humanities
ISSN (E): 3067-8153
Volume 01, Issue 06, September, 2025
Website: usajournals.org

3. Mirziyoyev Sh. M. Farmon №PQ-432: Suv resurslarini samarali boshqarish va Orolni tiklash. – Toshkent, 2020.
4. Mirziyoyev Sh. I. Nutq: Xalq bilan muloqot va ekologik barqarorlik. – Toshkent, 2021.
5. Abdullayev I. Orol dengizi inqirozi va suv resurslarini boshqarish. – Toshkent: Fan, 2001.
6. FAO. Water and food security in Central Asia. – Rome: FAO, 2017.
7. Glantz M. Creeping environmental problems and sustainable development in the Aral Sea Basin. – Cambridge: Cambridge Univ. Press, 1999.
8. IFAS O‘zbekiston bo‘limi. Faoliyat yakunlari va istiqbollari. – Toshkent, 2020.
9. Jo‘raev X. Transchegaraviy suv resurslari va mintaqaviy hamkorlik. – Samarqand, 2008.
10. Karimov I. Orol fojiasi – umumjahon muammosi. – Toshkent: O‘zbekiston, 1995.
11. Micklin P. The Aral Sea disaster // Annual Review of Earth and Planetary Sciences. – 2007. – Vol. 35. – P. 47–72.
12. Mirzaev A. Orolbo‘yi ekologik muammolari va aholi salomatligi. – Nukus, 2010.
13. Nukus davlat universiteti. Orol fojiasi bo‘yicha ilmiy konferensiya materiallari. – Nukus, 2018.
14. Small I., van der Meer J. The impact of the Aral Sea disaster on human health // International Journal of Public Health. – 2007. – Vol. 52. – P. 65–72.
15. United Nations. Sustainable development and the Aral Sea region. – New York: UN, 2021.
16. Wegerich K. Hydro-hegemony in the Amu Darya Basin // Water Policy. – 2008. – Vol. 10(S2). – P. 71–88.
17. World Bank. Restoration of the Northern Aral Sea and Syr Darya Control Project. – Washington, DC: World Bank, 2005.
18. World Bank. Aral Sea Basin Program: Achievements and challenges. – Washington, DC: World Bank, 2019.
19. Abdullayev I. Orol dengizi inqirozi va suv resurslarini boshqarish. – Toshkent: Fan, 2001.

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Volume 01, Issue 06, September, 2025
Website: usajournals.org

20. Ekologiya instituti, O‘zFA. Orolbo‘yi hududida iqlim o‘zgarishlari tahlili. – Toshkent, 2015.
21. Ekologiya qo‘mitasi. Orolbo‘yi hududidagi ekologik holat bo‘yicha hisobot. – Toshkent, 2019.
22. Orolbo‘yi xalqaro innovatsion markazi. Ekologik muammolar va yechimlar. – Toshkent, 2021.
23. Qozog‘iston Respublikasi Ekologiya vazirligi. Shimoliy Orolni tiklash tajribasi. – Ostona, 2007.
24. Глазовский Н. Аральский кризис: причины и последствия // Вестник РАН. – 1990. – Т. 60, №4. – С. 22–31.
25. Журнал «Экология Центральной Азии»: спец. выпуск «Аральский кризис». – 2010.
26. Михлин П. Аральское море: экология и политика. – М.: Наука, 2012.
27. Международный фонд спасения Арала. Доклад Исполкома МФСА. – Душанбе, 2015.
28. МФСА. Итоги деятельности фонда. – Ашхабад, 2020.
29. ООН. Региональное сотрудничество по проблемам Аральского моря. – Нью-Йорк, 2018.
30. Шадрин В. Проблемы управления водными ресурсами в Центральной Азии. – Ташкент: Фан, 2001.
31. ЮНЕП. Аральское море и безопасность в регионе. – Женева: UNEP, 2004.
32. Всемирный банк. Проект по восстановлению Северного Арала. – Вашингтон, 2006.
33. Плахотник А. Социальные последствия высыхания Арала. – Алматы: Қазақ университеті, 2005.