



Memorandum of Understanding between University of Oulu, Finland and Executive Committee of the International Fund for Saving the Aral Sea (EC IFAS)

This Memorandum of Understanding ("MoU") is made between

1) University of Oulu ("UO") Legal address: Pentti Kaiteran katu 1, 90014 University of Oulu, Finland;

and

 2) Executive Committee of the International Fund for Saving the Aral Sea ("EC IFAS")
Legal address: st. E-179, building 1, position 40, Astana, Kazakhstan;

individually also referred to as a "Party" and together as the "Parties".

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The Parties agree as follows:

1. PURPOSE AND SCOPE

1.1 The purpose of this MoU is to establish a framework for collaboration between the Parties to address the water management, water-energy, environmental and socio-economic challenges in the Aral Sea Basin. The Parties intend to advance scientific knowledge, share data, and implement joint projects to achieve sustainable development and mitigate the impacts of the environmental crisis.

- 1.2 The scope of this collaboration includes:a) Joint Research and Development
 - Collaborating on research projects aimed at integrating water balance and energy system models for improved benefit-sharing in transboundary river basins, including trade-off and synergy analysis.
 - b) Knowledge Transfer and Capacity Building Facilitating the exchange of expertise, technical knowledge, and best practices to support sustainable water and energy management systems.
 - c) Project Development and Implementation Jointly identifying, applying for funding, and implementing projects aligned with the Program of Assistance to the Aral Sea Basin Countries (ASBP-4) for 2021–2030.
 - d) Community Engagement and Dissemination Promoting awareness of the Aral Sea crisis and disseminating scientific findings through workshops, seminars, and publications.
 - e) International Cooperation Strengthening regional and global partnerships to amplify efforts in addressing challenges of the Aral Sea Basin.

2. AREAS OF COOPERATION

2.1 To achieve the objectives of this MoU, the Parties intend to cooperate in the following areas:

- 2.1.1 Integrated Water Resources Management
 - a) Improving tools and methodologies for integrating water balance and energy system models, optimizing resource use, and benefit-sharing in transboundary river basins.
 - b) Implementing infrastructure projects that ensure integrated water and energy resource management.
 - c) Advancing methodologies for regional coordination, data exchange, and system optimization to improve resource allocation efficiency.

- 2.1.2 Ecology and Climate Resilience
 - a) Reducing and preventing the pollution of surface and groundwater.
 - b) Addressing desertification and land degradation and the socio-economic impacts of these processes.
 - c) Enhancing resilience to natural disasters such as floods, mudflows, and droughts by leveraging early warning systems.
 - d) Assessing the state of glaciers in the Aral Sea Basin and addressing the impact of climate change on water availability.
 - e) Assessment of the state of lake systems and wetlands in the Aral Sea basin and the impact of climate change processes on them.
- 2.1.3 Socio-Economic Development
 - a) Ensuring access to clean drinking water for populations in the Aral Sea Basin, meeting forecasted demand up to 2030.
 - b) Improving public health by reducing waterborne diseases through improved sanitation and wastewater treatment.
 - c) Developing sustainable water supply systems to support industrial growth and mitigate pollution from industrial discharges.
 - d) Enhancing irrigation systems to support agricultural productivity and rural livelihoods.

2.2 The Parties commit to maintaining high scientific quality in all joint activities, exchanging research findings, and disseminating them to address pressing regional challenges effectively.

2.3 To achieve the objectives outlined in this MoU, the Parties may collaborate with other relevant organizations and stakeholders as required.

3. FORMS OF COOPERATION

3.1 Subject to resource availability, the Parties intend to cooperate in the following forms, but not limited to:

- a) Initiating and implementing joint applied research projects aimed at supporting decision-making based on evidence in hydrology and water resources management, including projects promoting the use of innovative renewable and green technologies to improve sustainable water use and the ecological situation in the Aral Sea Basin.
- b) Applying research results in practice by integrating tools and knowledge, including water balance and energy system models, to address transboundary river basin management challenges.

- c) Jointly seeking funding opportunities for projects, programs, and initiatives aligned with the Program of Assistance to the Aral Sea Basin Countries (ASBP-4) for 2021–2030.
- d) Providing technical assistance and expertise through the collaboration of EC IFAS and the University of Oulu's scientific community.
- e) Providing access to research products such as databases, hydrological models, mapping tools, and any other datasets of mutual relevance.
- f) Facilitating activities on existing projects of the Parties, which will be agreed upon on a case-by-case basis to ensure alignment with mutual goals.
- g) Publishing and disseminating research results collaboratively with scientists and specialists from Central Asian countries, promoting regional and global awareness of challenges and solutions.
- h) Organizing conferences, forums, seminars, and other events to facilitate knowledge sharing, capacity building, and dissemination of best practices.
- i) Promoting links between relevant institutions of Central Asian countries and similar institutions worldwide to foster partnerships and collaborations.
- j) Conducting capacity-building activities to strengthen institutional and human capacities in sustainable water and energy management across the region.
- k) Providing opportunities for education and training programs, including exchange programs, workshops, and certifications for researchers and students in Central Asian countries and beyond.

3.2 Specific details of cooperation necessary to implement these forms, such as priorities, technical frameworks, liabilities, intellectual property rights, confidentiality obligations, data protection and financial resources, will be negotiated and agreed separately between the Parties.

4. RESEARCH NEUTRALITY

4.1 Any data, findings, inventions, works, publications, or any other outcomes obtained as a result of joint research under this MoU shall not be used for profit or material gain.

4.2 The Parties agree that all research activities conducted under this MoU will remain impartial and focus solely on advancing scientific understanding, providing evidence-based solutions, and addressing challenges in the Aral Sea Basin.

4.3 The dissemination of research findings shall be conducted transparently and with acknowledgement of the contribution of all participating Parties.

5. COORDINATORS

5.1 Each Party will appoint a Coordinator to oversee the execution of this MoU and ensure effective communication and collaboration:

University of Oulu:

Name: Torabi A.H.

Title: Associate Professor and leader of the Hydrosystems Engineering & Management research group at the Water, Energy, and Environmental Engineering Research Unit

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Telephone: +358294484333

EC IFAS:

Name: Bekmaganbetov S. A.

Title: Deputy Chairman

Email: office@ecifas.kz

Telephone: +77172248098

5.2 Either Party may change its Coordinator or contact details by providing written notice to the other Party.

6.TERM AND TERMINATION

6.1 This MoU shall come into effect upon the date of the last signature and will remain valid for a period of five (5) years unless terminated earlier by either Party with six (6) months' written notice.

6.2 This MoU may be renewed upon mutual agreement in writing by the Parties.

7. GENERAL TERMS

7.1 This MoU does not create any financial, legal or other obligations between the Parties but brings out the Parties common intend to promote the collaboration in the scope, areas and forms of cooperation as described in this MoU.

7.2 Each Party is responsible for its own expenses concerning this MoU. Besides, there will be no exchange of funds between the Parties associated with this MoU. The Parties have no resulting financial, legal or other obligations unless they later decide to enter into separate agreement(s) which includes terms and conditions mutually accepted by the Parties.

7.3 The Parties agree to meet annually to review progress and explore further opportunities for collaboration.

7.4 This MoU does not establish a Party any rights to other Party's intellectual property. All intellectual property rights arising from joint activities will be addressed in subsequent agreements and will reflect mutual contributions.

7.5 Neither Party may assign its rights or obligations under this MoU to a third party without prior written consent of the other Party.

7.6 This MoU does not obligate either Party to enter into any further agreement with each other or any other party.

SIGNATURES

This MoU is made in two (2) copies in English language, each of which is equally authentic.

