SVENSKA ARALSJÖSÄLLSKAPET
Swedish Aral Sea Society

Swedish Aral Sea Society
on-line Conference

Uzbekistan's actions to stabilize environmental situation in the Southern Aral Sea region and today's status of water inflow

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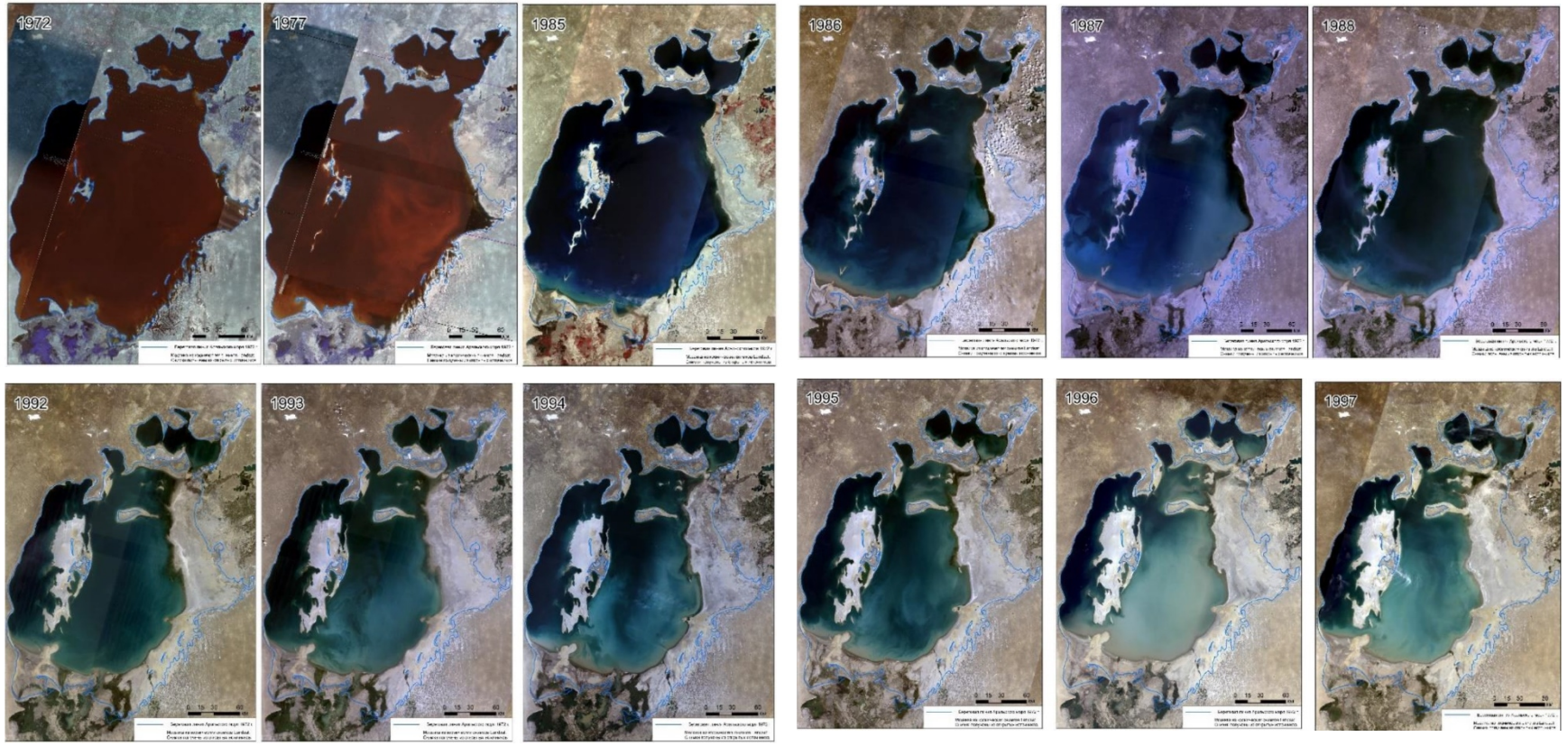
Tashkent, Republic of Uzbekistan
16 April 2025

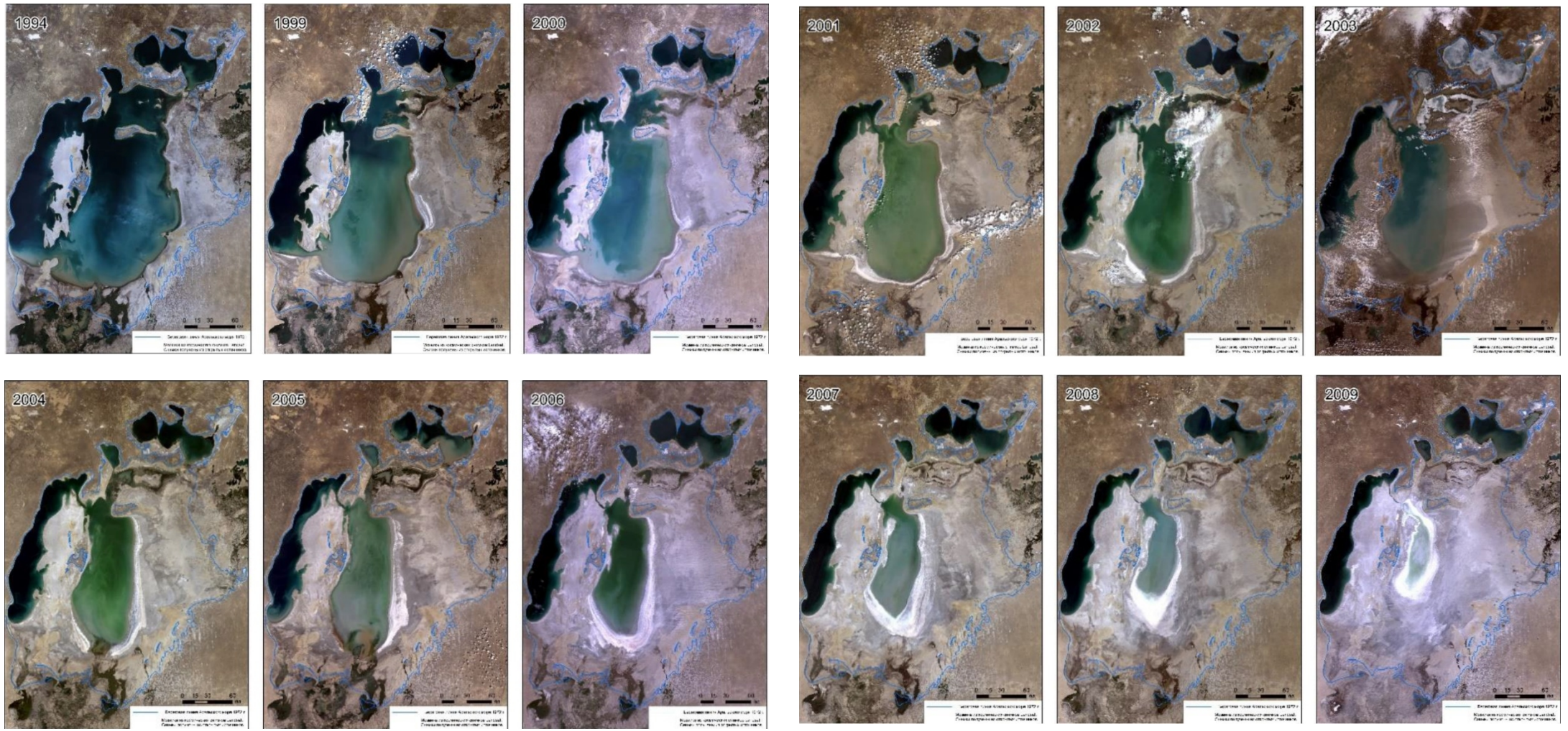
HOW the ARAL SEA DRIED

Anthropogenic factors (the main of which are intensive industrial, irrigation and hydropower developments) together with natural factors (climate aridity - a combination of high air temperatures, high evaporation and significant small amount of precipitation) led to the death of the Aral Sea. The less water flowed into the sea along the Amudarya and Syrdarya rivers, its depth and volume of water became less, the faster it warmed up - evaporation was bigger, which accelerated its drying.



The Aral Sea was divided into North and South in 1989 as a result of a decrease of water levels and drying up of the Berg Strait. By the end of the 1990s, the Big (Southern) Aral Sea turned into a hyperhaline (saline) body of water. Salinity in 1997 was 57 ‰ (ppm). In 1997 the island of Barsakelmes merged the coastal land, in 2001 - the island of Vozrozhdenie also stopped to be an island.

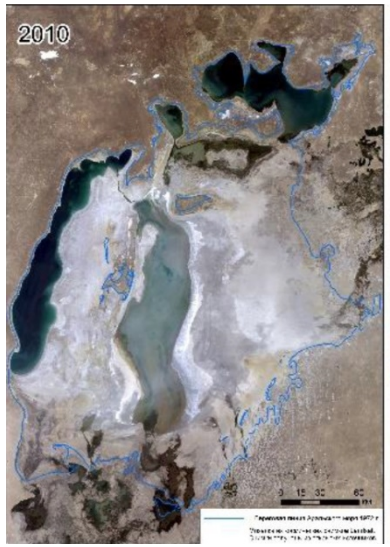
In 2003, the South Aral Sea was divided into Eastern and Western parts, which are connected by the narrow Uzun-Aral strait, located at an altitude of 29 m above sea level. This configuration does not allow water of those two bodies to mix. In 2004, a small lake Tushchibas, which was previously the bay of the Aral Sea - separated from the Eastern part.



In 2005, the Small Aral Sea was cut off from the Big Sea by the Kokaral Dam - on the territory of Kazakhstan. Both Sea bodies were finally separated.

Kokaral Dam - a structure that crosses the Berg Strait between the North Aral Sea (Small Sea) and the South Aral Sea (Big Sea)

The dam was designed to regulate the water level in the Small Sea. The length of the dam is 13,034 m, the width is up to 100-150 m. The height of the top of the dam is 6 m (45.5 m abs), the level of the Small Sea is supposed to be up to 42.2 m abs. A duct was built on the dam with nine spillways with water discharge of 600 m^3 /sec, designed to protect dam against destruction by high water level in the South Aral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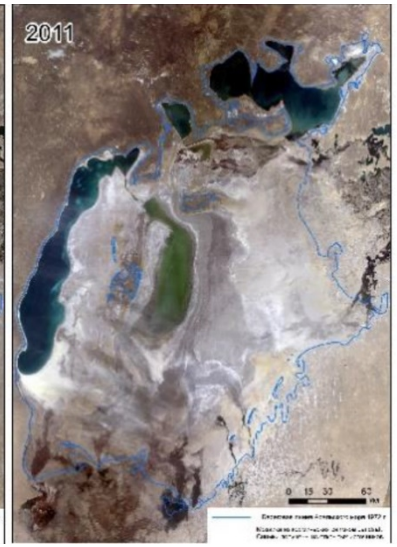
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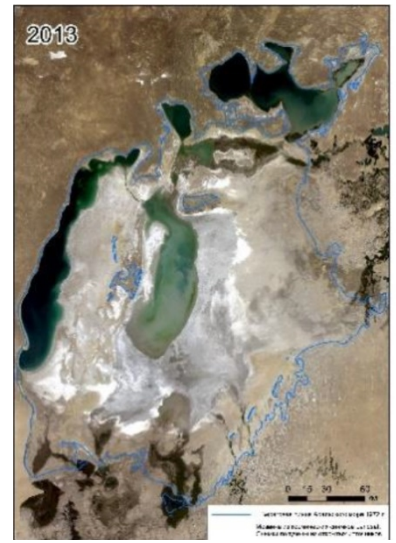
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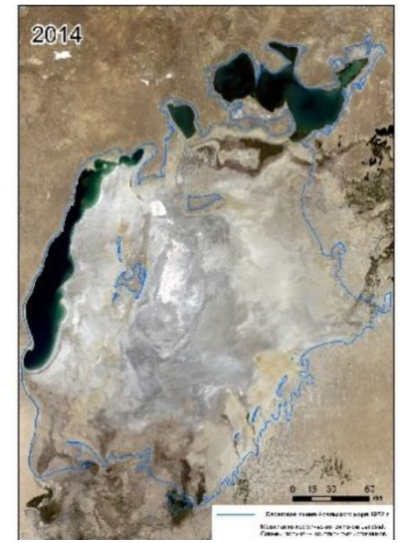
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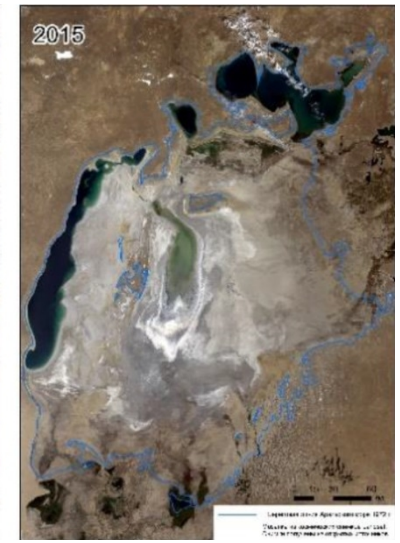
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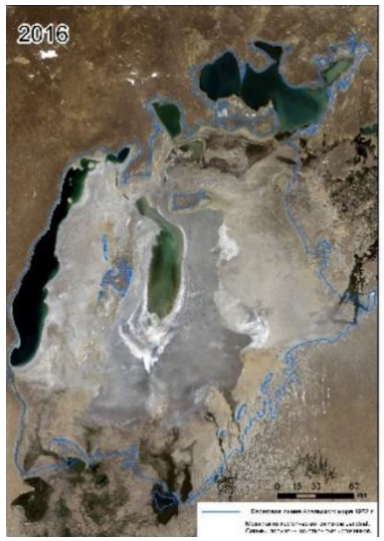
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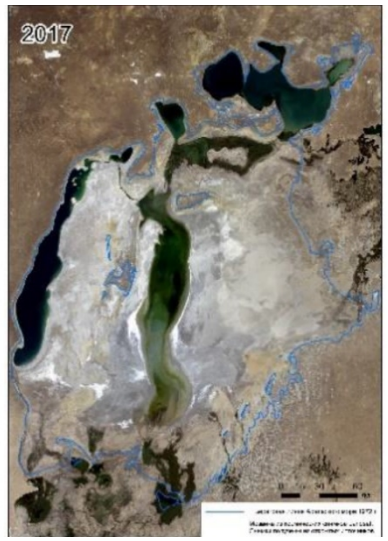
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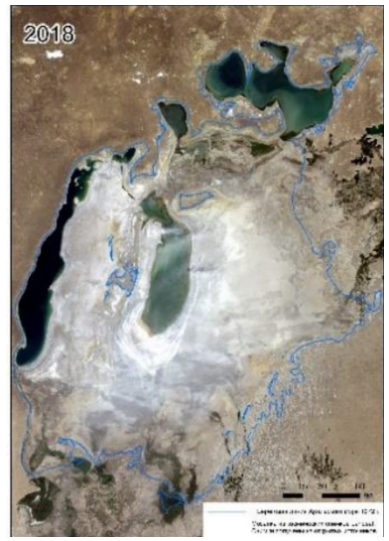
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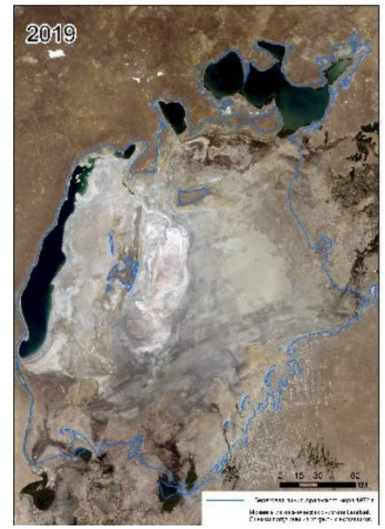
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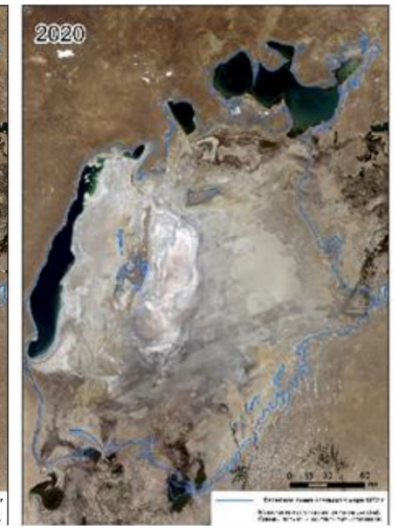
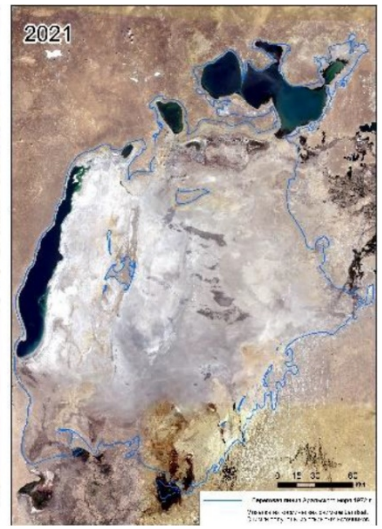

2020


2021

The very first state program to solve the Aral Sea problems was launched back in the days of Soviet Union

On September 19, 1988, Resolution No. 1110 of the Central Committee of Communistic Party and Council of Ministers of the USSR **"On measures to radically improve environmental and sanitary situation in the Aral Sea region, increase efficiency of use and strengthen protection of water and land resources in its basin"** of September 19, 1988 was adopted. It stated [paragraph 2]:

"In order to restore disturbed ecological balance in the Aral Sea region, preserve the Aral Sea (with a reduced water area) as a natural object that has a significant impact on the state of natural environment and climatic conditions in the region, improve sanitary and epidemiological situation and protect flora and fauna, establish a guaranteed inflow of river waters into deltas of the Amudarya and Syrdarya rivers and the Aral Sea starting in 1990 in an amount of at least 8.7 cubic kilometers per year, increasing it to 11 cubic kilometers in 1995. kilometers, by 2000 up to 15-17 cubic kilometers and by 2005 up to 20-21 cubic kilometers (taking into account collector and drainage waters).”

Details at the link: http://www.consultant.ru/cons/cgi/online.cgi?req=doc&base=ESU&n=772#m6crmkS4nzxchnFJ1

The Resolution gave order to develop and submit in 1990 for approval to the USSR State Planning Committee and the USSR State Committee for Nature Protection a **Master Plan (Scheme) for the integrated use and protection of water and land resources of the Aral Sea basin until 2010.**

Scientific-design Company “Soyuzvodproekt” presented the main provisions of this Master Plan in 1990. [http://www.cawater-info.net/library/rus/hist/scheme_complex_use_asb/index.htm].

It was ordered to develop a target program to strengthen health of population of the Karakalpak ASSR, Khorezm, Kyzyl-Orda and Tashauz provinces for 1988-1995, providing for necessary development of material base of health care, increasing effectiveness of work on prevention and treatment of tuberculosis, hepatitis and other serious diseases, especially among children and women, and the level of medical care for population in order to reduce incidence of people in this region.

A specialized construction **Association "Aralvodstroy"** was created to carry out work envisaged by the Resolution. In two and a half years of its existence, the Association began work on construction of group water pipelines and other agricultural water supply facilities, water supply facilities, sewerage and treatment facilities for cities, urban-type settlements and district centers in the Aral Sea region. The construction and reconstruction of main collectors for removal of mineralized drainage water from irrigated lands in the Aral Sea region was started.

In May 1989, a meeting was held in Nukus under the leadership of the Secretary of the Central Committee of the CPSU Yegor Ligachev to review the progress of implementing the instructions of Resolution No. 1110

During meeting, technical and economic feasibility study for creation of artificially regulated reservoirs in areas close to the cities of Muynak in the Karakalpak ASSR and Aralsk in the Kyzyl-Orda region, as well as technical and economic calculation of construction of structures to regulate level and water regime of coastal shallow areas of the Aral Sea in zone of deltas of the Amudarya and Syrdarya rivers were considered. Implementation of studies in this direction was started only after 2000 - first in Kazakhstan and then in Uzbekistan.

Due to collapse of the USSR, the grandiose plans to save the Aral Sea, envisaged in the Resolution, were not implemented. Some work was continued by the republics themselves only after collapse of Soviet Union, but on a significantly smaller scale due to limited funding.

International Fund for Saving the Aral Sea (IFAS)

On March 26, 1993, a meeting of the Heads of State of Central Asia was held in Kyzylorda (Kazakhstan). By decision of the Presidents, **the Interstate Council on the Aral Sea Basin Problems (ICAS)** was formed, consisting of 25 people (five from each state). **An Agreement was adopted on joint actions to resolve problems of the Aral Sea and the Aral Sea region, environmental improvement and ensuring socio-economic development in the Aral Sea Basin.**

On July 13, 1993, the first working meeting of the ICAS was held in Tashkent (Uzbekistan), at which:

- Structure of the ICAS and Legal Status of the Executive Committee of the ICAS were approved;
- **"The Basic Provisions of Concept of the Central Asian States for Resolving Problems of the Aral Sea and the Aral Sea Basin taking into account Socio-Economic Development of the Region"** were approved http://cawater-info.net/library/rus/gov8.pdf

The concept states that:
"to restore the sea to its full volume at 53 m, it will be necessary to ensure an annual flow of 65 km^3 of water into the Aral Sea, without taking into account the delta's water needs, and steps taken are not sufficient to solve the problem. This is difficulty of implementing such a proposal"

It is also noted: *"... preserving the existing sea will not solve all problems that have already damaged environment, and desertification process continues without reducing its intensity, increasingly pushing the sea away from human settlements, further complicating socio-economic development and aggravating already difficult living conditions of population*"

Based on this, the goal was set for IFAS - to reduce detrimental impact of the Aral crisis on environment and livelihoods of millions of people living in the Aral Sea region, including through implementation of well-thought-out, targeted projects provided with appropriate sources of financing.

Until 2014, IFAS was the main driver for solution of the Aral Sea problems

During period of independence - until 2014, Uzbekistan attracted no more than 25 million US dollars per year to Karakalpakstan

Following the International Conference on the Aral Sea Problems held in the autumn of 2014 in Urgench at the initiative of IFAS, the **"Comprehensive Program for Mitigation of the Consequences of the Aral Sea Disaster, Restoration and Socioeconomic Development of the Aral Sea Region for the Period 2015-2018"** was launched by Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 255 dated 29.08.2015. The program included 235 projects for a total of 1,920.8 million US dollars, of which 736.4 million US dollars was Uzbekistan's contribution from the state budget and 1,184.4 million US dollars were loans from international financial agencies.

Having become President of the Republic of Uzbekistan at the end of 2016, Shavkat Mirziyoyev radically changed situation.

Since 2017, Uzbekistan has been implementing activities in the Aral Sea region in four parallel directions:

1. State programs initiated by the Government of Uzbekistan

2. Activities of the International Fund for Saving the Aral Sea (IFAS) in Uzbekistan (https://aral.uz)

3. Activities within framework of the Multi-Partner Trust Fund for Human Security for the Aral Sea region (Aral Sea UN Human Security Trust Fund for the Aral Sea in Uzbekistan (undp.org).

4. Activities with support of international donors (GIZ, World Bank, ADB, UNDP-GEF, EIB, JICA, KOIKA, USAID-WAVE, CAREC and many others).

State programs initiated by the Government of Uzbekistan

n February 2017, President of the Republic of Uzbekistan approved **"Strategy of Actions for Five Priority Areas of Development of the Republic of Uzbekistan for 2017-2021"**. The document notes importance of taking systemic measures to mitigate negative impacts of global climate change and drying up of the Aral Sea for e development of agriculture and human life. To this end, President of the Republic of Uzbekistan approved the **State Program for Development of the Aral Sea Region for 2017-2021** by his Resolution No. 2731 dated 18.01.2017. The program envisaged the implementation of 67 projects by attracting and developing more than 8.4 trillion soums from various sources of financing, including budgetary allocations, target funds, grant funds and loans from major international financial institutions. https://lex.uz/docs/3099707

Following this, Resolution of President of the Republic of Uzbekistan No. PP-2803 **"On additional measures for economic development and employment of the population of the Muynak region of the Republic of Karakalpakstan in the period 2017-2018"** was adopted on February 28, 2017. https://lex.uz/docs/4937279 As part of this, a Small Industrial Zone was created in the city of Muynak (MPZ "Muynak") with an area of □□20.5 hectares, and an association was created with participation of enterprises engaged in the catch and processing of Artemia cysts, with the aim of ensuring organization of production lines for their complete processing, starting in 2018. These actions were approved by the Decree of the President of the Republic of Uzbekistan No. UP-5809 **"On measures to create the free economic zone"Nukus"** dated September 4, 2019 | https://www.lex.uz/docs/4498068#undefined

In December 2018, President of the Republic of Uzbekistan visited Muynak, where he initiated additional measures to further improve the situation. Following this visit, Cabinet of Ministers of the Republic of Uzbekistan adopted Resolution No. 37 of January 16, 2019, which approved **"Comprehensive Program for the Development of the Muynak District of the Republic of Karakalpakstan for 2019-2021"**. The program includes 75 projects for implementation in 2019-2021 with a total cost of 26.974 trillion soums (about 3.2 billion US dollars). https://lex.uz/ru/docs/4164159

State programs initiated by the Government of Uzbekistan (2)

By Resolution of Cabinet of Ministers of the Republic of Uzbekistan No. 1031 “**On additional measures to create protective forests “green covers” - in arid areas of the Aral Sea basin”** dated 12/24/2019. https://lex.uz/docs/4664693 large-scale work on forest reclamation activities on dried bed of the Aral Sea began. On November 25, 2020, these works were continued on the basis of the Resolution of Cabinet of Ministers of the Republic of Uzbekistan No. 745 **“On additional measures to create forests in the regions of the republic, “green cover” in the regions of the Aral Sea»** | https://lex.uz/ru/docs/5123924

On January 18, 2022, the Cabinet of Ministers adopted Resolution No. 31 **“On additional measures to create a “green cover” - protective forests on the dried bottom of the Aral Sea and the Aral Sea region”** https://lex.uz/uz/docs/5831072 The document was developed in accordance with **Concept for Development of the Forestry System in the Republic of Uzbekistan until 2030** (approved by Presidential Resolution No. PP-4850 dated 06.10.2020 https://lex.uz/docs/5037204) .

(Academician Novitsky Z.B. will tell you more about the work carried out and the results)

Another state program was launched by Decree of the President of the Republic of Uzbekistan No. PP-4889 dated November 11, 2020 **"On measures for comprehensive socio-economic development of the Republic of Karakalpakstan in 2020 - 2023"** | https://lex.uz/ru/docs/5100721 The goal is effective use of the existing socio-economic, including production and investment potential of the Republic of Karakalpakstan, improvement of engineering and communications, social and production infrastructure in the region, stable development of economic sectors, ensuring employment on this basis and improving standard of living of the population.

Resolution of President of the Republic of Uzbekistan No. PP-4912 dated 05.12.2020 **"On urgent measures for efficient use of water resources and improvement of melioration state of lands in the Republic of Karakalpakstan"** | https://lex.uz/docs/5144136 The purpose of Resolution is to take urgent measures for construction and reconstruction of water supply facilities, widespread introduction of water-saving irrigation technologies, improvement of melioration state of lands, establishment of automated control over use of water resources and electrical energy, reduction of water loss and increase in efficiency of canals through introduction of scientific achievements into production, as well as the reliable supply of water to irrigated land areas in the Republic of Karakalpakstan.

State programs initiated by the Government of Uzbekistan (3)

Resolution of President of the Republic of Uzbekistan dated 10.01.2020 N PP-4565 **"On measures to develop the social and industrial infrastructure of the Republic of Uzbekistan in 2020-2022"** A targeted program for development of the Aral Sea region with organization of financing for implementation of projects in the Republic of Karakalpakstan and the Khorezm region in 2020 was approved (Appendix N 14) https://lex.uz/docs/4691320#4697418

Resolution of the Cabinet of Ministers dated 04.04.2022 №155 **"On additional measures for the comprehensive socio-economic development of territories and further improvement of the standard of living of the population of the Republic of Karakalpakstan in 2022-2026."** In 2022-2026, the Republic of Karakalpakstan will see its gross regional product increase by 1.5 times, industrial production by 1.5 times, agricultural output by 1.2 times, services by 2.9 times, and construction work by 1.4 times.

Resolution of President of the Republic of Uzbekistan dated 30.05.2022 No. PP-264 "**On additional measures for development of entrepreneurship in the Northern regions of the Republic of Karakalpakstan"** https://lex.uz/docs/6039687 **PROGRAM OF MEASURES was approved for development of agricultural sector and support of entrepreneurship in the Northern regions of the Republic of Karakalpakstan in 2022 - 2024**

State programs initiated by the Government of Uzbekistan (4)

Decree of President of the Republic of Uzbekistan No. UP-213 **"On additional measures to improve the well-being of population of the Republic of Karakalpakstan through accelerated development of business, innovative technologies and infrastructure"** dated August 31, 2022. https://lex.uz/docs/6181169 A ROAD MAP has been adopted for socio-economic development of the Republic of Karakalpakstan, eliminating existing problems, ensuring employment of the population and further development of business/enterneship.

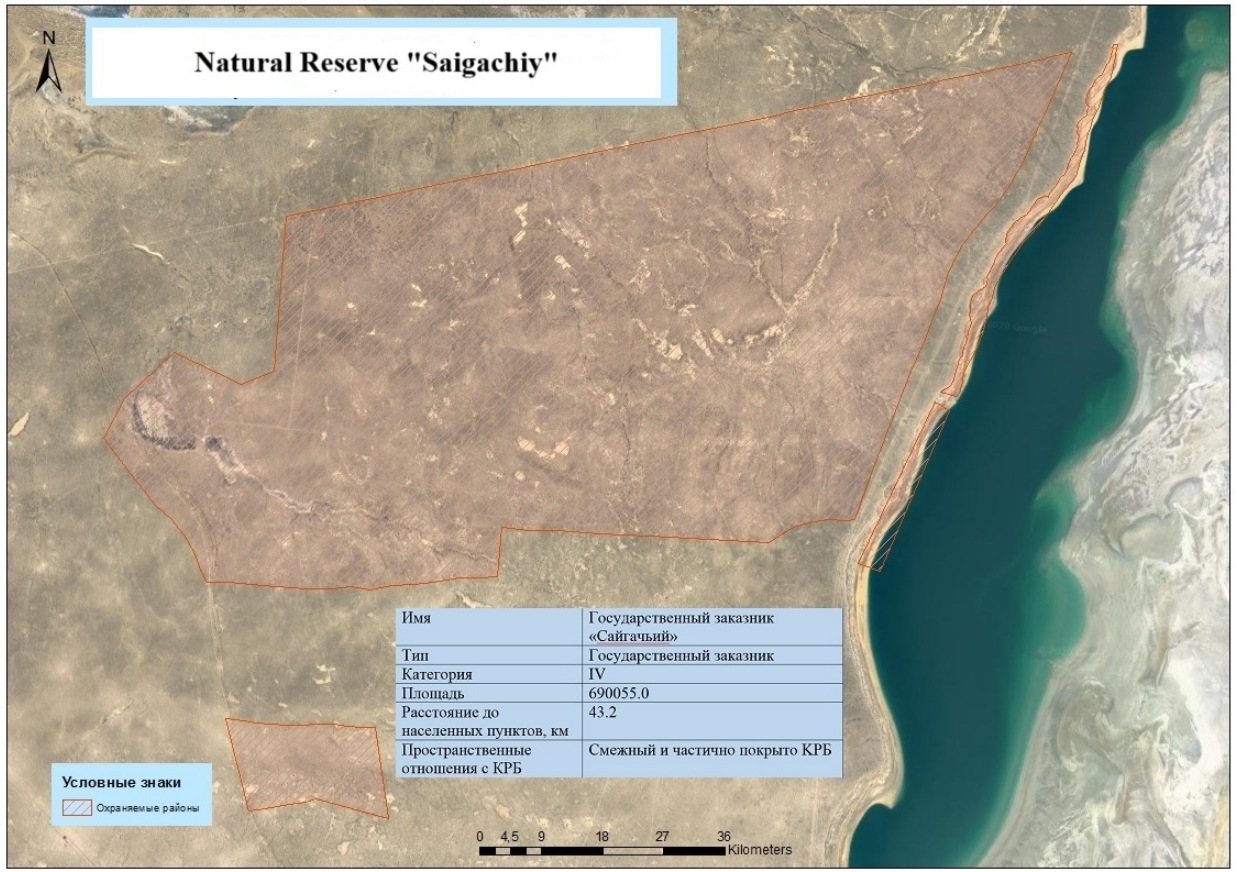
Decree of President of the Republic of Uzbekistan dated 08.08.2023 N UP-129 **"On additional measures to create favorable conditions for business in the Republic of Karakalpakstan"** https://lex.uz/ru/docs/6560024

Resolution of President of the Republic of Uzbekistan dated 09.02.2024 No. PP-66 **"On additional measures for comprehensive socio-economic development and employment of population of the Republic of Karakalpakstan**" https://lex.uz/ru/docs/6797666

and a number of other State programs

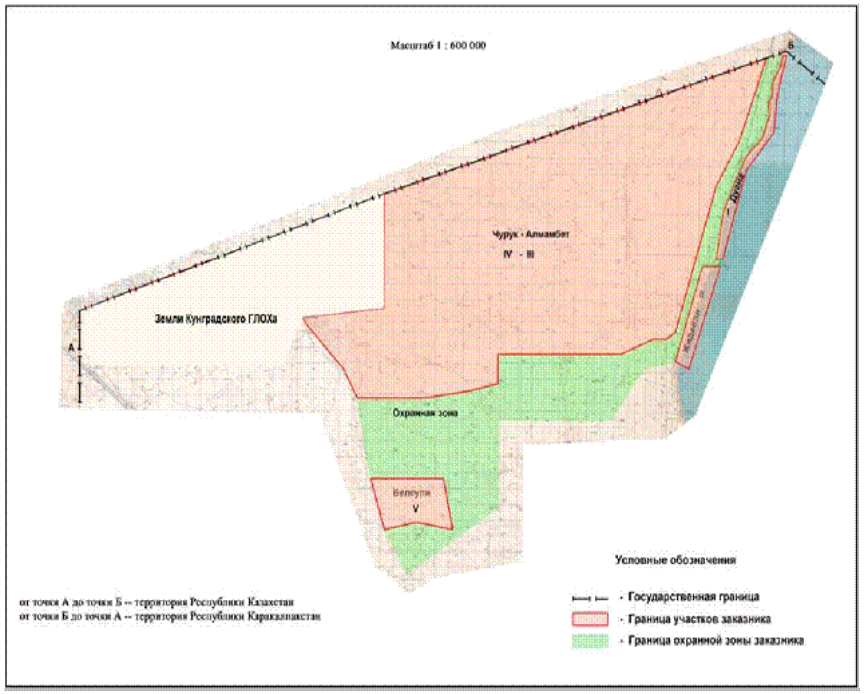
PROTECTED NATURAL AREAS IN THE ARAL SEA ZONE

The purpose of protected areas is to ensure biodiversity



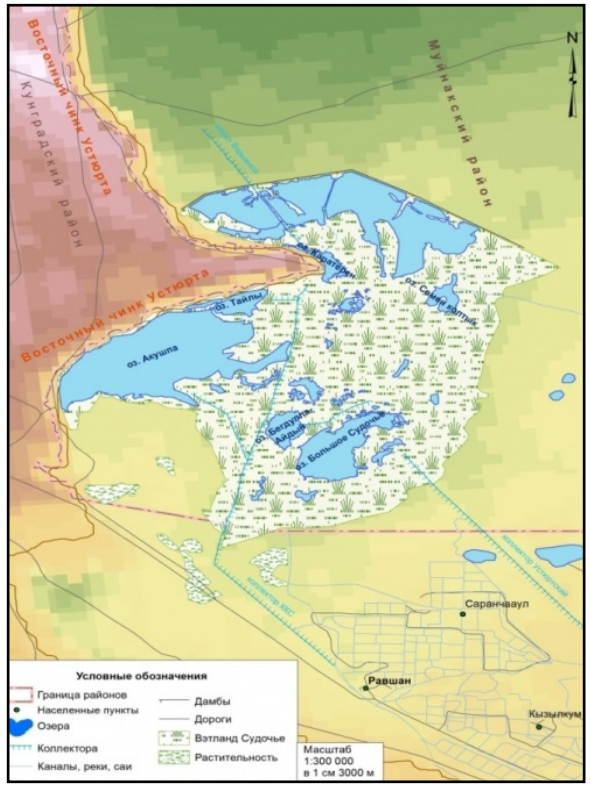
APPENDIX No. 3 to Resolution of the Cabinet of Ministers from July 22, 2016 No. 238 **"On measures to streamline issues related to the creation and organization of activities of complex (landscape) reserves“**

BORDERS of the complex (landscape) Natural Reserve "Saigachiy" and its protected zone



In 1991, the Sudochie State Ornithological Reserve was created on an area of □□50 thousand hectares. In 2008, Lake Sudochie received status of an “Important Bird Area” (IBA)

In Karakalpak language, the lake is called “Suvdoshin”, from the words “suv” (water) and “shin” (true)



The Sudoche Lake system is one of the richest wetlands in terms of bird diversity in Uzbekistan. In total, more than 230 bird species have been recorded here, including 12 globally threatened species and 3 threatened in Uzbekistan.

During migratory periods, 20 species of waterfowl form flocks of up to 86,000 individuals on the lake. In 1999-2005, migration of the white-headed duck was observed on the lake, number of which reached 4,000 individuals - about half of the world population of species. Up to 50 pairs of white-headed ducks, as well as 3 to 30 pairs of Dalmatian pelicans, 1 to 3 pairs of Saker falcons (globally threatened species) nested on the lake.

In the summer of 2014, a joint expedition of the Bird Conservation Society of Uzbekistan, International Fund for Saving the Aral Sea and the German Society for International Cooperation (GIZ) discovered a large population of common flamingo, listed in the Red Book of Uzbekistan, on Lake Sudochie. The colony contained about 7,000 nesting birds, which is about 1.4% of total number of species in the world.

Drought is the main limiting factor for the lake system, regularly affecting them. In low-water years (2000-2001, 2007-2008), lakes of the Sudochie system dried up completely.

Existence of all components of biodiversity here is completely dependent on availability of water. On the other hand, it is worth noting problem of flooding of islands - in 2015, the lake was completely filled with water, as a result of which all the islands suitable for nesting flamingos (as well as the islands of last year's nesting) were under water.

"Strategy for Conservation of Biological Diversity in the Republic of Uzbekistan for 2019-2028" (Resolution No. 484 of 11.06.2019)

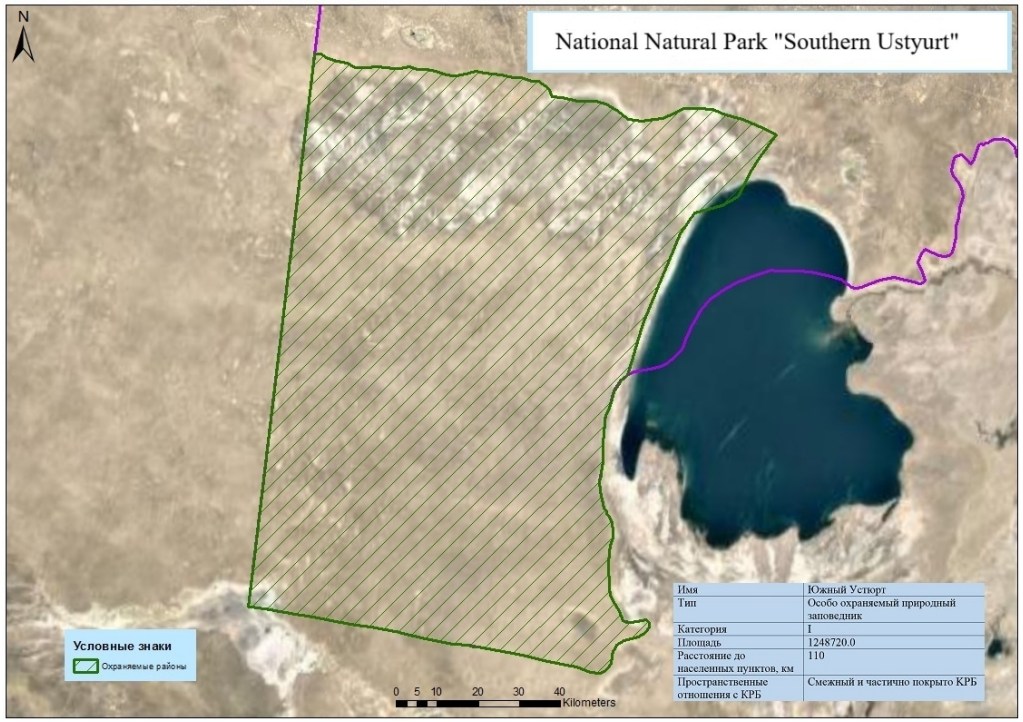
Implementation of the Strategy includes creation of **five new nature conservation areas** in the Republic of Karakalpakstan:

- National Nature Park **"Southern Ustyurt"** (1.4 million hectares)
- National Nature Park **"Central Kyzylkum"** (1.1 million hectares)
- State Nature Reserve **"Beltau"** (188.3 thousand hectares)
- State Nature Reserve **"Akpetki"** (587.7 thousand hectares)
- State Nature Reserve **"Interfluve Akdarya-Kazakhdarya"** (22 thousand hectares)

Creation of these new nature conservation areas in the Aral Sea region will increase protected area by 3,561,490 hectares or 8% of total area of the country.

The Cabinet of Ministers adopted resolution of 11.11.2020 No. 707 "On organization of the national natural park "Southern Ustyurt"

In accordance with Decree of President dated March 20, 2019 No. PP-4247 **"On measures to improve the system of state administration in the field of protected natural areas"**, a new protected natural area **"South Ustyurt"** is being created in the Kungrad region of the Republic of Karakalpakstan, the National Natural Park "South Ustyurt" with a total area of □□**1,447,143 hectares.**



The resolution approved:

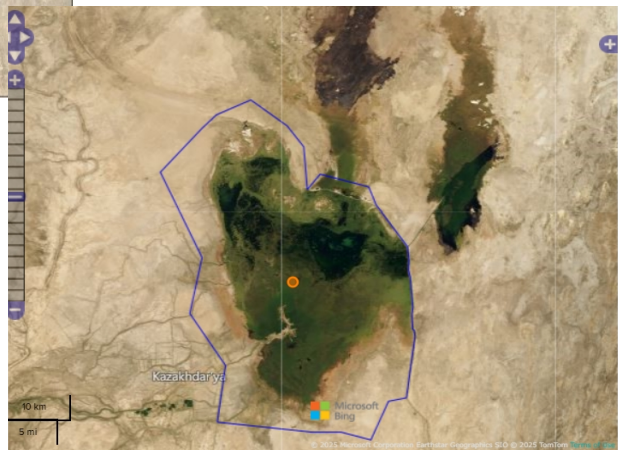
- the area of □□plots allocated to park on the basis of permanent use;
- the land area allocated for use for recreation and economic needs;
- the structure of executive office of the park.

The state park is a structural subdivision of Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan.

Resolution of Cabinet of Ministers of the Republic of Uzbekistan No. 58 "On establishment of the State reserve "Sudochye - Akpetki" dated February 8, 2021

A state nature conservation institution was created in form of the Sudochie-Akpetki state nature reserve with a total area of □□280,507 hectares (two territories)

The main goal of reserve is preservation and reproduction of coastal landscapes, canals, collectors and their watercourses, populations of waterfowl, rare and endangered species of fish, birds of prey and mammals.



On May 30, 2022, the Sudochie lake system, as well as Lake Dzhiltyrbas - August 8, 2022, were included in the List of Ramsar wetlands of international importance

Works on platform of the International Fund for Saving the Aral Sea (IFAS)

Agency of IFAS was established on basis of Order of the Cabinet of Ministers of Uzbekistan No. 03/105-14 dated January 7, 1998.

On January 26, 1998, the First Deputy Prime Minister of Uzbekistan I.Kh. Djurabekov approved Charter of the IFAS Agency. On March 12, 1998, the IFAS Board approved decision to establish Agency of IFAS. This decision was approved by President of IFAS, the President of Uzbekistan I.Karimov on May 12, 1998.

Created Agency of IFAS, as well as Nukus branch of the IFAS Executive Committee, are working bodies of the International Fund for Saving the Aral Sea in Uzbekistan with status of a representative office of an international organization.

MINISTRY OF FOREIGN AFFAIRS OF THE REPUBLIC OF UZBEKISTAN

CERTIFICATE
OF ACCREDITATION

№ 7

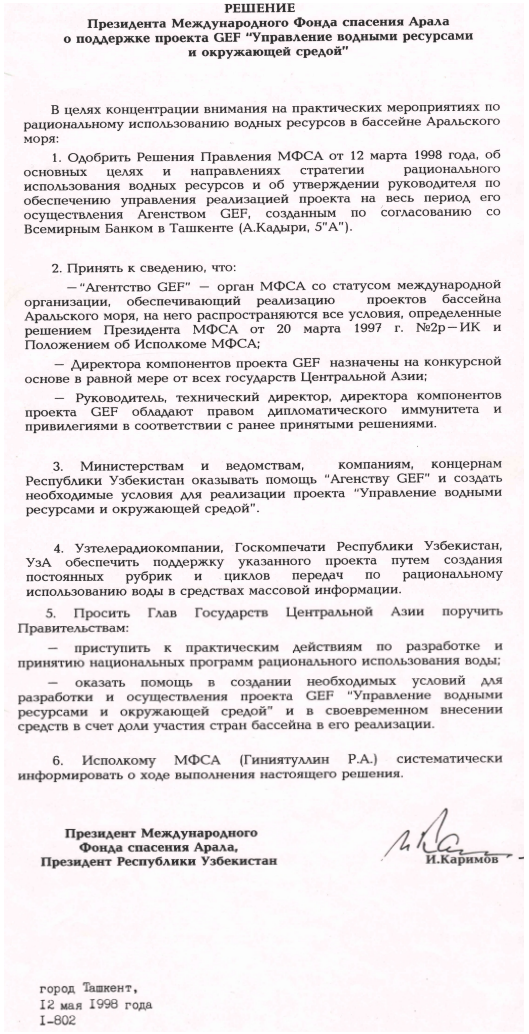
AGENCY OF INTERNATIONAL FUND FOR SAVING THE ARAL SEA
FOR IMPLEMENTATION OF THE ARAL SEA BASIN AND GEF PROJECTS

DATE OF ISSUE: FEBRUARY 16, 2023
DATE OF EXPIRY: FEBRUARY 16, 2026

DEPUTY MINISTER E. KHAMRAEV

Agency of IFAS was accredited by Ministry of Foreign Affairs (MFA) of the Republic of Uzbekistan as a representative office of the IFAS Executive Committee in Uzbekistan on February 16, 2023 for a period of three years - until February 16, 2026 (accreditation certificate No. 7).

In accordance with instruction of Cabinet of Ministers of the Republic of Uzbekistan No. 03-37-2 dated January 13, 2017, **Vadim Ilyich Sokolov**, PhD in Geographical Sciences, was appointed as Head of the Agency of IFAS.



РЕШЕНИЕ
Президента Международного Фонда спасения Арала
о поддержке проекта GEF "Управление водными ресурсами и окружающей средой"

В целях концентрации внимания на практических мероприятиях по рациональному использованию водных ресурсов в бассейне Аральского моря:

1. Одобрить Решения Правления МФСА от 12 марта 1998 года, об основных целях и направлениях стратегии рационального использования водных ресурсов и об утверждении руководителя по обеспечению управления реализацией проекта на весь период его осуществления Агенством GEF, созданным по согласованию со Всемирным Банком в Ташкенте (А.Кадыри, 5"А").

2. Принять к сведению, что:

– "Агентство GEF" – орган МФСА со статусом международной организации, обеспечивающий реализацию проектов бассейна Аральского моря, на него распространяются все условия, определенные решением Президента МФСА от 20 марта 1997 г. №2р–ИК и Положением об Исполкоме МФСА;

– Директора компонентов проекта GEF назначены на конкурсной основе в равной мере от всех государств Центральной Азии;

– Руководитель, технический директор, директора компонентов проекта GEF обладают правом дипломатического иммунитета и привилегиями в соответствии с ранее принятыми решениями.

3. Министерствам и ведомствам, компаниям, концернам Республики Узбекистан оказывать помощь "Агенству GEF" и создать необходимые условия для реализации проекта "Управление водными ресурсами и окружающей средой".

4. Узтелерадиокомпании, Госкомпечати Республики Узбекистан, УзА обеспечить поддержку указанного проекта путем создания постоянных рубрик и циклов передач по рациональному использованию воды в средствах массовой информации.

5. Просить Глав Государств Центральной Азии поручить Правительствам:

– приступить к практическим действиям по разработке и принятию национальных программ рационального использования воды;

– оказать помощь в создании необходимых условий для разработки и осуществления проекта GEF "Управление водными ресурсами и окружающей средой" и в своевременном внесении средств в счет доли участия стран бассейна в его реализации.

6. Исполкому МФСА (Гиниятуллин Р.А.) систематически информировать о ходе выполнения настоящего решения.

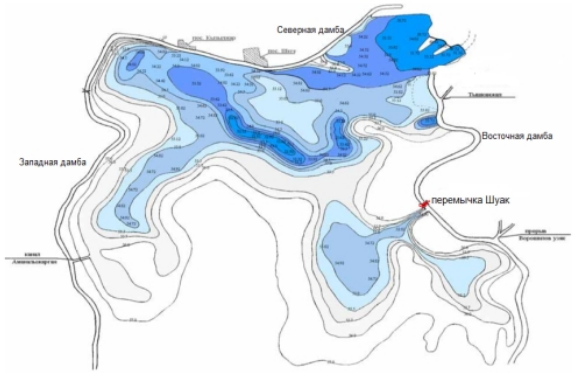
Президент Международного Фонда спасения Арала, Президент Республики Узбекистан И.Каримов

город Ташкент,
12 мая 1998 года
1-802

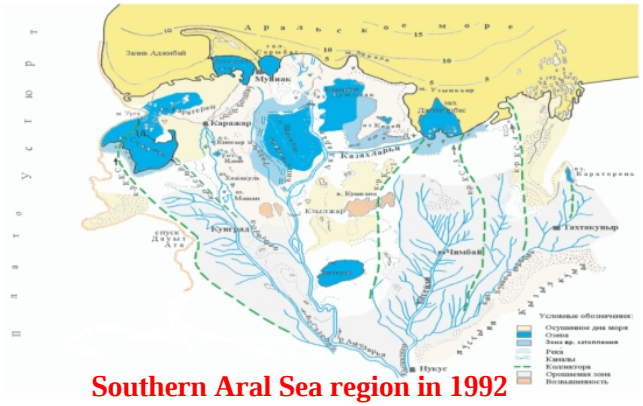
Forestry works carried out by the Nukus branch and Agency of IFAS on dried bottom of the Aral Sea from 2002 to the present – four locations(about 25000 hectares)

Contribution of Agency of IFAS to issues of stable water supply in the Aral Sea region

In period 1963-65, a noticeable decline in the Aral Sea water level began, which led to beginning of shrinking of the sea and sea bays were transformed into separate lakes in delta of Amudarya river. A transformation of all ecosystems began to occur due to changes in water inflow, hydrogeological processes, soil cover, etc.



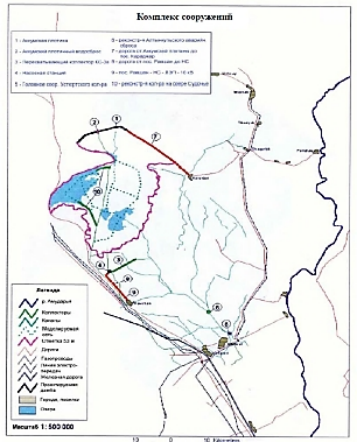
At the end of 1970, based on project of the Uzgiprovodkhoz Institute, **construction of the Mezhdurechensk Reservoir began in center of the Amudarya delta.** The Shuak dam was built on the Akdarya channel, directing water of the Amudarya along the Kipchak and Akdarya channels to the zone of small lakes Shegekul, Koksu, Koshpelyadin, Baltaketken, Autel, Nogai, Zhidelizyak. The western and northern dams were built along the Kichakdarya channel, and the eastern dam was built along the Akdarya channel, which led to creation of the Mezhdurechensk Reservoir (in 1978).



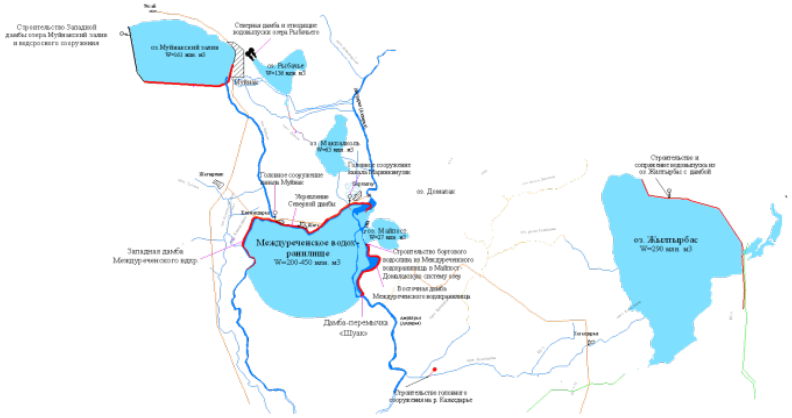
Southern Aral Sea region in 1992

From the first days of its establishment, Nukus branch of the IFAS Executive Committee (January 1996) together with Agency of IFAS (January 1998) have been providing management of projects in the Aral Sea basin, implemented at expense of all types of financing sources that come into their possession. At the same time, both organizations act as the customer for implementation of projects.

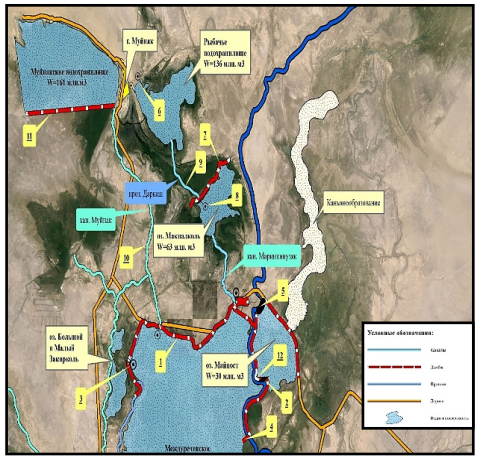
The very first project related to water infrastructure construction was the **GEF project on Water Resources and Environment Management** - **Component E "Restoration of wetlands of Lake Sudochie“** (started in 1999)



Completed objects of the first stage of the project **"Creation of small local water bodies along coastline of the sea in the Amudarya delta“** (2001-2008)



Phase 2 of project "Creation of small local water bodies in the Amudarya River delt” (2009-2016)



Canyon formation near the Mezhdurechensk reservoir

In 2015-2017, the Amudarya delta experienced an extremely large inflow of water along the river (from April 2015 to September 2017, inflow amounted **to 19.3 km^3** of water).

All water flowing along the Amudarya riverbed into delta passes through the Mezhdurechensk reservoir, lakes Maipost and Domalak. As a result, huge channels crossing the lakes were formed, the process of their erosion began.

The most dangerous of canyons that formed in early 2017 approached the site and destroyed bridge on the R-175 highway at a distance of about 2 km from the Northern and Eastern dams of the Mezhdurechensk reservoir.

To prevent further development of canyons in this direction, it was decided **to block the canyon channels with a dam-road along Lake Maipost, and to build a water spillway structure from the lake Maypost directly to the old river bed** of the Amudarya (Akdarya channel).

Construction work on the sites at Lake Maypost began on 01.09.2018

Based on order of the Council of Ministers of the Republic of Karakalpakstan No. 59-B dated March 12, 2021, Minister of Water Resources of the Republic of Karakalpakstan J. Uzakov on June 18, 2021 approved the **Act of the State Commission on the acceptance into operation** of **"Road (dam) with a ridge width of 6 meters and a length of 10,645 meters".**

The cost of fixed assets accepted into operation totals 40,412,248,784 thousand sums, including the cost of construction and installation works – 39,207,093,516 thousand sums.

Construction of a spillway and a diversion channel into the Amudarya (Akdarya) River

photo 27 January 2021

photo October 20, 2021

photo July 25, 2024

In pursuance of Decree of President of the Republic of Uzbekistan "On additional measures to improve welfare of population of the Republic of Karakalpakstan through accelerated development of entrepreneurship, innovative technologies and infrastructures" UP-213 dated August 31, 2022, a credit line was opened from budget of the Development and Reconstruction Fund of the Republic of Uzbekistan to Ministry of Water Resources of the Republic of Uzbekistan in the equivalent of 5 million US dollars to finance work carried out by Agency of IFAS and Nukus branch of EC IFAS at facilities on Lake Maypost within framework of the project "Creation of small local water bodies in the Amudarya River Delta" - in 2023.

Detail of Landsat 8 satellite image taken on December 25, 2022 – Maypost structure

Spillway structure into the river bed of the Amudarya (Akdarya)

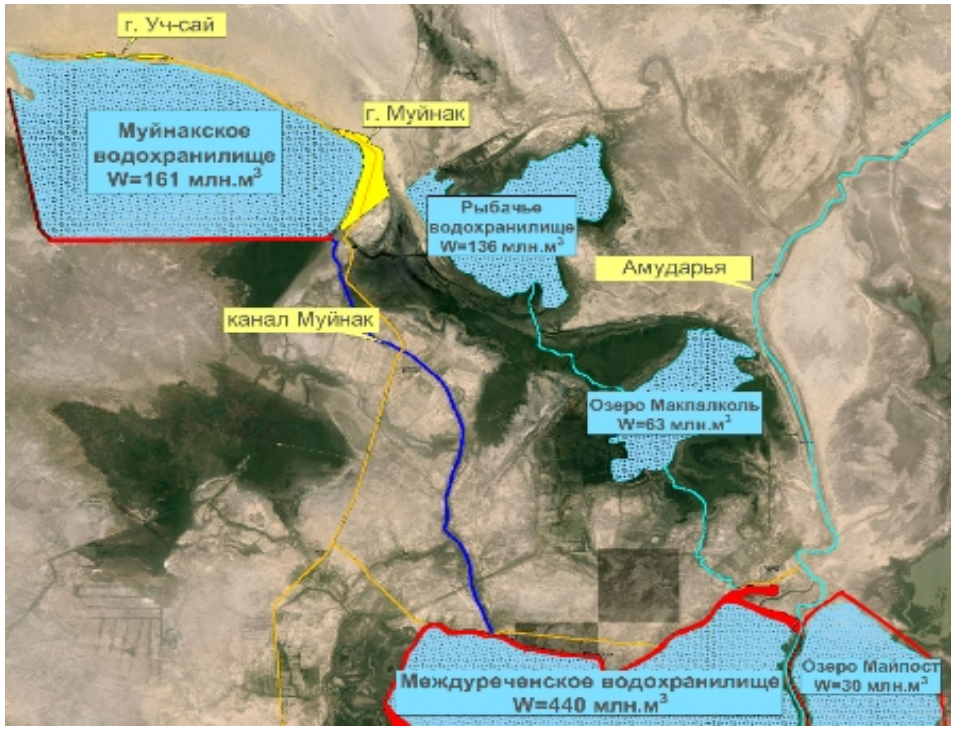
According to the Presidential Decree PP-465 “On measures to develop social and industrial infrastructure of the Republic of Uzbekistan in 2023-2025” dated December 30, 2022 (Appendix 3, paragraph 47), it is envisaged to allocate funds to complete the construction of facility (spillway structure on Lake Maypost) by the end of 2025.

“Reconstruction of the Muynak Canal from PK0+00 to PK250+00 in the Muynak district”

This facility is part of the project "Creation of small local water bodies in the Amudarya River Delta". Phase II". The project was launched in 2017 based on Resolution of Cabinet of Ministers of the Republic of Uzbekistan No. 255 "On the Comprehensive Program of Measures to Mitigate the Consequences of the Aral Sea Disaster, Restoration and Socioeconomic Development of the Aral Sea Region for 2015-2018" dated August 29, 2015.

On February 14, 2017, Order of the Cabinet of Ministers of the Republic of Uzbekistan No. 131-f was adopted, on the basis of which financing of project from the state budget of the Republic of Uzbekistan (as a contribution to the IFAS) began

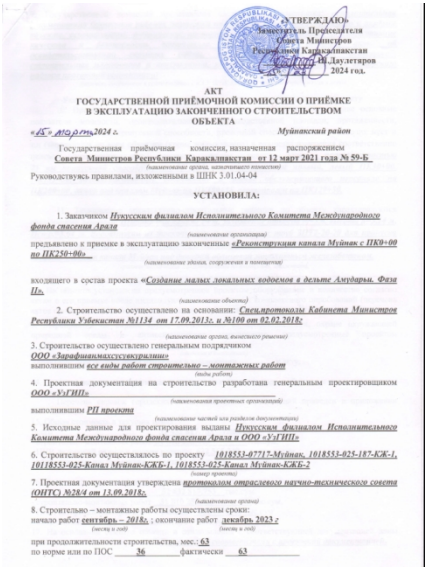
The main purpose of the Muynak Canal is to feed Muynak Lake from the Mezhdurechensk Reservoir, as well as to provide water to the cities of Muynak, Uchsay and other smaller settlements. Existing Muynak Canal (Glavmyaso) originates from the Mezhdurechensk Reservoir near the village of Kyzyldzhar. Activities on the Muynak Canal provide reconstruction of the existing earthen channel over a total length of 21.3 km, cross-section of which does not meet the design requirements, as well as construction of a new section 3 km long to pass a flow rate of 44.3 m^3/s.



Work on creation of a new profile of the Muynak Canal (October 2021)

In March-April 2022, as part of support for implementation of the nationwide Green Space project, the Nukus branch of EC IFAS, together with contractor Zarafshanmakhsussuvkurilish LLC, carried out work on planting 5887 saplings of Saxaul and Turanga along completed part of the Muynak canal.

According to Decree of Council of Ministers of the Republic of Karakalpakstan No. 59-B dated March 12, 2021, the State Acceptance Commission was appointed. This commission issued an act of acceptance into operation of completed construction of the Muynak Canal Reconstruction from PK0+00 to PK250+00 in Muynak district. The Act was approved by Deputy Chairman of Council of Ministers of the Republic of Karakalpakstan Sh. Dauletyarov **on March 12, 2024.**



УТВЕРЖДАЮ:
Заместитель Председателя
Совета Министров
Республики Каракалпакстан
Ш. Даулетяров
2024 год.

АКТ
ГОСУДАРСТВЕННОЙ ПРИЁМОЧНОЙ КОМИССИИ О ПРИЁМКЕ
В ЭКСПЛУАТАЦИЮ ЗАКОНЧЕННОГО СТРОИТЕЛЬСТВОМ
ОБЪЕКТА

«15» марта 2024 г. Муйнакский район

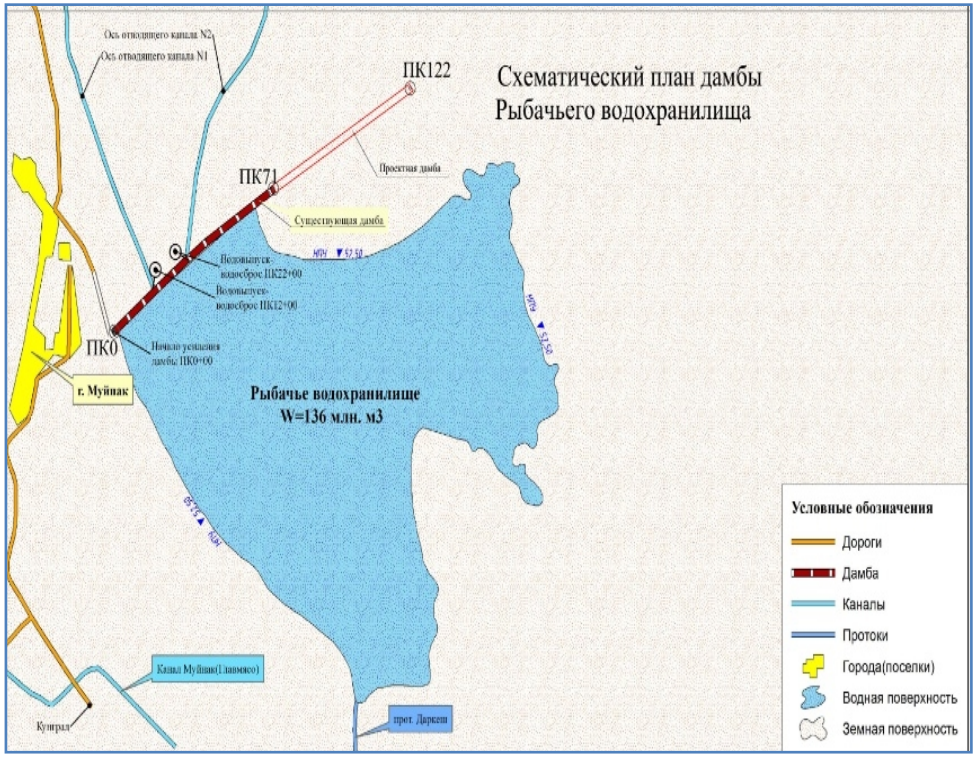
Государственная приёмочная комиссия, назначенная распоряжением
Совета Министров Республики Каракалпакстан от 12 март 2021 года № 59-Б
(наименование органа, назначившего комиссию)
Руководствуясь правилами, изложенными в ШНК 3.01.04-04

УСТАНОВИЛА:

1. Заказчиком Нукусским филиалом Исполнительного Комитета Международного фонда спасения Арала
(наименование организации)
предъявлено к приемке в эксплуатацию законченные «Реконструкция канала Муйнак с ПК0+00 по ПК250+00»
(наименование здания, сооружения и помещения)
входящего в состав проекта «Создание малых локальных водоемов в дельте Амударьи. Фаза II».
(наименование объекта)
2. Строительство осуществлено на основании: Спецпротоколы Кабинета Министров Республики Узбекистан №1134 от 17.09.2013г. и №100 от 02.02.2018г
(наименование органа, выдавшего решение)
3. Строительство осуществлено генеральным подрядчиком
ООО «Западшанмахсусуврилиш»
выполнившим все виды работ строительно – монтажных работ
(виды работ)
4. Проектная документация на строительство разработана генеральным проектировщиком
ООО «УзГИП».
(наименования проектных организаций)
выполнившим РП проекта
(наименование частей или разделов документации)
5. Исходные данные для проектирования выданы Нукусским филиалом Исполнительного Комитета Международного фонда спасения Арала и ООО «УзГИП»
6. Строительство осуществлялось по проекту 1018553-07717-Муйнак; 1018553-025-187-КЖ-1, 10118553-025-Канал Муйнак-КЖБ-1, 1018553-025-Канал Муйнак-КЖБ-2
(номер чертежа)
7. Проектная документация утверждена протоколом отраслевого научно-технического совета (ОНТС) №28/4 от 13.09.2018г.
(наименование органа)
8. Строительно – монтажные работы осуществлены сроки:
начало работ сентябрь – 2018г. ; окончание работ декабрь 2023 г
(месяц и год) (месяц и год)
при продолжительности строительства, мес.: 63
по норме или по ПОС 36 фактически 63

The object is **"Completion of construction of outlet channels, fixing of lower streams and repair of mechanical equipment at existing outlets of the Rybachy reservoir, as well as reconstruction of the end part of dam of the Rybachy reservoir and construction of a new one from PK 71+00 to PK 122+00 in order to prevent canyon formation."**

The total cost of project is 20.511 billion. Sum according to expert opinion of the State Unitary Enterprise "Center for Comprehensive Expertise of Projects and Import Contracts under Ministry of Economy and Industry of the Republic of Uzbekistan No.45/01-06/1-42/5 dated 18.09.2023 Based on results of tender trade, LLC "Ellikkalamakhsussuvpudrat" was identified as the contractor. Contractor started work in October 2023 and as of December 25, 2024, contractor has completed all construction and installation work. On December 27, 2024, the ceremony of putting completed facility into operation was held in Muynak district of Karakalpakstan

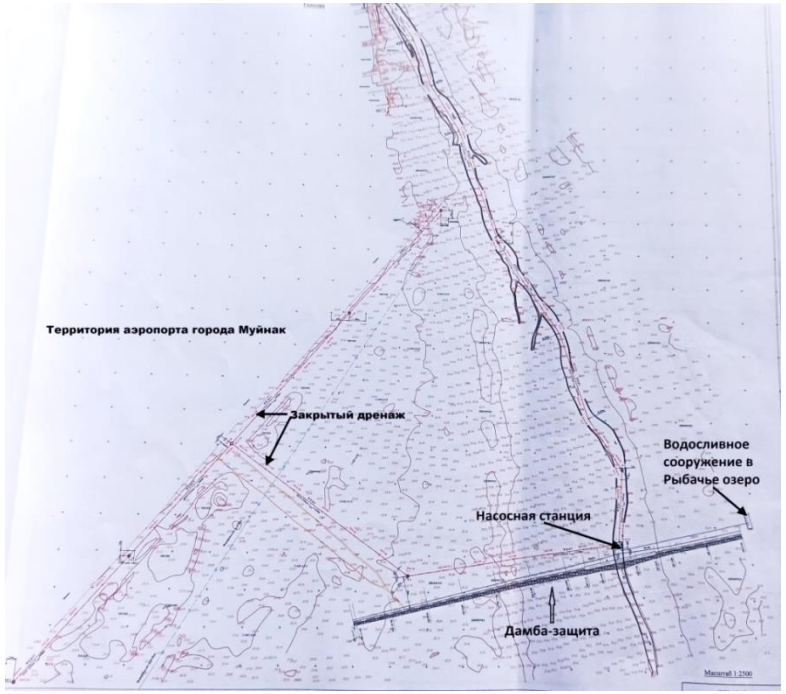


According to Decree of Council of Ministers of the Republic of Karakalpakstan No. 59-B dated March 12, 2021, the State Acceptance Commission was appointed. This commission issued an act on commissioning of the completed facility **"Completion of construction of outlet channels, fixing of lower streams and repair of mechanical equipment at existing outlets of the Rybachy reservoir, as well as reconstruction of the end part of dam of the Rybachy reservoir and construction of a new one from PK 71+00 to PK 122+00 in order to prevent canyon formation."** The Act was approved by Deputy Chairman of Council of Ministers of the Republic of Karakalpakstan Sh. By Dauletyarov **on February 10, 2025**.

"Construction of a dam and closed horizontal drainage to protect Muynak airport "

The works were implemented on the basis of Decree of President of the Republic of Uzbekistan No.PP-3874 "On additional measures to accelerate implementation of investment and infrastructure projects in 2018-2019" dated 07/19/2018. As part of the project, two facilities were built: "Construction of an enclosing dam to protect the Muynak airport from flooding from the Rybachy Bay" and "Construction of a closed horizontal drainage along the runway of Muynak Airport".

Guldirsinkurilish LLC is the contractor of all construction and installation works. Construction works were carried out in the period 2019-2021. On March 15, 2021, Deputy Chairman of Council of Ministers of the Republic of Karakalpakstan Zh.Kazbekov approved Act of the State Commission on commissioning "Protective dam and drainage to protect against flooding of the airport in Muynak from side of the Rybachy Bay." The total cost of fixed assets put into operation is 14,149.2017 million Sums.



Construction of a dam to protect the Muinak airport from flooding from the Rybachy Bay

Construction of a closed horizontal drainage to protect the runway of Muinak airport from flooding from the Rybachy Bay

Providing irrigation water to household plots (65 hectares) of residents of the city of Muynak with a pressure pipeline network of polyethylene pipes with a diameter of 250 mm

The works were implemented on the basis of the Resolution of Cabinet of Ministers of the Republic of Uzbekistan dated 16.01.2019 No. 37 "On measures for the integrated socio-economic development of the Muynak district of the Republic of Karakalpakstan" (paragraph 99). Within framework of the project, two facilities were built "Construction of an irrigation pipe network in the city of Muynak" and "Construction of a pumping station".

On June 17, 2021, the act of state acceptance of the facilities into operation was signed by commission created on the basis of order of the Council of Ministers of the Republic of Karakalpakstan No. 59-B dated 12.03.2021. On March 14, 2022, the facilities were transferred for operation to balance sheet of the **Muynak Improvement Department** - the amount of fixed assets transferred is 8,904,254,158 soums.

In the photo: the pumping station building (March 2022)

Pumping station building for installation of four pumps. In 2021 there were installed only two)

Construction of an irrigation pipe network in the city of Muynak

On August 20-21, 2019, President of the Republic of Uzbekistan Shavkat Mirziyoyev visited the Republic of Karakalpakstan to get acquainted with progress of on-going reforms

Upon arrival in the Muynak district, President got acquainted with work being done to create small reservoirs in the Amu Darya River delta. Having positively assessed progress of the work, President gave instructions to work out issues of stable water supply for this zone through the Amu Darya River and drainage collectors.

Also to give an assessment - how much water and where we need to stabilize ecosystems.

Assessment of real water demand for a stable conditions of water bodies in the Southern Aral Sea region

Name of Water Body	Water level (The Baltic Sea level system), m	Area of bio-diversity zones, km^2	Volume of water, million m^3	Water supply source	Required water inflow (preliminary assessment) (million m^3 per year)
West Aral, Lake Sarykamysh and surrounding Ustyurt Plateau area					
West Aral and the adjacent Ustyurt plateau	19,4	5110 (including water surface 2083)	43600	Ground water inflow from the Ustyurt plateau, in high water years discharge from the Small (Northern Aral) via Uzun-Aral channel	2000 -3500
Lake Sarykamysh and adjacent plateau Ustyurt	8,0	959,7	70000	Collector-drainage water from irrigated systems of Khorezm and Dashoguz along collectors Daryalyk and Ozerny	2000 - 2500
Amudarya River Delta					
Left-bank (western) zone					
Wetland system of Lake Sudoch'e	52,5	464,7	884	Raushan canal system, drainage collectors KKS and GK	600 - 800
Complex of Mashankul-Karajar lakes	53,0	50,7	440	Karajar and Taldyk canals from Raushan canal	500 - 600
Central zone (Amudarya delta)					
Mezhdurechenskoye water reservoir	57,0	320	420	Amudarya River	1000 - 1500
Lake Rybachie	51,0	64,0	136	Marinkinuzyak canal from Mezhdurechensky reservoir	200 - 250
Lake Muynak	51,6	97,4	163	Muynak canal (Glavmyaso) from Mezhdurechensky reservoir and Taldyk canal (Kungrad-Munak)	250 - 300
Lake Makpalkol	53,0	12,0	63,0	Marinkinuzyak canal from Mezhdurechensky reservoir	100 - 150
Right-bank (eastern) zone					
Dzhiltyrbas Lake (including left and right ducts)	52,0	297,2	477	Channel of the Kazakhdarya, drainage collectors KS-1, KS-1.22, KS-3	750 - 850
System of Lakes Akpetki	53,0	391,5	100	Drainage collector KS-4 and channel of Kokdarya	200 - 300
Total in the Amudarya Delta					**3600-4750**
Total in Sothern Aral Sea region		**1740,4**	**2730,8**		**7600-10750**

Agency of IFAS reviewed preliminary project proposal for deliver of collector waters through the Sudochie and Adzhibai systems - along the Ustyurt plateau to the Western Aral Sea. The minimum volume of required water supply is estimated - for the Western Sea - about 2 km^3 per year and for all lakes of the Southern Aral Sea region - no less than 3.8 km^3 per year. To achieve this goal, the following actions are necessary:

- □□Establishment of water limits agreed with other countries in the middle and upper reaches of the Amudarya and Syrdarya basins with the determination of degree of water supply in comparison with actual need for water;

- Implement a regional water conservation program in irrigation. Ensure a reduction in the level of water consumption in the upper and lower reaches by increasing their uniform water supply during growing season and reducing all types of losses (increasing efficiency of the system and efficiency of irrigation equipment), as well as releasing 3-4 km^3 of water along the main channel of the Amudarya River to delta (cost about 100 million US dollars);

- Develop a scheme for sustainable management of wetland ecosystems and coastal corridors of the Aral Sea basin, including protection of existing water bodies and increasing their functional integrity and gradual restoration of biodiversity. (cost about 20 million US dollars)

- Redirection of part of the waste (collector-drainage) water from the Khorezm and Bukhara oases to lower reaches of the Amu Darya - 3 km^3 (cost about 400 million US dollars)

In order to get acquainted with progress of the activities envisaged by Resolution of the Cabinet of Ministers No. 37 of 16.01.2019 "On measures for the integrated socio-economic development of the Muynak region of the Republic of Karakalpakstan" and results of work to create a "Green Cover" on dried-up bottom of the Aral Sea, President of the Republic of Uzbekistan visited the Republic of Karakalpakstan on February 23-24, 2022.

Following the visit, President gave instructions to implement measures to provide irrigation water to a separate sections of dried-up bottom of the Aral Sea to create favorable conditions for development of flora and fauna.

According to Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated March 28, 2023, it was ordered to develop design and estimate documentation for project **"Construction of a concrete canal along the bottom of the dried-up Aral Sea to protect the green cover, develop cattle breeding and improve its forage base, as well as create the necessary conditions for the animal world."**

The design and estimate documentation was developed by UzGIP LLC, for which positive protocol decisions were received from Technical Council of the Ministry of Water Resources of the Republic of Karakalpakstan; Coordination Council on Aral Sea Issues under the Council of Ministers of the Republic of Karakalpakstan; Center for State Environmental Expertise under the Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan; Sectoral Scientific and Technical Council under the Ministry of Water Resources of the Republic of Uzbekistan, as well as expert opinion (Sectoral Expertise of the State Unitary Enterprise "Uzsuvexpertiza"; State Institution "Expertise of Urban Development Documentation")

From the reconstructed water outlet structures on Lake Rybachye, it is proposed to build two concrete canals with a length of at least 100 km in two directions to the forest reclamation zones on the dried bottom of the Aral Sea with a water flow of 3 m^3/sec.

The cost of the work is about 150 million US dollars. An application has been submitted to the Ministry of Economy and Finance to determine sources of funding.

In order to preserve remaining part of the Western Aral and to provide water to the lake system in the Amudarya delta, a project is being implemented to divert water from the main Southern collector of Karakalpakstan towards the Western Aral

Existing problem:

According to analysis, level of remaining Western part of the Aral Sea has dropped by 2.9 m over past 5 years. Mineralization of water has increased to 197 g / l, with an increase in salinity there is a risk of death of the Artemia crustaceans existing in the sea. This also has a negative impact on ecosystem around the Aral Sea.

Suggestion for solving the problem:

In order to preserve remaining part of the Western Aral Sea and to supply water to the lake system of the Amudarya delta, it is necessary to develop a project to direct waters of the Main Southern collector of Karakalpakstan through Lake Zhiltyrbas to the dried-up bottom of the Aral Sea..

Project indicators:

Total length of collector

419 kilometer

Estimated costs

625 Billion Sum

Phase I

South collector to KC-4

166 kilometer

Phase 2

KC-4 directed to Zhiiltyrbas lake

53 kilometer

Phase 3

Outlet from Zhiltyrbas lake

33 kilometer

Phase 4

Channel from Zhiltyrbas lake to the Western Aral

167 kilometer

Expected results:

- ✓ Water level of remaining part of the Western Aral Sea has been maintained;
- ✓ Mineralization of water of the Western Aral Sea is improving;
- ✓ The catch of Artemia in the Aral Sea will develop;
- ✓ As a result of water supply to the lake system, the ecosystem is improving;
- ✓ It will be possible to develop fishing and livestock farming;
- ✓ Conditions will be created for arrival and reproduction of migratory birds, and quota hunting can be started for them;
- ✓ Opportunities will be created for breeding the fur-bearing animal muskrat and creating a specialized business for fur processing;
- ✓ New jobs will be created.

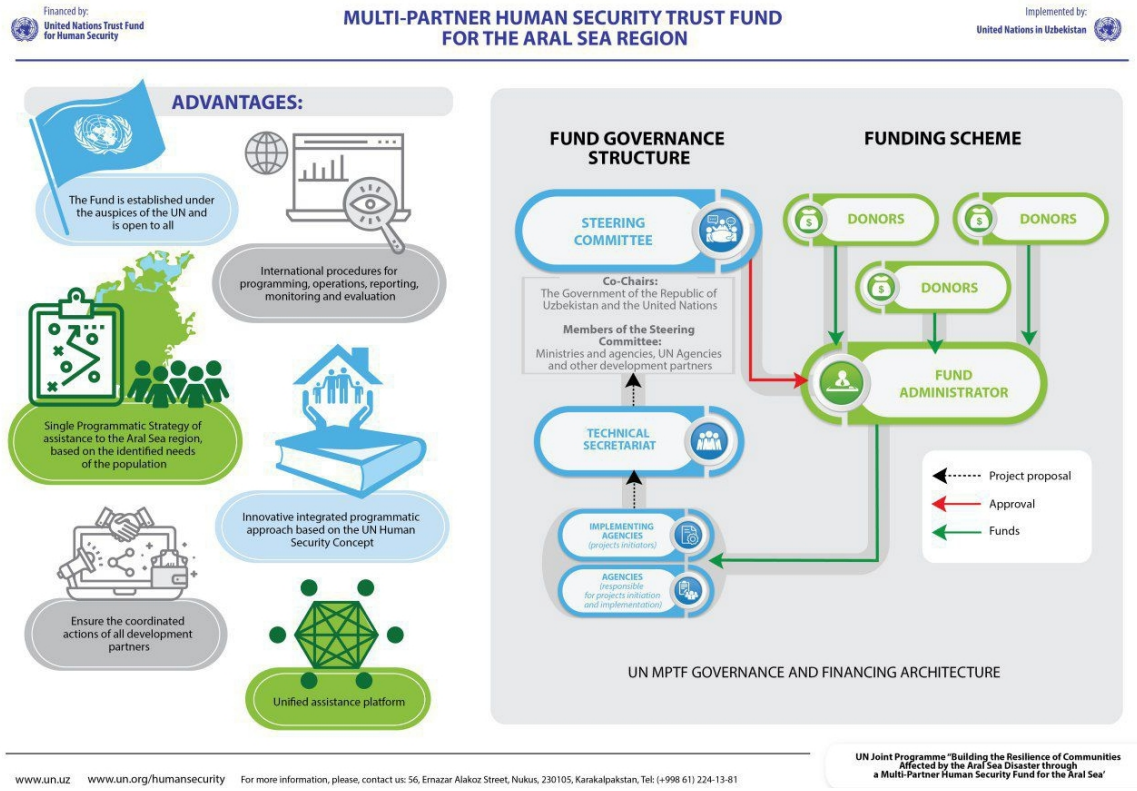
UN Multi-Partner Trust Fund for Human Security for the Aral Sea Region in Uzbekistan

On November 27, 2018, a special high-level United Nations assembly on "Promoting regional and international cooperation to develop comprehensive strategies to support sustainable development" was held at the UN headquarters in New York. During this assembly, presentation and launch of the **Multi-Partner Human Security Trust Fund for the Aral Sea region** took place.

On January 8, 2019, the President of Uzbekistan signed a resolution **"On measures to support activities of the Multi-Partner Human Security Trust Fund for the Aral Sea region under auspices of the United Nations".**

This document provides practical measures to create a favorable institutional, legal and financial environment to ensure effective functioning of the Fund.

Investor/Partner	Deposits
Uzbekistan	$6,500,000
European Union	$5,565,510
Finland	$1,123,367
Norway	$1,117,765
Republic of Korea	$1,000,000
Germany	$742,300
Al Waleed Philanthropies	$200,000
TOTAL (as for 1 January 2025)	**$ 16,248,943**



The Found based on a multi-sectoral approach to ensure human security in its activities

The Fund's main areas of focus are:

- Employment generation,
- Natural resource management,
- Improved social services in health and education,
- Empowerment of women and girls,
- Support to women in difficult conditions,
- Good governance through participatory planning and implementation.

The theory of change is comprised of six clusters that serve as the foundation for Fund initiatives:

Environmental insecurity associated with the deterioration land and water resources, toxic dust from dried sea beds, high levels of soil salinity, and poor and irregular water supplies.

Economic insecurity characterized by limited formal employment possibilities and a lack of other income-generating opportunities. Low investment in infrastructure and private sector development negatively contribute to the situation.

Food insecurity indicated by the poor availability of basic foodstuffs, deteriorating state of irrigated land and water resources, and lack of safe drinking water.

Health insecurity characterized by malnutrition, environmental hazards (e.g. dust storms or insufficient supply of pharmaceuticals), a lack of qualified physicians, isolated populations, or poor awareness of health practices.

Social insecurity marked by poor living conditions and lack of municipal services, which disproportionately affect women and children. Low quality of accessible schools and education facilities, plus high construction costs.

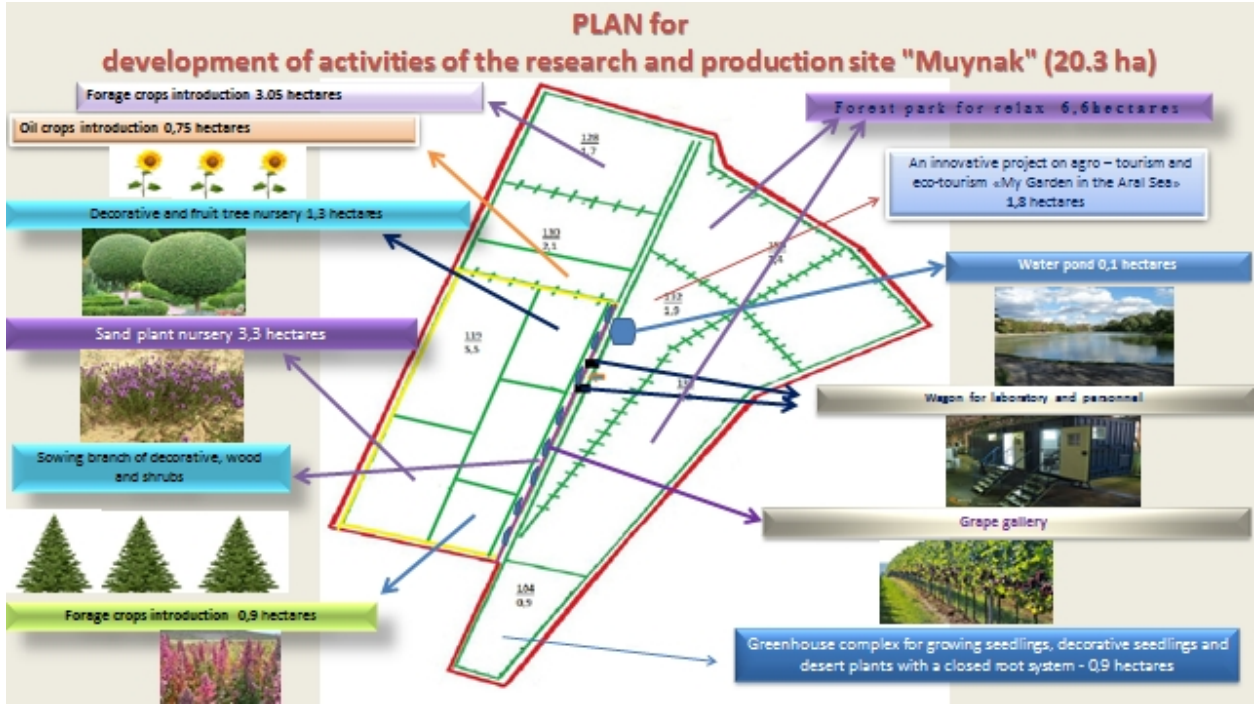
Ineffective donor assistance and uncoordinated efforts causes duplication of efforts, while the insufficient prioritization of the Aral Sea region leads to limited contributions. The situation is exacerbated by the lack of an overall strategy and consolidated database of development interventions.

International Innovation Center of the Aral Sea Region under Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan https://iic-aralsea.uz

On October 16, 2018 the President of Uzbekistan signed Resolution No. PP-3975 about formation of **the International Innovation Center of the Aral Sea region under the President of the Republic of Uzbekistan**, with the scientific and technical support from the Islamic Development Bank and the International Center for Bio-farming in Saline Areas (ICBA). In 2023 Center was transferred under Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan

This center provides scientific and methodological guidance for all activities on forest planting and restoration of biodiversity in the Aral Sea region.

An experimental field site “Muynak” with area of 20.3 hectares in the Muynak region and an experimental field site “Samanbay” with area of 20 hectares in the Nukus region of the Republic of Karakalpakstan were created. The gene pool of salt- and drought-resistant desert and ornamental plants has been formed, and 13 species of flora objects introduced into it are being tested.



On February 12, 2020, the President of Uzbekistan signed Decree No. PP-4597 on additional measures to improve the efficiency of the International Innovation Center for the Aral Sea Region under the President of the Republic of Uzbekistan. The resolution approved the implementation of the project **"My garden in the Aral Sea",** aimed at eliminating the consequences of the drying up of the Aral Sea and increasing the number of tourists.

#GreenAralSea

Мой сад в Аральском Море

In accordance with the Decree of the President of the Republic of Uzbekistan dated February 12, 2020 No. PP-4597, the International Innovation Center of the Aral Sea region under the President of the Republic of Uzbekistan is implementing the project **"My garden in the Aral Sea".** The main goal of the project is to attract foreign tourists and local residents to eliminate the consequences of the Aral Sea crisis, to contribute to the greening of the Aral Sea region, thus increasing the living standards of the population. As a result of these measures, for the first time in Uzbekistan, a landscaping project and crowdfunding platform were created.

The project is funded by the Fund for the Support of Innovative Ideas under the Ministry of Innovative Development of the Republic of Uzbekistan. 1.8 hectares of land were allocated for the project in the research and production site "Muynak", and to date, 1100 seedlings from 12 species of ornamental and fruit trees have been planted. Currently, work is underway to care for the planted trees.

In February 2020, a special website www.aralforest.org was created and launched, equipped with a payment system for remote purchase and planting of tree seedlings.

On October 24-25, 2019, in the city of Nukus, by initiative of Government of the Republic of Uzbekistan, the International High-Level Conference under auspices of the UN "Aral Sea Region - a Zone of Environmental Innovations and Technologies" was held

The conference was attended by about 250 participants from 28 countries, heads and representatives of authoritative international organizations - the UN, the UN Economic Commission for Europe, the UN Development Program, the UN Regional Center for Preventive Diplomacy for Central Asia, the World Bank, the Asian Development Bank, the European Investment Bank, the European Bank for Reconstruction and Development, as well as foreign governments and private companies.

A book was published based on the conference results

https://aral.uz/doc/2_5391283257654381006.pdf

Resolution of the President of the Republic of Uzbekistan No. PP-5202 dated July 29, 2021 "On measures to implement a special resolution of the United Nations General Assembly dated May 18, 2021 On declaring the Aral Sea region a zone of environmental innovations and technologies “

In order to implement the tasks defined in a special resolution, as well as transform the Aral Sea region into a zone of environmental innovations and technologies, approve the proposals from Ministry of Investment and Foreign Trade, Ministry of Innovative Development and the Council of Ministers of the Republic of Karakalpakstan, providing for the following:

a) Creating a favorable atmosphere and developing an institutional framework for structural transformations in the Aral Sea region through political and legal innovations
b) Ensuring environmental sustainability, digitalization and implementation of innovative approaches to the rational use of natural resources in the Aral Sea region;
c) Introduction of innovative technologies and mechanisms for development of the social sphere and support population in the Aral Sea region;
d) Widespread use in the Aral Sea region of economic and financial innovation mechanisms, large-scale implementation of resource-saving, "green" and circular (waste-free, regenerative and efficient) modern innovative technologies in the sectors of economy;
e) Development of science, conducting scientific research, providing legal protection for creation of intellectual property objects, as well as supporting local and international cooperation in implementation of scientific and innovative developments in the Aral Sea region;
f) Development of international cooperation and attraction of foreign investments for implementation of tasks defined in a special resolution of the UN and this resolution;
g) Formation and coordination of internal sources of financing for innovative projects in the Aral Sea region.

Resolution of the Cabinet of Ministers No. 41 of January 25, 2022 "On additional measures to turn the Aral Sea region into a zone of environmental innovations and technologies"

This document was developed as part of the implementation of Presidential Decree No. PP-5202 of July 29, 2021 “On measures to implement the special resolution of the United Nations General Assembly of May 18, 2021 “On declaring the Aral Sea region a zone of environmental innovation and technology.” http://aral.uz/doc/PP-5202w.pdf Approved:

- The concept of transformation of the Aral Sea region into a zone of ecological innovations and technologies;
- Multilateral "Roadmap" on the priorities of attracting foreign investment in the Aral Sea region for 2022-2026.

The concept includes the following areas:

- creation of "driver" clusters for technological innovations, including introduction of effective methods of ecosystem management, in particular, new technologies that save natural resources;
- development and implementation of economic and financial innovations, formation of market and price mechanisms necessary to stimulate technological innovation and create "green" jobs;
- implementation of innovative policies and legal innovations, including reducing risks associated with climate change, implementing agricultural and green economic strategies, and implementing land reforms that stimulate investment by landowners.

The multilateral "road map" for attracting foreign investment in the Aral Sea region for 2022-2026 includes:

- priorities for implementation of measures for integrated development of the Aral Sea region in 2022-2026;
- measures to expand international cooperation for sustainable development of the Aral Sea region and monitoring of programs and projects implementation;
- list of projects aimed at sustainable development of the Aral Sea region.

GIZ regional project "Ecologically Oriented Regional Development of the Aral Sea Region" (ECO-ARAL)

The project is commissioned by the Federal Ministry for Economic Cooperation and Development (BMZ) and implemented by the German Society for International Cooperation (GIZ) GmbH. The project provides support to the governments of Kazakhstan and Uzbekistan in ensuring environmentally sustainable cross-border economic development of the Aral Sea region. Deadlines 2021-2024. Expected results:

• 60% of the 120 Uzbek and 80 Kazakh small businesses (25% run by women) will benefit from project advisory services on environmentally sustainable economic development and improve resource efficiency by 30%;

• Ten activities are being implemented using spatial planning tools or procedures based on satellite observation systems for environmentally sustainable use of resources, four of which will be transboundary;

• New or updated principles of activities/strategies for environmentally oriented regional development of the Aral Sea region, agreed between the responsible regional administrations of Kazakhstan and Uzbekistan in 5 sectors of the economy.

CAMP4ASB
Climate Adaptation & Mitigation Program for Aral Sea Basin
CENTRAL ASIA

Donor: **World Bank**

Partners: Governments of the Central Asian countries, Executive Committee of International Fund for Saving the Aral Sea (EC-IFAS)

The project aims to address common problems and challenges related to climate change in Central Asian countries by enhancing access to improved climate change knowledge and data for key stakeholders (decision makers, expert communities, etc.); and also by increasing investment and capacity building.

The project consists of three components. CAREC is in charge of implementing Component 1, aimed to enhance the knowledge database and climate change capacities, and facilitate regional dialogue and cooperation between many stakeholders to ensure efficient climate response by scale.

CAREC is also in charge of implementing Sub-Component 3.1, which functions to coordinate and support project implementation at the regional level. Component 2 and Sub-Component 3.2. are implemented by project participant countries (e.g., Tajikistan and Uzbekistan) which work on climate investment and capacity building in their respective countries.

ADB Regional Technical Assistance TP-9977 Central Asia Regional Economic Cooperation (CAREC): Water Component Development

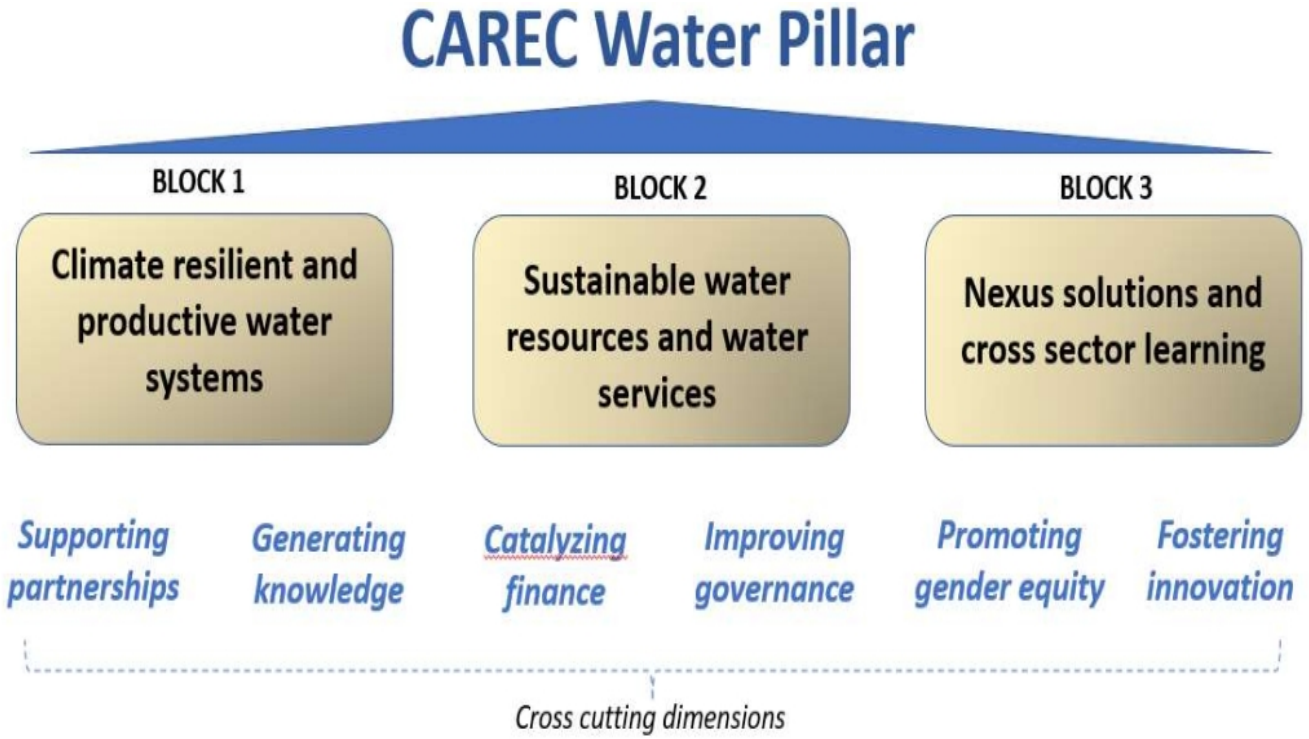
Under the CAREC program, ADB proposed a technical assistance project to strengthen regional water cooperation that meets growing water demand at a time of increasing climate uncertainty.

The project began in May 2020 and will be completed by December 31, 2025.

Financing amount: $1.55 million

Expected results:

- Assessed future water demand in the Central Asian region to 2050
- Identified opportunities for water resources development
- Prepared a policy and institutional strengthening framework



A pilot project **"Project for water resources management taking into account climate change in the Aral Sea basin"** was launched

JICA funded project "Development of innovative climate-resilient technologies to monitor and control water use efficiency and the impact of salinity on crop yields and living standards in the Aral Sea region"

The project is carried out within the framework of the SATREPS program, a Japanese government program that promotes international collaborative research https://www.jst.go.jp/global/english

The program is structured as a collaboration between the Japan Agency for Science and Technology (JST), which provides competitive research funds for science and technology projects, and the Japan Agency for Medical Research and Development (AMED), which provides competitive research funds for medical research. and Development, and the Japan International Cooperation Agency (JICA), which provides development assistance.

Project implementation period: from 2021 to 2025 (5 years). The main participants of the project are the International Innovation Center of the Aral Sea Region (IICAS), the Uzbek Research Hydrometeorological Institute (NIGMI), the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers (TIIAME), the National University of Uzbekistan (NUUz), the Uzbek Design Institute (UZGIP), the University of Kyoto , Chiba University, Tohoku University, Kobe University, Ibaraki University, Mie University, Tottori University, Osaka Prefectural University, Kitakyushu University

Target group: Researchers, farmers, livestock breeders, landless youth and women at project sites in Karakalpakstan.

"Green rehabilitation investment project for the Republic of Karakalpakstan in order to overcome the consequences of the Aral Sea crisis"

The project is funded by the Korea International Cooperation Agency (KOICA) and the Global Green Growth Institute (GGGI). The Aral Sea IPRP project will contribute to the green recovery of the Karakalpakstan region by creating feasible measures that will enable residents of areas most affected by natural disasters to secure sustainable livelihoods through climate-resilient agribusiness models.

This project is being implemented in partnership with the Government of the Republic of Karakalpakstan, the State Committee for Ecology and Environmental Protection, Human Asia, Green Asia Network and key government agencies.

OBJECTIVES

Objective 1: Establish a green rehabilitation investment plan that reduces disaster risk, enhances rural food security and sustainable livelihoods, and promotes equitable employment through climate resilient agriculture and agri-business value-chains in Karakalpakstan;

Objective 2: Respond to the most urgent needs of the workforce to tackle pressing human security and agro-business risk management needs, focusing on disaster related threats to health, livelihoods, and productive assets;

Objective 3: Demonstrate viable climate resilient agri-business models (from production to processing) and establish a business development platform to rebuild the economic foundation of Karakalpakstan's agrarian economy; and

Objective 4: Mobilize green/climate finance and build capacities of financial institutions to support green MSMEs development in Karakalpakstan.

TARGET AREA

Project implementation in four districts: **Kegeyli, Bozataw, Chimbay, Karauzyak**

COMPONENT 1

The Republic of Karakalpakstan is equipped with a viable "Green Recovery Investment Planning Strategy", providing a policy framework for a viable sustained growth pathway

BENEFICIARIES

Population of Karakalpakstan (1.82 million)

COMPONENT 2

Dekhan and private farmers have increased resilience to climate and Aral Sea disaster risks in 4 target districts

BENEFICIARIES

Direct Beneficiaries: c.a. 28,307 people

Indirect Beneficiaries: c.a. 113,307 people

COMPONENT 3

Local entrepreneurs of 4 target districts are equipped with climate resilient agri-business models (water scarcity, peak temperatures and dust/salt storm risks)

BENEFICIARIES

Direct Beneficiaries: c.a. 1,267 farmers & MSMEs

Indirect Beneficiaries: c.a. 1,546 farmers & MSMEs

COMPONENT 4

Successful climate resilient agri-MSMEs and farmers across Karakalpakstan have improved access to finance from commercial banks and government green financing

BENEFICIARIES

Direct Beneficiaries: 500 registered farmers and MSMEs in Karakalpakstan

For more information, please contact: aaron.russell@gggi.org or juanjose.robalino@gggi.org

UNDP project "Improving the resilience of the local population and promoting green, inclusive development of the most vulnerable communities of the Aral Sea region."

Project duration: 5 years (2022-2026)

Partners in the Karakalpakstan: Jokargy Kenes, Council of Ministers, khokimiyats of target districts

Project Donor: Government of the Russian Federation

Total project budget: $5,000,000

In-kind contribution: $500,000 (from communities)

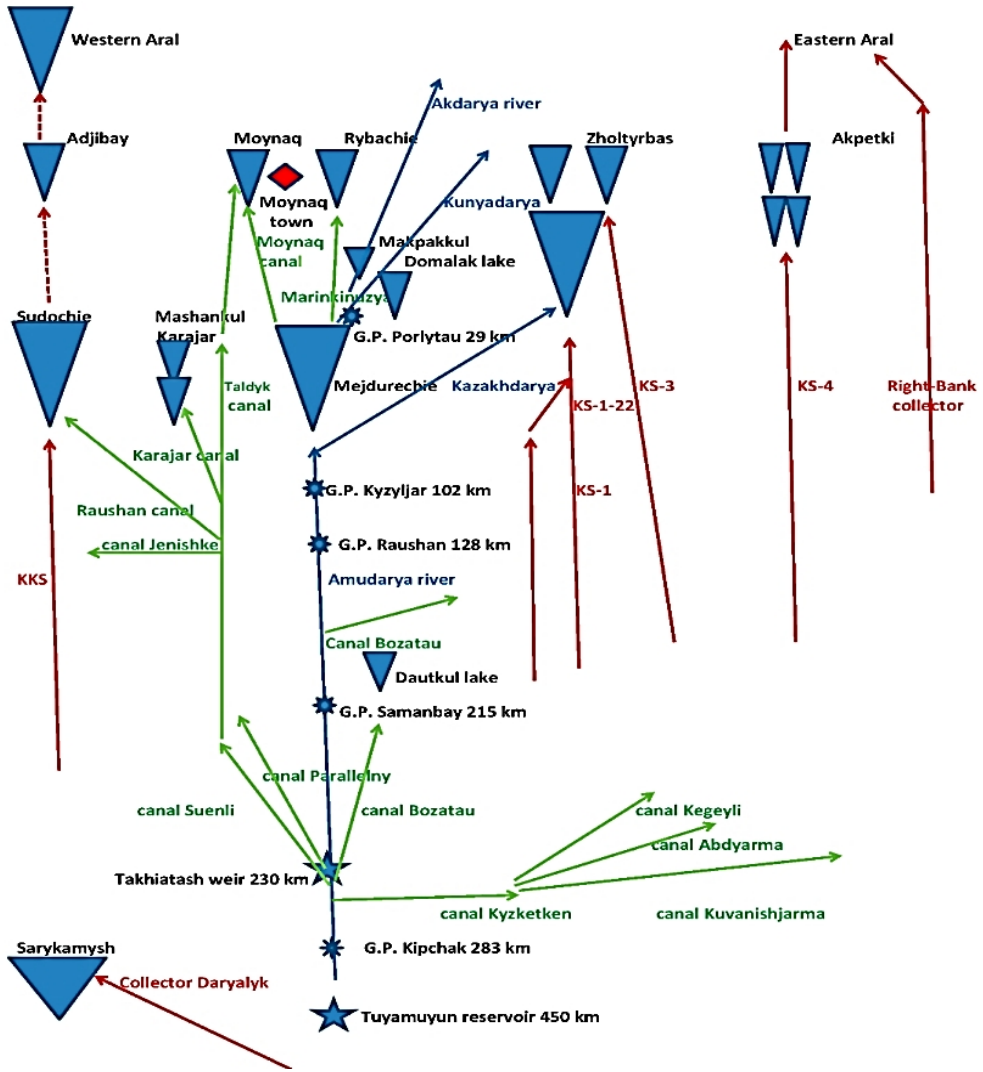
Main National partner: Ministry of Agriculture of the Republic of Uzbekistan

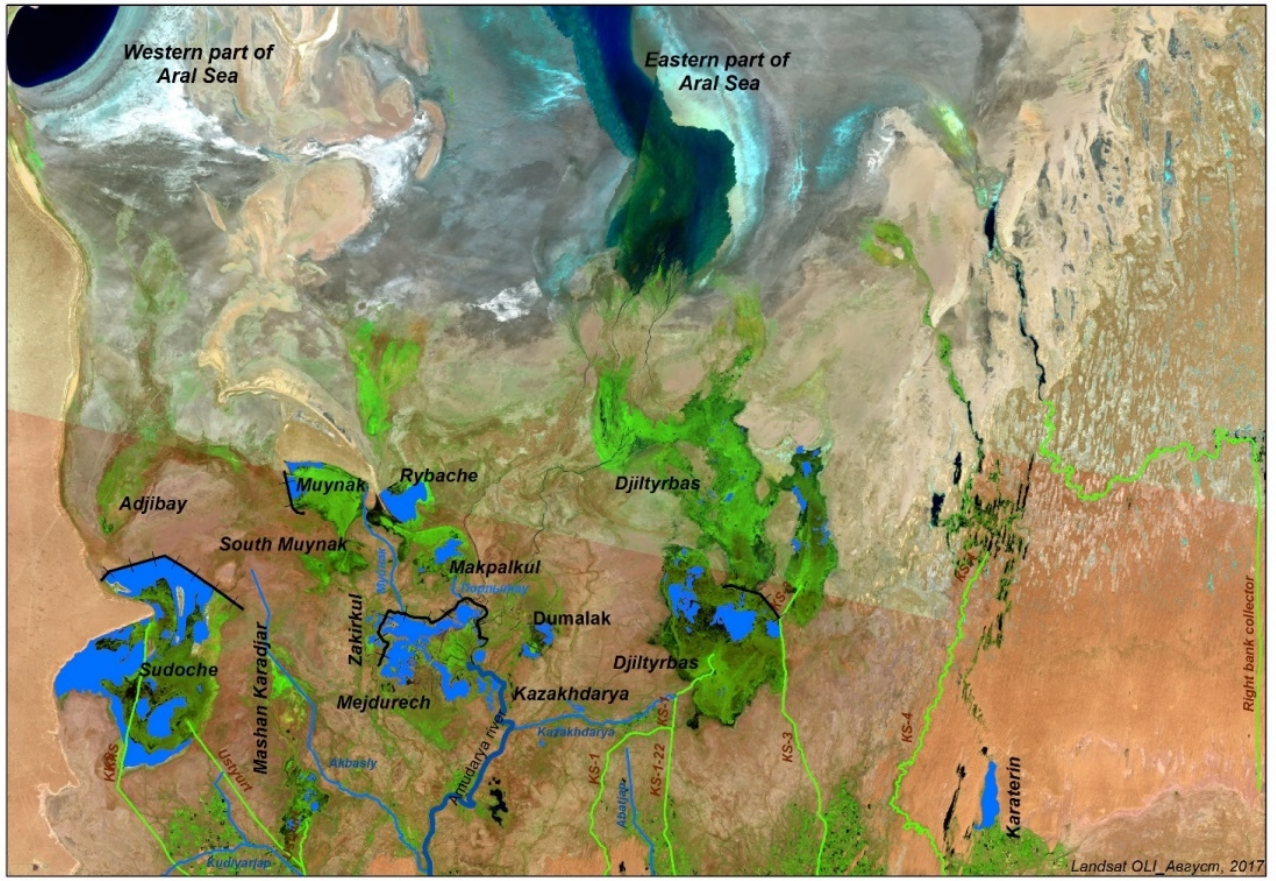
Target areas of the project: Karauzyak, Kegely and Kanlynkul districts

The main goal of the project is to increase the resilience of the local population and promote green, inclusive development of the most vulnerable communities in the Aral Sea region to address emerging and long-term environmental and socio-economic problems of the region.

TOTAL WATER INFLOW to the Southern ARAL SEA ZONE

Includes the sum of the flow along the Amudarya river below Takhiatash, water intakes to the Suenli, Parallel and Kyzketken canals, flow through drainage collectors KKS (to Sudochye), KS-1, KS-1-22, KS-3 (to Dzhiltyrbas), KS-4 (to Akpetki, Eastern Sea) and Right-Bank collector to the Eastern Aral





Inflow of water into the South Aral region http://www.cawater-info.net/aral/data/index

Time period (hydrological year)	Total inflow Million m^3
April - September 2011 (V)	617
October 2011 – March 2012 (N)	1048
April - September 2012 (V)	7186
October 2012 - March 2013 (N)	3570
April - September 2013 (V)	924
October 2013 - March 2014 (N)	938
April - September 2014 (V)	2820
October 2014 - March 2015 (N)	990
April - September 2015 (V)	5367
October 2015 - March 2016 (N)	2996
April - September 2016 (V)	1404
October 2016 - March 2017 (N)	1505
April - September 2017 (V)	9423
October 2017 - March 2018 (N)	1411
April - September 2018 (V)	461
October 2018 - March 2019 (N)	503
April - September 2019 (V)	1943
October 2019 - March 2020 (N)	2034
April –September 2020 (V)	1040
October 2020- March 2021 (N)	1050
April 2021 –August 2021 (V)	538
October 2021- March 2022 (N)	847
April – September 2022 (V)	938
October 2022 – March 2023 (N)	1354
April – September 2023 (V)	1191
October 2023 – March 2024 (N)	1252
April – September 2024 (V)	1238
October 2024 – March 2025 (N)	1621

The total inflow of water into the South Aral Sea region for period 2011-2025 (14 hydrological years) amounted to 56.21 km^3 or an average of 4.015 km^3 per year. For individual years, the value varies from **0.96 km^3 per year** (2018-19) and 1.38 km^3 per year (2021-22) to 10.75 km^3 per year (2012-13) and **10.83 km^3 per year** (2017-18). Last 7 years (April 2018 – March 2025) average inflow was **2.287 km^3 per year**, or the only **55% of required water** for all delta lakes (average **annual demand is 4,175 km^3 per year**).

Such a large variation in annual inflow negatively affects hydrological stability of water bodies, which leads to destruction of ecology in the zone of individual water bodies, and violation of biodiversity. Therefore, fish, fauna and flora of these water bodies are unstable due to instability of water-salt regime, which is formed without any control, under influence of random factors.

Unfortunately, still there is no regular, systematic, instrumental monitoring of both remaining water bodies of the former Aral Sea and entire zone of dried sea bottom.

Parameters of the key remaining Water Bodies in the South of Aral Sea

http://www.cawater-info.net/aral/data/monitoring_amu

Date	Western Aral	Eastern Aral	System of the Sudochie lakes	Lake Rybachie	Lake Muynak	System of the Dzyltyrbas lakes
Water surface area, hectares						
November 2011	Not visible	Not visible	10948,9	3082,6	**3587,9**	**7682, 3**
October 2012	**369659,2**	215986,1	12002	**5231,8**	1161,9	4646,8
October 2013	361979	139963	10327,3	2673	1014	5920
November 2014	324003	96829	9183,4	1046,7	111,4	5509,8
October 2015	300707	313037	14645,5	3794,3	1698,9	7503,1
September 2016	291583	125457	**21987,3**	3137,2	1272,5	6247,3
October 2017	270788	**251351**	17466	3588,5	1018,4	6582,9
November 2018	268399,2	128291	9860	2740,6	395	5567
June 2019	264967	34965	12977	2332,9	295,5	5233,1
July 2020	255799	166507	14672,1	2601,2	606,2	5731,7
October 2020	253406	54962	12276,3	2186,2	431,3	6332,9
April 2021	291875	78369	13411	2383,7	602,5	6021,1
August 2021	241290	31469	9634,9	1263,3	151,3	5570
September 2021	235023	18113	8822	140	108	5125
6 October 2022	211800	Not visible	4325	0,18	5,31	213
18 January 2023	209 733	364	6906	1574	2754	451
26 May 2023	210294	2588	9473	1871	129	5300
13 July 2023	208318	406	3101	531	16	890
17 October 2023	200885	15	4981	0	12	2324,4
18 April 2024	199234	15	15293	1996	1382	14247
6 June 2024	199079	47	9521	1735	168	5522
22 December 2024	Not visible	Not visible	13821	1207	1273	**15742**
12 March 2024	Not visible	Not visible	**18004**	**3228**	**2545**	**9164**
Water Level (Baltic system, m) for West Aral data from Hydromet station Aktumsuk (45,0809,8; 58,1732,4)						
2011 (31 May)	**27,74**	27,8				
2021 (31 May)	21,13	N/A	51,06	50,62	50,77	50,83
2022 (31 December) Delta Dept	19,57 (29.12.22)	N/A	49,85	49,0	49,9	47,8
2023 (30 June) Delta Dept	19,26	N/A	49,85	49,61	49,9	47,8
2024 (31 July) Delta dep	18,81	N/A	49,85	49,20	49,90	50,80
2025 (31 January) Delta dep	**18,53**	N/A	49,85	49,00	49,90	50,84
Mineralization (2021), G/L	180 (in 2025 = **207**)	60,0	7,5	10,0	10,0	15,0

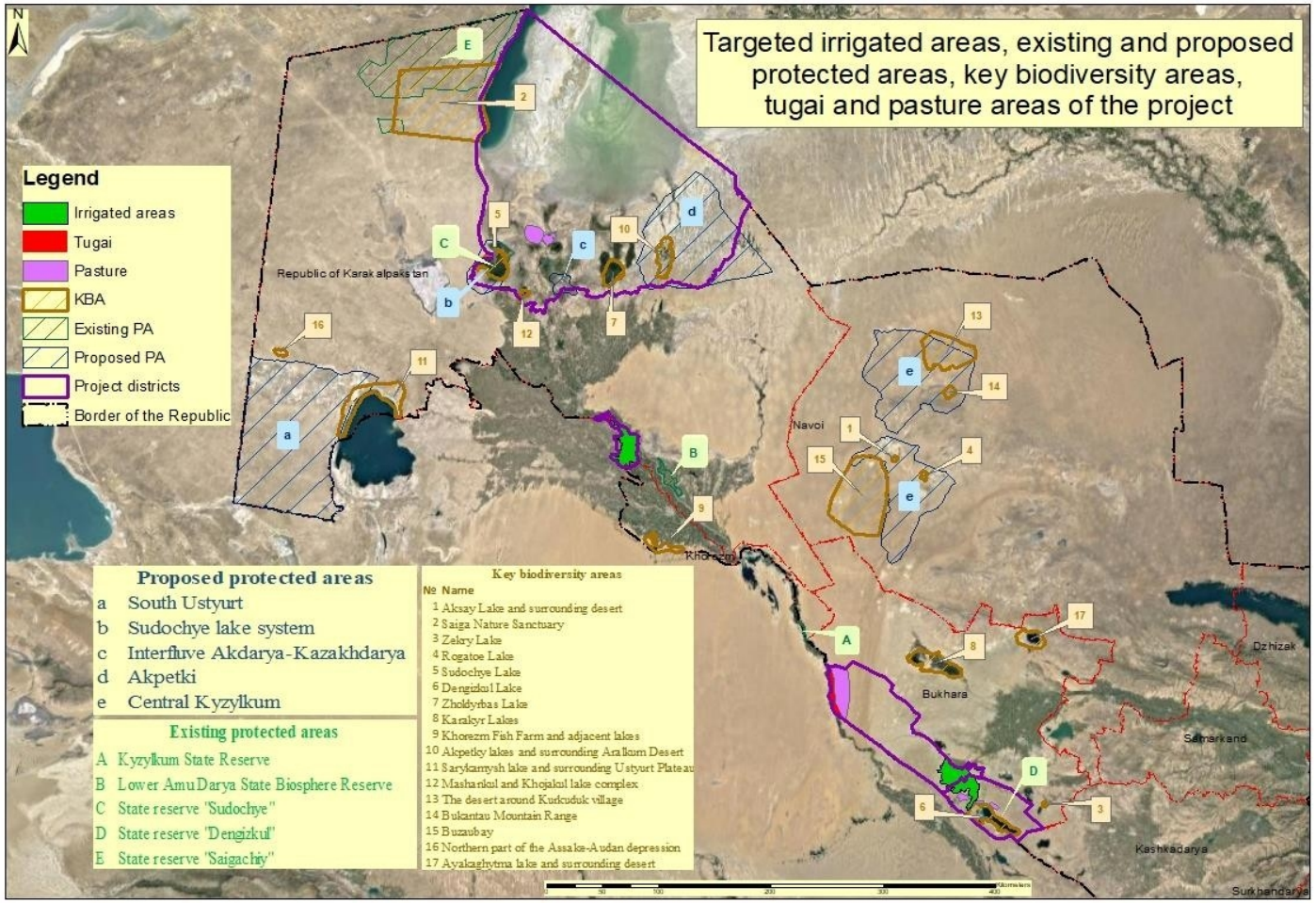
As seen from this table, conditions of remaining water bodies in the Southern Aral Sea region are very unstable - due to not stable inflow of water into this zone

UNDP Office in Uzbekistan has started implementing the project with support from GEF grant "Conservation and sustainable management of lakes, wetlands, and riparian corridors as pillars of a resilient and land degradation neutral Aral basin landscape supporting sustainable livelihoods" (Aral – Wetlands)

The objective of the project is to increase sustainability of ecosystems in the Lower Amu Darya of the Aral Sea Basin (LABAM) through integrated land and water management compatible with land degradation neutrality (LDN). That is, to ensure sustainability of productive landscapes around protected natural areas and key biodiversity areas - water bodies and wetlands

Component 1 of this project. Coordinated water management as a basis for neutral land degradation and ecosystem conservation

Here the goals are practical implementation of ecologically and scientifically sound norms and timing of irrigation (and leaching) for key irrigated areas (Bukhara, Khorezm regions and Karakalpakstan) is expected, **as well as determining the volumes and ensuring supply of water for key biodiversity zones**



Thank you for attention!
We are looking for productive cooperation

Savitsky Museum in Nukus:
The Art that Makes Us Better

«Viam supervadet vadens cunctim»
Walk together and you shall reach

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