



THE CLIMATE CHANGE IN THE EXAMPLE OF THE ARAL SEA

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Abstract:

In the following article the impacts of the drying Aral Sea is revealed. The efforts by the international community, the government of the Republic of Uzbekistan are analyzed through the prism of the relief programs and initiatives in the region.

Keywords:

Aral Sea, desert, climate change, Ecological Movement of Uzbekistan, Multi-partner Human Security Fund for the Aral Sea, International Fund for Saving the Aral Sea, Regional Environmental Center for Central Asia, representative offices of the United Nations Development Program, UNESCO, the World Bank, the German Society for International Cooperation (GIZ).

One of the largest global environmental disasters in the recent history which is being experienced by countries and the population of 62 million people in Central Asia, is the tragedy of the Aral Sea that in its environmental, climatic, socio-economic and humanitarian consequences poses direct threat to the region's sustainable development, health, gene pool and future of the people residing in it. This disaster is being tackled by the initiatives of Uzbekistan which are announced in the 72nd session of the UN General Assembly.

The Aral Sea, which was once a unique, beautiful and one of the largest closed water reservoirs in the world, is practically on the verge of complete disappearance and turned into an unprecedented disaster and irreparable damage to the life of the population living there, the ecosystem and biodiversity of the Aral Sea. Until 1960 the Aral Sea had an area of 68.9 thousand km² with the volume of water 1083 cubic km, its length extended to 426 km, width - 284 km, the greatest depth was 68 m. In 1998, water level was down by 20 m, with a total volume of 210 km³ compared to 1,060 km³ in 1960.

The Aral Sea area was a region with a wide variety of flora and fauna, 38 species of fish and a number of rare species of animals inhabited the Aral Sea basins, the number of saigas reached 1 million heads, the floristic composition comprised 638 species of higher plants. In the past, the sea was among the richest of fishing grounds in the world: the annual catch of fish in the reservoirs of the Aral Sea was 30-35 thousand tons. More than 80% of the inhabitants of the Aral Sea coast were engaged in the production, processing and transportation of fish and fish products. Fertile lands of the delta of the Amudarya and Syrdarya rivers, as well as highly productive pastures provided employment for more than 100 thousand people in the sphere of livestock, poultry farming, growing of agricultural crops¹.

In the 1960s the problems of the Aral Sea arose and took on alarming proportions as a result of thoughtless regulation of the major transboundary rivers of the region - the Syrdarya and the Amudarya, which provided the Aral Sea in the past with 56 cubic km of water annually. The significant growth of the population living in this area, the scale of urbanization and intensive

¹ <https://www.un.int/uzbekistan/news/problems-aral-sea-and-water-resources-central-asia>

development of lands, the construction of large hydrotechnical and irrigation facilities on the watercourses of the Aral Sea basin in the past, without taking into account the environmental consequences, created the conditions for desiccation of one of the most beautiful reservoirs on the planet.

On the bare part of the Aral Sea a new salt desert with an area of 5.5 million hectares appeared. Over 90 days a year, dust storms rage over it, spreading over 100 million tons of dust and poisonous salts into the atmosphere for thousands of kilometres each year.

The threatening impact of the Aral catastrophe is observed all over the world today. According to international experts, poisonous salts from the Aral region are found on the coast of Antarctica, on the glaciers of Greenland, in the forests of Norway and many other parts of the globe.

Since the beginning of the 1990s, all countries experiencing the devastating consequences of the Aral catastrophe, from the rostrum of the United Nations and other international and regional organizations, have been constantly drawing the attention of the world community to the Aral problem and its close relationship with regional and global security issues. At the 48th session of the UN General Assembly on September 28, 1993 and at its 50th session on October 24, 1995, representatives of the countries of the Central Asian region appealed to the world community to help save the Aral Sea, drawing the attention of the United Nations to the fact that without support and assistance of international financial institutions and developed countries and without the leading role of the UN it is impossible to solve this problem.

During the United Nations Sustainable Development Summit in September 2015, in New York, the Government of Uzbekistan initiated the establishment of a special Trust Fund for the Aral Sea and the Aral Sea zone under the auspices of the United Nations, its main task will be to coordinate efforts and implement targeted programs and projects in the following key areas:

- protection of health and the preservation of the gene pool of the population, the development of an efficient system of incentives for socio-economic development of the area adjacent to Aral, and to create the necessary decent life conditions for the people living in this region;
- preservation of the ecological balance of the Aral Sea region, adoption of consistent measures to combat desertification and implement the rational water use;
- restoration of biodiversity of animal and plant life, the preservation of unique flora and fauna, which is currently on the verge of extinction;
- the use of limited water resources in the region, especially the transboundary waterways - the Amudarya and the Syrdarya, in the interests of all countries in the region and in strict accordance with the norms of international law.

In order to implement this initiative, together with the UN the programme "Building the resilience of communities affected by the Aral Sea disaster through the Multi-partner Human Security Fund for the Aral Sea" has been developed. An official launch of this program was held in Tashkent, on February 10, 2017.

Huge efforts are also directed to the practical solution of these tasks at the regional level. A landmark event in this regard was the creation in January 1993 of the International Fund for Saving the Aral Sea (IFAS), the founders of which were Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.

In order to prevent the negative consequences of the Aral problem, within the framework of IFAS three programs have been implemented to assist the countries of the Aral Sea basin (ASBM-1, ASBP-2, ASBM-3).

On January 18, 2017 the President of the Republic of Uzbekistan also approved the State program on development of the region Priaralya for 2017 - 2021 aimed at improving the conditions and quality of life of the population of the region, providing for the implementation of projects worth 8.422 trillion sum. The program includes measures to create new jobs, increase the investment attractiveness of the region, develop water supply, sewage systems, sanitation and

recycling household waste, improve public health, housing conditions, improve the territories, create children's and sports play grounds, develop transport, engineering and communication infrastructure of settlements, improve of heat supply systems in Nukus and Urgench.

Up until the third quarter of the 20th century it was the world's fourth largest saline lake, and contained 10grams of salt per iter. The two rivers that feed it are the Amu Darya and Syr Darya rivers, respectively reaching the Sea through the South and the North. The Soviet government decided in the 1960s to divert those rivers so that they could irrigate the desert region surrounding the Sea in order to favor agriculture rather than supply the Aral Sea basin.

By establishing a program to promote agriculture and especially that of cotton, Soviet government led by Khrouchtchev in the 1950s deliberately deprived the Aral Sea of its two main sources of water income, which almost immediately led to less water arriving to the sea. Not only was all this water being diverted into canals at the expense of the Aral Sea supply, but the majority of it was being soaked up by the desert and blatantly wasted (between 25% and 75% of it, depending on the time period).

Dams also affect salinity, notably by reducing its variability with the seasons. Smaller lakes within the Aral Sea that have stopped being fed by river flows tend to have higher salinity due to evaporation, causing some or all fishes that either survived or had been reintroduced in the 1990s to die².

The contributors to the solution of the Aral Sea are: the Ecological Movement of Uzbekistan, Ministry of Innovative Development of the Republic of Uzbekistan, International Fund for Saving the Aral Sea, Regional Environmental Center for Central Asia, representative offices of the United Nations Development Program, UNESCO, the World Bank, the German Society for International Cooperation (GIZ), Project Coordinator of the Organization for Security and Cooperation in Europe (OSCE) in Uzbekistan, the Standing Committee for Scientific and Technological Cooperation of the Organization of Islamic Cooperation, JSC "Uzbekistan factory on preparation and processing of a scrap and waste of nonferrous metals", Scientific Information Center of the Interstate Commission for coordination of agriculture and other international and domestic organizations. The conference was attended by deputies of parliaments and heads of ministries and agencies of Central Asian countries, specialists and experts of the state governing bodies and administration, national and foreign specialists, representatives of foreign companies, international organizations, leading financial institutions interested in investing in projects on improvement of the environmental situation in the Aral Sea region, employees of non-governmental non-profit organizations. At the meetings held within the framework of the conference, activities of the International Fund for Saving the Aral Sea and the new Action Program on problems of the Aral Sea basin, issues of deepening cooperation between the countries of the region on joint use of water resources of transboundary rivers in Central Asia, economic and social development of the Aral Sea zone and creation under the auspices of the UN of a Multi-Partner Trust Fund for human security in the Aral Sea region, intensification of forest reclamation works on drained bottom of the Aral Sea were discussed. Within the framework of the conference, participants visited the districts of the Aral Sea region, they got acquainted with the situation in the region³.

² <http://www.columbia.edu/~tmt2120/introduction.htm>

³ <https://uza.uz/en/posts/the-aral-sea-problem-new-approaches-innovative-solutions-and-08-06-2018>