

THE ARAL SEA: A TRAGEDY OF WATER AND A STRUGGLE FOR REVIVAL

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Annotation: Today, the Aral Sea is disappearing more and more, the reasons and consequences of this are discussed. This article examines the dramatic decline of the Aral Sea, a once-thriving ecosystem now facing an existential crisis. It explores the historical context, the causes of the shrinking sea, and the devastating impacts on the surrounding environment and human communities. It concludes by outlining ongoing efforts to restore the Aral Sea and the challenges faced in this monumental task.

Key words: Aral Sea, continents, Meteorological Association, dust storms, fisheries, shipbuilding, diseases.

Introduction. The Aral Sea is the largest closed lake in Central Asia. Administratively, more than half of the southwestern part of the Aral Sea is located in the territory of Uzbekistan, and the northeastern part is located in Kazakhstan. Until the 60s of the last century, the area of the Aral Sea with its islands was on average 68,000 km². In terms of size, it was the fourth largest in the world (after the Caspian Sea, Lake Superior in America and Lake Victoria in Africa), and the second largest on the Eurasian continent (after the Caspian). The sea stretches from the north-east to the south-west. 428 km, the widest part was 235 km (45° latitude). The area of its basin is 690 thousand km², its water volume is 1000 km³, it is moderately dry. It varies around 16.5 m. It is called the sea because of the size of its basin.

The decrease in the level of the Aral Sea is an anthropogenic-natural ecological disaster associated with the loss of 90% of the water volume of the Aral Sea in the second half of the 20th century and the emergence of the Aral Kum desert in its place. According to the calculations of modern scientists, the influence of anthropogenic factors on the decrease of the level of the Aral Sea has exceeded 70 percent. A sharp decline began in connection with the development of agriculture on the archipelago, primarily the intensive cultivation of cotton on irrigated lands. By the 1960s, the entire flow of the Amudarya and Syrdarya, which fed the Aral Sea, was dismantled to irrigate plantations, and the construction of numerous reservoirs and canals upset the balance between water supply and evaporation. In 1985-1986, the sea level fell from 53 to 41 m (relative to the level of the Baltic Sea), the Berg Strait dried up, and the Island was divided into two independent reservoirs - the Big and Small reservoirs.

The main part. According to the World Meteorological Association, the drying up of the Aral Sea is one of the biggest man-made environmental crises of the 20th century. The picture below shows the state of the Aral Sea in 1989 and 2014:



Picture 1. The Aral Sea in 1989 and 2014

As you can see, the Aral Sea is disappearing completely, which is really a sad situation. This situation has a negative impact on both humanity and nature. Within a radius of 100 km from the former borders of the sea, the climate has changed sharply to continental, rainfall has decreased several times, forests have died, more than 130 animals and 30 species of fish have disappeared. Dust storms carry sand and chemical pollutants accumulated in it from the dry bottom over long distances. The rise of dust has caused an increase in respiratory, eye, cancer and other diseases among the inhabitants of Aral Bay. In addition, the population faced mass unemployment due to the closure of the fishing and shipbuilding industries.

The shrinking Aral Sea has had severe ecological, economic, and social consequences.

Environmental degradation: The loss of water has led to desertification, salinity, and dust storms, impacting the surrounding environment and harming human health.

Economic ruin: The once-thriving fishing industry collapsed, leading to unemployment and economic hardship for local communities.

Public health impacts: The increased salinity of the water has contaminated water sources, leading to health problems and an increase in respiratory illnesses.

President Shavkat Mirziyoyev also expressed confidence that holding the Future Summit at the initiative of the Secretary General of the United Nations in 2024 will serve to solve the current problems of international and regional development and further increase the influence and efficiency of the Organization.

In his speech at the 78th session of the UN General Assembly, Shavkat Mirziyoyev paid special attention to the situation of combating the Aral Sea tragedy and the consequences of climate change, and the measures that need to be implemented in this regard in the near future.

At the moment, the ecological situation has worsened in very large regions of the world. The main reason for this is three interrelated crises: climate change, loss of biodiversity and increasing environmental pollution.

Vast areas with millions of inhabitants, including Central Asia, are suffering from the consequences of climate change, and are experiencing great socio-economic damage.

Uzbekistan is taking great measures to the best of its ability to eliminate the problems related to the sharp decrease in the level of the Aral Sea, which has already become a global problem. Measures to mitigate the tragedy of the Aral Sea and the environmental situation are being implemented in line with the UN Sustainable Development Goals.

During this period, a number of comprehensive programs and strategies were adopted at the state level to reduce greenhouse gas emissions and increase the level of climate resilience. For example, on October 30, 2019, the Decree of the President of the Republic of Uzbekistan No. 5863 on "Approving the Environmental Protection Consent of the Republic of Uzbekistan until 2030", and on December 2, 2022, "On the Approval of the Environmental Protection Consent of the Republic of Uzbekistan until 2030" Decision No. 436 of the President of the Republic of Uzbekistan "On measures to increase the efficiency of reforms aimed at the transition to a "green" economy" was adopted.

These documents approved the concept and program of the transition to a "green" economy, the program for increasing energy efficiency in industry, and the plan for the transition to a "green" economy in the period up to 2030. They also developed measures to reduce greenhouse gas emissions per unit of GDP in Uzbekistan by 40% compared to 2010 in the period until 2030.

Against desertification, drought, dust and sand storms and temperature rise, it was decided to establish "green fence" forests on an area of 600,000 hectares. Measures have been developed to increase the level of accurate early reporting of hazardous hydrometeorological conditions and mountain river flows to 100% and 98%, respectively.

Great measures have been taken to protect and restore terrestrial ecosystems, to use them rationally, to stop and reverse desertification, land degradation, and to eliminate the reduction of biological diversity, and a number of decrees and decisions have been adopted in this regard. According to them, the processes of establishing forests in our country have been accelerated in recent years, and its ratio to the total land area has been increased from 8.5 to 8.7%. In 2018-2022, green areas with drought-resistant plants were established on an area of 1.7 million hectares in the dry bottom of the Aral Sea.

To increase forest areas in the republic to 6.1 million hectares and the level of forestry to 30%, to install and modernize high-efficiency dust and gas cleaning equipment and local treatment facilities, to introduce the regime of ecologically clean areas in 14 regions, 200 per year planting a million trees and increasing the level of greening by 30%, establishing 1984 green parks, including "green belts" consisting of 30 million trees in and around the territory of 112 large industrial enterprises in 3 years, "Green Space" of the republic plans to create aerobiological monitoring systems in 10 regions in accordance with the initiatives of the national project.

These are very big measures and their implementation will greatly help to alleviate the tragedy of the Aral Sea and the difficult environmental situation. However, the scope of the problem has already expanded beyond the level of the Central Asian region and has become universal, and to solve it, it is necessary to take great organizational actions at the international level and allocate

financial resources. It is not possible to solve this only at the level of Uzbekistan or Central Asian countries. To continue these efforts, the support of the international community is very important.

Conclusion. Currently, our Republic pays attention to preserving the existing ecosystems and the people living around it, not the Aral Sea. Because the only way is not to restore it, but to reduce the impact of this place on the environment. Otherwise, it will cause even bigger problems. As the climate changes dramatically, the condition of the Aral Sea is getting worse. Therefore, our Republic is taking all possible measures, using all the available opportunities. It is not only a national problem, but it is now considered a regional problem. Therefore, Central Asian countries should find a solution to this problem and eliminate the existing problem. So we all need to be vigilant and help.

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