

THE PROBLEM OF THE ARAL SEA REGION IN CENTRAL ASIA AND ITS IMPACT ON HUMAN HEALTH

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Abstract. *This article contains information about the occurrence of the Aral Sea region tragedy, which has become the most urgent problem of the world community, and its impact on human health, as well as the measures taken in this regard.*

Keywords: *sand-salt aerosols, trust, ecological, hydrological cycle, ecology, transboundary, crisis, hypertension, anemia, teratogenesis, gastroenteritis.*

The tragedy of the Aral Sea region, which today has become the most acute problem not only of the Central Asian region, but also of the entire world community, affects all spheres. The economy, politics and especially the health care system of five states located in Central Asia: Uzbekistan, Kyrgyzstan, Kazakhstan, Turkmenistan, Tajikistan, have changed dramatically since the emergence of the Aral Sea problem. How did the Aral Sea region problem actually arise?

The Aral Sea region tragedy and its consequences have not yet disappeared from the agenda as an urgent problem. Although there is no exact information about the age of the Aral Sea region in historical sources, the fact that in ancient times the tribes of the Massagets and Saxons lived on the eastern shores of the sea, and the Ugrians lived on the southern shores, who earned their living by cattle breeding, fishing, agriculture, indicates that its history dates back thousands of years. Ancient historians Strabo and Varro, who lived before our era, the Chinese traveler and scientist John San recorded very valuable information about the Aral Sea region.

Our compatriot Abu Rayhan Beruni in his work —geodesy left detailed scientific information about the long history of the Aral Sea. The island received the most water from the Amu Darya and is mentioned in the Avesta as the Arang River. Historian, scientist Hafiz Abru —geographer —Zubdat ut-tavorikh, who lived in the XV century, writes that the island dried up due to the fact that the Amu Darya and Syr Darya flow into the Caspian Sea. This was due to the fact that the Amu Darya, having changed its course, flowed through the Uzboy. The island dried up due to changes in the riverbed, but over the years it became a sea again, taking water from the Amu Darya and Syr Darya. The work "Firdousi ul— Iqbal", written by Shermuhammad Munis and Muhammadrizo Ogakhi, very beautifully depicts a blue seascape teeming with islands.

In the early 60s of the XX century, Doctor of Philology, a major literary critic Pirmat Shermukhammedov also described the Aral Sea region very beautifully. However, twenty years after they wrote about it, he said of the island: "the hills curving in front of me are ships turned into dry iron behind them, boats half stuck underground." [1] If we take statistics, the water on the island has decreased eight times over the next fifty years, and in its drained territories, a sandy-salty desert with an area of more than five million hectares, dangerous for nature, has formed, which harms human health. Judging by the literature of the last century, the island dried up even earlier, but was restored and began to dry up again due to improper use by people. Scientists say

that when an idea goes away the first time it dries up, it's a natural disaster, and when it dries up the second time, it's when people use water incorrectly. In the republics of Central Asia, where the Amu Darya and Syr Darya drink water, the cotton growing plan has been increasing from year to year. On the other hand, cotton is demanding of water, and water from two rivers went mainly to irrigate crops. This reduced the amount of water entering the island, and the water level on the Aral Sea decreased. The Central Asian region has a significant impact on the processes of global ecological equilibrium and the hydrological cycle.

In the 1960s of the last century, the area of the Aral Sea was 67,000 km, the water level indicator was 53.4 m. The mineralization of water was 10 grams per liter. Currently, it is less than half of the area observed in the 1960s, when the volume of water decreased by more than 9 times, and the mineralization of water increased by more than 10 times. The area of the drained seabed is more than 4.0 million hectares. The coastline decreases by 60-80 km, the exposed lands occupy 23 thousand km². The worst and most serious situation was observed on the south island [2]. The problem of the islanders is growing every year, and every year its water is drying up. In the period from 2000 to 2005, the annual inflow of water into the Aral Sea decreased even more, to 5.2 km³. And by 2007, the sea level decreased by 5.8 times, the volume of water decreased from 1064 to 80 km³.

The salinity of the water was 110-112 g/l in the western part and 280 g/l in the Eastern part. The sea retreated 120-200 km from the shore, leaving 45 thousand km² of salty desert [3].

The problem of the Aral Sea region is gaining momentum, and this is stated in the review of donor assistance in the Aral Sea region intensive desertification occurring on the island and in the Aral Sea region has not been encountered in the world experience. Therefore, it was claimed that he has significant difficulties with quantitative and qualitative assessment [4]. Due to the opening of the bottom of the island and the drying of river deltas, desert spaces are expanding, which leads to the appearance of a new powerful source in Central Asia, which carries away sand-salt aerosols with the help of wind.

Of course, this phenomenon cannot but affect the ecology and human health. This phenomenon primarily pollutes the soil: sand-salt aerosols rose from the soil due to wind and storms and spread to other areas, including cultivated areas, again causing an increase in human respiratory diseases and cancer. Infants and children are most exposed to pollutants. The infant mortality rate has been rising since the 1970s, when an Island problem arose in the region. It is reported that the number of these harmful substances that cause an increase in infant mortality in Kazakhstan has reached 70 since 1993.

The infant mortality rate in Afghanistan was 165 in 2004 and 163 in 2008. And on the territory of Turkmenistan in 2000 there were 55 people, in 2008- 74. 62 cases of infant mortality were registered on the territory of Uzbekistan in 2004, 48 in 2008. In Tajikistan, 50 in 2004 and 65 in 2008. Fifty percent of all registered diseases in children in Turkmenistan are associated with problems of the respiratory system. Below is a list of diseases that can occur in the Aral Sea, causing infant mortality, a decrease in living standards:

- Diarrheal diseases;
- Nutritional deficiency;
- Upper respiratory tract infections;
- Teratogenesis;
- Endocrine disorders;

- Influence on the development of the nervous system;
- Behavior change;
- Gastroenteritis;
- Typhoid fever;
- Hepatitis;
- Esophageal cancer;
- Various types of cancer;
- Hypertension;
- Heart disease;
- Anemia;
- Kidney disease;
- Eye disease, etc. [5].

If you look closely at such statistics, then the problem of the Aral Sea region primarily pollutes nature, clean air, and this entails serious changes in people's health. The state, of course, does not look at such changes in silence and calls on other countries to fight together on this issue. If we look at the reforms under the first President Islam Karimov, we will see a number of measures to preserve the Aral Sea. In particular, in October 1991, the heads of water management organizations of the Republics of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan gathered in Tashkent and adopted a joint statement on the management of the use and protection of water resources. New institutions were created:

- Interstate Coordination Commission on Water Management (IDGC) for the management of Trans boundary water resources;
- The International Fund for Saving the Aral Sea (IOC) in order to alleviate the crisis in the Aral Sea.

The efforts of most countries of the Aral Sea basin in the period from 1995 to 2005, the total amount of donor support provided in the Aral Sea amounted to \$ 825 million. US dollars. The main donors were the World Bank, the Asian Development Bank, the Governments of Germany, Kuwait, and Japan [6]. Our President Shavkat Mirziyoyev also spoke for the first time at the 72nd UN session in 2017 and showed how important is the Aral Sea problem. We are all proud and proud of the unanimous adoption at the plenary session of the 75th session of the United Nations General Assembly of a special resolution on the declaration of the Aral Sea region as a territory of environmental innovations and technologies on the basis of the proposal made by our President Shavkat Mirziyoyev. [7] and on the initiative of our country, a special UN resolution on human security was adopted for the Aral Sea region in 2017. A multilateral partnership Trust fund is being created, it serves as the basic platform of the international community to provide practical assistance to the population living in a remote ecological zone.

Countries such as Norway, Finland, Japan, South Korea, the European Union, Germany, the UAE, Turkey, Switzerland have shown great interest in the fund. More than 500 projects have been implemented as part of the comprehensive program of measures for 2013-2017 to mitigate the consequences of the Aral Sea crisis and the development of the Aral Sea region. Then the state program for the development of the Aral Sea region for 2018-2021 was adopted [8]. Such measures, of course, will not go unnoticed.

Based on the above, we can draw the following conclusions:

- The problem of the Aral Sea region affects the politics, economy, and social situation of the Central Asian states;

- The Aral Sea region has been formed for a long time and is very beautiful, it is the fourth largest in the world;

-The Aral Sea is drying up and sand-salt dunes appear in its place, causing damage to nature and ecology;

- Salty air spreading across the island affects people's health, causing and causing various diseases;

- The Republic of Uzbekistan and other States coordinate and take effective measures in relation to the Aral Sea region.

Instead of concluding, let's say that there are three main possible ways to solve the problem of the island and the Aral Sea region, namely:

-firstly, attention was paid to improving the sanitary and epidemiological condition of the territory with the delivery of drinking water to the population through pipelines, as well as the use of underground fresh water. There is a need for a sharp increase in the level of health and sanitation;

- secondly, the creation of a green belt by building an artificial dam on the drained southern shores of the sea and constant irrigation of the delta ecosystem;

- thirdly, the self-preservation of the sea. To maintain it, it is necessary to systematically supply a large amount of water to it, and, in addition, we can prevent the movement of sand, the raising of dust and improve its current condition by creating rocky placers on the dried-up bottom of the Aral Sea region.

The preservation of our nature, its protection, rational use of natural resources and the development of ecological culture and ecological consciousness in society is not only the work of environmental authorities, but also the childish duty of every person living on this earth to our Homeland, its nature.

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