

# Constructive and Optimal Solutions for the Formation of a Stable Ecological Situation in the Aral Sea Region of Uzbekistan

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## ABSTRACT

In this article, the formation of an ecological worldview in the world is not only a deterrent to global problems, but also means for environmental security, the solution of which takes place with the participation of human consciousness, reflection, intellect, intellectual potential and whole values and its ontological, epistemological, philosophical aspects within the Aral Sea region are analyzed.

**KEYWORDS:** *Ecological worldview, spiritual values, ecological perception, imagination, notion and thinking*

## INTRODUCTION

Today, the Aral Sea region has environmental, socio-economic and demographic complex problems of international and global nature. Therefore, "prevention of environmental problems that harm the environment, public health and gene pool" [1] has become an important strategic task in Uzbekistan. This requires a scientific and theoretical study of the methods, means and ways of improving the institutional system, constructive and rational organization of environmental policy.

This claimed comprehensive scientific analysis of the problem at the national, regional and global levels. Nature protection is complex in essence and includes socio-economic, spiritual and political tasks. Among these tasks, ensuring the balance of natural water distribution, saving and maintaining purity has become an extremely important issue. Finding a solution has been moved to the center of the tasks that need to be solved in science, technology, economics, culture and ethics. And the seemingly innumerable wealth of the earth — only one-tenth of the total amount of water — can meet the needs of technology and man.

## Method

Research methods: Historical-logical, objectivity, induction, deduction, analysis-synthesis, comparison and generalization, complex-systematic approach, comparative analysis and other philosophical methods of knowledge were used.

## Results and discussion

Indeed, in recent times, the escalation geography of the environmental situation is constantly expanding, attracting more and more attention of the world community. In our country, the development of state organizations, public institutions, special environmental movements responsible for the formation and development of the ecological worldview is considered a priority of state policy.

The issues of improving the ecological situation in the country and the formation of a scientific and pedagogical complex of the individual ecological worldview put on the agenda. "Such problems cannot be solved only by administrative means; it can be achieved by cultivating in the hearts of the younger generation a love for Mother Nature, a sense of belonging to it." President of the Republic of Uzbekistan Shavkat Mirziyoyev at the 72 nd session of the UN General Assembly in 2017 expressed such views on the rational use of water resources in Central Asia, the active integration of international efforts to address the consequences of the Aral Sea tragedy. [2]

When a map showing the real state of the Aral Sea today was shown by our President, we think that this situation has not left anyone indifferent to the future of our planet. Also, in 2020, at the 75th session of the UN General Assembly, he said, "The catastrophic consequences of the drying up of the Aral Sea, the Aral Sea region has become the center of an environmental tragedy. To improve the current situation, we are doing a lot of work here to create two million hectares of new plantations and forests, to form a layer of soil. At the initiative of our country, the United Nations Multilateral Trust Fund for Human Security has been established for the Aral Sea region. We hope that this fund will serve as a base platform for the international community to provide practical assistance to the population living in a difficult ecological zone.

We propose to adopt a special resolution of the United Nations General Assembly declaring the Aral Sea region as a zone of environmental innovation and technology. It would be expedient to celebrate the date of approval of this important document as the International Day for the Protection and Restoration of Ecosystems." [3] They proposed the adoption of a special resolution of the United Nations General Assembly on the declaration of the Aral Sea region as a zone of environmental innovation and technology. They suggested that the date of approval of this important document should be celebrated as the International Day for the Protection and Restoration of Ecological Systems. It is known that in 1967 the XXII session of the UN General Assembly for the first time put on the agenda the convening of the International Conference on Environmental Protection. An international conference was held in Stockholm, Sweden, on June 5-16, 1972, declaring June 5 the International Day for Nature Conservation.

All of the above mentioned facts show that the issue of ecology is a topical issue on a global scale. Indeed, the Aral Sea is an important link that defines the nature of Central Asia. Just as Lake Baikal, which has become a major environmental problem today, is important for Siberia, the

Aral Sea is no less important for Central Asia, Kazakhstan, and the Volga region.

The drying up of the Aral Sea is influenced by a number of factors: The first is the expansion of irrigated agriculture on the banks of rivers flowing into the Aral Sea. Although in the early 1960s the irrigated area in the oases was 3.5 million hectares (1.6 million hectares in the Amudarya oasis and 1.9 million hectares in the Syrdarya oasis), the water reserves of the Aral Sea have not decreased compared to the 1930s. Over the past 20 years, the irrigated area has reached 2.4 million hectares in the Amudarya oasis and 2.6 million hectares in the Syrdarya oasis. Thus, the intensive expansion of irrigated areas was the beginning of an environmental tragedy for both the Aral Sea and the region.

Especially in the post-Amudarya years, the increase in water intake from Turkmenistan by 7 km through the Karakum Canal further complicated the fate of the Aral Sea. As a result, the Aral Sea lost 24% of its water in the 60s and 70s and 54% in the 70s and 80s. The flora of 600,000 hectares of land in the delta of the Amu Darya flowing into the Aral Sea has been completed. The main reason for this is the influx of salt from the dried-up areas of the Aral Sea.

The second reason is to save water from the Amudarya and Syrdarya rivers. not to use and to collect the waters of these rivers into artificial reservoirs. According to experts, the Amudarya and Syrdarya rivers flow an average of 120 billion m<sup>3</sup> a year. With this water, 12 million hectares of land can be irrigated and farmed. Now 5 million hectares of land are irrigated. In addition, water from other water bodies, groundwater, is used for irrigation. Excess water from irrigation is collected in dozens of reservoirs. In particular, the Tukhtagul reservoir on the Naryn River can collect 19.5 km, the Chordara on the Syrdarya - 5.2, the Qairoqqum - 3.4, the Tuyamoyin on the Amudarya - 7.8 km.

It should be noted that as a result of the construction of artificial reservoirs in our country, 2,600 villages and 165 cities were flooded. The total area of the reservoirs is equal to the territory of France. [4] Currently, water conservation is not sufficiently controlled. There is a need to develop and implement a perfect, rigorous system of accounting and control. Fertilizer, machinery, fuel, labor resources should be allocated on the basis of a detailed plan, just as water is allocated on the basis of norms for each hectare or centner of field. It is necessary to set a strict limit on the amount of water supplied to farms with a differential approach to irrigated areas.

It is advisable to deduct the value of water used or wasted from the total income or to develop an additional incentive system for farming with less water than the norm. Consequently, the widespread introduction of family and brigade contracting on farms creates the organizational conditions for water-efficient use of water, i.e., the overtime work that the contract team receives at the end of the year, withholding a certain amount of money for overspending and wasting water, or using less water.

Knowing that there would be an additional material interest in saving it, and if this was strengthened in the contract between the farm and the contractor, the use of water would have been viewed from a different

perspective, of course. Wastewater from overuse in agriculture is causing serious environmental problems. In particular, it falls into freshwater basins and pollutes them, increasing the level of mineralization of groundwater, salting of soils and their conversion into swamps. The situation is particularly dire in the lower reaches of the rivers. [4]

The government of Uzbekistan is working to eliminate the consequences of the Aral Sea tragedy and ensure biodiversity around the region. In particular, saxaul fields are being built in the dry part of the Aral Sea. It is also trying to attract more investment to the region, drawing the attention of major international organizations to the Aral Sea problem. Even 50 years ago, the Aral Sea averaged 1,082 cubic km. There was a volume of water, and the area was 68 thousand sq. km. It is also 55-58 cubic km to the Aral Sea annually water was pouring. 2/3 of it flowed from the Amudarya and 1 part from the Syrdarya. The situation on the island was moderate, the salt content of the water was 11-12 g per liter. This means that the most moderate conditions for development were created in the Aral Sea region. So what are we in for now? Now the area has decreased by 10 times and the volume of water by 15 times. The level of the island dropped to 29 meters. More than 20 species of fish that could live in the Aral Sea alone have become extinct. For comparison, in the 60s of last century, up to 35 thousand tons of fish were caught per year. Today, more than 100 million tons of sand, dust and salt are extracted from the dried bottom of the Aral Sea every year, hundreds of thousands of kilometers. Such migrating salt and sand particles have been found in countries such as Norway, Japan, the Pamirs, the Alay, the Tien Shan, and the Arctic. [4] The first task before us now is to ensure the sustainable protection of the health of the population in the Aral Sea region, which is the first priority in the face of environmental tragedies. 5 million hectares that have dried up in the last 20 years. only 400 thousand hectares of land. saxophones were planted on the ground. So far, the focus on this issue has changed radically. For example, from December 2018 to April this year, 650 thousand hectares saxaul seeds were sown on the ground, 1 million one hundred thousand hectares. The branches were removed and the saxaul fields was ready for planting. Saxaul is such a plant that if you plant it in seven rows, it will be big enough to hold 90 percent sand in 5-7 years, and it will have the ability to reproduce on its own. This is the first feature of the saxaul. Its second feature is that the ecosystem in the area where the saxaul grows is moderate. Third, biodiversity will increase in those areas. [5]

Also, the joint program "Strengthening the living capacity of the population affected by the Aral Sea tragedy through the establishment of the Multilateral Fund for Human Security for the Aral Sea Region" funded by the UN Human Security Trust Fund and implemented by UN agencies [7] over three years in three model districts contributes the improving environmental safety.

Based on the experience of initiatives in Karakalpakstan in 2012-2016, the Council of Ministers of Karakalpakstan recommended that Moynak, Takhtakor and Shumanay districts, which are located in the areas of greatest environmental risk and have a population of more than 123,000, be designated as model areas for the new Joint Program. The implementation of the above-mentioned

projects may, albeit partially, solve the environmental problems associated with the drying up of the Aral Sea.

### Conclusion

As part of the initiative to address the consequences of the tragedy caused by the drying up of the Aral Sea, today, as a result of efforts in this direction, the Trust Fund was established under the auspices of the United Nations. Funds are being mobilized with the support of the leading countries and international organizations.

As a result of these measures, the living standards of the people of the Aral Sea region are improving. In this regard, Uzbekistan is mobilizing all opportunities and resources to settle this environmental tragedy. In particular, a number of projects have been implemented in the Aral Sea region over the past few years. In the arid zone of the sea, work is underway to create new plantations and forests with a total area of two million hectares, to form the soil layer.

The state program for the development of the Aral Sea region for 2018-2021 has been adopted. First of all, it will be possible to attract investments and strengthen international cooperation in the implementation of joint measures aimed at improving the ecology and living conditions of the population of the Aral Sea region. At the same time, it will be possible the introduction of

environmentally friendly technologies, the complex application of the "green economy" principles. In addition, mitigation of the effects of climate change for the Aral Sea region, the use of energy and water-saving technologies and the development of ecotourism will be provided.

### List of used literature:

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