

**LOCAL AND INTERNATIONAL INITIATIVES REGARDING THE ARAL CRISIS****Umatkulov Ilxomjon Sheraliyevich**Senior Geography Teacher, Halima Khudoyberdiyeva Creative School, Gulistan City  
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**Abstract:** This article analyzes local and international attention to the Aral Sea crisis and its ecological and socio-economic consequences. It highlights state policies aimed at addressing the problem, regional cooperation initiatives, and the role of international organizations. Additionally, measures and prospective projects undertaken to ensure the sustainable development of the Aral Sea region are examined. The article demonstrates that the Aral tragedy is increasingly securing a prominent place on the global community's agenda.

**Keywords:** Aral Sea region, UN, international innovation, wetlands, salt storm, green cover.

Since the 1960s, efforts have been made to save the Aral Sea, yet to this day the Aral problem remains acute, and the ecological situation continues to worsen year by year. This extremely serious and dangerous ecological situation requires highly intelligent management and rapid, constructive action. Until the 1960s, the Aral Sea covered an area of 68,000 km<sup>2</sup>, making it the fourth largest lake in the world. However, the excessive diversion of the Amu Darya and Syr Darya rivers, which fed the lake, for irrigation purposes began to reduce its size. By 2007, the Aral Sea had lost 90% of its area compared to fifty years earlier, and it had transformed into a small, highly saline lake.

Recognizing the severity of the Aral problem, President Shavkat Mirmonovich Mirziyoyev visited Karakalpakstan on January 21, 2017, to assess the regional situation firsthand. In September 2017, during the 72nd session of the UN General Assembly, the President highlighted the critical nature and global significance of the Aral tragedy to world leaders, using detailed maps for explanation. Following this, international cooperation on the issue increased significantly.

In August 2018, at the International Fund for Saving the Aral Sea founders' summit held in Turkmenistan, President Sh.Mirziyoyev put forward several important initiatives. The President proposed declaring the Aral Sea region as an "Ecological Innovation and Technology Zone," conducting interdisciplinary research jointly, and establishing regional centers for growing seedlings of desert plants.

The most important initiative of the President at the International Fund summit was the declaration of the Aral Sea region as an "Ecological Innovation and Technology Zone." This implies a fundamental shift in the approach to resolving the Aral disaster—not merely to draw attention to its negative ecological consequences, but to develop mechanisms to eliminate them. To implement these initiatives, on October 16, 2018, a decree (No. PF-3975) was issued to establish an International Innovation Center in the Aral Sea region under the President of Uzbekistan.

It is necessary to create unprecedented engineering infrastructure in the Aral Sea region, including roads, communication networks, water supply systems, and other essential facilities. On November 15–16, 2018, the President visited the Muynak district of Karakalpakstan, considered an ecological disaster zone. Based on this visit, a state program for the next two years was adopted, which envisaged the implementation of 795 projects with a total funding of 1.5 million USD.

The proactive and wise actions of the President of Uzbekistan to mitigate the critical ecological situation in the Aral Sea region have yielded results. Finally, on November 27, 2018, the UN's Trass Fund for human security in the Aral region, based on multilateral partnership, officially began its operations. On this occasion, during a high-level event in New York, UN Secretary-General António Guterres highly praised President Shavkat Mirziyoyev's initiative to establish the fund and called on the international community to actively participate in financing this structure.

At the forum, many heads of state and representatives of several non-governmental organizations expressed their readiness to support the fund's activities. The Norwegian delegation also announced that the Norwegian government had allocated USD 1.2 million to the fund. It was further emphasized that the Government of Uzbekistan would contribute USD 2 million annually to the fund. It should be noted that as this is an ecological project for the Aral Sea region, the 7 million residents of the area (in Uzbekistan, Turkmenistan, and Kazakhstan) will directly benefit from the fund's activities.

UN Secretary-General António Guterres personally chaired the presentation of the International Trass Fund, established based on President Mirziyoyev's initiative—a truly historic and significant event. The launch ceremony of the Trass Fund is considered the most prestigious UN-level event devoted to the Aral Sea issue. The President acted with tireless energy, diligence, and intelligence, consistently seeking real solutions to the problem. As noted earlier, during the 72nd session of the UN General Assembly in September 2017, he clearly and convincingly explained the consequences of the Aral disaster, which ultimately yielded results.

Thus, on November 28, 2018, at the UN summit, the Trass Fund officially began operating to ensure human security in the Aral Sea region through multilateral partnership. UN Secretary-General António Guterres emphasized President Mirziyoyev's initiative, stating: "I highly value the initiative of the President of Uzbekistan to establish the Trass Fund and call on donors to actively participate in financing the fund."

Naturally, one may ask what the Trass Fund, through such dynamic actions and the combination of various resources and efforts, can achieve. First and foremost, it provides strong confidence in the future. Importantly, it allows the implementation of complex, environmentally clean technologies under the principles of a "green economy," attracting foreign investments. The fund enables large-scale work to reduce the toxic salt and dust rising from the dried parts of the Aral Sea, stabilize moving sands, restore lost tugay forests and reed beds, develop fisheries, and create buffer zones and local water reservoirs that serve as habitats for migratory birds.

Additionally, it supports stabilizing desertification processes and preventing ecological migration. All of these efforts contribute to improving the ecological situation, providing drinking water to the local population, developing water networks, managing household waste, and enhancing sanitation. The fund also promotes the development of ecological tourism and infrastructure, creating jobs, and improving social services in health care and education. Ultimately, the Trass Fund serves to completely restore the city of Mo'ynoq, the historical center of the Aral Sea, which suffered the most from this disaster.

The results of conducted studies indicate that one of the most important methods for improving the ecological situation in the Aral Sea region is the creation of local water reservoirs in the Amu Darya delta as buffer zones, combined with the establishment of forest zones using drought- and salt-resistant local shrub species. These water sources utilize wastewater, collector and drainage waters, and floodwaters.

These “Green Protection” zones and managed small water reservoirs—wetlands and cultural landscapes—help prevent desertification, create a favorable microclimate, and simultaneously restore natural resources in the Amu Darya delta while reducing the movement of dust and salt storms. Wetlands play a crucial role in improving the local microclimate, preserving biodiversity, and providing the population with fish.

In the Aral region, forest enterprises annually create forested areas covering 37,000 hectares. For this purpose, 100,000 kg of seeds and more than 10 million seedlings are prepared annually in the republic's forestry enterprises. However, it must be noted that if these measures continue at the current pace, it would take over 60 years to fully implement them within the territory of Uzbekistan alone. This is because the existing technical and material base of forestry enterprises does not allow for large-scale implementation of these tasks.

To mitigate and improve the ecological situation in the Aral Sea region and the entire basin efficiently and quickly, it is necessary to carry out highly effective measures, enhance the technical and material base of forestry enterprises, and make effective use of scientific and technological achievements as well as the experience of foreign countries. For this reason, President Shavkat Mirziyoyev thoroughly studied the problem and began implementing rational and urgent measures.

It should be emphasized that, as noted earlier, the desiccation of the Aral Sea is deepening year by year. As a result, a new “Aralkum Desert” has formed, becoming a source of sand, salt, and aerosols that spread into the surrounding areas. During sand and salt storms, over 100 million tons of dust, salts, and sands are lifted into the atmosphere annually. Since the early 1980s, such storms occur approximately 90 days a year. For example, the “salt storm” of the Aralkum Desert was observed in Uzbekistan on May 27, 2018.

The salts primarily originate from the saline soils of the dried seabed. The area of the dried Aral Sea bottom exceeds 6 million hectares. These areas are devoid of vegetation, so even weak winds lift dust and salts into the air. Large amounts of dust and salts from the dried seabed are the main cause of the increasing incidence of various diseases among the local population.

Naturally, the urgent need to halt these dangerous processes associated with the drying of the Aral Sea attracted the attention of the President, prompting him to make decisive and timely decisions and to implement clear, practical, and rapid measures. Thus, from December 2018 and continuing into the spring of 2019, large-scale work began to establish “Green Cover” protective forests on the dried seabed of the Aral Sea, and these efforts continue today. During this period, protective forest seedlings were planted over an area of 500,000 hectares. More than 1,500 tons of seeds from saxaul and other desert plants were prepared. To carry out this work, more than 500 pieces of machinery, 2 aircraft, and over 2,000 workers and staff were involved.

According to the State Committee for Forestry of the Republic, monitoring of seedlings planted on 15,400 hectares showed that, depending on soil salinity, the average survival rate of planted seeds and seedlings was 50–60%, with some areas achieving 70–80% or higher (Tolipov, 2019).

Efforts are now underway to expand the saxaul forest area to 700,000 hectares. The planted forest seedlings will begin producing seeds after 4–5 years. These seeds will naturally disperse by wind, ensuring the continued natural development of the vegetation. According to experts’ observations, two-year-old seedlings reduce sand movement by 20.5%, and three-year-old seedlings by up to 34.6%. After 4–5 years, the natural grasses that develop around the planted seedlings will significantly reduce sand movement and deflation, and by seven years, sand movement will cease completely. The planted seedlings perform an important function in sand accumulation and stabilization.

Currently, the Forestry Committee of Uzbekistan is conducting extensive scientific work to develop projects for creating protective forest zones on the dried areas of the Aral Sea.

Henceforth, the Aral Sea should not be viewed solely as a dangerous and catastrophic zone, but as a unique landscape (ecosystem) region with real opportunities for land use and agricultural purposes, and even significant potential for tourism development. Interest in the Aral Sea has been growing worldwide. In particular, the dried areas have revealed numerous archaeological sites—ancient cities, constructions, crop fields, and roads—which show traces of human settlement over long periods.

This situation poses an important task for the field of geography: to identify long-term patterns of climate fluctuations in the arid regions of Central Asia and to study the current state of ecosystems in the Aral Sea basin under the conditions of ongoing global climate change.

### **Conclusion**

The Aral crisis is one of the largest environmental disasters in the Central Asian region, with its adverse effects impacting not only the environment but also human health, the economy, and social life. To mitigate this crisis, several important initiatives have been launched at both local and international levels. These include improving the living conditions of the population in the Aral Sea region, restoring ecological stability, and promoting the rational use of water resources through active cooperation between state policies and international organizations.



Programs implemented by the international community, including support from the UN, the World Bank, and other organizations, have expanded the scope of ecological restoration efforts in the Aral region. At the same time, local initiatives—such as tree planting, establishing green zones, and raising ecological awareness among the population—are also yielding positive results. These efforts play a crucial role in reducing the consequences of the Aral disaster, restoring the natural environment, and achieving sustainable development.

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