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Echoes of a dying Sea

The drying up of the Aral Sea affects us all. A concerted global effort is needed to tackle one of the most pressing environmental crises of our time

As a violinist, I have witnessed how music can bridge divides and inspire collective action. It is imperative that the global community harnesses this same spirit of unity and creativity to address a dire and unprecedented environmental catastrophe that extends far beyond the regional scale: the restoration of the Aral Sea.

The drying out of the Aral Sea, once the world's fourth largest lake, is one of the most severe ecological disasters caused by human activity. Before it began to dry out in the 1960s due to the unsustainable water diversion for Soviet agricultural purposes, the Aral Sea region was a vibrant hub of life. The water stretched to the horizon, supporting a thriving fishing community. Fishermen brought back hauls of fish that fed families and sustained local markets. Villages near the Aral Sea were lively, with children playing along its shorelines. The economy thrived, with markets brimming with produce, crafts and textiles. The community was deeply connected to the sea, relying on the Aral's bounty.

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Today, the picture is very different. The Aral Sea has drastically diminished, leaving behind a new desert, Aralkum – covering over 54 000 square kilometres – and salinised soil. Once-thriving fishing villages are deserted due to the outflow of the workforce, and the local economy has collapsed. Dust storms carry toxic particles, including concentrated salts, pesticides and other agricultural chemicals left behind on the exposed seabed due to extensive water diversion and evaporation, posing health risks to the 40 million people living in the Aral Sea Basin. Those living in the areas closest to the Aral Sea have higher rates of cardiovascular diseases as well as psychological disabilities. According to the UN, 3.5 million

people in the region have experienced a significant deterioration in their health, work and living conditions.

The impact extends well beyond Central Asia. The desiccation of the lake has altered regional and global climates, contributing to more extreme weather patterns and spreading toxic dust storms laden with pollutants across continents, affecting air quality and agricultural productivity as far away as Europe and Asia. The greatest threat now comes from toxic salts and minerals, which are carried by winds and have been found as far as 1 000 kilometres away. Aral Sea salts have been discovered in the peaks of the Himalayas, the Atlantic and Pacific Oceans, and even in the blood of penguins in Antarctica.

This environmental disaster is a poignant illustration of how interconnected our world truly is; the problems of one region inevitably ripple outwards, impacting us all. Water issues are high on the international agenda, as experts believe that future conflicts and migration may be caused by water-related issues.

Existing examples of good practice

It doesn't have to be this way. Drawing from my experiences in the world of music, I see a powerful metaphor for this situation. An orchestra comprises diverse instruments, each contributing its unique voice to a collective masterpiece. Similarly, the restoration of the Aral Sea requires the concerted efforts of nations, organisations, scientists and citizens from around the globe. Just as a single violin cannot carry an entire symphony, no single entity can resolve this crisis alone. It demands collaboration, innovation and a shared commitment to the greater good. While fully restoring the Aral Sea to its former size is practically impossible, the international community can work together to improve local conditions, address salinisation and dust storms, and revive some ecosystems.

In collaboration with neighbouring Central Asian countries, Kazakhstan has been leading efforts to revive the Aral Sea region. The country is chairing the International Fund for Saving the Aral Sea (IFAS) for the next three years, aiming to facilitate regional cooperation on sustainable water resource management, environmental protection and socio-economic development.

Restoration efforts have partially revived the

This is being done through programmes like the Aral Sea Basin Program-4, which encompasses 12 projects addressing climate

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adaptation, water resource management and ecosystem restoration. Additionally, the Regional Environmental Protection Programme for Central Asia focuses on climate change adaptation, biodiversity conservation as well as improved water quality. Both programmes aim to promote best practices in agriculture and regional cooperation, advocating for collaboration among Central Asian countries to address the environmental crisis in the Aral Sea region, with a target completion date of 2030.

Restoration efforts have partially revived the Northern Aral Sea, but challenges like reduced fish populations and rising health issues persist. To combat these, vegetation is being planted on the former seabed to reduce dust and salt emissions. This approach has proven effective in combating the increased sand and salt resulting from the lake's drainage. Since 2018, more than 1.73 million hectares of saxaul plantations have been established in the Aralkum Desert. This year, Kazakhstan plans to plant an additional 275 000 hectares to prevent dust storms, with the aim of covering 1.1 million hectares by 2025.

Thanks to the measures, the Northern Aral Sea has increased its water volume to 21.4 billion cubic metres, with 1.1 billion cubic metres added recently. Currently, the sea receives 50 cubic metres per second, which is almost tenfold higher than the previous year's six cubic metres.

Greater support needed

However, to fully restore the Aral Sea region, collaboration with international partners and an united approach among Central Asian countries is needed. Some progress has been achieved through the International Fund for Saving the Aral Sea. For example, Kazakhstan's Kok-Aral Dam, completed in 2005 with the support of the World Bank, has helped to partially restore water levels in the northern part of the Aral Sea, leading to the return of some fish species and revitalising local fisheries. However, there is still a lack of comprehensive regional water management agreements to equitably share the water resources of the Amu Darya and Syr Darya rivers. Moreover, large-scale projects to restore wetlands, reforest the dried seabed and improve agricultural practices have been underfunded. Our region often has competing interests over water resources, prioritising agricultural and economic needs over environmental restoration. This lack of coordination slows progress.

The international community can sponsor and collaborate with

Kazakhstan on several projects to restore the Aral Sea region. Implementing sustainable agriculture initiatives, such as water-efficient irrigation systems and crop rotation techniques, will conserve water and improve soil health. Projects to manage soil salinity, including building drainage systems and researching salt-tolerant crops, are essential for enhancing agricultural productivity. Building desalination plants and water purification systems will provide fresh water for communities and agriculture. Regional water management programmes with neighbouring countries can ensure fair water distribution. Community-based eco-tourism projects can create alternative livelihoods by promoting the region's cultural and natural heritage. Renewable energy projects, like solar and wind farms, will reduce reliance on fossil fuels and support sustainable energy use. Public health and nutrition programmes are also crucial to addressing the impacts of water scarcity and pollution and improving the overall well-being of the community.

As a Goodwill Ambassador, I have launched 'Mission Aral', a musical project that chronologically depicts the story of the Aral Sea — from its former beauty, through its industrial decline and devastation, to a hopeful future of restoration. Through music, I hope to draw greater attention of people around the world to this ecological catastrophe. It is then up to the international community to unite and right the wrongs of the past.



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