Climate-Resilient Agriculture in Uzbekistan: Restoring degraded ecosystems and empowering rural communities

South–South partnership uniting UAE expertise and finance with Uzbek research and innovation capacity

Context: The shrinking of the Aral Sea has caused serious environmental challenges in the region of Karakalpakstan, Uzbekistan, including drought, desertification, and soil salinity. These pressures have reduced agricultural productivity and increased risks to food security and rural livelihoods.

Financiers: In 2022, ADFD provided a USD 5 million grant for a 4-year research and technical assistance program in farming communities in Karakalpakstan. The initiative brings together the expertise of the International Center for Biosaline Agriculture (UAE) as lead partner with the local knowledge and implementation capacity of Uzbek ministries and research institutions as a model of South–South cooperation.

Results: From 2022 to 2024, the project tested 30 crop genotypes in the Aral Sea region, identifying several stress-resilient varieties for wider use. It also installed monitoring, water storage and irrigation systems and trialed soil solutions to restore fertility. 200+ scientists, extension workers, and farmers have been trained on sustainable farming practices, including targeted programs for women farmers.

Impact: The project has helped boost agricultural productivity and food security in one of Uzbekistan's most climate-affected regions. By combining UAE expertise with Uzbekistan's local capacity, it shows how South–South cooperation can address shared challenges of salinity, drought, and land degradation, while creating new economic opportunities for farming communities.

> "This initiative not only enhances agricultural productivity and food security in the region but also promotes long-term sustainability, addresses critical environmental issues, and strengthens economic development."

Aziz Abdukhakimov, Minister of Ecology, Environmental Protection, and Climate Change of Uzbekistan

Financing, Scope & Goals

- **USD 5 million** (ADFD)
- Uzbekistan
- Agriculture

Key Impacts

- **30 crop genotypes** tested in degraded areas
- **500+ scientists, extension workers, and farmers trained** in sustainable practices
- **460 kg of climate-resilient seeds** harvested for distribution to farmers
- **Automatic weather stations, soil sensors, and data loggers installed** in pilot communities
- **Groundwater well and surface pond built** for irrigation and salinity control