

# PRIORITY CLIMATE TECHNOLOGY SOLUTIONS FOR TURKMENISTAN

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# Climate challenges for Turkmenistan



Turkmenistan is a country with an arid climate that faces the following challenges:

- Rising average annual temperatures
- Water resource scarcity
- Desertification and land degradation
- Increased pressure on water supply and irrigation systems
- About **90% of water resources are used in agriculture**



# Priority #1: Smart Water Management Technologies



Key areas:

- Modern drip and sprinkler irrigation systems
- Digital monitoring of water distribution
- Water use metering and optimization systems
- Climate-adapted agriculture

Modern irrigation methods can reduce water consumption **by 30-40%**



# Priority No. 2 - Climate and Hydrometeorological Monitoring Systems



## Key solutions:

- Modernization of hydrometeorological observations
- Drought early warning systems
- Use of satellite and geoinformation technologies
- Digital climate information platforms



# Priority #3 – Emission Reduction and Energy Efficiency Technologies



Key areas:

- Methane leak detection technologies
- Modernization of energy infrastructure
- Energy-efficient industrial technologies
- Development of renewable energy sources



# Regional cooperation within CAREC



Key areas of cooperation:

- Exchange of climate and hydrological data
- Joint technology projects
- Implementation of innovative solutions in water management
- Development of regional climate monitoring systems
- Exchange of experience and technologies



# Proposal for a Regional Initiative



## Central Asian Regional Climate and Water Data Platform

Key objectives:

- Exchange of climate and hydrometeorological data
- Monitoring of water resources in the region
- Drought early warning systems
- Support for decision-making in agriculture and water management
- Exchange of innovative technologies



# Conclusion



Turkmenistan reaffirms its commitment to:

- Deploying climate-resilient technologies
- Rational management of natural resources
- Developing regional cooperation

to ensure a sustainable and environmentally secure future.

**Thank you for your attention !**