
WATER &
Sandbox Holding
WEATHER
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Introduction

The Water & Weather sector in Afghanistan in 2025 is characterized by increasing climate challenges, including prolonged drought, irregular rainfall, floods, and extreme weather events. These environmental conditions significantly affect water availability, agriculture, food security, and population stability. Climate-related disasters have contributed to large-scale internal displacement and humanitarian pressure. Despite these challenges, ongoing infrastructure development, dam projects, irrigation improvements, and climate adaptation strategies are being implemented to strengthen water management and promote long-term sustainability. Effective governance and sustainable resource planning remain essential for national resilience and environmental protection.

OVERVIEW OF WATER RESOURCES

Afghanistan’s water resources are managed by the Ministry of Energy and Water (MEW). The country’s water supply mainly comes from rivers, snowmelt in mountainous regions, rainfall, and groundwater sources. These resources are essential for agriculture, drinking water supply, irrigation systems, and energy production. Effective water management and sustainable utilization of water resources are important priorities for national development in 2025.

CLIMATE & WEATHER OVERVIEW

Afghanistan has a varied climate due to its mountainous terrain and geographical location. The country experiences four distinct seasons: spring, summer, autumn, and winter. Northern and central regions receive snowfall during winter, which contributes to water supply through snowmelt in the spring season. Some regions, especially in the south and west, have dry and semi-arid conditions with low annual rainfall. Climate and weather patterns significantly influence agriculture, water availability, infrastructure planning, and environmental sustainability in 2025.

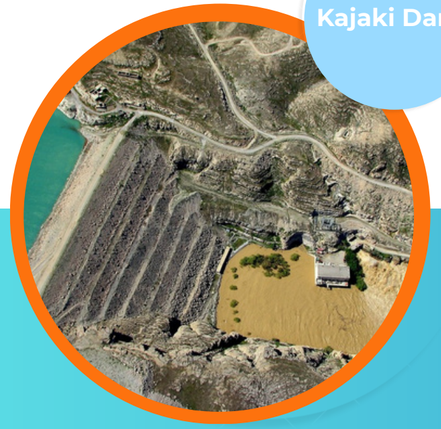
IMPACT OF WATER & WEATHER ON AGRICULTURE

Water availability and weather conditions significantly affect agriculture in Afghanistan. Farming activities in many provinces depend on seasonal rainfall and snowmelt from the Hindu Kush mountains, which are important sources of irrigation water. Regions such as Kabul, Parwan, Bamyan, and Panjshir benefit from snowmelt-based water supply, while southern and western provinces such as Kandahar, Helmand, Herat, and Farah often experience drier and semi-arid conditions. Irregular rainfall and drought can reduce crop production, impact farmers' income, and influence national food security. Strengthening irrigation systems and sustainable water management is essential for agricultural stability in 2025.

MAJOR WATER INFRASTRUCTURE PROJECTS

In 2025, Afghanistan continued utilizing major dams to manage seasonal water flow, reduce flood risks, and support agricultural irrigation. Both newly inaugurated projects and existing infrastructure played an important role in water resource management.

Kajaki Dam

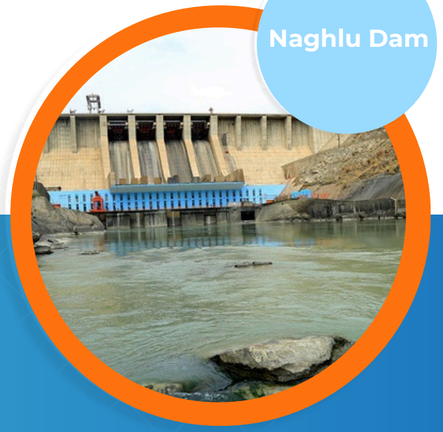


Continues to function as a major hydroelectric and irrigation dam, supporting agricultural activities in southern provinces.

Pashdan Dam

Inaugurated in 2025 with a storage capacity of approximately 54 million cubic meters, designed to irrigate around 13,000 hectares of farmland.

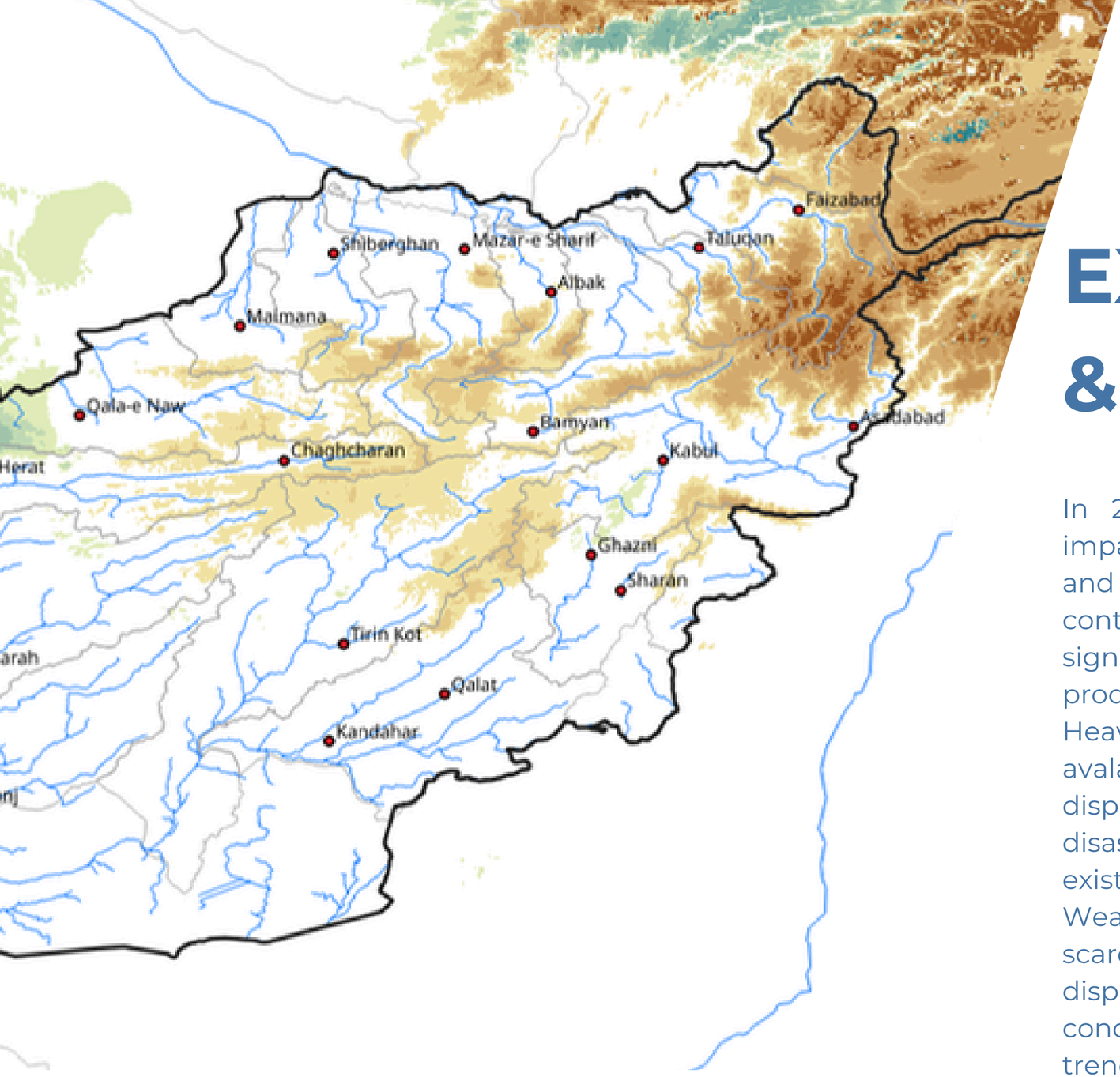
Naghlu Dam



Operates as a strategic dam for regulating the Helmand River and supporting irrigation in surrounding agricultural areas

Shah Wa Arus Dam

Supports seasonal water management and contributes to irrigation and drinking water supply in the Kabul region.



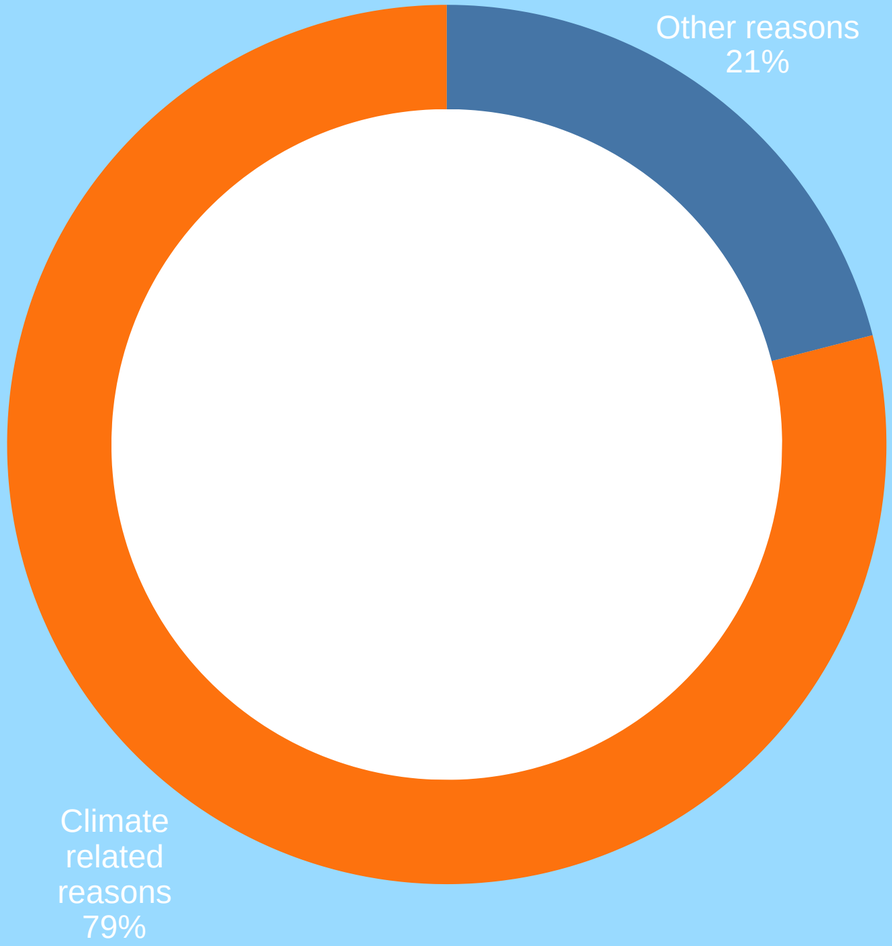
EXTREME WEATHER & CLIMATE IMPACTS

In 2025, Afghanistan faced severe and compounded weather impacts, including prolonged drought, flash floods, heavy snowfall, and other climate-related disasters. The country experienced continued drought conditions, affecting millions of people and significantly reducing groundwater levels and agricultural production, especially rainfed crops.

Heavy rains and snowfall in several provinces led to floods and avalanches, causing casualties, infrastructure damage, and displacement. Between January and March 2025, climate-related disasters affected nearly five million people. These events intensified existing humanitarian and economic challenges.

Weather extremes also contributed to agricultural losses, water scarcity in rural areas, health risks during harsh winters, and internal displacement. Ongoing climate patterns, including La Niña conditions, may continue to influence precipitation and temperature trends, increasing risks to water resources and food security.

In the first quarter of 2025, 79% of internal displacements in Afghanistan were caused by climate-related disasters such as droughts, floods, and severe weather events. This highlights the strong impact of environmental factors on population movement and vulnerability in the country.



WATER SECURITY & FUTURE OUTLOOK (2025–2026)

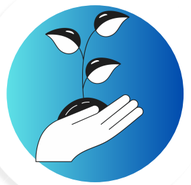
Water security remains a critical issue in Afghanistan in 2025. Continuous drought conditions, declining groundwater levels, and irregular precipitation patterns are increasing pressure on water resources. Seasonal water management through dams and irrigation systems plays an important role in reducing flood risks and supporting agriculture.

Future outlook indicates that climate variability may continue to affect rainfall and temperature patterns. Strengthening sustainable water management, improving infrastructure, and investing in climate adaptation strategies are essential to enhance resilience and long-term water stability in the country.

GALLERYWATER–AGRICULTURE CRISIS & CLIMATE RESPONSE

Water–Agriculture Crisis & Climate Response (2025)
In 2025, Afghanistan continues to face a climate-driven water and agriculture crisis. Around 80% of rural households depend on farming, while approximately 98% of water resources are used for agricultural purposes. Prolonged drought conditions have significantly reduced crop production and increased food insecurity.
Nearly 14.8 million people are experiencing acute food insecurity due to climate shocks and economic challenges. International organizations, including the United Nations and OCHA, have supported climate-smart initiatives and water management projects to strengthen resilience. Efforts include the development of water infrastructure such as dams and irrigation canals, rehabilitation of traditional karez systems, and implementation of climate-smart agriculture strategies. Improved water retention and sustainable resource management are essential to support food security and long-term stability in 2025.

WATER RESOURCE MANAGEMENT & SUSTAINABILITY



Infrastructure Development

Improving dams, irrigation systems, and water storage facilities to enhance water availability and reduce seasonal shortages.

Sustainable Water Practices

Promoting efficient irrigation methods, restoring traditional karez systems, and encouraging climate-resilient agriculture to reduce water waste.

Governance & Cooperation

Strengthening water policies, improving management systems, and supporting national and international cooperation for long-term sustainability.

Sustainable management requires adopting Integrated Water Resources Management (IWRM) and the Water-Energy-Food (WEF) nexus to improve agricultural efficiency and combat drought.

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