



A 2025 Webinar Series on Climate Action in Afghanistan

Session 2: Climate Change and Water Resources - 11 November 2025

Five Key Takeaways

1. Afghanistan has not been able to fully benefit from its water resources due to decades of conflict, instability, and underinvestment. The human impacts of the resulting water crisis are immense, cutting across the daily lives and livelihoods of Afghan men, women and children.
2. Afghanistan's water resources are highly vulnerable to climate change, due to both underdevelopment of water infrastructure, management and governance mechanisms as well as the hydrological conditions of Afghanistan's basins, which depend on snow and glacial melt for 80% of the country's water resources.
3. In the absence of surface water development amid climate pressures impacting natural recharge, groundwater depletion has become widespread and extensive, particularly in major urban centers like Kabul spurring fears of depletion in a matter of years, not decades.
4. Water quality issues and the health consequences of water and climate change are often overlooked and remain insufficiently addressed in water and climate policies.
5. Solutions to Afghanistan's water sector challenges do exist and are well known, but require coordination, investment, and a more permissive and conducive operating environment by the de facto authorities and donors.

Opening Remarks

Mohd Faizee, Professor of Practice in Water Diplomacy and Water Security, UNU-INWEH opened with context on the intersection of water and climate change in Afghanistan, highlighting the very human impacts of water resources on the lives, livelihoods and dignity of Afghan men, women, and children, and its intensifying stress under climate change. He highlighted the underdeveloped nature of Afghanistan's water sector due to decades of conflict, instability, and underinvestment, and made a call for all stakeholders to go beyond short term humanitarian support and invest in long term resilience. Mr. Faizee stressed that the transboundary nature of Afghanistan's water resources should not be a barrier, but a bridge to regional connectivity and mutual benefit.

"In Afghanistan, water determines whether a family eats, whether children go to school, and whether communities stay together. It is the invisible thread between food, dignity and peace." - Mohd Faizee



Lightning Presentations: Key Insights

1. Aziz Rahman Aziz, Director of Groundwater Resources, *de facto* Ministry of Energy and Water overviewed Afghanistan's water resource potential - including both surface and groundwater - by its five major hydrological basins. Mr. Rahman detailed the groundwater situation in the country, referencing rapid groundwater depletion due to overextraction linked to limited surface water availability and demographic pressures, as well as declining recharge due to climate change factors. He highlighted the critical need for improved monitoring systems, water storage infrastructure, and climate adaptive water management practices.





"Afghanistan's water resources are highly climate sensitive [...] there are a number of reports from parts of the country where we don't have sufficient water resources, pushing people to leave their villages." - Aziz Rahman Aziz

2. **Dr. Jamal Shokory, Senior Researcher, University of Lausanne** overviewed the impacts of climate change on water resources, first presenting the varying topography of Afghanistan's hydrological basins, highlighting their differences in land cover, surface water potential, and origin/form of precipitation. Dr. Shokory stressed that snow and glaciers contribute 80% of Afghanistan's water resources and they act as natural water storage (water towers) - particularly critical for the agriculture sector and livelihoods. Snow and glaciers are under threat from rising temperatures and changing precipitation patterns, with glaciers in Afghanistan in serious decline in the center and northern highlands. He proposed improving coping mechanisms through localized integrated water resource management (IWRM).



"Afghanistan's water towers are vanishing. Generic climate frameworks won't help the people who depend on them. Individual communities need localized water resources management approaches shaped by their specific realities." - Dr. Jamal Shokory

3. **Shiva Singh, WASH Manager, UNICEF** presented on a recently developed IWRM roadmap for Afghanistan, developed jointly with diverse stakeholders during 2023-2025. Mr. Singh gave an overview of IWRM as a comprehensive and integrated approach to water resource management, and defined the scope of the IWRM roadmap for Afghanistan, stating its coverage across situational analysis, stakeholder engagement, policy recommendations, capacity building strategies, and financial planning. He presented the roadmap's three key outcome areas, including i) institutional strengthening and coordination; ii) enhancing knowledge management and capacity for water resource monitoring; and iii) improving access to safe water for all needs.



"We need active resource mobilization to implement the roadmap. Without resources, these will remain ideas only." - Shiva Singh

Panel Discussion: Key Messages

1. **Marianna von Zahn, Director of Programmes, Mercy Corps** discussed the key findings from two recent Mercy Corps reports on the [Kabul water crisis](#) and Afghan [returnees facing a water emergency](#). She highlighted Kabul's imminent water crisis driven by rapid aquifer depletion - with wells now being drilled to 100-200m (some up to 300m), and widespread contamination - near 80% of groundwater - translating to health risks and higher economic costs for water. She highlighted a parallel crisis for Afghan returnees (over 2.6 million in 2025 alone), with 75% stating accessing clean water is challenging.



"We're observing that communities are not just passive victims - they're adapting through rationing, informal sharing, and local management. But adaptation ultimately has its limits. We need to urgently address this crisis in Afghanistan." - Marianna von Zahn

2. **Marjolaine Bos, Country Director, Solidarites International** discussed the often overlooked health impacts of Afghanistan's water crisis and climate change impacts. Ms. Bos highlighted the criticality of water quality for health outcomes related to water borne diseases or due to increased water salinity, climate change impacts on agriculture having knock-on effects on food security and malnutrition, and temperature and humidity changes impacting the prevalence of diseases such as malaria. She noted





awareness and capacity gaps, and the need to have tailored messaging to men, women, and children due to their often differentiated roles.

“As water resources decrease, people are forced to use what remains which leads to a reduction of quality at different levels.” - Marjolaine Bos

3. **Tesfaye Bekalu, Senior Water Resource Management Specialist, World Bank** - noted that while Afghanistan’s water challenges are well known — as highlighted by earlier speakers — the steps required to address them are also already well understood. Mr. Bekalu noted the biggest challenge for the World Bank is the post-August 2021 limiting operating environment. Regardless of the challenges, he showcased the bank’s ongoing efforts in the water sector, including through a 100 million USD Water Emergency Relief Project (WERP) project, co-leadership of the Afghanistan Water Platform, and the preparation of a synthesis report, as well as other innovative efforts to increasingly explore and pilot a role for the private sector in Afghanistan’s water resource development.



“We are experimenting with models such as our collaboration with UNOPS—to bring in private funding. [...] Looking ahead, this model has strong potential to become a significant business opportunity in Afghanistan.” - Tesfaye Bekalu

This summary overviews the shared insights from a [webinar convened by Samuel Hall and UNAMA as part of the 2025 Climate Action in Afghanistan Series](#). It brings together humanitarian, development, and technical perspectives to clarify what earlier, more coordinated, and more community-driven climate action must look like in practice. The session brought together:

The [United Nations Assistance Mission in Afghanistan](#) (UNAMA) is a UN Special Political Mission supporting the Afghan people. Its vision is a peaceful, stable, and prosperous Afghanistan where everyone’s rights are respected without discrimination.

[Samuel Hall](#) is a social enterprise that conducts research, evaluates programmes, and analyses data in and on contexts of migration and displacement. Our research connects the voices of communities to changemakers for more inclusive societies.