Akam Climate

AFGHANISTAN CLIMATE POLICY ANALYSIS

AFGHANISTAN CLIMATE POLICY OVERVIEW: ENHANCING CAPACITY BUILDING AND PUBLIC AWARENESS THROUGH EVIDENCE-BASED INFORMATION

By: Ahmad Faiz Omari

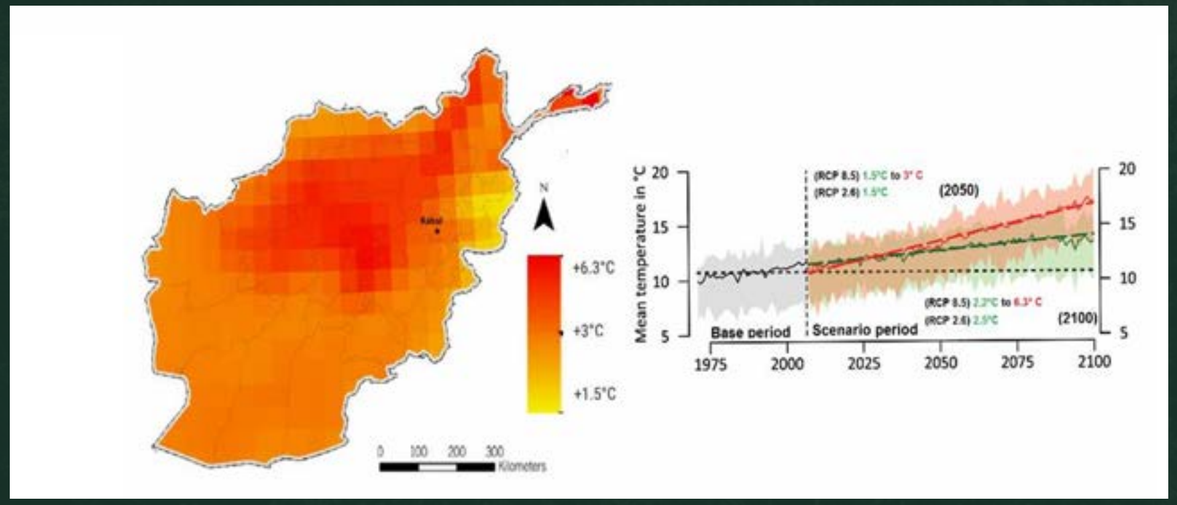
Introduction (Country Overview & Emissions Profile)

- **Geography: Afghanistan is a landlocked, mountainous country; vulnerable to droughts and floods.**
- **Economy: Agriculture-dependent, fragile due to conflict and instability.**
- **Emissions: Afghanistan's contribution to global GHG <0.1%, yet among the most vulnerable countries.**
- **Key impacts : Drought, floods, desertification, water scarcity, biodiversity loss.**

In Afghanistan, climate change is related to various adverse effects on water resources, agriculture, forests, biodiversity, increasing temperature, and changing the environmental landscape.

Climate Projection The extent of climate change impact depends on increasing greenhouse gases emission and aerosols and the vulnerability of the climate system to those emissions. Preliminary, regional, and local climate change scenarios are necessary for analyzing the impact of climate change.

Decreasing precipitation and increasing temperature are the two clear signals of climate change impacts in Afghanistan.

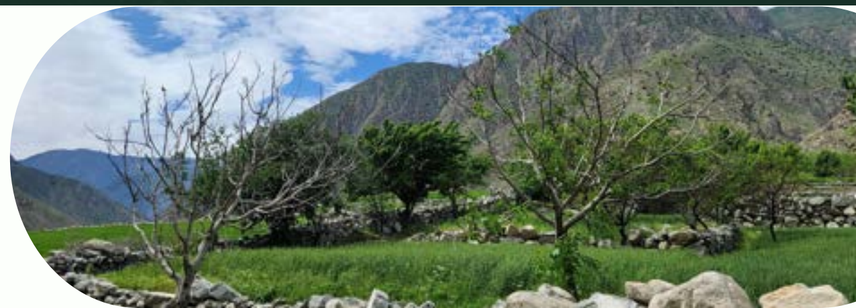


- Water resources, agriculture, environment, biodiversity, and other sectors. In such circumstances, mitigating and managing the consequences of climate change can reduce the impacts to some extent and prevent the destruction of production capacity. Therefore, changing and modifying the production pattern of agricultural products based on less water consumption, using more renewable energy, realizing climate change as a critical phenomenon, and adopting effective policies will lead to sustainability.

- **Environmental Sustainability The multi-functional analyses of an environmental vulnerability index for the water resources, agriculture, forest and rangelands, and biodiversity of Afghanistan indicates that most of these sectors and their sub-parts are very far from the ideal environmental sustainability level.**

- Afghanistan is one of the most vulnerable countries against climate change impacts. Climate change has led to disastrous droughts, frequent floods, water shortages, and an overall negative environmental sustainability balance. The country has experienced severe climatic variations in the past decades and, it is expected to face even more challenges in the future. The temperature is projected to rise exponentially, and the rainfall will have a slight decrease.

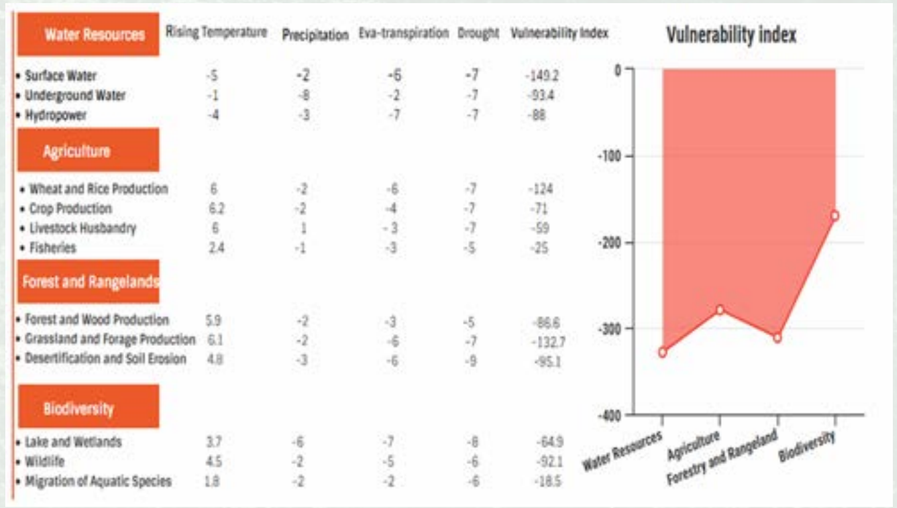
Akam Climate



Institutional Framework

Lead institutions:

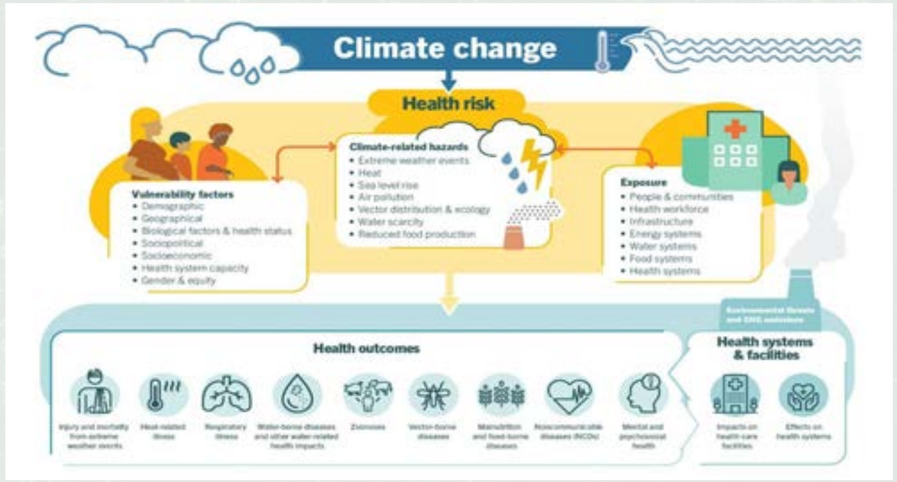
- National Environmental Protection Agency (NEPA) → focal point for UNFCCC.
- Ministry of Agriculture, Irrigation, and Livestock (MAIL).
- Afghanistan Meteorological Authority.



	Rising Temperature	Precipitation	Eva-transpiration	Drought	Vulnerability Index
Water Resources					
• Surface Water	-5	-2	-6	-7	-149.2
• Underground Water	-1	-8	-2	-7	-93.4
• Hydropower	-4	-3	-7	-7	-88
Agriculture					
• Wheat and Rice Production	6	-2	-6	-7	-124
• Crop Production	6.2	-2	-4	-7	-71
• Livestock Husbandry	6	1	-3	-7	-59
• Fisheries	2.4	-1	-3	-5	-25
Forest and Rangelands					
• Forest and Wood Production	5.9	-2	-3	-5	-86.6
• Grassland and Forage Production	6.1	-2	-6	-7	-132.7
• Desertification and Soil Erosion	4.8	-3	-6	-9	-95.1
Biodiversity					
• Lake and Wetlands	3.7	-6	-7	-8	-64.9
• Wildlife	4.5	-2	-5	-6	-92.1
• Migration of Aquatic Species	1.8	-2	-2	-6	-18.5

Regional & International Affiliations:

- UNFCCC (signed 1992, ratified 2002).
- Kyoto Protocol (2003)
- Paris Agreement (2016).
- Regional cooperation (SAARC, ECO).



Akam Climate

Sustainable Development Efforts and Challenges

- The goal of Afghanistan's sustainable development efforts is to tackle urgent environmental, social, and economic issues through a variety of programs. Future forced migration is expected to be largely caused by resource scarcity and climate-related catastrophes; estimates indicate that by 2050, these factors could compel 200 million people worldwide millions of whom may come from Afghanistan to migrate (Safi et al., 2024). Food insecurity and persistent poverty are major concerns, with half of Afghanistan's population living below the national poverty threshold.
- **By 2020, the government wants to bring down the percentage of people living in poverty from 54.5 percent in 2017 to 47.1%. That being said, 59.5 percent of people still experience food insecurity. To increase agricultural output, the government has made investments in water and livestock management, enhanced healthcare, and lowered the rate of maternal death. Afghanistan is a party to sixteen global environmental agreements and is impacted by climate change as well. On the other hand, the government has made investments in healthcare, water management, and livestock management in an effort to lower poverty rates and increase agricultural production .**

- Additionally, the technique lowers indoor temperatures by 1.43°C to 18.22°C. The saved emissions make up around half of the entire impact of mitigating climate change (François & Gavaldao, 2017). In order to further promote environmental sustainability and fight climate change, Afghanistan has also participated in multilateral environmental agreements and created frameworks like the National Agricultural Development Framework (NADF).Afghanistan is utilizing various resources to tackle climate change contests, with the Global Environment Facility (GEF) leading the charge. The National Agricultural Development Framework (NADF) promotes environmental sustainability, while the National Environmental Protection Agency (NEPA) preserves the country's environmental integrity. An important component of Afghanistan's goal for sustainable development is institutional initiatives. Two of the main organizations in charge of preserving the nation's biodiversity and environmental integrity are the Ministry of Foreign Affairs and the National Environmental Protection Agency (NEPA). Additionally, universities make a substantial contribution by encouraging the creativity and invention necessary for advancement (Mohammadi, 2020).

Legal Framework

- Constitution (2004) includes environmental protection under state duties.
- Environment Law (2007).
- Draft climate laws (limited enforcement capacity).
- Other sectoral laws: Water Law, Forest Law, Energy Law.

- Below average precipitation since October 2017, has destroyed and degraded agriculture and livelihoods, significantly increasing the number of people in need. For example, in Kandiwal, a village of 300 families in Ghor province, only 15 families had cultivated their crop this year. At least 40 families from there had already moved to Herat, joining at least 2,000 drought-displaced families. In the North and North Eastern regions, only 68% of rain-fed land cultivated last year was cultivated this year and the price of goats is almost two times less compared to the previous year. Approximately 30% of the population of Chakhansoor district, Nimroz, have abandoned their villages because they were unable to meet their basic needs, moving towards the already overpopulated provincial capital of Zaranj, across the border into Iran, or towards Europe, where they face increased protection risks.

National Climate Policies & Strategies

- NDC (2015, updated 2021 draft): Focuses on renewable energy, reforestation, disaster risk reduction, adaptation.

- National Climate Change Strategy and Action Plan (2015-2020).

- NAP (National Adaptation Plan - ongoing, draft stage).

Sectoral policies:

- Agriculture: Climate-smart agriculture (MAIL).
- Energy: Renewable energy plans (solar, hydro, wind).
- Forestry: Community-based forest management.
- Water: Integrated water management.

Akam Climate

National Climate Policies & Strategies

An enabling operating environment is required in order to respond effectively to the immediate and long-term needs of drought-affected communities. Humanitarian access continues to be an issue in many provinces of Afghanistan. All actors, including Non-State Armed Groups (NSAGs), must facilitate safe and unhindered access to communities affected by the drought. In addition, NGOs currently face a number of bureaucratic constraints in the implementation of their response to ongoing needs in Afghanistan resulting from conflict, displacement and natural disasters. In particular, the complexity of the current MOU process leads to significant delays in the implementation of current programmes. Given the critical situation, humanitarian actors should be exempt from this process in adherence to article 23 of the NGO law, to operate in lieu of a MOU when a humanitarian crisis such as drought requires immediate, independent, and effective response.

Implementation & Financing

Finance Mechanisms:

- Green Climate Fund (few small projects approved).
- UNDP and FAO-supported programs.
- Limited national budget allocation.

Implementation Arrangements:

- Weak institutional capacity.
- Dependence on international donors.

Partnerships: UNEP, UNDP, FAO, EU-funded projects.
NATIONAL DEVELOPMENT PLANNING The Afghanistan National Peace and Development Framework (ANPDF) is the Government's five-year (2017-2021) strategic framework for reaching stability and self-reliance.

The ANPDF presents the country's immediate and long-term development plans by providing high-level guidance to government and other stakeholders. In addition, the ANPDF highlights Afghanistan's key reforms, outlines priority investments needed to achieve development goals in these critical areas, and sets the economic, political and security context for sustainable development, focusing on agriculture, extractive industries, and trade.

OMLAS/CCADRR and trainings are examples of contribution to capacity building through Akam Climate.

Table 20: Afghanistan's Technological, Capacity-building, and Financial Needs for Climate Change Adaptation[118]			
Action and Planning Needs	**Technology Needs**	**Capacity Building Needs**	**Finance Needs (USD)**
Development and adoption of the Afghanistan Climate Change Strategy and Action Plan.	--	--	Own contribution
Development of a system to monitor and assess vulnerability and adaptation to climate change.	Climate science technology	Climate science institutes with university	0.02 Billion
Identification and mainstreaming of climate change adaptation technologies into the sectoral policies, strategies and development plans, and promotion of regional and international cooperation and coordination for adaptation technology transfer.	Climate policy technologies and methods	Training Afghan climate policy expertsa	0.01 Billion

Strengthen and expand meteorological and hydrological monitoring networks and services, including a national database to archive and store meteorological and hydrological data.	Hydrological, meteorological and data equipment and integrated systems	Operators and analysts for hydrological, meteorological and data integrated systems	0.1 Billion
Development of water resources through rehabilitation and reconstruction of small-, medium-, and large-scale infrastructure.	Improved designs and methodologies for catchment management technology	Ecological engineering and spatial planning for water resources	0.75 Billion
Planning for proper watershed management and promoted through community-based natural resources management.	Full catchment planning technology and models	Practitioners for watershed management	2.5 Billion
Increasing irrigated agricultural land to 3.14 M-ha, through restoration and development of Afghanistan's irrigation systems.	Eco-agriculture and climate friendly irrigation technology transfer to Afghanistan	Vocational and engineering capacity to design, build and maintain climate friendly irrigation networks and local schemes.	4.5 Billion
At least 10% of Afghanistan land area and the habitat of selected species under a system of conservation	Conservation ecology methods and tools	Protected areas and species ecologists, and ecological economists trained and working.	0.3 Billion
Behavioural change and opportunities for provision and development of alternative and renewable energy sources for 25% of the rural population above existing levels (15%), in order to contribute to a reduction in the unsustainable usage of natural resources and decreasing the strong reliance on fossil fuels by rural communities.	Technology transfer of renewable energy and sustainable energy	National centre for sustainable energy strengthened and expanded. Combine public and private competencies.	0.105 Billion
Regeneration of at least 40% of existing degraded forests and rangeland areas (the area covered will be approximately 232,050 ha for forestry; and 5.35 million ha for rangelands).	Forest and rangeland management tools and methods transferred	Practitioners group built in university, government and local delivery levels.	2.5 Billion
TOTAL FINANCIAL RESOURCES NEEDED:			10.79 Billion

Table 21: Climate Change Mitigation Gaps and Barriers and Support Needs[119]

Sector	Technology and Capacity Building Needs	Finance Needs (USD)
Energy Efficiency in Buildings and in Transport Sector	• Carbon finance and project development skills. • Information on available technologies, measures, and financing skills. • Traditional customs and administered pricing. • Building codes, and standards on appliances and equipment. • Clean cooking, heating and power projects.	100 Million/Year
Energy	• Human and institutional capacity for adoption of cleaner technology. • Capital markets that encourage investment in decentralized systems. • Information and intellectual property rights for mitigation technologies. • Renewable energy, entry costs support, access to capital, and subsidies. • Environmental compliance standards (emission and indoor).	188 Million/Year
Waste Management	• Landfill management, decentralised wastewater treatment. • Climate Project development skills.	74 Million/Year
Forests and Rangelands	• Carbon sequestration on forest/rangelands, and forest carbon skills. • Funding institutional capacity to monitor and verify projects. • Better spatial planning for community and production agriculture. • Reduce rural peoples' dependence on fuel for cooking and heating.	100 Million/Year
Industry and Mining	• Cleaner coal mining, leave-it-in-the-ground approaches, combustion, and transportation of minerals. • Hydrocarbon fields management. • Technical industrial capacity to link basic industry and mining private and public sector with climate sector experts.	100 Million/Year
Agriculture and Livestock	• National herd, reduction in fuel used, or cleaner fuel technologies. • South-south collaboration on low-carbon agriculture, study tours. • Funding for R&D activities. • Improved national dataset on agriculture, food security data.	100 Million/Year
TOTAL FINANCIAL RESOURCES NEEDED:		**662.00 Million/ Year**

INSTITUTIONAL ARRANGEMENTS FOR ADDRESSING CLIMATE CHANGE AND DISASTER RISK REDUCTION

Afghanistan is highly prone to natural disasters, and over the last several decades nearly all of the country's 34 provinces have been affected by at least one natural disaster.115 Under conditions of climate change, it is predicted that the incidence of extreme weather events, including heat waves, floods, and droughts, will increase. Similarly, climate change-linked disasters such as glacial lake outburst floods risk becoming more common. Climate change projections also suggest that Afghanistan's vulnerability to natural disasters will be compounded by high population growth that will put increased stress on the natural environment and natural resource base. 51 SECOND NATIONAL COMMUNICATION 2017, In addition to NEPA, which is responsible for the overall governance and management of the country's environmental issues, other key institutions that share responsibility of addressing climate change and hazards risks include: • Afghanistan Meteorological Department (AMD).
Afghanistan National Disaster Management Authority (ANDMA) • Ministry of Agriculture, Irrigation and Livestock (MAIL) • Ministry of Energy and Water (MEW) • Ministry of Rural Development and Reconstruction (MRRD) In addition, the Ministry of Economy (MoE), Ministry of Finance, and Ministry of Foreign Affairs (MoFA) all have key roles in planning, allocation, and securing of resources to address the country's urgent climate change adaptation needs. At the sectoral level, numerous other institutions and stakeholder groups require coordination to address sectoral climate change issues and provide technical guidance and expertise. Numerous institutional arrangements to lead this coordination have already been established in Afghanistan, particularly in the high priority areas of environmental conservation, climate change, and disaster risk reduction.

Table 14: Sectoral Inter-Ministerial Coordination Mechanisms	
Sector/Area	**Inter-ministerial Coordination Mechanisms**
Climate Change Adaptation and Mitigation	1. National Climate Change Committee
Agriculture	1. Agriculture and Rural Development Cluster
	2. Inter-Ministerial Committee on Food Security
	3. Sector-wide Coordination Mechanism in Agriculture
Biodiversity and Ecosystems	1. Committee for Environmental Coordination (CEC)
	2. National Environment Advisory Council (NEAC)
	3. Subnational Environment Advisory Councils (SEACs)
	4. Afghanistan Wildlife Executive Committee (AWEC)
	5. Biodiversity Working Group (BWG)
	6. Parliamentary Committee on the Environment (PCE)
	7. Protected Area Working Group (PAWG)
	8. High Level Commission on Air Pollution Control
	9. Supreme Committee for Environment
	10. Designated National Authority Steering Committee for Clean Development Mechanism
Energy	1. Inter-ministerial Commission for Energy (ICE)
	2. Inter-ministerial Commission for Renewable Energy (ICRE)
Forests and Rangelands	None
Resilience and Disasters	1. The High Commission of Disaster Management (HCDM)
	2. Provincial Disaster Management and Response Committees (PDMCs)
	3. District Disaster Management and Response Committees (DDMCs)
Water	1. Supreme Council for Water Affairs Management (SCWAM)
	2. River Basin Councils and Sub-basin Councils
	3. Water User Associations
	4. High Council on Water and Land

Table 15: Sectoral Legislation, Policies, and Planning on Sustainable Development and Environmental Protection		
Sector/Area	**National Legislation, Policies, and Planning**	
Climate Change Adaptation and Mitigation	Law	None
	Framework	None
	Strategy	Afghanistan Climate Change Strategy and Action Plan
	Policy	None
	Plan	National Adaptation Plan
	Other	Nationally Determined Contribution
Agriculture	Law	Rangeland Law (O.G. 795)
		Improved Seed Law (O.G. 1005)
		Agriculture Cooperative Law (O.G. 958)
		Agricultural Pesticide Law (O.G. 1229)
		Land Management Law (O.G. 958)
		Law of Land Survey, Verification and Registration (O.G. 346)
		Law on Land Expropriation (O.G 794)
		Veterinary Services Law (O.G. 1229)
		Law on Food Security (O.G. 1222)
	Framework	National Agriculture Development Framework (NADF)
	Strategy	None
	Policy	None
	Plan	None
	Other	Wheat Strategy Regulation (O.G. 998)
		Regulation on Grains and Root Crops Reserve (O.G. 998)
		Regulation on Imports, Distribution and Application of Pesticides (O.G. 795)

NATIONAL LEGISLATION, POLICIES, AND PLANNING ON SUSTAINABLE DEVELOPMENT AND ENVIRONMENTAL PROTECTION

In striving for sustainable and environmentally sound development, Afghanistan has developed and enacted a number of pieces of legislature, policy, and approaches to address key sectors. Although the country is still developing its legislative and governance documents for climate change, the following table summarizes the existing legislature and government planning from key sectors and areas that are of significance to climate change.

MAINSTREAMING CLIMATE CHANGE INTO ENVIRONMENTAL AND SECTORAL DEVELOPMENT POLICIES

The many uncertain effects of climate change pose significant risks for sustainable development and require coordinated action across numerous sectors to ensure that development progress is not undermined. Afghanistan is already highly vulnerable to natural hazards, and a changing climate is likely to exacerbate their impacts unless measures are taken to increase the country's adaptive capacity. In the long term, for climate change adaptation to be effective, it must be supported by an integrated and cross-cutting policy approach that mainstreams climate change into national development planning.

Key Gaps & Challenges

- Policy coherence: Lack of coordination among ministries.•Implementation: Political instability, lack of enforcement, donor dependency.
- Data & Monitoring: Weak research institutions, no reliable climate data.
- Capacity: Limited trained staff at institutional and provincial levels.
- Social challenge: Low community awareness about climate change impacts.

Opportunities & Recommendations

- Align policies with Paris Agreement goals.
- Strengthen institutional capacity (NEPA, MAIL, academia).
- Improve data collection (weather stations, research networks).
- Community engagement: Expand awareness, education, and local resilience projects.
- Climate finance: Advocate for more access to global funds.
- Regional cooperation: Leverage SAARC, ECO for adaptation and DRR.
- Increase investments in long-term solutions and comprehensive development efforts, including reforestation to protect slopes, conserve soil, protect riverbanks to reduce erosion and loss of arable land - Complex problems require systematic, comprehensive, knowledge-based, and sustainable interventions
- Increase cooperation between academia, governance structures, and farmers to promote practical and applicable knowledge-based solutions, including action research and other participatory research approaches and development of school curricula on climate change to inform, mobilize, and empower children and youth
- Humanitarian and Development actors must work together to produce a comprehensive, protection sensitive response strategy to the drought, in both areas of displacement and origin, to respond to the emergency and to support early return and recovery, as well as resilience-building, to be integrated into the multi-year HRP update this year. Donor resources must be made available accordingly.
- Protection risks must be adequately analysed and responded to, through both host and displaced community participation, to prevent recourse into harmful coping strategies, including resorting to irregular immigration into Iran and beyond

- Cluster Lead Agencies must demonstrate greater leadership, particularly at a field level, to take prompt action by better coordinating responses and more clearly understanding needs, and effectively dealing with potential obstruction from local and national stakeholders
- Develop comprehensive policies on NRM, environmental protection, and effective systems for climate change adaptation and mitigation
- Increase invest in protective and productive infrastructure, including comprehensive water-shed management systems - Ensure sustainability through establishment and support for grassroots NRM and DRR committees
- Invest in post-harvest infrastructure to increase income for farmers, reduce food insecurity levels, and reduce food waste
- Train farmers in climate smart agriculture, including drip-irrigation and other water saving technologies - Ensure that new and innovative approaches are anchored in Universities and Agriculture TVET Schools = Institutionalize innovation
- Introduce drought resistant crops to increase yields while reducing water consumption and work towards changing food habits (e.g., increase pulse, soy, and other plant-based protein sources) and reduce the reliance on wheat
- Explore funding options through educational institution, NGOs, international bodies, or private organizations to conduct scientific research to understand the problems and propose practical, affordable, and sustainable solutions Main recommendations

Akam Climate

Thank You

Key message:
Afghanistan contributes little to global emissions but suffers disproportionately — urgent need for climate justice and resilience.

Protect Today, Sustain Tomorrow