

climate change adaptations needs.

- To facilitate education and training of future scientists in agriculture sector and climate change adaptation.
- To serve as a bridge among multiple sub sectors of agriculture and other relevant government, non-government and private sectors for enhanced coordination.
- To establish regional and global linkages for appropriate climate research and development collaborations.
- To create learning and knowledge / experience sharing opportunities in climate change adaptation for researchers, faculty, officials, students, farmers and other stakeholders.

Key Accomplishments and Ongoing Projects

To realize its objectives, major endeavors of CCC include:

- Formation & capacity building of the Expert Group on Adaptation Planning (PAGE) at UAP.
- Simulation of district wise rain fall and temperature scenarios.
- Documentation of farmers' experiences and perceptions of climate change and community based adaptation strategies.
- Forecasting possible impacts of climate change on environmental services and farming systems.
- Research trials and studies on key crops grown under different agro-climatic zones of Khyber Pakhtunkhwa Province.
- Simulation of climate corridors for key crops to be manipulated in strategic adaptation plans.
- Learning and knowledge sharing events i.e. workshops, seminars and national conferences on climate change themes.
- Financial and technical support to PhD research in agriculture sector, climate change adaptation.
- Launching of post graduate degree programmes.
- Capacity building of faculty, students and staff in agriculture sector climate change adaptation.
- Involvement of PhD and MS Students in research trials and studies.
- Exposure / Exchange visits of management, faculty and staff aiming at knowledge and skills enhancement, sharing of expertise and exchange of modalities, techniques and technology.
- Knowledge dissemination; publications of research trials / studies, climate scenarios and advisories, through knowledge centre at CCC and its website.
- Collaborations with national and international organizations for joint climate change adaptation and mitigation initiatives.



CLIMATE CHANGE CENTRE
THE UNIVERSITY OF AGRICULTURE
PESHAWAR - PAKISTAN



Adaptation to Climate Change in 21st Century

Contact

CLIMATE CHANGE CENTRE (CCC)

The University of Agriculture, Peshawar-Pakistan

Phone: +92 91 9221054, Fax: +92 91 9221262, Email: ccc@aup.edu.pk



Leader in Career & Society Building



Leader in Career & Society Building

**The University of Agriculture,
Peshawar-Pakistan**

Tel: +92-91-9221054, Fax: +92-91-9221262
Email: ccc@aup.edu.pk, Web: www.aup.edu.pk

Climate Change - Threats and Opportunities

Climate changes are defining human development challenges of our time. The earth's climate is changing in ways that affect weather systems, patterns of snow, rainfall, storms and agro-eco systems. Extremes in climate variations are increasing and threaten the security of our livelihoods' assets. Long-term changes result in both creating opportunities for and threats to crops and farming systems whereas, changes in the timing, amount of rains and streams flow affect farm production. Therefore, it is important to learn to live with these changes, make use of the opportunities and cope with the threats to prevent losses.



Genesis of the Climate Change Centre (CCC)

It is unequivocal that climate is changing and is creating new challenges, risks and opportunities in the field of food production. Yet, what to do to be able to live with these changes to ensure food security and local resilience? Where should the farmers, researchers and extension agents look to for seeking the right guidance for timely adaptation? The CCC has emerged from an on going dialogue around these questions among multi-stakeholders which concluded that there was no institutional facility in the country that provided services on options to deal with adaptation needs arriving from the climate change. The University of Agriculture, Peshawar (UAP) and Helvetas Swiss Intercooperation (HSI) Pakistan together agreed to establish a Centre at the University. This consensus was based on the premise that the University is rightly placed to mainstream climate change in research and education as well as coordinate efforts to act as a knowledge repository on main streaming adaptation in agriculture sector. However, the centre is not limited to this. It also offers post graduate degree programmes and serves as a service hub to find solutions and build capacity for adaptation to the unprecedented changes in the climate. This initiative is to prepare the University and other relevant institutions to offer needed support in preparing stakeholders to deal with impacts of these changes. Acknowledging its importance, the Government of Khyber Pakhtunkhwa, Pakistan has approved a developmental project for strengthening of the CCC.



Role of the Climate Change Centre

Khyber Pakhtunkhwa is sheltering a population of more than 20 million people. The major portion of this population is dwelling in rural areas and depend on farming for their livelihoods. Along with crop production and horticulture, livestock farming is also a dominant occupation of the rural communities, particularly by women. Changes in temperatures and uncertain hydrological patterns are expected to affect food security and access to water in this highly diverse and ecologically fragile Province. Farmers are mainly confronted with these changes and need to be supported in finding and developing adequate responses to these new challenges for ensuring their food security and resilience to weather extremes.

There is a need to ensure access to existing knowledge and to prioritize research agenda in tune with the challenges and to devise a system that can deliver information to policy/strategic decision makers and to the farming community for appropriate action. Along with its research and education programmes, the CCC supports farmers to voice their observations and concerns and to have access to the relevant information and adaptation techniques. It facilitates researchers at UAP and private sector actors to have an access to existing knowledge from the region and to mainstream climate sensitive research in natural resource management. The CCC takes part in specific studies and analysis to contribute to policy/strategy dialogue to formulate policies and programmes that envisage adaptation to climate change. The CCC, through its knowledge management and outreach initiatives, is striving hard to enhance awareness among stakeholders including various wings of Agriculture Department and farming community about climate change, its possible impacts on natural resources and farming systems and workable adaptation measures. The centre plays a coordinating role among stakeholders for reciprocal communication and synergies in respect of adaptation to climate change. It also provides services to other actors of public and private sector in climate change research and planning.



Objectives of the Climate Change Centre

Of all adaptation needs, the agriculture sector has to prepare itself most for coping with climate change since food crops are highly sensitive even to little change in temperature and rainfall conditions. For this purpose the sector has to benefit from local and global knowledge and to develop relevant technologies for timely adaptation to the changing climatic scenario. Given this background, key objectives of the CCC are:

- To establish a system of information provision and advisory on climate change adaptation accessible to organizations engaged in agriculture related activities (including farmers' corporates / platforms).
 - To serve as knowledge resource repository focusing on climate change adaptation in order to provide cutting edge information on climate change adaptation.
- To sensitize and enhance capacities of the relevant departments (including applied research and outreach) to enrich their teaching, research and development agenda for addressing / linking with