

## **Research and Systematic Observation (SBSTA)**

The Government of Pakistan recognizes the importance of research and development in the field of climate change, which is impacting the lives of more than 170 million population. The Government in 2002 established Global Change Impact Studies Centre (GCISC) as a dedicated Centre for Climate Change research and providing assistance to national planners & policy makers for strategic planning in the wake of climate change. Since that time the GCISC has focused on the following:

- Climate Scenarios for Pakistan
- Impacts on Water Resources
- Impacts on Food Security
- Adaptation Measures

The on-going research activities of GCISC are based on the following:

- Dynamical downscaling of GCM scenarios using Regional Climate Models;
- Development of climate extreme indices for the South Asia region together with predictability of extreme events;
- Development of seasonal, inter-annual and decadal predictability systems.
- Prediction of crop yields under various climatic conditions, using Crop Growth Simulation Models;
- Assessment of Food Security and Water Security in Pakistan under Climate Change scenarios;
- Analysis of past hydro-meteorological data;
- Development of capacity to monitor temporal changes in Karakoram glaciers;
- Application of watershed models to simulate the flows of major rivers in Pakistan and to assess the impact of CC on their flows;
- Assessment of CC impacts on glaciers and river flows.
- Development of GHG inventory for Pakistan

The aforementioned research activities are not only shared with all stakeholders in Pakistan through seminars and conferences but are also taken to the grass roots level through various NGOs in the form of dissemination products in local languages. Moreover, the Government is encouraging initiatives for cross learning and exchange of information through visits and participation of the relevant scientists/researchers to present their findings and reports in seminars, conferences and workshops within the country and abroad.