

HighNoon

**Adaptation to Changing
Water Resources Availability
in Northern India with
respect to Himalayan Glacier
Retreat and Changing
Monsoon Pattern**

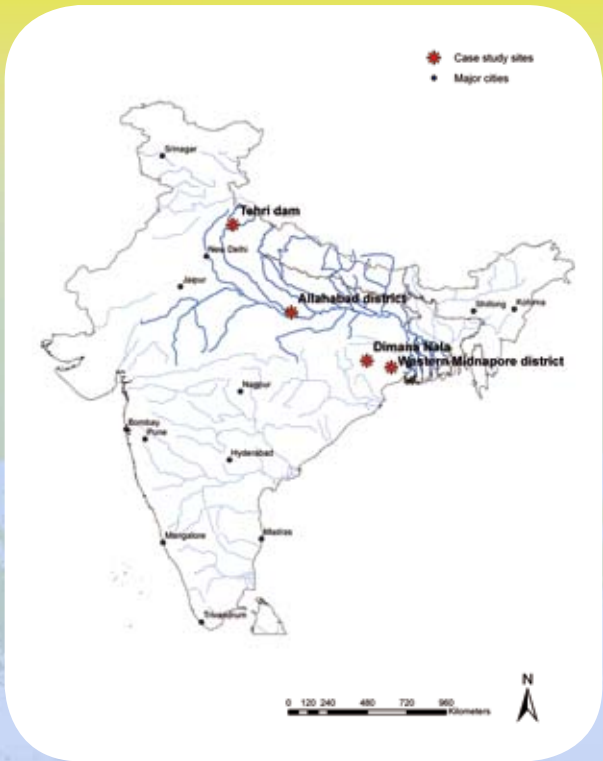


HighNoon brings together the critical mass of scientific leading institutions in the fields of climatology, hydrology and glaciology, socio-economy and environmental sciences.

Consortium Partners

- Alterra - Wageningen UR (NL, coordination)
- The Energy and Resources Institute (India)
- Met Office (UK)
- University of Salford (UK)
- Indian Institute of Technology Delhi, India
- University of Geneva (CH)
- Max-Planck Institute for Meteorology, Hamburg (D)
- Indian Institute of Technology, Kharagpur (India)
- Nagoya University (Japan)





Water Resources Availability with Increasing Water Stress

- On the short term: discharge of rivers in the North will increase due to the melting of snow and glaciers
- On the long term: glaciers will have melted for a great part and their contribution to river flow will greatly decrease

HighNoon will focus on three Case Study Areas in Northern India and aims at

- integrating available climate and hydrological data and state-of-the-art regional models
- studying changes under various climate change scenarios and analyse consequential impacts on water resources in general and on changes in glacier melting and changed spatio-temporal monsoon patterns in particular
- determining socio-economic scenarios and reliable boundary conditions in the case-study areas for planning of adaptation measures
- understanding the current coping strategies in place covering upstream, mid-stream and downstream sites
- developing a stakeholder driven applicable and cross-sectoral plan for action for adaptation measures in the fields of water supply, agriculture, energy and health
- estimating the cost effectiveness of the various measures proposed
- understanding the cross-sector interaction of measures and their cross-category impact on water quantity, water quality, socio-economy and adaptive capacity

Expected Impacts of the HighNoon Project

- identify and quantify issues related to changing water resources availability in northern India with Himalayan glacier retreat and changing monsoon pattern at present and in the future
- provide policy makers, water managers and water users in the Ganga river basin with applicable instruments to cope with current and potential future water-related problems





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