High-End cLimate Impact eXtremes

http://helixclimate.eu

Climate change is a reality now and being demonstrated across the globe through various climatic events. Warming up of our earth with the gradual increase of temperature as forecasted by the scientific community is no longer a myth. Climate change beyond 2°C, 4°C and 6°C would impact severely as a result of "extreme" events to be occurred in upcoming years. To address this problem, an initiative has been taken through the project "HELIX". The High-End cLimate Impacts and eXtremes (HELIX) is a collaborative project funded by European Union, and started in November 2013, with sixteen participating institutions led by the Exeter University, UK. Assessment of climate change impacts as a result of 2°C, 4°C and 6°C warming of the world will be conducted in HELIX on a global scale under a range of physical and socio-economic conditions with the consideration of different adaptations scenarios. As a partner of HELIX, BUET will focus on South Asia (case study: Bangladesh) for the apprehended implications of higher-end scenarios beyond 2°C, 4°C and 6°C warming of the world upon different bio-physical systems of the country like agriculture, water resources, ecology, infrastructure, health, etc. and socio-economic impact.

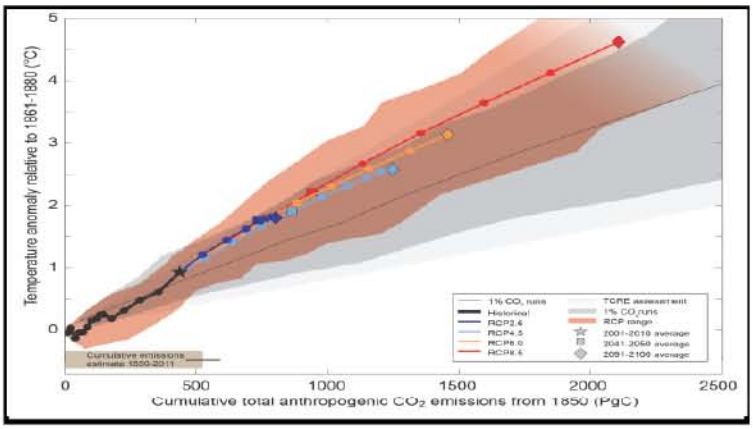
Goals & Objectives

HELIX's overarching focus is to assess climate change impacts through excellent research and stakeholder engagements under a world of 2°C, 4°C and 6°C. HELIX will develop a set of eight coherent global high end scenarios achieved at different rates and different pathways of adaptations by the society. Three regions are to be focused in details: Europe, East Africa and the north-East Indian sub-continent. All will be supported with a comprehensive analysis of confidence and uncertainty. Research focus of HELIX is on land and coastal impacts and their consequences for food, water and energy security; flooding, infrastructure, ecosystems, health, migration, and risk of conflict. It will carry out research for -

- Developing global scenarios of the combined natural and human world at 4 degrees + Celsius warming, with and without society pro-actively undertaking adaptation
- Developing and analysing global scenarios of the world at 6 degrees + Celsius by 2100
- Devising detailed case studies for Europe, northern sub-Saharan Africa and South Asia
- Describing reliable assessments of confidence in the scenarios
- Ensuring our research addresses the needs of decision-makers

Institute of Water and Flood Management (IWFM)
Bangladesh University of Engineering and Techonology (BUET)

"At HELIX we are assisting decision-makers and the research community in making adaptation to our changing climate more understandable and manageable by providing a set of credible, coherent, global and regional views of different worlds at 2, 4 and 6°C, further focusing on Northern Sub-Saharan Africa, South Asia and Europe."



HELIX in Bangladesh

In Bangladesh, this project will focus primarily on the possible impacts on high-end climate scenarios on various sectors, such as, agriculture, water resources, ecosystems and health. HELIX will also assess the possible changes of natural disasters like floods and droughts etc. Adaptation framework will be developed for the extreme climatic conditions in the future in different geographic locations of Bangladesh. HELIX will communicate major research outcomes to the research community, policy community and wider stakeholder user community.

Project Partners

- University of Exeter, UK
- Met Office, UK
- Tyndall Centre, University of East Anglia, UK
- Free University Amsterdam, Netherlands
- Joint Research Centre, EU (Spain & Italy)
- World Food Programme, UN (Italy)
- University of Liege, Belgium
- Institute Pierre-Simon Laplace, France
- Swedish Meteorological and Hydrological Institute, Sweden
- Potsdam Institute for Climate Impact Research, Germany
- University College London, UK
- Technical University of Crete, Greece
- IGAD Centre for Climate Prediction and Application, Kenya
- Indian Institute of Technology, Delhi, India
- National Agency for Civil Aviation and Meteorology, Senegal

Research Team

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This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 603864.