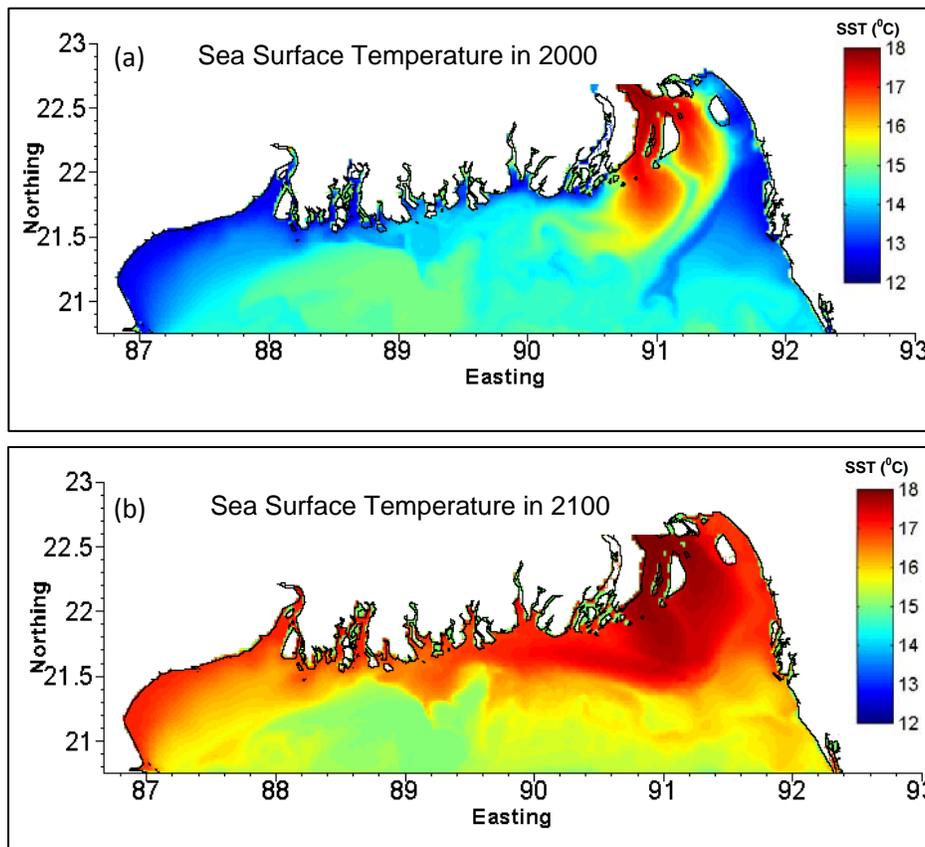


**Government of the People's Republic of Bangladesh
Ministry of Environment and Forest
Bangladesh Climate Change Trust**

**INSTITUTIONAL STRENGTHENING OF CLIMATE CHANGE STUDY
CELL AT BUET FOR KNOWLEDGE GENERATION AND HUMAN
RESOURCE DEVELOPMENT**



Final Report

August 2013



Climate Change Study Cell

Bangladesh University of Engineering and Technology (BUET)

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Preface

There is now scientific evidence that climate changes have affected the physical, biological and human systems. The Intergovernmental Panel on Climate Change (IPCC) in their Fourth Assessment recognized observed changes in many natural systems of every continent and most oceans due to regional climate changes, particularly temperature increase. The observed changes have occurred in different sectors and systems including hydrology, water resources, coastal zones, ecosystems, agriculture, forestry, health systems and socio-economic activities. Peak discharge is occurring earlier in rivers affected by snow melt. Lakes and rivers around the world are warming, with effects on thermal structure and water quality. Sea-level rise and man-made interventions are together contributing to losses of coastal wetlands and mangroves, and increasing damage from coastal flooding in many areas. Both terrestrial and marine biological systems are being strongly influenced by recent warming. Both agriculture and forestry have shown vulnerability to recent trends in heat waves, droughts and floods. Health system is affected due to recent warming, climate variability and changes. The impacts of climate changes on different systems and sectors are emerging. Several factors such as geography, high-density population, poor economy, illiteracy etc. have made Bangladesh one of the countries most vulnerable to climate change effects.

The purpose of the proposed project is to strengthen the activities of the Climate Change Study Cell (CCSC) which was established at Bangladesh University of Engineering and Technology (BUET) in 2007. Climate risks now need to be integrated into national development programs and strategies. Strengthening the capacity of the Climate Change Study Cell at BUET will help increase skills and awareness of professionals, educators, researchers, policymakers and planners working on potential impacts of climate change in different sectors. Knowledge generated through research activities and climate modeling will help take adaptation measures into national policy and planning processes.

This final report presents the major findings of ten separate research studies carried out by BUET under Institutional Strengthening of Climate Change Study Cell at BUET for Knowledge Generation and Human Resource Development and funded by the Bangladesh Climate Change Trust (BCCT) of the Ministry of Environment and Forest of the Government of Bangladesh. This project has been started from June 2010 and completed by May 2013.

We are grateful to the Ministry of Environment and Forest of the Government of Bangladesh for providing financial support to carry out this research. We would also like to express our sincere gratitude to all the investigators who have worked hard to make this project a success. We acknowledge Mr. Tarun Kumar Sarker for providing assistance to the project.

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