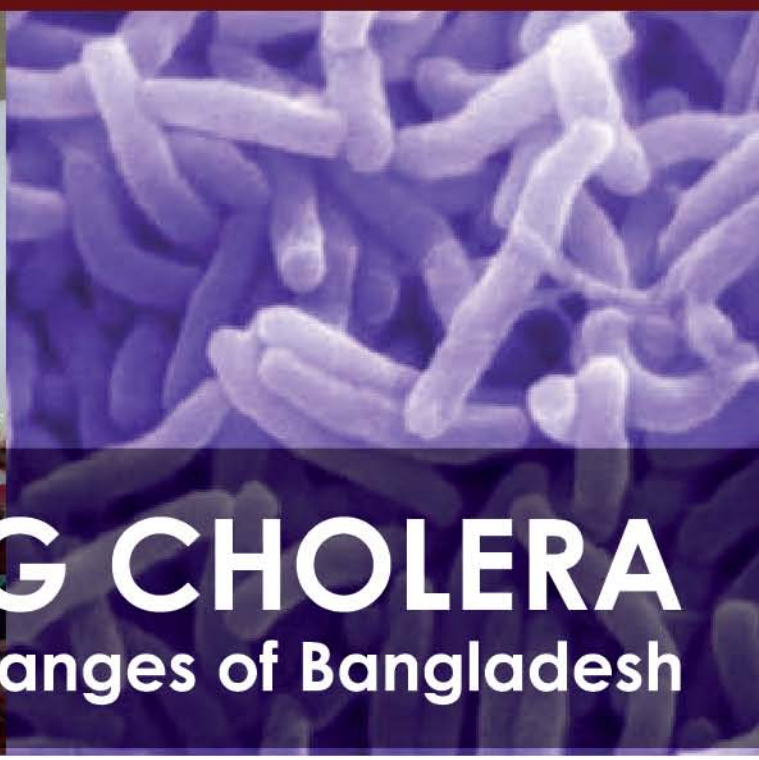


COMBATING CHOLERA

caused by Climate changes of Bangladesh

Bangladesh is one of the most hazard prone countries in the world and is expected to be one of the worst affected by climate change. Every year, extreme weather events such as flooding, droughts and cyclones have devastating effects by negatively impacting water quality, quantity, and sanitation infrastructure. As extreme weather events continue to increase as a result of climate change, Bangladesh faces a multitude of adverse health, economic, and livelihood consequences. Among the projected adverse climate change related effects in Bangladesh are altered patterns of cholera transmission. Cholera has been endemic in Bangladesh for more than 2000 years and is associated with water quality and poor sanitation, as well as a number of environmental factors such as increased temperatures and salinity of surface water. Consequently, cholera incidence is expected to rise because of both environmental responses to climate change and less water availability for households. However, our understanding on how climate change impacts cholera transmission and how to mitigate this impact is incomplete. By focusing on water quantity and hygiene, this study will apply a new, innovative multi-disciplinary methodology to understand the changing climate's effect on cholera transmission by identifying the relative risk of environmental, behavioural, and water resource management factors. This project will investigate how the risk patterns change due to extreme weather events and community adaptive capacities which help reduce the risk of cholera infection.

http://cope.ku.dk/research/cholera/

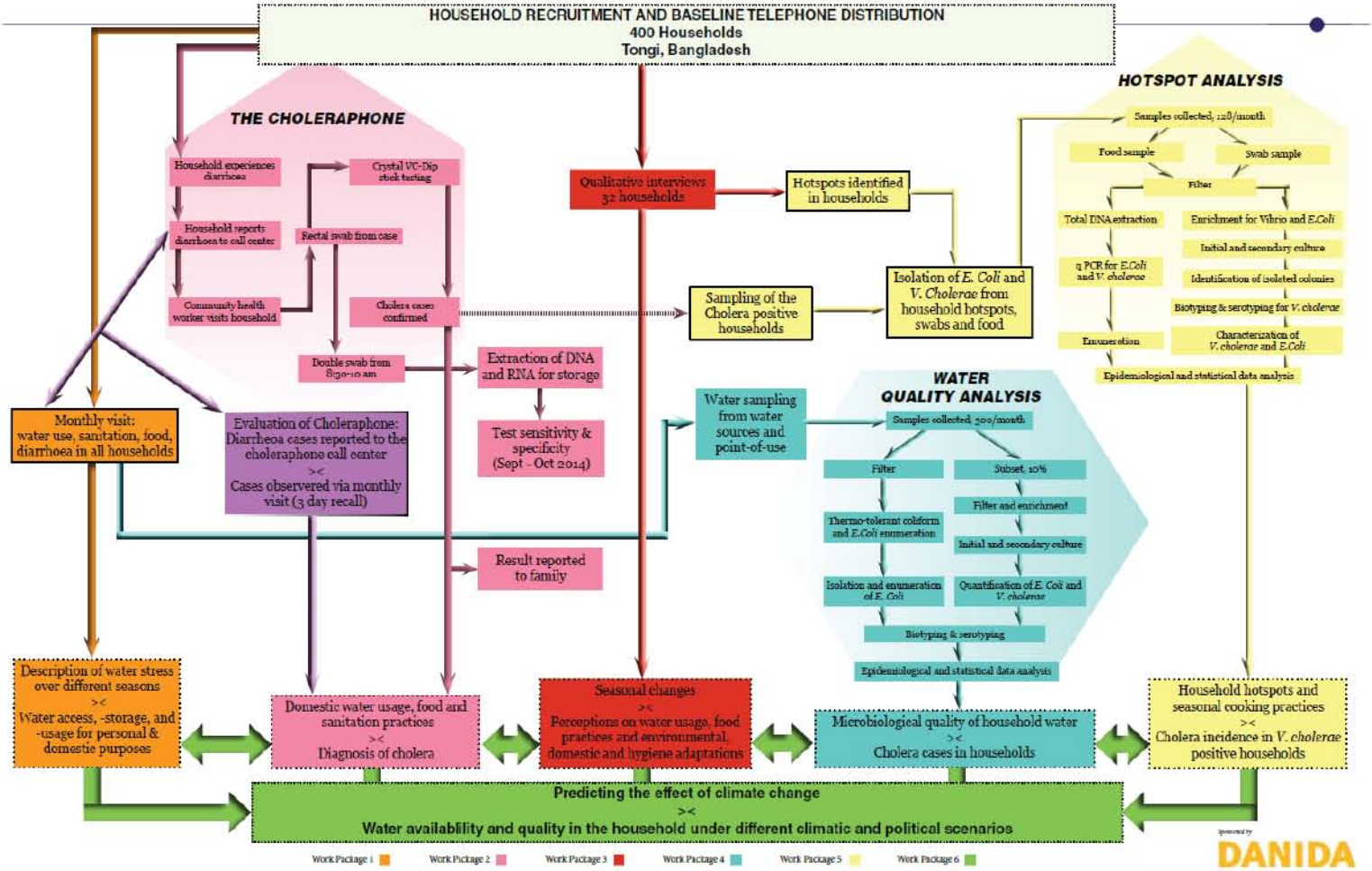
Goals & Objectives

The overall project aim is to evaluate the risk attributable to climate change-induced water stress on cholera transmission in Bangladesh. The immediate aims are:

• To analyse the availability, quality, use and perception of domestic water in households under seasonal climate variability.

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

Combating Cholera Caused by Climate Change (C_5)



- To examine the relationship between seasonal climate fluctuations and resilience to water stress including changes of patterns of water use, food practices and environmental, domestic and personal hygiene adaptations.
- To describe water use and environmental, domestic and personal hygiene risk factors of cholera infections.
- To determine the microbiological contamination of potential water and food related risk factors identified as being important for cholera transmission.
- To predict the contributable risk that climate change will have on water availability and quality in the household under different climactic and political scenarios.
- To build capacity in Bangladesh through communication, collaboration, education and dissemination of results on the interactions between climate change, resilience, cholera prevalence, household water use and food and hygiene practices.

Project Partners

- University of Copenhagen
- University of Dhaka
- International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B)

Research Team

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