Abstract:

Although several studies show the vulnerability of human health to climate change, a clear comprehensive quantification of the increased health risks attributable to climate change is lacking. Even more complicated are assessments of adaptation measures for this sector. We discuss the impact of climate change on diarrhoea as a representative of a waterborne infectious disease affecting human health in the Ganges basin of northern India. A conceptual framework is presented for climate exposure response relationships based on studies from different countries, as empirical studies and appropriate epidemiological data sets for India are lacking. Four climate variables are included: temperature, increased/extreme precipitation, decreased precipitation/droughts and relative humidity. Applying the conceptual framework to the latest regional climate projections for northern India shows increases between present and future (2040s), varying spatially from no change to an increase of 21% in diarrhoea incidences, with 13.1% increase on average for the Ganges basin. We discuss three types of measures against diarrhoeal disease: reactive actions, preventive actions and national policy options. Preventive actions have the potential to counterbalance this expected increase. However, given the limited progress in reducing incidences over the past decade consorted actions and effective implementation and integration of existing policies are needed.

Source: [http://dx.doi.org/10.1016/j.scitotenv.2013.07.021](http://dx.doi.org/10.1016/j.scitotenv.2013.07.021)
Other Geographical Feature: sub-tropical

Geographic Location: resource focuses on specific location
Non-United States

Non-United States: Asia

Health Impact: specification of health effect or disease related to climate change exposure
Infectious Disease

Infectious Disease: Waterborne Disease

Waterborne Disease: Other Diarrheal Disease, Unspecified

Model/Methodology: type of model used or methodology development is a focus of resource
Outcome Change Prediction

Resource Type: format or standard characteristic of resource
Research Article

Cross-cutting Themes: Adaptation

Timescale: Long-Term (>10 years)