

## Climate change induced natural disasters impact on the health of the coastal people in Bangladesh

Russell Kabir<sup>1</sup>, Hafiz T. A. Khan<sup>2</sup>

<sup>1</sup>Senior Lecturer, Department for Allied and Public Health, Faculty of Medical Sciences, Anglia Ruskin University, Chelmsford, Essex, UK

<sup>2</sup>Reader, School of Health Sciences, Faculty of Health, Education and Life Sciences, Birmingham City University, Birmingham, UK

\* Corresponding author: Russell Kabir, Senior Lecturer, Department for Allied and Public Health, Faculty of Medical Sciences, Anglia Ruskin University, Chelmsford, Essex, UK, Email: [russell.kabir@anglia.ac.uk](mailto:russell.kabir@anglia.ac.uk)

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Recently climate change is threatening human existence on the earth. Changes in climatic pattern and increase frequency of natural disaster events are causing havoc to human health. The major health threats due to climate change are caused by changing patterns of disease, water and food insecurity, vulnerable shelter and human settlements and population growth and migration. Climate plays an important role in the seasonal pattern or temporal distribution of malaria, dengue, tick-borne diseases, cholera and other diarrhoeal diseases. It has been anticipated that the combination of higher temperature and potential increase in summer precipitation may cause the spread of many infectious diseases (Patz *et al*, 2003). Climate change will increase the risk of infant and maternal mortality, birth complications and poorer reproductive health especially in developing countries. Thus climate change will have substantial impact on the health and survival of next generations among challenged populations (Rylander *et al*, 2013). Climate change is also responsible for dehydration, malnutrition and heat related morbidity among children and older people (Rahman, 2008).

Climate change is undeniable, has been a reality and its devastating impact is evident all over the world, particularly in the poor developing countries like Bangladesh. Bangladesh is considered as one of the high-risk countries to climate change due to its geographical location, topography, population density, poverty and lesser adaptive capacity to climate change. Bangladesh struggles to overcome under-development and poverty; she faces the additional challenges of climate change. It is an irony that Bangladesh will be worst victim of climate change even though she had no role of causing it.

Recent evidences show that climate change is responsible for the frequency of natural disasters and climatic events like cyclone, earthquakes, floods, riverbank erosion, sea level rise and salinity over the coastal areas of Bangladesh (Kabir *et al*, 2014). The coastal part of the country is the most vulnerable due to its unique geographic location, dominance of floodplains, low elevation from the sea, high population density and high levels of poverty. The coastal people in Bangladesh are still living under poverty line. Climate change induced natural disasters will aggravate the situation of poverty by causing havoc to the life and livelihoods of the coastal people. Wind direction, precipitation, river and terrestrial runoff along with the wide and open coast, strong current and wind, dynamics of erosion and siltation and salinity intrusion etc. are the salient features behind the natural disasters. Rain and tidal surges causes havoc to lives and property in the cyclone path and the environment in the affected area.

The major aftermaths of climate induced natural disasters are loss of human lives, livestock's, fishes, agricultural properties and production, inundation of land and ponds by saline water, damage to the households', breakdown of the sanitation system and lack of pure drinking water and foodstuff. Climate change affects decreases the agricultural productions thus costal people are suffering due to unwarranted changes in the ecosystem in the area. Due to disaster, poor people suffer from malnutrition as they fail to procure food. Increasingly saline drinking water may result acute health hazards and may displace hundreds of thousands of people from the coastal region. The coastal communities of Bangladesh are drinking and cooking with high sodium water and thus being vulnerable to developing hypertension and its associated risk of cardiovascular diseases. Climate change affects both men and women but the impact is felt more by the women in in disadvantaged areas (Kabir *et al*, 2016).

Children, elderly and women are highly vulnerable due to adverse effects of climate change impacts. Coastal people are suffering different health hazards due to changes in seasonal pattern. The prevalence of diarrhoea, skin diseases, dengue fever, hepatitis (jaundice) and other infectious diseases has increased Water borne and food borne infections are very common after the climate induced disasters and the main sources of these infectious diseases are polluted and high salinity of water, unhealthy sanitation, unclean environment, unhygienic food and vector borne insects (Kabir *et al*, 2014). Availability of underground safe water has also decreased due to the changing in the climatic pattern. Due to dislocation and displacement due to climate induced natural disasters, the coastal people lose their jobs, which push them into serious food insecurity that ultimately leads to malnutrition.

Overall, climate change is bringing more worry for the people of Bangladesh, more adaptive and mitigation measures like climate change and adaptation information dissemination to vulnerable population, capacity building programme and more health awareness programmes should be taken to reduce people's vulnerability to climate change induced natural disasters.

### **Competing Interests**

The authors declared that there are no potential competing interests with respect to the research, authorship and/or publication of this paper.

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