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## **Households' Perception and Coping Strategies for the Effect of Climate Change on Health**

Promotionsfach: **Public Health**

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Bangladesh's vulnerability to climate change has been recognized in global media accounts: it has been referenced in United Nations reports, has made headlines in national and international reports, and has been the center of concern in many journal articles. The impending effects of climate change with potentially devastating consequences also have drawn the highest attention at the global, national and regional levels over the past decades. Climate change and its negative effect on humans is one of the greatest challenges for the global community. Among the many challenges faced by the people of Bangladesh, the effects of climate change are discernibly threatening, impacting human settlement, agricultural production, economic development, and human health. Though these effects of climate change render many people highly vulnerable, little is known about how households in rural areas perceive these changes in climate.

Climate change has been identified as one of the major threats to human health of this century because of its potential effects on vector or water-borne diseases, cold spells, extreme heat, food and water scarcity and extreme climate variability and population displacement. The majority of such health problems is especially unfavorable for vulnerable population and may increase global health disparities. The World Health Organization anticipates that climate change will cause abrupt and severe storms, floods and heat waves in the coming years, and this will affect the most fundamental determinants of health. In Bangladesh, where a large proportion of the population is vulnerable to climate change, health impacts are expected to take place through a variety of ways, including an increase in water and vector borne diseases and in health problems in general. For example, southern Bangladesh is in a low-lying delta, making it vulnerable to sea level rise, severe storm-surges, floods and salinity intrusion. Almost every household in the three southern districts of Bangladesh was severely affected by cyclone "Aila" in 2009. Projected extreme climatic events such as droughts, cyclones, floods, tidal-surges, heat waves, and cold spells, directly and indirectly affecting major determinants of health and increasing the occurrence of disease and sickness. Although climate change poses a severe threat to human health, it has received relatively little attention among scientists and policy makers. Therefore, the objectives of the study were to know how people in rural areas perceive climate change, as well as to know what people do to cope with climate-sensitive diseases and sickness.

For this study, household perception of climate change and health coping strategies of climate vulnerable people were assessed by using a mixed method research design, as described in the literature. Concurrent triangulation method was used, in which qualitative and quantitative approaches were used to explore the

perception of climate change and health coping strategies in a broader manner and to increase the generalizability of findings.

Study participants had clear perceptions about the changes in heat, cold and rainfall that had occurred over the last five to ten years. Local perceptions of climate change included increased heat, overall warmer winters, reduced rainfall and fewer floods. They also perceived that the effects of the changes in climate and variability were mostly negative on means of living, human health, agriculture and overall livelihoods. Community members described how every aspect of their lives was affected by the changing and erratic patterns of heat, cold and rainfall. Most local perceptions of climate change and variability were consistent with the scientific evidence regarding the vulnerability of Bangladesh to climate change. Participants also linked climate change to current problems and identified important future threats to themselves, their families and their livelihoods.

People in the two rural communities included in this study were concerned about climate variability-induced diseases and sickness and sought preventive as well as curative measures to cope with health problems. Every respondent used traditional knowledge and locally known health care practices to cope with climate-sensitive health problems. Seeking health care from unqualified private providers was the most commonly sought service to treat sicknesses and illnesses brought on by climate variability. Public health care facilities at the community level are not used by respondents to cope with these health problems. Individual family spending to cope with such health problems is high and health care is solely based on OOP payment. Most respondents had to depend on their available family assets as well as their “social capital” to cope with climate-related health problems. There is no fund pooling and no community funding or health insurance program in the study areas to support the overall health coping of climate-vulnerable people. Initiatives and strong advocacies are needed from the government, NGOs and development partners to improve the health coping options for people vulnerable to climate change in rural areas. They also need to set measures, to reduce OOP payments and high health care costs and to improve the health services at public and private levels. Such measures are necessary for helping people vulnerable to climate change in resource poor settings to cope with additional climate variability-induced health problems. Coping with climate-related health problems at the village level is mostly an individual’s responsibility, that is, dependent on unqualified treatments at high prices. There is neither a community-based mechanism to cope with climate-induced health problems nor any additional program or support from the government. The collection of such information on climate-related health coping can benefit the government, NGOs and development partners in formulating strategies for effectively coping with climate-induced diseases and sickness.