

Climate Change, Social Stress and Violent Conflict
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Abstract

**Exploring the relationship between climate awareness and adaptation efficacy
for anticipatory adaptation against the impacts of sea level rise
on livelihood security in coastal Bangladesh**

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Dealing with livelihood security in the face of future climate change requires concerted efforts from various actors including the local people. How local people might respond depends along with others on their climate adaptation efficacy. Adaptation efficacy is individual's perceived ability to initiate adaptive response. Various factors influence climate adaptation efficacy including climate awareness. Climate awareness is manifested through familiarity with, perception of, and knowledge about climatic events. This paper identifies and assesses quantitatively the influences of various factors of particularly the three dimensions of climate awareness on adaptation efficacy of coastal people to secure their livelihood in coastal Bangladesh. A total of 285 respondents are randomly interviewed. 'Familiarity with', 'perception of' and 'intuitive knowledge about' climate change-sea level rise (CC-SLR) have been used as indicators of *climate awareness*. Employing principal component analysis (PCA) a total of 20 factors fall under 8 components (*Eigenvalues* >1) are identified which explain 72% of the variance. Using iterative backward method in multiple regression models the explanatory powers of these twenty factors and three dimensions of climate awareness on adaptation efficacy are predicted. Model as a whole is significant ($F(22, 262) = 27.61, p \leq 0.001, R^2 = 0.45 (R^2_{adj} = 0.43)$). From the comparison of standardized coefficient (beta: β) it is evident that among all factors that affect climate adaptation efficacy positively, perception about CC-SLR event is the strongest one ($\beta = 0.51, p < 0.001$), followed by age ($\beta = 0.33, p < 0.001$) and distance from the coast ($\beta = 0.10, p < 0.05$). On the other end, among the factors that affect adaptation efficacy negatively, habit of seeking external assistance such as contacting with local authority to solve problem is the strongest one ($\beta = -0.17, p < 0.001$), followed by frequent adaptation against dryer condition ($\beta = 0.16, p < 0.001$) and salinity intrusion ($\beta = 0.10, p < 0.05$). These factors tandem with climate awareness guide the adaptation efficacy of people. The finding is substantive for policy makers and planners in designing climate awareness raising programmes to enhance climate adaptation efficacy of people to adapt with livelihood insecurity in the coastal Bangladesh given the impact of CC-SLR.