POTENTIAL IMPACTS OF CLIMATE CHANGE ON SOUTH EAST ASIAN WATER RESOURCES AND ADAPTATION STRATGIES

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ABSTRACT

South East Asia (SEA) and the Himalayan region are experiencing a broader range of climate variability. Various researchers have expected this variability to increase over the coming century, including altered rainfall patterns, temperature change, extreme weather events, and sea-level rise. The degree of change that will take place is unclear. Climate modelling suggests fairly moderate temperature increases in the region but longer periods of warmer temperatures. The most severe impacts in the region are likely to come from changes in precipitation, snow and ice hydrology, and storm intensity and frequency, all of which are more difficult for models to accurately predict. While flooding related to heavy rainfall and extreme storms has been historically familiar in the region, drought is now increasingly a problem. Increases in temperature and changing rainfall patterns will likely affect the regional hydrology of its major rivers and tributaries, introducing greater variability and extreme flow regimes of Ganga downstream in Nepal, India and Bangladesh, and affecting the livelihoods of tens of millions of people. The consequences for local communities will be further conditioned by the ability of these societies to adapt to increased variability and uncertainty. Adaptive capacity differs among individuals, social groups and countries and is influenced by a range of factors including economic and livelihood systems, access to infrastructure and services, social and gender barriers, political institutions and personal attributes.

In this paper an attempt has been made to review climate change and water related studies carried out by various individuals/organizations for the South East Asia. Furthermore, adaptation strategies have also been discussed.