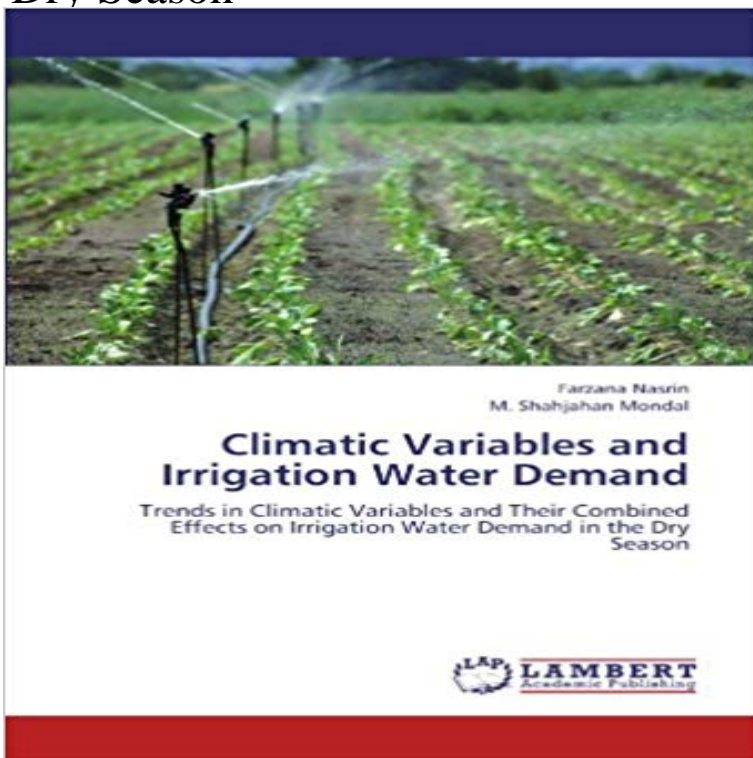


## Climatic Variables and Irrigation Water Demand: Trends in Climatic Variables and Their Combined Effects on Irrigation Water Demand in the Dry Season



Agriculture is a key economic sector in Bangladesh and one of the main users of fresh water resources. At present, climate change is thought to be putting extra stress on agricultural productivity and hence food security because climate change may lead to changes in irrigation water requirement. Most of the studies related to the effects of climate change on irrigation water requirement have been done based only on changes of temperature and/or rainfall. Other climatic variables, such as solar radiation, humidity and wind speed, which may also affect the irrigation water requirement, were not taken into consideration in those studies. To find out the impact of climate change on agricultural water requirement, the combined effects of all the variables need to be considered. The combined effect of the trends of above climatic variables on ETO and net irrigation requirement (NIR) of Boro rice, which is the staple crop in Bangladesh, are evaluated. The findings of this study convey a clear message to the policy and decision makers and water managers that the irrigation sector would not be adversely affected due to climate change.

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