

# **Impact of Climate change on Human Development: A case study of India**

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## **ABSTRACT**

The study examines climate change impact on Human Development Index (HDI) in the Indian context. The state and district level data on climate variables and Human Development Index (HDI) have been used towards this objective. The present study evaluates that there is a quadratic relationship between temperature and HDI at the state level. The results based on state-level analysis are suggestive of a negative effect of temperature and rainfall on HDI. To study the heterogeneous impact of climatic parameters, categorical variables defining a states' status as either poor or rich, hot or cold are used. Higher temperature effects more adverse negative impact on HDI for hotter states compared to cooler states. The differential effects of climate variables between richer and poorer states were not apparent from the state-level analysis. District-level analysis however suggests negative effects of temperature when non-linearities in the relationship between temperature and rainfall is considered. In the assessment of heterogeneous effects, it was found that lower latitude districts, districts that are historically hotter and poorer bear a significantly greater negative impact of rising temperature compared to districts in the higher latitudes, and are relatively cooler and poorer.