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Development of one day probable maximum precipitation (PMP) and isohyetal map for Tigray region, Ethiopia

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This paper aims to assess the economic impacts caused by haze disasters occurring in 2013 in China, through quantitative analyses of the economic losses for a representative province, Jiangsu. The project started with three qualitative interviews of meteorologists, meteorological administrators and residents, a questionnaire was then elaborately designed and the subsequent interviews of 1,123 families were administered. Further, the authors investigated measurements of direct economic losses by incorporating with the willingness to pay (WTP) approach and contingent valuation method (CVM) and explored influential factors of WTP by utilizing the binary logistic regression. The total estimated economic loss incurred by haze disasters and total treatment cost for haze-related diseases were respectively 22.38 billion (in RMB) and 8.4 billion for Jiangsu province. Residential families were willing to pay 11.6 billion RMB annually (51.97% of total loss) for haze treatment, leaving a shortage of 11.05 billion RMB. This information is critically important to economists, management experts, researchers, governmental agencies and environmental workers who seek ways to curb the environment and improve the living standard.

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