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Methods of Interpolating Temperature and Rainfall Distribution in Northern Vietnam

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Abstract : Reliable information on the spatial distribution of annual rainfall and temperature is essential in research projects relating to urban and regional planning. This research presents results of a classification of temperature and rainfall in the Red River Delta of northern Vietnam based on measurements from seven meteorological stations (Ha Nam, Hung Yen, Lang, Nam Dinh, Ninh Binh, Phu Lien, Thai Binh) in the river basin over a thirty-years period from 1982-2011. The average accumulated rainfall trends in the delta are analysed and form the basis of research essential to weather and climate forecasting. This study employs interpolation based on the Kriging Method for daily rainfall (min and max) and daily temperature (min and max) in order to improve the understanding of sources of variation and uncertainly in these important meteorological parameters. To the Kriging method, the results will show the different models and the different parameters based on the various precipitation series. The results provide a useful reference to assist decision makers in developing smart agriculture strategies for the Red River Delta in Vietnam.

Keywords : spatial interpolation method, ArcGIS, temperature variability, rainfall variability, Red River Delta, Vietnam
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