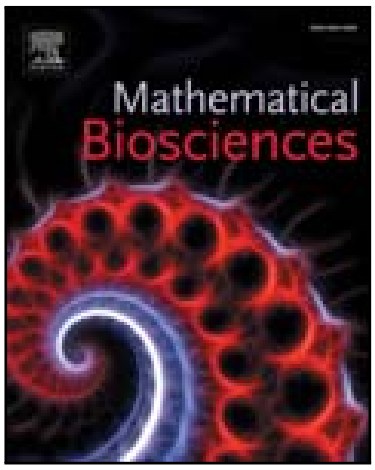

Mathematical modelling and numerical simulations of the influence of hygiene and seasons on the spread of cholera

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Highlights

- The intra-annual variations of climate (temperature and rainfall) are proposed,
- The impact of climatic factors and socio-economic factors on the spread of cholera are investigated,
- The dynamic of disease is modeled by non-autonomous ordinary differential equations,
- The extinction and uniform persistence of disease was investigated as function of two thresholds make that depend on the intra-annual variations of climate and level of education,
- Numerical simulations have been carried out.