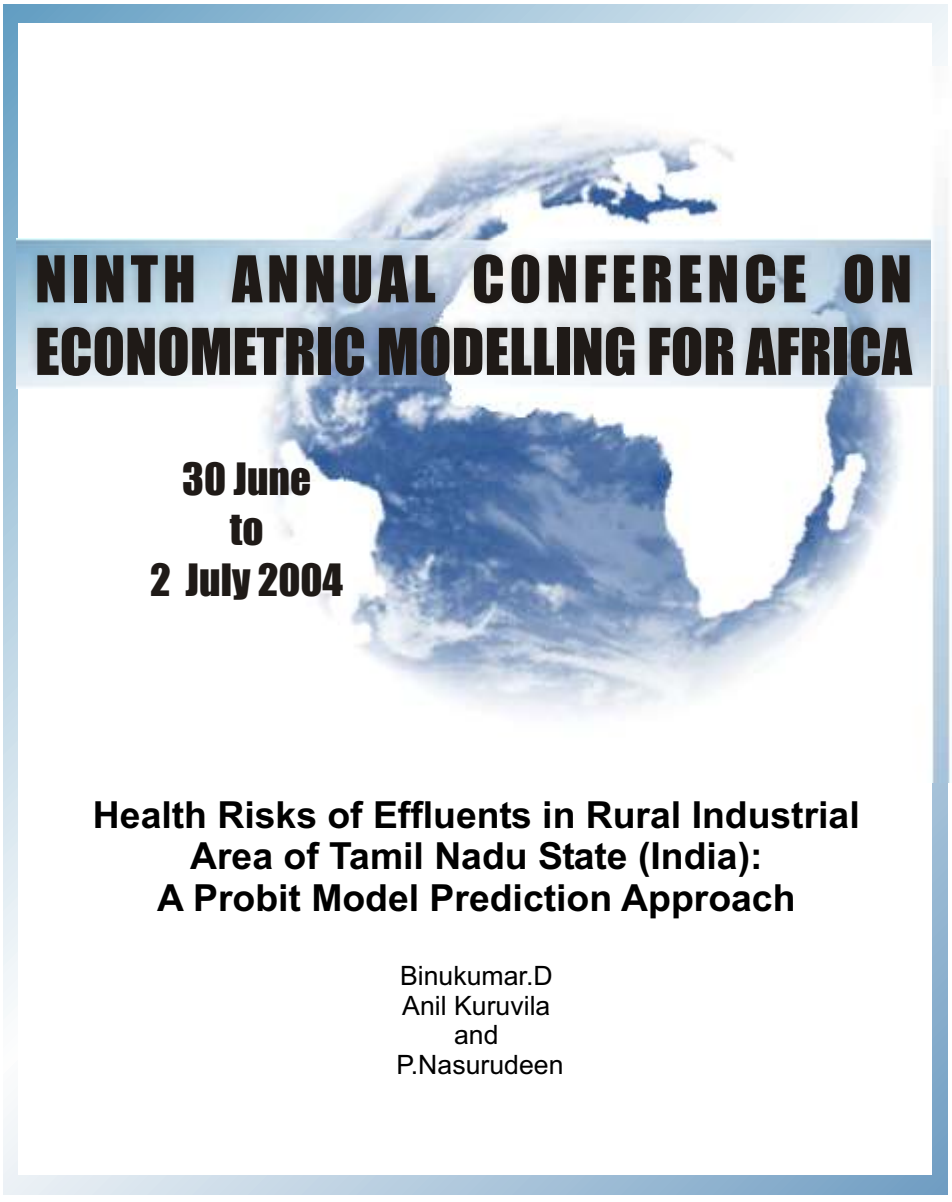

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Health Risks of Effluents in Rural Industrial Area of Tamil Nadu State (India): A Probit Model Prediction Approach

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Abstract

Rapidly growing industries areas of rural Tamilnadu are facing environmental problems, especially water pollution, due to disposal of untreated factory effluents into water. The research on hand was carried out to examine the impact of industrial pollution based environmental degradation health risks of rural farm households in the different industrial situations. The overall objective of the study was to analyze the nature and extent of externalities caused by the industrial effluents and their effect on human health evils. The sample for the study included 90 respondents comprising of three major polluting industries in this state, 30 respondents each from three types of industrial effluents *viz.,* textile dyeing, sago and tannery. Among the selected sample households 68 per cent, 36 percent had the diarrhoeal illness and skin rashes respectively, which encompassed 135 members of the hoseholds. Hence, it had been taken up the study on factors that influenced the occurrence of diarrhoeal illness and/ or skin rashes. The advanced functional model, Probit model was employed due the dependent variable (presence or absence of association) was dichotomous response. The major factor causing diarrhoeal illness in industrial effluents affected farms was the consumption of contaminated drinking water. Further, the predicted probability of occurrence made clear that the children were more prone to diarrhoeal illness than the adults. The probability of occurrence of diarrhoeal illness was the maximum in tannery effluents affected farms, followed by textile dyeing effluents affected farms and sago industrial effluents affected farms. Household income and number of children were found to be the important determinants in all the three types of situations studied. The affected farm holdings had low savings, more incidences of diarrhoeal illness and skin rashes. The children were more prone for health hazards than adults with high probability of occurrence among the farm households. Drinking and bathing with polluted water was the main cause of ailment. The suggested policy implications include giving suitable incentives to effluent affected farmers, keeping adequate distance between the location of industries and cultivable lands, providing good quality water.