

EVALUATION OF GROUNDWATER ARSENIC CONTAMINATION AND REMEDIAL INTERVENTIONS

Abstract of the Thesis
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This thesis using the treatment group, control group, background covariates and suitable matching methods; investigates and evaluates the impact of the arsenic affected households on the monthly household per capita income during 2005-2006 and over the years 2005-2006 and 2015-2016. It also examines the nature of adoption of arsenic-safe piped water source among both the arsenic-affected and the arsenic-unaffected households during the years 2015-2016. The thesis mainly focuses on the three research questions: first, whether social discrimination exists against the arsenicosis affected households and whether in consequence the households suffer from significant economic loss both in terms of per capita income and per capita consumption; second, whether the households affected by arsenicosis are more likely to adopt an arsenic-safe piped water source than the unaffected households and how the spread, intensity and years of experience with arsenicosis in the households matter in the adoption decision; third, whether the arsenicosis affected households lose in terms of per capita income over time compared to the arsenic unaffected households and if so, what is the estimate of the loss. It finds that the social discrimination exists and the measures of per capita income and expenditure loss given in the conventional literature, which are based on the labour market outcome only, underestimates the loss. The arsenic-affected households are more likely to adopt piped-water source and the exposure to arsenicosis matters the most in the adoption decision. The arsenic-affected households although earn less than similar households that are arsenic-unaffected in every period of time, adapt to their situation in such a way that the income gap significantly reduces over time. It also discusses the policy implications of the findings.