**Evaluation Study of Health Impacts Due to Arsenic Contamination in the Selected Communities of Terai Regions in Nepal**

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**Background**

Arsenic contamination in drinking water has been one of the biggest epidemics of the global concern including Bangladesh, India and Nepal. The long term continued exposure to arsenic leads to Arsenicosis, which has no definite medical cure. Thus, assessment of the socio-economic dimensions of the arsenic hazard becomes a first step toward preventive measure. The main objective of the study is to evaluate the health impacts of arsenic contamination on human health through drinking water

**Methods**

The study sites were selected on the basis of high vulnerability and low uncertainty level namely Ramgram and Lahan Municipality and Swathi, Hakpara, Santpur, Dumariya VDCs of Nawalparasi, Siraha and Rautahat districts respectively. The tools and techniques applied were the Questionnaires, Direct Observation, Focused Group Discussion, Interview and Computer software programming.

**Results**

In the present study, 312 people were selected from 312 risk households who used to drink water from arsenic contaminated tube wells. The overall percentage of risk tube well (>50 ppb as level) in selected areas was found to be 12.3%. 84(3.0%) in Lahan Municipality, 101(34.6%) in Hakpara VDC, 629(44.4%) in Ramgram Municipality, 23(14.7%) in Swathi VDC, 39(2.7%) in Santapur VDC and 29(2.4%) in Dumariya VDC. The total number of population at risk was found out to be 11204. The overall knowledge of Arsenic among these risk household were found to be low (42%, totally unaware).. Assessing knowledge of communities whether they are informed of harmful effects of arsenic in drinking water, it was found out that about half of the respondents (49%, 152 out of 310) were aware. More than two third of the health workers were aware of arsenic in the affected study area (84.3%). The most interesting part of the result is that none of the health workers are found to be dealing with the Arsenicosis patients.

**Conclusions**

An immediate unified water resources POLICY with integrated PLANNING and MANAGEMENT is needed. Breadth and depth of household information on Arsenic contamination, its seriousness, and technology options available need to be expanded for which empowerment of local communities can be the potential option of solution of the problem. Health workers need to be trained to provide counseling, assurance and mental support using WHO guide book (manual) on detection, management and surveillance

**Keywords:** arsenic contamination; evaluation study; health impacts; terai region.