

SAWA PGD Fellow : Mela Aryal Lama

Institution : NEC

Title : **ASSESSING THE WATER AND SANITATION RELATED VULNERABILITY AND ADAPTIVE STRATEGIES OF URBAN POOR**  
*A Case Study of Informal Settlement of Pragatinagar along Manohara River, MadhyapurThimi*

Email : [ramailomela@hotmail.com](mailto:ramailomela@hotmail.com)

## Background

Most poor people in developing countries live in rural areas. But urban poverty is widespread too, and is also growing. Currently round the globe, over one billion people (one-sixth of the world's population) are either homeless or live in very poor housing characterized by overcrowding and lack of adequate accompanying infrastructure services. This has a negative impact on their health and productivity (World Bank, 2007). Urban centers in Nepal have been growing rapidly in the past decade as a result of rural migration. People are increasingly migrating to urban centers to escape the poverty or violence of life.

The problem of urban poverty and its accompanying ill-effects is clearly visible among the informal settlement which is widely known as "Sukumbasi Basti" in Nepal. Urban poor is characterized by poverty, low income, inadequate living conditions and sub-standard facilities. The squatter settlement of Manohara lies on the bank of the river Manohara. The river Manohara is highly polluted with untreated solid and liquid wastes dumped into the river. The settlers living in the vicinity of Manohara are very likely to be affected by the pollution of that river. The vulnerability of those populations living around the bank of the river to the various water induced disease and disaster is really very high. This study tries to extract some of the facts on the vulnerability of the urban poor along one of the settlements of Manohara River i.e. Pragatinagar to various water borne or sanitation related diseases and the adaptive strategies that they are following.

## Objectives

To identify the existing water quality and sanitary condition and associated health and livelihood threat in Pragatinagar settlement and assess the adaptive measures of the people to deal with current state of vulnerability.

## Study Area

The Manohara squatter community is situated on the bank of the Manohara River, in the Bhaktapur district of the Kathmandu Valley. The site lies at approximately 1300 m above sea level, in a very congested and polluted area adjacent to one of the main routes into Kathmandu. The population of the settlement is estimated to be between 4000 and 4500. The site is expanding rapidly. There are ongoing disputes with the local government and landowners over the rights of the squatters to the site and to clean water. The existing wells within Manohara achieve a score of either "high" or "very high" risk of contamination (WHO, 2006). As such, the disease rate within Manohara is relatively high; over half the households suffer from water-related illnesses.

## Research Methodology

The modes of research design were surveys and observation. The approach for the whole research was exploratory approach where data collection was done by observing the practices the people follow towards hygiene and sanitation. The study adopted descriptive and explorative research design. A descriptive analysis was used to describe approaches to hygiene and sanitation promotion. The explorative research design helped to extract the designed specific objectives. The research study is based on both primary (*Questionnaire Survey, Focused Group Discussion (FGD) and Interactions with Stakeholders, and case study*) and secondary sources (Literature Review) of data collection. Data were analyzed through editing, tabulation and various statistical analysis processes.

## Research Findings

Pragatinagar, Manohara shows very high vulnerability to water borne diseases as per the study conducted. The vulnerability of the settlement was judged in terms of the quality of water they are using and the various sanitary practices that they are practicing. As such a water quality testing was done which showed the high concentration of coliform bacteria in each source available which clearly indicates their vulnerability to water borne diseases.

The consequences of water borne diseases were seen frequently on the settlement. Mainly diarrhea, worms, dysentery and skin diseases were found recurring and typhoid and jaundice were also observed. The conducted health camp and performed stool test also magnified their vulnerability as they clearly indicate the occurrence of various types of waterborne diseases among the settlers. Regarding the sanitary practices, even the practice of using soap and water after defecation was found in very few populations. When they were asked about the importance of good quality of water and better sanitary practices for their well being almost all of the respondents gave high priority but when were asked what will be their choice if they were to choose facilities to develop their settlement, without any doubt most of the respondents make choices on various luxury goods and infrastructures like electricity, road rather basic facilities like drinking water supply, sanitation and personal hygiene. Most of the settlers were found with a mentality that the basic services will be made available to them by various donors or government. So they were found ignoring to make their investment in these facilities and were found more interested in making expenses on luxury goods like television, computer, and vehicles.

#### Discussion/ Recommendations (if any)

##### *Discussion*

Number of informal settlement is increasing continuously due to increasing population, poor economic status, political situation and higher rate of migration. Starting from their basic needs of food, water and shelter to other requirements like toilet, access to basic services like bank, market, hospital etc. all are almost lacking. Visualizing the living standard of the people along the Manohara River tells their higher vulnerability to various forms of diseases. Hence in order to identify their problem, vulnerability and the adaptive strategies that they are following to deal with various health problem Manohara settlement was identified and study was undertaken.

##### *Recommendations*

- Monitoring and maintenance of built infrastructure with their own participation is required so that they develop a feeling of ownership and maintain it forever.
- The settlers need to quit the attitude of indifference as this attitude is dragging them towards various health impacts.
- The government bodies and development partners needs to include 'Motivation to invest' component in their development programs.
- Adequate empowerment and participation in every aspect of urban and environmental planning need to be done by government and development partners.
- The government and development partners need to provide proper training, orientation and awareness to local actors and stakeholders.
- Government policy should be modified.
- There is a need to explore the ways to reject the established indifference among the settlers and motivate them to live in good sanitary condition.
- Further research to explore ways to bring together involuntary settlers from different regions, ethnic and social backgrounds, and different income levels and motivate them to be self dependant in matters of clean and healthy living.