Climate Resilient Water Safety Plan (CR-WSP): a tool for Public Health Based Target

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Contamination of drinking water with Fecal coliform is the major issue for diarrheal disease in Nepal. Cholera is a cause of severe diarrheal disease results dehydration; can lead to death, if untreated. The World Health Organization says cholera is a global threat to public health, an indicator of inequality. The Safe water supply and hygienic sanitation remained a biggest challenge. In the meantime, climate change also increased risks on existing water sources. Climate Resilient Water Safety Plan (CR-WSP) is a tool that identifies specific considerations and manage risks posed by climate change from catchment to consumer chain; which ensure water quality. Main objective of this research study is to find 'Role of CR-WSP for fulfilling health-based target'. For empirical study, three Water Supply and Sanitation (WSS) systems of three ecological regions; Himalaya, Hill and Terai of Nepal have been selected for study namely Jomsom, Lekhnath and Bardaghat respectively. Study explored the role of CR-WSP for achieving public health-based target (HBT). Public HBT is the basis for supporting and measuring incremental progress in water quality. From field study, water quality indicators fulfilling HBT from three WSS systems Jomsom, Lekhnath and Bardaghat are found to be 76%, 88% and 91% respectively. It also highlighted public health risk hazards being low or high depends on effective implementation of CR-WSP in the system. Accordingly, systematic management of water quality at Himalaya, Hill and Terai region: Jomsosm, Lekhnath and Bardaghat WSS systems found successful by 69%, 76% and 75% respectively.

Ganga Datta has professional expertise on Water Supply Sanitation and Hygiene (WASH), climate change and public health in national and international contexts. During his academic and professional journey, he has worked with the Water and Sanitation System establishments particularly in Nepal, The Netherlands, Germany, the USA and The Philippines. He holds a PhD in Water, Climate Change and Public Health, a MSc degree in Civil and Environmental Engineering, an MA in Rural Development, and a postgraduate degree in Urban Infrastructure Management. Dr Datta has in-depth understanding of social, cultural, economic and gender-related challenges and social norms affecting water supply and sanitation promotion, through community mobilization and business models through private sector involvement in Nepal.