

Implementation challenges of rainwater recycling practice reducing water risks in Bangladesh - An analysis of social innovation

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Arsenic contamination of groundwater in Bangladesh has become the biggest natural calamity in the world. About 20 million people of Bangladesh are drinking arsenic contaminated water and about 70 million people of 59 districts out of 64 districts are at risk. The case station of the present study, Morrelgang municipality, seemingly as an overgrown village comes under the jurisdiction of Bagerhat district, a highly arsenic prone area. The local community has also been suffering from salinity of water. In 2004, the local NGO namely 'Community Development Center' (CDC) with the help of a Japan based NPO namely 'People for Rainwater' (PR) has initiated rainwater harvesting in a mini-rainwater tank at household level to cope with such drinking water pollution risks. Since then, though at modest scale, yet 46 rainwater tanks have been installed in this locality. Thus it is easily logical that increasing growth of adoption of rainwater tank at household level may make the community becomes resilient. An innovation is commonly defined as an idea, practices, or objects that are perceived as new by an individual or other unit of adoption. In our study we consider rainwater harvesting is such an innovative idea or practice that stands as an antidote of arsenic related drinking water risks in coastal Bangladesh. Therefore the adoption of rainwater tanks by the community members become challenge to the local community itself, particularly when the various resources and capitals are limited. Coping capacity, defined as the characteristics of individuals or groups

in terms of their capacity to anticipate, cope with, resist and recover from the impacts of hazards, can be maintained and enhanced as more and more local community members adopt the rainwater harvesting tank. In our study, we will show how the local community has been challenged and what extent the local community has used their various resources and capitals, which ultimately lead to the diffusion of such a social innovation. The study will show correlations between various capitals viz. social, economic physical etc of the tank adopters and the adoption or diffusion of the mini rainwater tank. In second part of our study, we will show in what extent the initiative is sustainable and how does it vitalize a community under a serious drinking water pollution risks. The diffusion of innovation approach will be taken as an analytic tool for this study.