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Community water harvesting structures' status, management and socio-economic impacts : Case studies in Shivaliks foothills, Northern Himalayas, India

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ABSTRACT

There has been an increasing participation of communities for management of common property water resources (CPWRs) as a means to reduce pressure on government finances, and to improve efficiency and sustainability of irrigation systems. Drawing on qualitative and quantitative surveys conducted during 2010 and 2012 of 406 households in five villages located in foothills of Shivalik region in Northern Himalayas, this paper analyses impact of community based water storage structures on productivity, economic efficiency and social aspects. Majority of surveyed beneficiary farmers (88%) belonged to marginal and small categories owning less than 2 ha of cultivated land, and are heavily dependent upon CPWRs for agriculture, animal husbandry and domestic needs. Dependence on CPWRs for irrigation was noticed to be higher of marginal farms than small farms indicating that dependence on CPWRs decreased with increase in landholding size. Marginal farmers' dependence on CPWRs for animal needs was absolute as this category of farmers do not own private water source. The results evinced that community based rain water harvesting structures have effectively contributed to close existing gap between demand and supply of water for its multiple usages. Augmentation of ground water recharge resulted in installation of tube-wells which paved way for informal local water markets by reallocation of water from surplus to scarcity farms and they are taken as a coping strategy for managing water scarcity.