

Do Dams Help Reduce Poverty¹

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SUMMARY

The simulation results based on a SAM-based multiplier model show that the Bhakra dam project has generated significant indirect or downstream effects in the Punjab state. The estimated multiplier value is 1.90. Thus for every rupee (100 *paise*) generated directly, another 90 *paise* were generated in the region as downstream or indirect effects. These multipliers include the effects of inter-industry linkages as well as the consumption-induced effects. The multiplier effects will be much higher if indirect and induced effects of remittances sent by agricultural workers from the Punjab and contributions of the Bhakra dam towards 'Food for Work' program were to be included in the analysis. The results on income distribution show that all sections of the society, not only landed households but the poor marginal and small farmers as also landless agricultural labor also gain. In fact the gains to the agricultural labor households from the dam have been higher than the gains to other rural households and to urban households.

Key words: Poverty, Multipliers, SAM, CGE.

1. INTRODUCTION

Concern for increasing agricultural production to either fulfill the rising food grain demand of increasing population and/or to minimize the impact of vagaries of weather on agricultural production has invariably driven public agencies and donors in bringing larger area under irrigation and in investing huge resources for development of small, medium, large - single and multipurpose irrigation structures. For an individual farmer, investing in a private tube well, the main concern is to have a larger control over irrigation water and thereby increase production on his farm. Concern for providing safe drinking water and sanitation facilities for rural and urban population has often guided large public and donor investments in rural and urban water supply and sanitation programmes. Investments in hydropower have consistently been governed by the need for

producing energy. Similarly investments in flood control structures have been guided by the concerns for minimizing the impacts of the floods on the property and life of the affected population.

These water development and management concerns have by and large not been viewed as poverty reducing strategies *per se*, though the poverty reducing impacts of these investments, specially that of investments in canal irrigation infrastructure, have often been recognized. Such investments have generally been justified for realizing broad based growth, for increasing agricultural production and achieving food security, for increased hydropower generation, for making drinking water available to rural and urban areas etc. with poverty reducing impacts of these investments being assumed implicit. Given the complexity of the process through which water-poverty interrelationships operate and given the multifaceted dimension of poverty, it has often proven to be difficult to ascertain if the availability of water *per se* has lead to a reduction in poverty. Large amount of literature available on poverty provides no coherent analysis of the relationship between water access and

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