



# **RECENT TRENDS IN RESEARCH IN BUSINESS STUDIES**

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## **"RECENT TRENDS IN RESEARCH IN BUSINESS STUDIES"**

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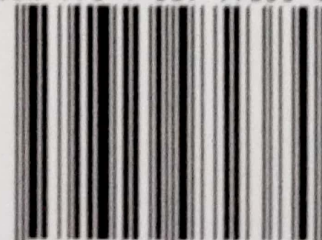
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# Impacts of Irrigation on Agricultural Land use Efficiency: A Study on Selected Mouzas of Polba- Dadpur Block of Hugli District, West Bengal

DR. GOLAM MOSTAFA

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## ABSTRACT

The economy of rural West Bengal is largely dependent upon agriculture and the cropping pattern depends on the amount of wet monsoon rain, type of soil and potentiality of irrigation. Polba-Dadpur Block of Hugli District is one of the important CD Blocks of West Bengal in context of agricultural productivity. Agriculture is the main occupation of nearly 65% of the working population of the Block. The area under irrigation through canals, ponds, shallow and deep tube wells and other sources measure for nearly 60% of the total area under cultivation. It signifies that irrigation in the selected mouzas plays a vital role in increasing agricultural production and diversification of crops by encouraging the farmers to practice intensive farming which in turn increases agricultural land use efficiency. Five villagers of the very Block have been selected as case study through purposive multistage sampling to explore my vision and Taheripour' (2013) Land holding Classification with Cropping Intensity Measures are the key methodologies adopted in this study.

This paper is an attempt to investigate the availability of irrigation resource and its impact on enhancing agricultural land use efficiency along with crop diversifications and to explore further possibilities of agricultural development.

*Key Words: Irrigation, Landuse efficiency, Diversion of crops, Tube-wells, intensive farming, canals, working population, cropping pattern.*

### Introduction

**P**olba-Dadpur Community Development Block is one of the agriculturally developed Blocks of the district Hugly in West Bengal. Agricultural efficiency and output generally depend upon the ready availability of inputs like water, fertilizer, agricultural labourer and their rational utilization. Water for irrigation in the concerned area is endowed with different surface and subsurface sources. Surface water includes both the gravitational irrigation system through canals of different lengths and traditional as well as modern power-driven lift irrigation from surface sources like ponds and tanks and some well-known wetlands locally known as *beels*. But a large share of the total irrigation is provided by the sub-surface aquifers from which water is extracted both by private and public entrepreneurships. Besides this most valuable input, the modern peasants are now practiced in application of chemical fertilizers as well as pesticides to increase agricultural output where the effects of those chemical substances on the agricultural ecosystem and local ecology is remained neglected which is proved later as negatively affected element.

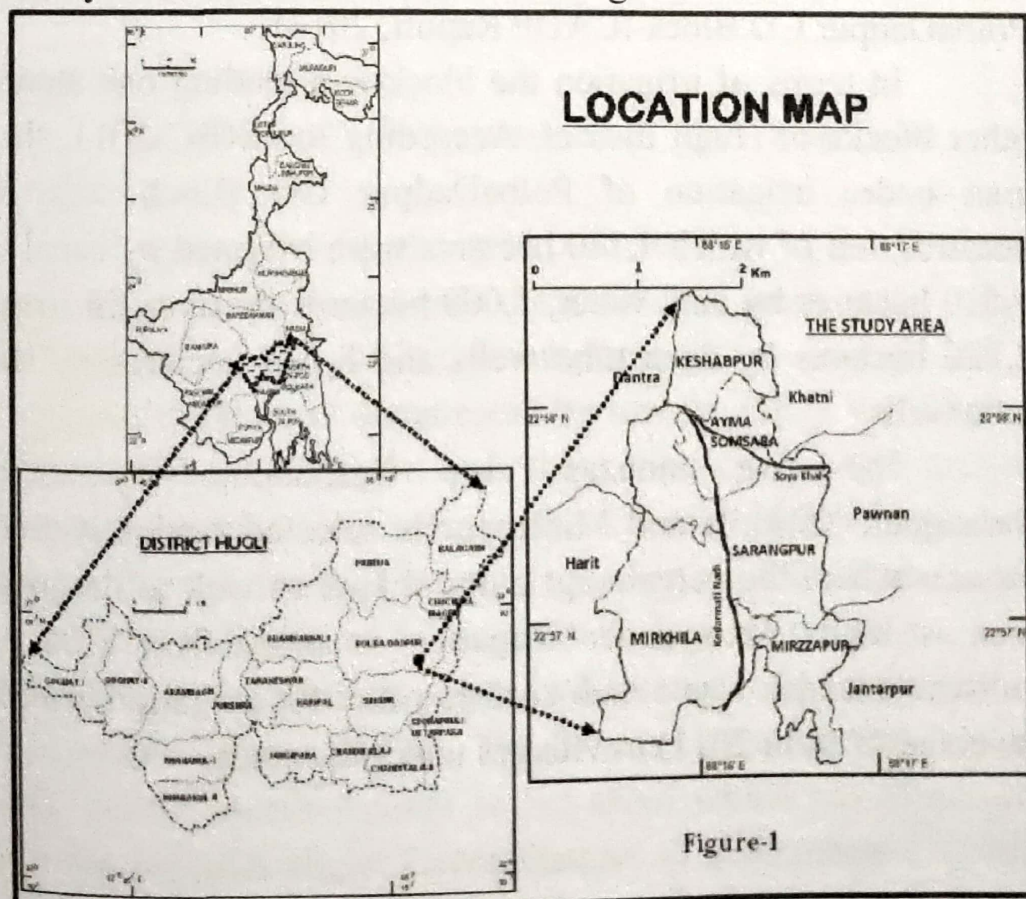
Similarly, without any perceived balance between the recharge and extraction of ground water, the farmers, both small and medium, are practiced in extracting huge amount of ground water, mainly in the period of summer when rain is absent but thermo-and-photo periodism are most suitable to grow boro-paddy introduced in the area in the 80s of the last century. Though the data on the amount of usable groundwater is absent, the peasants have realized

that the supply from subsurface sources is decreasing gradually. With these phenomena it has also been experienced by them that the output is gradually following the law of diminishing return which is thought of as a result of excessive doses of nitrogen fertilizer and pesticides. The peasants are slowly shifting the centre of importance from chemical to compost fertilizers. But the supply of water is limited which is true for all regions.

This paper is an attempt to analyze the impacts of irrigation on agriculture, and to suggest some measures helpful to sustain the present efficiency and to maintain the ecological equilibrium of the area concerned.

### Objectives

The objectives of the present work are: to investigate the availability of irrigation resources; to identify the impacts of irrigation on enhancing agricultural land use efficiency along with crop diversifications; to explore further possibilities of agricultural development and to suggest a plan for balanced agricultural economy with rational utilization of irrigation sources.



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