

## PREFACE

India is a country of more than 1.2 billion population and still now more than 60% of them are living in rural areas (Census, 2011). The economy of rural India has largely driven by the agricultural activity and almost every rural people directly or indirectly linked with agriculture. After the Green Revolution one concept has been developed among the farmers that the success of the agriculture depends on some factors like irrigation, mechanization and utilization of modern High Yielding Variety seeds. Among this Irrigation is of outmost priority for agricultural activities, especially in those region where the perennial supply of water is absent for cultivation. The state of West Bengal especially North Bengal, Agriculture has been a priority of its socio-economy, subsequently irrigation has a major role to play for the livelihood of the region. During the past two decades, the irrigation sector of West Bengal, as well as India, has emerged significantly important. The present study aims to identify the present status of irrigation and its impact on the agriculture and socio-economic condition of the farmers in Jalpaiguri District. Many irrigation systems have been emerged from last three to four decades in the district. The irrigation system of the district is Canal Irrigation, Shallow Tube Well, Deep Tube Well, River Lift Irrigation, Open Dug Well and Tank Irrigation, etc. Through this work the impact of irrigation on the crops production and improvement of socio-economic conditions of the engaged farmers has been presented.

The thesis is presented in 8 (eight) chapters. The first chapter deals with the introduction, study area, previous works, scope, hypothesis, objectives and database and methodology of the present study. The second chapter incorporates the general background of the study area, the Jalpaiguri district. Chapter three discuss about the status of irrigation in Jalpaiguri district. In the last two decades how the irrigation facilities have been changed in the study area is the key concern of this chapter. The Chapter four deals with the various factors that have influenced irrigation practices in the study area. Both physical and anthropogenic factors have been highlighted in this chapter. In chapter five the changes in irrigation practices and cropping pattern have been discussed. This chapter has also discussed about the changes in various irrigation methods, their growth rate and density. In case of changes occurred in agricultural practices, the changes in cropping intensity, agricultural productivity and agricultural efficiency have been discussed. And lastly the impact of irrigation on crop production and vegetable farming has been shown through correlation analysis.

Chapter six deals with the economic impact of irrigation on the farmers, which includes the discussion of various economic aspects of the farmers and then a comparative analysis between irrigated and non-irrigated farm in respect to annual household income and expenditure has been done. In chapter seven various social aspects of the farmers has been discussed and then analyzed the impact of irrigation on the social status of the farmers has been done through chi-square test. In last chapter i.e. chapter eight the researcher has discussed about the major findings of the study and gives some valuable recommendation. Finally, this chapter has ended up with conclusion.

Manoranjan Mandal  
1.3.2021  
(MANORANJAN MANDAL)

Department of Geography & Applied Geography  
University of North Bengal

Date: March 1, 2021