

List of Figures

Figure 1: Water Demand in India	26
Figure 2: Per Capita Water Availability in India	29
Figure 3: Irrigation Potential in india	31
Figure 4: Irrigation Potential in Different Plan Periods.....	34
Figure 5: Water sources in india	35
Figure 6: Rivers and canals in India.....	36
Figure 7: Different Water Bodies in India	37
Figure 8: Annual Rainfall in India	38
Figure 9: Water Potential in Major River Basins.....	42
Figure 10: Annual replenishable Ground Water in india	43
Figure 11: Major River Basin in India	44
Figure 12: Component of Minor Irrigation in India(4 th MI census).....	46
Figure 13: Components of Minor Irrigation in India(5 th MI census)	47
Figure 14: Distribution of Tank Irrigation in India.....	48
Figure 15: IPC and IPU in 5 th MI	50

Figure 16: GIA and NIA in India	51
Figure 17: Source Wise NIA in India.....	53
Figure 18: IPC and IPU in 10th and 11 th plans in India	55
Figure 19: Area Under Tank Irrigation in India.....	56
Figure 20: Decadal growth of Tank Irrigation in India	57
Figure 21: Decadal Growth of Percentage Change of Tank Irrigation.....	58
Figure 22: Different Sources of Irrigation in West Bengal	60
Figure 23: Surface Water Bodies in West Bengal	62
Figure 24: Water Requirements in West Bengal.....	63
Figure 25: changes of Tank in West Bengal.....	65
Figure 26: No of Tanks in West Bengal.....	66
Figure 27: USSL Diagram for Classification of Irrigation Water.....	68
Figure 28: Location Map of study Area.....	112
Figure 29: Soil Salinity Map of South 24 Parganas.....	115
Figure 30: Land use Map of Study Area.....	118
Figure 31: Box Plots Outliers.....	126
Figure 32: Different Sources of Irrigation in South 24 Parganas.....	137
Figure 33: Depth of All Water Bodies during summer and Rainy seasons.....	141

Figure 34: Age and Size of all Water Bodies.....	142
Figure 35: Capacity of all Water Bodies.....	142
Figure 36: Water Spread area during Different Seasons.....	143
Figure 37: Command Area of All Selected Water Bodies.....	144
Figure 38: Type of Farmers in Tank Command Area.....	145
Figure 39: Tank Productivity ('000 Rupees/acre).....	147
Figure 40: Diagram Shows Total Productivity and Capacity of All water bodies.....	148
Figure 41: Reasons for Lack of Maintenance of Water Bodies.....	152
Figure 42: Productivity Improvement after Renovation.....	153
Figure 43: Efficiency Scores, DMUs and Ranks of All Water Bodies.....	155