



SR.NO.	CHAPTERS	PAGE
	PREFACE	NO.=
	ACKNOWLEDGEMENT	
	LIST OF TABLES	-
	LIST OF FIGURES	
1	INTRODUCTION	10 - 34
	Sardar Sarovar Project	10
	Research Questions	23
	Significance of the study	24
	Choice of the study area	26
	Objective of the study	27
	Choice of the time frame	28
	Methodology	30
	A brief review of literature	30
2	PHYSICAL ENVIRONMENT	35-57
	Location and Extent	35
	Physiography	35
	Climate	46
	Soil	57
	Vegetation	57
3	SOCIO-CULTURAL ENVIRONMENT	
	Population Distribution	
	Density	
	Rural – Urban Distribution of Population	
	Sex Ratio	64
	Literacy	65
	Population Growths and Regional Economy	66
	R and R Programme for the SSP Affected Persons	69
4	SOIL	
	Soil Taxonomy	81
	Method of Soil Survey	84
	Soil Series / Soil Zones	85
5	LAND IRRIGABILITY CLASSIFICATION	
	Definition	161
	Agro-climatic Region - I (Savli – Naswadi Region)	166
·	Agro Climatic Region - II (Vadodara Karjan	173
	Region)	
	Agro Climatic Region - III (Jambusar – Amod	179
	Region)	
	Agro Climatic Region – IV (Jambusar – Vagra)	184
	Bara Tract	189

6	HYDROLOGICAL CHARACTERISTICS	Τ
	Hydrologic Cycle	196
	Rainfall Pattern in Study Area	200
	Estimating Water Availability	206
	Ground Water Resource	214
	Methods of Ground Water Conservation	218
	People's Participation and Role Of NGOs in Water	221
	Management	
	Quality of Ground Water	223
	Classification of Ground Water	237
	Suitability of Ground Water for Irrigation	238
	Groundwater Budgeting	247
7	IRRIGATION NEEDS	
	History of Irrigation Development	249
	Participatory Irrigation	254
	Water Need for Crops	255
	The Water Cycle	256
	Evapotranspiration (ET)	257
	Crop water requirements	259
	Irrigation Intensity	262
}	LAND USE AND CROPPING PATTERN	
	Meaning and Definition	278
	Land use Dynamics	279
	Land Use in Study Area	281
	Net Sown Area	286
	Fallow Lands	292
	Current Fallow	293
	Other Fallow	294
	Culturable Waste	298
	Permanent Pasture and Other Grazing Land	301
********	Forest	302
	Settlements	305
	Cropland Use	307
	Cotton	314
	• Jowar	316
	Rice	330
	Bajra	332
	Pulses	334
	Oil Seeds	336
	Sugarcane	338
	Tobacco	338
	Other Crops	340
******	Wheat	343
	Overall Change in Cropland Use	344

Ranking, Combination and Diversification of Crop	346
 Cropping Under Canal Irrigation And Existing And Projected Crop Yield Levels 	352
 Projected Cropping In Regions I to IV in SSP Command Area Phase-I (Under Irrigated and Un- Irrigated Conditions) 	354
Spatial Decision Support Systems for Crop Productivity Management	356
 Existing And Projected Yield Under Irrigation in Region I To IV in SSP Command Area Phase – I 	358
CONCLUSION & SUGGESTIONS	
Conclusions	386
Levels of change	388
Catalysts of Change	389
Catalysts of Change	
SUGGESTIONS	395
Prospects for Future Research	397
	 Cropping Under Canal Irrigation And Existing And Projected Crop Yield Levels Projected Cropping In Regions I to IV in SSP Command Area Phase-I (Under Irrigated and Un- Irrigated Conditions) Spatial Decision Support Systems for Crop Productivity Management Existing And Projected Yield Under Irrigation in Region I To IV in SSP Command Area Phase – 1 CONCLUSION & SUGGESTIONS Conclusions Levels of change Catalysts of Change SUGGESTIONS

`