CONTENTS

	Chapter No.	Title of chapter and sub title	Page No.
1.	**Chapter 1**	**Introduction**	**1**
	1.1	Overview	1
	1.2	Land use land cover	3
	1.3	Coastal vegetation	5
	1.4	Study area	6
	1.4.1	Physiography	9
	1.4.2	Geology	10
	1.4.3	Geomorphology	13
	1.4.4	Climate	13
	1.4.5	Tides and Currents	15
	1.4.6	Drainage	16
	1.4.7	Soil type	18
	1.4.8	Floral and faunal diversity	19
	1.4.9	Coastal population and socioeconomic structure	21
	1.5	Need of studying land use land cover and coastal vegetation of the Bharuch district	22
	1.6	Aim and Objective	22
	1.7	Brief Methodology	22
2.	**Chapter 2**	**Land use land cover**	**24**
	2.1	Definitions	24
	2.1.1	Land use	24
	2.1.2	Land cover	26
	2.2	Importance of Land use land cover	28
	2.3	Methods used to study land use land cover	29
	2.3.1	Conventional method	29
	2.3.2	Geospatial techniques	30
	2.4	Literature review	
	2.4.1	Global perspective	32
	2.4.2	National perspective	39
	2.4.3	State perspective	45
3.	**Chapter 3**	**Coastal Vegetation**	**48**
	3.1	Importance of coastal vegetation	50
	3.1.1	Ecological functions	50
	3.1.2	Economical functions	52
	3.2	Classification of coastal vegetation	53
	3.3	Methods used to study coastal vegetation	57
	3.4	Literature review	58
	3.4.1	Global scenario	58
	3.4.2	Indian scenario	61
	3.4.3	Scenario in Gujarat	64
4.	**Chapter 4**	**Methodology**	**67**
	4.1	Geospatial analysis	68

	Chapter No.	Title of chapter and sub title	Page No.
	4.1.1	Remote sensing	68
	4.1.2	GIS Analysis	87
	4.1.3	Information representation	88
	4.2	Field study	89
	4.2.1	Survey of coastal vegetation	90
	4.2.2	Collection of coastal sediments	93
	4.2.3	Ground verification and accuracy assessment	93
	4.3	Lab work	94
	4.3.1	Preprocessing step for sediment sample	94
	4.3.2	Preparation of soil suspension for the determination of pH, electrical conductivity and salinity	94
	4.3.3	Organic carbon	95
	4.3.4	Grain size	95
5.	**Chapter 5**	**Result and Discussion**	**97**
	5.1	Mapping of land use and land cover categories and change detection	97
	5.1.1	Land use land cover maps of Jambusar taluka	97
	5.1.2	Land use land cover maps of Vagra taluka	115
	5.1.3	Land use land cover maps of Hansot taluka	139
	5.1.4	Land use land cover maps of Aliabet	157
	5.1.5	Discussion	176
	5.2	Study of coastal vegetation	189
	5.2.1	Diversity of coastal vegetation	189
	5.2.2	Mangrove phytosociology	206
	5.3	Physico-chemical analysis of coastal sediments	215
	5.3.1	Granulometric analysis of coastal sediments	215
	5.3.2	Chemical analysis of coastal sediments	229
	5.3.3	Discussion	231
	5.4	Coastal geomorphology of three coastal talukas of Bharuch District	234
	5.4.1	Geomorphological set up of Jambusar taluka	238
	5.4.2	Geomorphological set up of Vagra taluka	238
	5.4.3	Geomorphological features of Aliabet	239
	5.4.4	Geomorphological set up of Hansot taluka	244
	5.4.5	Discussion	244
6.	**Chapter 6**	**Conclusions**	**251**
7.		**References**	**255**
8.		**Annexures**	**296**
9.		**List of Publications**	**302**