

CONTENTS



CHAPTER 1 INTRODUCTION 5

 LACUNA..... 5

 AIMS AND OBJECTIVES: 6

CHAPTER 2: STUDY AREA..... 8

 2.1 STUDY AREA: 9

 2.2 STUDY LOCALITIES: 12

 2.2.1 STUDY SITE: 12

 MUNDRA 12

 MANDVI..... 14

 SANGHI 16

 2.3 STUDY PERIOD: 18

CHAPTER 3: PHYTOPLANKTON 19

 3.1 INTRODUCTION..... 20

 3.2 METHODOLOGY: 23

 3.3 RESULTS:..... 25

 3.3.1 PHYTOPLANKTON COMPOSITION AND DISTRIBUTION: 25

 3.3.2. GRAPHICAL OR DISTRIBUTIONAL TECHNIQUES: 29

 3.3.2.1. K- DOMINANCE CURVE:..... 29

 3.3.3. MULTIVARIATE METHODS:..... 30

 3.3.3.1. CLUSTER ANALYSIS (BRAY-CURTIS SIMILARITY)..... 30

 3.3.3.2. MULTI DIMENSIONAL SCALING (MDS):..... 31

 3.3.4 DENSITY: 32

 3.3.5. SPECIES DIVERSITY, EVENNESS AND RICHNESS: 34

 3.4. DISCUSSION: 35

CHAPTER 4: ZOOPLANKTON	52
4.1 INTRODUCTION.....	53
4.2 METHODOLOGY	54
4.3 RESULTS:.....	55
 CHAPTER 5: WATER QUALITY	 75
5.1 INTRODUCTION:.....	76
5.2. MATERIAL AND METHODS:	77
5.2.1. SAMPLING AND ANALYSIS OF WATER:	77
5.2.2. STATISTICAL ANALYSIS:	78
5.3. RESULTS:.....	79
5.3.1. DISSOLVED OXYGEN (DO):	79
5.3.2 TEMPERATURE:	80
5.3.3. HYDROGEN ION CONCENTRATION (PH):	81
5.3.4. SALINITY:	81
5.3.5. TURBIDITY:	82
5.3.6. TOTAL SUSPENDED SOLIDS(TSS):	83
5.3.7. NUTRIENTS-NITRITE- N-NO ₂ :	84
5.3.8. NUTRIENTS- NITRATE- N-NO ₃	85
5.3.9. PHOSPHATE	86
 CHAPTER 6: SUBTIDAL	 88
6.1 INTRODUCTION.....	89
6.2 MATERIAL AND METHODS.....	91
6.3 RESULTS.....	95
6.3.1. SEASON WISE OCCURRENCE OF MARCROFAUNA AT STATIONS	97
6.3.2. POPULATION DENSITY OF MACRO BENTHOS.....	100
6.3.3. PERCENTAGE COMPOSITION OF MACROFAUNA	101
6.3.4. SPECIES COUNT VS. NUMBER OF ORGANISMS	103

6.3.5. UNIVARIETE METHODS.....	106
6.3.5.1. SPECIES DIVERSITY	106
6.3.5.2. SPECIES RICHNESS	108
6.3.5.3. SPECIES EVENNESS	110
6.3.6 GRAPHICAL OR DISTRIBUTIONAL TECHNIQUE.....	111
6.3.6.1. K-DOMINANCE CURVE.....	111
6.3.7. MULTIVARIATE METHODS.....	112
6.3.7.1. CLUSTER ANALYSIS AND MULTIDIMENTIONAL SCALING.....	112
 SUMMARY AND CONCLUSION.....	 122
 BIBLIOGRAPHY.....	 128