CONTENTS

Acknowledgements i-ii
Declarations iii
Index to Maps iv
Index to Figures v-vi
Index to Tables vii-viii
Index to Charts ix-xiii

CHAPTER- 1: Introduction 1 - 8
1.1 Sundarbans of West Bengal 2 - 4
1.2 Criteria for Designation as Biosphere Reserve 5
1.3. Significance for Conservation 6
1.4. Land Use History 7
1.5. Cultural Significance 8

CHAPTER- 2: Geography and Geology of Sundarban Biosphere Reserve 9 - 21
2.1 Geography 9 - 11
2.2 Geology (Topography) 12 - 15
2.2.1. Surface Configurations of Sundarbans
2.3 Soil 15 - 18
2.4 Climatology 18 - 21
2.4.1 Rainfall
2.4.2 Relative Humidity
2.4.3 Tidal Amplitude
CHAPTER- 3: Literature Review

3.1 Mangrove Diversity 22 - 26
3.2 Ecological Studies 27 - 28

CHAPTER- 4: Scope, Objective & Methodology of Study 29 - 37

4.1 Scope of Work 30
4.2 Objectives of the Study 31
4.3 Methodology 32 - 37

4.3.1 Qualitative Analysis
4.3.2 Quantitative Analysis
4.3.3 Water Quality Analysis
4.3.4 Soil Quality Analysis

CHAPTER- 5: Qualitative Analysis of mangrove Flora 38 - 135

5.1 Mangroves of the Sundarban Biosphere Reserve 39 - 41

5.1.1 Introduction
5.1.2 Forest types in Sundarbans

5.2 Results 42 - 135

CHAPTER- 6: Quantitative Study 136 – 171

6.1 Quadrat Studies inside Sundarban Tiger Reserve 137 - 153
6.2 Quadrat Studies inside Lothian Island Wildlife Sanctuary 154 - 157
6.3 Quadrat Studies inside Sajinakhali Wildlife Sanctuary 158 - 161
6.4 Quadrat Studies outside Sundarban Tiger Reserve 162 - 171

CHAPTER- 7: Ecological Study 192 - 226

7.1 Introduction 193 - 197
7.2 Soil Analysis Data 198 - 209

7.2.1 Result of Soil Studies inside
7.2.2 Result of Soil Studies outside Sundarban Tiger Reserve (South 24-Parganas)

7.2.3 Result of Soil Studies outside Sundarban Tiger Reserve (North 24-Parganas)

7.3 Water Analysis Data 210 - 226

7.2.1 Result of Water Analysis inside Sundarban Tiger Reserve

7.2.1 Result of Water Analysis inside Sundarban Reserve Forest (outside S.T.R.)

CHAPTER- 8: Mangrove Diversity & Correlation 227 - 255

8.1 Estimation of Diversity 228 – 250

8.2 Correlation Study 251 - 255

CHAPTER- 9: Discussion 256 - 263

CHAPTER- 10: Summary 264 - 266

CHAPTER- 11: References Cited 267 – 280

CHAPTER- 12: Published Papers & Books 281