DESERT ECOLOGY

Ved Prakash Meena

Pointer Publishers Jaipur 302 003 (India)

Contents

	rrejace	v
	Abbreviations	xv
	List of Figures	xvii
	List of Tables	xix
1.	Introduction	1
	- Hot Deserts: Sustainability Issues	2
	- Selection of the Study Area	11
	- Importance of the Desert National Park	13
	— Present Position	15
	— Aims and Scope	18
	Hypothesis	20
	- Methodology	22
	— Review of Past Work	.23
	Geographical Perspective	25
2.	Profile of Development	34
	Region and People	34
	— Development Profile	37
	— The Period of Inception	37
	- The Period of Development	38
	- The Period of Maintenance	38
	 Various Uses of Desert National Park 	39
	 Development of Fossil Wood – 'Akal' 	41
	 Tourism Development 	47
	— Interpretation Centre	47

xii

3.	Water Resources	51
	— Source of Surface Water with Background	51
	- Present Water Supply System	52
	— Water Management Strategies for the Future	54
	— Himalayan Water to Desert National Park	56
	— Animal Adaptations	56
	— Water Harvesting in the Arid Region	58
4.	Socio-Economic Aspects	62
	— Present Land Use and Protection	64
	- Settlement Pattern and Food Habits	64
	— Grazing Practices and Cattle Population	71
	— Economy	72
	Welfare of Man in the Park	76
	— Impact of Settlement in the Park	80
	- Impact of Indira Gandhi Canal	84
	— Migration Pattern	85
5.	Floristic Composition and Habitat Diversity	86
	Special Consideration of Ecosystem	87
	— Vegetational History of the Park	90
	 Present Status of Floral Composition 	93
	- Major Habitats	93
	— Physiognomic Distribution	95
	— State Tree - Khejri: The Lifeline of the Desert	103
6.	Faunal Community and Diversity	109
	 Assemblage and Adaptation of Wild Animals 	110
	— Past History	110
	 Utilisation of Habitat 	116
	— Present Faunal Diversity	116
	— Migratory Birds	119
	— Bird Community	121
	 Wildlife Population Census Method 	122
	— Changing Food Chain During the 20th Century	123
	- Indian National Bird - Common Peafowl	126
	— Common Sandgrouse Pigeon	128
	- State Cattle 'Chinkara' and State Bird 'Great	
	Indian Rustard	131

		XIII	
7.	Majo	r Management Issues	139
	<u>—</u> Ма	anagement Objectives	140
	Pro	oblems of Maintenance of Ecosystem	141
	— Co	entrol of Grasses and Weeds	142
	Ma	aintenance of Desert Land	142
	— Ma	aintenance of Wood Land	143
	— Ma	aintenance of Grass Land	143
	— Ро	Ilution Threats	144
	— Pr	oblems of Protection	144
	— Pro	oblems of Mining Activities	144
	— Ро	aching	144
	— Pr	oblems of Tourists	145
8.	Conc	lusion	147
	— Re	search Priorities	148
	Wa	ater Management	149
	Ve	getation Management	149
	— Ar	nimal Management	150
	— То	purist Management	150
	— Ро	ollution Monitoring	151
	— Environmental Management		151
•	— A1	nti-Poaching	152
	Appe	ndices	
	I.	Boundary Description of Desert National Park	153
•	11.	Staffing Pattern	162
	Ш.	Predominant Plant Species of the Thar Desert	164
	IV.	Some Important Grasses in the Thar Desert	171
	V.	Some Important Trees & Shrubs in the Thar Desert	173
•	VI.	Medicinal Uses of Vegetation in the Arid Region	175
	VII.	Common Birds of the Thar Desert	177
	VIII.	Mammals Found in the Thar Desert	187

190

Bibliography