

# Management Plan of the Khangchendzonga National Park

**2008-2018**

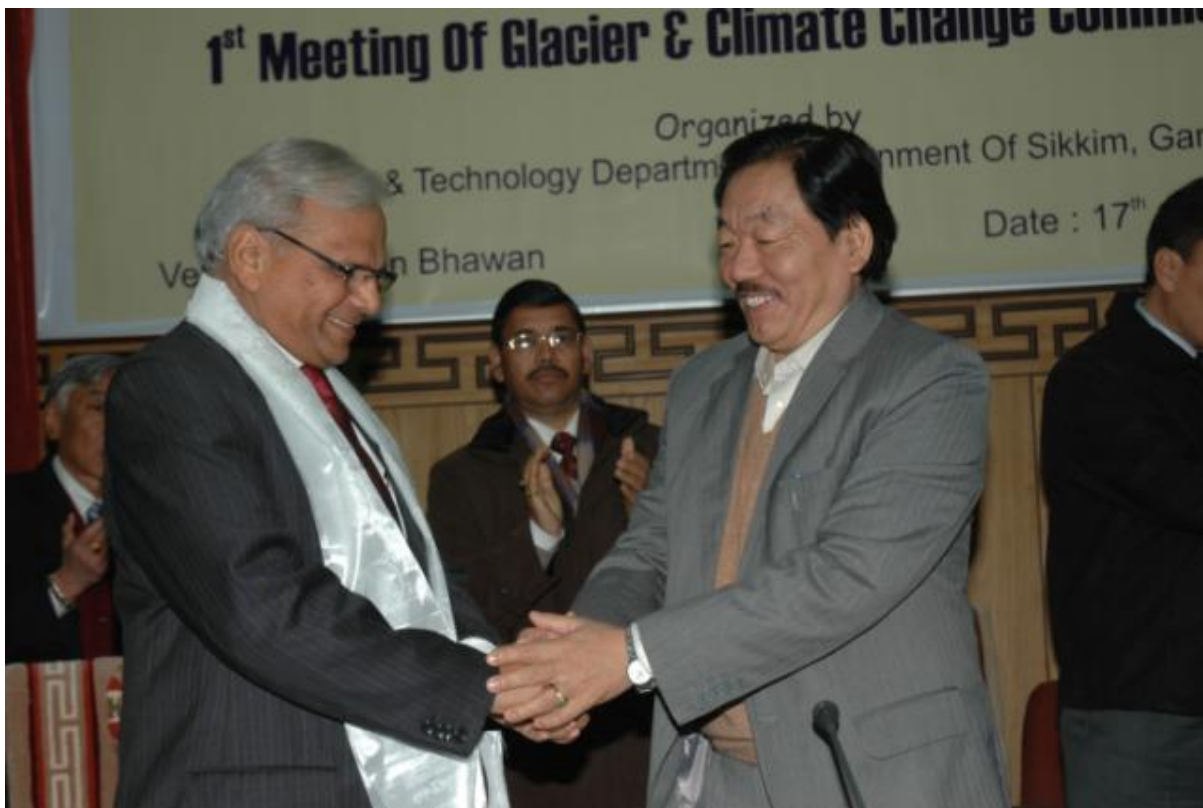
**UPDATED DURING – 2014**



**BLOOD PHEASANT (*Ithaginis cruentus*)**

**State Bird**

**WILDLIFE CIRCLE  
FORESTS, ENVIRONMENT AND WILDLIFE MANAGEMENT  
DEPARTMENT  
GOVERNMENT OF SIKKIM**



Hon'ble Chief Minister Shri Pawan Chamling welcoming the Chairman of Glaciers & Climate Change Commission, Professor, Dr. S.I.Hanain.



Sri. S.B.Subedi, Hon'ble Minister for Forests, Govt. of Sikkim(Centre)  
Sri. Suresh Chandra, IAS, Special Secretary, MoEF, Smt. Veena Upadhaya, IAS, Joint Secretary, MoEF, Dr. R.K.Rai, Additional Director, MoEF, Sri. T.R. Poudyal, IFS, Pr.CCF-Secretary & Sri. S.T.Lachungpa, IFS, Addl. Pr.CCF, addressing the National MAN and Biosphere Committee Meeting held at Gangtok on 19th-21<sup>st</sup>. Nov.2005.



Shri Bhim Prasad Dhungel  
Hon'ble Minister Forests, Environment & Wild Life Management Department,  
Govt. of Sikkim

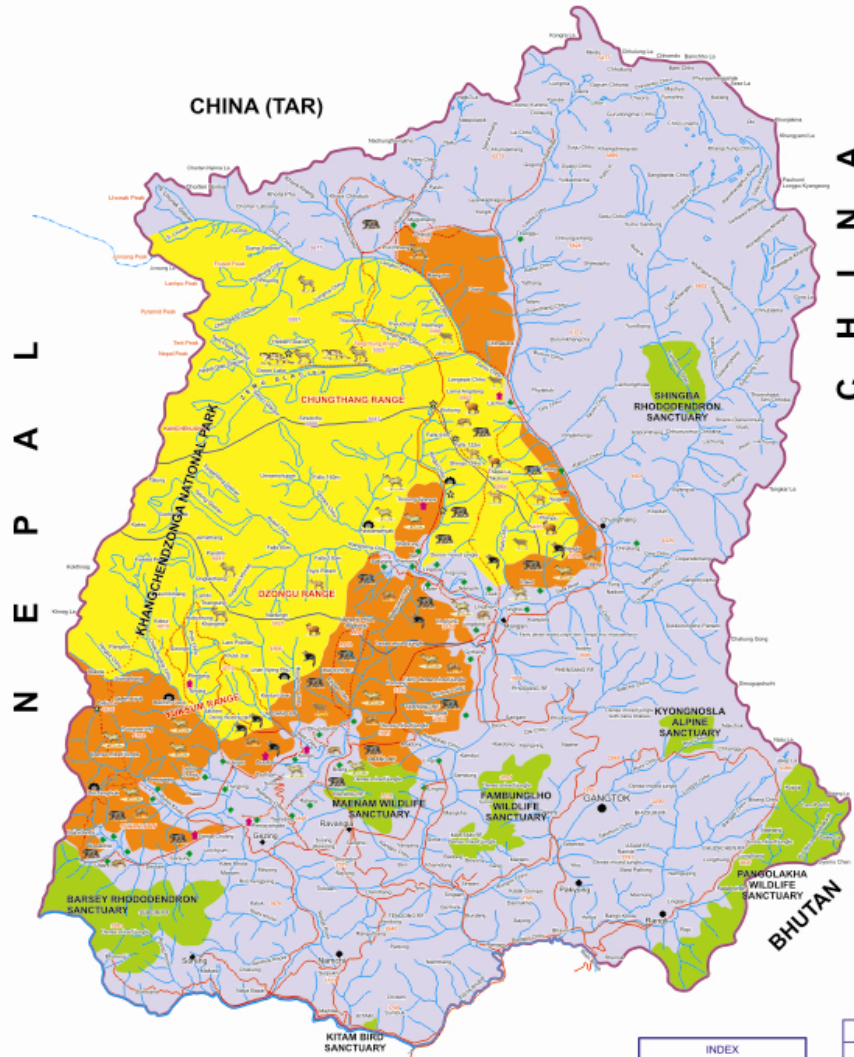


Shri N.T. Bhutia, IFS, Addl. PCCF-cum-Chief Wildlife Warden  
Forests, Environment & Wild Life Management Department,  
Govt. of Sikkim

# KHANGCHENDZONGA NATIONAL PARK IN INDIA : LOCATION



# PROTECTED AREAS IN SIKKIM



PROTECTED AREAS OF SIKKIM	
1. Khangchendzonga Biosphere Reserve	2619.92 Sq. Km.
2. Barsey Rhododendron Sanctuary	104.00 Sq. Km.
3. Kitam Bird Sanctuary	6.00 Sq. Km.
4. Maenam Wildlife Sanctuary	35.34 Sq. Km.
5. Fambungcho Wildlife Sanctuary	51.76 Sq. Km.
6. Pangolakha Wildlife Sanctuary	128.00 Sq. Km.
7. Kyongnosla Alpine Sanctuary	31.00 Sq. Km.
8. Shingba Rhododendron Sanctuary	43.00 Sq. Km.

Note: 1784 Sq. Km. of Khangchendzonga National Park includes in the KBR.

INDEX	
	Designated Trekking Trail
	Road
	River (Khola, Chu)
	Lake (Pokhari, Cho)
	Sacred Cave
	Holy Spot
	Monastery
	Pitng Village of KBR
	KBR - Core Zone
	KBR - Buffer Zone
	Sanctuaries

WILD ANIMALS OF KBR	
	Snow Leopard
	Goral
	Himalayan Black Bear
	Musk Deer
	Himalayan Thar/Sheep
	Blue Sheep
	Red Panda
	Serow
	Wild Boar

Forests, Environment & Wildlife Management Department, Government of Sikkim

Map showing Protected Areas in Sikkim



Management Plan Expert Committee Meeting in the Chamber of PCCF-Secretary, on 28-03-08.



**Management Plan Expert Committee Meeting in the Chamber of PCCF-Secretary, on 28-03-08.**

**(PART-I)**  
**DESCRIPTION & EVALUATION**  
**THE PROTECTED AREA: EXISTING SITUATION**

<b>CONTENTS</b>	<b>Page No</b>
<b>CHAPTER -1: Introduction to the Area</b>	<b>1-2</b>
1.1 Name, Location, Constitution and the Extent of Area	1
1.2 Approach and Access	1
1.3 The Statement of Significance	1 - 2
<b>CHAPTER - 2: Background Information and Attributes:</b>	<b>3 - 31</b>
2.1 Boundaries	3
2.2 Geology, Rock and Soil	3
2.3 Terrain	4
2.3.1. KNP-MAP – I, II, III,	5-7
2.4 Climate with KNP map IV	8-10
2.5 Water Sources with KNP map V, VI, VII & VIII	10-18
2.6 Range of Wildlife, Status Distribution, and Habitat.	19
2.6.1 Vegetation and Forest Type with KNP map IX & X	19-26
2.6.2 Animals with KNP map XI	26 - 31
<b>CHAPTER – 3: History of Management and Present Practices</b>	<b>32 - 61</b>
3.1 General	32 - 33
3.2 Timber Operations Including Bamboo and Firewood Harvest;	33 - 34
3.3 Non Wood Forest Produce (NWP) Collection;	34
3.4 Leases;	34
3.5 Other Programmes and Activities;	34- 35
3.5.1. Centrally Sponsored Schemes.	35
3.6 Forest Protection;	35 - 36
3.6.1 Power and Functions delegated to the field level officials.	36
3.6.2 Legal Status:	36
3.6.3 Hunting:	36
3.6.4. Illegal Activities:	36
3.6.5. Domestic Livestock Grazing.	37
3.6.6 Wild Fires:	37
3.6.7 Insect Attacks and Pathological Problems:	37
3.6.8 Wildlife Health:	38 - 39
3.6.9 Interagency Programmes and Problems:	39
3.7 Tourism:	39-44
3.8 Research Monitoring and Training:	45 -48
3.9 Wildlife Conservation Strategies and Their Evaluation:	48-53
3.10 Administrative set up: with KNP map XII	53- 59
3.11 Communication:	60
3.12 Present and Likely Threats to the Park:	61
<b>CHAPTER – 4: The Protected Area and the Interface Landuse Situation:</b>	<b>62 - 68</b>
4.1 The Existing Situation in the Zone of Influence: with KNP map XIII & XIV	62-66
4.2 The Development Programmes and Conservation Issues:	66-68

**(PART-II)**  
**THE PROPOSED MANAGEMENT**

<b>CHAPTER - 5: The vision, objectives, issues and problems:</b>	<b>69- 81</b>
5.1 The Vision:	69
5.2 Objectives of Management:	69-71
5.2.3. Wildlife Management Plan under 1200MW, Teesta Stage –III.	71-73
5.2.4. 280 MW. Panan H.E. Project, Dzongu, North Sikkim:	74 -76
5.2.5. Wet Land Development	77
5.2.6. Aided Natural Regeneration:	77
5.2.7. Soil and Moisture conservation;	77
5.2.8. Bally Benching in Landslide areas:	77
5.2.9. Development of Camping Sites:	77
Lists of Lakes /Wet Lands in the National park:	78
5.2.10. Control of grazing, poaching, encroachment, illicit felling of timber:	79
5.2.11. Conservation and Management of Himalayan Heritage	
Sami-wild Yak, pure breed (Dee) in KNP:	80
5.3 Constrains in Achieving Objectives:	80-81
<b>CHAPTER – 6: The Strategies:</b>	<b>82 -91</b>
6.1 Boundaries:	82
6.2 Zonation:	82
6.3 Zone Plans: with KNP map XV	82-84
6.4 Theme Plans:	85-91
<b>Chapter- 7: Ecotourism, Interpretation and Conservation Education</b>	<b>92-110</b>
7.1 General:	92-93
7.2 Objectives:	93
7.3 Issues/Problems:	93-94
7.4 The Strategies:	94-95
7.4.1 Identification of a Zone:with 5 nos. of Trekking Trail Maps	96 -100
7.4.2 Infrastructure Development:	101-107
7.4.3 Regulations, Monitoring and Evaluation:	108-110
<b>Chapter – 8: Ecodevelopment:</b>	<b>111-114</b>
8.1 Objectives:	111
8.2 Specific Issues:	111
8.3 Broad Strategies:	111
8.4 Village Level Site Specific Strategies:	111 - 113
8.5 Monitoring and Evaluation:	113 - 114
<b>Chapter – 9: Research, Monitoring and Training:</b>	<b>115- 119</b>
9.1 Research and Monitoring:	115
9.2. Monitoring:	116
9.3 Training:	116
9.3.1 On the Job Training:	116 - 117
9.3.2 Formal Training Courses:	117 - 118
9.3.3. Establishing a Learning Centre:	119
<b>Chapter – 10: Organisation and Administration:</b>	<b>120 - 128</b>
10.1 Structure and Responsibilities:	120 - 126
10.2 Staff Amenities:	127 - 128
<b>Chapter – 11: The Budget:</b>	<b>129 - 143</b>
11.1. Budget, Summary of fund received from State Plan since last five years:	129
Budget, Summary of Fund received from GoI, under 100% CSS: Dev of Park.	130
11.2. Proposed, Year-wise Budget Summary for next 10 Years, viz. 2008-2018.	131 - 138
11.3 Revised, Proposal for four years(2014-18) as per new schedule of rates	139- 143



**Chapter – 12: The Schedule of Operations and Miscellaneous Regulations: 144**

12.1 The Schedule:	144
12.2 Record of Deviations and Implemented Targets:	144
12.3 Control Forms: Total : 54 Nos.	sheet i to xxvii
Annexures: Notifications	1 to 35
12.4 Guidelines for submitting the proposal under Centrally Sponsered scheme: “Integrated Development of Wildlife Habitats”:	42 sheets
Plates: Photo – Plates	46 plates

**COMPONENT 2 (PART-III)**

a. Legal Proceedings Forms for dealing of Wildlife Offence Format:	Form No. 1 - 17 nos
b. Name of Plant species and their medicianial uses:	Appendix I - VIII
c. Maps :	8 plates
d. Office Orders:	11 pages
e. Management Plan Approval accorded by the State Government:	
f. References:	y - z
g. Abbreviations Used :	a - b
.	

=====~~XXXXXXXXXX~~=====

**TEAM LEADERS**

1. Shri. S.T. Lachungpa, IFS, Principal Chief Conservator of Forests-cum-Secretary, Government of Sikkim.
2. Shri. N.T. Bhutia, IFS, Additional Principal Chief Conservator of Forests –cum- Chief Wildlife Warden, Government of Sikkim.
3. Shri. Manjit Singh, IFS, Addl. Principal Chief Conservator of Forests-cum- Member Secretary SPCB.

**EXPERT COMMITTEE FOR VETTING AND SCRUTINIZATION OF WIDLIFE MANAGEMENT PLAN- KHANGCHENDZONGA NATIONAL PARK:**

1. Shri. N.T. Bhutia, IFS, Add. Pr.CCF-cum- Chief Wildlife Warden
2. Shri. Thomas Chandy, IFS, Chief Conservator of Forests, Territorial Circle
3. Shri. S.B.S. Bhaduria, IFS, Chief Conservator of Forests, Land Use and FCA.
4. Shri. S.Z. Lucksom, Director, Parks & Zoo.
5. Representative from Mines & Geology Department, Government of Sikkim.
6. Shri. Chezung Lachungpa, IFS, Conservator of Forest, Land Use Circle.
7. Dr. Dipankar Ghosh- Sr. Coordinator, WWF, Sikkim Unit.
8. Dr. Hemant K. Badola- Scientist, Conservation of Biodiversity & Nodal person KBR, G.B. Pant Institute of Himalayan Environment & Development, Sikkim unit, Gangtok.
9. Dr. A.K. Sahu, Scientist, Botanical Survey of India, Gangtok.
10. Shri. H.P. Pradhan, IFS, Conservator of Forests, Wildlife Circle – Member Secretary.

**PLANNING TEAM MEMBERS:**

1. Shri. Gut Lepcha, SFS, Joint Director, National Park & Zoo.
2. Shri. Nima Wongdi Tamang, SFS, Joint Director, NTFP, SMPB.
3. Shri. Sandeep Tambe, IFS, Joint Secretary, Rural Management & Development Department, Government of Sikkim.
4. Shri. Sanula Bhutia, SFS, Assis. Conservator of Forests, (KNP) North.
5. Shri. Blen Tshering Targain, SFS, Assis. Conservator of Forests (KNP) West.
6. Shri. S.T. Lachungpa, Range Officer (KNP) Chungthang.
7. Shri. Nima Tashi, Programme Coordinator, The Mountain Institute (NGO), Gangtok.

**CONTRIBUTORS:**

1. Shri. Topdhan Rai, SFS, Director (WL & Eco-Tourism), Member Secretary-SPCB.
2. Shri. C.S. Pradhan, SFS, Add. Director (WL & Eco-Tourism), NTFP & SMPB.
3. Smt. Usha Lachungpa, Senior Research Officer, Forests, Env. & Wildlife Management Department.
4. Dr. Nakul Chhetri, ICIMOD.
5. Mutanchi Lom Aal Shezum (MLAS) NGO from Upper Dzongu.
6. Shri. Mingma Lepcha, Range Officer (KNP) Dzongu, North Sikkim.
7. Shri. Shiva Kumar Sharma, SRF.

**MANAGEMENT PLAN PREPARED BY:**

Shri J. B. Subba, Divisional Forest Officer, Khangchendzonga National Park Forests, Environment & Wildlife Management Department, Government of Sikkim.

**REVIEW COMMITTEE OF MANAGEMENT PLAN (August 2014)**

1. Shri J.B. Subba, IFS, Director, Khangchendzonga National Park, (Chairman)
2. Shri Udai Gurung, IFS Additional Director, KNP (Member)
3. Shri Sangay Gyatso Bhutia, Divisional Forest Officer, KNP (Member)
4. Shri. Anguir Bhutia, Divisional Forest Officer, KNP West (Member Secretary)
5. Smt. Dechen Lachungpa, Divisional Forest Officer, SBFP(BC)

## **PREFACE**

The preparation of Management Plan of the Khangchendzonga National Park has coincided with preparation of Sikkim Forest Working Plan, which is being finalized shortly. Further, the enhancement of wages for skilled and non-skilled labours has also been announced by the State Government and has been effected from 01-04-2008, which shall be affecting the proposed activities in the Management Plan in toto. Hence, this Management Plan has to be reviewed by the Expert Committee, within no time and then after every three to four years duration the Plan shall have to be reviewed on the basis of Technological Advancement and its requirement in the field for management of the Park.

Although the Khangchendzonga National Park was declared and notified in the year 1977, but the Management Plan was not prepared till 1990. During the year 1990 a draft Wildlife Management Plan of the Khangchendzonga National Park was prepared for the period from 1990 to 1995, by Shri S.Z.Luksun, the then Field Director, but it was not brought to the notice of the Government for approval and was used within the division, as annual work programme, only.

The Hon'ble Chief Minister remained always advocative towards protection, conservation, preservation, and propagation of the natural resources of the State. HCM was suggesting to the educated youth to take steps to patent some valuable species of the State in the gathering of Government Employee in Gymnasium Hall, Gangtok, on 04-04-08. The Khangchendzonga National Park, occupying 25% of the total geographical area of Sikkim is one of the Biological diversity Hot-Spot and regarded as one of the paradise for the Botanist, Environmentalist, Glaciologist, Ethno-botanist, Ornithologist, Anthropologist, Geologist, Zoologist etc. If the suggestion is valued and taken seriously hundreds and hundreds Phd. Scholars and Scientist of different discipline, like, Doctorate on *Panax spp.* *Codepsis spp.* and likewise on bird spp. tree spp. individual wild animals, wetlands/lakes etc. can be produced by this High Altitude National Park in the days to come.

Management Plan of the Khangchendzonga National Park is prepared on the basis of "A Guide to Planning Wildlife Management in Protected Areas and Managed Landscape" by: Vishwas B. Sawarkar, some of the unusual proposals in the contex of Sikkim Hamalays have been incorporated, which has been opined to be important in the near future, are as under:

- I. Conservation and Management of Himalayan Heritage Semi-wild Yak, pure breed (Dee) in KNP: within the limit of carrying capacity of the particular area/zone for preservation of threatened Yak spp. of Sikkim Himalayas in near future. Detail justification for this proposal is given in Page No. 82 of 5.2.11.

- ii. Purchase, Lease or Chartering/hiring a Halicopter (Chhoper) for the Management of the Park, justification of the proposal is given in Page No. 61 of 3.11.2.
- iii. The government of Sikkim has Constituted a Commission to Study the state of Glaciers and its Impact on Water System in Sikkim, under the Chairmanship of Prof.S.I. Hasnain, Sr. Fellow, Centre for Policy Research, New-Delhi.

Review of the Management Plan in every 3-4 years interval is important and necessary for rearrangement of descriptions and prescription of different work components in the Plan and delition of unnecessary items and addition of different activities on the basis of outcomes of the research work carried out by different institutions and agencies.

At last any valuable suggestions, innovative ideas, advices, corrections and addition/omissions of records and datas as per findings and recordings, to improve the Management Plan of the Khangchendzonga National Park is whole heartedly solicited, for the better management of the Park, as a whole.

(H.P. Pradhan,IFS)  
Chief Conservator of Forests (Wildlife)

J.B.Subba,  
Field Director (KNP)

(N.T.Bhutia, IFS)  
Addl.Pr.CCF-cum-Chief Wildlife Warden)

## FOREWORD

The Management Plan of Khangchendzonga National Park for a period of 10 years was initially prepared and documented by the Khangchendzonga National Park Division of Forests, Environment and Wildlife Management Department, Government of Sikkim in the year 2008. The preparation of this Plan was mandatory since one of the prerequisites for releasing fund under the 100% CSS viz. “Integrated Development of Wildlife Habitats” to the Protected Areas by the concern Ministry was Management Plan projecting the annual fund requirement for proper management of Khangchendzonga National Park. As such, the Management Plan was prepared taking help from the book entitled “A Guide to Planning Wildlife Management in Protected Areas & Managed Landscapes” by Vishwas B. Sawarkar, Wildlife Institute of India (WII) and Management Plan of Sagarmatha National Park, Nepal and Management Plan of Senchal Wildlife Sanctuary, Darjeeling, WB and also after having series of discussion with the senior officers of Forests, Environment and Wildlife Management Department as well as experts from G.B.Pant Institute of Himalayan Environment & Development Sikkim Unit, Pangthang, Gangtok

The Khangchendzonga National Park is the only National Park in Sikkim having an area of 1784 Sq.Km. The Park occupies 25.14 % of total geographical area of Sikkim viz. 78.30 % in North District, 18.32 % in West and 3.38 % South Districts.

The Khangchendzonga National Park Management Plan is at present in 6<sup>th</sup>. Year of its implementation and now needs to be reviewed and updated for further implementation of the remaining four years duration

The Khangchedzonga National Park Management Plan is the guiding and reference document for writing the following international dossiers:

- a). The document for listing of Khangchendzonga National Park in the UNESCO World Heritage Site under the criteria of mixed property.
- b). The document for inclusion of Khangchendzonga Biosphere Reserve in the World Network of BRs of UNESCO under (Man and Biosphere) MAB programme.

The Ministry of Environment and Forests, Government of India has directed to revise and update the Management Plan of Khangchendzonga National Park, which would be attached as Volume II in both the documents mentioned at a) and b) above after revision/updating.

This was followed by constitution of a committee headed by Director Khangchendzonga National Park to revise and update the Khangchendzonga National Park Management Plan vide Office Order No.46/ADM/FEWMD Dated: 12/05/2014

In the revised management plan consisting of twelve chapters describes in detail the importance of the Park in ensuring biological continuity and ecosystem integrity, human communities and economic status, sustainable eco tourism, threat analysis of biodiversity and environmental degradation in the National Park and strategic actions for the next four years, implementation of the work plan, monitoring & evaluation and budget revision.

Cont....

Digitized National Park maps with corrected boundaries have been inserted in the revised plan. The new notifications, photographs, new data of fund receipts, revenue collection etc. have been incorporated in the revised plan.

At last, I would like to place on record my sincere appreciation to Shri. Sangay Gyatso Bhutia, Divisional Forest Officer, Khangchendzonga National Park, whose relentless effort has helped greatly in updating the Khangchendzonga National Park Management Plan.

(J.B. SUBBA, IFS)  
CHAIRMAN OF THE COMMITTEE  
DIRECTOR, KNP/KBR AND HZP

## PART- I

### CHAPTER-1: INTRODUCTION TO THE AREA:

#### 1.1. Name, Location, Constitution and Extent:

Name	Kangchendzonga National Park
Declaration No	Sikkim Official Gazette 95
Declaration Date	26 <sup>th</sup> August 1977 with an initial area 835 sq.kms
Area	Extended to 1784.00 sq km. Vide Not. No. 1/KNP/WL/F27 dated 19.05 .1997
Altitude	1220 – 8585 m
Nearest Town	Mangan & Chungthang in North District & Gyalsing in West Districts and Rabongla in South District.
Road Head	Chungthang, Lachen, Thangu Lingya in North and Yaksom, Tashiding-Labdang, Uttarey in West Sikkim and Phamtam in South Sikkim.
Rail Head	NJP (West Bengal)
Air Port	Bagdogra (West Bengal)
Range	Chungthang, Dzongu and Yuksam
Division	Khangchendzonga National Park
Revenue Sub Division	Mangan ,Chungthang and Gyalsing
District	North, West and South District of Sikkim.
District HQ	Mangan for North District, Gayzing for West District.

#### 1.2. Approach and Access:

The Khangchendzonga National Park occupies as much as 25.14 percent of the total geographical area of the state of Sikkim. The major portion of the park lies in the North District and 1/3 area lies in West district. The motor-able road has connected from NJP (Railway Station) and Bagdogra (Air-port) to the nearest points of the Park, via Melli - Jorethnag – Gayzing – Pelling and Yuksam. The Park is also accessible through Uttarey-Chewa-Bhanzyang or through Dharap- Nambu and through Tashiding-Labdang in western part of the Park. However, the above mentioned points do not touch the boundary of the park, so one has to trek at-least 1 to 4 hours to enter the park depending upon the selection of the road-head points. The average motor able road distance from Melli to the above mentioned points is 100 to 120 km. In the Northern part, one can enter the Park via Chungthang, Dzongu and Thangu, North of Mangan (North District Headquarter). While to visit the Park from Northern part one has to pass through Gangtok or through Rangpoo – Singtam – Dikchu of East District. The distance from Rangpo up to motor able road head of Northern part of the Park is approximately 100 to 130 km. Since the Khangchendzonga National Park (High Altitude) is situated in a far-flung mountainous region, the primary means of transport and communication is on foot only which may take 5 to 10 days or more from the nearest road head depending on the places included in the visitors' itinerary. The Park is considered to be a suitable place for trekking and mountaineering.

#### 1.3 Statement of Significance:

- The third highest point of the Earth's surface, the Khangchendzonga and its surrounding are of major significance not only to Sikkim but also to the Nation. The status of the

National Park is further elevated to the international prestige for its outstanding universal aesthetic and scientific values.

- As an ecological unit in the high Mountains of the world, the area is of important scientific value and offers unique research opportunities to scientists of the Nation, because of its conditions of extreme elevation, associated flora and fauna, culture and environment.
- The high altitude forests and rangeland environment of the Park are not only of aesthetic value but are vital to the local people of the area and down below as the glaciers and rivers of the area are important source of water for people downstream.
- The Park is of major religious and cultural significance in Sikkim since it abounds in sacred mountains and holy places. The Sikkimese people respect their homeland as a sacred hidden valley and refrain from hunting and slaughtering animals. These indigenous belief systems and practices provide important cultural basis for conservation.
- The Park has become an important destination for national and international visitors to Sikkim and benefits the State through promotion of eco-tourism, revenue generation and friendship building. The scenic and wilderness values, which are major tourism resources, must be protected from further exploitation and ill judged commercial development. This can be achieved through participatory planning and management based on sound conservation principles.
- The major portion of the National Park comprises of Glaciers, mountains and lakes. There are about 18 Glaciers and prominent amongst them are, South Lhonak, Langbu, Changsang, Hidden, Tent and Nepal Gap Glacier, Tongshiong, Talung, Onglakthang, East Rathong, Zumthul Phuk and the largest among all is Zemu Glacier. Besides, over 17 crystal clear and placid lakes, the Khangchendzonga National Park is blessed with more than 20 mountain peaks and they boast some of the most magnificent scenery of snow clad in the world. It is place of beauty, charm, peace and remote from the main streams of events.
- Amongst all the peaks, the most glamorous, magnificent, panoramic and predominant peak is the Mount Khangchendzonga (8585m.), the World's third highest peak, which is revered as the Guardian Deity of Sikkim, along with the other peaks namely; in the middle flank is the beautiful Mount Narsing (5825 m.), Mount. Pandim (6691m.) Mount Kuber on the Southern side, the Twin (7350 m.), Nepal Peak (7150 m.), Tent Peak (7365 m.) etc. These lofty peaks, totally or partly have occupied the Khangchendzong National Park and has influenced the climate of the region and rendered a conducive environment for diverse bio-resources including valuable, rare and endangered species of flora, fauna and avi-fauna.
- Besides various fauna and avi-fauna of the Park it is also the store-house of medicinal plants.



## CHAPTER – 2: BACKGROUND INFORMATION AND ATTRIBUTES

### 2.1. Boundaries.

The Park covers seven topo-sheets of Survey of India namely, 78 A/ 1 to 78 A/ 3, 78 A / 5 to 78 A / 7 and 78 A / 10 in 1:25,000 scale. The legal boundaries of the Park in four directions are as mentioned below in the table:

<b>Location</b>	The Khangchendzonga National Park geographically lies between 27* 30' to 27*50' North latitude and 88* 30' to 88*37' east longitude. Its extreme North end lies 123 km. north of Gangtok town (capital of Sikkim) and its extreme western end lies 155 km. west of Gangtok town.
<b>East</b>	This boundary runs from the point of confluence of Lhonak chu and Zemu chu , proceeding along the RF boundary upto just above the confluence of Zemu chu and Teesta River and then passing through the RF above Lachen , Bensoi , Latung , Denga Yuigang until it meets the existing boundary above Darey and proceeding along it and ending up at Ningla.
<b>West</b>	The western limit of Park mostly follows the India-Nepal boundary. But at the extreme north west i.e in the Lhonak glacier lies at the Indo-China border.
<b>North</b>	It starts from the point below Lhonak Peak on the Tibet Boundary proceeding along the upper edge of the South Lhonak Glacier and then following the Goma Chu, Langbu Chu, Lhonak Chu and ending up at the confluence of Lhonak Chu and Zema Chu near Zema.
<b>South</b>	In the south, it includes the Reserve forests above Toong, Tholung valley, Hee,Taryang, Karchi,Yuksam, Labdang, Khechopalri, Chhaney, up to Singalila Range covering the catchment area of Ringyong, Monmu, Kayam, Prek, rivers etc.

### 2.2 Geology, Rock and Soil:

The soil in the Park and its areas is predominantly acidic and rich in humus, with dark brown to reddish brown colour on sloping hills and fine loamy soils with dark grayish brown to dark brown colour occur on steep low hill slopes, water holding capacity of the soil is medium. The erosion and deposition by rivers and rivulets have resulted in a sandy and sandy loam, clayey soil mixed with heterogeneous matrix in some places. The rocks in the area are transaxial belt and the inner belt consists of Precambrian Daling and Darjeeling group of Meta sediments and inner development of Buxa group of rocks. The aril belt exposes the crystalline rocks of the central region and intensive granites. There are predominant groups, Gneiss and Daling groups along with some intermediaries Gneissic groups constitute the main body of the Himalaya. The characteristics of the soil in the Park are variable due to variation in the topography and the weathering of parent rock. In general soil is loamy sand to silt-clay-loam in texture varying in depth from few centimeters in depth to a few meters. The soil is mostly acidic with pH ranging from 5.0 to 6.0 or more. The organic matter content of the soil varies mostly between 2-5% and in some areas soil is having even 10% organic content. Thus the soils are quite productive. The soil of this area is derived from shales, schists and conglomerates, which forms a more sandy soil on the upper part of the foothill zones and become progressively clayey in the lower reaches. All the snow- capped mountains and high ridges have skeletal rocks of thin layer.

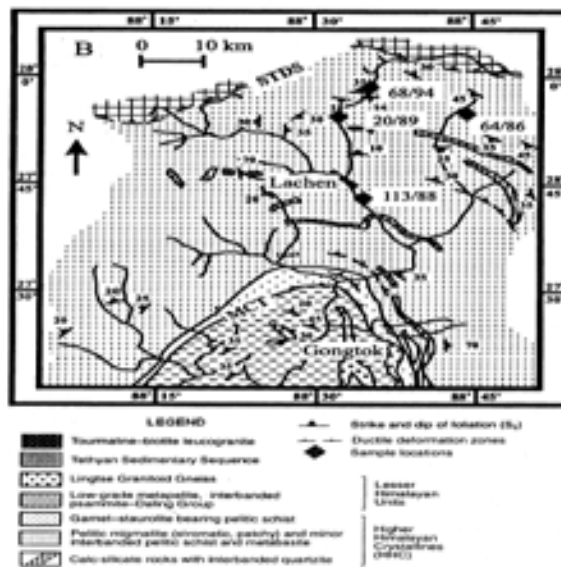
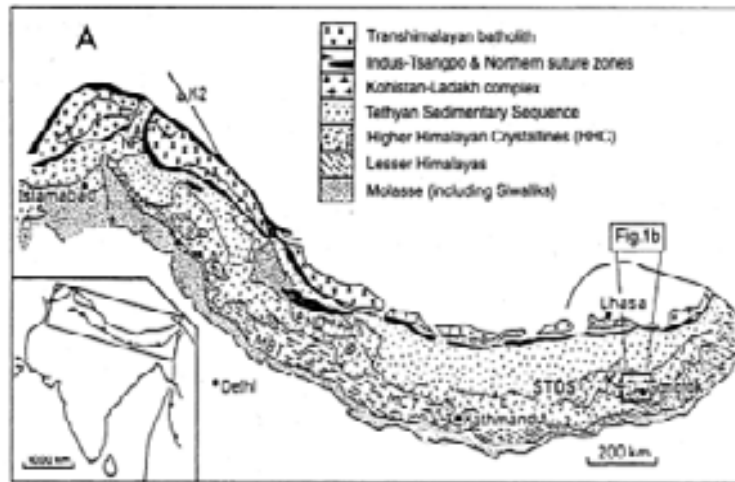
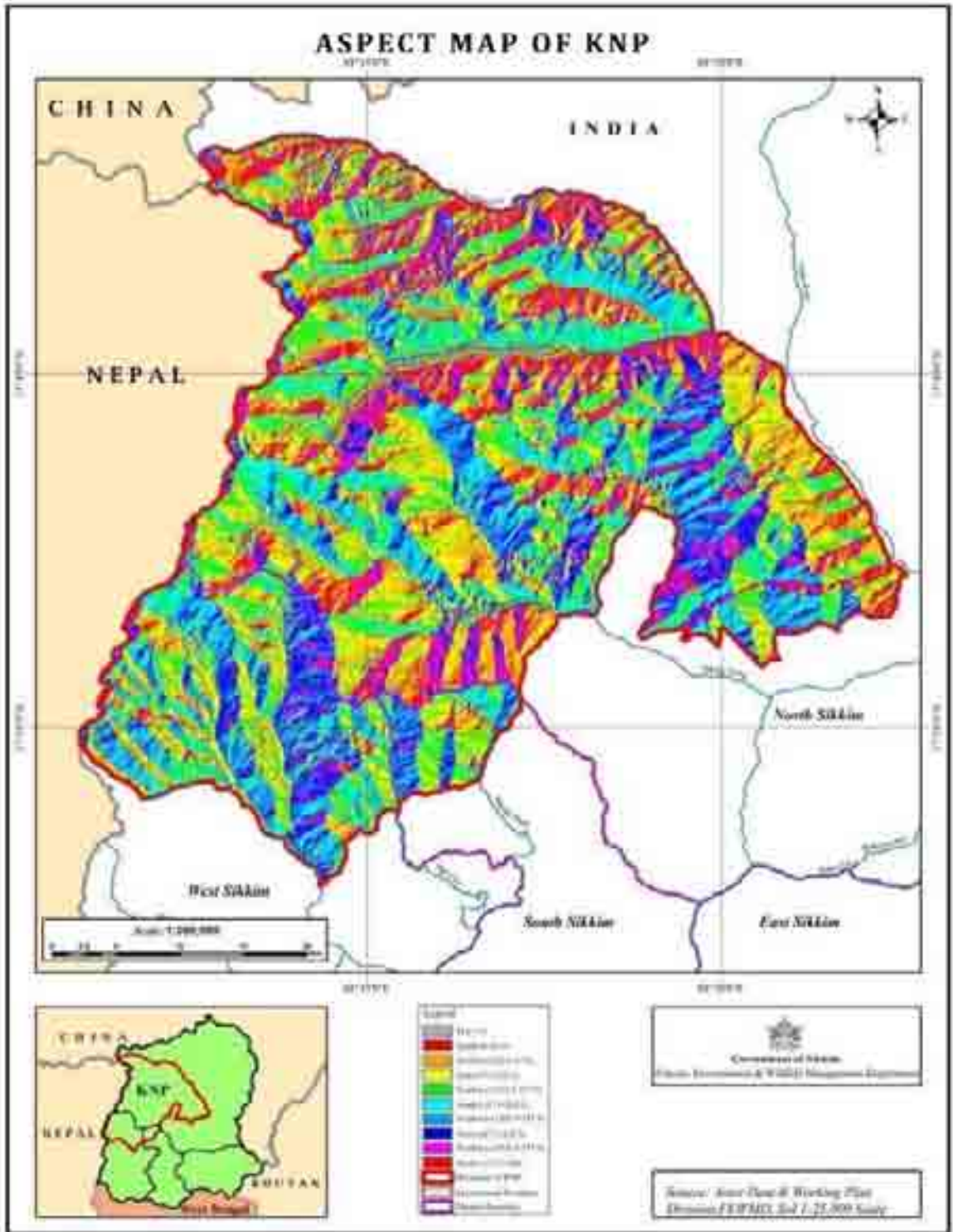


Fig. 1. (A) Generalized map of the Himalayas showing different tectonic domains and the lithounits. MBT: Main Boundary Fault; NP: Nanga Parbat; ND: Nanda Devi; MCT: Main Central Thrust Zone; STDS: South Tibetan Detachment System. (B) Sample locations (filled diamonds) from the Sikkim sections used in this work, along with the sample numbers. Modified from Neogi et al. [6].

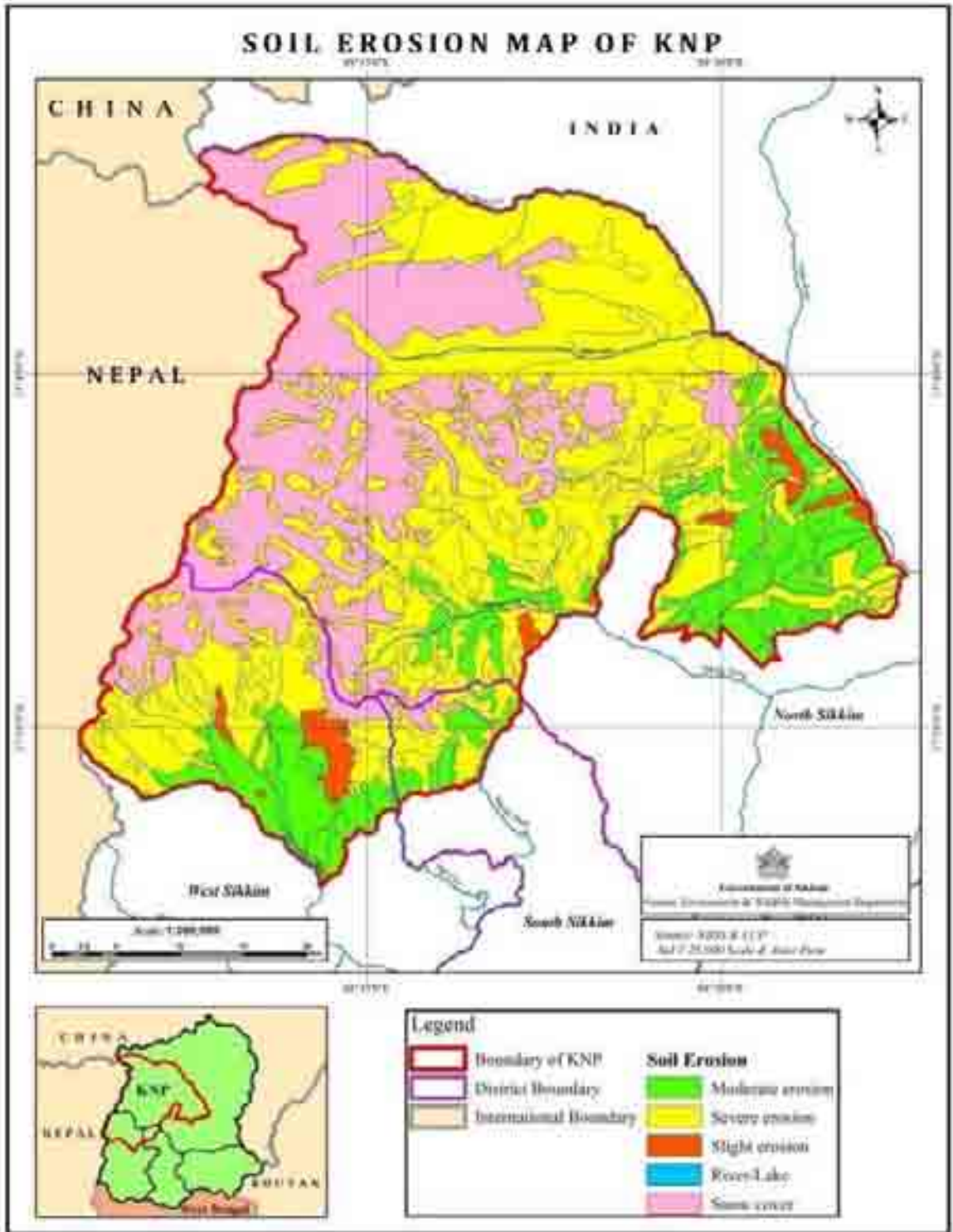
**Fig-I.**

**2.3. Terrain:**

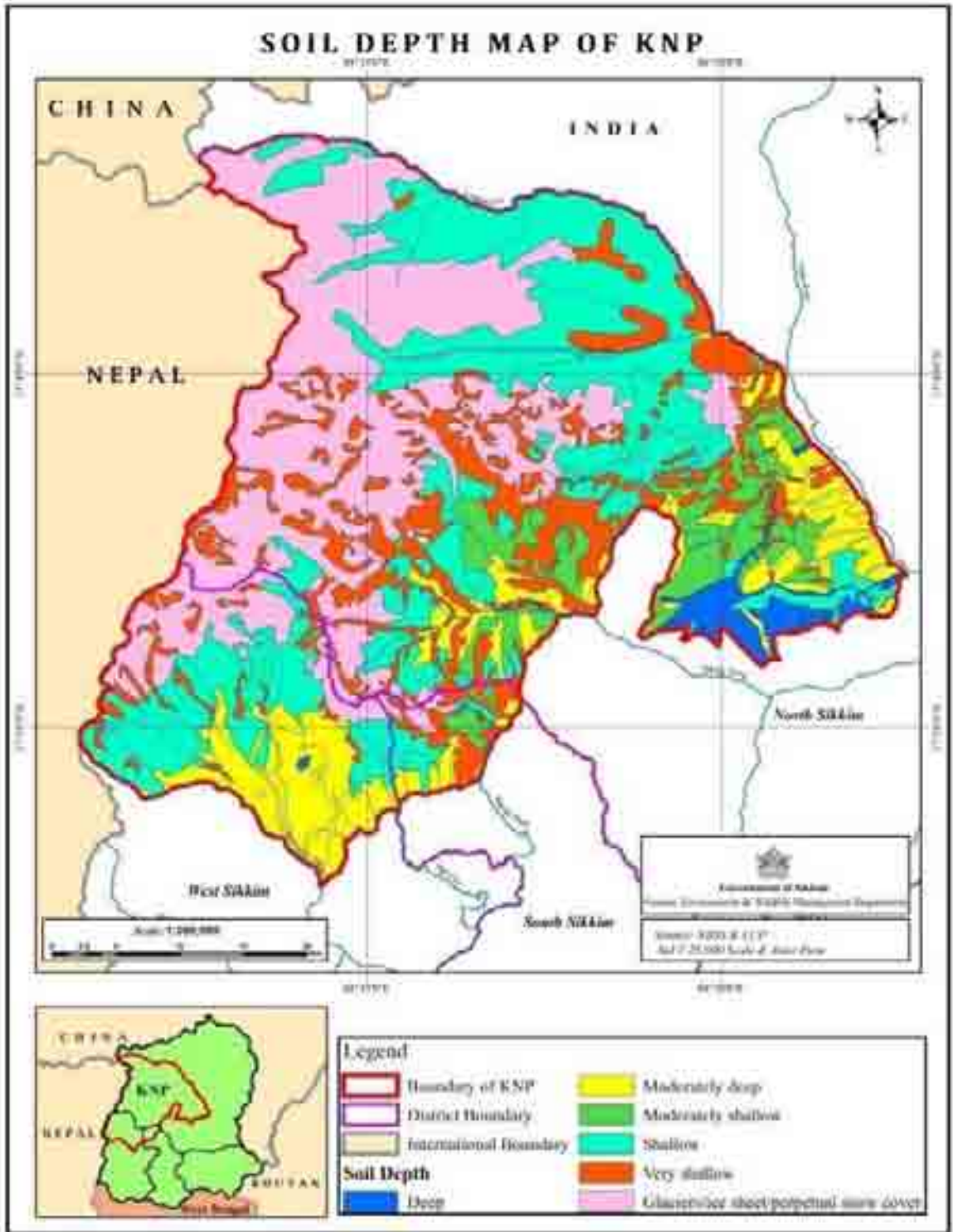
The KNP extends over a large part of the state and as such has diverse terrain. The altitude varies from 500 meters to more than 8500 meters, with almost 50% of the area having average altitude between 3000 to 5000 meters. All categories of aspect are present in the KNP, majority areas having North West to North aspect (30% of areas) and South East to South aspect (21%). The drainage pattern is governed by the ridge structure. Rivers originating in the eastern plank drain to River Teesta and on west drain to River Rangit. The slopes ranges from gentle sloping (<15%) to very steep slopes (>90%). Hence there are patches of landslides and almost 30% of the area is prone to severe erosion.



KNP-MAP- I.



KNP-MAP-II.



KNP-MAP-III.

#### **2.4. Climate:**

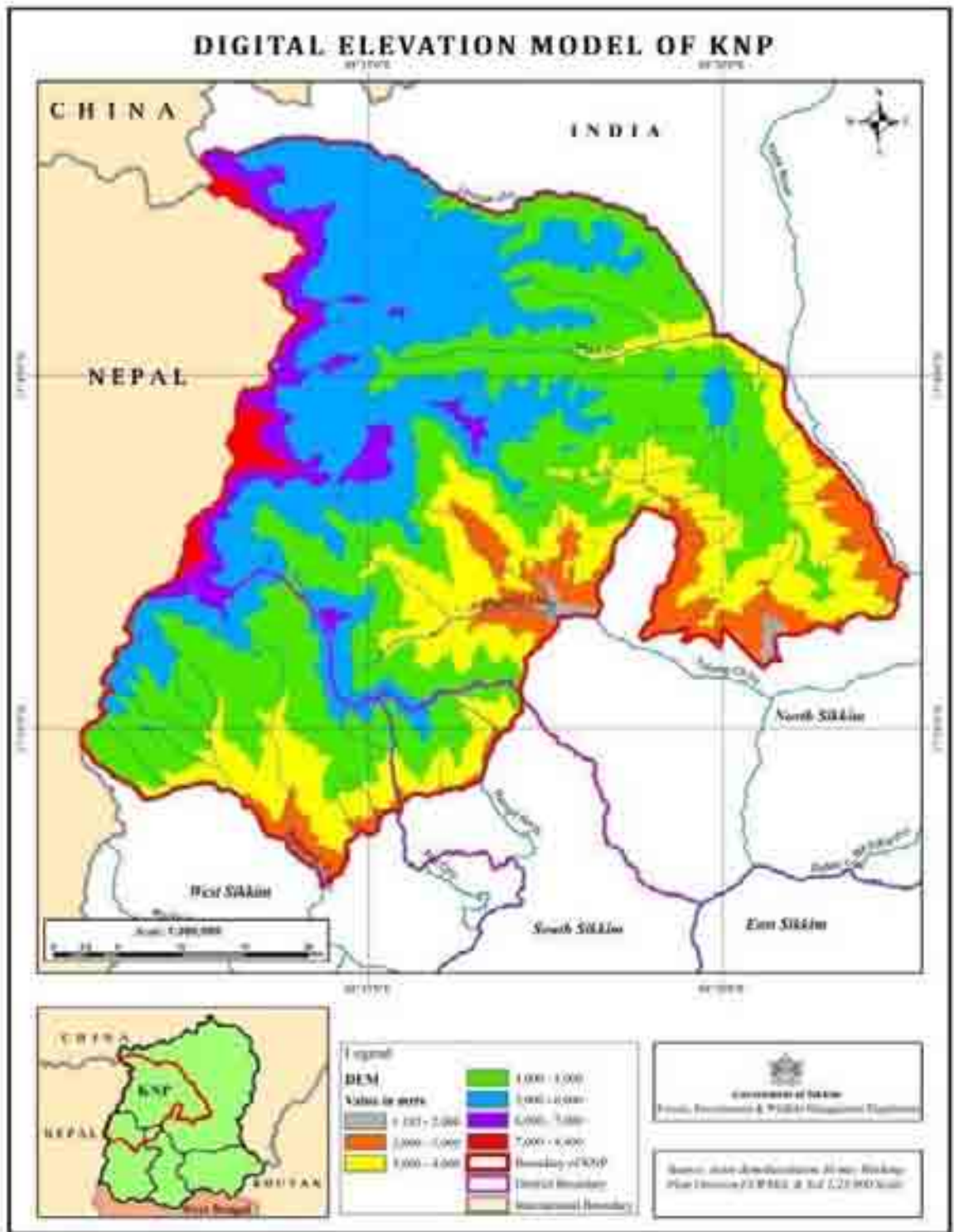
Climate in the KNP varies from place to place due to great altitudinal variations. It is burning summer at the foothills and freezing chills in winter at higher mountains. The weather is pleasant during spring and autumn. The Khangchendzonga National Park area falls under heavy rain fall area in the country and it varies from place to place from 2000 to 5000 mm. annually. Generally the rain fall is heavy and well distributed during the months of June to September, of which June–July are the wettest months, while it is moderate in the month of April and October. It is very low from November to February. Settlement of Tibetan community with a population of 90 exists in the Tshoka village, within the core area on the south-west part of the Park. The Buffer Zone of the Park is surrounded by number of small villages. The population consists of Lepcha, Bhutias and Nepalese in the Buffer villages of the Park. The villages such as Beh, Sakyong, Pentong, Satdharey, Leek, Shipgyar, Saffo, Lingya, situated in the buffer zone of central part of the Park are inhabited by Lepchas mainly, while the Chungthang, Lachen, Munsithang, Pegong consist of Bhutias with few Nepalese communities. The western part of the Park such as Yaksom, Tsong, Nesha, Chongrang, Kongri, Labdang, Dhupi, Norkhola, upper Karjee, is dominated by Nepalese only. About 75 % of households are considered to be at subsistence level and they depend on the National Park for their livelihood. The rural economy of the area is of fixed type and mostly depends on traditional farming, horticulture, agriculture and animal husbandry apart from tourism. As such this Park has least biotic interference. Generally, the colder and drier climate prevails in the North as compared to warmer and more humid climate in the lower foothills i.e. in the Eastern and Southern part of the Park.

##### **2.4.1 Rainfall pattern and distribution.**

Two prominent seasons can be felt in the park i.e. winter and summer with a short spell of spring in April and autumn in later half of October. During November to February it gets winter rain and sometimes pre-monsoon shower starts from April with a short spell of dry climate in the month of March. Usually April and May is the best season for visitors, normally they are attracted by the beautiful and varied blooming flowers in the Park. This adds a fragrance to the enchanting panoramic view of Mt Khangchendzonga. Flowers like primulas, penduncularis and potentillas with different colours form a soft cushion over the open barren areas of the Park adding to the beauty of landscape. The average annual rainfall of its about 3000mm. Bright sunshine hour is very less in the higher altitude during summer & winter seasons i.e. ½ hour to 2 hour a day. In such areas, sunshine hours is more in the month of March to May. In lower zone the sunshine hour is more i.e. 7-8 hour in winter and 8-9 hour in summer. Hailstorm occurs in the lower zone during February March. Wind velocity in the higher zone is much more as compared to lower zone. Wind velocity is not recorded yet inside the Park.

##### **2.4.2 Temperature:**

Due to altitudinal variation the temperature distribution shows north-south change. The northern portion which is occupied by the greater Himalayan range has hardly the temperature is above the freezing point, to the south east towards the foothill zones, the temperature in various season varies. In the park maximum temperature varies from 15<sup>0</sup> - 20<sup>0</sup> and the minimum temperature ranges from 30<sup>0</sup> - 0<sup>0</sup>. The rainfall in general increases as it comes down to South from North. Year round pattern of temperature for the Park has not been recorded so far.



KNP-MAP-IV.

**2.4.3 Humidity;**

The Khangchendzonga National Park and its surrounding experiences a wide range of humidity but generally remains 70 % in most of the time, however it rises up to 95 % during June-July. The annual means being *ca* 82.5 %. Year round pattern of Humidity for the Park has not been recorded so far.

**2.4.4 Wind speeds;**

Gale force winds are common in the higher elevation .Wind of high velocity is not uncommon especially in the reaches above 2500m. Cyclonic damage of limited extent is almost an annual phenomenon. Wind direction above mountain peaks is uniform, but lower level wind direction is determined as per the geological aspect and slopes of the areas, as shown in **KNP-MAP-I**.Year round pattern of wind speed for the Park has not been recorded so far.

**2.4.5 Drought, and its periodicity:**

The summer and winter seasons are predominating in the Park, so the advancing summer monsoon cloud penetrates into the valleys carrying moisture. The moist cloud is forced to lift by increasingly higher mountain ranges as it advances north wards and precipitates. Relative humidity remains at 100% even in the upper valleys during monsoon, and humidity rapidly decreases after monsoon. Climate of the Park therefore can be described as generally moist and cool in summer and cold and dry in winter. There are marked variations in temperature and precipitation influenced by altitude and seasons. During summer the Park area remains moist and humid and snowy winter starts immediately after summer season, so, the occurrence of drought in the Park area have not been reported till date.

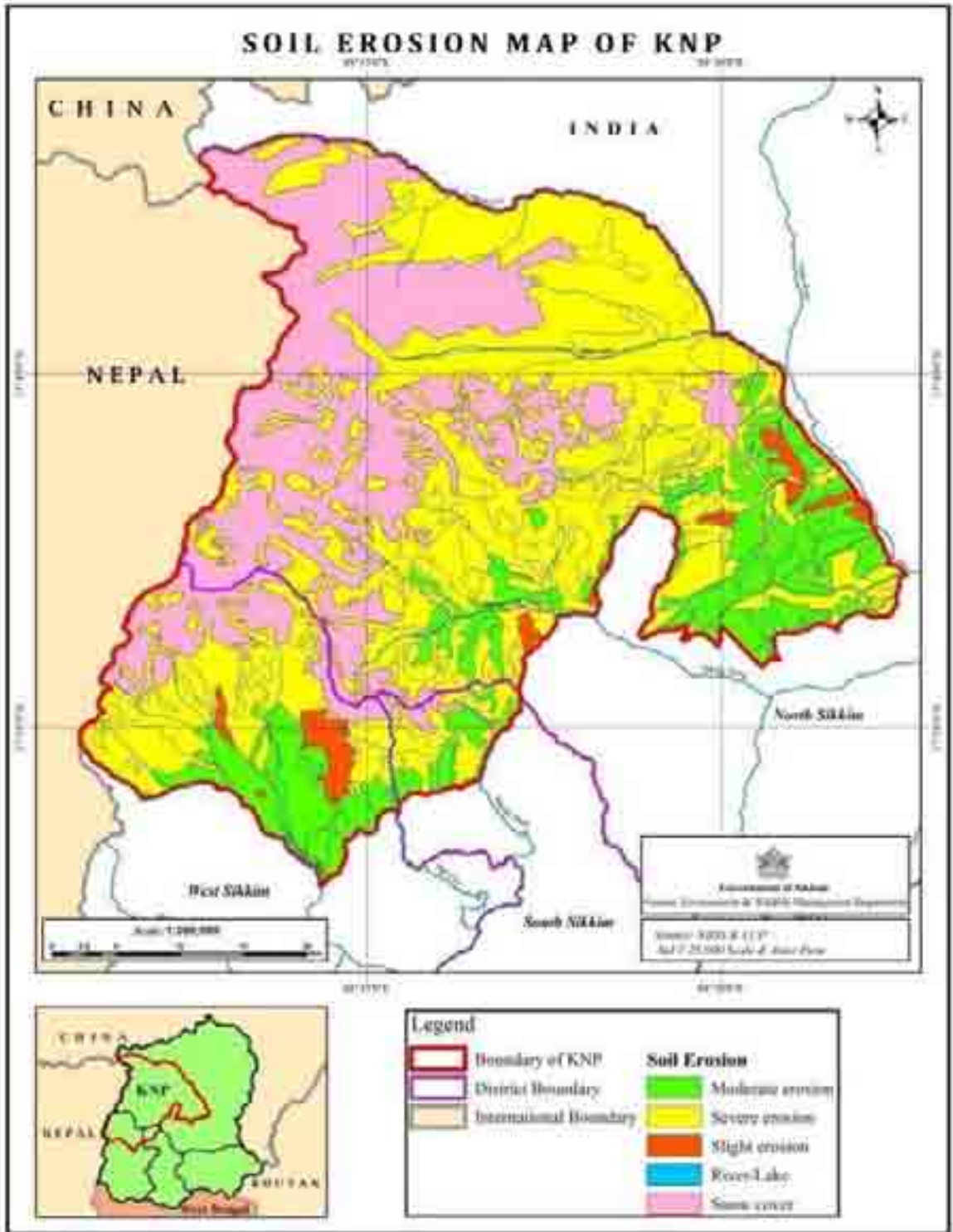
**2.5. Water Resources:**

Whole State of Sikkim is a Catchments of Teesta and Rangeet Rivers. The sources of these Rivers are within the Khangchendzonga national Park. These Rivers are snow fed and drain towards South and South-East from North and North-East.

**I. Major Peaks and Mountains within the Park**

Sl.No.	Peaks & Mountains	District	Height in mtrs.
1	Mt. Khangchendzonga	West	8585
2	Mt. Narsing	West	5825
3	Mt. Pandim	-do-	6691
4	Mt. Siniolchu	North	6886
5	Mt. Simvo	-do-	6811
6	Tent Peak	North	7365
7	Jhoponu Peak	West	5963
8	Paki Lho Peak	North	4144
9	Lama Angdang Peak	-do-	5868
10	Singdamringu Peak	-do-	3751
11	Lhokhamburich Peak	-do-	5497
12	Ungburnam Khang Peak	-do-	--
13	The Twin peak	-do-	7350
14	Nepal Peak	-do-	7350
15	Forked Peak	-do-	7150
16	Pharek Peak	-do-	--
17	Rathong Peak	-do-	6678
18	Kokthang Peak	-do-	6147
19	Yajuknamteng Peak	-do-	5643
20	Mt. Tinchengkang	West	6010
21	Frey's Peak (Chaurigang)	-do-	5830
22	Fluted Peak	North	6084
23	Kabru North	West	7338
24	Kabru South	West	7317
25	Goechala Peak	West	6115
26	Talung Peak	West	7349





KNP-MAP-V.

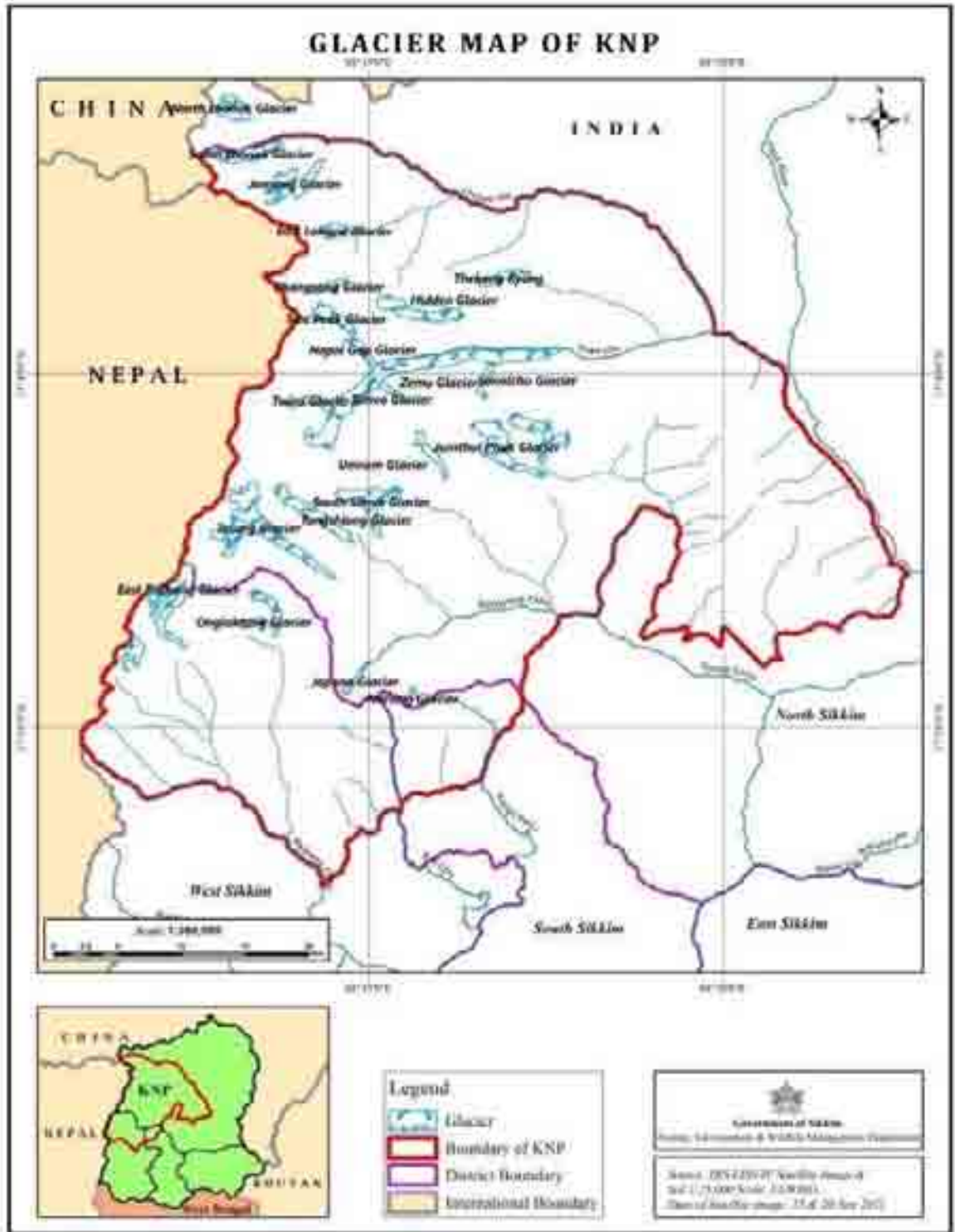
**Glaciers within the National Park:**

Sl.No.	Name of Glaciers	District-Wise location
1	Zemu Glacier, 26 Km long and 300m wide approx, largest in the Park	North
2	Tent Peak Glacier	-do-
3	Nepal Gap Glacier	-do-
4	Zumthul phuk Glacier	-do-
5	Talung Glacier	-do-
6	Siniolchu Glacier	-do-
7	Simvo Glacier	-do-
8	South Simvo Glacier	-do-
9	Twins Glacier	-do-
10	Hidden Glacier	-do-
11	Changsang Glacier	-do-
12	East Longpo Glacier	-do-
13	South Lhonak Glacier	-do-
14	Tongshiong Glacier	West
15	Thekang Kiong Glacier	-do-
16	Jonsang Glacier	-do-
17	Onglakthang Glacier	-do-
18	East Rathong Glacier	-do-



Bhramini Duck(*Tadorna ferruginea*) in Green Lake, 17000ft. alt.

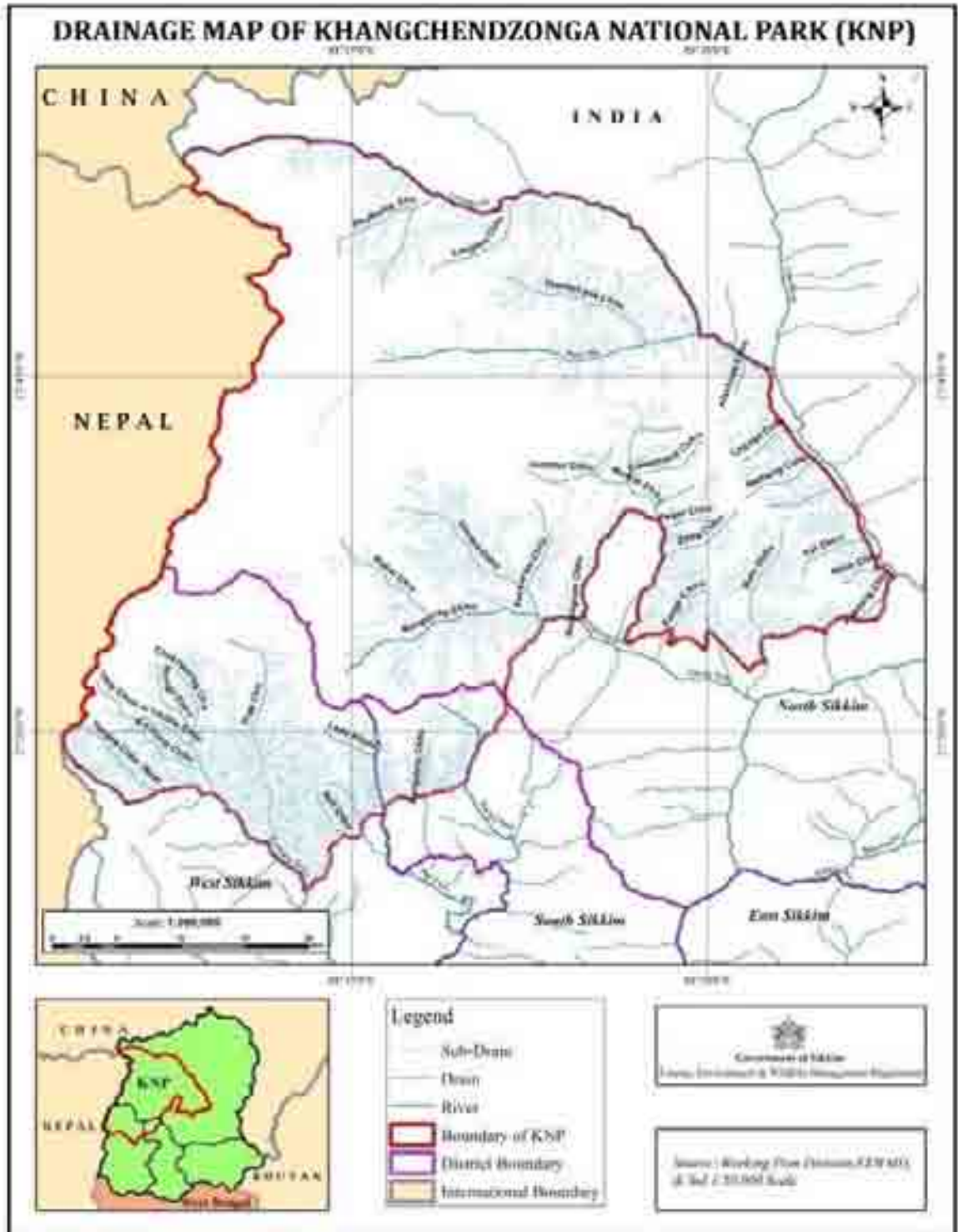
**Fig-II**



KNP-MAP-VI.

2.5.2. Rivers and streams within the Park:

No.	Name of Rivers & Streams	District-wise location	Covers KNP-Buffer villages	
1.	Teesta River	North-East South	Thangu,Lachen,Lachen,Chhaten,Denga,Yuigang, Mensithang,Chungthang, Pegong, Theng, Bop, Shipgyer etc.	
2.	Rangit River	West-South	Karchi RF, Sada-Famtam, Borong, Tashiding, Legship etc,	
3.	Naku Chhu (Naku khola)	North	Lachen,Chhaten,Denga,Yuigang, Mensithang,Chungthang, Pegong, Theng, Bop, Shipgyer etc.	
4.	Lhonak chhu	-do-		
5.	Chyaga Chhu	-do-		
6.	Nathang Chhu	-do-		
7.	Yukti Chhu	-do-		
8.	Kwang Chhu	-do-		
9.	Yel Chhu	-do-		
10.	Phim Chhu	-do-		
11.	Ramam Chhu	-do-		Ramam, Saffu, Pakel, Salim, Leek, Tingvong, Payer, Kusung, Namprik, Lingzya, Beh, Myong, Tshana, Tholung Monastery, Pentong Sakyong, Lom, Sangnok Gaor,etc.
12.	Rahi Chhu	-do-		
13.	Zong Chhu	-do-		
14.	Tadung Chhu	-do-		
15.	Rangli Chhu	-do-		
16.	Kishong Chhu	-do-		
17.	Jumthul Chhu	-do-		
18.	Ringpi Chhu	-do-		
19.	Ravingram Chhu	-do-		
20.	Passaram Chhu	-do-		
21.	Umram Chhu	-do-		
22.	Rukel Chhu	-do-		
23.	Rangyong Chhu	-do-		
24.	Kayam Chhu	South	Sada, Fhamtam, Lingi Paiyong of South Sikkim.	
25.	Rangit Chhu	-do-		
26.	Rangdong Chhu	-do-		
27.	Rel Chhu	-do-	Chongi, Yambong, Chojo, Khechelpolri, Yuksam, Chung, Hungri, Neshu, Chongrang, Kongri, Labdang, Dhupi dara, Karjee, Mangnam., Norkhola, etc. of West Sikkim.	
28.	Ledo Chhu	West		
29.	Rehi Chhu	-do-		
30.	Prek Chhu	-do-		
31.	Kokchurang Chhu	-do-		
32.	Chokchuong Chhu	-do-		
33.	Rungji Chhu	-do-		
34.	Tikip Chhu	-do-		
35.	Yangsa Chhu	-do-		
36.	Gomathang Khola	-do-		
37.	Rathong Chhu	-do-		



KNP-MAP-VII.

**2.5.3. Nature and Distribution of Sources of Water:**

The park contains major glacier complexes namely: Zemu Glacier, Lohnak Glacier, Tolung glacier, Rathong glacier and numerous small pockets of glacier and snow-capped mountains. These in turn feed the rivers and drains. Major rivers emerging from these glaciers are Goma chu, Zemu Chhu, Lhonak chu in northern part, Tolung chu, Rangyong chu, Ravingram chu, Umrang chu and Rukel in central portion and Prek chu, Ralli khola, Rimbi khola, Ringyang khola and Rangit khola in western portion of the park. All the streams mostly drain from north-west to East and South-East direction of the Park.

**2.5.4. Glaciers in the Northern India:**

Kulkarni, armed with a doctorate in glaciology from Canada's McGill University, during his regular annual visits to the Himalayas, he observed glaciers in the northern region smarting under heat. While many smaller glaciers – a few football fields vast – may already have disappeared from the face of the earth, the larger ones, also accumulating ice over tens of thousands of years, are merely biding their time. When glaciers break apart into pieces, they release zillions of litres of extra water into the streams and rivers that are the lifeline of more than 600 million people of the Indo-Gangetic plains. And the melting, some experts hold, even has a direct impact on the lives of millions living hundreds of kilometres away.

But there is no dispute over the fact that the glaciers are in danger. Kulkarni's latest study that appeared in the prestigious *Current Science Journal* in January this year looked at 466 glaciers in Chenab, Parbati and Baspa basins originating in the northern Himalayas. The investigation showed an overall reduction in glacial area from 2077 sq km in 1962 to 1628 sq km at present – a whopping 21 per cent reduction. Described by the United Nations as the “water towers” of Asia, glaciers store water quite like huge tanks in the rainy season. In summer, the ice masses begin to melt, and the melted water thus released helps maintain river flows during dry periods. Indian scientists, several international organizations such as the Inter-government Panel on Climate Change (IPCC), the United Nations Environment Programme, and the World Wildlife Fund have expressed worry over the alarming depletion of glacial ice. If this continues, the Himalayan glaciers may shrink to one-fifth of their volume within a few decades, cautions a recent IPCC report. But some scientists think the glaciers are retreating at a slower rate than before. As proof, they point to certain glaciers in the Himalayan region. Gangotri, for instance, is retreating at a rate of 6 metres per year now as compared to more than 20 metres of retreat in the eighties, says Anjani Kumar Tangri of the UP State Remote Sensing Centre in Lucknow.

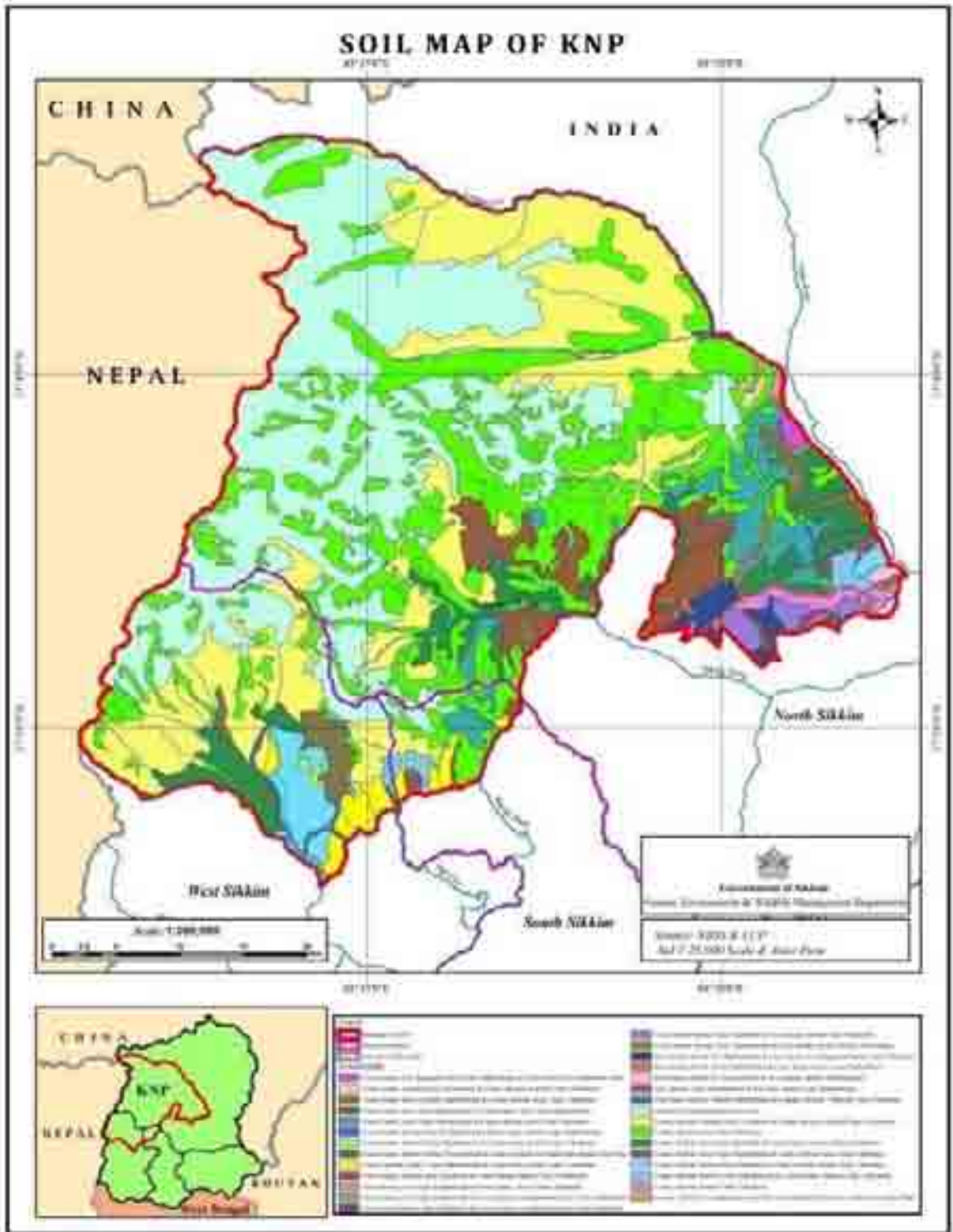
**2.5.5. Glacial Lake Outburst Flooding (GLOF).**

Glacial lakes that exist in the vicinity of glaciers, look deceptively calm but are in a state of continuous flux and excessive melting of the glacier can cause them to burst their banks wreaking immense damage downstream a phenomenon known as Glacial Lake Outburst Flooding (GLOF). Global warming is leading to glacier receding or melting excessively. But no one is yet sure of reasons that cause global warming. It is definitely not happening because of localized action and perhaps being triggered by global industrialization and development. “The melting glaciers represent a time-bomb that is ticking away even as we speak.” cautions Pradeep Mool, a glacial specialist at Kathmandu's International Centre for Integrated Mountain Development.

“Glaciers melt to form high altitude lakes, dammed with [the] debris and moraine that characterize the landscape of the Himalaya. But as the water from glacial melt accumulates over the years, these dams, which are structurally weak, suddenly give way – resulting in what we call glacial lake outburst floods, or GLOFS.”, indeed, are the most obvious results of glacial melt. In 1964, one such GLOF destroyed entire stretches of highway in China and washed 12 timber trucks more than 70 km down-stream. A GLOF at Nepal’s Dig Tsho glacier in 1985 destroyed a hydroelectric project near Namche Bazaar, as well as bridges, house and farmlands worth USD 4 million. “And it isn’t just water that crashes down into the valleys.” Says Mool. Receding Himalayan glaciers – likely to affect hundreds of millions of people facing GLOFS or drying rivers – are only a single facet in a montage of global environmental breakdown. Shrinking glaciers – like rising sea levels, like melting Arctic ice sheets – can be likened to thermometers signifying the arrival of global warming. In literally countless ways, climate change will lead to transformations of South Asian and global agriculture, demography, the larger economy and society as a whole. For all of this, melting glaciers are but a seemingly timid warning that nature has delivered – to those who will listen. Therefore, even as this debate rages on, glaciers are slowly but steadily melting away. On this account the government of Sikkim has Constituted a Commission to Study the state of Glaciers and its Impact on Water System in Sikkim, under the Chairmanship of Prof.S.I. Hasnain, Sr. Fellow, Centre for Policy Research, New Delhi, vide Notification No.99/ Home/2007, dated, 26<sup>th</sup>.September,2007, issued from Home Department, Government of Sikkim. Some of the prominent Glaciers within the Khangchendzonga National Park is shown in **KNP-MAP- VI**.

#### **2.5.6. Floods:**

Some landslide has scarred the mountain across the river. It might, surely be this landslide has not occurred because of environmental degradation due to deforestation as there is no human activity here. It has perhaps been triggered as a part of a natural upheaval process This wilderness is their domain and the human being in fact the intruders. It hardly rains here as the clouds are obstructed from reaching the lake by the snowy peaks that surround it. No precedence of floods exists but during the monsoon season the volume of the rivers increases drastically. Normally, flash floods are regular phenomenon in the streams and rivulets during monsoon season and sometimes damages public property including crops on either side of its way. In the higher elevation, the volume and current of the streams and rivulets increases in the afternoon and decreases in the morning, as because of the melting and freezing of snow in the mountain peaks.



KNP-MAP-VIII.



## 2.6. Range of wildlife, Status distribution and habitat:

Major significance is accounted due to the reason that this Park harbours the number of schedule I animals which are given maximum protection in the National and International level. The Park area is main inhabitant of Snow Leopard, Red Panda, Himalayan tahr (Shapi), Musk deer and various pheasants. Some of the animals belonging to schedule I of the Wildlife (Protection) Act,1972 found in this Park include

1.	Red Panda	<i>Ailurus fulgens</i>
2.	Musk Deer	<i>Moschus moschiferus</i>
3.	C. Leopard	<i>Panthera pardus</i>
4.	Clouded Leopard	<i>Neofelis nebulosa</i>
5.	Serow (mountain Goat)	<i>Capricornis sumatraensis</i>
6.	Chinese Pangolin	<i>Manis pentadactyla</i>
7.	Snow Leopard	<i>Panthera uncial</i>
8.	Shaphi (Himalayan tahr)	<i>Hemitragus jemlahicus schefari</i>
9.	Barking Deer	<i>Muntiacus muntjak</i>
10.	Common Langur	<i>Prebytis entellus</i>
11.	Assamese macaque	<i>Macaca assamensis</i>
12.	Himalayan Black Bear	<i>Selenarctos thibetanus</i>
13.	H. Palm Civet	<i>Viverridae spp.</i>
14.	Jackal	<i>Canis aureus</i>
15.	Leopard Cat	<i>Felis bengalensis etc.</i>
16.	Blue Sheep	<i>Pseudois nayaur</i>
17.	Himalayan Yellow throated Marten	<i>Martes foina intermedia</i>
18.	Himalayan crestless porcupine	<i>Hystrix hodsoni</i>
19.	Common Otter	<i>Lutra perspicilatta</i>
20.	Wild dog	<i>Cuon alpinus</i>
21.	Indian Fox	<i>Vulpes bengalensis</i>
22.	Red Fox	<i>Vulpes montana</i>
23.	Wild Boar	<i>Sus scrofa</i>
24.	Goral	<i>Nemorhaedus goral</i>
25.	Chinese Pangolin	<i>Manis pentadactyla</i>
26.	Flying squirrel	<i>Bulopetes petaurisata</i>
27.	Nyan or great Tebetan Sheep	<i>Ovis ammon hodgsoni</i>
28.	Tibetan Gazelle	<i>Procarpra picticaudata</i>
29.	Tibetan Wild Ass	<i>Equus hemeonus kiang</i>

Besides the wild animals as mentioned in the above list, the Park habitats various types of pheasants, reptiles and amphibians.

### 2.6.1. Vegetation and Forest Types :

Khangchendzonga National Park and its surroundings are rich in floral and faunal diversity owing to its diverse habitat conditions ranging from almost temperate to alpine zones. The diverse topography and steep slopes provide a wide range of habitats for plants and animals species. The terrestrial habitat can be divided into a variety of ecological zones and ecosystem types such as temperate mixed-forests, sub-alpine conifer forests, and broadleaved forest, alpine shrubs, grasslands and barren land. The different forests and rangeland ecosystems support different plants and animal species. The sub-alpine zone exhibits a higher number of species followed by lower alpine and temperate zones. Most of the plants species available in the Park have economic value in terms of either medicine or

aroma. The mountain temperate zone is the habitat range for the highest number of medicinal plants, followed by temperate and lower sub-alpine zones. The water bodies are young and have cold temperatures and low nutrient contents. This prevents the high elevation lakes, streams and rivers from supporting a high diversity of aquatic life. Nevertheless, they are important resting site and habitat for a significant number of migratory and some resident water birds. The high altitude flora and fauna is important for global biological diversity because there are very few other places where life exists at such unique high altitudes.

Out of five major forest zones in the State, three zones falls within the Park and they are as under:

i) Sub-tropical Forest	---	ca 1800 m
ii) Temperate Forest	---	1800-3500 m
iii) Alpine Forest	---	3500-5000 m
iv) Alpine Scrub	---	5000 and above

### Subtropical forests

Subtropical forests occur up to an altitude of ca 1800 m. These are mainly mixed type of forests, comprising of *Macaranga denticulata*, *Alnus nepalensis*, *Castanopsis tribuloides*, *Rhododendron arboreum*, *Alangium chinese*, *Maesa chisia*, *Malus sikkimensis*, *Ficus semicordata*, *Toricellia tiliifolia*, *Schima wallichii*, *Saurauia nepalensis*, etc. as tree species. Predominant shrubs here are *Dichroa febrifuga*, *Oxyspora paniculata*, *Melastoma malabathricum*, *Buddleja asiatica*, *Edgeworthia gardneri*, *Rubus ellipticus*, *Mussaenda roxburghii*, and many climbing species of *Piper*, *Smilax*, *Tetrastigma*, *Rhaphidophora*, etc. are also common in these forests. Dominant herbs found in the park belong to species like *Persicaria capitata*, *Houttuynia cordata*, *Gnaphalium affine*, *Eupatorium odoratum*, *Gynura pseudo-china*, *Ranunculus diffusus*, *Notochaete hamosa*, *Drymaria villosa*, *Sagina japonica*, *Elatostema lineolatum*, *Plantago erosa*, *Crassocephalum crepidioides*, *Hydrocotyle asiatica*, *Achyranthes bidentata*, *Oxalis corniculata*, *Oxalis griffithii*, *Galinsoga parviflora*, *Bidens pilosa*, etc.

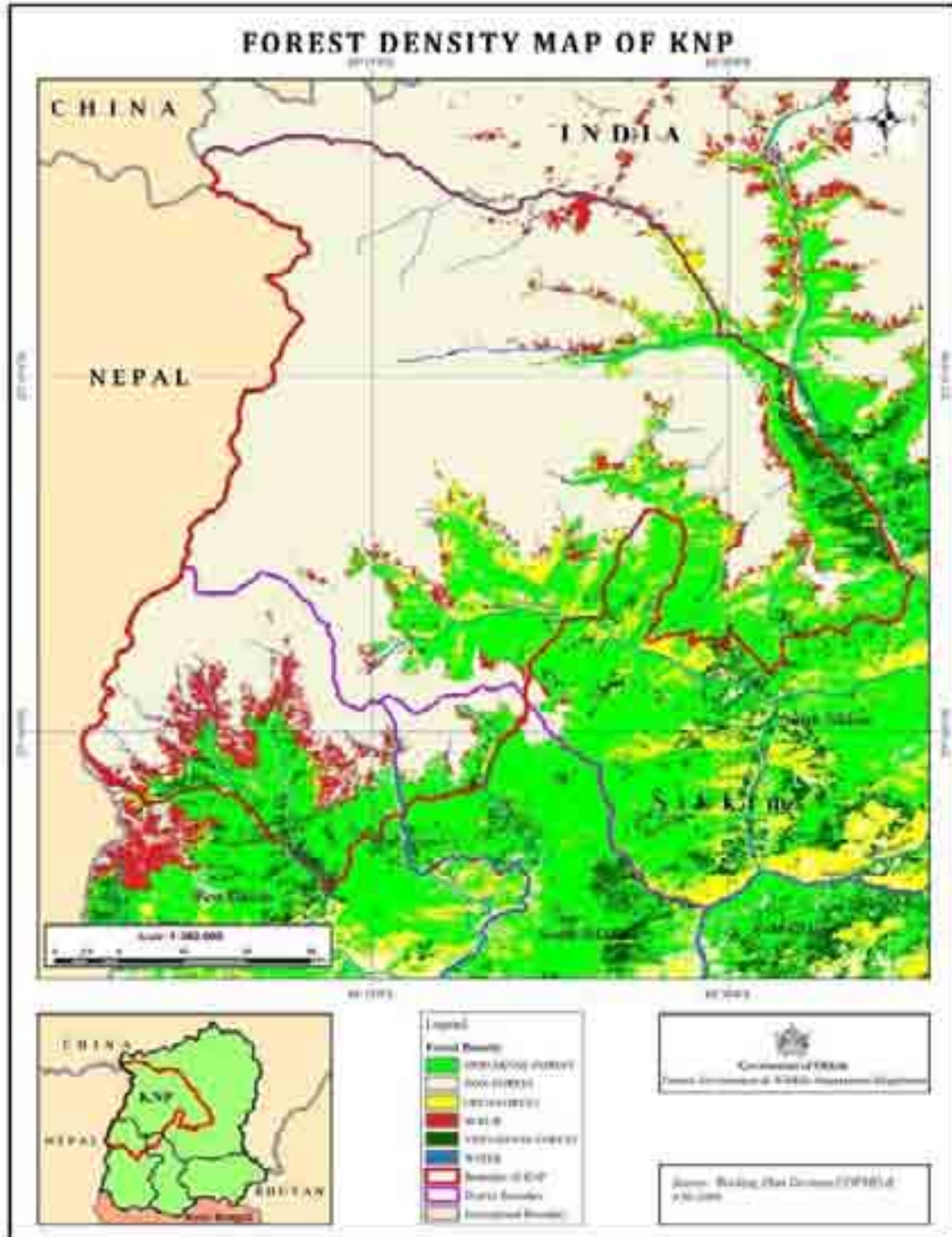
### Temperate forests

These forests are confined between 1800 and 3500 m altitude and can be further divided in to (a) broad leaved temperate forests and (b) coniferous forests. The important trees species of broad leaved forests are *Acer campbellii*, *Exbucklandia populnea*, *Alnus nepalensis*, *Betula utilis*, *Malus sikkimensis*, *Lithocarpus pachyphylla*, *Engelhardtia spicata*, *Quercus spp.*, *Enkianthus deflexus*, *Pieris formosa*, *Lyonia ovalifolia*, *Rhododendron grande*, *Magnolia campbellii*, etc. Shrubby vegetation is quite dense and diverse and comprises of *Berberis aristata*, *B. insignis*, *Buddleja colvilei*, *Hypericum hookerianum*, *Sambucus adnata*, *Philadelphus tomentosus*, *Mahonia nepaulenses*, *Gaultheria spp.*, etc.

The temperate zone is also characterized by presence of numerous interesting species of climbers like *Ceropegia pubescens*, *Aristolochia griffithii*, *Clematis montana*, *C. acuminata*, *C. buchananiana*, *Dicentra scandens*, *Holboellia latifolia*, etc. Similarly, dominant herbaceous species in these forests are represented by *Aconogonum molle*, *Bistorta vacciniifolia*, *Koenigia nepalensis*, *Euphorbia sikkimensis*, *Pilea anisophylla*, *Gaultheria trichophylla*, *Agapetes incurvata*, *Panax pseudo-ginseng*, *Rubus fragarioides*, *Arisaema nepenthoides*, *A. griffithii*, *A. jacquemontii*, *A. propinquum*, *Smilacina oleracea*, *Roscoea purpurea*, *Hedychium spp.*, etc. Many herbaceous species of *Begonia* and *Impatiens* grow along the banks of rivers, rivulets and other moist places. Some dominant species are *Impatiens bicolor*, *I. longipes*, *I. spirifer*, *I. sulcata*, *Begonia flaviflora*, *B. josephii*, etc.

A few insectivorous species like *Drosera peltata*, *Utricularia brachiata*, *U. wallichiana*, *U. multicaulis*, etc. are also found in moist and shady places.

The coniferous species are one of the important constituents of the temperate vegetation. The common species found here are *Larix griffithii*, *Cupressus corneyana*, *Abies spectabilis*, *Tsuga dumosa* and an important medicinal plant *Taxus wallichiana*. *Cryptomeria japonica*, introduced long ago has now naturalized and flourishing well within the Park and its periphery.



KNP-MAP-IX.

### Alpine forests

These forests occur between *ca* 3500 and 5000 m altitude. At low altitudes usually shrubby species of *Berberis*, *Vaccinium*, *Rhododendron*, *Cotoneaster*, *Salix*, *Ribes*, etc. grow profusely. At higher elevations the vegetation comprises of alpine moraine where tree growth is completely arrested and bushes form dense clumps. Some predominant alpine species found are *Rheum acuminatum*, *Rheum nobile*, *Primula capitata*, *P. obliqua*, *P. minutissima*, *P. sikkimensis*, *Rhododendron ciliatum*, *R. anthopogon*, *R. lepidotum*, *Cassiope fastigiata*, *Parnassia nubicola*, *Rhodiola himalensis*, *R. imbricata*, *Corydalis juncea*, *Nardostachys grandiflora*, *Saussurea gossypiphora*, *Meconopsis paniculata*, *Caltha palustris*, *Potentilla coriandrifolia*, *P. peduncularis*, *Cypripedium himalaicum*, *Pododphyllum hexandrum* and species of *Aconitum*, *Bryocarpum*, *Cassiope*, *Gentiana*, *Corydalis*, *Saxifraga*, *Sedum*, etc.

Three species of gymnosperms are also found in this zone, of these *Juniperus recurva* and *J. squamata* are very common, whereas *Ephedra gerardiana* occurs at few places.

### FLORISTIC DIVERSITY

Khanchanjunga National Park and surrounding forests exhibits enormous floristic diversity, which is presently under investigation. There are diverse species of *Rhododendrons*, *Orchids*, medicinal plants, horticultural plants, taxa of ethnobotanical importance, rare and endangered species. The diversity is also further enriched by the presence of numerous species of adjacent and distant regions. In the present state of knowledge, the biosphere comprises about 1225 species of angiosperms distributed under 490 genera and 120 families. These figures may change in due course of time when remaining surveys and studies are completed. The present status of different groups of vascular plants, a conspectus of families showing number of genera and families and families showing maximum diversity in the Park are presented Table-I- below. (source: BSI-Sikkim)

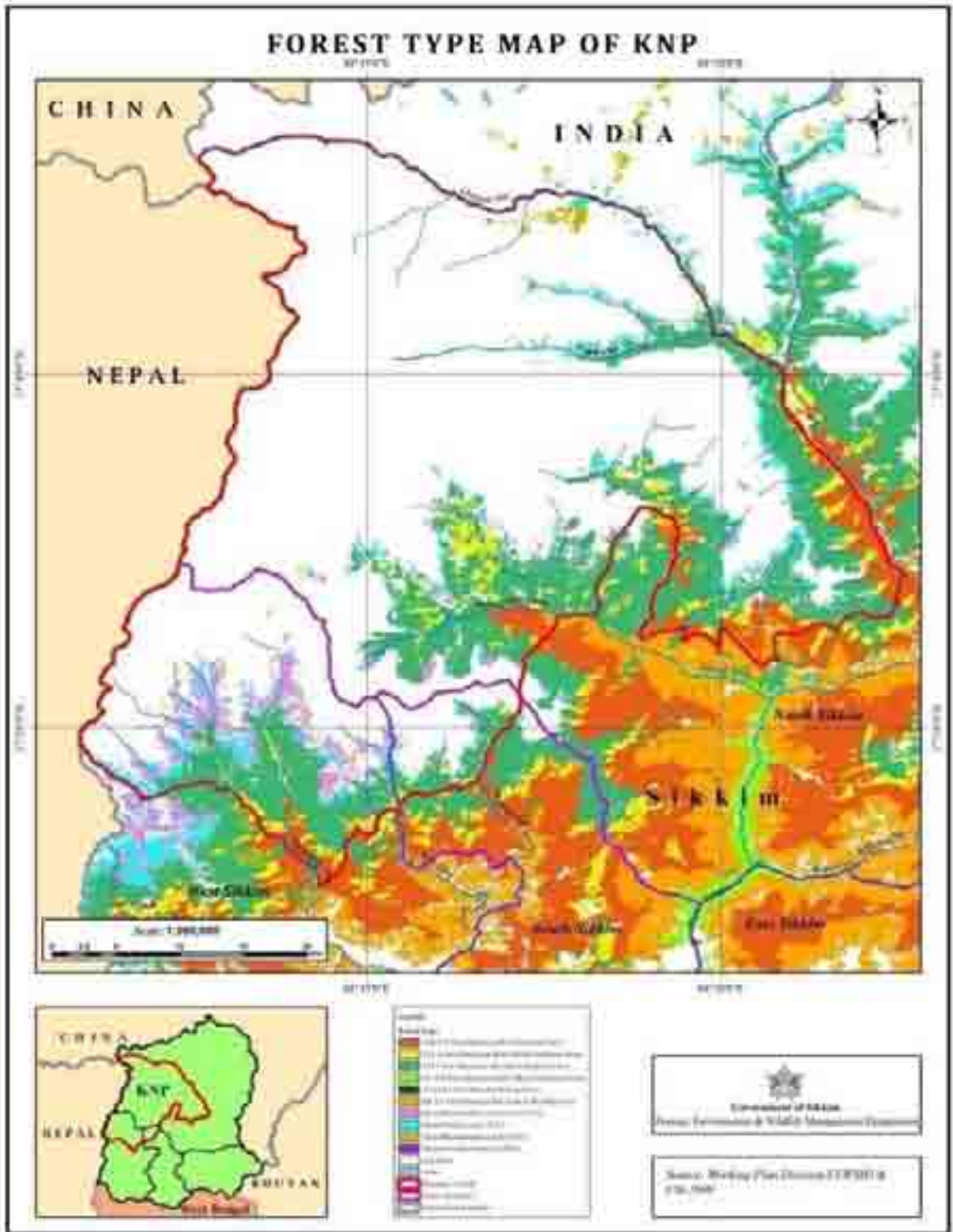
**Table I**  
**Status of different groups of vascular plants.**

<b>Group</b>	<b>family</b>	<b>Genera</b>	<b>species</b>
<b>ANGIOSPERMS</b>	120	490	1225
Dicots	(105)	(379)	(1030)
Monocots	(15)	(111)	(195)
<b>GYMNOSPERMS</b>	5	9	10
<b>PTERIDOPHYTES</b>	22	37	57

(Reference: Dibatrata Maity, A.S. Chuhan BSI)

#### **2.6.1.1 The Bio-geographic Classification:**

The Park lies in the biogeographical zone 2C (Central Himalayas) as recognised by Wildlife Institute of India, Dehradun (Rodgers and Panwar, 1988, subsequently revised in 1977)



KNP-MAP-X.

### 2.6.1.2 The Forest type:

According to the revised classification **Champion and Seth** which is mainly based on ecosystem, the forest types of Khangchendzonga National Park fall under following categories:-

#### **Type 8B/cl East Himalayan Sub-tropical wet hill Forest:**

This zone is between 1000m to 1800 m altitude and comprises of species like-*Castanopsis tribuloides*, *C.indica*, *Schima wallichii*, *Engelhardtia spicata*, *Betula cylindro stachys*, *Alnus nepalensis*, *Lithocarpus* and *Quercus* species.

#### **Type 11B/cl East Himalayan wet temperate forest**

##### **Sub.Type 11B/cl a-Lauracxeous forest.**

The zone is between 1800m to 2100m altitude. In this zone over wood comprises of – *Machilus edulis*, *Aleimandra Michelia cathcartii*, *Beilsehmedia spp.* *Cinnamomum botusifolium*, *Magnolia campbellii*, *Engelhardtia spicata*, *Schima willichii* and *Castanopsis tribuloides*.

##### **Sub Type 11 B/cl b- Buk-oak forest**

This zone occurs between 2100 m to 2440 m altitude. The over-wood consists of *quercus lamellosa*, *Castanopsis tribuloides*, *Acer campbellii*, *Michelia doltsopa*, *Aleimandra catheartii* etc. Because of its proximity to Bay of Bengal and its exposure to the moist-bearing south western monsoon wind, the Park get maximum rainfall during June to October. In higher altitude it receives heavy snowfall during Dcecember till early April. Seventeen thousand feet altitude is the snow line. Most of the snow remains unmelted till April and this plays a major role in the migration of wild animals from high snow bound areas to the lower snow free areas. Sometimes heavy snow kills the wild animals in the Park area. There are only two seasons in this area i.e. winter and summer with a brief spell of Spring in April and Autumn in later half of October. During November to February it gets winter rain and sometimes pre-monsoon shower starts from April with a short spell of dry climate in the month of March. Flowers like primulas, penduncularis, potentillas with different colours forms a soft cushion over the open bare areas of the Park adding to the beauty of landscape.

##### **Sub-Type 11B/cl c High-level Oak Forest**

This zone is between 2440 m to 2750 m altitude. Here the canopy consists of *Quercus pachyphylla*. *Q.Lamellosa*, *castanopsis*, *Accr* and *Magnolia* spp.

#### **Type 12/c3 East Himalayan mixed temperate forest**

##### **Sub-Type 12/c East Himalayan mixed conifer forest.**

This zone is between 2300 m to 3000 m altitude and comprises top canopy species are *Tsuga dumosa* and *Abies densa*. The middle storey consists of *Quercus pachyphylla*, *Quercus lineata* , *Rhododendron spp*, *Acer spp.*, *Magnolia spp.*, *Betula alnoides* and *Taxus baccata*.

#### **Type 13/c. East Himalayan dry temperate conifer forest.**

This zone is within 2800 m to 4500 m altitude. This zone mainly comprises of *juniperus wallichiana* and birch.

**Type 14/c2 East Himalayan sub-alpine birch/fir forest**

This zone is above 3000m altitude. Here the overwood consists of *Abies dense* and *Juniperus wallichiana*.

**Type 15/c1 Birch-Rhododendron scrub Forest**

This zone is above 3500m altitude. The vegetation is entirely of Rhododendron and some birch.

**Type 15/c2 Deciduous alpine scrub**

This zone is above 3500m altitude. It consists of deciduous scrubs usually 1 m height forming a dense cover over extensive area. Here the patches of *Betula* and *Rhododendron* are occasionally found.

**Type 15/c3. Alpine Pasture.**

Here in this zone the vegetation mostly found are mesophytic herb and very less grass. The common herbs are *Primula*, *Anemone*, *Fritillaria*, *Iris*, *Gentiana* with many *Ranunculaceae*, *Cruciferae* and *Compositae* family. So far no detail studies have been made regarding the flora of the Park. Topography of park is such that it harbours very interesting floristic composition, which may differ from place to place. It has its own micro climatic condition, which form the heaven for botanist as well for the zoologist. There are many medicinal herbs inside the KNP in the sub Alpine and Alpine Scrub land. Even Upper Subtropical and temperate zone supports growth of many medicinal herbs and they are as follows-

*Panax pseudoginseng*, *Iris nepalensis*, *Swertia chirata*; *Phodophyllum emodi*, *Picrorhiza kurron*(Kutki); *Aconitum ferox* (sikh); *Aconitum hooker* (bikhma); *Apalmatum* (bikh), *Nardostachys jatamansi* (jatamansi); *Ephedra sexatilis* and *Rheum nobile*. Besides there are many medicinal herbs which need a thorough studies and investigation. In KNP there are about 550 spp of Orchids and over 36 spp of Rhododendron.

**Some of the endangered and rare flora of Park is given below-**

*Anacetochilus sikkimensis* (orchidaceae.R.) *Aphyllorchis montana* (orchidaceae.R.), *Camellia eaduca* (Theaceae.R.), *Cypripedium himalicum* (Orchidaceae), *Cymbidium macrorhizon*, *Cymbidium whiteae* (Orchidaceae.), *Nardostachys grandiflora* (valerianaceae.R) *Populus gamblei* (salicaceae); *Rheum nobile* (poligonaceae.R.); *Rhododendron dalhousiae* (Ericaceae.R); *R. nivale* (Ericaceae.R.) and *Vanda pumila* (orchidaceae.R)etc.

**2.6.1.3 Species and communities of conservation importance; key areas:**

1. The National Park harbours population of rare and endangered high altitude flora and fauna some are endemic to the Eastern Himalayas .
2. The Khangchendzonga National Park has high concentration of flora- Orchids, Rhododendrons, medicinal plants, Himalayan Flowers and fauna- Birds, Butterflies and Moths.

Name of Species in and around KNP	No. of spp. available
■ Flowering plants	- 4500
■ Rhododendrons	- 36
■ Medicinal Plants	- 424
■ Ferns & Fern allies	- 410
■ Tree Ferns	- 8
■ Primulas	- 60
■ Oaks	- 11
■ Orchids	- 550
■ Conifers	- 16
■ Bamboos	- 23

The concept of the management of the Park envisaged the participation of the local people in the formulation and implementation of the scheme in order to establish social fencing, to protect and develop the watershed zone with rich bio-resources. The traditional way of life of the people living in the region as being primarily forest oriented and cattle and animals were let loose in the forest areas for grazing which practice was being followed for generations from time immemorial. Their livelihood was mostly dependant on the cattle and animals. People were also unaware of the need to protect the forest and environment. However, the Forests, Environment & Wild Life Management Department, to take several measures like bringing about awareness amongst the people of the need to protect the forest, making alternative arrangement for fodder, firewood, timber etc. and also providing them incentives through wages and creating assets of public use. Since the tradition can not be changed overnight, with all the efforts to take up reformative steps by adopting the method of bringing about awareness, convincing and motivating the people by getting them involved in the scheme, there has been gradual co-operation by the people in taking new form of livelihood and changing their traditional way of cattle rearing.

## 2.6.2 Animals:

### 2.6.2.1 Vertebrates, their status, distribution and habitats. Habitat quality, quantity and key area.

**Primates:** One species of monkey, the common longer *Presbytis entellus* is found within the Park. Their distribution is confined to very limited area in Northern and also in Western part of the Park

Carnivore order is divided into Felidae, Viverridae, Ursidae, Canidae, Herpestidae and Mustelidae.

**Felidae** This is represented by Snow leopard (*Uncia uncia*), Marbled cat (*Felis marmorata*) etc.

**Viverridae** It is represented by large Indian civet cat (*viverra zibettha*) and Spotted lingsang (*Prionodon pardicolor*.)

**Ursidae** This is represented by Himalayan Black Bear (*Selenarctos thibetanus*).

**Ailuridae** Red Panda (*Ailurus fulgens*) is found above 6000' altitude.

**Mustelidae** Weasel is represented by beachu stone marten (*Nartes foinea*)

**Canidae** It is represented by Red Fox (*Vulpes vulpes*) wild dog (*Cuon alpinus*) Jackal (*Cannis aureus*).

**Ungulate** Sometimes Tibetan wild ass (*Equus hemionus*) crosses over to the high ridges of the Park. Due to the deployment of Army personnel at Dong-kongla and Cholamu area of the Park is occasionally visited by these animals.

**Bovidae** In the western part of the Park and in some portion of the northern part, the yaks are domesticated in semi-wild condition. Besides these the prized animals like Musk deer (*Moschus moschiferus*), Serow, (*Capricornis sumalrancis*), Himalayan Thar (*Hemitragus jemlahicus*) Bharral, Blue sheep (*Pseudois nayaur*); Ghoral (*Nemorhaedus goral*) and Barking deer (*Munfiacus muntjac*) are available in he Park

#### **Aves (Birds)**

Within the Park we find beautiful magnificent birds with varying colours and sizes starting from pheasants to small warblers.

#### **Family anatidae**

Park has got many small and considerable numbers of lakes in high altitide areas. This pokharis (Lakes) are halting place of many migratory birds. This needs thorough study and investigation. Some of the spps. found are Bar headed goose (*Anser indicus*) Ruddy snelduck or Brahminy snelduck (*Tadorna ferruginea*) Pintail (*Anas acuta*) and Mallard (*Anas platyrhynchos*) etc.



**Vertebrates, their Status:**

The KNP is very rich in wildlife and contains 6 species included in Scheduel-1 of the Wildlife (Protection) Act, 1972. (Reference in Chapter-1, Part-1,3) including presence of the Red Panda which is the flagship species. A list of fauna of the Park, is as follows:

<b>Felidae</b>	Leopard
<b>Mustelidae</b>	Himalayan Yellow Throated Marten, Common Otter
<b>Viverridae</b>	Himalayan Palm Civet
<b>Cannidae</b>	Wild dog, Indian Fox, Jackal
<b>Ursidae</b>	Himalayan Black Bear
<b>Suidae</b>	Wild Boar
<b>Ailuridae</b>	Red Panda
<b>Cervidae</b>	Musk Deer, Barking Deer
<b>Goat-Antelope</b>	Goral, Serow
<b>Primates</b>	Assamese Macaque
<b>Pheasants</b>	Crimson Horned Pheasant and Kaleej Pheasant
<b>Others</b>	Crestless Porcupine, Rufous Tailed Hare, Chinese Pangolin, Parti-coloured Flying Squirrel, Hoary-bellied Squirrel, Orange-Bellied Squirrel, Shrew, Himalayan Mouse, Hare etc.

**Population Dynamics and Status of Different Vertebrates:**

Almost all the animals found in Sikkim, are also found inside the Park except some species of sub-tropical and subtropical zones.

<b>Sl.No/</b>	<b>Fauna</b>	<b>Total No. in Sikkim</b>	<b>Total in KNP</b>
i)	Mammals	144 sps.	124 sps.
ii)	Birds	324 sps.	300 sps.
iii)	Reptiles	29 sps.	10 sps.
iv)	Amphibians	10 sps.	5 sps.
v)	Fishes	26 sps.	8 sps.
vi)	Butterflies	600 sps.	400 sps.

Out of the mammalian species, 39 species are already regarded as endangered or rare and are included in Schedule – I of Wildlife (Protection)Act, 1972. Some of these include Tree shrew, Tibetan wolf, Red fox, Indian wild dog, Red Panda, Hog Badger, Snow leopard, Tibetan sheep, Serow-Goral, Tibetan wild ass, Musk deer etc.

**2.6.2.2.Census and Monitoring Machanism of Wild animals:**

census becomes a challenging task due to harsh terrain and topography of the park and also the fact that 50% of the areas remains under snow cover through out the year. A mechanism for census of Wild animals in the steep hilly terrain and snow covered mountains can be carried out only through the latest Camera trap technique adopted by WII, Derha Dun.

Census report on the basis of visual sighting and ocular estimation of wild animals may not be accurate, however, a pocket of Phimpu area and German Orar in North Sikkim are hot spot for (Shapi) Himalayan Thar (*Hemitragus jemlahicus*) and the Park field staff, Range Officer, Sri. S.T.Lachungpa and his team have sighted and estimated the numbers of Shapi, since last 12 years is given in this table below:-

Sl. No.	Month/Year	Nos. of animals			Total	Location/Place	Remarks
		Male	Female	Young			
1	Nov-December 1996	1	1	1	3	Phimpu	
2	December 1997	1	2	2	5	-do-	
3	November 1998	1	3	2	6	-do-	
4	December 1999	-	-	-	3	-do-	
					1	-do-	1 Ghoral
5	December 2000	2	4	-	6	-do-	
6	November 2001	3	6	3	11	-do-	
7	November 2002	3	6	3	12	-do-	
8	November 2003	4	3	2	9	German Orar	
9	-do-	9	4	4	17	Phimpu	
10	November 2004	9	18	7	34	-do-	
11	December 2005	8	19	8	35	-do-	
12	November 2006	6	11	6	23	-do-	

Similarly in the study tour to Green Lake along with Sri. Dr.R.S.Rawat, WII, Derha Dun during 1<sup>st</sup> to 10<sup>th</sup> July 2006, we came across more than 70 numbers of Blue Sheep (*Pseudois nayaur*) in two herds near Zemu Glacier, which is an indicative of presence of main predator Snow leopard (*Panthera uncial*) in the areas. (Photograph – Fig-IV.)

### 2.6.2.3. Limiting Factors for Fauna:

There are number of rare and threatened animal species, which are on priority list of protection, they are Musk deer, Snow leopard, Blue sheep, Red Panda and Black bear etc. This needs to be addressed through mobilization of local people and make them aware of the issues. There is insufficient information on endangered species and their habitats especially the less obvious ones. The two most dominant threats to the Park Eco-system may be fragmentation of relatively large areas of habitats through developmental encroachment and increase perforation of park's landscape through expansion and developmental of settlements surrounding areas. The Park needs to develop strategies to protect habitats and species.

- **Poaching:**

Poaching incident in the Khangchendzonga National Park has reduced considerably due to vigilant and regular patrolling of the park area by the field staff.

- **Inter- species Relationship:**

Not much work and data is available in this respect. It is felt that the herbivores are proliferating in number and the indirect evidences has revealed that there are some carnivores like Snow Leopard, Wild fox, Jackal etc. are relatively less in number to control herbivores especially the Blue sheep, Himalayan Thar, Musk Deer, Barking Deer and Pheasants etc. within the Park area

- **Destruction of Habitat:**

Illegal felling and collection of Non-timber forest produce, wild edible forest fruits which are food for Himalayan Black Bears, Barking Deer and monkeys. Competition between the cattle and herbivores wild animals for using same grazing ground for fodder and water sources.

- **Niches of Wildlife**

The term “Niches” envisage, i) Habitat - where it lives in the eco-system, ii) Relationship- all interactions with other species in the eco-system and iii) Nutrition – its method of obtaining. However, in case of wildlife in Khangchendzonga National Park, the work on this particular field have to be carried out regarding identification of niches occupied by various wild animals and birds in the Park.

- **Dispersal and Migration:**

Not much work has been done regarding identification of niches occupied by various wild animals and birds in the Park. However in winters after snowfall, all animals and birds are flushed to the lower reaches of the Park. During their transition from higher to lower reaches, the poachers use to setup traps across their migratory route, so there is maximum chances of becoming pray for the poachers.

- **Distribution of Natural Salt Licks:**

Most of rocky caves are the places for natural salt lick within the Park area. Natural salt licks are abundant in the Park but the distribution is not proportionate as per the wild animal population in the area.



**Rhododendron and primula of Green Lake area: Photograph on 06-07-06**

**Fig – III.**



- Grazing:**  
Grazing in Khangchendzonga National Park and its surrounding Reserve Forests is not a threat since the government has banned grazing and further the removal of the cattle sheds have been initiated by the Department and from the western part of the park because of higher concentration of cattle shed in the park.
- Disease:**  
Wild animals, particularly herbivores, are very susceptible to diseases, most of which are transmitted through domestic cattle. Anthrax, Rinder pest, food and mouth disease, Pasteureollosis, tuberculosis etc. are common diseases, which cause death of wild animals. Though no record and data is available for the Park, but the threat is always looming.
- Tourism:**  
Unregulated tourism leads to damage of vegetation and change in the behavioral pattern of wild animals in general. Un-regulated garbage dumping, un-designated camping sites and using of local timber wood for cooking poses a threat to the bio-resources of the Park. Wild animals also get disturbed due to regular presence of tourists. Tourism is an inevitable part of management practices and hence measures to regulate tourism and minimize the destruction of habitat, eco-tourism zones have been designated. These zones have been designated to facilitate tourist visiting the park for different purpose like Bird watching, wildlife sightings, research works etc.

**2.6.2.4.Important invertebrates, their status, distribution and habitat.**

Not much work has been done regarding identification of invertebrates found in the Park. However some insects found in the lower reaches in the valley of rivers and streams are: the Insecta (insects) are a Class of the large animal Phylum called Anthropoda (arthropods)- a name that refers to the joint limbs. The other major Classes of living arthropods (e.g. animals related to insects) include the Crustacea (crab, lobsters, shrimps, barnacles woodlice etc.) The Myriapoda ) millipedes, centipedes, etc.) and the Arachnida (scorpions, spiders, mite, ticks, etc.) .In addition there are several minor Classes, the Onychophora (velvet worms), Tardigrada (water bear), Pentastomida (tongue worms) etc.

**Butterflies found in the Khangchendzonga National Park and its surrounding areas:**

Sl.No.	Family	No. of Species
1	Papilionidae	55
2	Pieridae	51
3	Lycaenidae	172
4	Nymphalidae	160
5	Hesperiidae	251
	<b>Total:-</b>	<b>689</b>

Literature referred: Haribal Meena.(1992) The butterflies of Sikkim in Himalaya and their natural history: Nature Conservation Foundation, Gangtok,Sikkim-217pp.

## CHAPTER – 3: HISTORY OF MANAGEMENT AND PRESENT PRACTICES

### 3.1. General:

Some of the main events in the beginning of Sikkim Forestry is mentioned below:

- a) 1902 -- Reserved Forest Demarcated vide C.M.3-3-1902.
- b) 1905 -- Khashmal Forest Demarcated out of R.Fs. vide Notification No-2 of 29.3.1905. issued by Political Officer.
- c) 1911 -- Gaucharan Forest demarcated vide Notification No.14 of 22.11.1911, issued by Forest Department.

(Ref. Annual administrative report 2003-04, p.5)

Until the beginning of 1950 the management of natural resources was within the dual control of the Forest Department and the Kazis. The local Kazis were responsible for the management of the State Forests in their Elakhas, and the Forest Department was responsible for forests of hill top i.e. high level forests, outside their ELakha. The Kazis maintained forest guards to patrol the forests, and issue purjis (permit for domestic use of forest produce, grazing fees) and had the power to try forest offences, except cases of illicit felling, which were settled by Forest Department. The kazis, of course, had to follow the directives given by Forest Department, regarding overall management. Lamas managed the Gompa forests, more or less on the lines as the Kazis. They had similar powers of collection, but no powers to try cases. Neither the Kazis nor Lamas had the power to issue a permit for felling of trees. The forests of the private estate of the His Highness the Chogyal of Sikkim, were also demarcated at the same time as the Reserved Forests was demarcated. They were looked after by the Private Estate Department, who had some trained and untrained foresters under them. After 1950, the management of some of Private Estate Forests has been given over to the Forest Department. From 1950 onwards, the forests of Sikkim have come under the administrative control of the Forest Department directly and the power of the Kazis and Lamas have been eliminated as their share in management is concerned. After complete taking over of charges of State Forests by the Forest Department and after the merger of Sikkim forming the integral part of India during 1974 and calculating the degree of pressure to the Forest in the coming days, The forest department by considering some of the rich biodiversity areas has been brought into the network of Protected Areas. Amongst them, the Khangchendzonga National Park, with an area of 835 sq.kms. of which, 70 % area falls in North Sikkim and 30% in West and South Sikkim, had been declared as Khangchendzaonga National Park in the year 1977 and only the National Park in the State. However, the then, managers of the Park felt that the Notified P.A. was not sufficient for the seasonal migratory wild animals due to almost all the area declared as National Park is covered with snow for almost 8 to 9 months in a year and more than 60% of the protected area is perpetual Snow covered peaks and Glacier land, so the wild animals knowing nothing about the boundary of the P.A. use to climb down to the lower reaches from the Park during winter season thereby risking their life in the hands of poachers and hunters, hence, after careful study of the adjacent areas considering the richness in respect of the biodiversity compositions in the area is again extended to 1784 Sq.Km. during 1997.

The process of declaring some other rich bio-diversity areas into this network has begun after then and in the subsequent years a number of Sanctuaries has come up in the different districts of Sikkim State. Some of them are Fambongla Wildlife Sactuary, Kyongnosla Alpine Santuary in East Sikkim and like wise Singba Rhododendron Sanctuary in North Sikkim and Maenam Wildlife Sanctuary in South Sikkim and Bersey Rhododendron Sanctuary in West Sikkim, recently during the year 2002 another sanctuary, considering its rich bio-diversity composition as Panglokha Wildlfiie Sanctuary and Kitam Bird Sanctuary have been declared. Soon after the declaration of areas to National Park, all the human activities have been restricted from entering into Park without valid permission. The basic requirement in terms of fodder, fuel-wood and timber to the local villagers has been supplemented from buffer areas and from their private land holdings. The infrastructural developmental activities had been initiated keeping due care of physical features. Time to time Anti-poaching cum trap demolition activities is being organized with people's participation. Eco-Development Committees have been constituted in all the buffer villages with a view of participatory mode of protection and conservation of bio-resources of the region, as per the recent guidelines of MoEF. In lieu of protection they are being compensated with other eco-development activities like income generation devices to generate income to sustain their livelihood, so that their dependency upon the bio-resources could possibly be minimized or diverted from the forest resource.

### **3.2. Timber Operation including bamboo and firewood harvest:**

The Reserve Forests adjoining to the Park which acts as its buffer, was facing great pressure from fringe villagers to meet up the demands of fodder, fuel-wood and timber. However, their requirement had been met up from the fallen, dead and dying trees which sometimes did not fulfilled their required demands. These reserve forests are under the administrative control of Territorial Division. As such the Boundary of the Park is at a considerable distance from human habitation, the question of fire-wood harvesting, bamboo and timber operations are not considered as threats in case of conservation and protection of natural resources of Khangchendzonga National Park.

#### **3.2.1 Silvi-culture system and tending operations**

For proper development of forest crop silvicultural and tending operations are required for uniform growth. Sunlight and spacing is an important factor that determines the health of the forest. The individual members constituting the crop have to compete for these essentials not only amongst themselves but also with the individuals of the unwanted species which appear on the forest floor by themselves. As the crop grows in age, the requirements of individual members increase and their growth is seriously affected if their increasing requirements in respect of food and light are not met by proper tending operations. However, in respect of the vegetations and forest crop in and around Khangchendzonga National Park, tending operation is not so seriously needed due to the topographical formation of the region. The crop composition of the area are of mix type and scattered in a patches on the high and steep hills, so food competition amongst the vegetation as well as the aeration in not the problem. Only the man made forest patches under habitat management, requires tending operation in the areas. Moreover most of the area receives snow fall for two to three months in a year and more than 50% area are of the Park remains snow bound through out the year.

#### **3.2.2 Even-aged systems and uneven-aged systems**

More than 80 % of the vegetation within Khangchendzonga National Park is natural virgin forest, so, crop composition consists of uneven-aged in the temperate forests and sub-alpine forests.

**3.2.3 Bamboo working;**

Bamboo is minor forest produce and it plays a very important role in the lives of the forest fringe villages as it is a common man's timber. The traditional way of life of the people living in the region as being primarily forest oriented and cattle and animals were let loose in the forest areas for grazing which practice was being followed for generations from time immemorial. Their livelihood and day to day working areas was mostly inter-related / intermingled with the bamboos of the locality.

Some of the Bamboos available in and around the Khangchendzonga National Park are as under:

Sl.No	Botanical Name	Local Name	Family
1	Bambusa nutans Wallich ex Munro	Mal bans	Poaceae
2	Schizostachium( Munro) Majumda	Gopey bans (Dyllobans)	Poaceae
3	Sinarundinaria (Munro)Chao and Renv.	Parang	Poaceae
4	Dandrocalamus hamiltonii Nees & Arh. Ex Munro	Choya bans	Poaceae
5	Dandrocalamus hookeri Munro	Chilley bans/ Tili bans	Poaceae
6	Dandrocalamus sikkimensis Gamble	Bhalu bans	Poaceae
7	Sinarundinaria intermedia (Munro) Keng	Titey Nigalo	Poaceae
8	Sinarundinaria maling(Gamble) R. Majumdar	Malingo	Poaceae.

**3.2.4 Firewood harvest and collection**

Firewood harvest and collection is does not pose as threat to the National Park. Most of the fringe villages are at a considerable distance from the Boundary of the Park. Further each househole of the fringe villages have small landholding that is enough to meet the local daily needs.

**3.3. Non wood forest produce (NWFP) collection:**

Other than timber and firewood, this area is a good source of Non Wood Forest Produce (NWFP) or Non Timber Forest Produce (NTFP). However the collection of NTFP and other forest produce are prohibited under Wildlife (Protection) Act 1972.

**3.4 Leases:**

So far no portion of KNP land have been leased out to any other agency/body. The Boundary of the KNP is far away from human habitation and the park is surrounded by Reserve forests.

**3.4. Other programmes and activities:**

An "Ecological Study of Pastoralism in the Khangchendzonga National Park, West Sikkim" an initiative of the Indo Swiss Project Sikkim (ISPS), Animal Husbandary, Livestock, Fisheries and Veterinary Services Department (AHLFVS), Forests, Environment and Wildlife management Department and The Mountain Institute India (TMI-India) has identified and demarcated the critical habitats of Blue Sheep, Musk Deer and Medicinal Plants.



In order to provide livelihood options to the villagers living in the remote villages adjacent to the National Park, 3 new trekking trails and 27 camping sites were designated. In order to reduce the impacts of trekking, the code of conduct for tourism was also given a legal basis with the government notification of the Sikkim Wildlife Trekking Regulations. Also the role of the people surrounding the park have been involved in the conservation of park by means of Peoples Participation. Himal Rakshaks (honorary mountain guardians) have been constituted and institutionalized by issue of notification based on sound guidelines and principals. Since this study is being conducted jointly in partnership with the Forest Department and local NGOs, the implementation of the research findings are already underway through policy changes and action on ground. All this has resulted in the study actually resulting in conservation action. Similar studies of habitat survey, identification, demarcation, zonation on the ground are being conducted in North-East part of the Khangchendzonga National park, North Sikkim.

**3.5.1 Centrally Sponsored Schemes:** There are programmes and activities which are being undertaken by the Forest Department through the Schemes Sponsored by MoEF, Government of India and State Government, to improve the Park from different ways of management, e.g. habitat improvement, Research and extension-Educational programme, protection of flora and fauna, welfare programme for field staff and local people.

There are Three centrally sponsored schemes: i) Management Action Plan (MAP) for Conservation and Management of Khangchendzonga Biosphere Reserve -Sikkim and ii) “Integrated Development of Wildlife Habitat” and iii) Forest Development Agency (FDA) under National Afforestation and Eco-Development Board of National Afforestation Programme(NAP), Government of India. As per the Annual Plan of Operation submitted by the Forests, Environment & Wildlife Management Department, Government of Sikkim, after careful consideration by the MOEF, Government of India, releases the resources for implementation of a) Eco-development activities b) Social welfare activities, d)Habitat management, e) Forest research, Extension and Education, f)Forest Protection, g) Infrastructure development are implemented in and around Khangchendzonga National Park. All the activities are carried out through the ECO-Development Committees representing all the buffer villages of Park.

**3.5.2. Main Activities being taken-up through Centrally Sponsored Schemes:**The programmes and activities taken up by Forest department under the centrally sponsored schemes are as follows -

1. Afforestation activities.
2. Improvement of communication.
3. Intensification of management and protection.
4. Habitat improvement works.
5. Soil conservation and stream bank erosion control/works.
6. Awareness generation and nature education activities.
7. Site specific eco-development works.
8. Amenities for forest staff.
9. Research and monitoring works.
10. Management of regulated Eco-tourism
11. Social welfare activities for sustainable development of buffer villagers
12. Conservation and documentation of Natural resources of the Park, etc..

### **3.6. Forest Protection**

Protection is the primary aspect of management in the Khangchendzonga National Park. It is carried out by the existing Park staff. anti-poaching operations such as trap demolition and patrolling in the poaching prone areas are conducted periodically.

In such operations field staff are armed with guns and ammunitions and wireless sets to contend with musk deer poacher. High altitude expeditions for senior officers in the core zone of the reserve and wildlife habitat area are also organized from time to time with a view to studying the current status of the highlands and impact by tourists, trekkers, mountaineers, graziers, medicinal plant collectors and to some extent poachers. The managers are equipped with a network of wireless communications and has been set up in important places and this is fully and effectively used during such outdoor activities. Musk Deer poachers were active in the early eighties but the incidence of poaching has been greatly reduced due to the developmental activities taking place in the buffer villages. The poachers now have a tendency to carry out contract works, which fetch money in short period. Incidence of poaching by graziers has also been reduced now with the banning of grazing by the State Government in the Protected Areas and Reserved Forests.

### **3.6.1. Power and functions delegated to the frontline Officials:**

In exercise of the powers conferred by sub-section 2 of Section 5 of the Wildlife (Protection) Act.1972. (as amended up to 1993) the Chief Wildlife Warden, Government of Sikkim, has delegated the power-duties and functions to the following subordinates working under Territorial and Wildlife Sectors of the Department of Forests, Environment and Wildlife Management, Government of Sikkim vide Notification No. 44/WL/F/83/-II/50/FEWMD dated- 04/06/2011 (enclosed notification- Annexure 96- 98)

### **3.6.2. Legal Status:**

Immediately after declaration of Khangchendzonga National Park along with its boundaries and areas vide Notification No.1/KNP/WL/F/27, Dated: 19/5/1977, for the purpose of protecting, propagating or developing wildlife or its environment the Sections and Sub-Sections of The Wildlife (Protection) Act 1972 is affected. So, the legal actions and procedure as per the provisions of the said Act. are followed for dealing with the wildlife offenders in the Park.:

### **3.6.3. Hunting:**

Hunting is prohibited in the KNP. In the olden days hunting was a tradition of the local community, especially during the festival of *Ram Navami*. Hunting of Barking Deer and Ghoral and Trapping of the Satyr Tragopan and Kaleej Pheasant has been reported in the past. Practice of hunting by weapons has almost vanished but laying of traditional type of traps all along the migratory routes is still exists in some wildlife corridors in high altitude areas.

### **3.6.4 Illegal Activities:**

#### **3.6.4.1 Poaching:**

Poaching, by means of laying of traps along the migratory routes are still being reported but only in rare cases. Since due to imposition of strict and stringent Acts and Rules and regular patrolling of Field staff and annual capacity building programme being organized incidence of poaching has significantly reduced. Health camps and cattle immunization programmes are being organized in a yearly basis under Management Action Plan (MAP) for Conservation and Management of Khangchendzonga National Park (100% CSS). Local and State level stakeholder meeting have to be held every year for the preparing the Annual Plan of Operation under KBR scheme, before submission to the MOEF, Government of India, poaching and hunting in the Protected Areas has been considerably reduced.

#### **3.6.4.2 Illegal cutting of trees:**

Illegal felling of trees in the Khangchendzonga National Park is not so serious issue except some incidences of felling and cutting of herbs and shrubs by the Yak graziers in high altitude areas for construction of sheds, however in every year Yak-shed dismantling, burning by fire and removal operation is being conducted by the State Forest Department.

#### **3.6.4.3 Illegal removal of NWP, encroachment & other illegal activities:**

Since there is well protected Reserve Forest all along the periphery of the National Park there is no threat of encroachment in the Park. Earlier a small village of Tibetan communities had been settled at Tshoka since 1969. The total household of this village was 10 nos. with a total population of about 80 members. However during the year 2011 this village has been rehabilitated to area outside the park.

#### **3.6.5. Domestic Livestock Grazing:**

Most of the permanent cattle-sheds from within the Park were removed in a phased manner since these cattle-sheds depended on the forests to meet their incessant demand for firewood and fodder. The felling of poles for the purpose of construction was damaging to the biodiversity values of this Park. The spaces formerly occupied by these cattle-sheds have now been naturally rehabilitated into meadows. Other than the lush luxuriant grass, unpalatable weeds like *Rumex nepalensis* have also sprung up. The next step would be to remove this weed, using Habitat Manipulation. Further the setting up of water holes nearby for herbivores is required.

#### **3.6.6. Wild Fire:**

The climate of the Park is humid and remains for most months under snow cover, so wild fire is not the problem. Wildfire is restricted to the lower elevation which is outside the Khangchendzonga National Park. There is no record of forest fire since the date of the declaration of the National Park.

#### **3.6.7. Insect attacks and pathological problem:**

The word pathology derives from the Greek (Pathos +logos) meaning a “discourse on sickness or disease”, forest pathology is the study of forest tree disease. It is both a science and an art within the profession of forestry and plant pathology. As a science, it is one of many crop-oriented divisions of plant pathology that are collectively dedicated to understanding the nature of disease in plant. As an art, it is a discipline in forestry serving the public interest by applying scientific principles to the prevention and control of tree disease. Maintaining the health of forest from seedling stage to timber class is a time-consuming process. Most agronomic crops are annuals from which yields are realized within one growing season, whereas forest rotation may range from a minimum of 10-50 years for pulpwood harvest to 30-100 years or more for timber harvest. Through these years of growth and development, trees are subject to biotic and abiotic stresses that may invoke sudden to long-standing forms of debilitation.

(Ref. Principles of Forest Pathology by F.H. Tainter and F.A. Baker)

The Khangchendzonga National Park, as it is a protected area, the question of extraction and harvesting of any biological resources does not arise, however, for the protection, propagation, conservation, preservation and development of the natural resources the detailed research work to ascertain the insect attacks and pathological problem is very much necessary in the near future.

**3.6.8. Wildlife Health:**

Veterinary Doctor, the Deputy Director (Zoo and W.L.), Forests, Environment & Wildlife Management Department, had reported that the disease like *dermatitis and hyperkeratosis* affected Gorals (*Nemorhaedus goral*), Schedule-III, animals as per Wild Life (Protection) Act.1972, at Saprong, Beh and Channa, just outside the Khangchendzonga National Park, under Dzongu (KNP) Range in North Sikkim have been detected. and a team headed by Veterinarian, Dr. Madan K.S. Shanker, The Dy. Director (Zoo & WL) including RO(KNP) Dzongu had proceeded to the spot and necessary investigation of carcasses have been carried out. The visceral organs (heart, lungs and liver) of the dead Goral preserved in 10% Formalin and skin scrapings for isolation of the causative organisms collected from the spot have been sent to Centre for Wildlife Disease Diagnosis, College of Veterinary Science, Assam, Agriculture University. The Project Coordinator, Dr. Apurba Chakraborty, of the Centre for Wild Life Disease Diagnosis, College of Vety.Sc. Gawahati, has sent the report on the specimens of Goral carcass found at Saprong (N.Sikkim). The report of the skin scrapping was received by e-mail stating that the skin scrapings revealed **Sarcoptic mite infestation**

Remedial measures to control the diseases from further spreading to the wild mammals, immunization of livestock and distribution of livestock medicines to the farmers were taken up at Beh, Saprong, Channa, Lungbung, Dumlung, pentong, Saffu, Shipgyer, Chungthang, mensithang, Dharey, Denga and Latong from 6<sup>th</sup>. to 10<sup>th</sup>. March 2007.

Deputy Director, (Zoo & WL.) has suggested future plan of action and approach to control the possible cause of spread of the diseases in the area, as under:

**Proposal and Plan**

The findings of two carcasses of wildlife within a short interval of distance and based upon the reports of the local Panchayats and EDCs, it would be injustice to the indigenous wildlife rather unscientific management of the National Park if we do not explore the possible cause of the spread of the disease and adopt prophylactic measures for treatment and control. If such conditions prevail, the decline of the existing wildlife including endangered species is certain. More would be the impact of the contagious epidemic to the livestock in the buffer villages.

**Approach**

The report presently based on the findings at Dzongu Range and Chungthang Range of KNP, North Sikkim can be taken up for the proposal as proposed. The approach for the investigation of the wildlife diseases in the Park and treatment can be phased into different groups as suggested below:

**Phase I – Dzongu Range I:**

- 1<sup>st</sup> camp at Chana and exploration of a radius of ten kilometers.
- 2<sup>nd</sup> camp at Tholung and exploration of a radius of ten kilometers.
- 3<sup>rd</sup> camp at Pentong and Sakim and exploration of a radius of ten kilometers.

**Phase II – Dzongu Range II :**

- 1<sup>st</sup> camp at Ship and Gher and exploration of a radius of ten kilometers.
- 2<sup>nd</sup> camp at Shafu and exploration of a radius of ten kilometers.

**Phase III – Chungthang Range :**

- 1<sup>st</sup> camp at Mensithang and exploration of a radius of ten kilometers.

2<sup>nd</sup> camp at Phimpu and exploration of a radius of ten kilometers and in this manner further, Phases could be taken up in the Western Part of the Park.

### **Anticipation**

The proposal as mentioned may enhance better vision for controlling the any untoward spread of epidemic and the measures for prophylaxis. There could be possibility of controlling further spread of infections and control deaths of wild animals of the National Park.

### **3.6.9. Interagency programme and problems:**

The traditional economic activities of the local people surrounding the park was subsistence agriculture. This economic activity of the local people of the western part of the Park (Yuksam) began to undergo a rapid change after Dzongri began to attract increasing numbers of mountaineering and trekking groups. Tourism related activities such as peak-climbing, portering, guiding and lodge/homestay management has now become a dominant economic activity and has now become a way of life. The employment/engagement of significant proportion of labor force by tourism sector has had a major impact on the viability of agricultural practice. With less than 30% of the land being cultivable and potato & Cardamom being the only crop that can be grown widely, agriculture does not appear to be a significant economic activity. Yet, agriculture and animal husbandry are still an important livelihood options for economically marginal households. Livestock rearing is still common in villages where trekking and tourism has not become the dominant economic activity. The main livestock include yak and sheep, cows and bulls, dzo and goats, and horses. The population of male livestock such a dzo and yaks has increased in recent years because of demand for pack animals to move tourist luggage. A yak or cross-breed can earn twice the income of a human porter.

In one hand the grazing in the Protected Area is being banned through different notifications and circulars on other hand free distribution of Yaks and Milking Cows to the farmers are on the pipe line through the Department of Animal Husbandry, so coordination between these line departments are very much necessary for Management of PAs.

### **3.7. Tourism:**

The main tourist attraction to the park are the various beautiful treks within the park. Some of them are the Green Lake trek, Dzongri trek, Kishong trek. Further since the high altitude areas are steeped in religious significance often pilgrimage tours are also very common. There are significant religious sites within the Park that are much revered by the local people. The centre of attraction amongst the tourists is to have a close view of the Khangchendzonga Peak and its nearby magnificent mountain peaks. Besides trekking and expedition in this site is good for study of floristic and faunal composition and in view of such significances, researchers and botanist also visit this place for academic purpose.

#### **3.7.1. Eco-Tourism**

Eco-tourism is derived from two words – “Ecosystem” & “Tourism”. Together it is made Eco-tourism. To understand Eco-tourism we have to understand our Ecosystem first. “The grand father of Ecology”-**Eugene Odum**, has defined the Eco-Tourism “An ecosystem is a unit of biological organization interacting with the physical environment such that the flow of energy and mass leads to a characteristic trophic structure and material cycle”

**Ecosystem:**

Ecosystem is the system in which we live – the system which include the earth, the water, the sky and of course the living and non-living object in all these systems. It is a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.

There is no specific and particular spatial unit or scale to measure an Eco-system, but can refer to any functioning unit at any scale. It could, for example, be a grain of soil, a pond, a forest, the sea, the river, a biome or the entire biosphere. Eco-Tourism means “Tourism involving travel to areas of natural or eco-logical interest, typically under the guidance of a naturalist, for the purpose of observing wildlife and learning about the environment and at the same time focus on wildlife and promotion of understanding and conservation of the environment”. This is a conscientious form of tourism and tourism development, which encourages going back to natural products in every aspect of life and helps preserve nature. It is also the key to sustainable ecological development. Today, there are “Laws” of conservation, which are making people aware of how man and the environment can live beneficially for more time to come and Eco-Tourism is one way to maximize the environmental and social benefits of tourism, along with economic development. Every one is a stakeholder in the process and we have to forget our past shortcomings and negative impacts. In Sikkim State the movement is gathering momentum with more and more travel and travel related organizations are addressing the need of the eco-tourist and promoting eco-tourism in the region.

**3.7.2. Organizing for Tourism Management**

Tourism is now relied on as an income source and for the foreseeable future is likely to remain a predominant economic activity. All those whose livelihoods are bound up with the tourism have an interest in maintaining it. The Park needs carefully managed and appropriate styles of tourism to prevent worse pressures on natural resources. Organization is needed at community level and at a state level. There is now widespread recognition of the need for management and coordination to maintain the industry.

**Tourism Image:** As of to day, lodge operators have had no means to influence markets until visitors arrive at their door. However, with tent-trekking styles less popular and various forms of lodge-based trekking taking over, lodge owners are now interested in marketing. The apparent success of “chain lodges” is adding to local awareness of the strength of marketing and market linkages. Some traditional family lodges are making long-term arrangements with Siliguri, Darjeeling and Gangtok based trek agents. In addition, lodge operators see a need to managing the image of High altitude Eco-tourism as a whole. The Park needs ways to influence tourist attitudes and behaviour.

**3.7.3. Accommodation for tourist:**

Accommodation facilities within the Park, for trekkers, expeditionary and other research scholars are being managed by the registered tour operators of the area, after obtaining permission from the Government through CWLW of Forests, Environment & Wildlife Management Department as per the provision of the Wildlife (Protection) Act. 1972. Some log huts are available inside the Park which is meant for Park staff to be used during patrolling and census and other activities relating to the Park management.

**3.7.4. Current Patterns of trekking inside the Park**

The nearest accessible boundary of Khangchendzonga National Park is Prek-Chu, which is half hours on foot walk from Yuksam KNP Check-Post, and in most of the entry point of the Park are two hours to 5 hours on foot walk to get into the National Park, so hardly 30to40 %

domestic tourist use to visit/trek the Park. They only used to view the magnificent Khangchendzonga and associate peaks from the distance and returned back. However 60-70% foreign tourists use to visit the Park. Some adventurous groups enter from Muguthang, Phimpu, Zema I, Tholung-Kisong, Shipgyer of North Sikkim and Yambong-Boktok, Yuksam, Labdang and Dhupidara of West Sikkim. Both mountaineering and trekking are currently very seasonal, limited by cold winters and rainy summers. October is the peak trekking month, followed by November, then April. Mountaineering expeditions occur in the spring after the worst of winter and before the monsoon. Fewer expeditions occur in autumn.

The lowest visitor months are monsoonal June and July. These months are suitable for Botanist or wildlife research scholars as during these seasons abundant natural resources are visible and accessible for research works.

### **3.7.5. Tourism's Economic Impacts**

The tourism associated with a protected area has provided local communities with a significant source of income and significantly improved their living conditions especially at Pelling, Yuksam, Gangtok, Rabongla etc. The local communities have become increasingly reliant on tourism. Tourist lodges in particular are now an important part of the local economy. Trek guiding and mountaineering is the other main way local families engage in tourism. Running strings of pack animals carrying loads for treks and expeditions is another way of income generation. Tourism has led to the accumulation of wealth in many families. While the people of surrounding villages of the Khangchendzonga National Park remain active carrying mountaineering loads, and using pack animals to upper elevations, almost all portering below base camp level is by lowland farmers who come to the Park during the trekking seasons to supplement their family's income. High altitude treks are very hard on porters, so the welfare of porters, particularly their safety and fair remuneration, is very important to maintain the wholesomeness of the tourism industry. There are negative economic effects also, such as inflation caused by tourism hurts those not benefiting from tourism. At times there are fewer hands available for traditional farming practices. There may be economic immigration into the tourist township in future, bringing associated social and environmental pressures.

### **3.7.6. Environmental, Social and Cultural Impacts of Tourism**

Over the last decade, stories of the impacts of tourism in the Park have received worldwide publicity. The issues seem dramatic. In context, they need to be weighed against the fact that tourism is now beginning to provide an economic rationale for conservation in the minds of local people. Tourism's most serious environmental impacts are associated with the degradation of forests and alpine shrub land due to unregulated tourism in the eco-fragile and environmentally sensitive regions like dumping of non degradable garbage, trampling, disturbing and polluting the ground vegetation, high altitude lakes and wild animals respectively and by using fuel wood for cooking and heating. Particularly concerning, because of the very slow re-growth, is the harvesting of juniper shrubs at high altitudes. Littering is another much publicized issue. Villages, trails and base camps are now clean a fact that has had a positive effect on the visitor experience. Congestion is not so serious problem in case of the Park till date. The social and cultural impacts of tourism are complex and need attention. Underneath the undoubtedly positive development benefits are concerns ranging from diminishing use of Lepcha, Bhutia and Nepali language, the changing character of traditional villages and questions about the cultural appropriateness of tourist-town 'nightlife'. At the heart of all these concerns is a perceived loss of Lepcha, Bhutia and Nepali identity in the own homeland and a wish to maintain styles of tourism that are appropriate to the national park and cultural context.

**3.7.7. Revenue Collected as Entry Fee in the Khancheendzonga National Park:**

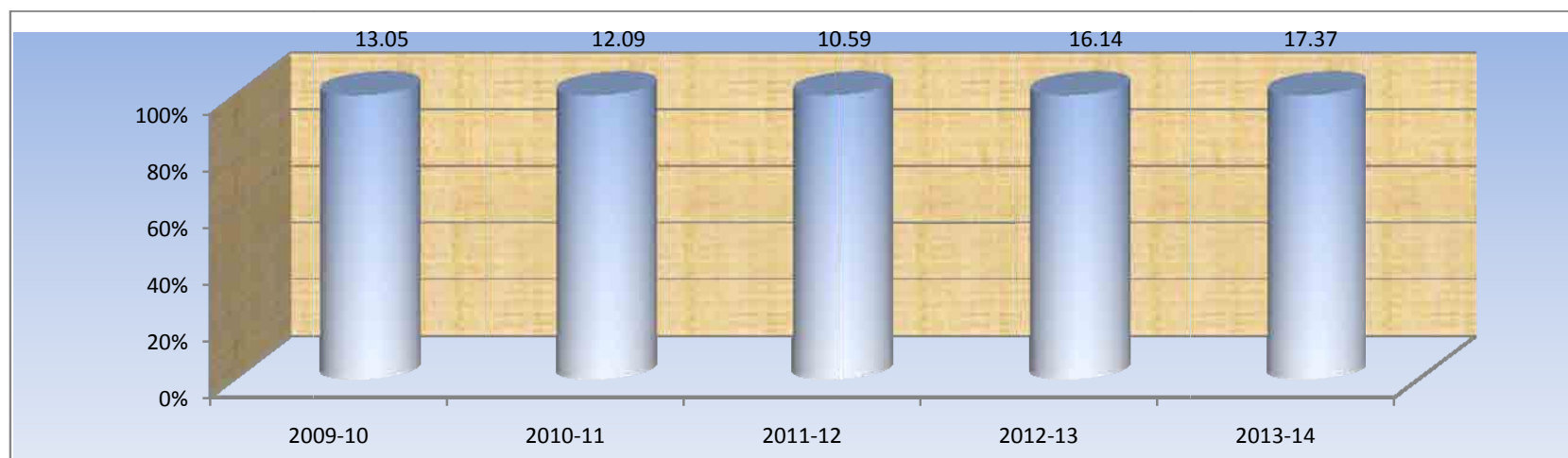
Besides the economic improvement of the local populace through the tourist movement, the Government is also collecting some revenue as Entry Fee. These entry fees are collected in two places, viz. one at Yuksam (KNP) Check-post and other at Gangtok, KNP (Division), Deorali. Now with the increase of the tourist flow in the Park, the number of Check-Post have also been increased, by constructing at Nambu, Labdang, in West and Toong and Sankalang in North Sikkim. The Entry Fee is collected as per the specification prescribed in the Notification No.1: 4/KNP/-96/20, Date;03-05-2001. A copy of the Notification is enclosed as Annexure – 27-29.



**I. Statement of Revenue collected by the KBR (Division) since last five years is given as under:-**

Year	April	May	June	July	August	Sept.	October	November	December	January	February	March	Total
2009-10	1,47,160/-	84,210/-	11,120/-	52,810/-	30,755/-	425114/-	297450/-	100845/-	38520/-	5840/-	7750/-	104000/-	1305574/-
2010-11	167805/-	142440/-	24490/-	6900/-	92775/-	124980/-	328475/-	139650/-	62420/-	15250/-	12125/-	101105/-	1209415/-
2011-12	187340/-	119320/-	19560/-	720/-	6990/-	15465/-	370190/-	216640/-	12605/-	9515/-	17200/-	83280/-	1058825/-
2012-13	261460/-	156670/-	10975/-	300/-	191350/-	233960/-	449659/-	147626/-	33576/-	4750/-	7255/-	116378/-	1613959/-
2013-14	423398/-	254513/-	12761/-	6867/-	8001/-	205499/-	498661/-	112313/-	36238/-	7620/-	35380/-	135743/-	1736994/-
	<b>1187163/-</b>	<b>757153/-</b>	<b>78906/-</b>	<b>67597/-</b>	<b>329871/-</b>	<b>1005018/-</b>	<b>1944435/-</b>	<b>717074/-</b>	<b>183359/-</b>	<b>42975/-</b>	<b>79710/-</b>	<b>540506/-</b>	<b>6924767/-</b>

**II. REVENUE CHART FOR LAST FIVE YEARS:**



### **3.7.8. Visitor Flow Management**

The visitor flow management process will actively manage “visitor carrying capacity”. As a first step, establish agreement among all key stakeholders on indicators of unacceptable crowding. Once two or three indicators are agreed, find ways to measure the indicators. Then, decide limits to acceptable crowding. Finally, put in place a means for collective decision-making, with all concerned stakeholders involved. Each year, make a decision about the visitor flow management actions required for the following year. These actions may include:

- i) Trek agents make voluntary adjustment to trip route planning;
- ii) Tourism umbrella organizations promote alternative trails and circuits;
- iii) Initiating improvements to infrastructure at bottlenecks
- iv) The Government through notification introduces mandatory one-way trails;
- v) Introduces policy of no pack animals zone in some of the naturally vulnerable areas.
- vi) The Park imposes a crowding surcharge on entrance fee at peak periods;

#### **Activities**

- To conduct a Participatory Planning Study on visitor flow management, focusing on: stakeholder agreement on indicators, measures and limits of acceptable crowding; a means for collective decision-making by concerned stakeholders; and a sustainable funding arrangement, including funding to Independent Agency for monitoring purposes.
- The indicators of crowding will need to be universally agreed. One example could be waiting time at Check-post. Another could be the number of groups unable to find accommodation each day. Once two or three indicators are agreed, ways to measure the indicators are needed. For example, waiting time at check-post will require measurement at daytime peak flows. Numbers of groups turn back from settlements will require monitoring in the evenings. Next, limits to acceptable crowding need to be agreed. Again, universal agreement is required.
- The means for collective decision-making could involve NGOs, EDCs assisted by the Panchayats, Wildlife Sector of Forest Department, Tourism Department, Umbrella organization of Tours & Travels convening a Visitor Flow Task Force (VFTF) made up of individuals recommended by key stakeholder groups. A Memorandum of Understanding (MOU) will be drawn up, containing the principles of the visitor flow management process
- Subject to further consideration by Study, members of the VFTF may be recommended to the management.
- The VFTF’s objectives may include: i) to agree on arrangements of possible crowding control actions; ii) to evaluate the results of the monitoring of indicators for the previous twelve months; iii) to make decisions on what actions should be taken in the following twelve months; and iv) to fine-tune the monitor process and commission studies.

### **3.7.9. Day Visitors:**

There is no vehicular road head to the boundary of the Park, so one must walk at least an hour or two to reach the boundary, hence the question of day-visit is next to impossible. Therefore, in order to enjoy the Park in real sense one must have minimum 7 to 10 days in their itineraries to visit interesting and important places of the Park.

### **3.7.10. Closed Period:**

There is no closed period for the park as such but during winter, from December to March no visitors are able to visit because of heavy snowfall, which covers almost all areas of the Khangchendzonga National Park

### **3.8. Research, Monitoring and Training:**

To ensure that the protected area management and development becomes increasingly more scientific and that Park and its surrounding areas serves as scientific laboratory for research and education. I) To promote, encourage and coordinate priority scientific research activities in the Park. II) To ensure that the research results are applied to conservation and management of the Park and the pariphery of the Park.

#### **3.8.1. Research and Monitoring:**

##### **Developing a research policy and guidelines:**

Protected areas are natural “laboratories” for scientific research. The Wild Life (Protection) Act 1972 and Sikkim Forests, Water Courses and Road Reserve (Preservation and Protection) Act 1988 allows research in the national parks and other wildlife areas with prior permission of the Chief Wildlife Warden, Forests, Environment and Wildlife Management Department, Government of Sikkim, under the conditions that the copies of the results, findings, publications, research articles are submitted to the State Government through CWLW. Khangchendzonga National Park is increasingly being received much attention from national and international researchers. However, clear policies and guidelines on conducting research in the PAs including KNP are lacking. Therefore, the line departments have to initiate the process of formulating such a guideline to facilitate and encourage appropriate research in the protected areas. Develop an interim research guideline for Protected Areas taking into account of the following points:

- Researchers wishing to conduct research in the Khangchendzonga National Park must submit a detailed proposal containing clear objectives, methodology, timeframe and budgets to the Chief Wildlife Warden, Government of Sikkim with a letter of request from the Principal Investigator.
- The Department of Forests, Environment and Wildlife Management, Government of Sikkim will act as the clearing house for research proposals related to the Khangchendzonga National Park and its surroundings. A copy of the research proposal must be sent to the Joint Director/ Field Director /DFO, Khangchendzonga National Park for evaluation and input of the of research work for future management.
- Researchers immediately after completion of the research work in the field should give a power point presentation to the Principal Chief Conservator of Forests-cum- Secretary and Chief Wildlife Warden along with all Officers and field staff working for the management of the said Protected Areas.
- Research proposals with sensitive social, cultural and religious contents must be endorsed by the “Local Panchayats and Eco-Development Committee” or the concern District Collector before issuing permission.
- Intellectual property rights of the indigenous people and sensitivity to local concerns must be given utmost consideration.
- Foreign researchers should be encouraged to partner with local researchers and institutions to ensure that the State/Country benefits from research work.
- Researchers should be encouraged to supply evidence of partnership and sponsorships, if any, with national and international organizations and educational institutions.
- Research proposals oriented towards or determined by management concerns of the Khangchendzonga National Park should receive priority.
- Researchers should be encouraged to use research methods that are not damaging to the park values such a destructive sampling and removal of specimens of endangered species.

- Permits will have to be obtained from the Chief Wildlife Warden for collecting and transporting of botanical, zoological, and geological specimens out of the park and the Park officials should closely monitor the activities of the researchers.
- Researchers will be required to disseminated outcomes of their work through formal and informal presentations, reporting, and by depositing copies of data, reports, photographs and copies of published papers and thesis to the Park Managers for future reference.

### **3.8.2. Setting priority on research agenda**

The Park did not have research priorities in the past. The topics of past research work within Khangchendzonga National Park has mostly been determined by the interest of the individual researchers. The Park do not have its own ongoing research and monitoring programs and has been dependent on outside researchers for information. However, under the Sikkim Biodiversity Conservation and Forests Management Project Rapid Biodiversity Surveys and study of Musk deer is being undertaken in the park.

#### ***Strategies***

In consultation with Ministry of Environment & Forests, Wildlife Sector, GoI and the WII, Darhadun including other experts, State Forests, Environment and Wildlife Management Department, Government of Sikkim will develop an interim list of priority research topics.

- Identify and compile research topic important for implementation of the Management Plan.
- Circulate the preliminary research priority list to the National Wildlife Board, MoEF, Government of India Scientific Advisory Committee and other experts for comment.
- Refine and compile list for dissemination.

### **3.8.3. Establishing research information storage and retrieval system:**

Several research work has been carried out in Khangchendzonga National Park after the establishment of the Park. However the main issue is that the outcome of this research has not been collected and kept locally in the park office / Forest library in a manner that is accessible to the managers, researchers and other interested users. The results of research have not then been effectively applied to management, monitoring and proposes.

#### ***Strategies***

To collect, catalogue and store results of the past, present and future research work at the KNP-Range Office level, Field Director office or in the Wildlife Sector Library of Forests, Env.& Wildlife Management Department, Gangtok.

#### ***Activities***

- Secure necessary funding to establish a proper Wildlife Sector library in Gangtok, Forests Secretariat with good facilities for record keeping and information dissemination system. Where possible the information should be stored electronically as well as in hard copies.
- Contact all past and present researchers and organizations involved conducting research in KNP and seek their supporting in contributing copies of their work and other collections.
- Establish a secure and non-damaging system of public access to stored collections by training and equipping park staff.
- Encourage local NGO's to participate in setting up information collection and storage

### **3.8.4. Training:**

#### **Institutional Strengthening**

To strengthen the KNP through increased managerial capacity; appropriate infrastructure; updated Rules regulations through Government Notifications and management plans that are supported by an improved information system, empowered local people and effective involvement of expertise and partners.

#### **OBJECTIVES**

- a) To employ and maintain an adequate number of able and motivated park staff able to manage the Park's expanding responsibilities, ensuring appropriate gender balance and local representation.
- b) To develop, refine and update a new set of Park Regulations to better address current and emerging issues including World Heritage Site requirements and joint management approaches, and buffer zone operations.
- c) To establish and maintain close formal and informal consultation with local people and other stakeholders and strengthen their support and involvement in Park protection.
- d) To ensure adequate Park infrastructure and access to communications and transportation facilities necessary for efficient and effective Park operation.
- e) To develop and implement plans for research, monitoring and evaluation of Park management on a regular basis.

### **3.8.5. Need for adequate Trained Staff:**

Khangchendzonga National Park is shortage of qualified energetic field staff to take on the increase in management responsibilities and complexity. Since its establishment in 1977, visitors have increased by many fold especially in the Western side of the Park; where, Socio-Economic Activities and Social Welfare works for the poor local forest fringe farmers are to be carried out under Central Sponsored Scheme and State Sponsored Schemes. The poaching of Musk Deer, Himalayan thar, Serow, Goral, Blue sheep and pheasants etc. remains a problem. Further, the problem is to protect some valuable medicinal plants of the Park from illegal collectors and regular patrolling to check the cattle grazing within the Park. The number of field level Park staff remains unchanged.

#### **Strategies**

- To increase the number of energetic field level Park staff for effective patrolling of entire high altitude Park. Two ACFs for North and West Sub-divisions respectively have been recently posted, which has ensured the planning, coordination and leadership capacity in the team for management of the Park.
- Seek government approval to sanction additional staff positions as recommended in the in the Management Plan and increase staff number .The increase staff will constitute Ranger Officer, Block Officer, Forest Guards and supervisors.
- Develop job descriptions for all additional staff positions in order to clarify and illustrate the need for these positions to cover new priorities including community development and mobilization, environmental education and interpretation, and forest and tourism management.
- They the Park staff, will be deputed for training for handling Tranquilizers, fire arms, to combat with forest fire, handling of wireless sets, GIS for survey works, etc. within State or outside State or abroad as refreshment course, deploma or degree, so that the Park management could be manned with technically sound field staff.Such training are bing organized by the JICA assited SBFP project.

### **3.8.6. Capacity Building of field staff (Training):**

- Khangchendzonga National park management needs to become increasingly more sophisticated, scientific and people-oriented. Participatory management approaches involving multiple stakeholders, and greater responsibility sharing with Eco-development communities will become essential. Park staff will have to become better planners, coordinators, motivators and researchers. These changes are the demand of time factor for substantial retraining and capacity building of the Park Staff and posting of well trained field staff.
- Inform, familiarize and retrain park staff of all levels in new approaches, new policies and regulations so that they are reoriented to new responsibilities and directions.
- Through the capacity building activities, the local Panchayats, Eco-Development and Joint Forest Management Committees and other Non-Governmental organizations will be strengthened to enable them to take management responsibility for the natural resources of their surroundings areas.
- Conduct regular in-service training for park staff to improve their ability to work as social immobilizers and extension workers to support poor farmers of the forest fringe villages in addition to their existing routine duty.
- Organize periodic workshops for Park officials on new and emerging management themes including training to boost leadership, planning facilitation, and coordination skills.
- Organize joint trainings for Panchayats, EDCs, JFMCs, Local NGOs and park staff to discuss the issues of mutual concern, improve coordination, and develop cross cultural understanding.
- Make the park jobs more attractive by increasing public appreciation, through welfare activities provided by the Government, participatory approach in all management activities, providing training and other technique for sustainable way of farming, and other incentives like, training on Handloom and Handicraft, providing Health check-ups etc.
- Develop well-designed and well-equipped offices and accommodation facilities for staff.
- Provide health and accident insurance coverage, plus suitable field and safety equipment.
- Publicize the role of the Park and its staff to the public to increase appreciation and support.
- Implement regular participatory staff performance and evaluation system.

### **3.9. Wildlife Conservation Strategies and their Evaluation:**

#### **Strategies**

- i) Control grazing, poaching, encroachment, illicit felling of timber:
- ii) Extensive and regular patrolling of the Park.
- iii) Wildlife Protection Mobile Squad, comprising 4 FGs in each group.
- iv) Posting of trained field staff in ranges and beats:
- v) Strengthening communication network:
- vi) Purchase of arms and ammunition for field staff:
- vii) Creation of a wireless network:
- viii) Establishment of intelligence network for collecting information illegal activities and provision of secret fund:
- ix) Publicity, nature education and awareness generation:
- x) Formation of Himal Rakshak
- xi) Promotion of regulated eco-tourism.
- xii) Identification and notification of trekking trails in the Protected Area.

**3.9.1. Activities safeguarding the Wildlife & its Evaluation:**

Protection and conservation is the primary aspect of management in the Khangchendzonga National Park. The routine work carried out by the existing Park staff are anti-poaching operations such as trap demolition and patrolling in the poaching prone areas are conducted periodically.

High altitude expeditions of senior officers of the Park and Wildlife Organizations are also organized from time to time with a view to studying the current status of the highlands and impact by tourists, trekkers, mountaineers, graziers, medicinal plant collectors, research scholars etc. The Park has a network of wireless communications set up in important places and this is fully and effectively used during such outdoor activities. Musk Deer poachers were active in the early eighties but now the incidence of poaching has been greatly reduced. Incidence of poaching by graziers is reduced now with the banning of grazing by the State Government in the Protected Areas and Reserved Forests. Securing support for protection of wildlife and regulating forest laws, rules and regulation has become relatively easy because the local traditions of conserving forest and wildlife already was part of the culture of the Sikkimese people. The Park and the people relationship gradually improved through promotion of conservation of the natural resource by means of Peoples participation. The park staff hold regular meetings and create awareness about the importance of the conservation of natural resources. The local communities are more conscious and committed to the conservation more than ever before. At the same time, they are seeking greater involvement in the park’s decision processes. Experience suggests that successful involvement and empowerment of local communities will make conservation more sustainable and cost effective.

**Stakeholders:**

There are 44 villages surrounding the KNP in the altitude of 3000 – 13000 feet in West and North Sikkim. A total of 8353 households, with a total population of 35,575 (2001 Census of India) of which about 70% are tribal. They are mostly subsistence level farmers, residing in these remote villages, adjacent to the Khangchendzonga National Park. Representing these villages, there are 20 Eco-Developments committees are formed and registered. Each committee consists of 10 to 12 members representing at least one ward by one member. They are the field level managers of the Park. However, these 20 EDCs covers approximately 20-23 villages,only, hence there is still need to create 5 to 6 additional EDCs to cover the villages falling in the South-Western part of the National Park.

**3.9.2. Habitat Improvement Works:**

Habitat of wild animals had earlier been degraded due to several reasons such as theft of timber and firewood, cattle grazing, soil erosion etc. Improvement works have recently been initiated and more are prescribed in this management plan. The total area of Open Forest recorded is 115.07 sq.Km. and 215.51 sqkm. Forest land is recorded as degraded forest within the Khangchendzonga National Park, where, management intervention in phase-wise manner shall be more effective to improve soil condition and its vegetative cover. For the purpose of creating grazing ground for the herbivorous animals, hunting ground for the carnivorous animals and nesting and feeding purpose for the avi-fauna, some supplementary works under management intervention have to be carried out on the yearly basis without disturbing the existing flora and fauna of the Park. Some of the supplementary activities suggested are as under:

- a) Pasture Development in the open forest,
- b) Bamboo Plantation,
- c) Aided Natural regeneration in degraded forest,
- d) Pltn. of flowering and fruiting tree
- e) Grass land maintenance,
- f) Soil & Moisture conservation etc.

**3.9.3. Watch and wards for special threatened animals:**

The significance and importance of areas has already been described at the earlier chapter. Keeping in mind such importance, protection of these endangered, threatened animals of Himalayan range should be given on top priority by engaging watch and wards at these places for which regular patrolling throughout the years is must to keep strict vigilance at the most vulnerable areas. At the time of engagement of watch and wards only those interested and dedicated resident of nearby buffer zone's youths will be given priority, which further solves the unemployment problem. Since the area is very extensive, at least 5 chowkidhar in each Range will be engaged to look after protection and conservation of natural resources of the Park.

**3.9.4. Construction of Watch Tower and Log Bridges:**

There are a total of seven wooden watch towers were constructed and out of that most of the towers are unserviceable and many more have to be constructed considering the vastness of the areas. Till date, the Watch Tower are being constructed with wooden structures and the cost of its construction is also very nominal but it gives minimum services. In view of the durability, the Angle Iron Watch Towers are more viable in the environment sensitive areas of the Park. The Watch Tower fulfills both monitoring as well as protection purposes. Similarly, at several places construction of bridges are necessary on every crossings of rivers and streams in every valleys, which become torrential during rainy seasons and one can not cross it. The construction of bridges in a way of Log Bridge has been going on at different places but its service has been observed not enough as compared to Iron bridge. Hence instead of Log bridge, Iron Angle Plate is proposed in this management Plan although the cost involves will be little higher site, but it gives durability.

**3.9.5. Checkposts:**

Two Check Posts were recently constructed in Western part of Khangchendzonga National Park, one at Yuksam, from where entry fees is collected and checking is done and other on is at Darap-Nambu, where entry fee collection and checking is yet to be started. One more check-post is coming –up at Tashiding-Labdang in West Sikkim. Recently one check-post has been constructed at Toong under Chungthang Range and another one is to be constructed at Sangklang-Passingdang under Dzongu Range in North Sikkim to check unauthorized entry of human being and to check the bio-thefts from the Park.

Further, as and when the construction of these check-posts are completed legal base is to be given through Government Notification, so that the check-post shall become full functional in respect of fee collection and checking and apprehending the culprits on the spot.

**3.9.6. Provision of sophisticated Wireless Network:**

Wireless network system has been procured through centrally sponsored schemes which are of immense important for patrolling. Some more sets have to be purchase to cover more areas in future. The provision for maintenance of batteries, hand sets and static-sets are to be provided in near future.

**3.9.7. Communication:**

The KNP is now further strengthened by posting well trained Assistant Conservator of Forests in order to assist Divisional Forest Officer (KNP) and to effectively protect and manage the area. The ACF will also supervise the execution of the various works being carried out in the KNP and its surrounding with central and state Governments



assistance. Since the area being very extensive with total area of 1784.sq.kms with no local transportation facilities, it is impracticable to perform all above duties without the conveyance facilities. Therefore, the proposal to purchase two Boleros to facilitate the above officer to carry out the above mentioned duties. Patrolling mobile Vans are also very much necessary for proper patrolling, for apprehending wildlife offenders, for rescuing injured wild animals, for transporting patrolling equipments etc.

### 3.9.8. Existing Vehicles and Motor-Bikes under Khangchendzonga National Park Division,

Sl.No.	Type of Vechile	Year of purchase	Attached to the officials	Registration No.	Purpose
1	Marshal (Hard-top)	2001-2002	DFO-KNP	Sk-02-A-0824	Field & Officeduty
2	Motor-Bike (B.Pulsor)	2004-2005	Range Officer Chungthang	Sk-01/ 5140	Field duty
3	Motor-Bike ( Bajaj Discoverer)	2004-2005	RangeOfficer Dzongu	Sk-01/ 5608	-do-
4	Motor-Bike (BajajDiscover)	2004-2005	RangeOfficer Yuksam	Sk-01/ 5611	-do-

a)

#### Requirement of two nos. of Boleros:

The Khangchendzonga National Park stretches between two districts covering an area of 1784.00 Sq.Km. The Range and District wise area falls as under:-

Sl. No.	District	Name of Range	KNP Area, in sq.km
1	North Sikkim	Chungthang	816.00
2	-do-	Dzongu	612.00
3	West Sikkim	Yuksam	356.00
	<b>Total:</b>		<b>1784.00</b>

The Park has also been strengthened by posting two new Assistant Conservators in two districts to assist the Field Director, KNP and to supervise various works in and around the Park at Yuksam in West Sikkim and Chungthang – Dzongu in North Sikkim, respectively. The whole area being extensive, remote hilly terrain and far flung, there is no other means of conveyance, so non availability of vehicle for ACFs would directly affect on the management of the Park in respect of protection, preservation and propagation of Bio-resources of the Park. Therefore, it is proposed to procure 2 Nos. of Boleros vehicles for ACFs during the year, .2007-08 and 2008-09 in a phase manner.

#### b) Petrolling Vehicle.

As mentioned above in justification the Park stretches between two districts which is more than 150 Km. apart by road, hence to monitor the Park and routine visit to both the districts by the mobile squad comprising 4/5 Forest Guards, at least one Patrolling Pick-up Van is badly needed in the Division. Petrolling Pick-up Van will be used for transportation of injured wild animals to the nearby Veterinary Hospital for treatment and sometimes the seriously injured animal have to be transported to Gangtok Himalayan Zoological Park, where rescue centre has been set-up for long term treatment before releasing the animal to the wild. Pick-up Van is necessary for transportation of Wildlife

Offenders to the nearest Magistrate for legal prosecution and other formalities as per the provisions of Wildlife (Protection) Act, 1972 and other relevant Acts.

**3.9.9. Establishment of striking force/Mobile Squad:**

Two mobile squad needs to be formed based one at Yuksam West Sikkim, and other one at Mangan in North Sikkim. These squads will function as striking force for wildlife criminals, cattle grazers in the National Park and anti-poaching squad.

**3.9.10. Development of Intelligence Network:**

Informers in the remote area are to be planted within the villagers itself, with incentives for silent information regarding the offences, like, hunting, collecting medicinal plants, felling of trees, encroachment of forest/Park land, trapping of wild animals etc. so that information related to poaching and other illegal activities come to the knowledge of the officers and staff. However, the identity of the informer are to be kept quite secret. So, this system of clandestine information can be improved with quick action against the criminals.

**3.9.11. Rescue Centre:**

Till date the National Park have no rescue centre of its own and whatever the rescue works so far being carried out is through the help of nearest veterinary center of respective areas like Veterinary Doctors of Geyzing and Tashiding which are from Animal, Husbandry and Veterinary Science, Fisheries Department are being used for treatment of injured wild animals of the Western part of the Park for Northern part of the Park Veterinarian of Chungthang, Mangan and Dzongu are used for treatment and postmortem of dead animals. And in case the time required is more for taking care and treatment of rescued wild animals then these animals are being brought to Gangtok, Himalayan Zoological Park, where Veterinarian of Wildlife Sector are available. Therefore, now-onwards it is necessary to have Rescue Centers one at Yuksam, in West District and another one at Mangan or Dzongu in North District with full infrastructure, Veterinary Doctor, Compounder and necessary assistants, so, that there is no need of requesting other department for their help.

**3.9.12. Chemical immobilization/Operation/Capture Cages/Nets:**

To deal with any untoward eventualities, like out-break of epidemics amongst the wild animals, treatment of injured animals, spraying & spreading of medicine in high altitude habitats and for the purpose of investigation of wildlife diseases, the following medicine and materials have to be readily available in the Office of the KNP or in the Himalayan Zoological office.

• ***Tranquilizing Drugs & Antidotes:***

- a) Xylazil-100 (Troy, Australia) – 50ml X 2 vials
- b) Ketamil-100 (Troy,Australia) – 50ml x 2 vials
- c) Antagozil-10 ( Troy, Australia – 50ml x 2 vials
- d) Distill water inj - 10ml x 5 vials

- **Accessories of Rifle Model No. 60 N:**

- a) Metal syringes Art. No.3123
- b) Metal syringes Art. No.3125
- c) Needles for metal syringes Art. No.3040:
  - i) NA2/19mm.
  - ii) NA3/28mm
  - iii) NA4/32mm
- d) Charges for metal syringes Art.No.2006/7/8(10pcs./tin)1tin each.
- e) Cartridges Art.No. – 2012
- f) Cartridges Art. No. -2014
- g) Cartridges Art. No. – 2013
- h) Cartridges Art. No. – 2015
- i) Silicone Grease Art. No. – 5001
- j) Cartridges Holder Art.No.5003.

- **Other materials:**

- |   |                                      |
|---|--------------------------------------|
| 1) Rectified spirit.                            | 2) Swab stick.                       |
| 3) Vaccinator with EDTA                         | 4) Vaccinator with cloth activator.  |
| 5) Test Tube 12x100mm.                          | 6) Formalin Concentrated.            |
| 7) Phosphate Buffer solution.                   | 8) Specimen jars (plastic) 250ml.    |
| 9) Specimen jars (plastic) 500ml.& 2litres      | 10) Specimen jars(plastic) 5 litres. |
| 11) Surgical Gloves (no.6.5/7)                  | 12) Savlon 450 ml.                   |
| 13) Disposable syringes-2ml,5ml &1ml.           | 14) Surgical blade (11/18/22/24no)   |
| 15) B.P.Handle for the blades as cited above.   | 16) Surgical mask- 50pcs.set.        |
| 17) Test Tube with swab (sterilized).           | 18) Serum vials – 50 vials pack.     |
| 19) Hand Towels.                                | 20) Omnipor paper Tape2.5/5cm.       |
| 21) Leukoplast 2.5 /5cm.                        | 22) Container for stool sample.      |
| 23) Forcep, Dettol soap and Cotton roll-100 gm. |                                      |

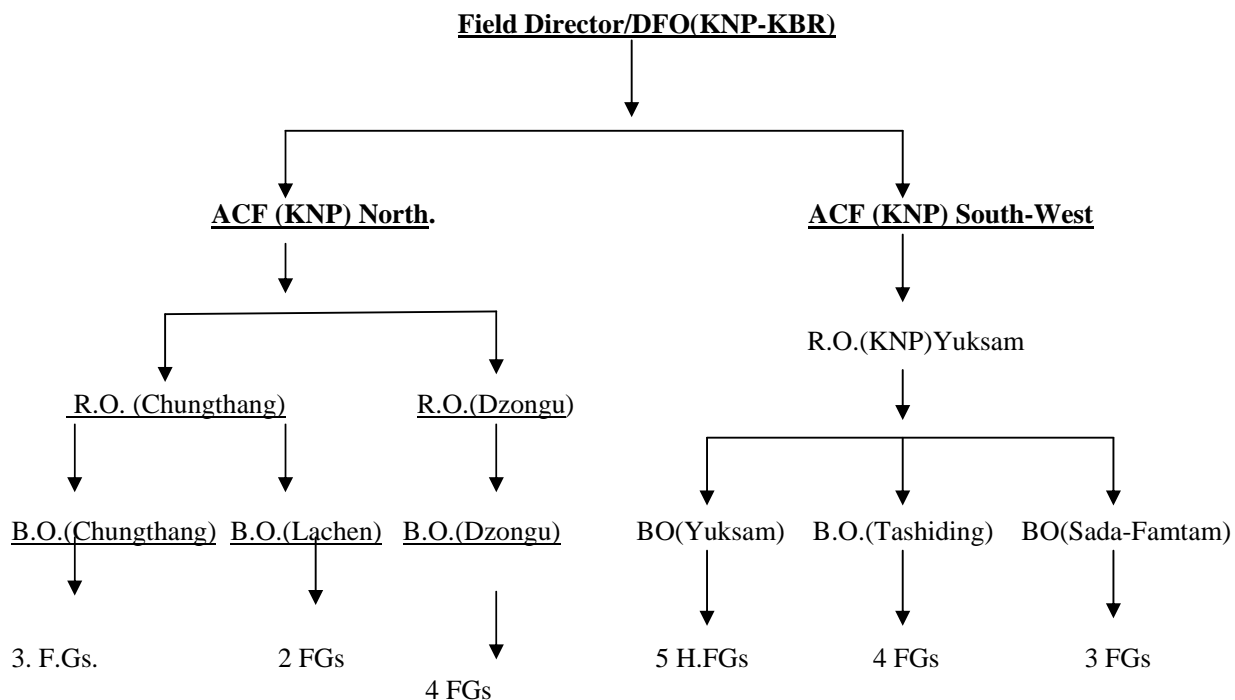
- **Medicines:**

- a) Inj. Anistamin – 30ml.
- b) Inj. Neomec – 1ml.

- Besides above materials and medicines, good quality nets and transportable light cages for different wild animals are necessary for all Protected Areas of the State.

### 3.10. Administrative Setup:

The Flow-Chart for the Administrative set up right from the Field Director to the ground level field staff for the management of the Khangchendzonga National Park is as follows:



**3.10.1. Tenure of last 6 incumbents / in-charge of the National Park**

- i) Shri. S.Z.Luksom, SFS, (Field Director) - 1<sup>st</sup>. May 1986 to June 1991 - 5 years
- ii) Shri. Pempa Dadul Bhutia (Field Director) - 1991 to 19.02.1994 - 3 years.
- iii) Shri. Gut Lepcha (Field Director) - 20.02.1994 to 01.12.1999 - 5 years.
- iv) Shri. Bhuwan Pradhan (Field Director) - 02.12.1999 to 31.01.2000 - 2 Months.
- v) Shri. Nima Wangdi Tamang (Field Director) - 01.02.2000 to 21.04.2005 - 5 years.
- vi) Shri. J.B.Subba (Field Director) - 22.04.2005 to 30.05.2009 - 4 years.
- vii) Shri Nambi Tshering Bhutia (Field Director) - 1.03.2009 to 16.02.2011 - 2 years
- viii) Shri. Sangay Gyatso Bhutia (Field Director) - 17.02.2011 to 15.08.2014 - 3.6 years

**3.10.2. Range-wise areas for administrative jurisdiction:**

The Khangchendzonga National Park stretches in three districts covering an area of 1784.00 Sq.Km.

**THE RANGE AND DISTRICT WISE AREA OF KHANGCHENDZONGA NATIONAL PARK:-**

Sl. No.	District	Name of Range	Area, in sq.km	Area in %
1	North Sikkim	Chungthang	816.00	78.30%
2	-do-	Dzongu	612.00	
3	South-West Sikkim	Yuksam	356.00	21.70%
	<b>Total:</b>		<b>1784.00</b>	

**3.10.3. Watershed-wise boundaries of individual ranges:**

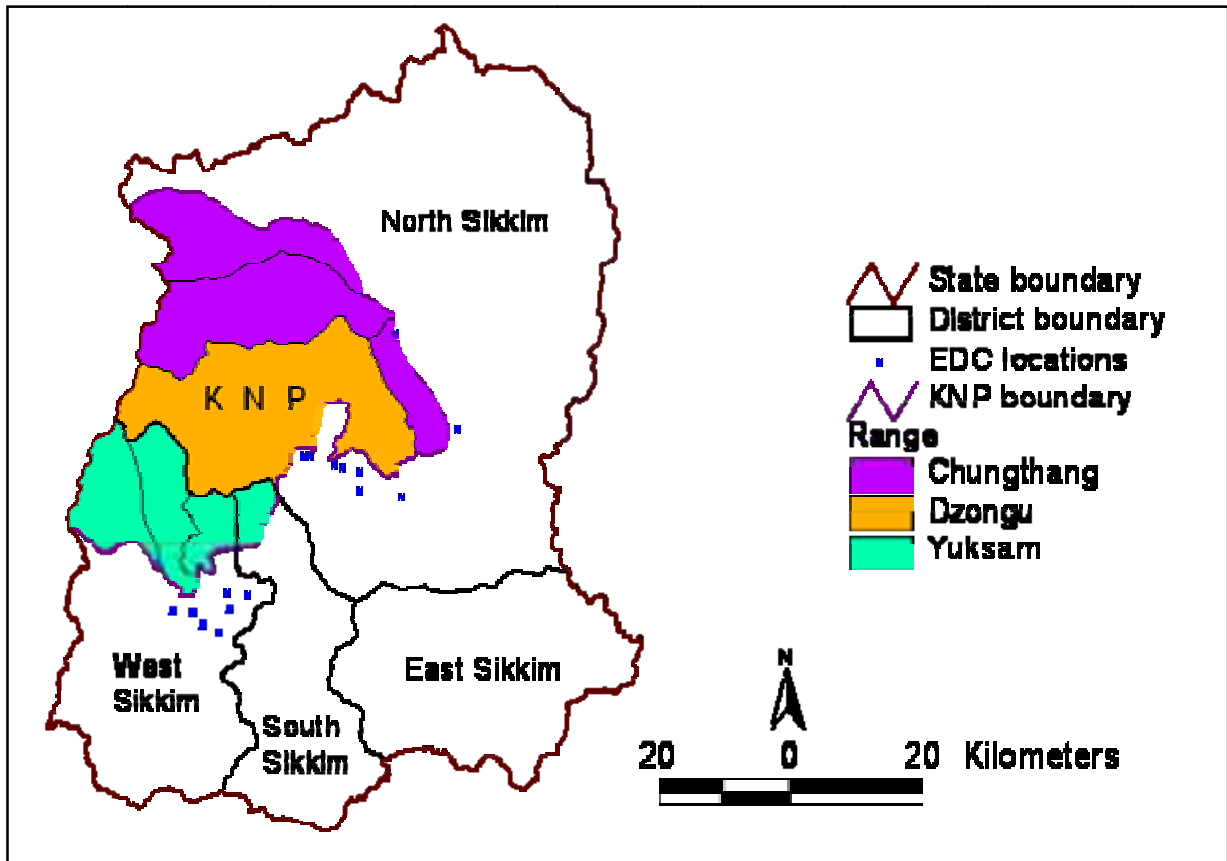
The Khangchendzonga National Park covers almost one fourth of the total geographical area of the State. Out of the total area of 1784 Sq.km, including management intervention zone, 78.30% of the KNP area fall in North Sikkim and 21.70% South & west District of Sikkim. The Forest type extends from Sub-Tropical to Alpine and Scrub Forests. In view of topographical hilly terrain with high Mountain Peak, Glaciers and dense forest areas of the Park and in consideration of management of the Park the whole area have been broadly divided into two Sub-Divisions, namely, i) Yuksam (KNP) Sub-Division, manned by One Assistant Conservator of Forests, and ii) North (KNP) Sub-Division with an Assistant Conservator of Forests. Similarly, Sub-Divisions are divided into three Ranges, two ranges in North Sikkim, namely a) Chungthang (KNP) Range and b) Dzongu (KNP) Range and c) Yuksam (KNP) Range covers the areas of West and South Sikkim.

**3.10.4. Management of the Park:**

Under Wildlife Sector of Forests, Environment and Wildlife Management Department Government of Sikkim the management of Khangchendzonga National Park is placed as KNP, Division, manned by one Field Director/ DFO and he/she will look after whole KNP area of North, West & South Districts of Sikkim.

Two sub-divisions namely North & West respectively are manned by two Assistant Conservators in each sub-division. The whole area is divided into Watershed-wise Ranges as given in Fig- XII

- Chungthang Range: Lhonak, Zemu and Lachen Watersheds
- Dzongu Range: Rangyong Watershed
- Yuksam Range: Churong, Prek and Rangit Watersheds



(prepared and designed by Mr.Sandeep Tambe,IFS)

## KNP-MAP-XII.

### I. Boundaries of Chungthang (KNP) Range:

Chungthang Range of Khangchendzonga National Park is bounded by Lhonak Chu and Goma Chu in North and it is extended up to south Lhonak Glacier in the North-West. Eastern side is bounded by international boundary line of Nepal. Further it comes down in eastern side along the international boundary and meet Khangchendzonga, the high Peak and come down to the South Summit of Khangchendzonga, having 8476 m. altitude and forms the South-West boundary of Chungthang (KNP) Range. Then the boundary follows the ridge line and come up-to Zemu top. Further the boundary follows the ridge line of mountain with altitude of 6539m, 5835m and in the centre of the South Chibgela 5405. and Siniolchu of 6888m. The boundary further runs behind the Zumthuk Puk Glacier at Yajukmanteng of 5643 m. to 5208m ridge and touch with Kishongla and it comes down via Lama Angdong of 5862m.high. It further comes down following the ridge touching the peak at an altitude of 5080m.5200m. and 4940m. then to Thepala 4959m. via Shingo Chu.

The boundary runs towards ridge of 5069m altitude and Pemikhangchhen 4483m Rokzongchu 4097m, Ningla 3768m finally the South-Easten part in 11350m. near Toong which is Eastern portion of Khangchendzonga National Park. The River Teesta in the Eastern Side of the Park is the Natural boundary and runs up to the confluence of

Zema River, so this becomes the eastern boundary of Chungthang (KNP) Range. The boundary line further follows the Zema River upto the confluence of Lhonak River and it follows the Lhonak River. Zemu Glacier, the largest in the State and other glaciers like South Lhonak Glacier, North Longbu Glacier Chwangsang Glacier, Hidden Glacier etc. are within this Range. Zemu River is the main river of this Range and other rivers are Jhomphyak Chu, Lhonak Chu, Lingma Chu etc.

## **II. Boundaries of Dzongu (KNP) Range:**

This is the central part of the Khangchendzonga National Park and the area falls under the administrative jurisdiction of Dzongu Range. The western side of this Range is separated by international boundary of India and Nepal, where the boundary starts from South Khangchendzonga Peak and in North-East it followed with Talung, 7349m Peak and it runs up to Kabru Peak at South-West and follows the ridge in downward to Kabru Done in 6545m. again it follows the ridge and come down to Goechela via Gocha Peak, then it follows the ridge towards Pandim Peak 6691m., Tinchengang 6010m, Joponu 5936 m., and comes up to Mt. Norsing of 5825m. again it follows the ridge finally the boundary meets in Peki-Lhu of 4934 m. altitude in the middle portion of the Southern part of Dzongu Range. Further, the boundary goes towards the East following the southern ridge of the River Rangyang Chu, above Sakyong village and crosses in the confluence of Rangyong and Tholung Chu below the foot hills of Pentong and the boundary runs above Beh, Tshana and then Tholung Gumpa and whole Tholung Chu forms the natural boundary towards Beh. The boundary again runs towards left above Linzya and runs towards Saffu, Shipgyer via above Tingvong. The boundary of Northern side of this Range runs along the ridge of Bikmatar, Siniolchu, Muleling and further proceeds towards the hill-top Ridge of Zema Chu which is the southern boundary of Chungthang Range. The Tholung Glacier, Zumthul Phuk Glacier, Thongsing Glacier, South Simvo Glacier, Umrangkhang Glacier are the prominent glaciers within this Range. Some of the important Rivers are; Umrang Chu, Rangyong Chu, Ringpi Chu, Rukel Chu, Jhumthul Chu, Dawa Chu, Kishong Chu, Tholung Chu and Rahi Chu. These Rivers are feed by Glaciers, perpetually snow covered mountain peaks and perrinial lakes and wet lands available with this Range. The important places under this range are: Kabru Peak, Goechela, Mt. Pandim, Mt. Jopuno, Mt Norsing, Riyot Patam Kishongla, Tholung Gumpa, Sacred Cave, Hot Spring etc.

## **III. Boundaries of Yuksam (KNP) Range:**

This is the South-Western part of the Khangchendzonga National Park. The Northern boundary of this Range runs along the southern boundary of Dzongu Range. The North-West boundary of this Range runs along the International boundary of Nepal via Rathong Paek 6678m, Kokthang Peak 6147m, Khangla Peak 5560 m, up to Mazzur Pokhari and Gomathang and it meets with Kokchurang Chu. This boundary follows Kokchurang Chu up to Nalang Cave in South-East, then it again goes Northern side up to Kasturi Cave and again it follows River Relli Chu up to Neythang and from Nethang it follows ridge with 3487m, and 3502m. then it proceeds and touches the River Kayam Chu. The boundary runs along the Kayam Chu River in the East and joins the boundary line of Dzongu Range in North-East.

The important feature of this Range are East Rathong Glacier, Dudh Pokhari, Tal Pokhari, Choksering Chu, Mazzur Pokhari, Yangsa Chu, Kaklung Chu, Kabbru Peak, Lampokhari, Leduwa Pokhari, Relchu, Onglakthang Glacier, Chamhya Pokhari, Singmoang Chu, etc.

### **3.10.5. Staffing:**

The office of the Director (Wildlife), Addl. Director (Wildlife) Joint Director (KNP), Field Director/DFO (KNP) and ACFs/Assistant Field Directors and Range Officers are responsible for implementation of the management Plan, under the overall control of the Chief Wildlife Warden and Secretary- Forests. There are 22 officials responsible for administration and Management of the Park at present. Their duties include forest patrolling, law enforcement, issuing resource collection and harvesting permits, and wildlife protection. The involvement of Sikkim Police is depending upon the seriousness of the offence and threats by the armed poacher in the field and police team can be requisitioned by the Park Managers if needed, after approval of the CWLW, Government of Sikkim.

### 3.10.6. Patterns of resource allocation and release.

There are two centrally sponsored schemes: i) Management Action Plan (MAP) for Conservation and Management of Khangchendzonga Biosphere Reserve-Sikkim and this Central Sponsored Scheme focuses on the sustainable Socio-economic upliftment of the local populace residing all along the periphery of the Park and ii) “Integrated Development of Wildlife Habitats”. The working areas of this particular scheme is infrastructural development of the Park Habitat Management for the wild animals within the Park. As per the Annual Plan of Operation submitted by the Forests, Environment & Wildlife Management Department, Government of Sikkim, after careful consideration by the MOEF, Government of India, releases the resources for implementation of a) Eco-development activities b) Social welfare activities, d) Habitat management, e) Forest research, Extension and Education, f) Forest Protection, g) Infrastructure development etc. All the administrative expenses like Salaries and wages of the Officers, field staff and office staff are meet up from State Plan of the State Government

### 3.10.7. Infrastructural Facilities:

#### LISTS OF INFRASTRUCTURES ESTABLISHED FOR THE KNP MANAGEMENT

Sl. No.	Type of Infrastructure	Location	Year of Construction	Remarks
1	Log House	Beh	1982-83	Renovated in 2005,
2	Log House	Sat-Dharey	1984-85	Repair work is necessary
3	Class-IV FG-quarter	Yuigang	1985-86	-do-
4	Cl.-IV,FG quarter	Dzongri	1985-86	-do-
5	Cl-IV,FG-Quarter	Lachen	1985-86	-do-
6	Class-III, Quarter	Mangan	1985-86	Serviceable, requires repair
7	FG-quarter-C-IV	Sakyong	1985-86	needs major repair
8	Class-III, Quarter	Sangkalang	1985-86	-do-
9	Log House	Yabuk	1985-86	Serviceable, repaired, 2003-04
10	Log House	Phimphu	1985-86	-do- repaired during 2006-07



Sl. No.	Type of Infrastructure	Location	Year of Construction	Remarks
11	Watch Tower	Yabuk	1985-86	Not serviceable
12	Watch Tower	Thangsing	1985-86	-do-
13	Watch Tower	Phimphu	1985-86	-do-
14	Log House	Tholung	1986-87	Serviceable, toilet is required
15	Log House	Jakchen	1987-88	Serviceable, repaired, 2007-08
16	Log House	Lampokhari	1987-88	required major repair
17	Log House	Tsingnok	1987-88	Repair work carried out
18	Interpretation Centre	Yuksam	1991-92	renovated during 2007-08
19	Range Office-Qrt	Yuksam	1997-98	Habitable, require major repair
20	Block Officer Qrt	Sangkalang	2001-02	Habitable
21	Forest Guard Quart	Lachen	2001-02	-do-
22	Forest Guard Qrt	Yuksam	2001-02	-do-
23	Log Bridge	Rabangkyong	2001-02	Habitable
24	Cane Bridge	Pathangkyong	2002-03	-do-
25	Log bridge	Green Lake	2002-03	-do-
26	Watch Tower	Sat-Dharey	2002-03	-do-
27	Watch Tower	Lampokhari	2002-03	
28	Watch Tower	Thangsing	2002-03	
29	Watch Tower	Bikmatar	2002-03	
30	Log House	Tamrong	2002-03	Serviceable
31	Interpretation Centre	Bulbuley, Gangtok	2003-04	furnishing ,painting and equipments required
32	Range Office-Quart	Chungthang	2003-04	Habitable
33	Range Office-Quart	Sangkalang	2003-04	-do-
34	Check-post	Yuksam	2004-05	-do-
35	Check-post	Nambu	2006-07	-do-
36	Check-post	Toong	2006-07	-do-
37	Check-post	Labdang	2007-08	New and serviceable
38	Check-post	Sangkalang	2007-08	-do-

Most of the Khangchendzonga National Park amenities were developed during the early establishment phases of the Park. These infrastructural amenities have become old and unserviceable which has suffered from a lack of proper maintenance. Inadequacy of management infrastructures: Development of the National Park, especially for the non-recurring items of works depends on the central grant, which is not sufficient to maintain the humid affected infrastructure. The National Park is vast in areas and only 60-70% areas are accessible and the rest comprises of mountains, Peaks, glaciers and rocky areas. The accessible areas of Wildlife interest need to be connected with bridle paths, log bridges and log huts at some places. Watch towers and hides are also needed during the patrolling of the wildlife areas, Camping equipments, warm clothing, vehicles for anti-poaching squads and other field equipments also need to be adequately provided the field staff in the out-door activities. Maintenance of build-up infrastructures: in the past, bridle paths, log huts, watch tower, log bridges etc, are required to be maintained with renovation works from time to time for long lasting and better use. There is constraint of fund under the State Government, the recurring cost also to be requested to the Government of India. Administrative expenses, Salaries of Park Managers, TA & DA, Overhead expenses and maintenance costs of the Vehicle etc. are being met up by the State Government.

**3.11. Communication:**

Communication network by means of vehicle in the Park is not possible. The entire Park falls within a high altitude zone and vehicular road do not touches the Park. Nearest vehicular road points to enter the Park are Yuksam & Labdang in west Sikkim, Lingza and Lachen in North Sikkim, from these points one has to walk on foot to visit the Park. In most of the areas of the Park is connected with bridle path and trekking trails for effective management and conservation. The entire area has to be traversed on foot during the monsoon period, in winter the entire area used to remain under snow cover. For transportation purpose Dzos can be used from Yuksam, Labdang and Yambong-Boktok along with porters in the Western part of the Park, but in the Eastern and Central part of the Park only porters are available for transportation of luggage and other food materials.

**3.11.1. Communication connecting rest of the Country:**

The motor-able road is connected from NJP (Railway Station) and Bagdogra (Air- port) to the nearest points of the Park, via Melli - Jorethnag – Gayzing – Pelling and Yuksam. The Park is also accessible through Utarey-Chewa-Bhanzyang or through Dharap-Nambu and through Tashiding-Labdang in western part of the Park. However, the above mentioned points do not touch the boundary of the park, so one has to trek at-least 1 to 4 hours to enter in to the park depending upon the selection of the road-head points. The average motor able road distance from Melli to the above mentioned points is 90 to 100 km 160 to 170 km from Bagdogra airport. In the Northern part, one can enter the Park via Chungthang, Dzongu and Thangu, North of Mangan (North District Headquarter). While to visit the Park from Northern part one has to pass through Gangtok or through Rangpoo – Singtam – Dikchu of East District. The distance from Rangpoo up to motor able road head of Northern part of the Park is approximately 80 to 180 km.

**3.11.2. Purchase, Lease or hiring a Helicopter for the Management of the Park:**

Since the Khangchendzonga (High Altitude) National Park is situated in a far-flung mountainous region the primary means of transport and communication is on foot only which may take 5 to 10 days or so from the road head, depending on the places included in the visitors' itinerary. The Park is a place for trekking and mountaineering. Since last 5-6 years Sikkim Tourism Development Corporation (STDC) has started Helicopter service from Gangtok connecting almost all flights from Bagdogra air-port. The Helicopter can be chartered for viewing the Khangchendzonga National Park as a package "The Mountain Flight". However, the helicopter is not available whenever it is required for emergency service like rescue operation for wild animals and trekker and the members of the expedition group at the time of occurrence of untowards incidence in the high altitude, snow covered areas. Therefore, purchase, leasing or chartering a helicopter is necessary under (100% CSS) Grand in aid, so that high level officials from National or international level also could monitored the activities of the Park and the panoramic and aesthetic view of hidden natural resources could be explore to the world, without disturbing the existing eco-system. This Hecopter services to the Khangchendzonga National Park continue to promote sustainable management of natural resources and its protection and such operations support silviculture programmes. The helicopter service also support to forest management including tree planting, herbicide application and fire suppression activities. Specialized forestry applications include aerial ignition, infrared scanning, cone collection, aerial seeding, aerial fertilizing, GIS and video mapping etc.

However, the financial implication for this proposal is maximum, so, this has to be discussed in between Central and State Governments in the policy level. Hence this proposal has not been incorporated in the Budget Summary of the this Management plan.

**3.12. The present and likely threats to the Park:**

- ✚ Accumulation of non –biodegradable garbage along trekking/mountaineering trails
- ✚ Yaks grazing in the alpine lands
- ✚ Proposed road construction in the periphery of the Protected Area and through the Park.
- ✚ Construction of outpost of paramilitary forces in the park area
- ✚ Collection of wild medicinal plants and incense
- ✚ Spread of contagious disease to wildlife
- ✚ Poaching and snaring of wildlife
- ✚ Hydroelectric power projects
- ✚ Encroachments for agriculture purpose and cardamom cultivation
- ✚ Adventure Tourism.

Tourism Department and the State Forest Department have to develop common strategies for proper and regulated flow of tourists into the western part of the Park, garbage management, control over illegal collection of medicinal plants fire wood collection for burning and incense. These issues need to be addressed.

This State Forest Department has also facilitated formation of Joint forest Management and Eco-development Committees in the forest fringe villages of the Park. The impact of proposed alternative road construction and deployment of a large no. of labour force by the Border Roads Organization, in the road construction close to the boundary of the National Park in the north for military exigencies may not be encouraging. The resultant damage to the hitherto pristine habitat due to excessive use of dynamite in the fragile ecological Zones, where there is possibility of landslide, cutting of woods by the labourers, poaching of animals and birds and other wildlife and habitat degradation are some of the issues of concern. New hydroelectric power projects have been planned or are underway in an effort to harness the water of the Teesta River Valley. In North Sikkim instances of Goral dying due to contagious diseases have also been reported. It is matter of concern that there is no diseases diagnostic centre in State. Trekking and mountaineering are regular features in the Park especially along the trekking trails. The Himalayan Mountaineering Institute, Darjeeling has been holding regular courses in the Khangchendzonga base camp in the core area since its inception over four decades ago. This activity is also responsible for removal of some of Rhododendron and Junipers for fuel wood, by support staff. This activity is being monitored with the help of a local NGO. The Khangchendzonga Conservation Committee (KCC) based at Yoksom, West Sikkim.

-----XXXXXX-----

**CHAPTER-4-THE PROTECTED AREA & THE INTERFACE LAND USE SITUATION**

**4.1. The existing situation in the zone of influence.**

**4.1.1. Ethnicity and Demography**

The Lepchas, Bhutias and Nepalese are the main ethnic group and constitute 90% of the total population of fringe villages of Khangchendzonga National Park. The remaining 10% of the population are Defense personals and business communities. The villages are located in the altitude zone of 2400 – 9000 feet in West and North Sikkim. A total of 8,353 households, with a total population of 35,757 (2001 Census of India) of which about 75% are tribals. They are mostly subsistence level farmers, residing in these remote villages, adjacent to the Khangchendzonga National Park.



**KNP-MAP-XIII.**



KNP-MAP-XIV.

#### **4.1.2. Religion and culture**

Approximately 60% of the people residing in the fringe villages of the Park are Buddhists and the remaining 40% are Hindus and Christians. The majority of the Buddhists are local Bhutias and Lepchas who had been residing in the area for centuries. The Buddhist population refrains from hunting of wildlife and slaughtering livestock. The ancient monasteries are the heart of the communities and foundations of local culture and religion. These monasteries and festivals are maintained through indigenous systems and community organizations that participate. The Khangchendzonga 3<sup>rd</sup>. highest in the world and highest peak in Asia used to worship by all three communities of Sikkim, Lepchas, Bhutias and Nepalese, as it is believed that the Khangchendzonga the guardian deity of Sikkimese has played a very important role in the unity of the three ethnic communities of Sikkim. The Khangchendzonga and its associate peaks in the National Park with its melting glaciers pushing large volumes of water to sustain various types of life in the lower region, including North Bengal and neighbouring country Bangladesh. River and rivulets of high altitude areas can be crossed on foot in the morning till 12.00 noon, but one can not cross the same in the afternoon, due to release of water through melting glaciers. The three communities of Sikkim used to worship mountains and lakes that supports all kinds of life in the lower region. Major native festivals of Sikkim is celebrated/worshiped on the basis of individuals religion. The concept of the Pang-Lhabsol festival is to know the gods and goddess of the nature who provide us food and shelter so that our life must not become miserable under the wrath of the natural calamities. Traditionally, people makes offering of the first collected fruits and crops of the summer harvest to the guardian deities of the land for the grace of good crops and timely rainfall.including peace and prosperity.The unique religious instruments, songs, dances and costume explicitly show the rich culture and tradition of the local people.

#### **4.1.3 Agriculture and Animal Husbandry:**

The traditional economic activities of the people are subsistence agriculture, horticulture and animal husbandry and small percentage of Government service and contractual works under developmental activities in surrounding areas. Trans-human herding trading is restricted due to the international boundaries on the Western and Northern side of the Park. The economy of Yuksam in the Western part of the Park began to change rapidly after Dzongri and its surrounding area began to attract increasing numbers of mountaineering and trekking groups following the relaxation of permit formalities and opening of various new peaks for expedition. Tourism related activities such as climbing, portering, guiding and lodge management became dominant economic activities and now determine the way of life. Absorption of significant proportion of labor force by tourism sector has had a major impact on the viability of farming and herding systems. With less than 20% of the land being cultivable and cardamom being the only crop that too can not be grown widely because of disease infection since last decade or so, agriculture may not appear to be a significant economic activity. Yet, it is strongly linked with the livestock management system. Agriculture and animal husbandry are still an important livelihood options for economically marginal households. About 80% of the households in the fringe villages are dependent entirely on agriculture and about 20% are said to be partially involved in business and Govt. employment. Livestock herding is still common in villages where trekking and tourism has not become the dominant economic activity.

The main livestock include yak, cows and bulls, dzo, sheep and goats. The land use pattern of the fringe villages has limited use of land for settlement and cultivation. Settlements occupy less than 10% of the total area. These areas are mostly compounded by stone walls and owned by individual owners. Settlements are located mostly below 4000 m elevation on steep and some are gently sloping areas. Traditionally, the higher elevation summer settlements were occupied mostly during summer for livestock herding and breeding. These summer pastures are located mostly above 3800 m elevation in the alpine zone and extend up to 5000 m elevation. These areas are intensively used for grazing, Winter settlements located at lower elevations below 3700 meter are primarily used for agriculture in summer and livestock herding in winter. The migration of livestock up and down slope in tune with the seasons is known as the transhumance system. The transhumance system was enforced by the community through a rotational grazing arrangement in past. The system of transhumance driven by traditional regulations are no longer practiced due to banning of grazing in the Reserve Forest and other Protected Areas. Successful agro-pastoral development also requires veterinary services and product development and marketing. These initiatives are yet to be promoted in the area. There is a crucial need for rural economic diversification and promotion of productive sectors such as farming, livestock production, handicraft and other local processing activities such as processing of medicinal and aromatic plants and agricultural products.

#### **4.1.4. Education and Health Services:**

Most of the villages are well connected with motor-able road heads and communication system. State Government has set up Schools in every two kilometers distance. There are number of Junior High Schools, Secondary Schools and Senior Secondary Schools within the forest fringe villages of the Khangchendzonga National Park. The current literacy rate of the villages are estimated at 70%, however, the low number enrolling in higher education are the main reason that the local people are not becoming qualified professionals and technicians. Most villages have access to primary education. The inadequacy of school infrastructural facilities, educational materials and qualified teachers are common challenges in these schools. The health services in these villages are well developed, as number of Primary Health Sub-Centre are set-up by the State Government and more over Primary Health Centre are very close to these villages. On top of this many government departments and Non-governmental Organizations (NGOs) used to organize health camps in the selected villages. Further, the Government of India used to provide fund for organizing Health Camps, Awareness programmes and immunization programme for children as well as for livestock. Besides above mentioned health and Education programme the State Government has electrified almost all villages in forest fringe areas.

#### **4.1.5. The location, extent, boundaries and natural attributes of the zone of influence:**

In the year 1977 when the area was declared as Khangchendzonga National Park with an area of 850 sq.kms, at that particular time this hamlet was outside the KNP boundary but subsequently after considering the rich flora and fauna in the area and in view of protection, preservation and breeding of rich flora and fauna the area was further extended to 1784sq.kms, after careful studying its ecological, geo-morphological and biological significance.

Local communities namely Nepalese, Bhutia and Lepcha inhabit the fringe areas of the Park. Their traditions and lifestyles are very much dependent on forest resources. The income level of the people around the park is generally moderate and they depend on

forest for their existence. There is no industry around the Park and agriculture is the mainstay of their economy, Large Cardamom is cultivated extensively as an agro-forestry cash crop model with *Alnus nepalensis* and provides good returns. Most of the families are small and marginal farmers. Most of them maintain a large number of cattle, which are largely unproductive. Milk collected from the milch cattle is sold in the market and cow-dung is used in agriculture manure. They are mostly dependent on forest for fuel-wood and fodder grass but recent trend in the tourist area have seen this community move to tourism activities.

#### **4.1.6. The state of people's economy, vocations, land use and use of forest and non forest based natural resources by people and seasonal patterns: resources**

Vocations of fringe villagers are agriculture, animal husbandry and agro-based laborers. Other than employment on the government job, other employment generating activities are limited in most of the areas. The dependence on the forests for firewood, which are used in huge quantities, due to the prolonged cold season and cooking of livestock feed. As regards animal husbandry, migratory graziers have traditionally used the higher reaches of the Park as their summer grazing grounds. It is only in the winters, when their own agricultural fields are vacant, that these graziers leave the forest land including Protected Areas. Since the lifestyle of the villagers is timber based, houses being constructed from wood, hence, the Forests, Environment and Wildlife Management Department Government of Sikkim has regulated the system of allotting trees for construction from only fallen, dead and diseased trees from the forests, so that the pressure on PASs could be minimized.

#### **4.2. The development programmes and conservation issues:**

All together 44 villages are located surrounding the KNP in the altitude of 2400 – 13000 feet in South, West and North district of Sikkim. A total of 8,353 households, with a total population of 35,757 (2001 Census of India) of which about 70% are tribal. They are mostly subsistence level farmers, residing in these remote villages, adjacent to the Khangchendzonga National Park.

There are different Government Departments working in these villages under developmental programmes, viz, approximately 80 to 90 % villages have been electrified through Power Department, Schools of Primary, Jr. High School, Secondary and Senior Secondary are available in every 2 to 3 Km, i.e. within walking distance, Primary Health sub-Centers are also available within walking distance, Motor-able roads are available connecting almost 80% of the remote villages, Capacity building programmes are being organized by different NGOs in consultation with the different Government Departments on respective subjects like, Handloom and Handicrafts, Eco-Tourism, Cropping pattern with latest technology etc.

#### **4.2.1. An evaluation of government and non-government agency programmes for development. Implications for the PA, people and the Zone of Intervention (ZI).**

Management of the Protected Area with people's participation is an approach, which requires changes in the mindset of the officials, field level functionaries and people participating in joint bio-resource management concept. The constitution of the Eco-development committees was a mandatory requirement as per the FDA guidelines issued by NAEB, MOEF, Government of India. After constitution of Eco-development committees with wide mass base, micro planning exercise with PRA tools of each EDC was carried out in detail with the help of NGOs KCC, Yuksam west Sikkim and The Mountain Institute, Gangtok, Sikkim. Annually capacity building programme is being organized in one or two places in the buffer villages of the protected area especially for beneficiaries with the help of local NGOs by involving resource persons from line



departments. Health camps and cattle immunization programmes are being organized in a yearly basis under Management Action Plan (MAP) for Conservation and Management of Khangchendzonga National Park (100% CSS). Local and State level stakeholder meeting have to hold every year for the proposal of Annual Plan of Operation under KBR scheme, before submission to the MOEF, Government of India for consideration. Further, District level Executive Body meeting is being held every year under Forest Development Agency, NAEB, MOEF, Government of India with the District level Officers from all line departments by involving all EDC presidents as they are key stakeholders of the PA management.

**4.2.2 The interplay of market forces and their impact on the subsistence economy of the local people.**

- The third highest point of the Earth's surface, the Khangchendzonga and its surroundings are of major significance not only to Sikkim but also to the Nation. Its status as a National Park further elevated the international prestige for its outstanding universal importance for aesthetic and scientific values.
- As an ecological unit in the high Mountains of the world, the area is of important scientific value and offers unique research opportunities to scientists of the Nation, because of its conditions of extreme elevation, associated flora and fauna, culture and environment.
- The high altitude forests and rangeland environment of the Park are not only of aesthetic value but are vital to the local people of the area as the glaciers and rivers of the area are important source of water for people downstream.
- The Park is of major religious and cultural significance in Sikkim since it abounds in sacred mountain and holy places. The Sikkimese people respect their homeland as a sacred hidden valley and refrain from hunting and slaughtering animals. These indigenous belief systems and practices provide important cultural basis for conservation.
- The Park has become an important destination for Nationals and international visitors to Sikkim and benefits the State through revenue generation and friendship building. The scenic and wilderness values, which are major tourism resources, must be protected from further exploitation and ill judged commercial development. This can be achieved through participatory planning and management based on sound conservation principles

**4.2.3. A summary of problems faced by people that affect the management of the PA & the ZI:**

- a) Lengthy official procedure, presently prevails, to get approval and sanction of the schemes before implementation in the field, which may sometime lead lapses and surrender of financial provision of the seasonal works.
- b) Communication and mobility facilities like, patrolling Pick-up Vans in the Division for patrolling purpose, transportation of injured wild animals to nearby Veterinary Hospital and transportation of wild animals' carcasses and sometime wildlife offenders to the nearest Magistrate for legal formalities are to be addressed.
- c) Posting of young and energetic wildlife management trained field staff, like Range Officers, Block Officers and Forest Guards are necessary for effective management of the Protected Areas.
- d) Establishment of fully equipped rescue centre in the periphery of the protected area along with wildlife trained Veterinary Doctor and supporting staff is required for treatment of diseased and injured wild animals and regular immunization of livestock of the buffer villages.



**Monitoring Team headed by Sri.H.Choudhari, Management Effectiveness Evaluation (MEE) of Protected Areas in India – Evaluation Committee for North-East India, 27 to 30th.Oct.2006, interacting with Key-stakeholders, in North Sikkim.**

## PART –II

### PROPOSED MANAGEMENT

#### CHAPTER-5 PLAN OBJECTIVES AND PROBLEMS

**5.1. The Vision:**

To conserve those ecosystem and landscape attributes of the Khangchendzonga National Park that contribute to biological diversity, aesthetic beauty, recreational opportunity, cultural and educational values; and advancement of scientific knowledge and at the same time ensuring sustainable flow of resources for traditional livelihood along with developmental activities.

**5.2. Objectives of management:**

- a) To strictly protect indigenous flora and fauna proven to be of particular conservation or scientific significance.
- b) To protect natural and cultural landscapes, habitats and sites of special importance to conservation of biological diversity, maintenance of scenic quality and cultural integrity.
- c) To allow controlled use of the Park and its resources by local people for supporting their traditional livelihoods and other sustainable resource collection by ensuring that such uses are in balance with the regenerative capacity of the environment.
- d) To allow tourism and mountaineering activities in the Park to the extent that these activities are not detrimental to the long term survival of the Park values, and ensuring that these activities benefit the local
- e) To restore the Open Forests, degraded due to the permanent cattle sheds [Goths] and by heavy avalanches and landslides, which is very conspicuous in selected areas.
- f) To improve the watershed capability of the catchments Area.
- g) To facilitate and promote field oriented research activities for providing technical input to management of the Park.
- h) To encourage eco-friendly nature tourism, for promoting nature education and generation of conservation awareness amongst the visitors in the tourism zone.
  - i To ensure active participation of the fringe population in management and development of the Park.
  - ii Plantation of fodder and fuel species is to be encouraged all around the buffer zones to meet the basic demand in respect to fodder and fuel wood thereby diverting their pressure from core zone and to eliminate the prospect of encroachment
  - iii. To study birds and water fowls of the Park and to provide them with fruiting and flowering trees.
  - iv. To keep the park free from all biotic pressures and mostly from poaching and grazing.

**5.2.1. Strategy for the conservation of Biodiversity of the Park:**

There are number of rare and threatened plants and animal species that are of priority on protection lists. Examples include musk deer, snow leopard, wolf, and Himalayan Black bear. Poaching of musk deer continues unabated. Feral dogs and cats are another source of wildlife depredation that needs effective control. The lack of adequate staff, inability of the Protection Unit to engage in effective Park protection and failure to mobilize local people are issues that need to be addressed.

There is insufficient information on endangered species and their habitats especially due to difficult terrain of the Park. No work has been done for documentation of natural resources of the park. And most dominant threats to Khangchendzonga National Park ecosystem may be fragmentation of relatively large areas of habitats through developmental encroachment like, construction of roads and structures by the Defense personals (Army, BRO and SSB) in the name of National Security. The Park needs to develop strategies to protect habitats and species.

**Activities**

- Conduct research and studies on rare and threatened species of flora and fauna to generate better understanding of their population, habitat requirements and threats.
- Protect large areas undisturbed habitats from further fragmentation by preventing developmental encroachments and confine tourism activities only in areas that are already well designated and regulated trekking trails.
- Identify important species and habitat structures that are of important scientific and conservation values through research and survey and introduce appropriate measures to protect them.
- Establish joint anti-poaching operations and conduct joint patrols of Park staff and local community organizations including EDCs, Himal Rackshak and NGOs.
- Mobilize Panchayats and EDCs for wildlife conservation activities within their respective areas and introduce an incentive system to encourage participation.
- Control feral dog populations on a regular basis ensuring that the method employed is socially acceptable and not damaging to other species. Require pet owners to control their dog and raise awareness among trekking groups not to feed or shelter feral animals.

**5.2.2. Reducing Wildlife Damage to Crops:**

The conflict so far reported is only crop damage in the forest fringe areas by wild animals. The problem of maize crop damage by Himalayan black Bear, Wild-bore and Porcupines and tearing and damaging of cardamom shoots by monkeys is becoming a problem although the Lepcha and Bhutia people are showing a high level of tolerance because of their Buddhist attitudes. It is now increasingly felt that the population of wildlife is growing because of the Park's protection and that the Park must shoulder the responsibility of damage either by controlling or by compensating the damage caused or lost, so that local farmers with limited crops and livestock are not economically deprived and always remain helpful and cooperative to the Park managers.

Develop better understanding of the problem and seek solutions in consultation with the farmers and implement practical solution to minimize damage.

- Conduct research and monitor depredation patterns, and study behaviour and population of wildlife with damaging tendencies and socio-economic impacts involving local farmers.
- Experiment with practical solutions to minimize wildlife damage such as better guarding, fencing, and planting alternative crops that are less vulnerable to wildlife depredation. Replacing old traditional crops with medicinal and aromatic plant offer good potentials.
- Where prevention is impossible and damage is serious, explore the possibilities of introducing community-managed compensation scheme and insurance system.
- Establishment of fully equipped rescue centre in the periphery of the protected area along with wildlife trained Veterinary Doctor and supporting staff for treatment of diseased and injured wild animals and regular immunization of livestock of the Fringe villages.

- Provision for Air-lifting and Air-dropping of the officials, assistants and labours to combat the occurrence of emergency in the remote and far flung areas of the Park has to be set-aside. While working in the field, occurrence of any un-toward incidents in respect of Trekkers, Scientists, Research Scholars, Officials, Assistants and porters and labours in high altitude areas, steep hills & rocks and in dip grudges of rivers and rivulets have to be taken care.

**5.2.3. Wildlife Management Plan under: 1200 MW–Teesta H.E. Project in Chungthang ,North Sikkim.**

The Project Components of 1200MW-Teesta H.E.Project in Chungthang does not fall within the boundary limits of Khangchendzonga NationalPark. However, small portion of project component i.e. tunnel touches the KBR buffer zone. Most of the Project Components are underground except for the Dam area which is adjacent to the N. Highway and also near to Chungthang Sub-Division. The boundary of the Khangchendzonga National Park runs along the Reserved Forests line above the Teesta river bed and proper protection vis –a -vis management measures have been planned in the EMP. The main habitat of major wild life is located above the project sites, it is possible that the animals may move down in search of food, shelter and water and competition on the area is likely to occur. A Km.from the left flank of the hills along the upward River Teesta is the Khangchendzonga National Park and the existing rules and regulations of the KNP/KBR shall be the guidelines for the conservation and management of wildlife distributed in the area.

**I. PROTECTION AND CONSERVATION MEASURES**

- Regulation of movement of floating population and settlement of camps away from wildlife habitat
- Recovery and improvement of wildlife habitat
- Trans-location of displaced wildlife to the KNP
- Regular immunization of livestock against FMD and other communicable diseases
- Up-gradation of check list of wildlife of the area
- Expansion of wildlife habitat
- Infrastructure development
- Control and management of forest fires
- Enforcement of law
- Reduction of cattle and liaison with the project developers
- Conservation of biodiversity
- Special conservation of habitat vulnerable species
- Improvement of existing waterholes and spring
- Rehabilitation of a small wildlife health cum ex-situ conservation centre
- Patrolling and surveillance
- Identification of decimating factors
- Anti-poaching and hunting operational measures
- Study of wildlife population during the project implementation
- Population estimation before and post project implementation
- Enhancing bird diversity and dynamics
- Eco-development and community participation
- Awareness, education and sensitizing of fringe population
- Recruitment of field staff



Construction work for Dam area of 1200MW.Teesta Stage-III. H.E.Project at Chungthang, North Sikkim on 04-02-2008.

**Fig-V**

## **II. TREATMENT MEASURES AND AREAS:**

The treatment measure under this Plan limits within the watersheds and its surrounding KBR areas, like Chhaten, Mensithang, Pegoan, Denga, Theng, Phimphu, German Orar, Zali, Bikmatar, Saffu, Shipgyer etc. This Plan shall be formulated and prepared for Annual Work Programme for 4years span, i.e from 2008-09 to 2011-12 and remaining work like maintenance of plantations, waterholes, foot-paths, and leftout treatment works etc. will be maintained & implemented in the further financial years after according approval from the Multidisciplinary Committee and Chief Wildlife Warden, Government of Sikkim.

**III. PHYSICAL AND FINANCIAL TARGET FOR CONSERVATION OF WILDLIFE UNDER TEESTA STAGE-III H.E. PROJECT (ANNUAL WORK PROGRAMME TO BE WORK-OUT FOR 4YEARS)**

S. No	Activities	Unit	Rate	Area /volume	Physical Target	Fin.Target (in lakhs)
1	Habitat improvement	HA	14950	80	80	11.96
2	Construction of watchtowers	No	250000	3	3	10.50
3	Construction of Check posts	No	380000	2	2	7.60
4	Improvement of footpath	Km	350000	3	3	10.50
5	Waterholes/check dams	Cum	968	900	900	8.71
6	Estimation of wildlife	HA	22200	25	25	5.55
7	Immunization of Livestock	Head		800	800	4.00
8	Conservation of vulnerable spp.	Ha	14950	25	25	3.74
9	Control of forest fires	Ha	14950	30	30	4.49
10	Patrolling and surveillance	Ha	12500	50	50	6.25
11	Anti-poaching	Km	35000	25	25	8.75
12	Eco-development	HA	186000	1.5	1.5	2.79
13	Enhancing wildlife diversity	HA	20200	15	15	3.03
14	Rehabilitation of displaced wildlife	HA	-			3.00
15	Awareness, education and training	No	80000	4	4	3.20
16	Recruitment of field staff	-		6	6	5.40
17	Total					99.47
18	Administrative expenses	%	12	12	12	11.94
19	Total					111.41
20	Contingencies	%	3	3	3	3.34
	<b>Total (lakhs)</b>					<b>114.75</b>
	<b>Total (million)</b>					<b>11.47</b>

The provisions under this scheme is not incorporated in the Annual Budget Summary of the Management Plan, due to the reason being that the areas selected for treatment are confined within 8-9 Sub-watersheds only and most of the areas are in the buffer areas of KBR and forest fringe areas.

**5.2.4. 280 MW. PANAN H.E. PROJECT, DZONGU, NORTH SIKKIM:**

Catchments Area Treatment Plan of any Industrial H.E.project should compulsorily be incorporated in the Plan for the purpose of protection, propagation and development of the local Environment, local flora- fauna – avi-fauna, water bodies, religious sites, sacred peaks and local sentiments etc. Therefore, the CAT Plan has been made mandatory for any commercial industry to be incorporated in the project on the cost to be born by the Project Developers. Biodiversity Conservation Management Plan of Panan H.E. Project, North Sikkim. The Panan H.E. Project power developer has submitted the proposal for Biodiversity Conservation and Catchment Area Treatment plan in areas likely to be affected by the proposed H.E. Project with the financial involvement to the tune of Rs.1,27,48000/- (Rupees One Crore twenty Seven Lakhs and Fourtyeight thousands ) and Rs.9,09,81,000/- Rupees Nine Crore Nine Lakhs and eighty thousands) respectively. The detail estimated cost is given in tables below. All the works shall be implemented as per the Environment Management Plan of Panan H.E. Project so submitted and approved by MoEF, Govt. of India.

**A. AREA (HA.) UNDER DIFFERENT EROSION INTENSITY CATEGORIES IN SUB-WATERSHEDS OF PANAN H.E. PROJECT AREA:**

Though the main Project Component does not fall within the National Park, all the area proposed for treatment under CAT Plan and Biodiversity Conservation Plan of 280 MW. Panan H.E. Project falls within the limits of the Khangchendzonga National Park and its surroundings buffer zone of National Park, so the implementation of Plan shall be focused on the propagation, protection, conservation, development and preservation of wildlife and its surrounding environment. Further, the socio-economic development activities of the local populace (forest fringe villagers) shall be concentrated. Since, the all watersheds falls with the National Park and KBR areas, implementation of these plans shall be carried-out with the permission of the Chief Wildlife Warden, Government of Sikkim and Multidisciplinary Committee, formed as per directives of the MoEF, Government of India.

**Watershed-Code**

<b>Erosion intensity category</b>	<b>Rg1</b>	<b>Rg2</b>	<b>Rg3</b>	<b>Rg4</b>	<b>Rg5</b>	<b>Rg6</b>	<b>Rg7</b>	<b>Total</b>
Very severe	1217.49	686.49	229.67	41.42	5.86	8.32	96.56	2285.72
Severe	3991.37	1446.12	1109.48	581.45	965.97	850.32	2352.35	11296.97
Moderate	1202.52	825.82	908.39	766.93	896.58	317.32	1514.88	6433.44
Slight	45.13	26.86	15.86	21.64	9.72	11.73	50.82	181.76
Snow/ Glaciers/ Lakes,etc.	4204.06	264.62	38.64	56.22	109.72	11.64	72.82	4746.45
<b>Total</b>	<b>10660.57</b>	<b>3249.80</b>	<b>2302.04</b>	<b>1467.66</b>	<b>1987.87</b>	<b>1188.07</b>	<b>4088.33</b>	<b>24944.34</b>



**B. SUB WATERSHED WISE AREAS (HA) REQUIRING TREATMENT MEASURES IN FREE-DRAINING CATCHMENTS OF PANAN H.E. PROJECT**

Sub-Watershed	Area requiring treatment (ha)			Area taken-up for treatment(ha)		
	Very Severe	Severe	Total	Very Severe	Severe	Total
Rg1	23.11	1088.86	1111.17	23.11	809.89	833.00
Rg2	78.40	798.92	877.32	78.40	242.60	321.00
Rg3	12.68	482.58	495.26	12.68	294.32	307.00
Rg4	0.21	325.03	325.23	0.21	238.79	239.00
Rg5	-	506.75	506.75	-	385.00	385.00
Rg6	5.75	841.84	847.59	5.75	619.25	625.00
Rg7	11.49	5667.93	1636.25	11.49	1283.51	1295.00
<b>Total:-</b>	<b>131.64</b>	<b>5667.93</b>	<b>5799.57</b>	<b>131.64</b>	<b>3873.36</b>	<b>4005.00</b>

**C. WATERSHED-WISE DETAILS OF VARIOUS ACTIVITIES:**

Name of Watersheds	Components							Total
	Engineering				Biological			
	Gully Control			Bench Terracing	Afforestation	NTFP	A.N.R.	
B.W.C. D. (Nos)	DRSM (ha.)	Wire crates ha.)	(ha.)	(ha.)	(ha.)	(ha.)	(ha.)	
Rg1 (Umramchu)	-	259	118	382	59	-	15	833
Rg2.(Passaram Chu)	-	86	44	104	68	-	18	321
Rg3.(Tholung chu)L.bank	-	68	38	96	93	12	-	307
Rg4.(Tholung Chu)R.bank	25	32	24	51	85	15	32	239
Rg5(.Pokram Chu)	30	49	34	75	182	10	35	385
Rg6.(Ringpi Chu)	55	159	110	161	143	20	32	625
Rg7.(Ringyang Chu)	60	324	148	478	205	25	115	1295
<b>Total:-</b>	<b>170</b>	<b>977</b>	<b>516</b>	<b>1348</b>	<b>835</b>	<b>70</b>	<b>259</b>	<b>4005</b>

**I. THE ESTIMATED COST OF BIODIVERSITY CONSERVATION WORKS**

Sl. No.	Particulars	Amount(lakhs)
<b>A.</b>	<b>Medicinal Plants Conservation</b>	
(i)	Establishment and maintenance of Nurseries for medicinal plants	7.48
(ii)	Preparation of inventory of medicinal plants	30.00
	<b>Total (A)</b>	<b>37.48</b>
<b>B.</b>	<b>Wildlife Preservation</b>	
(i)	Wildlife census & works related to biodiversity conservation	35.00
(ii)	Public awareness on conservation, training etc	25.00
(iii)	Anti-poaching activities- Training & reward for informers	15.00
(iv)	Eco-tourism and publicity	15.00
	<b>Total (B)</b>	<b>90</b>
	<b>Total of (A) +(B) =</b>	<b>127.48</b>

**II. CATCHMENT AREA TREATMENT PLAN:COMPONENT-WISE COST ESTIMATE  
FOR CATCHMENT AREA TREATMENT WORKS:**

Sl.No.	Name of works	Unit	Quantity	Rate (Rs.)	Amount (Rs. In lakhs)
<b>A.</b>	<b>Engineering</b>				
I.	Gully control				
(i)	Brush-wood-Check-Dam	No	170	1375/-	2.33
(ii)	DRSM-Check-Dam	Ha.	977	14400/-	140.69
(iii)	Crate wires/wiremesh	Ha.	516	26360/-	138.02
II.	Banch Terracing Addl. 5% for maint. Of structure	Ha.	1348	7500/-	101.10 19.01
	<b>Sub-Total (A) =</b>				<b>401.15</b>
<b>B.</b>	<b>Biological</b>				
I.	Afforestation				
(i)	Creation	Ha.	835	2700/-	225.45
(ii)	Maintenance				81.58
II.	Assisted Natural Reg.				
(i)	Creation	Ha.	259	18810/-	48.73
(ii)	Maintenance				17.21
III.	NTFP Regeneration				
(i)	Creation	Ha.	70	49500	34.65
(ii)	Maintenance				15.15
IV.	Nurseries	Ha.			10.00
	<b>Sub-Total (B) =</b>				<b>432.77</b>
<b>C.</b>	Treatment of Landslides				25.00
<b>D.</b>	Forest infrastructure( Vehicles,machineries, equipments, trekking trails, etc.				17.80
<b>E.</b>	Administrative Charges				25.09
<b>F.</b>	Monitoring & Evaluations				10.00
	<b>Grand Total: A to F =</b>				<b>911.81</b>

**III. TREATMENT MEASURES AND AREAS:**

The treatment measure under this Plan limits within the identified watersheds and its surrounding KNP/KBR areas. This Plan shall be formulated and prepared for Annual Work Programme for 5 years span, i.e from 2008-09 to 2012-13 and remaining work like maintenance of plantations, waterholes, foot-paths, and leftout treatment works etc. will be maintained & implemented in the further financial years after according approval from the Multidisciplinary Committee and Chief Wildlife Warden, Government of Sikkim.

**5.2.5. Wet land Development :**

The KNP is blessed with several High Altitude Lakes, wetlands and marshes. The lakes or wetlands are the most productive ecosystem which if not given scientific management or interference may lead to its degradation. Some of these lakes are threatened by siltation, eutrophication, & invading grasses. The proposal intends to rejuvenate & restore these degraded natural lakes by treating its catchment areas, removal of invading grasses. The proposal also intends to beautify the surrounding areas so as to encourage ecotourism. In general almost all the sites of the lakes and wetland including its surrounding have more or less similar type of vegetation and geological formations in the high altitude alpine areas. The people of Sikkim believe that the lakes, wetlands and marshes are of highly sacred place of worship and they use to perform annual religious function seeking blessings of peace and prosperity of the family including the village as a whole.

**5.2.6. Aided Natural Regeneration:**

Some of the forests areas have been found degraded which requires management interventions so as to stop further deterioration of the natural forest. The proposal intends to improve the degraded forest by aiding the existing natural regeneration in areas like Yambung , Naya patal , Pema latsho, Thepala , Tamrang , Rukhel, Dawathang, Talem, Denga etc.

**5.2.7. Soil and Moisture conservation;**

The topography of areas of the Park being moderate to steep slope soil erosion and landslides are common phenomenon. Soil erosion from the hills gradually increases its volume leading to splash floods and landslides at the down streams thereby damaging life and property of the local people. Hence, treatment of such areas with the help of engineering structures like brush wood check dams, gully plugging, abutments etc. and by vegetative measures like planting of fast growing plants having soil and water retaining capacity.

**5.2.8. Bally Benching in Landslide areas:**

Most of the areas under the National Park comprise of hilly terrain, so the landslide and mass movement of the earth in some places are common features in and around the Khangchendzonga National Park and fringe villages, so to stabilize the areas bally benching in a staggered manner across the slope will control the sliding soil and stone. The bally should be of *Erithrina indica*, *Viburnum*, *Kadam*, bamboo rhizomes etc. which will grow from bally itself and resultantly the area shall have green cover within 2-3 years. Further, the space left in between the bally benching can be used for the plantation of soil binding species of fodder trees like *Ficus* spp, *Vivernum* spp, etc.

**5.2.9. Development of Camping Sites:**

In view of increasing tourists inflows and frequent visit of the area by the field staff the existing *camping sites* which are being used for the purpose are not in a serviceable condition and do not have basic facilities like water supply, toilets and bathrooms. The proposal intends to upgrade the following camping sites with provision for basic facilities.

- (i) Yambung camp site,   ii) Chamling Kharka camp site,   iii) Jagchen camp site,
- iv) Talem camp site,   v) Dawathang camp site, vi) Yabuk camp site, Dzongi, etc.

**SOME OF THE LAKES EXISTS WITHIN THE NATIONAL PARK ARE AS UNDER:**

Sl. No.	Name/Wetl and sites	Appr area in ha.	District	Remarks
1	Green Lake	0.5	North	Glacial Lake remnant
2	Pema Lhatso	3	-do-	Astip of land passes through the lake in KNP, at Kishongla
3	Muleting Tso	22	-do-	Aglacial lake reported to have underground passage to Tebet in KNP
4	Lam Pokhari	15	West	A longitudinal lake located in KNP, halting place for Avi-Fauna
5	Dood Pokhari	3	-do-	White lake in the pocket of moraines in KNP
6	Rakta Pokhari	2.5	-do-	Lake of Blood colour in the mountain spree in KNP
7	Moi Pokhari	4	-do-	A holy lake, people of Nepal and Sikkim used to visit this lake for prayer and pujas. The lake is partly damaged by falling debris from the hillside.
8	Phaley-Pokhari	2.5	-do-	The Pokhari is Cock shaped so accordingly named as Phaley.The lake is situated in the mountain spree.
9	Hans Pokhari	3	-do-	This lake serves as halting of migratory ducks during their long flight.
10	Dungey Pokhari	4	-do-	The colour of this lake appears to be whitist and pocketed in a small high altitude area.
11	Thulo Jumley	6	-do-	A twin lakes jointed by a small passage of water and belief to be of sacred lake
12	Laximi Pokhari	6	-do-	A holy lake of highly sacred and belief to be wishes fulfilling lake
13	Nir Pokhari	3	-do-	A blue colour lake with perennial water sources and these lakes are fed by the Rathong Glacier
14	Kal Pokhari	3.5	-do-	A dreaded lake with black appearance and belief to hurrying lake of the are.
15	Mujur Pokhari	5	-do-	The shape of the lake, looks like peacock elongated with tapering tail in the run. This lacated in the maountain glacial area.
16	Ram Laxaman Pokhari	7	-do-	Two medium size lakes nearby each other. It is located in a secluded area in the Himalayas
17	Jyamto Pokhari	2	-do-	A lake situated in the mountain side and disarray of rocks and boulders surrounded the lake
18	Ome-Tso or Dood Pokhari	5	-do-	A milky and creamy appearance water body sunken in the vally regarded as very sacred by the Buddhists and Hundus.
19	Bhaley Pokhari	2.5	-do-	This lake also looks like cock having a small head and spread tail.
20	Kuthang Wetland in KNP	200	North	A huge wetland spread in a broadleaved forest with still water rich I aquatic life but not identified

Source Wetland &amp;Lakes Project Report of Mr. C. Lachungpa, IFS.

**5.2.10. Control of grazing, poaching, encroachment, illicit felling of timber:**

To achieve the above objective, the strategy will be mainly to build up a protection network, developing infrastructure for better implementation of the rules and regulations, building up information network and building up of human social fencing around the Park through eco-development activities.

**5.2.11. Conservation and Management of Himalayan Heritage Sami-wild Yak, pure breed (Dee) in KNP:**

Yaks of Sikkim Himalayas are of endemic nature, they can not survive in the lower sub-tropical hills. These yaks have traditional attachment with the Sikkim Himalayas along with the local populace. However, the Acts. and Rules of the Nation and its implementation in the field might be too much stringent and may not suit to the young mountain along with its animals. So, to conserve these semi-wild pure breed animals, a special commission comprising Environmentalists, Veterinarian, Anthropologist, Foresters and local Athnobotanists have to be formed, before it is too late. Then with the outcome of the Commissions' report the some conservation zones have to be designated in high altitude Himalayas within the limit of carrying capacity of the particular areas. The ways and means have to be find out with the local people, so how could these almost endangered animals be protected and conserve in the Himalayas and we would be proud of having pure, original Yak in Sikkim in the near future. This issue has to be brought to the notice of the highest level authorities for policy decisions.

**5.2.12. Extensive patrolling of the Park on foot:**

Regular intensive patrolling and maintaining constant vigil over the Park is the primary condition for preventing poaching and illicit felling of timber. For the purpose of patrolling, each Block Officer should arrange for daily and intensive combing of the forest areas. The mode of patrolling should be irregular criss-crossing of the lower reaches and also scanning the higher reaches at least once in a week in the same fashion. While patrolling, the staff should look for any visible sign of unusual movement/unfamiliar scenes and also try to locate any sign of carcass, suspicious looking mounds of earth/salt licks, or unauthorized clearing of forest. Whenever any of these are noticed, the staff should investigate more and find out the source/details of the same and report back to the Block Officer and Range Officer. The Block Officer and Range Officer should regularly carry out patrolling, during different times of the day and night, and make specific entries of the same in their diaries. The Assistant Conservator of Forests in charge of the Park should patrol each and every Reserve Forest of this Park at least once in a fortnight, and a mention of the same must be made in his monthly diaries. Divisional Forest Officer should make it a point to take up regular inspection of the Park and also organise night patrolling in the Park at least once every three month. Night patrolling by the staff should be organized by ACF, in consultation with the concern Range Officers and Beat Officers, on and around every full moon night.

**5.2.13. Forest Protection Mobile Force**

One strike force/mobile squad, to be constituted from the existing Forest Protection Force, with five members will be stationed at Gangtok. The service of this strike force will be requisitioned only in case of special raids and special vigilance duties.

The Forest Protection Mobile Force should not be engaged in routine patrolling jobs and they should also not be posted for a long time in any particular forest area. After each and every operation, they should preferably go back to their base headquarters at Gangtok.

### 5.3. Constraints in achieving Objectives

I. There are number of challenges and threats facing the protection and conservation of the National Park. Some of them are given here:

- a) Bio-diversity theft: The Khangchendzonga National Park is rich in bio-diversity, Alpine flowers, medicinal herbs and shrubs are in profuse growth, similarly, birds, butterflies & moth and insects are also in great numbers. There have been incidences if illegal collection of butterflies, moth and insects by an Russian group during 2001 and illegal collection of seeds flowers Czech Republic national during 2003,.Field staff and established check posts have been alerted. More check posts are needed in important identified places. Field staffs are to be transferred in more numbers to the lower level.
- b) Poaching: prized Musk deer is of the flagship of the National Park which is hunted by the poachers for Musk fetches good amount of money in clandestine market. The poachers in the Rhododendron forests usually erect the rows of trap lines, which run in miles in length by cutting the Rhododendron branches/twists, which remain strong and alive for months in high altitude areas. The trap lines with traps at close distances are erected and left in the wild. Musk Deer and sometimes other animals get entangled in the trap during their movements caused by snow falling in their habitats and die. The miles long trap lines need to be demolished. Trap demolition and anti-poaching prone areas during in the beginning of wintern and summer. Watch and Watched for certain peak periods of poaching are also required to be employed.
- c) Grazing: despite of implementation of the statutory order of the State Government of banning of grazing in the protected areas and reserved forests, there are still a few cattle camps of yaks, sheeps and cow inside the National Park. The problem is with the Yaks, which cannot survive in hot areas. There has been no modality worked out to acquire them but effort to remove sheeps and cow is continuing.
- d) Habitat degradation: Due to both biotic and a biotic reasons, wildlife habitats are degrading. Landslides and erosions caused by heavy rainfalls and climbers are the causes for degradation of the habitats. Degraded areas need to be replenished by planting with fruit, fodder and nectar yielding plants.
- e) Inadequacy of management infrastructures: Development of the National Park, especially for the non-recurring items of works depends on the central grant, which are not so sufficient. The National Park is vast in area 60-70% areas are accessible and the rest comprises of mountains, Peaks, glaciers and rocky areas. The accessible areas of Wildlife interest need to be connected with bridle paths, log bridges and log huts at some places.  
Watch towers and hides are also needed during the survey of wildlife, Camping equipments, warm clothing, vehicles for anti-poaching squads and other field equipments also need to be adequately provided the field staff in the out-door activities.

- f) Lack of maintenance of build-up infrastructures: in the past, many infrastructures have been built up. Bridle paths, log huts, Watch tower, log bridges etc, are required to be maintained with renovation works from time to time for long lasting and better use. There is constraint of fund under the State Government, and also has its own priority work for conservation of biodiversity in the region so, the recurring cost to some extent need to be met up by the Government of India. Needless to mention that administrative/overhead costs of the protection staff is being met up by the State Government.
- g) Relocation of Tsoka village: A community of Thomopas consisting of ten families occupying a total area of 30 acres (12 ha) in a place called Tsoka has been re-located outside from KNP to Yuksam in West Sikkim. State Government has allotted already constructed concrete houses of scrapped Rathong Chu-Hydel Project to them at Yuksam. The affected families have been provided small lands for cultivation of cereals and vegetables in the vicinity. Therefore, lands are also required to be acquired for them.
- h) The impact of proposed alternative road construction and deployment of a large no. of labour force by the Border Roads Organization, in the road construction close to the boundary of the National Park and in the Buffer Zone of the KBR in the North for military exigencies may not be encouraging. The resultant damage to the hitherto pristine habitat due to excessive use of dynamite in the fragile eco-zones, where there is possibility of landslide, cutting of woods by the labourers, poaching of animals and birds and other wildlife and habitat degradation are some of the issues of concern. New hydroelectric power projects have been planned or are underway in an effort to harness the water of the Teesta River Valley. In North Sikkim instances of Goral dying due to contagious diseases have also been reported.

## **II. Boundary Demarcation and Encroachment Problems**

This is one of the most important tasks to be done before carrying out any management activities in the Park is to protect from any type of biotic interferences. Boundary pillars need to be fixed all along the boundary after conducting proper survey of the boundary line of the Park. Priority is to be given to the boundary areas adjoining or near to the villages. The erection of boundary pillar is going on with the Central Sponsored Aid from the MoEF, Government of India. Previously dry wall pillar was erected which was replaced by concrete cemented (C.C), with Iron Angle to give distinct identification and strong which can not be displaced or uprooted. The process of erecting Iron Angle pillar has started since 2002 –2003 duly replacing dry wall with CSS. In fact the dry wall pillar was not strong enough and can be displaced or uprooted by encroachers. Keeping in view of such circumstances the C.C. Iron Angle Pillar is proposed to fix the boundary line which can not be broken and displaced easily. As per the map the boundary line is 156 kms whereas in actual 250 kms to be erected because of the hill precipitous mountain chains. About 15 kms of the Park lies in Sikkim -Nepal border where we cannot erect boundary pillar because these areas are either inaccessible or strategically vulnerable areas as being international boundary.

## **CHAPTER -6: THE STRATEGIES:**

### **6.1. Boundaries:**

#### **6.1.1. Managerial Boundary:**

The legal Boundary as per the Notifications has already given in Chapter 2.of Section 2.1. The managerial boundary of the Park can be taken both the legal as well as the ecological boundaries, since the managers of the Park have to deal with the law of the land along with the conservation, propagation, preservation and protection of natural resources of the Park including the human beings residing in the periphery of the Park. Hence, there are four basic functions of management, i.e. planning, organising, directing and control. Strategy is the part of planning which identifies the best options available and methods to achieve the objectives. In the current management plan strategies will be discussed to address each and every problem which may be encountered in achieving the objectives outlined in Chapter 5 above.

#### **6.1.2. Ecological Boundaries:**

As it is not possible to confine the movement of wild animals within the legally demarcated boundary of the Park, it is seen that the ecological boundary extends up to the buffer Zones of the Khangchendzonga Biosphere having an areas of 835.92 Sq.kms. almost along the three peripheral sides of the Park. The North-West side of the Park shares international boundary with autonomous region of Tibet and Nepal, which is almost a natural barrier of the wildlife of the region.

### **6.2. Zonation:**

Although the Park was established in the year 1977 and further, the area was extended to 1784 sq.kms in the year 1997 but clear zonation of the Park has not been established in the field corroborating with the map. In order to adopt stipulation as laid down for management of Parks and Sanctuaries, the proper zonation of Park is proposed for declaring Core Zone , which remains “Sanctum Sanctorum” and the area is to be totally free of all form of biotic activities where certain habitat improvement works and treatment of degraded areas will be encouraged. The area will be demarcated by erecting boundary pillars along the line separating Buffer Zone and Core zone of the National Park. Outside the core zone, buffer zone will be created for eco- tourism, scientific research and other management purpose The proper zonation of the Park will help the field officers as well as to villagers living in the fringe areas to restrict their activities within a defined areas and thus reducing possibility of beyond carrying capacity pressure on the Park from the people of the fringe villages

### **6.3. Zone Plans:**

For this purpose, Khangchendzonga National Park and its surrounding areas should be delineated into the following four zones.

#### **I. Wilderness Zone: -**

The forest in this zone should be so managed as to retain them in their pristine status and the interference for development in this zone should be minimum. The managerial interference here would only be protection oriented and the habitat should be regularly monitored. This zone will primarily act as biodiversity conservation zone. The following areas have been identified for declaring Wilderness Zone at different areas where maximum number of flora and fauna are found in its pristine nature. The following areas has been recommended to declare Wilderness Zone with names of the areas such as



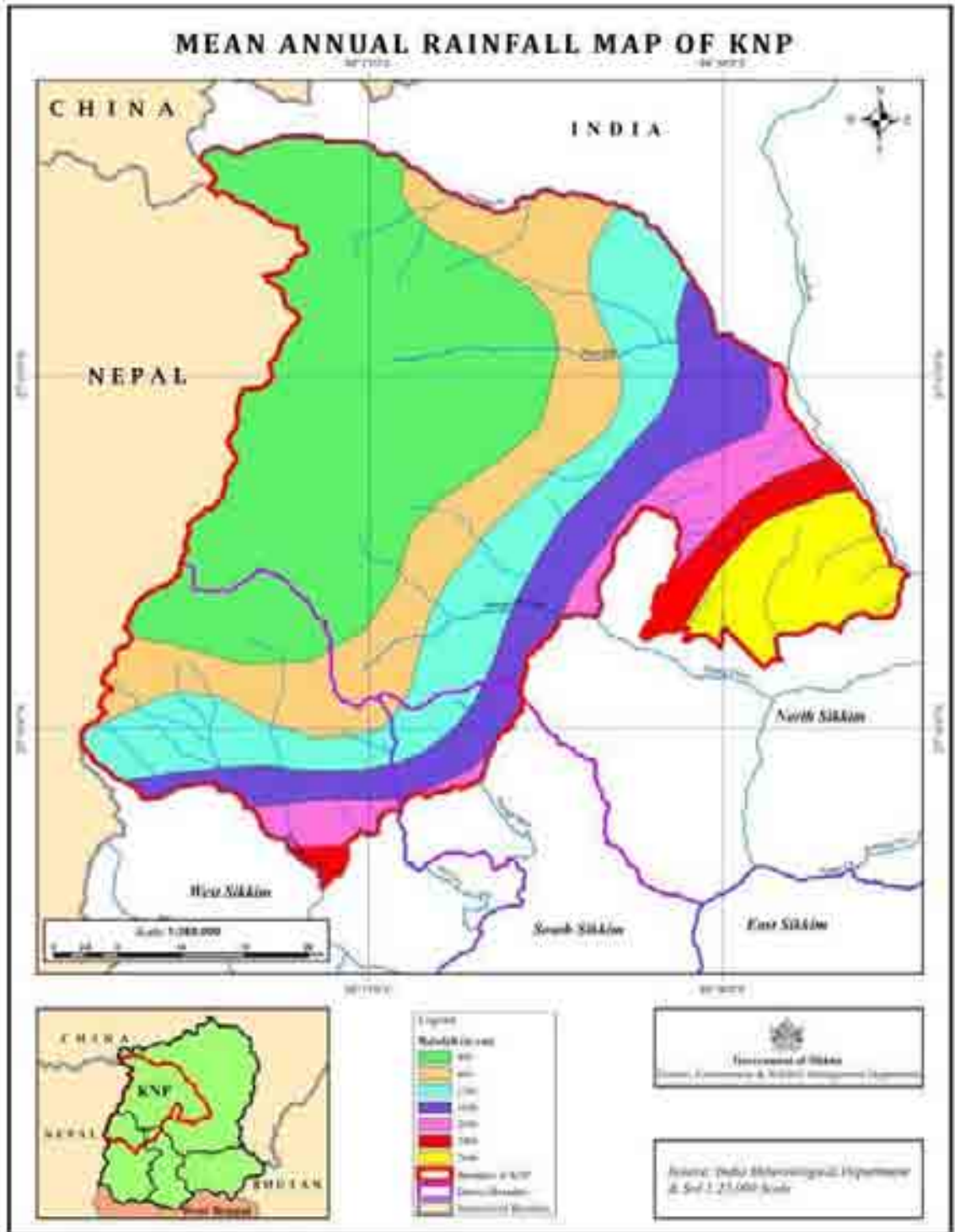
beyond Parek Khola i.e Thangsing towards Lamphokari, Kasturi Orar, Pha-hungry, Labdang ridge upto Kargee R.F. northern boundary upto Himalayan Range in the Western part of KNP. Likewise at the Northern and Central part the following areas has been selected for Wilderness Zone keeping in view of floristic and faunal composition such as at Central Part the areas as selected are the entire valley of Rakel Chu from Yongzotha to Tsangnok including Zopattam and Umaram Chu Valley in the Northern part of the Park.

## **II. Habitat Improvement Zone: -**

Due to scattered manner of biotic and abiotic factors some of the areas have been deteriorated severely which needs immediate management intervention, including habitat manipulation, which has to be carried out in this zone for development of the forest area as to reclaim ideal wildlife habitat. This would include carrying out gap plantations, improvement of water availability, removal of weeds etc. The habitat improvement activity should primarily aim at restoring the habitat and food-base of all the species. Since the food chain in any ecosystem is highly complicated and any large scale manipulation of the ecosystem may set in an irreversible process of degradation, one has to be extremely careful while carrying out habitat manipulation activities for the purpose of development. The areas adjoining to the permanent cattle-sheds have been converted into man made meadows, with infestation of *Rumex nepalensis*. It is proposed that these meadows be maintained rather than converting them into woodlands. However manual removing of *Rumex* needs to be carried out on a war footing and water holes development adjoining to these places should be carried out. There are different locations as identified to carry out such management to facilitate healthy environment for breeding and growth.

## **III. Eco Tourism Zone: -**

The Khangchendzonga National Park situated in the Eastern Himalaya is highly significant in terms of promoting eco tourism within this Park and in its surroundings areas. One of the most significant view is magnificent view of Mt. Khangchendzonga Peak, 3<sup>rd</sup> Highest Peak of the World is visible from almost all angles of the hilly State of Sikkim. The other important tourist interest destination is like Green Lake expedition, Dzongri trek and Singalila Ecotourism Promotion Zone, Dzongu Ecotourism Promotion Zone, etc. For Mountaineering purpose some peaks are open to the expeditions team within the Park after obtaining permission from the Home Department and Chief Wildlife Warden, Government of Sikkim. Besides there are so many holy lakes and wet lands which finds interesting grounds for visiting migratory birds and even for pilgrimages to visit such sacred places and few more for interested anthropologist. One can enjoy different taste of trekking, Mountaineering, expedition, study of different forest types within small patches and cultural diversity. The following areas has been proposed for Eco – Tourism Zones at different parts of Park considering its importance and interesting places such as Phaka towards Dzongri via Tshoka, Phedang upto Boktok and Chewabanzang- Western part phedang to Thangsing, Samatey and Goechala, Southern part- Tshoka to Zamlingang and base camp. On the Central part the following areas has been proposed for Eco Tourism having Tholung Monastery at the peripheral of Buffer Villages where every year pilgrimages used to visit to celebrate Maha Puja being conducted and this trek leads to the interesting places towards Kissong and Kisongla with Kisong Lake including Tamrong and Dewathang. In the Northern part of the Park also harbours many places of interest like sighting of Shapi at Phimphu, German Orar for Musk Deer sighting, Yuigang to Bikmatar for Monal sighting and mindblowing expedition to Green Lake and many more exhaustive natural trekking.



KNP-MAP-XV

#### **6.4. Theme Plans:**

Strategy for improvement: cultural operation of dense forest to create ideal forest and restoration of open forests, degraded forest of Khangchendzonga National Park.

##### **6.4.1. Treatment of National Park:**

The statistical data forest density wise of Khangchendzonga National Park is annexed, where different classes of forests is given. On the basis of available data, different management intervention is proposed for the treatment of individual class of Forests.

**I. Dense Forests :**An area of 149.14 sq.km is dense forests of Rhododendron, conifer and forest of temperate and sub-tropical, no any special management input is suggested but in some of the areas the forests floor is found with fallen rhododendron and conifers twigs and branches, fallen trees may pose vulnerable to fire hazards, however there report of forest fire in high altitude areas so far. Sometimes there will be long dry spell winter (March, April and May) threatening every chances of forest fire in the low altitude areas of the Park.

To cope up this situation, the following precautionary measures are suggested :

- a) Clearing and burning of dry twigs and small branches.
- b) Destroying of those decaying logs to keep the forest pests and diseases under control and retention of hollow logs, which are ideal natural habitat for rabbit, squirrels and other rodents. The snags should be retained as it provides a portion of the life support system for many species of plants, invertebrates, birds, snails and micro-organisms.

##### **II. Open Forests:**

An area of 115.07sq.kms has been shown as open forest which also requires certain management intervention. The open forest was created because of both biotic and abiotic factors, but the great enemy is people whose cattles used to graze inside this Park and poachers pose serious damage to the forests. The grazers used to burn grasses to induce new shoots for the next session but sometimes the new shoots does not come resulted into gap, creating unwanted, thorny and weed type of forest.. Further, while during their stay at forests they used to burn stems, logs, branches and leaves of trees/plants through out the day and night to keep them warm and to keep away wild animals and for cooking purpose All these activities aggravated to create open forests. Gap plantations of indigenous species needs to be taken up to restore the open forests which cover 115.07 Sq.Km. within KNP and 210.48 sq.kms in its surrounding areas. Hence, the following intervention works to be taken in a phase manner in the course of future management:

- a) 30% of the area i.e 34sq.kms of such area will be taken for reforestation programme in order to provide thermal cover to the wild animal therein.
- b) The remaining area will be treated with planting of fruit bearing trees, fruit and fodder grasses to provide ample area for feeding.

##### **III. DEGRADED FORESTS:**

Maximum thrust has to be given to treat these degraded forests before it further worsened. An area of 215.51sq.kms has been classified as degraded forests. Due to degradation, the process of soil erosion is more accelerated because of open canopy and forest floor, steep sloppy areas and textures of soil further degrades the land making the areas totally barren and degraded. To combat the situation the following intervention is recommended :

- a) The land fertility is degraded and it needs immediate treatment from further deteriorations. In order to check soil erosion small slanting ridge ditch are dug out along the contour line and on the mound of it the grasses are planted.

- b) Fruiting trees are planted along the lower edge of the ditches at an interval of 7mtrs. This will further help to arrest and conserve soil moisture. Fruiting & flowering trees will invite many birds, mammals and bees which facilitates the natural regeneration in the area by way of carrying seeds from other areas. With the improvement of forest coverage, it sheds leaves which form good manures and plantation of grasses is encourage to increase the carrying capacity of Park. Out of 215.15sq.kms, an area of 175sq.kms will be treated through this prescription and the rest area will be maintained under Travel lane cover. Such identified areas are saddles gap, bonds around ridges and streams courses. The wild animal corridors are for concealing animals moving across areas are to be covered by plantation of indigenous species of fast growing spp.

#### **IV. Forest Blank/ Alpine Scrub Areas:**

These areas also faces high biotic interferences because of presence of graziers and their herds of cattle compounded by medicinal herbs collectors resulted into the degradation of ground coverage with unpalatable grasses. These areas forms the good pasture land for herbivorous animals of high altitude animals like Blue Sheep, Nayan, and Himalayan Tahr, Musk Deer etc. the existence of these animals is important to keep the prey and predator relation in balance especially for high altitude predator like Snow Leopard. To make the full use of alpine scrub areas the following recommendation is suggested :

- a) The barren / scrub areas will be treated by planting fodder grasses like Dactylis glomerate, Festuca, Lolium spp.
- b) In order to survival of wild animals medicinal herbs is very important to keep their health fit as they consume in the form of foods. To rejuvenate the loss of herbs by collectors, plantation of medicinal herbs like Pieriorhiza curron, Swertia chirrata, Nadostachys jatamansi and Aconitium spp. are preferred

#### **V Scrub Non-Potential Areas :**

The statistical data presents that an area of 878.33s q.kms faces severe soil erosion and 177.64sq.kms shows slight soil erosion, as shown at page 18 of this plan. The areas falling under severe category requires immediate treatment to stop further erosion of soil to keep the soil profile intact and similarly slight erosion area will also be taken up along during the treatment of severe areas to check further deterioration. In severe landslides areas and slight eroded areas, the immediate engineering works added by vegetative measures should be taken up. Engineering structure likes drop spill ways guide walls, toe walls and retaining walls are recommended. Vegetative measures like bally benching, planting service of grasses are recommended. The rocky and vulnerable areas should not disturb.

#### **VI. Cliff areas:**

Wherever there are cliffs, caves and rocks those are the main places for resting, reproduction, nesting and perching places to a large number of birds, carnivore, herbivorous and reptiles etc. the Snow Leopard prefers the snow covered rocky areas as their hiding and hunting places. Hence, no such activities should be taken up which shall disturb the areas and their habitat.

#### **VII. Treatment of Management Intervention Areas:**

Although these areas are(Buffer Zone of KBR) Reserve Forest, which comes under the administrative control of Territorial Division but the management portion in respect of

buffer zones of KBR comprising Reserve Forests and surrounding fringe villages are assigned to the concerned National Park officials, of the Wildlife Sector of the Department. The most important management aspect of Park is to keep the Khangchendzonga National Park intact and that can be achieved by diverting the people needs from these areas itself.

The objectives of management of this Zone are :

- a) To develop the area as an effective buffer of the Park and thereby help in reduction of the biotic pressure on the Park.
- b) To meet the forest based demands of local people.
- c) To provide grazing grounds to local livestock.
- d) To protect against forest fire.
- e) To conserve wildlife in the area.

The strategies for management of the Buffer Zone of KBR will be as follows :

The statistical data of Remote Sensing shows that there are degraded and open forest about an area of 23.20sq.kms of degraded forest and 127.34sq.kms of Open forest in and around Khangchendzong National Park. Since, the surrounding area of National Park are the focussed areas from where the forests based demands of local people is met, so that the core zone of the Park could be kept intact. The treatment of such forest to meet the demand in perpetual manner is very important and should be given on top priority. Hence both degraded and open forest of in and around of National Park is proposed for management intervention. All the degraded, open forest will be treated before it further degrades.

#### VIII. Talus & Caves:

In order to extend the management programme, talus will also be taken care which is the accumulation of broken rocks at the base of cliffs or other slopes and this forms the good habitat for the wildlife. It also supports the edge of herbaceous vegetation ideal for regular supply of foods to the animals living in the talus. Caves also forms the ideal habitat for prey animals to protect themselves from predator and for nocturnal animals especially for bats. While carrying out management programme, this will also be taken care with minimum input if possible no any type of activities will be encouraged. The percentage of degraded forests of KNP and surrounding area has been worked out to give treatment to restore in its original form.

#### I. KNP:

S. No	Degraded Forests of KNP to be Restored	Area [km <sup>2</sup> ]	%
1	Mixed Broad Leaf Forests	53	25
2	Conifer Forests	162	75
	<b>Total:-</b>	<b>215.00</b>	<b>100</b>

**II. Areas out side National Park:**

S.NO.	Degraded Forests of outside KNP to be restored	Area ( Km)2	%
1	Mixed Broad Leaf Forest	43.8	60
2	Conifers Forest	29.2	40
	<b>Total:-</b>	<b>73.0</b>	<b>100</b>

**6.4.2 Species Selection for Restocking of Open Forests:**

S. No	Forest Type	Species Selection
1	Mixed Broad Leaf Forests	<i>Quercus lineata, Quercus lamellosa, Castanopsis hystrix, Machilus spp., Rhododendron arboreum, Rhododendron grande, Michelia excelsa, Leocosceptrum canum, Elaeocarpus lancaefolius, Acer campbellii etc</i>
2	Conifer Forests	<i>Abies densa, Rhododendron hodgsonii, Rhododendron falconeri, Thamnocalamus aristata, Arundinaria maling, Betula alnoides, Quercus lamellosa, Quercus lineata</i>

While undertaking habitat development works, the activities should remain confined within the Habitat Improvement Zone :-

- 1) Wherever habitat manipulation activities are being taken up, some control plots should be laid out for future monitoring of the effects of such manipulations.
- 2) No exotic tree / fodder species should be introduced.
- 3) The focus of habitat development should be aimed towards expanding the habitat areas of the animals.
- 4) Maintain special habitats like snag, den trees, caves, overhangs etc. for other species.

**6.4.3 Maintaining special habitats for other species:**

Special habitat within the Park will be maintained for wildlife. The following prescriptions were proposed:-

- 1) Retaining of a number of hollow, top broken, top dried, partially dead, or fully dead (snag) standing trees particularly trees >20 cm GBH and >5m height. Such trees are used by a variety of wildlife species, particularly woodpeckers, barbets, nuthatches and smaller mammals.
- 2) Retaining and preserving of fallen trees and logs of any diameter and let them decomposed 'as is where is basis', so that these decomposed trees and logs is habitat, niche used by different organisms, ranging from soil bacteria to fungi, mollusca, arthropods, amphibians and small mammals.
- 3) Retention of fruit and seed bearing trees and dwarf bamboo clumps, as these trees are food bearing species of different animals, bird, butter flies, Bees, moths etc.
- 4) Trees with deeply twisted boles, furrowed bark or peeling bark, with natural cavities will be retained because bats, shrews, snakes, often use such natural

crevices and cavities as hiding, resting and nesting sites. These trees should be identified and preserved carefully.

- 5) Protection of riparian areas - Habitat along water courses should be carefully protected
- 6) Burrows will not be disturbed because hare, rat, mouse, pangolin, mongoose etc. and other nocturnal animals take shelter there.
- 7) Breeding sites of all animals will be protected and preserved.

**6.4.4.** Grazing poses the greatest threat to the habitat. There are total of 44 fringe revenue blocks villages around Khangchendzonga National Park. Domestic livestock from the fringe villages not only competes with the wild herbivores for food, they also spread diseases like Anthrax and Foot and Mouth disease among wild animals which can cause death. Besides domestic Livestock permanent cattle sheds of Yaks exists within Park cause damage to the habitat. But after the state government notification on grazing ban in all Forests lands the grazing in the National Park has reduced considerably. Yak sheds from Forests and high altitude alpine forests, are the source of livelihood for the people living in those areas whose source of income and livelihood is completely depend upon these animals in the form of diary products and meat. On the other hand, by virtue of semi-wild in nature these animals cannot be domesticated like other domestic livestock for this reason the management intend to remove this yak sheds by compensating the farmers who are willing to give up this age old grazing pattern in phase manner and the management has been successful in doing do as more than 80% of cattle sheds from the Park areas has been removed.

**6.4.5. The strategy should be as follows :**

- 1) Extensive patrolling should be done by the staff, especially along the forest boundaries and the grazing-prone areas to stop illicit grazing.
- 2) Compensation provision is to keep solving this menace once and for all, to keep the forests free from biotic interferences like cattle and cattle sheds.
- 3) Construction of cattle pound and sending the cattle, seized for illicit grazing, to the cattle pound.
- 3) Reduction of low yielding variety cattle through castration of inferior bulls and artificial insemination for improvement of stock.
- 5) Regular immunization of domestic cattle against FMD, Anthrax etc. in the fringe villages within 5 km.periphery of Park boundary.
- 6) Replacement of low yield varieties by high yield variety cow through cattle distribution/improvement programme with the help of Eco-development Committees.
- 7) Involvement of Eco-development Committees and seeking their cooperation to prevent illicit grazing of cattle in the Park.
- 8) Formation of milk producers' cooperative centres in the fringe villages for the purpose of reduction of low yielding varieties, introduction of high yielding varieties and to facilitate marketing of milk.

**6.4.6. Restore the watershed capability of Catchment Area**

The Park has tremendous significance for its watershed value. Infect entire Sikkim depends upon the source of River Teesta and Rangeet. The source of this River originates from this Park such as Talung Glacier & Rathong Glaciers at the Western part of the Park and Zemu Glaciers & Lohnak Glaciers at the Northern parts, which forms major source of water to River Rangeet and Teesta respectively. In order to keep the catchments area intact, catchments area treatment activities such as plantation, soil and moisture

conservation measures, treatment of landslide areas will be the given main concentration to stabilize landslides prone areas and improvement of water retention capacity of the soil in the National Park.

- 1) Since the catchments areas lie in the conifer zone, gap plantations or aided natural regeneration of indigenous species need to be carried out in a phase manner throughout the plantation season in the course of management of the Park till the open and degraded areas are covered up;

S. No	Forest Type	Species Selection
1	Conifer Forests	<i>Abies densa, Rhododendron hodgsonii, Rhododendron falconeri, 4Thamnocalamus aristata, Arundinaria maling, Betula alnoides, Quercus lamellosa, Quercus lineata</i>

**6.4.7. Illicit removal of timber, fuel-wood and non-timber forest products (NTFP):**

Illegal felling of trees is not very common but the surrounding villagers are involved for the collection of grasses, fuel wood, medicinal herbs and sometimes for timbers. However, the strategies should be made as below for effective control of this problem in the near future before it becomes too late :-

- 1) Intensive patrolling in the affected areas by the staff.
- 2) Collection of information clandestinely from locals engaged for the purpose for illicit removal of timber by the offenders and carrying out surprise raids with the help of strike force / mobile Force. Initiate and strengthen Eco-development activities in the adjoining villages for flow of information from the villagers on forest offence/offenders.
- 3) To implement the provisions of the Govt. order on Eco-Development Committees for the purpose of free distribution of fuel-wood and NTFP to the EDC members.
- 4) Distribution of fuel-wood saving device like LPG connection, goober-gas plant in lower part of the Park and solar energy for cooking and lightening, Bhukharis for heating purpose to the forest fringe villagers to reduce demand of fuel-wood from the surrounding forest.

**6.4.8. The following strategies are proposed to resolve the problems arising out of the human disturbance:-**

- 1) Encourage social fencing around the Park through the Eco Development Committees Panchayats and local NGOs.
- 2) Generate awareness amongst the fringe villagers with regard to wild life conservation and importance of the Park.
- 3) Step up family welfare measures in the villages adjoining the Park.
- 4) Take up literacy drive amongst the fringe villagers.



-----XXXXXX-----



**Juniper Plant at Green Lake - 06-07-06**

**Fig – V.**

## CHAPTER-7- ECO-TOURISM, INTERPRETATION AND CONSERVATION EDUCATION

### 7.1. General:

**A. Definition of Eco-Tourism:** “The responsible travel to the natural areas that preserves the environment conserves the endangered species as well as sustains the well being of the local people”. Hence, as per this definition, simply by trekking, biologically rich areas do not constitute eco-tourism. A true eco-tourist wherever he / she visit does not mean any harm to the fragile and environmentally sensitive life cycle of nature; instead his visit will improves the local environment and socio-economic condition of the people through tourism related income.

**B. What is Eco-Tourism?** As per “**Eugene Odom’ [the grand father of ecology]** “An ecosystem is a unit of biological organization interacting with the physical environment such that the flow of energy and mass leads to a characteristic tropic structure and material cycles”  
**Eco-Tourism is derived from two wards:** viz. Ecosystem & Tourism. Together it is made Eco-Tourism. We first have to know our ecosystem then only we can understand Eco-Tourism.

#### **C. What Ecosystem stands for?**

Ecology or ecosystem is an open space built by physical and biological components of an environment; Ecosystem is result of an active interaction between living and non-living components. Ecosystem is where community of plants, animals and their environment functions as awhile and relationship between organism and environment thrives blissfully.

**Types of ecosystem:** Earth itself is immense ecosystem; likewise there can be an ecosystem in a sea, forest, and river and even in a small pond, as ecosystem is where organism and environment meets together. So, ecosystems differ in shape and size. Categorized in 4 types: 1 Aquatic ecosystem, 2 urban ecosystem, 3 Arctic Tundra and 4 Boreal Forest’

**D. Ecosystem:** is a system in which we live-the system which include the earth, the water, the sky and of course the living and non-living objects in all ecosystem. It is dynamic complex of plant, animal and microorganism communities and their non-living environment interacting as a functional unit.

#### **7.1.1. Organizing for Tourism Management**

Tourism is now relied on as an income source and for the foreseeable future is likely to remain a predominant economic activity. All those whose livelihoods are bound up with the tourism have an interest in maintaining it. The Park needs carefully managed and appropriate styles of tourism to prevent worse pressures on natural resources. Organization is needed at community level and at a state level. There is now widespread recognition of the need for management and coordination to maintain the industry.

### **7.1.2. Eco-Tourism Promotion and Conservation Zonation**

Conservation of natural resources and promotion of Ecotourism are the main thrust areas of the State Government. The Yam bong-Singalila trekking trail in Nambu, West Sikkim which was opened in 2005 and managed by Yam bong Ecotourism Committee had earned good income to the local community from 140 overseas tourists. With increased awareness local NGOs and Panchayats have supported the Forest Department in eviction of yaks and its sheds from the core area of the Park.

#### **Ecotourism Promotion zone:**

The Singalila Ecotourism Promotion Zone in West District, Sikkim comprises seven approved treks namely; Khangchendzonga Base Camp, Yam bong Singalila, Arelungchok Dzungri and the Everest Singalial and comprise of the designated nature trails and designated camping sites.

In order to replicate this success story in other remote corners of Sikkim, a joint team of Forest Department, JFMCs, EDCs and local NGOs lead by Shri Sandeep Tambe IFS, Project Manager, The Mountain Institute had conducted a study of the alpine areas of West and North Sikkim during 2005 and 2006. The team spent a total of 4 months in the high altitudes conducting identifying habitats sensitive to wildlife, locating medicinal plant hot-spots and also the scope for promoting ecotourism along these trails.

In order to promote tourism in a sustainable manner, the “Dzongu Ecotourism Promotion Zone” was identified in Upper Dzongu, North Sikkim with 1 approved trek, the **Tholung-Kishong trek** and 9 designated camping sites. Also the **Narsing Himal Trek** was identified as a part of the already notified “Singalila Ecotourism Promotion Zone” starting from 10<sup>th</sup>.mile Borong (South Sikkim) via Karjee-Mangnam, Tashiding, West Sikkim with 5 designated camping sites.

### **7.2. Objectives:**

- 1) To promote conservation awareness amongst the tourists and the local people through nature education and interpretation.
- 2) To develop the eco-tourism zone within the Park to increase the inflow of eco-tourists to the Park without affecting the main objective of conservation.
- 3) To regulate and reorient tourism so as to make it more educative and compatible with the goal of conservation.
- 4) To involve local people in tourism activities, thereby generating direct and indirect economic activities for them
- 5) To protect endangered species of flora and fauna and their habitats within buffer zone; while practicing sustainable harvesting of forest and rangeland products to fulfill local needs for timber and non-timber resources; and by encouraging sustainable production through active management of community and private forests.
- 6) To guide management and development of village settlements and cultural sites by local people in a way that will retain traditional character and architectural style to conserve indigenous architecture, and culture; and to preserve other social and cultural activities as they see fit.
- 7) To promote organic agriculture, traditional livestock management, trade and tourism and other income generating activities to increase livelihood opportunities with emphasis on environmental sustainability.

### **7.3. Issues and Problems:**

#### **7.3.1. Controlling of Crowding:**

Till so far the Khangchendzonga National Park has not faced over crowding tourist problems. However, the important point is that during the next ten years, demand is likely

to build up and the crowding of visitors particularly the expedition to the high peaks can be forecasted.

Over crowding of tourist visits will endanger the eco-system of the Himalayan ranges endangering the flora and fauna of the region. Certain portion of crowding problems may be alleviated by improvements in tourism facilities and infrastructure. The restrictions on the numbers of visitor entering the Park should be strictly maintained. The Park entry fee and royalty levied per peak is not a major constraint to international visitors. There are other approaches, potentially easier to implement, including a substantial peak season surcharge on the Park Entry Fee. The Park has to gather accurate arrival statistics at Yuksam Check-post, Gangtok (KNP) Division Office, Yuksam Police Check-Post and Tourism Department. However, it is unrealistic to expect the Park alone to deal with crowding problems. There is unlikely to be a single solution. Simply declaring a carrying capacity limit is not feasible. The tourism industry, Forests, Environment & Wildlife Management Department along with its stakeholders must move beyond a pioneering attitude and accept responsibility for an on-going, responsive management process in partnership with the Park and other authorities.

### **7.3.2. Visitor Flow Management**

If not checked and managed in time uncontrolled tourist flow will lead to crowding which will endangering the Eco-System of the Himalayan Ranges, flora and fauna of the region and the cultural heritage of the local populace, the Eco-tourism, managers in-coordination with the line departments and the stakeholder should set up a visitor flow management process. The process will be established without causing adverse publicity about crowding. The overarching objective will be to preserve and protect the bio-diversity available in the Park and its international reputation as a reliable and uncrowded tourist destination. The visitor flow management process will actively manage “visitor carrying capacity”(VCC). As a first step, establish agreement among all key stakeholders on indicators of unacceptable crowding, then, decide limits to acceptable crowding. Finally, put in place a means for collective decision-making, with all concerned stakeholders involved. Each year, make a decision about the visitor flow management actions required for the following year. These actions may include:

- i) Trek agents make voluntary adjustment to trip route planning;
- ii) Tourism umbrella organizations promote alternative trails and circuits;
- iii) The managers in consultation with the stakeholder, the Government of India as well as the State Government have to initiate improvement to the infrastructure at bottlenecks and should introduces mandatory one-way trails;
- iv) The tour operators should strictly follow the do and don't prescribed by the Chief Wildlife Warden, Government of Sikkim and printed on the back side of the Entry Permit Letter.
- v) The tourist, Tour operators and guides are strictly governed by the Sikkim Trekking Rules 2005
- vi) The Government has to impose a crowding surcharge on entrance fee at peak periods in near future.

### **7.4. The strategies:**

- 1) Organized and regulated tourism is just being initiated by the Government so, it takes little bit time to be acquainted with the system to bring it in the field. There is no accommodation provided to the tourists inside the Park. However there are a number of private lodges that have come up at the fringes.

- 2) Interpretation Centers are to be strengthening with latest equipments at Yuksam and Gangtok. Screening of video and documentary films related to bioresources of the Park, needs to be organized.
- 3) The system of organizing nature camps for school children and local people including elders are to be conducted in large scale, taking them into big National Parks and Sanctuaries of the Country for exposure
- 4) The focus is to be given in a systematic and extensive publicity regarding the being the Biological hot spot and the uniqueness of the Park.
- 5) Developing Spatial Database on the Mammal Distributions and Monitoring Programme for large Carnivores, Prey populations and their habitats in Khangchendzonga National Park is initiated by Wildlife Institute of India, in coordination with the forests, Environment & Wildlife Management Department, Government of Sikkim.
- 6) Inter-agency co-ordination and co-operation between various departments like Tourism, Forest, Rural Development, PHED, Sikkim Public Works Department and Education with regard to development of tourism is be developed.
- 7) The infrastructure for Park managers including lowest ground level staff have to be developed as per the requirement in a phase manner
- 8) Budgetary support for development of eco-tourism infrastructures in the Khangchendzonga National Park have to be enhanced, through the State Plan as well as through the Central Sponsored Schemes.

#### **7.4.1. Identification of the Zone:**

- I.** Further to regulate the eco-tourism in the region the State Government has issued some rules and regulations through notifications are as under
  - a) Sikkim Wildlife ( Regulation of trekking) Rule, 2005, Notification No.887/FEWMD, dated.10.2.06.
  - b) Guidelines for the Appointment of Himal Rakshaks, Notification No.888/FEWMD, dated.10.02.06.
  - c) Singalila Ecotourism Promotion Zone, Notification No.892/FEWMD, dated.10.2.06.

With an objectives to promote sustainable community based ecotourism with minimum negative impact and provide incentives to the local community from conservation, the singalila ecotourism promotion zone is being defined and set aside in West Sikkim. The Singalila Ecotourism zone comprises of 4 approved treks and 27 designated camping sites.

- II. Conservation importance and values:** Located at the northern tip of the Onglaktang valley, due north of Samiti Lake beyond Jemathang, one has to cross the 4800 m high Gochela pass to descend in to Yongzokdrak meadows. These meadows are hidden between glaciers and forms amongst the last refuge for the globall endangered Blue Sheep in West Sikkim. Yangzokdrak is the sacred rock (Naydo) of Sikkim (Notified by Government of Sikkim) and Guru Padmasambhava meditated here on the way to Tibet. This meadows of Yangzokdrak is bounded by Talung glacier towards north, Pandim mountain towards the east, Kabur Mountain towards the west and Forked Peak towards the south.

**Fig:-VI.**

**Fig – VII.**

- g) Dzongu Ecotourism Promotion Zone, Notification No.1975/F. Dated:11/12/2006.

**Fig-VIII.**



**Fig - IX.**

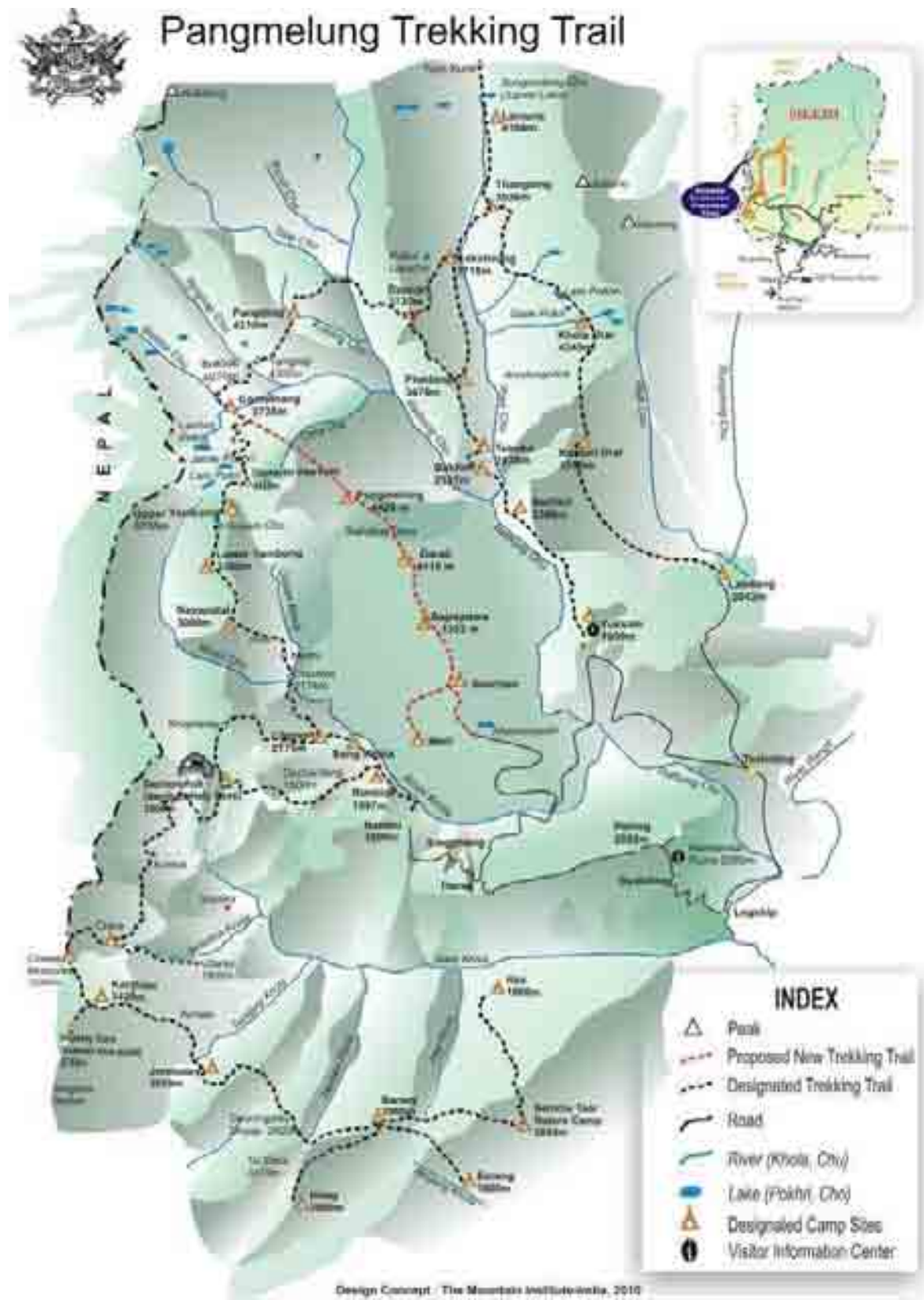


Fig - X

**7.4.2. Infrastructure development:**

**I. Proposal for regulated Eco.Tourism Infrastructures in the National Park and its surrounding areas in West, South and North Sikkim.**

**WEST SIKKIM & SOUTH SIKKIM**

1. Development of Singhalila Trekking Trail.
2. Trekker's Huts along Singhalila trekking trail.
3. Porter's Huts along Singhalila trekking trail.
4. Toilet facilities at Camping sites along Singhalila trekking trail.
5. Development of Camping sites along Singhalila trekking trail.
6. Water Supply facilities at Camping sites along Singhalila trekking trail.
7. Development of Pangmelung Trekkin trail and other facilities en-route.
8. Development of Narsing trekking trail and other facilities en-route.
9. Development of Namboo-Gomathang trekking trail and other facilities en-route.
10. Pilgrimage hut and trekking trail to Neytham, Dechenphu.
11. Trekking trail and other infrastructures Ranidhunga.
12. Eco-tourism activities around Rabdentse, Kecheodpalri, Rimbi, Namboo, Sopakha, Yuksom, Dentam, Melli Aching, Labdang, Pokhari, Dubdi, Karzee, Dhupidara, Larinyipo
13. Treking routes and other infrasructures from Damthang to Jor porkari – Kalipokari-Kartikey pokari under Damthang, South Sikkim.
14. Development of 35 km long trek from Phamtam -Panchpokari via Daleydunga-Durpindara-Kalo pokhari at Ralong, South Sikkim

**NORTH SIKKIM**

- 1 Development of Trek route from Zema I to Green lake at Lachen.
- 2 Development of Tourist Infrastructure at Zema I in Lachen.
- 3 Development of Tourist trail from Gochemy to Phalum at Lachen.
- 4 Development of Tourist trail from Gochemy to Midey at Lachen.
- 5 Development of Tourist trail from Singpanlakha to Phogey at Lachen.
- 6 Development of Tourist trail from Togu to Togaten at Lachen
7. Development of Tourist trail & infrastructure from Tholung to Keshung at Dzongu.
8. Development of Tourist trail & infrastructure from Pentong to Sungnuk at Dzongu.
9. Development of Tourist trail & infrastructure from Leek to Shipgyar at Dzongu.
10. Development of Tourist infrastructure at Namprikdang Park in Dzongu.
11. Tourist Check Post at Sankalang, North Sikkim.
12. Development of Tourist trail & infrastructure from Burfok to Lingichu at Dzongu

Source Tourism Department

### **I. Park and Community Interpretation**

While most tourism product development work will continue to be achieved by both the private sector and public sector there are two important areas where the Park can take an active part: i) interpretation of the Park's natural resources; and ii) the presentation of culture to visitors. There is scope to significantly enhance the product quality of Khangchendzonga Eco-tourism through interpretation. As the Park is being promoted as a World Heritage site, visitors' expectations of park management will increase. A programme to lift the standards of interpretation will reassure visitors. Existing interpretation facilities are not adequate. There are many natural history & stories untold. In future, the self-conscious "delivery" of culture will become increasingly important. Visitors' expectations are evolving. Whereas earlier, adventurous visitors were content to be in a unique environment away from normal sights and sounds, the current markets are 'on holiday' and expect to experience the attractions promised in brochures. At the same time, as the fruits of tourism success become more evident in the built environment and in local lifestyles, the tourism industry cannot rely on "culture being everywhere". The "Eco-Centre" at Gangtok is on the pipeline and shall illustrate the potential for using interpretation techniques to 'deliver' a cultural product in a locally acceptable way. Interpretation of nature and culture is an ideal prospect for joint implementation by the Park managers and local communities. To visitors, it is the interpretive stories told in these places that are important. The sequence of stories should be planned. In future, in the new spirit of partnership, community management of Park interpretation facilities should be encouraged. Cultural interpretation also provides an opportunity to respond to the increasing awareness among local populace of the need to manage the constant, tourism-led changes to local communities. The presentation of culture through interpretation should include messages aimed at influencing visitor behaviour.

### **II. Park and Community Interpretation Plan**

The Park managers and Eco-Development Committees to oversee a programme to prepare and implement a Park and community interpretation plan with the aim to promote consistency and quality in interpretation.: i) an explanation of interpretation themes and story lines, including the sequencing of stories; ii) a trail signage and on-site interpretation strategy; iii) a programme for documenting community stories; and iv) a prescription for safety messages, particularly associated with the effects of altitude, v) Safety disposal of bio-degradable and non-bio-degradable garbages. Select an interpretation planning team by involving interpretation expertise with international interpretation experience.

#### **I. Interpretation Centre and its Objectives:**

- i) To increase public awareness regarding nature conservation.
- ii) To inform visitors, upon their arrival, about the location, natural resources and management of the Park.
- iii) To increase people's interest about and understanding of the Park by providing information on its importance, history, ecology, habitats, wildlife etc.
- iv) To create concern for the endangered flora, fauna and eco-systems and to motivate them in conservation of nature in general and the Park in particular.
- v) Development of Interpretation Centre will be taken up outside the Park
- vi) Interpreting talks and film shows should be organized regularly at interpretation Centre.

#### **III. Theme to be displayed at the Interpretation Centre may be:**

- i) Food habit and food chain of the Red Panda, pheasants, Rhododendrons and other wild animals and plants.
- ii) Behaviour, social life, ecology, biology of red panda, pheasants etc.
- iii) Habitat, flora and fauna of the Park.

- iv) Birds and their roles, and check list of birds.
- v) Ecological processes and function.
- vi) Geology and landscape of Khangchendzonga National Park.
- vii) History of management in the Park.
- viii) Soil and water conservation works.
- ix) Habitat utilization of different animals.
- x) Impact of tourism.
- xi) Role of people in conservation efforts, including eco-development activities.
- xii) Local and ethnic culture.
- xiii) Effect of uncontrolled felling of trees.
- xiv) Management objectives, problems and strategies for development of the Park.
- xv) Research activities and monitoring works.
- xvi) Man-wildlife conflicts.
- xvii) Effect of fire, grazing, garbage and biotic pressures on forest and wildlife and their control.

**IV. Documentary Film on Natural Resources:**

Preparation of Documentary Film on Natural Resources, for which the experts to film almost all aesthetic and panoramic view of snow capped Peaks, Mountains, Glaciers, Lakes & Wetlands, Rocks, Meadows, Vegetations, Flowers, Topographical aspects, Various type of wild animals, Rivers, Rivulets & streams etc. available within the Khangchendzonga National Park and its surrounding areas.

**V. Eco-Tourist Guide:**

Eco-tourist guides should be developed from amongst the educated and enterprising youth of the eco-development committees and they should be properly trained up to act as guides in the conducted tours. The guides should be paid fixed fees per trip by the tourists and the list of such guides will be kept with the park management and the charges should be approved by the officials of the park and displayed on notice board.

**VI. Trekking and Expeditions:**

The State Government has issued the following Notifications to regulate trekkings in the eco-fragile and Environmentally sensitive Protected Areas. The Notifications are i) Sikkim Wildlife ( Regulation of trekking) Rule, 2005, Notification No.887/FEWMD, dated.10.2.06. ii) Singalila Ecotourism Promotion Zone, Notification No.892/FEWMD, dated.10.2.06.and iii) Dzongu Ecotourism Promotion Zone, Notification No.1975/F. Dated:11/12/2006.

The State Government further, Notified the following Peaks open for Alpine Expedition vide Notification No,54 (78) Home/84/30 dated 20<sup>th</sup> July 1993 and Notification No.25/Home/2006, Dated:20/03/2006, as given in the table below:

Name of the Peak	Height in mtr.	Location /District	Grade	Protected Areas
Mt. Tinchenkang	6010	West Sikkim	D	Khangcheng]dzonga National Park
Mt. Joponu	5963	West Sikkim	D+	-do-
Frey's Peak	5830	Chaurigang, West Sikkim	AD+	-do-
Lama Wangden	5868	Lachen, North Sikkim	AD	-do-
Brumkhangse	5635	Yumthang, North Sikkim.	D	Singba Rhododendron Sanctuary

## **VII. Hoardings and Signages:**

Signboards and hoardings on the Park are necessary along the National and State highways for guidance of the tourists/visitors. A map of the Park is to be kept at Yuksam, West Sikkim, Chungthang & Namprikdang in North Sikkim, indicating the entry points to the Park. Similarly signages inside the Park are to be put up in every bifurcation point of the trekking trails for proper guidance to the trekkers so that they can walk through the aimed direction and designated camping sites in time.

### **7.4.2.1. The objectives of organizing nature camps would be as follows -**

- a) To introduce basic ecological principles in simple forms for learning through personal experience.
- b) To motivate participants to gather information on diverse aspects of biotic and abiotic environment.
- c) To encourage participants to analyze and discuss conservation issues in a constructive manner.
- d) For fostering admiration and respect for the complexities of relationship amongst the species and within natural communities.
- e) To dispel unfounded fear of wild animals and help participants to be comfortable in wilderness.

The nature camps for school children, village elders and EDCs of the forest fringe villages of the Park should be organized by the park managers and also N.G.Os in an alternative turn for an exposure to the different places of the country for the knowledge for conservation, protection and preservation of flora and fauna of the their locality as well as to learn about the sustainable way of developmental activities for their livelihood. The camps or the exposure trip would be better if it is organized in a yearly basis.

### **7.4.2.2. Involvement of fringe population in eco-tourism.**

The Eco-Development Committee members should be consulted and their advice has to be sought while taking up eco-tourism activities and the income out of such tourism activities will be shared with the EDC members, Local NGO and the local population; Local guides will be trained from the EDC members and they will be made efficient guide to conduct tours and also to accompany the tourist groups while they move inside the forests of the Park. A preset questionnaire may be circulated amongst the visitors to get a feed back on their experiences, perceptions and suggestions for better management of the eco-tourism centre and for creation of new and innovative facilities under eco-tourism.

### **7.4.2.3. Garbage Clean Up:**

With the increase in number of tourist visiting the Khangchendzonga National Park has substantially increased the amount of garbage with it. Therefore, to control the increasing garbage inside the Park a joint venture between The Mountain Institute, Gangtok Office, Kkangchendzonga Conservation Committee and Khangchendzonga National Park Division, Forests Department had initiated during 3-4 years back in Yuksam. The proposal intends to identify, collect whatever garbage is taken inside the Park shall be brought back down to Yuksam KNP check post and segregate of all non biodegradable garbage by linking up with the municipal disposal system. Garbage monitoring forms are developed and available in Yuksam KNP Check post and notice board are also prepared.



Separate Bins for segregated garbage in Yuksam, KNP Checkpost



KNP Check Post at Yaksum, West Sikkim

# A STEP TOWARDS ZERO WASTE TRAIL



**Please support zero waste supervisors to reduce waste by properly segregation your waste. Use separate bins for different waste as follows**

	<b>PLASTIC BOTTLES</b>		<b>GLASS, GLASS BOTTLES</b>		<b>TINS / CANS / METAL</b>
	<b>PLASTIC PACK, WRAPPERS</b>		<b>CARTONS, PAPER, BOOKS</b>		<b>THERMOCOL TRATA PACKS</b>
	<b>CLOTH, BAGS, ROPE</b>		<b>BATTERIES (small bin)</b>		<b>CHEMICAL'S, MEDICINE'S</b>

## LEAVE NO TRACE

1. Please submit a filled up copy of the garbage monitoring form at KNP check post before your trek and retain a copy for your self
2. Ensure that you and your support staff brings back all non biodegradable waste
3. All travel operators, group & individuals should submit filled up garbage monitoring forms to KNP check post before your trek
4. It is mandatory for all travel operators and group to get their garbage checked and properly verified at the KNP check post during exit
5. Ensure that your support staff brings all non biodegradable waste and segregates them into separate bins at KNP check post

## PENALTY

1. During the exit, if any items are found missing after verifying the garbage monitoring form, a fine upto Rs. 5000 shall be charged.
2. Get a receipt for any payment or donation from KNP check post

**WE ENCOURAGE YOU TO BRING BACK ALL LEFT OUT WASTE AND HELP US ACHIEVE ZERO WASTE TRAIL**

*Any donation, support for the initiative is most welcome.  
Please contact zero waste support groups for more details.*



Contact detail:

zwsg@tmi-india.org , kcc\_skkidm@hotmail.com  
Telefax: 03592-207942, 09733158268, 09733091853



**DEPARTMENT OF FOREST, ENVIRONMENT AND WILDLIFE  
MANAGEMENT, GOVERNMENT OF SIKKIM  
GARBAGE MONITORING FORM**

**Original Copy**

Name of Travel operator:				
Guide Name and Contact No.:				
No. of Client		No. of Porters		No. of pack animal
Sl. No	ITEMS	Items Description	Quantity	
			IN	OUT
1	Plastic Rubber Bottle	water bottle, oil, juice, sauces, pickle etc		
2	Glass Bottle	oil, juice, sauces, fruit, food, Jars, horlicks etc		
3	Tins / Cans	Tin pack food, sauce, tomato puri, juice, meat, milk tin, butter, peanut etc		
4	Plastics	Large size plastics, food packing plastics		
5	Tetra Packs	Fruti juice, amul toaza, Oil, Dalda, milk etc		
6	Cartons / Bags	cartons, cloth bags, sacks, etc		
7	Any other			
8	Any other			

Do not fill OUT column

I accept the responsibility to bring back all waste on behalf of my agency, failing which the prescribed penalty may be enforced. I also state that all information stated above is true to the best of my knowledge

**FOR OFFICE USE ONLY**

Signature on behalf of Travel operator

Total items found : \_\_\_\_\_ Checked By: Name \_\_\_\_\_

Total item missing : \_\_\_\_\_ Date & Signature \_\_\_\_\_

1. Submit the filled up form at KNP check post before the trek and retain a copy with you.
2. Enclosed a copy of shopping list along with the form.
3. If any items are found missing at your exit a penalty upto RS. 5000 will be fined.
4. We appreciate your effort in bringing back any additional garbage items found during the trek.



KNP Division



**7.4.4. Regulations, monitoring and evaluation:  
Regulations:**

**CODE OF CONDUCT**

[For Mountaineers, Trekkers, Trekking Service Providers, Trekking Companies, Trek Managers, Research scholars and other visitors in the Wildlife Protected Areas (National Park and Wildlife Sanctuaries) in the State].

**DON'Ts : The parties shall not**

- (a) use firewood or kindle fire in wildlife and forest areas.
- (b) damage or cut shrubs or thickets.
- (c) pollute water body.
- (d) collect plants or their parts.
- (e) be accompanied by stray dogs or pet animals.
- (f) feed, shout, tease, chase, disturb or molest wild animals.
- (g) play loud music or use loud speakers.
- (h) camp outside designated campsites.
- (i) trek outside designated nature trails.
- (j) defecate within 100 meters of any water body.
- (k) camp within 500 meters of the periphery of any lake.
- (l) cause environmental pollution.
- (m) defile sites of religious and cultural significances such as sacred mountains, lakes, rocks, caves and shrines.
- (n) commit any other act that may be injurious to forests, water bodies, plants, animals or disturb the natural tranquility of such sites or become a nuisance to fellow trekkers.
- (o) leave any non-biodegradable materials in wildlife area during a trek, and such materials shall be declared at the forest/ wildlife check-post both before and after the trek.
- (p) sell liquor, drugs and other intoxicants within a wildlife area.
- (q) carry out any research or study within a wildlife area without the prior permission of the Government.
- (r) indulge in hunting of any wild animals or carry on the business of buying & selling any animals, animal, article, antique cultural artifacts, trophy, uncured trophy or meat of wild animals and specified plants.
- (s) destroy or remove any wildlife, infrastructures and plants /trees, sign boards of the protected areas.
- (t) swim in lake, river or approach glaciers inside the National Park/ protected area or camp in areas of wildlife interest or their habitats.
- (u) collect specimens of wildlife (animals, birds butterflies, insects, moths, etc.) without permission of the competent authority.

**DO's: The parties shall**

- (a) engage trekking service providers who are genuine Sikkim subjects and possess the Certificates of Identification.
- (b) engage pack animals owned by genuine Sikkim subjects who possess the Certificate of Identification.
- (c) provide adequate cooked food for the trekking service providers while in a wildlife area and ensure that they do not use firewood.
- (d) obtain a permit and pay prescribed fees before entering a wildlife area.
- (e) register at the forest/wildlife checkposts before entering a wildlife area.
- (f) arrange to carry sufficient kerosene and LPG for heating and cooking purpose.
- (g) the pack animal operator shall arrange for fodder for the pack animals and ensure that they do not graze freely in wildlife areas.
- (h) keep to the permitted nature trails and treks.
- (i) segregate degradable and non-degradable litters and burn or bury all bio-degradable items and carry back all other non-biodegradable items.
- (j) also inform the nearest Wildlife Check Post, in case the parties come across forest fire, wildlife offence by some one, death or carcass of wild animals during their nature trip.
- (k) obtain permission from the State Home Department and also from State Chief Wildlife Warden, Forest for Alpine Expedition.

**Note:** The actions stipulated above are prohibited under the provisions of the Wildlife (Protection) Act, 1972 (amended up to 2006) and the Sikkim Wildlife (Regulation of Trekking) Rules, 2005, which attract penalties with fine or imprisonment to the offenders.

**Addl. PCCF-cum-Chief Wildlife Warden,  
Forest, Env. & Wildlife Management Department,  
Government of Sikkim.**

#### 7.4.3.1 Trans-boundary Linkages

Protected areas do not exist in isolation. They are ultimately influenced by events beyond their boundaries. Wide ranging species such as snow leopard, wolf, and Himalayan black bear may depend on habitats outside the boundaries of the Park. Populations from adjacent areas may place pressure on the park. Recognizing the importance of these internal and external environmental and socio-economic linkages is vitally important. Hence, the importance of looking beyond the Park boundaries need to be recognized. Maximum international boarder line in West & North-West and North of Khangchendzonga National Park is covered by natural barriers like High Mountain Peaks in the North and North - West direction of the Park fall Tibetan Autonomous Region (TAR) and in the West direction of Park is Nepal and nearly 50% of the boarder line is assessable and guarded by Sashastra Seema Bal (SSB). Collaborative management across the Park boundaries with adjacent areas needs strengthening, establish active contacts and coordination with adjacent to the Protected Areas in implementing research, planning, and trainings. Actively participate in cross-boundary exchange meetings with adjacent to the Protected Areas by involving managers, community members and other line government agencies, by obtaining prior permission from MoHA, Government of India. Develop collaborative research and joint strategies to protect wide ranging species and ecosystems across the boundaries. • Establish stronger links with district planning and administrative agencies and seek their participation and commitment in supporting Khangchendzonga Management Plan and programmes.

#### 7.4.3.2 Monitoring and Evaluating Plan:

Keeping management plans up-to-date; developing and implementing Annual Plan of Operation is important but has not been easy to institutionalize. Such short comings hamper progress in the ground level. Wildlife Sector of Forest Department will maintain an up-to-date management plan and develop annual operational plans to submit to the Government of India through State Government and after according approval and sanction the scheme will be implemented prescribed activities and will ensure regular progress of monitoring and evaluation of the implementation status of the plan by the State as well as by the Centre Government.

- The Khangchendzonga National Park Management Plan has been completed and necessary approval of the competent have been accorded and now it is in operation.
- Management Plan have to be reviewed in every 3/4 years by the Expert Committee, on the basis changing scenario of the local environment, technological advancement regarding management and local requirement towards sustainability amongst forest fringe farmers.
- Within the overall framework of this Plan, the FD/DFO will develop/prepare annual plans of operation to submit to the Government of India through State Government and after according approval and sanction the scheme carry out approved and sanctioned activities in consultation with local communities and other stakeholder.
- A system of regular progress monitoring and evaluation will be adopted by the department to ensure proper implementation of the Plan and that constraints are identified and addressed in a timely manner.
- The participation of Park Advisory Committee,(to be constituted) Eco-Development Committees, Local Panchayat members, Himal Rakshak, officials from line departments, NGOs and other relevant stakeholders will be sought in the monitoring and evaluation process
- Forests, Environment and Wildlife Management Department will ensure that the implementation status of the Plan is reviewed after five years and that Plan is up-dated to include new priorities as required in the field.



Sonam.T. Lachungpa, RO(KNP)

**Caterpillar plant (*Cordiceps sinensis*)**

**Fig – VI.**

## CHAPTER - 8. ECO-DEVELOPMENT

### 8.1. Objectives:

Strategy to develop and institutionalize Peoples' participation in the management of Park through Eco-Development Activities:

### 8.2. Specific issues:

National Forest Policy of 1988 lays stress on management of the forest as a national asset to be protected and enhanced for the well being of the people and nation. The same policy also highlights the active involvement of all fringe population in the management and development of forest resource. In June 1990, the Government of India passed a significant resolution providing specific guidelines regarding the formation, functioning, rights and responsibilities of community forest management groups. The Government also launched a centrally sponsored scheme called "Eco-development committees around National Parks and Sanctuaries" in the 8th Plan. Eco-development is a process and not just a one time action. It has been defined as a "Site-specific package of measures" developed through people's participation with the objective of promoting sustainable use of land and other resources, as well as on-farm and off-farm income generating activities which are not deleterious to PA values (Panwar 1992). The objective is to promote conservation, but this in turn, should mean better living condition for local people and a more satisfying occupation for foresters at all levels. Eco-development is a joint effort between all agencies, Government or non-Government organisations and the affected people, with the Forest development playing a facilitating role. The PA manager has to decide, in consultation with those agencies and the people, the extent of which a particular activity or development is required, how much is being done or is being planned by some other agencies and then decide on the level of such activities for which resources will have to be found.

### 8.3. Broad strategies:

Eco-development planning process consists of following sequence of steps -

- a) Reconnaissance and Familiarization.
- b) Socio-economic and Resource Survey.
- c) Identification of Impact Zone.
- d) Prioritization and Selection of target villages.
- e) Writing preliminary Eco-development Plan.
- f) Discussion over Preliminary Plan - Participatory Planning.
- g) Writing Eco-development Microplans.
- h) Submission and Approval of Microplans.
- i) Consolidation of Microplans into Division/District/Local Microplans.

### 8.4. Village level site specific strategies:

#### i) Formation of Eco-Development Committees:

Khangchendzonga National Park has got more interference from its southern and eastern boundaries. The eastern and southern boundaries having buffer in the form of Reserve and put under the jurisdictions of Territorial Division.

The fringe villages have population with large composition of SC and ST population as well as the economically backward sections. These people have considerable impact on the Park and the impact zone may be selected in conformity with the ground situation. These people depend on the forest for collection of firewood for grazing of the cattle, for the collection of non-timber forest products, and for generation of employment through forestry activities etc.

**ii) Socio-Welfare Activities:**

The State Government has already notified Eco-Development Committees Notification Vide No1/WL/F/204, Dated, 07-03-02 and its principal of implementation and enforcement.

**iii) Sustainable Socio-Economic development:**

In the fringe villages, agriculture is the main profession. Majority of the fringe dwellers are marginal farmers. There is no small, medium scale industry and there is no large scale industry in the region. The subsidiary professions are small scale business, livestock maintenance, piggery, poultry as well as working as labour, are the day to day activities of the locals.

**iv) Handloom and Handicraft:**

For effective management and protection of KNP the involvement of the people residing in fringe villages is must, which helps alternative way for economic upliftment of these villagers. In order to increase the income of the local people it is proposed to impart training on handlooms and handicrafts. The local women will be selected from different villages and will be given training at Handlooms and Handicrafts. Training Institutes, after the training they can earn their livelihood with the knowledge so gained from the training.

**8.4.1. Strategy for People's Participation:**

The following strategies are proposed to achieve the objectives of institution building with regard to people's participation:-

- 1) Motivate and train up the Forest officials at every level towards the process of participatory management.
- 2) Carry out Participatory Rural Appraisal (PRA) in the fringe villages as the first step towards formation of Eco-Development Committees.
- 3) Constitute/reconstitute the eco-development committees on the basis of the Government resolution and complete the process of registration.
- 4) Initiate the process of micro level planning through participatory rural appraisal and village level participatory planning exercise by involving the allied Government Departments and all stake holders of the Park.
- 5) Complete the microplans for each Eco-Development Committee on the basis of budgetary provisions for a period of 5 years.
- 6) Build up a common platform involving all other Government and Non-Government Agencies and stake holders, for implementation of the micro plans.
- 7) To encourage creation of a corpus fund for each EDC, which will ensure sustenance of EDC activities and EDC involvement in participatory planning process even in the absence of substantial government funding.

**The Possible menu of options, as part of Eco-Development activities, can be as follows:**

- 1) Construction of water harvesting structures.
- 2) Construction of Soil-conservation structures to facilitate and augment agricultural production.
- 3) Distribution of seedlings for farm forestry.
- 4) Distribution of fruit species for orchard.
- 5) Fuelwood and fodder species plantation.
- 6) Provide poultry, duckery and piggery units.
- 7) Supply of apiary boxes for apiculture.
- 8) Provide mushroom cultivation units and sericulture units.
- 9) Digging or redigging of community pond for pisciculture or irrigation.

- 10) Supply of handloom units.
- 11) Encourage non-browsable crop cultivation, including cash crops.
- 12) Creation of employment facilities through necessary training in above activities as well as in some other cottage industries like bamboo and cane handicrafts, food processing etc.
- 13) Livestock improvement programmes through -
  - a) Castration of seral bulls, b) Artificial Insemination, c) Immunisation, d) Stall feeding etc.
- 14) Training of EDC members regarding livestock improvement.
- 15) Immunisation of livestock in fringe village.
- 16) Construction and improvement of clubs, library and reading rooms for conservation education and extension activity.
- 17) Health services through medical camps.
- 18) Supply of smokeless chullahs, bio-gas plants and solar cookers, bhukharis.

The objectives of the eco-development activities should include the following: -

- 1) To involve the village communities to ensure in the protection and preservation of bio-diversity and eco-system of Khangchendzonga National Park.
- 2) To promote conservation awareness values for long term sustainable utilisation of natural resources by reducing biotic pressure on the Park.
- 3) To improve socio-economic conditions of fringe villages through some prioritized, site specific and need based eco-development packages, having integration with activities of other Government departments and NGOs.
- 4) To generate alternate employment to reduce traditional dependency on forests, through provision of vocational training and inputs.

#### **8.5. Monitoring and evaluation:**

Monitoring and evaluation form the vital link between the implementation of activities, assessment of their success and the subsequent evolution of the plan. The process of monitoring and evaluating the Strategic Plan will use existing structures and readily available information as far as possible rather than creating new structures or collecting new types of information. Monitoring and evaluation needs to be continual and ongoing. The process of evaluating and monitoring the management Strategic Plan will involve a number of different steps: The implementing organization/agency for a particular activity, project, or program will be responsible for monitoring and evaluating the progress of those activities, projects and programmes.

This will take place within the existing structures of the implementing organizations and agencies, but should not be measured against the National Park goals, Targets and Outcomes. There can be one co-ordination unit established which will be responsible for gathering information and reporting about the implementation of Khangchendzonga National Park Management Plan from the various implementing organizations and agencies. The structure and mechanism of such kind of coordination unit will appear in the schemes Implementation Plan. The results of the monitoring and evaluation will be widely disseminated, especially amongst the implementing organizations and agencies and at local grass-root level. Dissemination will be through the reporting system and public awareness activities. These results will be used as a basis for updating and adapting the Management Plan, particularly through the incorporation of identified gaps and lessons learnt



Blen Tsh. Lepcha.

**Dhungey Pokhari in West Sikkim**



## **CHAPTER – 9: RESEARCH, MONITORING AND TRAINING:**

### **9.1. Research and Monitoring:**

Research is essential for developing a better understanding of the natural, cultural and social features of the Park and its surroundings forest fringe villages should be promoted. At the same time, the fragile and sensitive areas such as high altitude Khangchendzonga National Park with full of Bio-natural resources can not afford to accommodate sub-standard and ill-designed research projects that are likely to have negative impacts on park values. The Wildlife Sector of Forests, Environment & Wildlife Management Department, Government of Sikkim in coordination with the MoEF, Government of India must proactively work towards promoting high quality scientific research work that is useful in addressing important management questions facing the Park, for example the **State Government has come up with the Notification No.99/Home/2007, dated 26<sup>th</sup>. September, 2007 for “Constitution of Commission to study the state of glaciers and its impact on water system in Sikkim, under the Chairmanship of Prof. S.I. Sanain, Sr.Fellow, Centre for Policy Research, New Delhi.** More importantly, the managers, scientists, and local community leaders need to be familiar with the results of important research work and apply them to management and planning decisions. Strategically to promote high quality research work and ensure that results are disseminated to managers, intellectuals and community representatives so that they can be integrated in management and development.

- Ensure that the Park staff and Rangers to be assigned to for scientific management are familiar with the resources, environment and the socio-economy of the area before posting them to the Khangchendzonga National Park.
- Ensure that the Park Managers have a strong appreciation of the value of scientific research in general and interest in encouraging qualified researchers to work in the Park and integrating results into management.
- Gather reliable baseline information for the purpose of monitoring, changes in the status of biodiversity, socio-economy, tourism and mountaineering, and other resource conditions by mobilizing Park resources.

#### **9.1.1. Objective:**

- 1) To identify the specific fields, concerning the management of the Park for the purpose of initiating field oriented research.
- 2) To establish a mechanism for sustaining departmental, collaborative and contract research studies.
- 3) To initiate time bound and specific research activities for providing input to management techniques.
- 4) To ensure horizontal linkages between the research topics and the management goals for enhancing managerial capabilities.
- 5) To develop a monitoring mechanism, as control function to oversee the achievement of objectives and correcting the deviations from the goals.
- 6) To initiate and promote Sustainable Human Development (SHD) through training of the departmental personnel for individual as well as organizational development.

## **9.2. Monitoring:**

- 1) Training, Research, Evaluation & Monitoring, Advisory Committee (TREMAC) comprising the Chief Wildlife Warden as Chairman and Director, Additional Director W.L., Conservator of Forests, Wildlife, Joint Director KBR/KNP, Conservator of Forests (Working Plan) shall be constituted. The Divisional Forest Officer in charge of the Park and Senior Research Officer, Forests, will frame the draft guidelines for the various research, monitoring and training activities in side the Khangchendzonga National Park.
- 2) The Advisory Committee will periodically assess the progress of draft guideline and also ensure that the output of the research work are useful to the propagation, protection, conservation and preservation of wildlife of the Park and properly incorporated into the Management Plan.
- 3) The departmental research establishment should primarily concentrate on field oriented researches and monitoring of various activities. Further, the Principal Research Officer (Forests) shall try to collect all the research documents of old and new research works carried out within the KNP/KBR and set up an library for documentation and as well as for reference purposes.
- 4) Major stress should be on collaborative and contract research projects, for more detailed and exclusive studies, with the assistance of reputed institutes/ organizations. For example, The Training, Research and Academic Council (TRAC) of WII has approved a research project, **“Developing Spatial Database on the Mammal Distributions and Monitoring Programme for Large Carnivores, Prey population and their Habitats in Khangchendzonga National Park”** The project is already been completed after signing the Memorandum of Understanding (MoU) in between the representative of the Wildlife Institute of India and the C.W.L.W, Forests, Environment & Wildlife Management Department Government of Sikkim.
- 5) A computerized data storage and supply system should be developed at the DFO office and Sub-Division headquarters and Range offices/ Check-posts.

## **9.3. Training**

- a) Training to be organized at the local level with subject matter by inviting professionals/specialist from the department and also from outside State as resource persons.
- b) Training of personnel through deputation to other institutes like Wildlife Institute of India etc.

### **9.3.1. On the job training:**

#### **I. Application of Laws and Regulations:**

The Protected Areas including Khangchendzonga National Park is govern by the provisions, sections, sub-sections, clauses of Wildlife (Protection) Act 1972, and its time to time revisions. The surrounding area of the Park, which forms the part of KBR and the legal status of the same is Reserve Forest including all its natural resources is protected under the provisions of Sikkim Forests, Water Courses and Road Reserve Preservation and Protection Act. 1988. Further, the Directives of the Supreme Court of India and Guidelines, Notifications, Circulars and instructions from the Government of India and State Government in respect of Conservation, Protection and Management of the Park shall be binding to the Park Official including key stakeholders.

Hence, the capacity building and training to the front line staff are to be trained on legal procedure for handling the Wildlife crimes. The prescribed forms and formats in relation to handling of Wildlife Offences are given in enclosed **Wildlife Format – 1 to 17**.

### **III. Postmortem of Wild Animal Carcasses and other Wildlife Health Care Matters:**

The following steps could be taken up to build surveillance strategy for prophylactic measures:

#### ***I .Collection of specimens***

1. Collection of wild animals pellets for identification of the infestation of the endoparasites.
2. Collection of the visceral organs from the carcasses for histopathology study.
3. Collection of skin scrapings from the carcasses for identification of the ectoparasites.
4. Collection of blood samples for haematology parameters / serology study. If chances permit to tranquilize healthy as well as diseased wild animals.

#### ***II .Disposal of carcasses found inside the National Park***

2. Postmortem and recording of the findings.
3. Disposal by burial and lime spray in the vicinity of the carcass.

#### ***III .Treatment methodology***

2. Administration of medicines in the feed of the wild animals (herbivores) by identifying shelters at several locations inside the National Park.
3. Provision of medicated baits for the carnivores.
4. Provision of saltlicks containing high content and balanced minerals.
5. Treatment of affected livestock in the buffer villages in collaboration with the Department of Fisheries, Livestock & Animal Husbandry.

#### ***IV. Identification of species affected***

1. Identification / enumeration of the species affected.
2. Study of the degree of interspecific / intraspecific susceptibility to infections and their manifestation.
3. Possible means of transmission of the organisms.

#### ***V. Laboratory analysis***

1. Dispatch and submission of samples collected to different recognized institutions for examination.
2. Evaluation of the results.

#### ***VI. Follow up***

Based upon the laboratory results similar follow up for provision of medicines could be taken up. Number of deaths could be compared with the previous study. The efficacy of the drugs administered could be evaluated and improvement can be made for future plans.

### **9.3.2. Formal training courses:**

#### **I. Frontline Staff Training within the State:**

Officers and field staff posted in the Park are proposed to be given training on GPS, Arms and Ammunitions, handling and using of Wireless sets, Tranquilizing equipments, fire extinguishing, wildlife capsules and census techniques .Experts/ resource persons from

other organizations pertinent to the subject matter will also be invited to impart training to the wildlife field staff posted in the Khangchendzonga National Park.

The Park officials to be trained and the date, time and duration for training will be proposed by the PA Manager which will be approved by the Research and Training Advisory Committee. Further, the natural resources of Khangchendzonga National Park cannot be protected by Government efforts only. Hence, with the participation of the local people residing in the fringe villages, the management should also create awareness among the local people about the importance for the conservation of native flora, fauna and other natural resources by conducting workshops, seminars, wild life education etc, once or twice in any year.

## **II. Training of personnel through deputation to other institutes like Wildlife Institute of India etc.**

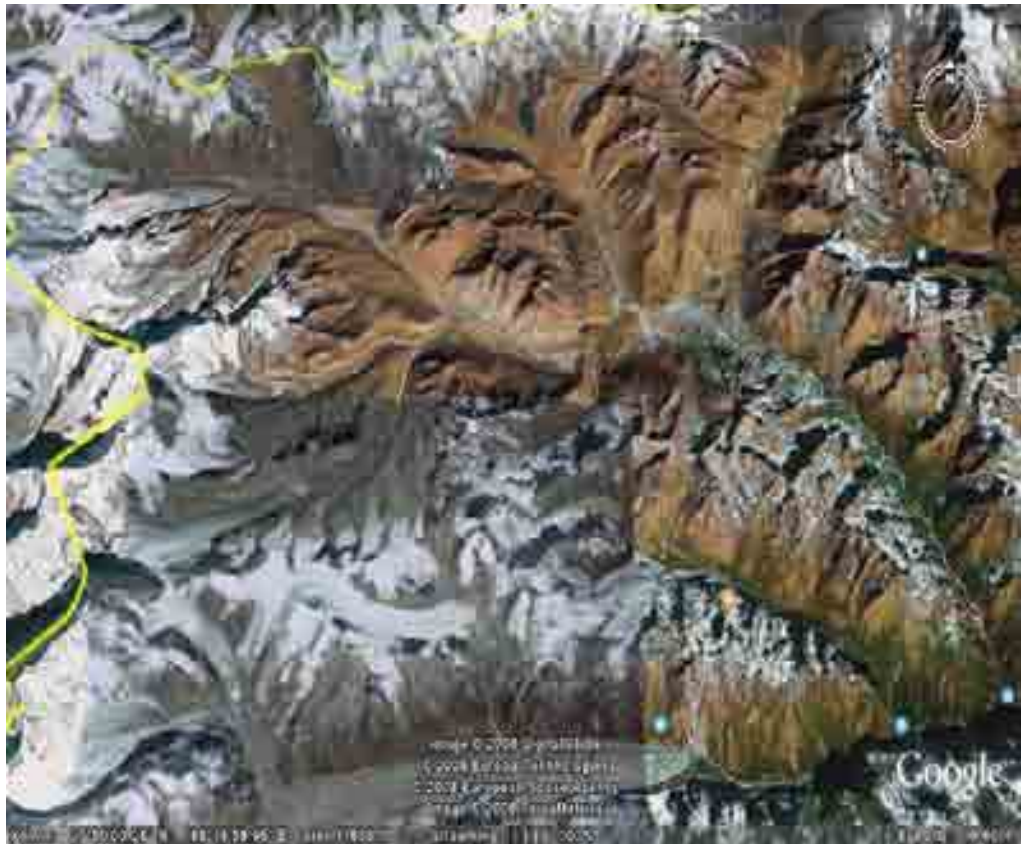
1. Deputation of ACF's and DCF's to Wildlife Institute of India, Dehra-Dun for 9 months post graduate Diploma Course with a component of 3 month dissertation in the field.
2. The Range Officer's and equivalent level officials have to be deputed for 3 month long certificate course.
3. In consultation with the MoEF, Government of India and WII, Dehra-Dun the wildlife officials entrusted with the management of the Protected Area have to be deputed in a phase manner to get trained with several short term thematic courses offered at the WII such as interpretation and conservation education, wildlife health, chemical immobilization, , GIS and computer applications etc. Some modules in the P.G. Course admit interested/sponsored professionals as theme based training in ecodevelopment (one month), Law and procedures, Environmental impact assessment, and Wetland conservation (one to two weeks).
4. As such the refreshment training for frontline staff, like Foresters, Head Forest Guard, Forest Guard are routinely conducted in the department once in a year, however, at all times, on the job training is crucial at all levels of officials, to update with basic ideas of the latest technology instituting and adopting a continuous learning process, which is critically important. There are several other aspects of training areas important for PA management e.g. field research techniques, weapon handling and maintenance, modern fire fighting, anti-poaching, visitor management etc.
5. The Plan needs to identify training areas, the priorities and prescribe training at all levels appropriately. Training needs must relate to PA management objectives. To start with, the plan should recommend appointment of trained persons. The next should be to provide for training of untrained staff at different levels in a realistically phased manner. Likewise on the job training requirements need to be listed with training responsibilities specified. Targets and schedules need to be stated. Outside agency resource personnel need to be involved in training activities depending upon expertise identified.
6. A provision for payment of honoraria, training costs, travel costs for resource persons as relevant should be included in the plan budget. Plan budget must also provide for the cost of formal training according to targets set.
7. Training requirements should be developed as a theme plan addressing visualised function at all levels as per activities projected in the plan.

**9.3.3. Establishing learning Centre:**

Khangchendzonga National Park management needs to become increasingly more sophisticated, scientific and people-oriented. Participatory management approaches involving multiple stakeholders, and greater responsibility sharing with buffer village communities will become essential. Park staff will have to become better planners, coordinators, motivators and researchers.

These changes will demand substantial retraining and capacity building of the Park staff and key stakeholders. Inform, familiarize and retrain park staff of all levels in new approaches, new policies and regulations so that they are reoriented to new responsibilities and directions. The capacity of the recently established Himal Rakshak and Eco-Development committee and other buffer village based organizations will be strengthened to enable them to take management responsibility for National Park resources. Conduct regular in-service training for park staff to improve their ability to work as social immobilizers and extension workers to support the forest range village communities. Organize periodic workshops for Park Wardens on new and emerging management themes including training to boost leadership, planning, facilitation, and coordination skills. Organize joint trainings for members from line departments, Tours & Trevel, NGOs and park staff to discuss issues of mutual concern, improve coordination, and develop cross cultural understanding.

-----XXXXXX-----

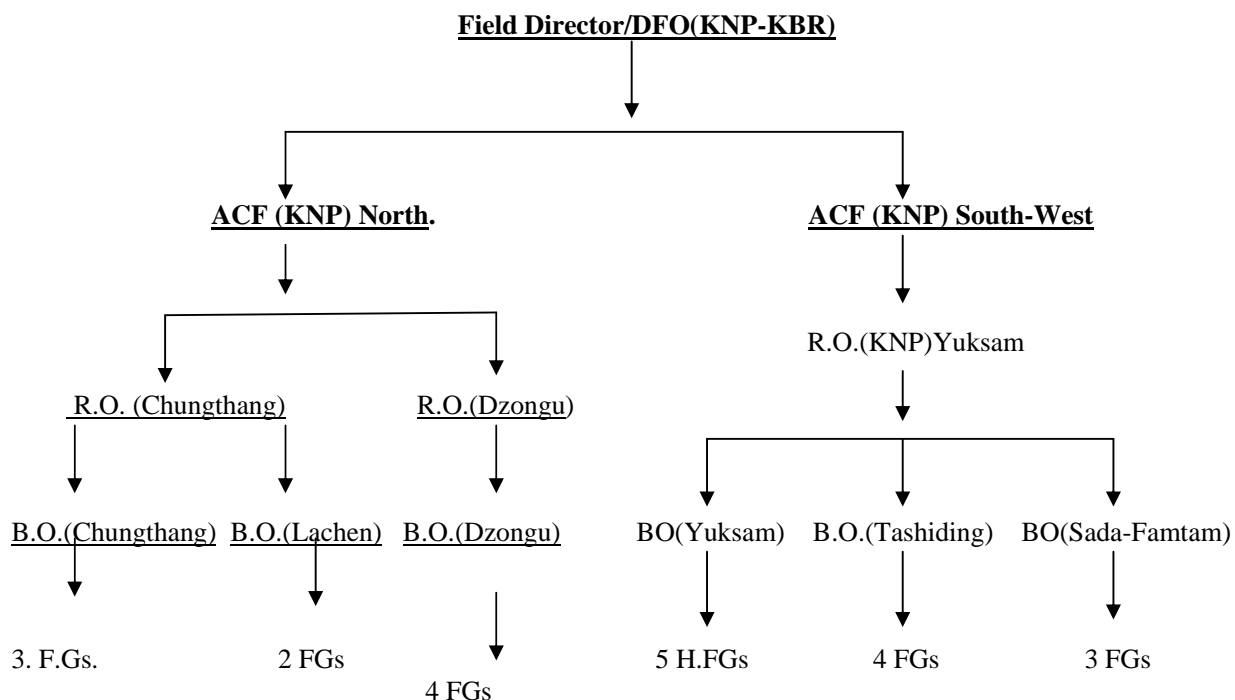


**Zemu Glacier and Lhonak Glacier in North Sikkim**

## CHAPTER -10: ORGANISATION AND ADMINISTRATION

### 10.1. Structure and responsibilities:

Keeping in mind the convenience and effective management, reorganisation of Khangchendzonga National Park on the Administrative setup needs to delegate to the lower level frontline staff. The administrative setup for the efficient, effective and meaningful management in future, the staffing pattern right from Range Officer/ Wildlife Warden to the Forest Guard level have to be deputed, posted or transferred, as given in the following Flow Chart:



### I. Requirement of Frontline staff including the existing field staff:

- i) Yuksam Range:
  - a) 1 No. Range Officer
  - b) 3 Nos. Block Officers
  - c) 12 Nos. Forests Guards
- ii) Dzongu Range:
  - a) 1 No. Range Officer
  - b) 1. Block Officer
  - c) 4 Nos. Forests Guards
- iii) Chungthang Range:
  - a) 1 No. Range Officer
  - b) 2 Nos. Block Officers
  - c) 5 Nos. Forest Guards

**10.1.1. Requirement of field staff as shown in above Flow Chart:**

Sl. No	Designation	Existing in No.	Required in No.	Name of Range	Name of Block	Name of Beat	required strength
1	FD/ DFO	1	-	-	-	-	1
2	ACF(KNP) North	1	-	-	-	-	1
3	ACF(KNP)South-West	1	-	-	-	-	1
4	Range Officer	1	1	Yuksam	-	-	1
5	-do-	Nil	1	Chungthang	-	-	1
6	-do-	1	1	Dzongu	-	-	1
7	-do-	Nil	1	Sada-Famtam	-	-	1
8	Block Officer	1	-	-Yuksam	Yuksam	-	1
9	-do-	1	-	-do-	Tashiding	-	1
10	-do-	1	-	Chungthang	Chungthang	-	1
11	-do-	Nil	1	Dzongu	Dzongu	-	1
12	-do-	Nil	1	Chungthang	Lachem	-	1
13	-do-	Nil	1	Sada-Famtam	Sada-Lingi	-	1
14	Head F. G.	1	-	Yuksam	Yuksam	Yuksam	1
15	-do-	1	-	Dzongu	Dzongu	Leek	1
16	-do-	1	-	-do-	-do-	Tingvong-Linzya	1
17	-do-	1	-	-do-	-do-	Sakyong-Pentong	1
18	Forest Guard	1	-	Yuksam	Tashiding	Kongri-Labdang	1
19	-do-	Nil	1	Yuksam	Yuksam	Chongri-Yambong	1
20	-do-	Nil	1	-do-	-do-	Khechepari-Maliaching	1
21	-do-	Nil	1	-do-	-do-	Nambu-Checkpost	1
22	-do-	Nil	1	-do-	-do-	Yuksam-Checkpost	1
23	-do-	Nil	1	-do-	-do-	Chung	1
24	-do-	Nil	1	-do-	Tashiding	Hungri-Nesha	1
25	-do-	Nil	1	-do-	-do-	Dhupi-Norkhola	1
26	-do-	Nil	1	-do-	-do-	Labdang-Checkpost	1
27	-do-	Nil	1	-do-	-do-	U.Mangnam-Pokhari	1
28	-do-	Nil	1	Dzongu	Dzongu	Beh-Tholung	1
29	-do-	1	-	-do-	-do-	Saffu-Shipgyer	1
30	-do-	Nil	1	-do-	-do-	Sangkalang-Checkpost	1
31	-do-	Nil	1	Chungthang	-	Toong-Checkpost	1
32	-do-	1	-	-do-	Chungthang	Lachen	1
33	-do-	Nil	1	-do-	-do-	Chatem-Mensithang	1
34	-do-	1	-	-do-	-do-	Chungthang	1
35	-do-	Nil	1	-do-	-do-	Bop	1
36	-do-	Nil	1	Sada-Famtam	Sada-Lingi	Lingi	1
37	-do-	Nil	1	-do-	-do-	Famtam	1
38	-do-	Nil	1	-do-	-do-	Sada	1
	<b>Total:</b>	<b>16</b>	<b>24</b>				<b>38</b>

### **10.1.2. Responsibilities:**

#### **I. Activities related to safeguarding the threatened Biodiversity values:**

Protection is the primary aspect of management in the Khangchendzonga National Park. It is carried out by the existing Park staff. Anti-poaching operations such as trap demolition and patrolling in the poaching prone areas are conducted periodically. High altitude expeditions of senior officers of the Park and Wildlife Organizations are also organized from time to time with a view to studying the current status of the highlands and impact by tourists, trekkers, mountaineers, graziers, medicinal plant collectors and to some extent poachers. The Park has a network of wireless communications set up in important places and this is fully and effectively used during such outdoor activities. Musk Deer poachers were active in the early eighties but the incidence of poaching has been greatly reduced due to the developmental activities taking place in the buffer villages. Incidence of poaching by graziers has also been reduced now with the banning of grazing by the State Government in the Protected Areas and Reserved Forests.

#### **II. Mechanism of participation of the stakeholders in planning process:**

Securing support for controlling wildlife poaching and regulating forest harvesting has been relatively easy because traditions of conserving forest and wildlife already was part of the culture of the Sikkimese people. The Park and the people relationship gradually improved as rights of access to local resource of the buffer areas and the traditional way of life were secured. The park staff held public meetings and communicated that their traditional resource use rights would be respected. Since then, the Park has made significant progress in maintaining the delicate balance involved in trying to conserve natural resources while allowing local people to continue traditional user rights in the buffer zone only. The local communities are more conscious and committed to the cause of conservation more than ever before. At the same time, they are seeking greater involvement in the park's decision processes. Experience suggests that successful involvement and empowerment of local communities will make conservation more sustainable and cost effective.

#### **III. Mechanism of participation**

Management of the Protected Area with people's participation is an approach, which requires changes in the mindset of the officials, field level functionaries and people participating in joint bio-resource management concept. The constitution of the Eco-development committees was a mandatory requirement as per the FDA guidelines issued by NAEB, MOEF, Government of India. After constitution of Eco-development committees with wide mass base, micro planning exercise with PRA tools of each EDC was carried out in detail with the help of NGOs KCC, Yuksam west Sikkim and MLAS, Dzongu of North Sikkim. The same committees along with the NGOs, Officials from sister departments of Government of Sikkim and Himal Rakshak recently constituted through notifications, are stakeholders for management of Khangchendzonga National Park.

#### **IV. Periodicity of s stakeholder meeting etc**

Annually capacity building programme is being organized in one or two places in the fringe villages of the Protected Area especially for beneficiaries with the help of local NGOs by involving resource persons from line departments. Health camps and cattle immunization programmes are being organized in a yearly basis under Management Action Plan (MAP) for Conservation and Management of Khangchendzonga National Park (100% CSS). Local and State level stakeholder meeting have to hold every year for



the proposal of Annual Plan of Operation under KBR scheme. Further, District level Executive Body meeting is being held every year under Forest Development Agency, NAEB, MOEF, Government of India with the District level Officers from all line departments by involving all EDC presidents as they are the key stakeholders of the PA management.

**V. Habitat restoration programme (Planning and Monitoring)**

Recorded the total area of open Forest is 115.07 sq.Km. and 215.51 sqkm. Forest land is recorded as degraded forest within the Khangchendzonga National Park, where, management intervention in phase-wise manner shall be more effective to improve soil condition and its vegetative cover. For the purpose of creating grazing ground for the herbivorous animals, hunting ground for the carnivorous animals and nesting and feeding purpose for the avi-fauna, some supplementary works under management intervention have to be carried out on the yearly basis without disturbing the existing flora and fauna of the Park. Some of the supplementary activities suggested are as under:

- a) Pasture Development in the open forest,
- b) Bamboo Plantation,
- c) Aided Natural regeneration in degraded forest,
- d) Plantation of flowering and fruiting tree species,
- e) Grass land maintenance,
- f) Soil & Moisture conservation etc.

**VI. Details of the strategy of protection.**

- a. Control grazing, poaching, encroachment, illicit felling of timber:
- b. Extensive and regular patrolling of the Park.
- c. Wildlife Protection Mobile Squad, comprising 10 FGs in each group.
- d. Posting of trained field staff in ranges and beats:
- e. Strengthening communication network:
- f. Purchase of arms and ammunition for field staff:
- g. Creation of a wireless network:
- h. Establishment of intelligence network for collecting information illegal activities and provision of secret fund:
- i. Publicity, nature education and awareness generation:
- j. Formation of Himal Rakshak (guardian deity)
- k. Promotion of regulated eco-tourism.
- l. Identification and demarcation of conservation zone in the field.
- m. Identification and notification of trekking trails in the Protected Area.

**10.1.3. Posting of staff in ranges and beats:**

The terrain of the Park is quite steep, and the climate is quite adverse. Heavy rainfall is experienced for six months of the year, with the winters being quite severe. Hence it is necessary to post comparatively young and dynamic Block officers in charge of all above-mentioned Blocks.

**10.1.4. Strengthening communication network:**

**I. Patrolling Path:** The entire Park was once connected well with bridle paths for effective management and conservation but due to non regular maintenance over a long periods, the paths has deteriorated severely and has become unserviceable. The existing deformed paths does not fulfils the objectives for which it was meant for, i.e to cover for 850 sq.kms but with the increase of areas to double from initial areas of 850 sq.kms to 1784 sq.kms in the year 1997, as such path network has to develop to cover all those important places of the Park. The same paths needs proper maintenance and requires

further extension to connects other points and many more new paths are requires to construct owing to its vast stretch of areas to make the monitoring and patrolling effective and fruitful.

**II. Vehicles Needed:**

Sl. No.	Designation/ Post/ District	Type/ made of Vehicle	Total Number
1	Field Director-East, Gangtok	Bolero (ZLX)	1
2	ACF (KNP) North, Mangan	Bolero (SLX)	1
3	ACF (KNP) West, Yuksam	Bolero (SLX)	1
4	Mobile Squad team,West, Yuksam	Mobile Pik-up Van	1
5	Mobile Squad team,North, Mangan	Mobile Pik-up Van	1
	<b>Total:-</b>		<b>5 Nos.</b>

**III. Provision of arms and ammunition for staff:**

The Officers and patrolling field staff of Khangchendzonga National Park have not been provided with arms and ammunition. The total requirements of fire arms for the Park managers should be as follows:-

Sl. No.	Officers and staff to be provided with Arms	Type/made of Arms	No.of Arms
1	Field Director	Pistolor Revolver	1
2	Assistant Conservator of Forest (KNP) North.	-do-	1
3	Assistant Conservator of Forest (KNP) South-West	-do-	1
4	Range Officer (KNP) Chungthang,North-Sikkim	-do-	1
5	Range Officer (KNP) Dzongu, North-Sikkim	-do-	1
6	Range Officer (KNP) Yuksam, West Sikkim	-do-	1
7	RangeOfficer(KNP)Sada-Famtam,South Sikkim	-do-	1
8	Block Officer (KNP) Chungthang, North Sikkim	-do-	1
9	Block Officer (KNP) Dzongu, North Sikkim	-do-	1
10	Block Officer (KNP) Yuksam, West Sikkim	-do-	1
11	Block Officer (KNP) Tashiding, West Sikkim	-do-	1
11	Forest Guards and Mobile Squads	• 315 Rifle	10
	<b>Total:- 12 Nos. Pistol and 10Nos. • 315 Rifles</b>		

**IV. Creation of a wireless network:**

The wireless network is now fully equipped but few static sets is require tobe set at the Field and for Mobile Squad. The requirement for the field is as follows

<b>Beat,Camps,Watch Towers</b>	<b>Fixed/Static</b>	<b>Wireless sets required Mobile Walkie-Talkie</b>
Chungthang Range	2	5
Yuksam Range	2	4
Dzongu Range	2	4
Sada-Famtam Block	1	1
Mobile Squad	-	6
Spares	1	3
<b>Total</b>	<b>8</b>	<b>23</b>

**V. Establishment of intelligence network for collecting information and provision of secret fund:**

The success of Management of the Park depends on the net work spread over the entire Park and its buffer villages and participation of locals for conservation of bio resources. At present the Range Officer and Block Officer collect information through their personal level networks and informers. Since there is no such mechanism in the Forest Deptt. for collection of information professionally, in most of the cases the information collection system becomes highly personalized and its effectiveness depends upon the initiative taken by the official concerned. The mechanism of information gathering can become effective only when there is a specific provision for the same under the Rules and when there is provision for incentives to the informers. Like in the Police, Customs, BSF and other enforcement agencies, Forest Deptt. should also have provision for operating a secret fund by the Divisional Forest Officer to facilitate purchasing information regularly from the informers. The secret fund will be operated by the KNP Field Director. Only an abstract voucher indicating the amount disbursed will accompany the accounts. This is required in order to maintain the secrecy of the source of information and to safeguard the lives of the persons supplying information. The power of Director to operate such secret fund may be kept restricted to Rs.100,000/- per year and the original vouchers will be retained by the Field Director confidentially which may be subject to audit verification on on the order of the CWLW or Secretary-Forests. Similarly, the system of paying rewards to informers for providing valuable information which has lead to seizures/confiscation of illegal wildlife products and arrest of persons involved in such illegal activities, will facilitate the flow of valuable information from the fields/villages and other sources to the Park managers.

**VI. Publicity, nature education and awareness generation:**

Dissemination of information on the objectives of management of the Park to the local people as well as to all others is extremely important towards the efforts of conservation of biodiversity and prevention of poaching.

Such publicity and awareness generation can be achieved through the following means:-

- 1) Through a well equipped nature interpretation centre at Yuksam and Chungthang with interactive multimedia facilities.
- 2) Installation of hoardings at strategic points on the National and State Highways.
- 3) Circulating, free of cost as well as at cost, leaflets and brochures to the visitors and local people, highlighting the importance and activities of the Park.
- 4) Organising regular awareness meetings and shows in the fringe villages.
- 5) Releasing advertisement on the Park through audiovisual media like TV, radio, cinemas, newspapers and magazines.
- 6) Organising regular camps of school children and college students in the Park from the urban as well as rural areas.

<b>Administrative Setup for Kanchenjunga National Park</b>				
<b>S. No</b>	<b>Post</b>	<b>Total Needed</b>	<b>Current Staffing</b>	<b>Posts to be filled-up</b>
1	Field Director (KNP)	1	1	0
2	Assistant Conservator of Forests	2	2	0
3	Range Officer ( Yuksam )	1	1	0
4	Range Officer ( Dzongu ]	1	1	0
5	Range Officer ( Chungthang )	1	0	1
6	Block Officer [Yuksam Block]	1	1	0
7	Block Officer [ Tashiding Block]	1	1	0
8	Block Offcier [Dzongu Block]	1	0	1
9	Block Officer [Chungthang Block]	1	1	0
10	Block Officer [Lachen Block]	1	0	1
11	Block Officer [Sada-Famtam Block]	1	0	1
12	Forest Guards [Yuksam Block]	6	1	5
13	Forest Guards [Tashiding Block]	5	1	4
14	Forest Guards ( Dzongu Block )	5	4	1
15	Forest Guards ( Chungthang Block )	5	3	2
16	Forest Guards [ Sada-Famta]	2	0	2
17	Mobile Squad (Dzongu&Chungthang )	4	0	4
18	Mobile Squad ( Yuksam & Tashiding )	4	0	4
19	Draughtman / Surveyer	1	0	1
20	Accountant / Jounior Accountant	3	1	2
21	Stastical Assistant	1	0	1
22	Driver	4	0	4
23	Office Peon	2	0	2
	<b>Total</b>	<b>54</b>	<b>18</b>	<b>36</b>

**10.2. Staff Amenities:**

- 1) With this new organization chart, new infrastructure needs to be created, especially the offices and staff quarters:

<b>Quarters / Offices for Kanchenjunga National Park</b>				
<b>Sl. No.</b>	<b>Post</b>	<b>Total Needed</b>	<b>Currently Available</b>	<b>To be Constructed</b>
1	Field Director's Residence at Gangtok	1	0	1
2	Assistant Conservator of Forests Residence at Yuksam and Mangan	2	0	2
4	Block Office cum Quarter	6	1	5
5	Forest Guard Barrack (Yuksam, Tashiding, Chungthang, Sangkalang )	4 nos. of 6units	0	4
6	Forest Guard Quarter in their respective posting areas	12	4	8
	<b>Total</b>	<b>25</b>	<b>5</b>	<b>20</b>

- 2) Reward scheme for the staff: A scheme for grant of rewards to the staff and others, in case of exemplary performance in conducting and apprehending various forest and wildlife offences has been initiated in the Forest Department.
- 3) Other incentives that has been instituted;  
**“Rajya Van Sanrakshan Evam Paryavaran Purashkar”vide Notification No.67/F/Env&WL, Dated:29<sup>th</sup>.April,2000.**
- Best worker in wildlife protection.
  - Best worker in eco-development programme implementation.
  - Best worker for forest protection.
  - Best worker for public relations and for resolving man -wildlife conflict.

**10.2.1. Staff Placement Policy:**

- In order to ensure effective administration, all the Officers, Field staff and Office staff are to be posted or transferred in the KNP Division
- Preference should be given for posting of more young, energetic and enthusiastic officers and staff for the Park Management.

-----XXXXXX-----



- I. Zemu Glacier feeds water to Zemu River in North Sikkim
- II. Zumthol Glacier feeds water to Ringyong/Panan River in Dzongu,
- III. Rathong Glacier feeds water to Rathong and Rangit Rivers in West Sikkim.

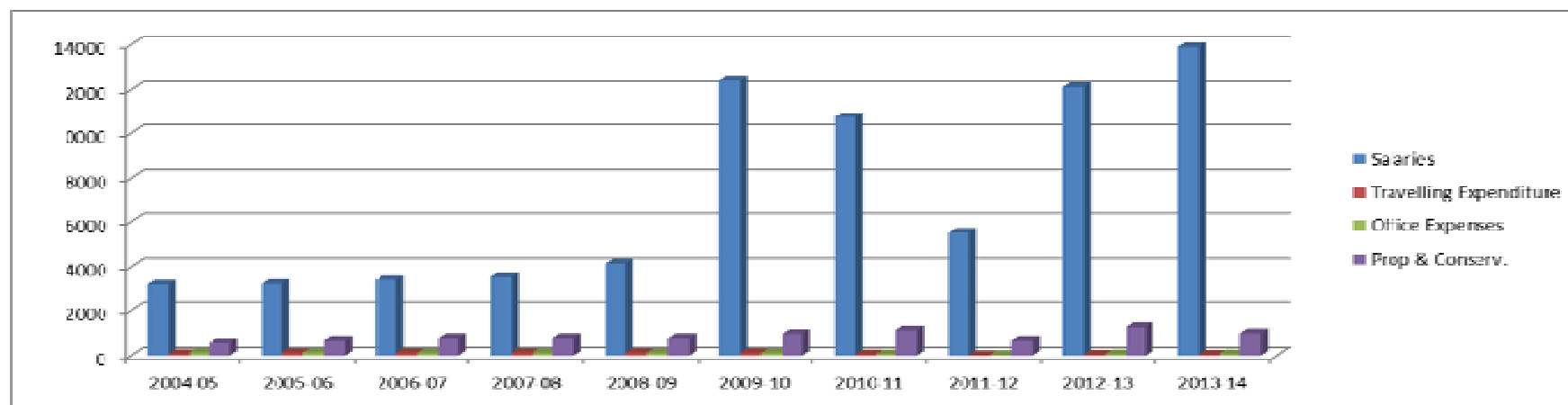
Fig- VII.

**CHAPTER-11- THE BUDGET**

**11.I. Budget Summary provided from the State Government since last 11 years is given in the following table:**

**A) Budget allotment from the State Plan:**

<b>BUDGETTORY PROVISIONS OF KHANGCHENDZONGA NATIONAL PARK:</b>									<b>( Rs. In thousand)</b>
<b>Sl. No.</b>	<b>Year</b>	<b>Salaries</b>		<b>Trevelling expenditure</b>		<b>Office Expenses</b>		<b>Propagation &amp; Conservation</b>	<b>Total</b>
		<b>Plan</b>	<b>Non-Plan</b>	<b>Plan</b>	<b>Non-Plan</b>	<b>Plan</b>	<b>Non-Plan</b>	<b>Plan</b>	
1	2003-04	0	2848	0	50	25	55	547	3525
2	2004-05	0	3220	25	50	75	55	550	3975
3	2005-06	0	3262	75	45	75	50	660	4167
4	2006-07	0	3425	75	41	75	45	773	4434
5	2007-08	0	3555	75	41	75	45	773	4564
6	2008-09	0	4148	75	41	75	45	770	5154
7	2009-10	0	12407	75	41	75	45	965	13608
8	2010-11	0	10756	20	37	20	41	1117	12391
9	2011-12	0	5508	0	10	0	25	658	6273
10	2012-13	0	12112	0	50	0	60	1263	13485
11	2113-14	0	13894	0	50	0	60	980	14984

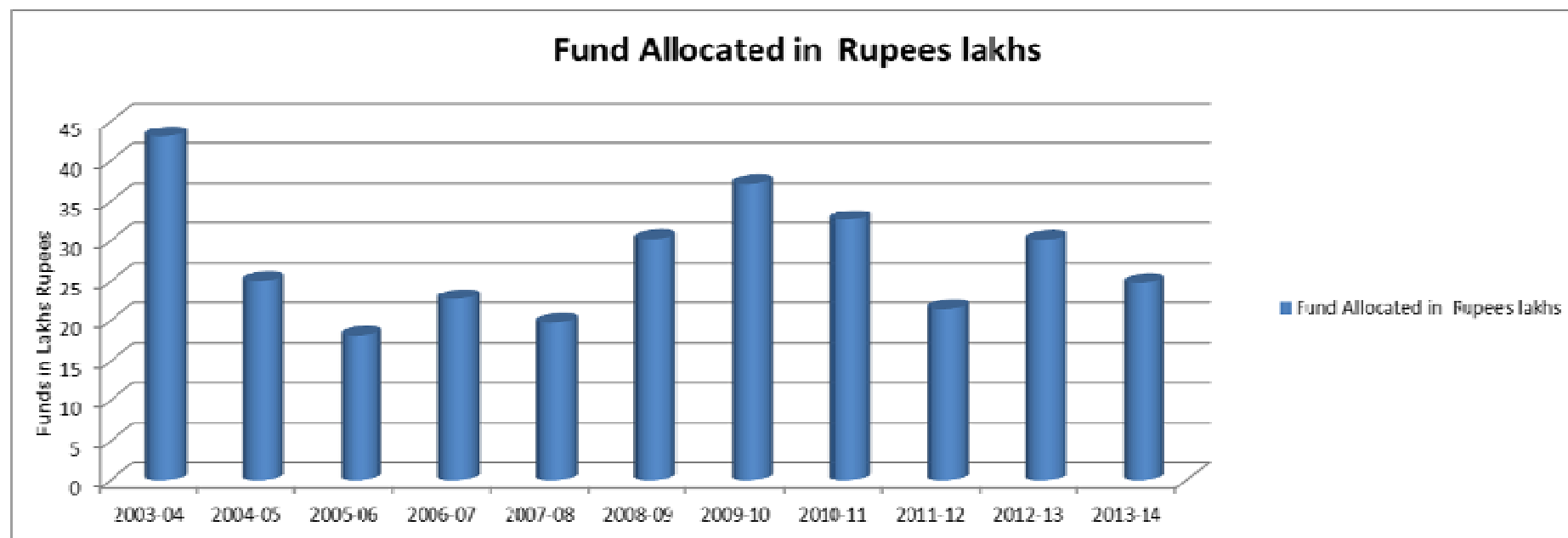


**B) Patterns of resource allocation from Government of India:**

There are two centrally sponsored schemes: i) Management Action Plan (MAP) for Conservation and Management of Khangchendzonga National Park-Sikkim and ii) "Integrated Development of Wildlife Habitats- Khangchendzonga National park-Sikkim. As per the Annual Plan of Operation submitted by the Forests, Environment & Wildlife Management Department, Government of Sikkim, after careful consideration by the MOEF, Government of India, releases the resources for implementation of a) Eco-development activities b) Social welfare activities, d)Habitat management, e) Forest research, Extension and Education, f)Forest Protection, g) Infrastructure development etc. All the administrative expenses like Salaries and wages of the Officers, field staff and office staff are born by the State Government.

i)Funding Pattern under the Scheme: Integrated Development of Wildlife Habitat for Khangchendzonga National Park, Sikkim. since last eleven years, i.e. from 2003-04 to 2007-08.

<b>Financial (Rs.) in Lakhs</b>										
<b>2003-04</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
1	2	3	4	5	6	7	8	9	10	11
<b>43.10</b>	<b>25.05</b>	<b>18.15</b>	<b>22.74</b>	<b>19.74</b>	<b>30.2</b>	<b>37.15</b>	<b>32.61</b>	<b>21.4</b>	<b>30.105</b>	<b>24.8</b>





CHAPTER-11

11.2. Proposed,Year-wise Budget Summary: - “Integrated Development of Wildlife Habitats”- Khangchendzonga National Park- Sikkim(100% CSS)

Phase-I: 2008-09 to 2012-13 ( 5 years Plan)

(Financial Target Rs. in Thousand)

Sl. No	Work component/Activities	Rate	Unit	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		Total	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
1	Relocation of Tshoka Village(Repair of Qrt)	200	family	10	2000	0	0	0	0	0	0	0	0	10	2000
2	Demarcation of KNP-Boundary	70	Km	20	1400	20	1400	15	1050	15	1050	10	700	80	5600
3	Construction for Residential-Quarter for Field Director	2000	No	0	0	1	2000	0	0	0	0	0	0	1	2000
4	Office-cum-Quarter for Assist. Conservator of Forest	17000	No	0	0	0	0	1	1700	1	1700	0	0	2	3400
5	Construction of B.O.Quarter	1000	No	1	1000	2	2000	2	2000	0	0	0	0	5	5000
6	Construction (6 units) Forest Guard Barrack	1500	No	0	0	0	0	0	0	0	0	2	3000	2	3000
7	Construction of Forest Guard Quarter	800	No	0	0	0	0	0	0	2	1600	2	1600	4	3200
8	Construction of Rescue Centre & Staff Quarter	1200	No	0	0	1	1200	0	0	0	0	0	0	1	1200
9	Construction of Veteriranian	1000	No	0	0	0	0	1	1000	0	0	0	0	1	1000
10	Construction of Watch Tower	610	No	0	0	0	0	0	0	0	0	1	610	1	610
11	Construction of Log Bridge	210	No.	0	0	0	0	1	210			1	210	2	420
12	Construction of Trekking trail	390	Km	3	1170	3	1170	3	1170	3	1170	3	1170	15	5850
13	Upgradation of old trekking trails	85	Km	4	340	4	340	4	340	4	340	4	340	20	1700
14	Construction of Waterholes	10	No	30	300	30	300	30	300	30	300	30	300	150	1500
15	Chamical immobilization/ Operation/Capture,Cages/Nets				150		150		150		150		150		750
16	Livestock Immunization		No.	200	100	200	100	200	100	200	100	200	100	1000	500
17	Controll of Forest Fire	15	Ha.	30	450	30	450	30	450	30	450	30	450	150	2250
18	Wildlife Enforcement	35	Sqkm	6	210	6	210	6	210	6	210	6	210	30	1050
	<b>Sub-Total:-</b>			-	<b>7120</b>	-	<b>9320</b>	-	<b>8680</b>	-	<b>7070</b>	-	<b>8840</b>	-	<b>41030</b>

Phase-1: 2008-09 to 2012- 13 ( 5 years Plan)															(Financial Target Rs.in Thousand)	
Sl. No	Work component/Activities	Rate	Unit	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		Total		
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	
19	Arms & Ammunitions						350		350	0	0	0	0		700	
20	Habitat Improvement	30	Ha.	45	1350	45	1350	45	1350	45	1350	45	1350	225	6750	
21	Soil Moisture Conservation	39	Ha.	21	819	21	819	21	819	21	819	21	819	105	4095	
22	Aided Natural Regeneration	22	Ha.	18	396	18	396	18	396	18	396	18	396	90	1980	
	Ist.Year. Maintenance	3	Ha.	0	0	18	54	18	54	18	54	18	54	0	216	
	2nd. Year Maintenance	2	Ha.	0	0	0	0	18	36	18	36	18	36	0	108	
	3rd. Year maintenance	1	Ha.	0	0	0	0	0	0	18	18	18	18	0	36	
23	NTPF	63	Ha.	15	945	15	945	15	945	15	945	15	945	75	4725	
	Ist.Year. Maintenance	3	Ha.	0	0	15	45	15	45	15	45	15	45	0	180	
	2nd. Year Maintenance	2	Ha.	0	0	0	0	15	30	15	30	15	30	0	90	
	3rd. Year maintenance	1	Ha.	0	0	0	0	0	0	15	15	15	15	0	30	
24	Improvement of Sinking & Landslide area through vegetative method	29	Ha.	12	348	12	348	12	348	12	348	12	348	60	1740	
25	Sowing/Dibbling/broadcasting inlandsides and degraded areas	18	Ha.	10	180	10	180	10	180	10	180	10	180	50	900	
	Ist.Year. Maintenance	3	Ha.	0	0	10	30	10	30	10	30	10	30	0	120	
	2nd. Year Maintenance	2	Ha.	0	0	0	0	10	20	10	20	10	20	0	60	
	3rd. Year maintenance	1	Ha.	0	0	0	0	0	0	10	10	10	10	0	20	
26	Wet-Land/Lakes Development/	35	Ha.	10	350	10	350	10	350	10	350	10	350	50	1750	
27	Gap filling	26	Ha.	24	624	24	624	24	624	24	624	24	624	120	3120	
28	Eco-Tourism Activities	55	No	0	0	3	165	3	165	0	0	0	0	6	330	
29	Awareness& Extention Education		No		100	0	100	0	100	0	100	0	100		500	
30	Refreshment course for Wildlife Staff		No			0	200						200		400	
31	Petrolling and serveilance	200	No	1	200	1	200	1	200	1	200	1	200	5	1000	
32	Purchase of Vehicles		No	3	2000	2	1200	0	0	0	0	0	0	5	3200	
33	Rnovation of Range Quarters	400	No	0	0	1	400	1	400	1	400	0	0	3	1200	
34	Renovation of B.O. Quarter	350	No	0	0	0	0	0	0	0	0	1	350	1	350	
	<b>Sub-Total:-</b>			-	<b>7312</b>	-	<b>7756</b>	-	<b>6442</b>	-	<b>5970</b>	-	<b>6120</b>	-	<b>33600</b>	

**Phase-1: 2008-09 to 2012-13 (5 years Plan)**

**(Financial Target Rs. in Thousand)**

Sl. No	Work component/Activities	Rate	Unit	2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		Total	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
35	Renovation of F.G.Quarters	300	No	1	300	1	300	1	300	1	300	1	300	5	1500
36	Renovation of Log Huts	200	No	1	200	1	200	1	200	1	200	1	200	5	1000
37	Purchase of Audio-visual, Computers		No	0	300	0	200	0	0	0	0	0	0	0	500
38	Field/Camping equipments		No		200		200							0	400
39	Purchase of Vedio & Digital still Camera		No	0	200	0	200	0	0	0	0	0	0	0	400
40	Posters, Brochures, Pamphlets and Signes& Maintenance		No	0	200		0		200		0		200	0	600
41	Construction of Hides/Talus	150	No	1	150	2	300	2	300	1	150	1	150	7	1050
42	Socio-Economic Survey of forest village	150		0	0		450	0	0	0	0	0	0	0	450
43	Monitoring & Evaluation	Ls			75		75		75		75		75		375
44	Nurseries Creation	378	Ha	0	0	3	1134	0	0	0	0	0	0	3	1134
45	Maintenance of Nurseries	246	Ha			3	738	3	738	3	738	3	738	3	2952
46	Awards & Rewards to the staff & informer of Wildlife Offence etc.				100		100		100		100		100		500
47	Ex-gratia payment and Compensation for crop damage by Wild animal				150		150		150		150		150		750
	<b>Sub-total:-</b>			-	<b>1875</b>	-	<b>4047</b>	-	<b>2063</b>	-	<b>1713</b>	-	<b>1913</b>	-	<b>11611</b>
	<b>Grand Total of Page 1 to 3.</b>			-	<b>16307</b>	-	<b>21123</b>	-	<b>17185</b>	-	<b>14753</b>	-	<b>16873</b>	-	<b>86241</b>
	Office Expenses @ of 2% of the yearly out lay =				326	-	422	-	344	-	259	-	337	-	1688
	Contingency @ 4% of the yearly outlay =				652	-	845	-	687	-	590	-	675	-	3449
	<b>GRAND TOTAL =</b>				<b>17285</b>	-	<b>22390</b>	-	<b>18216</b>	-	<b>15602</b>	-	<b>17885</b>	-	<b>91378</b>

**Budget Estemitates for I. Phase, of Management Plan of the Khangchendzonga National Park = Rs..9,13,78,000=00 (Rupees:Nine crore thirteen lakhs seventy eight thousand, only)**

**Phase-II: 2013-14 to 2017-18 ( 5 years Plan)**

**(Financial Target Rs. in Thousand)**

Sl. No	Work component/Activities	Rate	Unit	2013-2014		2014-2015		20015-2016		2016-2017		2017-2018		Total	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
1	Demarcation of KNP-Boundary	70	Km	10	700	10	700	10	700	10	700	10	700	50	3500
2	Repair of Residential-Quarter for Field Director	Ls	No	0	0	1	600	0	0	0	0	0	0	1	600
3	Renovation of Office-cum-Quarter for Assist. Conservator of Forest	Ls	No	0	0	0	0	0	0	1	500	1	500	2	1000
4	Renovation of B.O. Quarter	Ls	No	0	0	1	350	2	700	2	700	0	0	5	1750
5	Construction (6 units) Forest Guard Barrack	1500	No	2	3000	0	0	0	0	0	0	0	0	2	3000
6	Construction of Forest Guard Quarter	800	No	2	1600	2	1600	0	0	0	0	0	0	4	3200
7	Construction of Rescue Centre & Staff Quarter	1200	No	1	1200	0	0	0	0	0	0	0	0	1	1200
8	Construction of Veteriranian	1000	No	0	0	1	1000	0	0	0	0	0	0	1	1000
9	Construction of Watch Tower	610	No	1	610	1	610	1	610	1	610	1	610	5	3050
10	Construction of Log Bridge	210	No.	1	210	1	210	1	210	1	210	1	210	5	1050
11	Construction of Trekking trail	392	Km	3	1176	3	1176	3	1176	3	1176	3	1176	15	5880
12	Up-gradation of old trekking trails	85	Km	6	510	6	510	6	510	6	510	6	510	30	2550
13	Construction of Waterholes	10	No	30	300	30	300	30	300	30	300	30	300	150	1500
14	Chamical immobilization/ Operation/Capture,Cages/ Nets			0	0	0	200	0	0	0	200	0	0	0	400
15	Livestock Immunization		No.	300	200	300	200	300	200	300	200	300	200	1500	1000
16	Controll of Forest Fire	15	Ha.	30	450	30	450	30	450	30	450	30	450	150	2250
17	Wildlife Enforcement	50	Sqkm	6	300	6	300	6	300	6	300	6	300	30	1500
18	Maintenance Arms & Ammunitions			0	0	0	0	0	100	0	0	0	100		200
	<b>Sub-Total:-</b>			-	<b>10256</b>	-	<b>8206</b>	-	<b>5256</b>	-	<b>5856</b>	-	<b>5056</b>	-	<b>34630</b>

Phase-II: 2013-14 to 2017-18 ( 5 years Plan)														(Financial Target Rs.in Thousand)	
Sl. No	Work component/Activities	Rate	Unit	2013-2014		2014-2015		2015-2016		2016-2017		2017-2018		Total	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
19	Habitat Improvement	30	Ha.	45	1350	45	1350	45	1350	45	1350	45	1350	225	6750
20	Purchase of Reference books& Journals for I.P.Cs	Ls	No	0	0		150		150						300
21	Soil Moisture Conservation	39	Ha.	21	819	21	819	21	819	21	819	21	819	105	4095
22	Aided Natural Regeneration	22	Ha.	18	396	18	396	18	396	18	396	18	396	90	1980
	Ist.Year. Maintenance	3	Ha.	18	54	18	54	18	54	18	54	18	54	0	270
	2nd. Year Maintenance	2	Ha.	18	36	18	36	18	36	18	36	18	36	0	180
	3rd. Year maintenance	1	Ha.	18	18	18	18	18	18	18	18	18	18	0	90
23	NTPFP	49	Ha.	15	735	15	735	15	735	15	735	15	735	75	3675
	Ist.Year. Maintenance	3	Ha.	15	45	15	45	15	45	15	45	15	45	0	225
	2nd. Year Maintenance	2	Ha.	15	30	15	30	15	30	15	30	15	30	0	150
	3rd. Year maintenance	1	Ha.	15	15	15	15	15	15	15	15	15	15	0	75
24	Improvement of Sinking & Landslide area through vegetative method	35	Ha.	12	420	12	420	12	420	12	420	12	420	60	2100
25	Sowing/Dibbling/broadcasting inlandsides and degraded areas	18	Ha.	10	180	10	180	10	180	10	180	10	180	50	900
	Ist.Year. Maintenance	3	Ha.	10	30	10	30	10	30	10	30	10	30	0	150
	2nd. Year Maintenance	2	Ha.	10	20	10	20	10	20	10	20	10	20	0	100
	3rd. Year maintenance	1	Ha.	10	10	10	10	10	10	10	10	10	10	0	50
26	Wet-Land/Lakes Development/	35	Ha.	10	350	10	350	10	350	10	350	10	350	50	1750
27	Gap filling	26	Ha.	24	624	24	624	24	624	24	624	24	624	120	3120
28	Eco-Tourism Activities(Dev. Of Camping sites)	65	No	5	325	5	325	5	325	5	325	5	325	25	1625
29	Awareness& Extention Education	Ls	No		150	0	150	0	150	0	150	0	150		750
	<b>Sub-Total:</b>				<b>5607</b>		<b>5757</b>		<b>5757</b>		<b>5607</b>		<b>5607</b>		<b>28335</b>

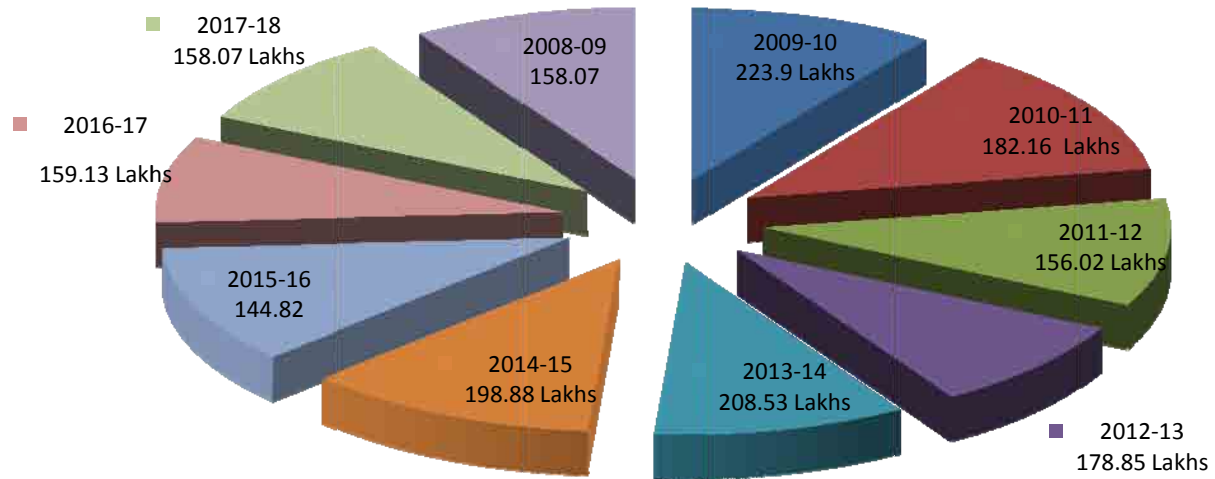
Phase-II: 2013-14 to 2017-18 ( 5 years Plan)				(Financial Target Rs.in Thousand)											
Sl.No	Work Components	Rate	Unit	2013-2014		2014-2015		2015-2016		2016-2017		2017-2018		Total	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
30	Refreshment training for Wildlife Staff	Ls	No	0	0	0	300	0	0	0	300	0	0	0	600
31	Petrolling and serveilance	250	No	1	250	1	250	1	250	1	250	1	250	5	1250
32	Purchase of Vehicles	Ls	No	1	800	1	800	0	0	0	0	0	0	2	1600
33	Maintenance of Vehicles	Ls	No		150		150		150		150		150		750
34	Purchase of Motorbikes	120	No	3	360	0	0	0	0	0	0	0	0	3	360
35	Rnovation of Range Quarters	300	No	0	0	0	0	0	0	1	300	2	600	3	900
36	Renovation of B.O. Quarter	250	No	0	0	0	0	0	0	1	250	0		1	250
37	Renovation of F.G.Quarters	150	No	0	0	0	0	0	0	0	0	5	750	5	750
38	Renovation of Log Huts	150	No	0	0	0	0	0	0	3	450	2	300	5	750
39	Upgradation and Maintenance of Audio-visual, Computers etc.		No	0	0	0	300	0	0	0	0	0	0	0	300
40	Field/Camping equipments		No		0		200		200					0	400
41	Purchase of Vedio & Digital still Camera		No	0	200	0	200	0	0	0	0	0	0	0	400
42	Posters, Brochures, Pamplets and Signes& Maintenance		No		200		0		200		0	0	200	0	600
43	Construction of Hides?talus	150	No	2	300	2	300	1	150	1	150	1	150	7	1050
44	Maintenance of Hides?talus	75	No	0	0	0	0	2	150	2	150	2	150		450
45	Purchase of Reference book & Journals for IPCs	Ls	No				150						150		300
46	Socio-Economic Survey of forest village	200	No	0	0	3	600	0	0	0	0	0	0	0	600
47	Monitoring & Evaluation	Ls			100		100		100		100		100		500
48	Maintenance of Nurseries	400	Ha	3	1200	3	1200	3	1200	3	1200	3	1200	3	6000
	<b>Sub-Total:</b>				<b>3560</b>		<b>4550</b>		<b>2400</b>		<b>3300</b>		<b>4000</b>		<b>17810</b>

Phase-II: 2013-14 to 2017-18 ( 5 years Plan)														(Financial Target Rs.in Thousand)	
Sl.No	Work Components	Rate	Unit	2013-2014		2014-2015		2015-2016		2016-2017		2017-2018		Total	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
49	Awards & Rewards to the informer of Wildlife Offence and best p				100		100		100		100		100		500
50	Ex-gratia payment and Compensation for crop damage by Wild animal				150		150		150		150		150		750
	Sub-total:-			-	250	-	250	-	250	-	250	-	250	-	1250
<b>Total of Sl.No. 1to 50. =</b>				-	<b>19673</b>		<b>18763</b>	-	<b>13663</b>	-	<b>15013</b>	-	<b>14913</b>	-	<b>82025</b>
Office Expenses @ 2% of the yearly out lay =				-	393	-	375	-	273	-	300	-	298	-	1639
Contingency @ 4% of the yearly outlay =				-	787	-	750	-	546	-	600	-	596	-	3279
<b>GRAND TOTAL =</b>					<b>20853</b>	-	<b>19888</b>	-	<b>14482</b>	-	<b>15913</b>	-	<b>15807</b>	-	<b>86943</b>

**Budget Estemitates for I. Phase, of Management Plan of the Khangchendzonga National Park = Rs.8,69,43,000=00 (Rupees: Eight crore sixty nine lakhs forty three thousand, only)**

**PROPOSED YEAR-WISE BUDGET UNDER THE KHANGCHENDZONGA NATIONAL PARK  
MANAGEMENT PLAN FOR 10 YEARS**

**YEAR-WISE, BUDGET FOR 10 YRS. (RS. IN LAKHS)**





## CHAPTER-11

**11.3. Revised Proposal for: - “Integrated Development of Wildlife Habitats”- Khangchendzonga National Park-Sikkim(100% CSS) for the year 2014-15 to 2017-18 as per the new schedule of rates**

**Revised Phase-II: 2014-15 to 2017-18 ( 4years Plan)**

**(Financial Target Rs.in Thousand)**

Sl. No	Work component/Activities	Rate	Unit	20014-2015		2015-2016		2016-2017		2017-2018		Total	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
1	Demarcation of KNP-Boundary	150	Km	6	900	10	1500	10	1500	10	1500	36	5400
2	construction of Residential-Quarter for Field Director	3000	No	1	3000	0	0	0	0	0	0	1	3000
3	construction of Office-cum-Quarter for Assist. Conservator of Forest	2500	No	1	2500	0	0	1	2500	1	2500	3	7500
4	Renovation of B.O.Quarter	400	No	1	400	2	800	2	800	0	0	5	2000
5	Construction (6 units) Forest Guard Barrack	1500	No	1	1500	0	0	0	0	0	0	1	1500
6	Construction of Forest Guard Quarter	1500	No	1	1500	0	0	0	0	0	0	1	1500
7	Construction of Rescue Centre & Staff Quarter	1800	No	1	1800	0	0	0	0	0	0	1	1800
8	Construction of Veteriranian	1500	No	0	0	0	0	0	0	0	0	0	0
9	Construction of Watch Tower	1000	No	1	1000	1	1000	1	1000	1	1000	4	4000
10	Construction of Log Bridge	500	No.	1	500	1	500	1	500	1	500	4	2000
11	Construction of Trekking trail	500	Km	3	1500	3	1500	3	1500	3	1500	12	6000
12	Up-gradation of old trekking trails	100	Km	6	600	6	600	6	600	6	600	24	2400
13	Construction of Waterholes	15	No	30	450	30	450	30	450	30	450	120	1800
14	Chemical immobilization/ Operation/Capture,Cages/ Nets		LS		200		100		0		0		300
15	Livestock Immunization		No.	300	200	300	200	300	200	300	200	1200	800
16	Controll of Forest Fire	25	Ha.	0	0	30	750	30	750	30	750	90	2250
17	Wildlife Enforcement	70	Sqkm	6	420	6	420	6	420	6	420	24	1680
18	Purchase of Arms & Ammunitions		LS	0	500		200		0		0		700
	<b>Sub-Total:-</b>			-	<b>16970</b>	-	<b>8020</b>	-	<b>10220</b>	-	<b>9420</b>	-	<b>44630</b>

**Revised Phase-II: 2014-15 to 2017-18 ( 4years Plan)**  
**(Financial Target Rs.in Thousand)**

Sl. No	Work component/Activities	Rate	Unit	20014-2015		20015-2016		2016-2017		2017-2018		Total	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
19	Habitat Improvement	49	Ha.	45	2205	45	2205	45	2205	45	2205	180	8820
20	Purchase of Reference books& Journals for I.P.Cs	Ls	LS		150		150		0		0		300
21	Soil Moisture Conservation	67	Ha.	21	1407	21	1407	21	1407	21	1407	84	5628
22	Aided Natural Regeneration	30	Ha.	18	540	18	540	18	540	18	540	72	2160
	Ist.Year. Maintenance	5	Ha.	18	90	18	90	18	90	18	90	72	360
	2nd. Year Maintenance	3.5	Ha.	18	63	18	63	18	63	18	63	72	252
	3rd. Year maintenance	2	Ha.	18	36	18	36	18	36	18	36	72	144
23	NTFP	85	Ha.	15	1275	15	1275	15	1275	15	1275	60	5100
	Ist.Year. Maintenance	6.6	Ha.	15	99	15	99	15	99	15	99	60	396
	2nd. Year Maintenance	6.6	Ha.	15	99	15	99	15	99	15	99	60	396
	3rd. Year maintenance	3.5	Ha.	15	52.5	15	52.5	15	52.5	15	52.5	60	210
24	Improvement of Sinking & Landslide area through vegetative method	46	Ha.	12	552	12	552	12	552	12	552	48	2208
25	Sowing/Dibbling/broadcasting inlandslides and degraded areas	34	Ha.	10	340	10	340	10	340	10	340	40	1360
	Ist.Year. Maintenance	5	Ha.	10	50	10	50	10	50	10	50	40	200
	2nd. Year Maintenance	3.5	Ha.	10	35	10	35	10	35	10	35	40	140
	3rd. Year maintenance	2.5	Ha.	10	25	10	25	10	25	10	25	40	100
26	Wet-Land/Lakes Development/	60	Ha.	10	600	10	600	10	600	10	600	40	2400
27	Gap filling	40	Ha.	24	960	24	960	24	960	24	960	96	3840
28	Eco-Tourism Activities(Dev. Of Camping sites)	80	No	5	400	5	400	5	400	5	400	20	1600
29	Awareness& Extention Education	Ls	LS	0	200	0	150	0	150	0	150		650
	<b>Sub-Total:</b>				<b>9178.5</b>		<b>9128.5</b>		<b>8978.5</b>		<b>8978.5</b>		<b>36264</b>

**Revised Phase-II: 2014-15 to 2017-18 ( 4 years Plan)**

Sl. No	Work component/Activities	Rate	Unit	20014-2015		20015-2016		2016-2017		2017-2018		Total	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
30	Refreshment training for Wildlife Staff	Ls	No		300		0		300		0		600
31	Petrolling and serveilance	350	No	1	350	1	350	1	350	1	250	4	1300
32	Purchase of Vehicles	Ls	No	1	800	0	0	0	0	0	0	1	800
33	Maintenance of Vehicles	Ls	No		150		150		150		150		600
34	Purchase of Motorbikes	180	No	0	0	0	0	0	0	0	0	0	0
35	Rnovation of Range Quarters	600	No	0	0	0	0	1	600	2	600	3	1200
36	Renovation of B.O. Quarter	550	No	0	0	0	0	1	550	0	0	1	550
37	Renovation of F.G.Quarters	500	No	0	0	0	0	0	0	5	750	5	750
38	Renovation of Log Huts	500	No	0	0	0	0	3	1500	2	300	5	1800
39	Upgradation and Maintenance of Audio-visual, Computors etc.		No		300		0		0		0	0	300
40	Field/Camping equipments		No		200		200		0		0		400
41	Purchase of Vedio & Digital still Camera		No		200		0		0		0	0	200
42	Posters, Brochures, Pamphlets and Signes& Maintenance		No		0		200		0	0	200		400
43	Construction of Hides/talus	300	No	2	600	1	300	1	300	1	300	5	1500
44	Maintenance of Hides?talus	150	No	0	0	2	300	2	300	2	300	6	900
45	Purchase of Reference book & Journals for IPCs	Ls	No		150		0		0		150		300
46	Socio-Economic Survey of forest village	300	No	3	900	0	0	0	0	0	0	3	900
47	Monitoring & Evaluation	Ls			100		100		100		100		400
48	Maintenance of Nurseries	623	Ha	3	1869	3	1869	3	1869	3	1869	12	7476
	<b>Sub-Total:</b>				<b>5919</b>		<b>3469</b>		<b>6019</b>		<b>4969</b>		<b>20376</b>

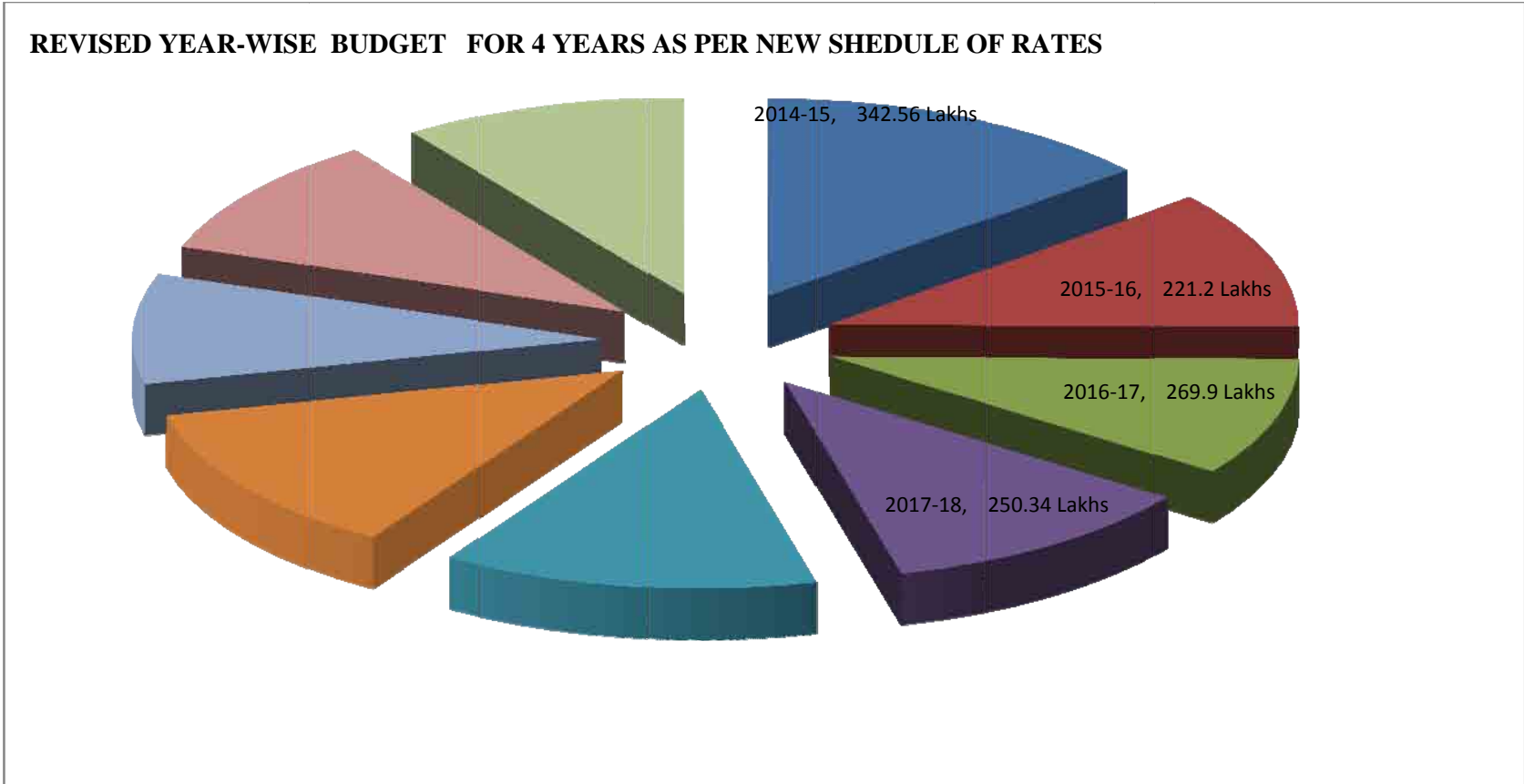
**Revised Phase-II: 2014-15 to 2017-18 ( 4 years Plan)**

**(Financial Target Rs.in Thousand)**

Sl.No	Work Components	Rate	Unit	2014-2015		2015-2016		2016-2017		2017-2018		Total		
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	
49	Awards & Rewards to the informer of Wildlife Offence and best p				100		100		100		100		500	
50	Ex-gratia payment and Compensation for crop damage by Wild animal				150		150		150		150		750	
	Sub-total:-			-	250	-	250	-	250	-	250	-	1250	
<b>Total of Sl.No. 1to 50. =</b>					<b>32317</b>		<b>20868</b>		<b>25468</b>		<b>23617.5</b>		<b>102320</b>	
Office Expenses @ 2% of the yearly out lay =					-	6.46	-	417.35	-	509.35	-	472.35	-	20.50
Contingency @ 4% of the yearly outlay =					-	12.93	-	834.7	-	1018.7	-	944.7	-	40.91
<b>GRAND TOTAL =</b>					<b>-</b>	<b>34256</b>	<b>-</b>	<b>22120</b>	<b>-</b>	<b>26996</b>	<b>-</b>	<b>25034.6</b>	<b>-</b>	<b>108661</b>

**Revised Budget Estemitates for II. Phase(2014-15 to 2017-18), of Management Plan of the Khangchendzonga National Park = Rs.108661000/-  
(Rupees: Ten Crore Eighty Six Lakhs Sixty One Thousand, only)**

**REVISED PROPOSED YEAR-WISE BUDGET UNDER THE KHANGCHENDZONGA NATIONAL PARK  
MANAGEMENT PLAN FOR FOUR YEARS AS PER NEW SHEDULE OF RATES**



## **CHAPTER-12: THE SCHEDULE OF OPERATIONS AND MISCELLANEOUS REGULATIONS**

### **12.1. The schedule:**

The Schedule of Rates/Basis of expenditure and estimates are drawn for implementations, execution of approved physical targets and maintenance of infrastructure / assets on the basis of Sikkim Public Works Department's schedule and of Forests, Environment & Wildlife Management Department.

### **12.2. Record of deviations and implemented targets:**

The role of control function in management is to ensure regulations so as to keep the strategies on the right track for achieving the objectives. The regulatory mechanism ensures correcting the deviations at every stage for the purpose of keeping the focus of activities on the objectives and goals. Hence it constitutes one of the most important functions of management and it runs concurrently along with the process of implementation. The control mechanism prescribed for the management of Khangchendzonga National Park will be as given below:

### **12.3. The control forms:**

Control forms are prescribed under chapter 12 of Component 2, Part II of the Manual. There are 18 principal control forms. These together with their sub-units constitute a total of 54. All follow in their appropriate order. At the end of each financial year all the control forms are to be posted. To facilitate the posting of information, each Range should maintain registers on each set of information to be reported. These registers should be posted as and when each activity is initiated. The progress of the activity/operation should be tracked to its completion. To complete the forms for the PA, the information will need to be collated across the Range registers and adding information from the headquarters office which would not be reflected at the Range level. Every Range should have equipped with computer, so that the task will be far the easier as it would need updating the computer files progressively to the end of the financial year. Some information, as prescribed in the manual, will be shared between the PA/Range Books and the control forms.

- i) Form No. 12.3.1.to 12.3.3. = 3 Nos..
- ii) Form No. 12.4. & 12.4.1 to 12.4.7. = 8 Nos.
- iii) Form No. 12.5.and 12.5.1. to 12.5.8 to 12.5.49. = 43 Nos.

**FORM No.- 12.3.1.  
CREATION OF NEW ARTIFICIAL WATERHOLES**

Sr. No	Category	Year	Location	Cost	Performance
1	2	3	4	5	6

**Note :** Category : Masonry anicut, earthen bund, lined depression, borewell and pump, reservoir, spring fed, tanker fed, guzzler, aquifer; permanent or temporary  
 Location : By compartment or by a named feature and name given if any  
 Performance : Successful, partially successful, failure (give reasons for the latter two)

**FORM No - 12.3.2.  
MAINTENANCE OF WATER-HOLES : NATURAL**

Sr. No	Category	Perennial or seasonal	Location	Year	Nature of work	Cost	Performance
1	2	3	4	5	6	7	8

**Note :** Category; Spring, seep, natural depression, a flowing stretch, reservoir  
 Location; By compartment or by a named feature and name given if any  
 Nature of work; Desilting, provision of apron, any other category  
 Performance: Successful, partially successful, failure (reasons for the last two)

**FORM No. 12.3.3.**

**MAINTENANCE OF WATER-HOLES : ARTIFICIAL**

Sr. No	Category	Perennial or seasonal	Location	Year	Nature of work	Cost	Performance
1	2	3	4	5	6	7	8

**Note :** Category : Masonry anicut, earthen bund, lined depression, borewell and pump, spring fed, tanker fed, guzzler, aquifer etc.  
 Location : By compartment or by named feature and name given if any.  
 Year : Year of maintenance, with year of establishment in parenthesis.  
 Nature of work : Desilting, grouting, repairing leaks, repair to mechanical parts, closing anicut openings, any other work.  
 Performance : Successful, partially successful, failure (reasons for the latter two).

**FORM No. – 12.4.**

**RESTORATION OF HABITAT: WEED CONTROL, INITIAL OPERATION**

Sr. No.	Location & name of site	Year	Extent of area (ha)	Species of weed	operation	Total cost	Cost per ha.	Remarks
1	2	3	4	5	6	7	8	9

**Note :** Location : By compartment, site name or land feature  
 Operation : Uprooting, cutting, burning, ploughing, manual or by using animals or machinery  
 Remarks : Measure of success and/or problem faced



**FORM No. 12.4.1.**

**RESTORATION OF HABITAT: WEED CONTROL, SUBSEQUENT OPERATIONS**

Sr. No.	Location & name of site	Year	Extent of area (ha)	Complete or partial coverage	Species of weed	operation	total cost	Cost per ha.	Remarks
1	2	3	4	5	6	7	8	9	10

**Note:** Location: By compartment, site name or land feature  
 Operation: Uprooting, cutting, burning, ploughing, manual or by using animals or machinery.  
 Remarks: Percent cover of weed/s before operation, problems, if any

**FORM No.12.4.2.**

**RESTORATION OF HABITAT: CONTROL OF REGENERATION OF WOODY SPECIES IN GRASSLANDS**

Sl.No.	Location&name of site	Year	Extent of area(ha)	Species controlled	operation	Total cost	Cost per ha.	Remarks
1	2	3	4	5	6	7	8	9

**Note:** Location: By compartment, site name, etc.  
 Species controlled: List the species.  
 Operation: Uprooting, cutting, burning etc. manual or mechanised methods.  
 Remarks: The measure of success, suitability of methods, problems encountered.

**FORM No. 12.4.3.**

**RESTORATION OF HABITAT: PRESCRIBED BURNING**

Sl.No.	Location&name of site	Year	Extent of area(ha)	Area treated (ha)	Period	Total cost	Cost per ha.	Remarks
1	2	3	4	5	6	7	8	9

**Note:** Location: By compartments or name of site.  
 Period: Date of starting operation and completion.  
 Remarks: Mention resultant structure e.g. a mosaic, % burnt, and % intact.  
 Problems encountered in conducting the operation - e.g. fire escape.

**FORM-No. 12.4.4.**

**SOIL CONSERVATION MEASURES - INITIAL OPERATIONS AND SUBSEQUENT MAINTENANCE**

Sl.No.	Location&name of site	Year	Extent of area(ha)	Area treated (ha)	Operations	Total cost	Cost per ha.	Remarks
1	2	3	4	5	6	7	8	9

**Note:** Location: By compartments, name of site or landmarks.  
 Extent of area: Total area identified for such treatment. In case of streams or gullies, the length involved.  
 Area Treated: If linear feature then quote length; otherwise area.  
 Operation: Structures involved such as gully plugs, trench-cum-mound, terracing, spurs and bunds etc. quote quantity nos. and cmt.of earthwork.  
 Remarks: Mention if initial work or maintenance.

**FORM-No. 12.4.5.**

**RESTORATION OF HABITAT: PLANTING, SOWING - INITIAL OPERATION**

Sl.No.	Locatio	Year	Extent of area(ha)	species	Planting stock	Spacing	Operation	Total cost	Cost per ha.	Remarks
1	2	3	4	5	6	7	8	9	10	11

**Note:** Location: By compartments, or landmarks and describe the site factors e.g. vegetation cover, soil, perturbations etc.

Planting Stock: Kind and condition e.g. root shoot, naked root seedling, seedlings in polythene bags, age or average size.

Operation: Mention site preparation if any, crowbar holes, pits and pit size, trench, seed sowing (rate), tussock planting (norms), protection measures.

Remarks: Mention operational problems if any.

**FORM-No. 12.4.6.**

**RESTORATION OF HABITAT: RESPONSE OF PLANTINGS, SOWINGS AND SUBSEQUENT OPERATIONS**

Sl.No.	Locatio	Year	Extent of area(ha)	species	Survival %	Casualty replacement	Operation	Total cost	Cost per ha.	Remarks
1	2	3	4	5	6	7	8	9	10	11

**Note:** Location: By compartments, or landmarks.

Casualty replacement: Mention planting stock by species, number & kind (polythene bag, root shoot, rhizome etc).

Operations: Planting, sowing technique, protection measures.

Remarks: Operational problems, protection problems, any other useful information.  
Assess & mention survival percentage & growth before taking up casualty replacement.

**FORM-No. 12. 4. 7.**

**RESTORATION OF HABITAT: AREA UNDER PROTECTION/CLOSURE**

Sr. No	Location	Year	Extent of area (ha)	Description of sites	Regulation or protection measures	Response	Remarks
1	2	3	4	5	6	7	8

**Note:** Location: By compartment or landmarks

Description of site: % tree, shrub, ground cover, main species, impact of factors causing perturbations.

Regulations & Social fencing, power or other kind of fencing, enforced protection by patrolling, protection measures fire protection etc.

Response: To be recorded annually. Consider trend of regeneration, vegetation cover, change in structure and composition, wildlife use index.

Remarks: State problems or any other useful information, including alternatives if area being used by people for specific purposes.

**FORM-N0. 12. 5.**

**ANIMALS: MEASURING TRENDS IN POPULATIONS (YEAR)**

Sl.No.	Species	Population estimation methodology	Adult		Sub-Adult		Yearlings	Fawn	cubs	Total	Remarks
			Male	Female	Male	Female					
1	2	3	4	5	6	7	8	9	10	11	12

**Note:** Population:e.g. pugmark, line transect, scan, roadside counts etc., area covered, sampling intensity, estimation data treatment, extrapolation where involved. In case of indices of density or dung count & mention those figures under the remarks' column; use details as pertinent.

Describe age classes for each species.

Remarks: Operational problems, protection problems, any other useful information.Indices of density or dung count details to be recorded here.

**FORM-No. 12. 5.1.**

**ANIMALS: NEW RECORDS**

Sr. No	Species	Location	Year	How discovered	Details of numbers age, sex.	Habitat description-	Remarks
1	2	3	4	5	6	7	8

**Note:** Animals will include vertebrates and invertebrates.

How discovered: Sighting, dead specimen, reliability of sighting, captured specimen, incontrovertible other evidence.

Number, age, sex etc. as applicable to vertebrates.

Habitat description: Broad habitat description such as vegetation, and elements such as water, large old trees, den trees, snags, down log material. Use microhabitat descriptors only if relevant.

Remarks: Any other useful information.

**FORM-No. 12. 5. 2.**

**ANIMALS: MORTALITY OTHER THAN THAT ATTRIBUTABLE TO AN OFFENCE**

Sl.No.	Species	Location	Year	Sex & Age	Number	Discovered in what condition	Cuase of mortality	Remarks
1	2	3	4	5	6	7	8	9

**Note:** Location: By compartment, landmark etc.

Sex & age: As per parameters for age class. Sex, if possible to identify.

Discovered in what condition: Carcass, complete or partial. Skull or any other recognisable remains collected where only some remains of an animal are found.

Cause of mortality: If known e.g. territorial fight, accident, possible disease (following postmortem results), old age, cause difficult to determine, redation etc.

Remarks: Any other useful information

**FORM-No. 12. 5. 3.**

**ANIMALS: MORTALITY ATTRIBUTED TO POACHING OR AN ACT OF VANDALISM**

Sl.No.	Species	Location	Cuase of mortality				Remarks
			Number	Sex	Age	Class	
1	2	3	4	5	6	7	8

**Note:** Location: By compartments or landmarks.

Cause of mortality: Whether the animal was intact or remains found, article or trophy to be recorded. Cause if known e.g. animal snared, shot or poisoned etc.

Remarks: Any other useful information, especially matters of illegal trade.

**FORM-No. 12. 5. 4.**

**ANIMALS: PREDATION ON DOMESTIC LIVESTOCK BY WILD CARNIVORES**

Sr. No.	Range	Month	Category of livestock killed	Location	Number	Ex gratia payment (Rs.)	Carnivour involved	No.of cases undecided	Remarks
1	2	3	4	5	6	7	8	9	10

**Note:** Category of livestock killed: Buffalo, cow, bullock (adult, sub-adult, calf), camel, horse, donkey, sheep, goat, poultry etc.

Location: Comptt. no. or landmark where killed and the village of the owner.

Carnivore involved: Indicate species responsible for the kill if identity is confirmed.

No. of cases undecided: Either in progress or dropped.

Remarks: Record observations like - attended or unattended animal, killed in forest or waterhole or in the pen/shed, field and whether kill was in area closed to livestock trespass

**FORM-No. 12.5.5.**

**ANIMALS: KILLING OF A HUMAN BY WILDLIFE OR INJURY CAUSED**

Sr. No.	Range	Month	No. of incidents	No. of people killed, age & Sex.	Location, circumstances & Species	No. of people injured, age & Sex	Location, circumstances & Species	Ex-gratia Payment (Rs.)
1	2	3	4	5	6	7	8	9

**Note:** Location: Location by comptt no., the village to which the person belongs and a description of the circumstances and activity such as-open grassy patch, cutting grass; or under a mahua tree collecting and species flowers etc. Mention species responsible on proof.

**FORM-No. 12.5. 6.**

**ANIMALS: WILDLIFE DAMAGE TO PRIVATE OR PUBLIC PROPERTY**

Sr. No.	Range	Month	The category of property	Extent of damage	Species involved and number	Remarks
1	2	3	4	5	6	7

**Note:** Location: By comptt. no., village survey no., name of village or landmark.  
 Category of property: e.g. agriculture field-wheat, huts in a village, any kind of vehicle.  
 Extent of damage: Crop damage by area, estimated loss of produce and monetary loss. Similar yardsticks for other items like partial or total destruction of huts and belongings with estimated monetary loss.  
 Remarks: Any relevant information or circumstances e.g. a wild elephant was provoked by people.

**FORM-No. 12. 5. 7.**

**PLANTS: NEW RECORDS**

Sr. No.	Family	Species	Year	Location	Habitat	Status	Remarks
1	2	3	4	5	6	7	8

**Note:** Habitat: Description by vegetation associates at various levels, % canopy closure if relevant, soil/site, microhabitat elements such as higher Level of moisture, woody debris or humus etc.  
 Status: A broad idea on its frequency, national status e.g. endangered, rare, endemic etc.  
 Remarks: Any specific information.

**FORM-No.12.5. 8.**

**PLANTS: DISEASE AND MORTALITY**

Sr. No.	Species	Location	Year	Particulars of disease, morbidity & mortality	Area affected	Remarks
1	2	3	4	5	6	7

**Note:** Location: By compartment or landmarks.  
 Particulars of disease: In case of trees, the mortality by diameter classes and number, symptoms, insect pest activity or any other external indicators if visible, none if not seen. No mortality but infestation detected, mention that as morbidity.  
 Area affected: In hectares.  
 Remarks: Any specific environmental condition, or site factors you may suspect as being related to the problem or any other useful information.



**FORM-No. 12. 5.16.**

**GRAZING OF DOMESTIC LIVESTOCK  
YEAR**

Sr. No.	Grazing unit No.	List of villages in the unit	Village-wise listed population of cattle	Capacity of the unit(Cattle unit) and number grazed	Total cattle unit grazed		Remarks
					Legal	Illegal	
1	2	3	4	5	6	7	8

**Note:** Remarks: (i) Mention number of cattle immunized against FMD, RP, anthrax as the case might be and the number of cattle without the prophylactic cover. (ii) If grass is allowed to be cut for cattle being stall-fed, mention the village and number of such cattle.

**FORM-No.12. 5. 17.**

**INTER-AGENCY PROGRAMMES: AGENCIES AND SCHEMES (GOVERNMENT)  
YEAR**

Sr. No.	Name of Agency	Central or State	Number & Name of scheme operated	Physical & Financial Target		Area &Location	Remarks
				Given	Achieved		
1	2	3	4	5	6	7	8

**Note:** Name of the scheme: To include all activities in the Govt. sector, i.e. construction, use of resources, development processes etc. mention names of schemes, projects or normal operations. This will address all departments in the management area and those activities outside but capable of influencing the management area.  
Remarks: Success, adverse impacts, incompatibility with PA management objectives or failures should be mentioned.Detail notes to go in the PA book.

**FORM- 12.5.18.**

**PROGRAMMES OF NGOS  
YEAR**

Sr. No.	Name of Agency	HQ location	Nature of the scheme operated	Physical & Financial Target		Area & Location	Remarks
				Given	Achieved		
1	2	3	4	5	6	7	8

**Note:** Remarks: Success or adverse impacts, incompatibility with PA management objectives or failures should be mentioned. Detailed notes to go in PA book. These programmes and activities could be within the management area or those that are outside the management area but are capable of influencing the state of the management area - either complementing the efforts or adversely impacting.

**FORM- No. 12.5.19.**

**CONSTRUCTION\*/MAINTENANCE\* OF INFRASTRUCTURE: ROADS & BRIDGES (\*EXISTING/NEW)  
YEAR**

Sr. No.	Catagory	Range	Surface	Name or number	Length covered(Km)	Cross drainage workd bridge or culverts with type	Total cost with status
1	2	3	4	5	6	7	8

**Note:** Category of road: National highway, State highway, district road etc. public road, forest road or open only to managers should be stated.  
 Surface type: Black topped, metal, earth etc. Applies to roads.  
 Name or number: As the case may be. Cross drainage type: e.g. for culverts - box, hume pipe culverts etc.  
 Bridge type: Wooden trestle, suspension, metal multi span, masonry arch etc.  
 Status: Work completed or ongoing. State also the agency responsibility; state whether operational or non-operational.  
 \*: Strike out which is not applicable. Use separate forms as required; for construction & for maintenance details.

**FORM-No.12.5.20.**

**CONSTRUCTION\*/MAINTENANCE\* OF INFRASTRUCTURE: BUILDINGS (\*EXISTING/NEW)  
YEAR**

Sr. No.	Catagory	Range	Surface	Name or number	Length covered(Km)	Cross drainage workd bridge or culverts with type	Total cost with status
1	2	3	4	5	6	7	8

**Note:** Nature of the building: e.g. residential, office, store, chauki, watch tower, tourist facility, hide, barrier, patrolling camp (temporary or permanent) etc. Location: By compartment or village or landmark as appropriate.  
Type of construction: Masonry (brick/stone), log or wooden, metal, local material etc.  
Status: Completed or ongoing.\*: Strike out which is not applicable.Use separate forms as required: for construction and for maintenance details.

**FORM-No. 12. 5.21.**

**DEVELOPMENT\*/MAINTENANCE\* OF INFRASTRUCTURE:COMMUNICATION (\*EXISTING/NEW)  
YEAR**

Sr. No.	Range	Type of facility	Location	Number	Cost	Advantage gained	Remarks
1	2	3	4	5	6	7	8

**Note:** Type of facility: e.g. telephone, wireless.  
Location: Staff Hq location, village, landmark etc.  
Advantage gained: Area served, staff locations connected etc.  
Remarks: Record status - complete, ongoing, functional, non-functional.  
\*: Strike out that is not applicable. Use separate forms as required, for new facility and maintenance.

**FORM-No.12.5 22.**

**DEVELOPMENT\*/MAINTENANCE\* OF INFRASTRUCTURE:VEHICLES (\*EXISTING/NEW)  
YEAR**

Sr. No.	Kind of vehicle	Number	HQ if any	Intended use	Cost	Remarks
1	2	3	4	5	6	7

**Note:** Kind of vehicle: Jeep, trailer, tractor, truck, minibus, tanker, motorcycle, bicycle, boat (paddle or motor), launch, car, riding elephant, ponies, etc.

Intended use: Management support, patrolling/antipoaching, tourism etc.

Remarks: Any other useful information. Mention written off vehicles, retired or dead animals.

\*: Strike out the inapplicable. Use separate forms as required to indicate acquisition, maintenance

**FORM-No. 12.5.23.**

**DEVELOPMENT OF INFRASTRUCTURE: MANPOWER RECRUITMENT\*/EXISTING MANPOWER\*  
YEAR**

Sr. No.	Category of Post	Number	Status		Scale of Pay	Intended deployment/ deployed as	Remarks
			Recruited	Vacant			
1	2	3	4	5	6	7	8

**Note:** *Status:* Permanent, temporary, contractual. *Intended deployment:* State purpose e.g. conservation education, research, antipoaching, etc as applicable. *Remarks:* Any other useful information. New recruits within the year should be mentioned. This will also include officers & staff obtained on transfer/ deputation. Likewise changes due to personnel going out on transfer, deputation, retirement, removal, resignation, death should be reflected in this column. \*: Strike off that which is not applicable. Accordingly, use additional forms. One for recruitment and one for the existing manpower.

**FORM-No. 12.5.24.**

**DEVELOPING INFRASTRUCTURE: CONSTRUCTION OF BOUNDARIES, FENCES, CPTS, EPTS, ENCLOSURES, ENCLOSURES (\*EXISTING/NEW)  
YEAR**

Sr. No.	Category of Construction	Range	Location	Leength(meter)	Number	Specification	Remarks
1	2	3	4	5	6	7	8

**Note:** *Category:* Kind of boundary e.g. comptt, block, zone etc. In case of fences: power fence, others. *Location:* By compartment or suitable landmark. *Numbers:* In case of exclosures, enclosures, number of pillars etc. as applicable. *Specifications:* As applicable to the construction: dry rubble, chain link, local material, height, area, depth, width etc. *Remarks:* Any other relevant information.

\*;Strike out that is inapplicable. Use a form each for maintenance of existing features and for new features.

**FORM- No. 12. 5. 25.**

**DEVELOPING INFRASTRUCTURE: FIRELINES (\*EXISTING/NEW)  
YEAR**

Sr. No.	Range	Fireline category and width	Name of points connected	Leength(meter)	cost	Remarks
1	2	3	4	5	6	7

**Note:** Category: Main or subsidiary etc.

\*;Strike out that which is inapplicable. Use one form each for maintenance of existing fireline and creation of new.

**FORM-No.12.5.26.**

**TOURISM YEAR**

Total number of visitors all categories:

Name of complex:

**Total revenue earned:**

Sl. No.	The category of visitors by month & number					Indian			No. day visitors	No. staying overnight and revenue
	Adult			Children	Foreigners	Rural	Urban	Revenue		
	Month	Male	Female							
1	2	3	4	5	6	7	8	9	10	11

**Note:** Columns 2 to 5 will be written in three successive lines for the month pertinent, one below the other. First line information pertains to foreign tourists. Put a tick ( ) in col. 6. Second and third line details rural and urban tourists respectively. Put a tick ( ) in Col. 7, Column 8 as applicable.

**FORM-No.12.5.27.**

**TOURISM: USE OF TOURIST FACILITIES - LODGING YEAR**

**Name of complex:**

**Class of accommodation:**

**Capacity (beds):**

Sr. No.	Month	Month/ capacity/ (beds/month)	Occupancy/ (beds/month)		Total occupancy during the month (beds/month)
			Foreign	Indian	
1	2	3	4	5	6

**Note:** Class of: Classify accommodation as per tariff slabs and if applicable, might include different rate. Accommodation structure for the same set viz. for Indians and foreign tourists. The highest class for example will be I for AC rooms, IV for tents etc. Use a fresh form for each class of accommodation. Month Capacity: Number of days in a month x total number of beds available in that class per night halt.

**FORM-No. 12. 5. 28.**

**TOURISM; USE OF TOURIST FACILITIES - FIELD TRIPS  
YEAR**

Name of complex:

Sl. No.	Month	Riding,elephant use, month trip, capacity	Utilisation	Revenue (Rs.)	Use of PA bus/es Month trip capacity	Utilisation	Revenue (Rs.)	Use of month) trip quantum	Guides utilisation	Revenue (Rs)
1	2	3	4	5	6	7	8	9	10	11

**Note:** Riding elephant : Month trip capacity e.g. 2 elephants, 4 trips/day, each to carry 4 people, therefore the elephant month trip capacity =  $2 \times 4 \times 4 \times 30 = 960$ . Record utilisation accordingly. Bus month trip capacity: e.g. one bus, 2 trips/day, 20 seater =  $1 \times 2 \times 20 \times 30 = 1200$ . Guide-month trip quantum : 1 guide, 4 trips/day =  $1 \times 4 \times 30 = 120$  trip quantum/guide.

**FORM-No. 12. 5.29.**

**ECO-TOURISM - PARTNERS  
YEAR**

Sr. No.	Identity of eco-tourism entrepreneur	Infrastructure	Programmes	Investment	Kind and extent of benefits to local people	Benefit to PA & resources
1	2	3	4	5	6	7

FORM-No.12. 5. 30 (A) & (B)

ECO-TOURISM: VISITOR ASPIRATIONS  
YEAR

Visitor category	Number	Interested in									
		Plants	Bird watching	Animal sighting	Photography	Sketching	Scenic place	Cultural/historical sites	Pilgrimage	Trekking	Other
Adults Male Female Children Foreigners Male Female Children											
1	2	3	4	5	6	7	8	9	10	11	12

**Note:** 12. 5. 30.(A) is for urban population and 12. 5. 30.(B) is for rural population. Create separate forms 12.5.30. (A) & 12.5.30.(B) that are otherwise identical

FORM-NO. 12.5. 31.

OUTBREAK OF FIRES  
YEAR

Sr. No.	Range	Location	Extent (ha.)	Date		Reasons	Estimated loss	Remarks
				Detacted	controlled			
1	2	3	4	5		6	7	8

**Note;** Location: By compartments. Reasons: Established or suspected. Estimated loss: e.g. number of trees damaged, stacked firewood/timber/bamboo destroyed/damaged by volume and cost, wild animals dead, particulars of sensitive sites affected, other property or life destroyed. Remarks; State particularly problems encountered in detection and suppression and any other useful information. State also whether the extent of fire has been mapped.



**FORM-No. 12. 5. 32.**

**OFFENCE CASES DETECTED  
YEAR**

Sr. No.	Range	Category	Number	Numbers cases decided		Number of cases under process	Number of cases compounded	Remarks
				Successful	Failure			
1	2	3	4	5	6	7	8	9

**Note:** Category: e.g. illegal cutting of trees, illegal firewood, illegal NWP, poaching, encroachment, illegal cattle grazing etc. category should be codified by letters of alphabet. Remarks: Any other useful information. This should also include the number of cases pending decision with the department.\*: The cases under column 8 pertain to area of non PA status under management which do not involve an endangered species (Schedule-I).

**FORM-No. 12. 5. 33.**

**INCENTIVES AND REWARDS/AWARDS  
YEAR**

Sr. No.	Range	Number of recipients incentives/reward for detecting offences	No.of recipients awards for outstanding service	Kind of award	Number of recipients	Remarks
1	2	3	4	5	6	7

**Note:** Kind of award: e.g. a medal like the Shaurya Chakra, any other such awards instituted by the State or Central Government. Includes citations, extra increments etc. Remarks: Any other useful information. If an award carries cash, mention the amount.

**FORM-No. 12.5.34.**

**RESEARCH PROJECTS UNDER IMPLEMENTATION THROUGH PA MAN-POWER WITH OR WITHOUT  
COLLABORATION WITH OTHER AGENCIES  
YEAR**

Sr. No.	Title	Completed	Ongoing	New	Status	Financial outlay(Rs.)	Expenditure incurred (Rs.)	Remarks
1	2	3	4	5	6	7	8	9

**Note:** *Completed:* State date of completion and the status of the project report. *Ongoing:* State since when the project is under operation and expected period of completion. *New:* State the date of commencement and duration. *Status:* State the progress towards achievement of objectives; or project which has been dropped or held in abeyance etc. *Remarks:* Any other relevant information. If the project is in collaboration with any other agency or is an contractual arrangement, state the situation and the name of the collaborating agency. If animal/plant specimen are being collected, state authority and where the collections are being housed.

**FORM-No.12.5.35.**

**RESEARCH PROJECTS UNDER IMPLEMENTATION BY OTHER AGENCIES  
YEAR**

Sr. No.	Title	Completed	Ongoing	New	Status	Financial outlay(Rs.)	Expenditure incurred (Rs.)	Remarks
1	2	3	4	5	6	7	8	9

**Note:** *Completed:* State date of completion and the status of the project report. *Ongoing:* State since when the project is under operation and expected period of completion. *New:* State the date of commencement and duration. *Status:* State the progress towards achievement of objectives; or project which has been dropped or held in abeyance etc. *Remarks:* Any other relevant information. If the project is in collaboration with any other agency or is an contractual arrangement, state the situation and the name of the collaborating agency. If animal/plant specimen are being collected, state authority and where the collections are being housed.

FORM-No. 12.5.36.

SURVEY AND INVENTORIES  
YEAR

Sr. No.	Title of survey, inventory activity	Completed	Ongoing	New	By PA	By other agency	Remarks
1	2	3	4	5	6	7	8

**Note:** *Completed:* State date of completion of field work and the status of the report. *Ongoing:* State since when is it under operation and when is it expected to be completed. *New:* State the date of commencement and duration. *By PA personnel:* Will include collaboration or contractual arrangement. State the case as relevant. *Other agency:* State the name of the agency. *Remarks:* If specimen of plants/animals are being collected, state where the collection is being housed and authority. Any other useful information

FORM-No. 12.5.37.

THE MONITORING PROGRAMME  
YEAR

Sr. No.	Title of the programme	Date of initiation	Responsible agency	Technique	Status of collaboration and analysis of data	Remarks
1	2	3	4	5	6	7

**Note:** *Technique:* PCQ, belt transect, line transect and plots, pugmarks etc. by the title of the technique.  
*Status of:* Write only if applicable. and *Collaboration:*

FORM-No.12.5.38.

ECODEVELOPMENT PROGRAMME: TARGETS AND IMPLEMENTATION  
YEAR

Sr. No.	Nature of the programme	Sector (Central/State) or NGO sponsored	Target set		Achievements		Village (Buffer/ enclaved)	Remarks
			Physical	Financial	Physical	Financial		
1	2	3	4	5	6	7	8	9

**Note:** *Nature of the programme:* e.g. pasture development, fodder plantations, establishing biogas units, livestock improvement, establishment and development of sericulture, revival of local skills such as handicraft, water harvesting systems, adults education etc. *Village:* Site where programme is being implemented - whether buffer or inside PA. *Remarks:* State problems, state failures and reasons thereof, reasons for not attaining targets, for non-implementation or deviation etc. State whether it is on the right tracks in context of achievement of objectives.

FORM-No.12. 5. 39.

PROGRESS OF ALL STRATEGIES UNDER THE ZONE AND THEME PLANS  
YEAR

Sr. No.	Zone/Theme	Nature of strategy	Target as per schedule of operations/APO*		Achievements		Location	Remarks
			Physical	Financial	Physical	Financial		
1	2	3	4	5	6	7	8	9

**Note:** *plan:* Mention title. *Nature of strategy:* e.g. demarcation of boundary, creation of artificial water source, salt lick, maintenance of water sources (desilting), cutting and burning of fireline, prescribed burning, weed control, immunization of cattle, maintenance of nature trails, setting up wayside exhibits, recruitment of staff, number of villages translocated, settled on new sites etc. *Location:* Where pertinent, mention location e.g. weed control in comptt. 105, 111, 117. *Remarks:* State problems, failures and reasons thereof, shortfall and reason, deviations if any and reasons, non-implementation with reasons etc. \*APO : (Annual Plan of Operations). Under Col.4 & 5, each column will have two figures. First the figure as per the schedule of operations in the plan and next to it in the same column the figure as per APO. If they differ it amounts to a deviation

**FORM-No. 12.5.40.**

**PROGRESS OF LEGAL SETTLEMENTS UNDER THE WILDLIFE (PROTECTION) ACT 1972 IN CONTEXT OF  
ATTAINMENT OF THE STATUS OF A WLS/NP  
YEAR**

<b>Sr. No.</b>	<b>Nature of settlement/ enquiry &amp; section under the Act</b>	<b>Progress achieved till the commencement of the year under report</b>	<b>Progress achieved during the year</b>	<b>Remarks</b>
1	2	3	4	5

**Note:** Remarks: State the problems encountered and any other useful information such as reasons for inadequate/lack of progress.

**FORM-No.12.5.41.**

**A SUMMARY OF ALLOTMENT OF FUNDS, REVENUE AND EXPENDITURE  
YEAR**

<b>Sr. No.</b>	<b>Plan/non-plan any other grant</b>	<b>Sector Central/State/other</b>	<b>Allotment received</b>		<b>Expenditure Incurred</b>		<b>Revenue realised</b>	<b>Remarks</b>
			<b>Non-recurrent</b>	<b>Recurrent</b>	<b>Non-recurrent</b>	<b>Recurrent</b>		
1	2	3	4	5	6	7	8	9

**Note:** Explain under expenditure, over expenditure, savings and surrenders. State the extent of demand for the year as per the schedule of operations/APO in the remarks column.

**FORM- No. 12. 5. 42.**

**EXISTING CORRIDORS - CONSERVATION INPUTS REQUIRED**

Sr. No.	Identity of the corridor	Length/Section	Nature of inputs/ treatment	Target	Agency/cies re-identified	Constraints	Anticipated investment
1	2	3	4	5	6	7	8

**Note:** Col. 2: by name, number, etc. Col. 3: Total length, if only a particular section is relevant, mention the section

**FORM-No. 12.5.43.**

**EXISTING CORRIDORS - CONSERVATION INPUTS ACCOMPLISHED**

Sl. No.	Identity of the corridor	Length/section addressed	Nature of inputs/ treatment	Agency	Target set	Achievement	Constraints	.Investment	Remarks
1	2	3	4	5	6	7	8	9	10

**Note:** Col.10 State success and quality of achievement. Anything else that is significant

**FORM-No.12.5.44.**

**EXISTING CORRIDORS - MONITORING HABITAT RECOVERY**

<b>Sl. No.</b>	<b>Identity of the corridor</b>	<b>Length/section monitored</b>	<b>Inputs/treatment that had been provided</b>	<b>Monitoring technique/process</b>	<b>Indicators of recovery</b>	<b>Nature of progress</b>	<b>Constraints</b>	<b>Remarks</b>
1	2	3	4	5	6	7	8	9

**Note:** Col 9: Indicate the quality and measure of success.

**FORM-No.12.5.45.**

**POTENTIAL CORRIDORS - CONSERVATION INPUTS REQUIRED**

<b>Sl. No.</b>	<b>Identity of the corridor</b>	<b>Length/section</b>	<b>Nature of Inputs/treatment</b>	<b>Target</b>	<b>Agency/cies identified</b>	<b>Constraints</b>	<b>Anticipated investment</b>
1	2	3	4	5	6	7	8

**Note:** See form-No.12.5.42.

**FORM-No.12.5.46.**

**POTENTIAL CORRIDORS - CONSERVATION INPUTS ACCOMPLISHED  
YEAR**

Sl. No.	Identity of the corridor	Length/section addressed	Nature of inputs/ treatment	Agency	Target set	Achievement	Constraints	.Investment	Remarks
1	2	3	4	5	6	7	8	9	10

**Note:** See form-No.12.5.43.

**FORM-No.12.5. 47.**

**POTENTIAL CORRIDORS - MONITORING HABITAT RECOVERY  
YEAR**

Sl. No.	Identity of thecorridor	Length/section monitored	Inputs/treatment that had been provided	Monitoring technique/process	Indicators of recovery	Nature of progress	Constraints	Remarks
1	2	3	4	5	6	7	8	9

**Note:** See form-No.12.5.44.

**FORM-No.12.5.48.**

**CONNECTING MULTI-AGENCY PROGRAMS IN LANDSCAPE BASED PLANNING  
PARTNERS DURING YEAR:**

Sl. No.	District	Sector Central/ State Other (specify)	Agency & Work area/speciality	Program coverage	. Agreed input and mechanism	Financial implications /investment & source
1	2	3	4	5	6	7

**Note:** Col 4: Main agency agenda e.g. livestock production, health, education, irrigation etc.  
Col.5: Indicate by either administrative unit e.g. tehsil, or number of villages i.e. target  
Col.6: what has the agency agreed on to deliver? How? through agency plan/ scheme?



FORM-No.12.5.49.

MONITORING EXTENT AND QUALITY OF MULTI-AGENCY PROGRAMS  
YEAR

Sl. No.	District	Sector Central/ State Other (specify)	Agency	Objective / Targets	Achievement& standard	Constraints	Extent of investment	Remarks
1	2	3	4	5	6	7	8	9

**Note:** Col 6. The standard of achievement to be based on (i) verification of targets (ii) perception of satisfaction of people and their own assessment  
Col.7 (i) as reported by agency(ii) as perceived by people concerned.

**LIST OF NOTIFICATION RELATED TO  
KHANGCHENDZONGA NATIONAL PARK**

<b>S.N.</b>	<b>Notification</b>	<b>Dated</b>	<b>Annexure</b>
1.	Declaration of Khangchendzonga National Park	16.08.77	1
2.	Notification on Environment fee for Mountaineering expeditions within Sikkim	20.08.93	2 – 3
3.	Withdrawal of grazing from Reserve Forest areas in Sikkim, vide Notification No. 426/F	17.07.95	4
4.	Enquiry and deterring the rights on the extended area The Khangchendzonga National Park in West Sikkim, (Proclamation) Memo No. 294 (396) DC(W)	04.12.1996	5
5.	Amendment of Notification No. 54(75) Home/93/33 on Environmental fee for mountaineering expeditions Within Sikkim	14.03.97	6
6.	Extension of Khangchendzonga National Park	19.05.97	7 – 8
7.	Sikkim Forest Department Reward Rule, 1998, Vide Notification No. 402/F	05.09.98	9
8.	Declaration letter for Khangchendzonga Biosphere Reserve	07.02.2000	10 – 11
9.	General description of the boundary-KBR Notification	07.09.2000	12
10.	“Rajya Van Sangrakshan Evam Paryavaran Puruskar” Vide Notification No. 67/F/Env. & WL	29.04.09	13 – 19
11.	Sikkim Forests Cattle Trespass Rules, 2000, Vide Notification No. 421/F. Env. & WL	27.01.01	20 – 26
12.	Entry & other fees chargeable for entering into the National Park & Sanctuaries, Sikkim	03.05.01	27 – 29
13.	Delegation of Power & Function to the functionaries Right from Forest Guard to the Conservator of Wildlife & Territorial Circles in Sikkim	04.09.01	30 – 32
14.	Declaration of Sacred Peaks, Caves, Rocks, Chhoedtens (Stupa) Hotsprings of Sikkim	20.09.01	33 – 34
15.	Formation of State Board for Wildlife	08.07.04	35 – 36
16.	Sikkim State Biodiversity Board, Vide Notification NO. 20/Home/2006	07.03.06	37 – 38
17.	Opening of Peaks for Alpine Expedition	20.03.06	39 – 46

## Management Plan of the Khangchendzonga National Park

18.	Guidelines for Lake Conservation in Partnership with Gram Panchayats and Pokhari Sanrakshan Samiti's in Sikkim, vide Notification No. 335/F	31.07.2006	47 – 50
19.	Commission to Study the state of Glaciers and its Impact On water system in Sikkim – Prof. S.I. H Asnain, CPR	26.09.07	51 – 52
20.	Constitution of Support Core Group with scientist and Officers of various State Government Departments to The above Commission	09.04.08	53 – 54
21.	Sikkim Wildlife (regulation of Trekking) Rules, 2005	10.02.06	55 – 57
22.	State Forest Officers are defined as Forests Officers Under Sub-section (2) of Section 2 of Indian Forest Act, 1927 (16 of 1927), and Forest Office, vide Notification No. 05/GOS/FEWMD	06.12.2006	58
23.	Partial modification of Paragraph 7 of the Notification No. 892/FEWMD, dated: 10.02.06, Narsing Himal Trek	11.12.06	59
24.	Guidelines for the Appointment of Himal Rakshak	10.02.06	60 – 62
25.	Singalila Ecotourism Promotion Zone in West Sikkim	01.02.06	63 – 66
26.	Enhancement of Wages for Skilled and Unskilled Worker in Sikkim w.e.f. 01-04-2008	15.04.08	67 – 76
27.	Establishment of Directorate of Eco-Tourism under Forests, Environment and Wildlife management Department, Government of Sikkim vide Notification No. 64/Home/2008	05.07.2008	77 – 79
28.	Ex-Gratia or relief payments in respect of Wild animal And Human Conflict vide Notification No. 282/PCCF/DFEWM/GoS.	27.02.2009	80 – 82
29.	State River Conservation Authority	20.04.10	83 – 85
30.	Declaration of Honorary Wildlife warden	01.07.2010	86
31.	Duties and Responsibilities of Honorary Wildlife warden	16.09.2010	87 – 88
32.	Declaration of Pangmelung Singalila Trekking Trail	16.08.2010	89
33.	Royalty fee on Mountaineering expeditions and trekking	08.10.2010	90 – 96
34.	Revision of Royalty, Entry and other fees vide notification No. 08/GOS/FEWMD	28.10.2010	97 - 102
35.	Delegation of powers	04.06.2011	103 - 105

SIKKIM  
GOVERNMENT  GAZETTE  
EXTRAORDINARY  
PUBLISHED BY AUTHORITY

No. 95

Gangtok, Friday, August 26, 1977

GOVERNMENT OF SIKKIM

HOME DEPARTMENT

NOTIFICATION

Dated Gangtok, the 26th August, 1977.

In exercise of the powers conferred by Section 35- of The Wild Life Protection Act, 1972 (No. 53 of 1972): the State Government, hereby, declares the following area as per boundaries detailed hereunder as "Khangchendzonga National Park" for and with a view which is of great importance from ecological, geomorphological and Biological significance. The area of National Park comprises about 850 Sq. kilometers.

**BOUNDARIES :**

On the East – proceeding from Zedang along the ridge passing through Lama-Angdong along the ridge of Lachen, Benshoi, Latong, Denga, Yungang Reserve Forests following the ridges upto Theng R. F.

On the West :- commencing from South Kabur Peak following the Nepal boundary passing through Kabur North Peak, Talung Peak, Mount Khangchendzonga, Nepal Peak and ending at Tent Peak.


On the South :- proceeding from Theng R. F. passing above Pakal R. F. following the ridge and crossing Ringi Chhu above Tholung Gompa, the following the ridge to a turning point to future South following the ridges between Umaram Chhu and its tributary Passamram Chhu passing through Tsingnok, Pakilho, Mounts Narsing Jho- Punu, Pandim, Geochala and ending up at Kabur Peak.

On the North :- commencing from Tent Peak, on the Nepal boundary, passing through Zemu glacier along the Zemu Chhu upto the confluence of Zemu Chhu and Lhonak Chhu at Zedang.

T. S. Gyaltsen,  
Chief Secretary,  
Government of Sikkim.

No. 43(9)-Home/77.

**SIKKIM**

**GOVERNMENT**  **GAZETTE**

EXTRAORDINARY  
PUBLISHED BY AUTHORITY  
Gangtok, Tuesday 28th December, 1993.

No. 188

GOVERNMENT OF SIKKIM  
HOME DEPARTMENT  
GANGTOK

No. 54(75)Home/93/33

Dated Gangtok the 2nd August 1993.

NOTIFICATION

The Cabinet in its meeting held on 9.7.1993, has approved the proposal of royalty to be imposed on mountaineering expeditions within Sikkim as per the rates and the conditions given below with the amendment that the local Sikkimese trekkers are to be exempted from payment of the fees on production of their valid identity card/certificate. The fee is to be imposed as an environmental fee with immediate effect under Wildlife (Protection) Act, 1972 amended upto 1991.

- |      |  |                   |         |
|------|--|-------------------|---------|
| (a)  | Climbing of peaks  | US Dollar         | 20,000  |
| **   | Mt. Kanchenzonga   | US Dollar         | 8,000   |
|      | Peaks above 8000 Mtrs  | US Dollar         | 3,000   |
|      | Peaks between 7501 - 8000 Mtr  | US Dollar         | 2,000   |
|      | Peaks between 7001 - 7500 Mtrs   | US Dollar         | 1,500   |
|      | Peaks between 6501 - 7000 Mtrs   | US Dollar         | 1,000   |
|      | Peaks below 6500 Mtrs  |                   |         |
| (b)  | For virgin peaks, the fee could be double.   |                   |         |
| (c)  | For Indian expedition only 50% of the fee referred to (a) above shall be charged.  |                   |         |
| **   | Mt. Kanchenzonga is most sacred peak for Sikkim and lesser the number of expeditions the better and hence higher fee is recommended. |                   |         |
| (i)  | For trekkers, the Environmental Fee is recommended as follows:   |                   |         |
|      | (a) For Foreign Groups-  |                   |         |
|      | For group of 5 to 10 members   | US Dollar         | 300     |
|      | For group of 11 to 15 members  | US Dollar         | 400     |
|      | For group of 16 to 20 members  | US Dollar         | 500     |
|      | (b) For domestic trekkers-   |                   |         |
|      | For individual   | Rs.               | 1,000/- |
|      | For group of 5 to 10 members   | Rs.               | 4,500/- |
|      | For group of 11 to 15 members  | Rs.               | 6,000/- |
|      | For group of 16 to 20 members  | Rs.               | 1,500/- |
|      | (The fee is for duration of the trek which is usually 10 days on the average)  |                   |         |
| (ii) | Entry fee-   |                   |         |
|      | (a) For Sancturaries   | Rs.5/-perhead     |         |
|      | (b) For National Parks   | Rs.100/- per head |         |

(Entry fee is in addition to Environmental fee)

Furthermore, it has also been decided to ensure that all expeditions within Sikkim should adhere to the following conditions:

- (a) The royalty as mentioned above be paid by the teams in hard currency before their arrival in Sikkim.
- (b) The teams shall make sure that necessary clearance from Ministry of Home Affairs, Ministry of Defence and the Chief Wild Life Warden, Government of Sikkim are obtained by them before they start their expedition.
- (c) The team should avail of all infrastructural facilities (boarding, lodging and transport) available with the Government of Sikkim throughout their expedition.
- (d) The teams should abstain from using fuel-wood and only LPG/kerosene oil should be used for their cooking purposes. They should zealously avoid any environmental damage/pollution during their treks.
- (e) The mountaineering equipments used by the teams or a part thereof should be donated to the proposed Sikkim Mountaineering Institute at Gangtok in order to give a fillip to the local efforts at developing mountaineering- based skills.
- (f) The teams may be requested to give wide publicity to these expeditions within their respective countries in order to place this State firmly on the mountaineering map of the world.
- (g) The teams during their treks/expeditions will have to be accompanied by Liaison Officers from the side of the State Government whose entire expenditure shall have to be borne by them.

SONAM WANGDI IAS  
Home Secretary

**GOVERNMENT OF SIKKIM  
FORESTS DEPARTMENT**

MEMO NO. \_\_\_\_\_

DATE: \_\_\_\_\_

NOTIFICATION

SUB: WITHDRAWAL OF GRAZE FROM RESERVE FORESTS AREAS IN SIKKIM

The Government has noted with great anxiety and concern the degrading and degrading menace of grazing in the Reserve Forests by multitude of Cows, Buffaloes, Yak and Goat. A great many fragile forest eco-systems throughout the State are under immense threat of decentralization and disequilibrium. Conversely the diversity and richness of Sikkim's flora and fauna, wealth also seriously at Stake.

It is, therefore, imperative that total withdrawal of grazing is effected without losing any further time the forest of nature resume to operate and the resurrection and generation of lost eco-system is ensured.

Hence, the Govt. hereby bans grazing in Reserve Forests and Plantation areas of South and West Districts of the State by all kinds of domestic / semi-domestic animals for a period of 4 years.

This Notification shall come into force with immediately effect.

*Account*  
*17/11/95*

PRINCIPAL CCF-CUM-SECRETARY, FORESTS  
GOVERNMENT OF SIKKIM, GANGTOK

MEMO NO. 425 =

Copy to-

- 1. All Head of Department
- 2. C.C.F (I & II)
- 3. ACCH (I & II)
- 4. All CFs (U)
- 5. All DFOs
- 6. All ACFs

*Account*  
*17/11/95*

PRINCIPAL CCF-CUM-SECRETARY, FORESTS  
GOVERNMENT OF SIKKIM, GANGTOK



Office No. 114  
Date: 19.06.76

108

GOVERNMENT OF SIKKIM  
OFFICE OF THE DISTRICT COLLECTOR  
WEST DISTRICT, GYALSHING.

108 (270) (W)

Date: 19.06.76

To

The Chief Wild Life Warden,  
Forest Department,  
Gangtok.

Subj- Enquiry and determining the rights on the extended area of Kanchenjunga National Park in West Sikkim.

Sir,

This is in reference to your letter Number 159/1/NWP/WL/76 dated 4.7.76 regarding the above mentioned subject. In this connection, in exercise of the powers conferred under sections 10, 21 and 22 of the Wild life (Protection) Act, 1972, a proclamation was issued in the original language in an around the neighbourhood of the proposed extended area specifying the prohibition and the limit of the enclosures and requiring any person, claiming any right to appear before the undersigned within 3 months from the date of proclamation.

After service of the prescribe notice and after expiry of the mandatory 3 months, no claim have been received in this office.

Forwarded for your information and further necessary action.



Yours faithfully,

*[Signature]*  
District Collector  
West District



**SIKKIM**

**GOVERNMENT**



**GAZETTE**

EXTRAORDINARY  
PUBLISHED BY AUTHORITY

Gangtok Monday, 7th April, 1997

No. 40

GOVERNMENT OF SIKKIM  
HOME DEPARTMENT  
GANGTOK

NO. 13/Home/97

DATED: 14th March, 1997

NOTIFICATION

The State Government hereby makes the following amendment to Notification No. 34 (75) Home/93/33 dated 2nd August, 1993 in respect of mountaineering expeditions within Sikkim with immediate effect:-

(1) In place of entry (a), substitute the following:

(a) Climbing of Peaks-

Peaks above 8000 Mtrs.	-US Dollar 1000
Peaks between 7501-8000 Mtrs.	-US Dollar 7000
Peaks between 7001-7500 Mtrs.	-US Dollar 6000
Peaks between 6501-7000 Mtrs.	-US Dollar 5500
Peaks below 6500 Mtrs.	-US Dollar 5000

(2) In place of (b), substitute the following:

"All mountaineering expeditions booked through registered travel agency located in Sikkim shall be eligible for a 20 % rebate of the fees prescribed in (a) above. Expeditions sponsored by the Sikkim Gyatsa Mountaineering Institute at Gangtok and the Himalayan Mountaineering Institute at Darjeeling shall also be given the same concession."

(3) In place of entry (c), substitute the following:

"In addition to the environmental fee, entry fees for private associations and national parks and other related fees as may be prescribed from time to time by the State Forest Department shall be charged."

(4) In place of condition (a) which relates to the mode and manner of payment of royalty, substitute the following:

(a) The environmental fee can be paid in Indian currency and the prescribed amount shall be deposited directly in the State Bank of Sikkim at Gangtok or alternatively by a bank draft and the revenue receipt or bank draft is to be presented to the Home Department at the time of seeking final clearance for the mountaineering expedition or trek."

(5) In place of condition (e), substitute the following:

(e) All expeditions shall ensure that the garbage that they generate are removed by them and they shall undertake to abide by such terms and conditions as may be stipulated by the State Government for this purpose."

By order and in the name of Governor

ANAM WANGDI, IAS

**SIKKIM**



**GOVERNMENT GAZETTE**

**EXTRAORDINARY  
PUBLISHED BY AUTHORITY**

Dated Gangtok, Monday, 26th May, 1997

No. 90

GOVERNMENT OF SIKKIM  
FOREST DEPARTMENT  
( WILDLIFE CIRCLE )  
DEORALI-737102  
GANGTOK

No. 1/KNP(WL)/F/27

Dated: the 19th May, 1997.

**NOTIFICATION**

Whereas in pursuance of sub-section (5) of section 35 of the Wildlife (Protection) Act, 1972 (53 of 1972), the Sikkim Legislative has passed a resolution for expansion of the Khangchendzonga (High Altitude) National Park declared by Notification No. 43 (9) Home/77 dated 26.8.1977 from the existing areas of 850 sq. kms. to 1784 sq. kms ;

Whereas in exercise of the powers conferred by sub-section (1) read with sub-section (2) of section 35 of the said Act, the State Government vide Sikkim Government Gazette, Extraordinary No. 69 dated 22.6.1996 has declared its intention to constitute the areas as per boundaries detailed hereunder as Khangchendzonga (High Altitude) National Park ;

And whereas after complying with the provisions of sub-section (3) of section 35 of the said Act, the period for preferring claims has elapsed;

Now, therefore, in exercise of the powers conferred by sub-section (4) of section 35 of the said Act and in supersession of Notification No. 43 (9) Home/77 dated 26.8.1977, the State Government hereby constitutes the following areas as per boundaries detailed hereunder as Khangchendzonga (High Altitude) National Park for the purpose of protecting, propagating or developing the Wildlife in this part of Sikkim by reasons of its ecological, faunal, floral geomorphological and zoological significance:-

**BOUNDARIES :**

**On the North :** Commencing from the point below Lhonak Peak on the Tibet boundary, proceeding along the upper edge of the South Lhonak Glacier and then following the Goma Chu, Langbo Chu, Lhonak Chu and ending up at the confluence of Lhonak Chu, and Zemu Chu near Zema-

**On the South:** Commencing from the Singalla Danda near Simana Pukhari on the Nepal boundary and proceeding along the Gomthang chu, Chokchurang chu upto the point where Paha Khola meets and proceeding upward along Paha Khola, crossing the Kasturi Lankabui Danda and following the Reli chu until it meets Reli chu and proceeding upward along it upto Neythang and then to Dare Himal to Rangdang chu and crossing it to reach Kayam chu and proceeding upward along it and meeting the existing boundary at Paki Lho, proceeding further along the tributary of Rangyong chu until it meets Naviangrum chu and proceeding upward along it and the tributary of Ringpi chu to meet it above Tolung Gumpa and proceeding along it upto Tsana and further along the Tolung RF boundary above Mayong, Lingza, Tinbong, Lik until it meets the tributary of Tolung chu near Pakel and proceeding upward along it until it meets the existing boundary and further passing through Ramon RF and ending up at Ningla.

On the East: Commencing from the point of confluence of Lhonak chu and Zomo chu, proceeding along the RF boundary upto the confluence of Zomo chu and Teesta River and then passing through the RF above Lachen, Bensol, Latong, Dengu, Yuigang until it meets the existing boundary above Dasey and proceeding along it and ending up at Ningla.

On the West: Commencing from the point below Lhonak Peak at South Lhonak Glacier on the Tibet boundary and then following it and the Nepal boundary, passing through Jomang Peak, Dome Khang, Rangpo Peak, Pyramid Peak and meeting the existing boundary at Tent Peak and proceeding further along it passing through Nepal Peak, The Twins, Mt. Khangchendzonga upto Kabri and proceeding further along the boundary passing through Rathong, Kokthang, and ending up near Simara Pokhari on the Singalila Dande.

2. This notification shall come into force with immediate effect.

P.K. BASNETT IFS  
Principal Chief Conservator of Forests-cum-  
Secretary to the Government of Sikkim,  
Forest Department.

( File No.1/KNP(WL)P-II )

**SIKKIM**



**GOVERNMENT** **GAZETTE**

EXTRAORDINARY  
PUBLISHED BY AUTHORITY

Gangtok, Friday, 27th November, 1998

No. 277

GOVERNMENT OF SIKKIM  
FOREST DEPARTMENT

No. 8078

Date: 23.98

NOTIFICATION

In exercise of the powers conferred by clause (4) of sub-section (7) of section 83 of the Sikkim Forest, Water Courses and Road Reserves (Preservation and Protection) Act, 1988 (6 of 1988), the State Government hereby makes the following rules to regulate the grant of rewards to informers and non-Gazetted officers in respect of offences reported, detected and acted upon by forest officers, namely:

- |   |           |   |
|---|-----------|---|
| <p>State Government</p>   | <p>1.</p> | <p>(1) These rules may be called the Sikkim Forest Department Reward Rules, 1998.</p> <p>(2) They shall come into force from the date of their publication in the official Gazette.</p>   |
| <p>State Government</p>   | <p>2.</p> | <p>Definitions:</p> <p>(a) "Act" means the Sikkim Forest, Water Courses and Road Reserves (Preservation and Protection) Act, 1988 (6 of 1988).</p> <p>(b) "Forest fire" means the outbreak of a fire on any forest land as defined in the Sikkim Forest, Water Courses and Road Reserves (Preservation and Protection) Act, 1988 (6 of 1988) or any other land covered with trees.</p> <p>(c) "Forest offence" means an offence punishable under the Sikkim Forest, Water Courses and Road Reserves (Preservation and Protection) Act, 1988 (6 of 1988) or any rules made thereunder.</p> <p>(d) "Informer" means any person furnishing information of the occurrence or impending occurrence of a forest offence.</p> <p>(e) "Offender" means any person who has committed a forest offence.</p> <p>(f) "Value" means the value as may be notified by the Government in respect of forest produce.</p> |
| <p>Any person or persons furnishing information leading to or otherwise contributing to the booking of forest offence and/or successful penal action against the offenders, may be granted a reward, to be authorised by the Divisional Forest Officer which shall be paid in cash, to the extent of 2% of the value of the produce involved in the offence. In case of auctioning or compounding of the produce, 1% of the proceeds shall be granted to informer as reward after authorisation by the Divisional Forest Officer.</p> | <p>3.</p> |   |
| <p>Non-Gazetted government officials who apprehend forest offences shall be granted rewards to the extent of 2% of the value of the produce or 1% of the proceeds of compounding or auctioning after authorisation by the Conservator of Forests or 10% of the proceeds of compounding or auctioning after authorisation by an officer not below the rank of Additional Chief Conservator of Forests.</p>   | <p>4.</p> |   |
| <p>Incentive rewards for forest fire prevention.</p>  | <p>5.</p> | <p>Incentive rewards for preventing forest fire shall be granted upto Rs. 200/- to any individual/individuals who render exceptionally good services in keeping a forest free from fire or suppressing fire.</p>  |
| <p>Rewards to Government</p>  | <p>6.</p> | <p>The Government may grant a reward to any individual contributing to the booking and/or disposal of any forest offence by displaying exemplary courage or who gets injured in the course of duties relating to apprehension of offenders under the forest Act or any rules made thereunder, if the reward exceeds the delegated powers under these rules.</p>   |
| <p>Rewards not to be claimed as a matter of right.</p>  | <p>7.</p> | <p>(1) The rewards under these rules are discretionary and cannot be claimed as a matter of right.</p> <p>(2) No appeal shall lie against any authority or any reward made by the authority competent to make reward under these rules.</p>   |

Secretary to the Government of Sikkim  
Forest Department  
(File No. 21200/1796-98)

R.H. Khwaja  
Joint Secretary

तार :  
Telegram : PARIYAVARAN,  
NEW DELHI  
दूरध्वनि :  
Telephone:  
E-Mail Address :

भारत सरकार  
पर्यावरण एवं वन मंत्रालय  
GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT & FOREST  
पर्यावरण भवन, सी. जी. ओ. कॉम्प्लेक्स  
PARIYAVARAN BHAVAN, C.G.O. COMPLEX  
लोदी रोड, नई दिल्ली-110003  
LODHI ROAD, NEW DELHI-110003

No. J-2.016/76/91-BR

7<sup>th</sup> February, 2000

To

The Chief Secretary  
Government of Sikkim  
Tashiling Secretariat  
Gangtok, Sikkim

Subject: Establishment of Biosphere Reserve in Kanchenjunga areas in Sikkim.

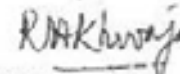
Sir,

A project document for designating Kanchenjunga area as a Biosphere Reserve (BR) was prepared by the State Government of Sikkim. Having considered the project document in accordance with the guidelines issued by Government of India in this regard, Government of India have decided to designate the proposed Kanchenjunga area as a BR.

2. The BR will be deemed to have come into being with effect from the date of issue of this notification.
3. The total area of the BR is 2619.92 sq. Km. Out of this, an area of 1784 sq. Km. forming Kanchenjunga National Park and 835.92 sq. Km. Around this Park will comprise the core and buffer zones respectively. The details of the area to be earmarked for manipulation activities such as forestry, agriculture, ecorestoration, agroforestry etc. Will be worked out by the project authorities. The details of the boundary and zonation are given in Annexure - I.
3. The following will be important aspects of the Kanchenjunga BR.
  - (a) The core and buffer zone and manipulation activities which may be permitted in the buffer zone will be in conformity with general guidelines for management of biosphere reserves.
  - (b) The core zone of the BR will be kept absolutely undisturbed.

- (c) The constitution of the BR by itself will not in any way change the status of legal ownership of land and forests nor affect the rights of tribals and local people in any way.
- (d) State Government will constitute a Biosphere Reserve Management Committee at the state level in accordance with the guidelines for ensuring scientific management of the BR.
- (e) Government of India will provide financial assistance for approved items of expenditure included in the Management Action Plan to be prepared by the Government of Sikkim.
- (f) The Government of Sikkim will set up a local committee for coordination of the activities of the various departments in the BR area.
- (g) The Government of Sikkim will nominate an officer as Director of the BR. He/She may be an existing functionary who may not necessarily be an exclusive functionary for this purpose.

Yours faithfully,



(R.H. KHWAJA)

Joint Secretary to the Govt. of India

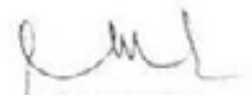
New Delhi

Dated 07.02.2000

Encl. As stated

Copy to

- 1 Secretary, Planning Commission, GOI
- 2 Chief (Science), Planning Commission, GOI
- 3 Secretary, Department of Forests, Govt. of Sikkim, Gangtok
- 4 Secretary, Department of Environment, Govt. of Sikkim, Gangtok.
- 5 Chief Conservator of Forests, Govt. of Sikkim, Gangtok
- 6 Chief Wildlife Warden, Govt. of Sikkim, Gangtok.
- 7 Shri Pradeep Kumar Rawat, Deputy Secretary (China), Ministry of External Affairs, New Delhi-110 001



(DR. R.K. RAI)  
JOINT DIRECTOR

**ANNEXURE - 4**

**GENERAL DESCRIPTION OF THE BOUNDARY - KANGCHENDZONGA BIOSPHERE RESERVE**

The 'western limit of Biosphere Reserve follow the India-China boundary in the Lhonak valley in North Sikkim and India-Nepal boundary in West Sikkim. The northern limit follow the boundary of the notified Khangchendzonga National Park upto the confluence of Gomti Chu and Naku Chu and includes Langnak La and the area west of Tunpu. In the east, it is bounded by the areas west of Teesta River from Thangu to Toong and in the south, it includes the reserved forests above Toong, Tholing valley, Hee, Taryang, Karchi, Yulsom, Lapdang, Khochopain, Chhange upto Singaita Range covering the catchment areas of Ringyong, Monmu, Kayam, Relli, Prek, Rimbi and Kalej rivers and streams.

**THE CORE ZONE**

The Khangchendzonga High altitude National Park forms the Core Zone of the Biosphere Reserve. The western limit of Core Zone follow the India-China boundary in the Lhonak valley in North Sikkim and India-Nepal boundary in West Sikkim. In the North, East and South, the boundary limits will be in accordance with the State Government's Notification No. 1/KNP(WL)/27 dated 19 May, 1997 in respect of the Khangchendzonga National Park. The area of the Core Zone is 1784.00 sq. Km.

**BUFFER ZONES:**

**BUFFER ZONE - I :** Portions of Lhonak valley (Trans-Himalayan Zone - cold desert area) which is the part of the catchment area of Lhonak Chu, a tributary of Teesta River. It is bounded by Langnak La Ridge in the North, Teesta River in the East, Zemi in the South, Naku Chu and Lhonak Chu in the West. Buffer Zone - I lies between latitude 27 45' and 27 57' North and longitude 88 20' and 88 34' East.

The area of the Buffer Zone - I is 154.48 sq. Kms.

**BUFFER ZONE - II :** Areas West of Chungtang Valley and Teesta River from Lachen Ridge to Paki outside the Core Zone. Buffer Zone - II lies between latitude 27 32' and 27 45' North and longitude 88 30' and 88 40' East.

The area of Buffer Zone - II is 55.29 sq. Kms.

**BUFFER ZONE - III :** Portions of Tholing Valley in the Dzoong Watershed area, catchment area of Tholing Chu. Buffer Zone - III lies between latitude 27 35' and 27 40' North and longitude 88 25' and 88 30' East.

The area of Buffer Zone - III is 29.37 sq. Kms.

**BUFFER ZONE - IV :** The western limit of Buffer Zone - IV follow the India-Nepal boundary. The northern boundary is the Core Zone of the Biosphere Reserve while the eastern limit is bounded by the RF boundaries of Hee and Taryang. The southern limit follow RF boundaries of Chhange, Khochopain, Yulsom, Lapdang, Karchi and the northern boundary of Maesom wildlife Sanctuary. Buffer Zone- IV includes the principal catchment areas of Ringyong Chu, Monmu Chu, Kayam Chu, Relli Chu, Prek Chu, Rimbi Khola and Kalej Khola which form the tributaries of five main rivers of Sikkim - Teesta and Rangit Rivers.

The area of Buffer Zone - IV is 596.78 sq. Kms.

**DELINEATION AND TOTAL AREA OF VARIOUS ZONES**

(a)	Area of Core Zone - Khangchendzonga National Park	1784.00 sq. Kms.
(b)	Area of Buffer Zones - Buffer Zone - I Buffer Zone - II Buffer Zone - III Buffer Zone - IV	154.48 sq. Kms. 55.29 sq. Kms. 29.37 sq. Kms. 596.78 sq. Kms.
	Total of Buffer Zones area	1336.92 sq. Kms.
	Total area of the Biosphere Reserve	3120.92 sq. Kms.



GOVERNMENT OF SIKKIM  
DEPARTMENT OF FOREST, ENVIRONMENT AND WILDLIFE  
GANGTOK

No. 677/Env&WL

Dated: 29th April, 2008

NOTIFICATION

**RAJYA VAN SAMRAKSHAN EVAM PARYAVARAN PURASKAR**

1	GRAM PANCHAYAT	Rs. 5,000.00 and Prashasti Patra
2	GOVERNMENT SERVANT OF ANY RANK/AGENCY (INCLUDING PRIVATE/PUBLIC SECTOR AGENCIES)	Rs. 5,000.00 and Prashasti Patra
3	VOLUNTARY AND NON-GOVERNMENT ORGANIZATION	Rs. 5,000.00 and Prashasti Patra

**DECLARATION AND DISTRIBUTION OF AWARDS**

The Minister for Forests, Environment and Wildlife, shall declare the awardees before 15th August every year. The Chief Minister of Sikkim will award them on 15th August. These awards will be given every year to promote and develop Forestry, Environment and Wildlife and their conservation, preservation and protection in the State during the Harth Kranti (2000-2010). The process of giving such awards shall continue indefinitely beyond 2010.

**SELECTION COMMITTEE**

**A. STATE LEVEL**

- |   |   |                  |
|---|---|------------------|
| 1. Minister for Forests, Environment and Wildlife | - | Chairman         |
| 2. Civil Secretary                                | - | Vice Chairman    |
| 3. Development Commissioner                       | - | Member           |
| 4. Secretary Finance                              | - | Member           |
| 5. PCCF-Secretary-cum-Chief Wildlife Warden       | - | Member Secretary |
| 6. Chief Conservator of Forests                   | - | Member           |

**B. DISTRICT LEVEL**

- |  |   |                  |
|--|---|------------------|
| 1. Divisional Forest Officer (Territorial)     | - | Chairman         |
| 2. Divisional Forest Officer (LJ & E)          | - | Member           |
| 3. District Development Officer                | - | Member           |
| 4. Divisional Forest Officer (Social Forestry) | - | Member Secretary |

Members from the Districts shall be appointed by the Minister, Sikkim of the State Level Committee.



### LAST DATE OF APPLICATION AND NOMINATION

Application forms will be made available from April in form of the following year and all the nominations should reach to the Member Secretary, State Level Selections Committee from the District Level Committee latest by 15th June of the year. These Awards would be for the performance made during the previous years.

### BACKGROUND:

The situation in the Himalayan belt in particular is one of extreme concern as the entire ecosystem is facing widespread degradation. Sikkim situated as it is in the Eastern Himalayas has a predominant role to play in maintaining the ecological balance of a very fragile ecosystem. Due to the geological character of the region and the fact that all major river systems originate in this region, it is imperative on our part to ensure that the green cover is not only preserved but also rapidly expanded. "Nature has enough for everybody's need but not for everybody's greed". In this race to obtain raw materials, full use is being made of the earth and its precious elements like forests and other natural resources. Today the situation is such that forests are rapidly disappearing from the earth. Because of this, people especially in the rural areas are facing acute shortage of firewood and raw materials. Climate changes, increase in the fragility of ecosystems, soil erosion and air pollution, pose a serious threat to the very survival of humankind. That is why, it is now being rapidly appreciated that we must not only protect the disappearing forests but also bring more areas under green cover for the rapid growth of forests in the world.

Therefore, a new Forests Policy, 1988 had been recently adopted. People's forestry needs are to be strengthened for meeting their various requirements. The involvement of Panchayats, Non-Government Organizations (NGOs) and other public-private enterprises has become a need of the day.

This purpose may be achieved to a large extent by giving awards to appreciate and to encourage efforts of Panchayats, communities, individuals and NGOs who have practical and result oriented contribution to the development, conservation, protection and preservation of Forests, Wildlife and Environment in the State. Through this, we may also establish a model for socio-economic development in the State through forestry by generating more employment for the rural unemployed and by providing an effective linkage between the people and the Forests, other government departments / local voluntary organizations working in this direction.

**GRAM PANCHAYAT****Rs. 5,000.00 + PRASHASTI PATRA**

Gram Panchayat is a well-recognized entity since ancient times. Gandhi had stressed the vital role of the village Panchayat as the most important socio-economic and political unit in social and economic development. Panchayat in a sense represents village Republic of India. Implementation of any community oriented development in the country requires association or close relation with the existing administrative organization at the local, intermediate and still higher level be it a village, block or a district. Programs of social forestry and wasteland development are to great extent community based activities. In this endeavor Panchayats will have a greater share of responsibility to act as leaders in taking up the programs and to help other concerned agencies i.e. State Forest Department and the voluntary agencies in raising village wood-lots and help in promotion of afforestation works with sincerity and zeal. Panchayats have much potential to exhibit their control over village resources for their augmentation. They can help in creating a symbiotic relationship between the people and the forests.

Although, the people's movement has gained momentum through Joint Forest Management & Watershed Development Programmes, the need to further encourage such movement is a much-felt need today. Therefore, the movements emanating from these efforts and meeting requirements at the local level would be encouraged by awards and appreciation from the government.

**CRITERIA FOR SELECTION:**

1. Co-operation provided to the Forest Department in the implementation of various forestry programmes / schemes
2. Creation of awareness among the public
3. Women's participation in protection / conservation of forests, wildlife and environment
4. Area afforestation by Panchayat on community / private land
5. Good survival percentage of seedlings over last three years.
6. Soil conservation work, watershed management.
7. Reporting of illicit felling, illicit movement of Forest produce, and any other related offence
8. Reporting of encroachment cases in forest areas
9. Co-operation provided to Forest Department in checking the Forest offences
10. Co-operation provided to the Forest Department in extinguishing forest fire and in time of any natural calamity
11. Raising of seedlings / orchard / medicinal plants (bamboos, bay leaf tree)
12. Fuelwood and fodder plantation taken up.

13. Establishing people's nurseries
14. Social fencing of community wood-lots and pasture land
15. Achievements of Joint Forest Management
16. Achievement of Watershed Development Programmes
17. Achievement in the field of wildlife issues.

**11. GOVERNMENT SERVANT OF ANY RANK / AGENCY  
(INCLUDING PRIVATE / PUBLIC SECTOR AGENCIES)**

**Rs. 5,000.00 + PRASHASTI PATRA**

The Forest service is the natural agency to undertake forestry works. It usually has an already existing organisational infrastructure in the rural areas. It also has the greatest store of knowledge about many of the critically important technical aspects of tree growing. Particularly, in areas where there are difficult growing conditions, the advice of the trained forestry personnel will be needed to ensure that the correct decisions are made. Forestry officials are well trained in forest protection and conservation. Professional forestry expertise is particularly necessary where growing conditions are difficult and technical problems likely to arise. Mounting farm and community forestry programme like Joint Forest Management and Watershed Development Programme in these circumstances without the full support and collaboration of trained and experienced people would be very difficult indeed. In places where relations between Forest officers and rural people are poor, it may be worth considering establishing independent extension service, through working in collaboration with Forest department. Other Government agencies working in rural areas have also great potential to help the forestry and related activities. The Government agencies and Private / Public sector agencies working at district level should only be considered for such awards.

**CRITERIA OF SELECTION:**

1. Afforestation area target (last three years)
2. Survival Percentage of plantation (last three years)
3. Involvement of community in afforestation programme, Joint Forest Management and Watershed Development Programme
4. Plantation on private / community land
5. Identification of waste land for future afforestation programme
6. Protection of young plants
7. Protection and conservation of natural forests
8. Threat on educating public on forestry programme
9. Environmental education to public
10. Afforestation in urban areas
11. Collection of specimens

**BRIFEFIVE**

12. Implementation of Forest (Conservation) Act, 1980 (cases dealt with)
13. Implementation of Sikkim Forest Act (cases dealt with - Last three years)
14. Environment and Pollution control Act (cases dealt with - Last three years)
15. Wild Life Act (cases dealt with - Last three years)
16. Achievement in the field of wildlife issues
17. Experience of Environmental Impact Assessment
18. Trainings / Seminars / Workshops attended on Forestry and related fields
19. Publications on forestry and related fields
20. Number of cases of illicit felling detected and prevented
21. Number of cases of illicit movement of forests produce detected, compounded and person charge sheeted
22. Maintenance of Nurseries, number of seedling raised and their quality
23. Seedlings distributed to the public Free of cost or on payment bases and number of seedlings purchased from public
24. Forests fire detected and Action taken
25. Number of cases of encroachment detected (total area), Area seized and cases registered
26. Any other achievement not covered above

**III. VOLUNTARY AND NON GOVERNMENT ORGANISATIONS**

**Rs. 5,000.00 + PRASHASTI PATRA**

Even in the best of circumstances, the Government agencies have certain inbuilt disadvantages when it comes to implement community oriented programmes. Voluntary organisations are well set to assist in the implementation of such programmes and can motivate people to bridge the gap often existing between the local community and the Forest Department. Non Government organisations can act as an important communication channel both upwards and downwards and may help in the institutionalisation of community forestry. Such an intermediary role can be an extremely important one. The non-government organisations have the ability, resources, personnel and credibility amongst the people and government to play their role of go-between effectively.

**CRITERIA OF SELECTION:**

1. Co-operation provided to the Forest Department and the people in the implementation of various afforestation programmes
2. Extension / Awareness camps / Workshops / seminars organised including number of participants (including women) in the field of forestry, wildlife, environment, soil conservation and other related fields
3. Reporting of illicit fellings and movement of forest produce
4. Reporting of encroachment cases

5. Achievement in the field of wildlife issues
6. Co-operation provided in case of forest fire and natural calamity
7. Afforestation programme taken up on community land, urban areas, Churches, Schools, etc.
8. Soil and moisture conservation measure taken up
9. Work done with regard to social/vegetative fencing of community wood lots and pastureland
10. Details of Grants-in-aid obtained from government/other sources
11. Publications, write-ups / photographs etc. relating to Forestry and environment in the State
12. Contribution for establishment and Development of Joint Forest Management in the State

The Award is to be given in recognition of outstanding works done in the above fields. The work done over a period during last three years will be considered. Those who receive the Award once, may not be eligible in general again. The Award would be an exceptional contribution in the field of afforestation and other Forestry Development Programmes in the State of Sikkim.

PCC/Secy Forests-cum-Chief Wildlife Warden  
Department of Forests, Environment & Wildlife  
Government of Sikkim, Gangtok

**RAJYA VAN SAMRAKSHAN  
EVAM  
PARYAVARAN PURASKAR**

by  
**DEPARTMENT OF FORESTS, ENVIRONMENT AND WILDLIFE  
GOVERNMENT OF SIKKIM**

**PROFORMA FOR NOMINATION**

NAME OF NOMINEE	
ADDRESS OF NOMINEE	
LOCATION OF WORK DONE	
ACHIEVEMENTS AS PER SELECTION CRITERIA (To be submitted by nominee in separate enclosure)	

Place: \_\_\_\_\_

Date: \_\_\_\_\_

Nominee's signature

**A. Observations and Recommendations of District Level Selection Committee:**

---

---

---

---

---

---

---

Chairman and Members Signature:

**B. Observations and Recommendations of State Level Selection Committee:**

---

---

---

---

---

---

---

Chairman and Members Signature:

PC-1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/16/17/18/19/20/21/22/23/24/25/26/27/28/29/30/31/32/33/34/35/36/37/38/39/40/41/42/43/44/45/46/47/48/49/50/51/52/53/54/55/56/57/58/59/60/61/62/63/64/65/66/67/68/69/70/71/72/73/74/75/76/77/78/79/80/81/82/83/84/85/86/87/88/89/90/91/92/93/94/95/96/97/98/99/100/101/102/103/104/105/106/107/108/109/110/111/112/113/114/115/116/117/118/119/120/121/122/123/124/125/126/127/128/129/130/131/132/133/134/135/136/137/138/139/140/141/142/143/144/145/146/147/148/149/150/151/152/153/154/155/156/157/158/159/160/161/162/163/164/165/166/167/168/169/170/171/172/173/174/175/176/177/178/179/180/181/182/183/184/185/186/187/188/189/190/191/192/193/194/195/196/197/198/199/200/201/202/203/204/205/206/207/208/209/210/211/212/213/214/215/216/217/218/219/220/221/222/223/224/225/226/227/228/229/230/231/232/233/234/235/236/237/238/239/240/241/242/243/244/245/246/247/248/249/250/251/252/253/254/255/256/257/258/259/260/261/262/263/264/265/266/267/268/269/270/271/272/273/274/275/276/277/278/279/280/281/282/283/284/285/286/287/288/289/290/291/292/293/294/295/296/297/298/299/300/301/302/303/304/305/306/307/308/309/310/311/312/313/314/315/316/317/318/319/320/321/322/323/324/325/326/327/328/329/330/331/332/333/334/335/336/337/338/339/340/341/342/343/344/345/346/347/348/349/350/351/352/353/354/355/356/357/358/359/360/361/362/363/364/365/366/367/368/369/370/371/372/373/374/375/376/377/378/379/380/381/382/383/384/385/386/387/388/389/390/391/392/393/394/395/396/397/398/399/400/401/402/403/404/405/406/407/408/409/410/411/412/413/414/415/416/417/418/419/420/421/422/423/424/425/426/427/428/429/430/431/432/433/434/435/436/437/438/439/440/441/442/443/444/445/446/447/448/449/450/451/452/453/454/455/456/457/458/459/460/461/462/463/464/465/466/467/468/469/470/471/472/473/474/475/476/477/478/479/480/481/482/483/484/485/486/487/488/489/490/491/492/493/494/495/496/497/498/499/500/501/502/503/504/505/506/507/508/509/510/511/512/513/514/515/516/517/518/519/520/521/522/523/524/525/526/527/528/529/530/531/532/533/534/535/536/537/538/539/540/541/542/543/544/545/546/547/548/549/550/551/552/553/554/555/556/557/558/559/560/561/562/563/564/565/566/567/568/569/570/571/572/573/574/575/576/577/578/579/580/581/582/583/584/585/586/587/588/589/590/591/592/593/594/595/596/597/598/599/600/601/602/603/604/605/606/607/608/609/610/611/612/613/614/615/616/617/618/619/620/621/622/623/624/625/626/627/628/629/630/631/632/633/634/635/636/637/638/639/640/641/642/643/644/645/646/647/648/649/650/651/652/653/654/655/656/657/658/659/660/661/662/663/664/665/666/667/668/669/670/671/672/673/674/675/676/677/678/679/680/681/682/683/684/685/686/687/688/689/690/691/692/693/694/695/696/697/698/699/700/701/702/703/704/705/706/707/708/709/710/711/712/713/714/715/716/717/718/719/720/721/722/723/724/725/726/727/728/729/730/731/732/733/734/735/736/737/738/739/740/741/742/743/744/745/746/747/748/749/750/751/752/753/754/755/756/757/758/759/760/761/762/763/764/765/766/767/768/769/770/771/772/773/774/775/776/777/778/779/780/781/782/783/784/785/786/787/788/789/790/791/792/793/794/795/796/797/798/799/800/801/802/803/804/805/806/807/808/809/810/811/812/813/814/815/816/817/818/819/820/821/822/823/824/825/826/827/828/829/830/831/832/833/834/835/836/837/838/839/840/841/842/843/844/845/846/847/848/849/850/851/852/853/854/855/856/857/858/859/860/861/862/863/864/865/866/867/868/869/870/871/872/873/874/875/876/877/878/879/880/881/882/883/884/885/886/887/888/889/890/891/892/893/894/895/896/897/898/899/900/901/902/903/904/905/906/907/908/909/910/911/912/913/914/915/916/917/918/919/920/921/922/923/924/925/926/927/928/929/930/931/932/933/934/935/936/937/938/939/940/941/942/943/944/945/946/947/948/949/950/951/952/953/954/955/956/957/958/959/960/961/962/963/964/965/966/967/968/969/970/971/972/973/974/975/976/977/978/979/980/981/982/983/984/985/986/987/988/989/990/991/992/993/994/995/996/997/998/999/1000

GOVERNMENT OF SIKKIM  
DEPARTMENT OF FORESTS, ENVIRONMENT AND WILDLIFE

No. 421/Env. & WL.

Dated the 27th Jan., 2001.

NOTIFICATION

In exercise of the powers conferred by section 54 of the Sikkim Forests, Water Courses and Road Reserve ( Preservation and Protection ) Act, 1980 ( 6 of 1980 ), the State Government hereby makes the following rules, namely :-

- Short title, extent and commencement. 1. (1) These rules may be called the Sikkim Forests Cattle Trespass Rules, 2000.  
(2) They shall extend to the whole of Sikkim  
(3) They shall come into force on the date of their publication in the Official Gazette.
- Definition 2. (1) In these rules, unless the context otherwise requires:-  
(a) " Act " means the Sikkim Forests, Water Courses and Road Reserve ( Preservation and Protection ) Act, 1980;  
(b) " agent " means and includes relative, shepherd, servant or any person who tends cattle on behalf of the owner;  
(c) " cattle " means the cattle as defined under the Act;  
(d) " Conservator of Forests " means an officer of that designation in the Government in charge of territorial functions;  
(e) " contingency advance " means an amount of money to be provided for each cattle pound as an advance to cover the cost of maintaining such number of cattle as may be determined and fixed by government, by notification, from time to time;  
(f) " Divisional Forest officer " means the officer of that designation in the Government who is responsible for implementation of all forest acts in the places of seizure and impounding of cattle;
- K. L. Saha*

- 2 -

- (g) "feeding schedule" means the hours of feeding as may be fixed by Government by notifications.
- (h) "Form" means the form appended to these Rules.
- (i) "Forest Officer" means the Forest Officer as defined under the Act.
- (j) "grazing" includes eating, browsing, consuming or in any way destroying any plant life whether natural or artificially planted, irrespective of the type of plant or its numbers.
- (k) "maintaining" includes feeding, watering, medication administered, expenditure on transportation and any other expenses incurred towards the well-being of the cattle.
- (l) "Principal Chief Conservator of Forests" means an officer of that designation in the Government in charge of territorial functions.
- (m) "Range Officer" means the officer of that designation in the Government who is responsible for implementation of all forest acts in the places of seizure and impounding of cattle.
- (n) "scientific lines" means proper facilities for care of the animal(s) so that they are not put to any distress.
- (o) "unauthorized" means not permitted or carried out in an area closed for it by Government.
- (2) words and expressions used herein but not defined defined shall have the meanings respectively assigned to them in the Act.

Cattle pounds.  
to be estab-  
lished

The Principal Chief Conservator of Forests shall establish cattle pounds within the territory of Sikkim wherever he shall deem it necessary to do so in the interest of protection of forests from unauthorized grazing. The cattle pounds shall be established on scientific lines with suitable plans for resting and feeding of cattle within forest land or land acquired by the Forest, Environment and Wildlife Department.

Appointment  
of Pound  
Keeper.

4. The State Government shall appoint a Pound Keeper for such number of cattle heads as may be determined and notified by the Government to look after the impounded cattle and the cattle pound. All Pound Keepers shall

*Attam*



- 3 -

he deemed to be public servants within the meaning of section 21 of the Indian Penal Code, 1860.

- Cattle to be seized

5. Cattle found to be entering or grazing on reserved forest lands, plantation areas or any other land closed for grazing under the Act or any other Forest or Wildlife laws for the time being in force in Sikkim shall be seized and dealt with by the forest officer ( hereinafter called impounding officer ).
- Seizure Memo to be prepared

6. The impounding officer shall prepare a seizure memo for cattle in Form A for the cattle seized by him and supply a copy of it to its owner or his agent.
- Cattle to be Taken to Cattle Pound

7. He shall then take the cattle to the nearest cattle pound established under rule 3 within twenty-four hours of the seizure.
- Cattle to be handed over to Pound Keeper

8. On reaching the cattle pound, the impounding officer shall hand over the cattle seized by him under rule 5 to the Pound Keeper in Form 1 who shall confine them in the cattle pound.
- Impounding Officer to maintain Feeding Schedule

9. The impounding officer shall maintain the feeding schedule for all cattle seized by him from the time of its seizure till they are handed over to the safe custody of the Pound Keeper as provided under rule 8.
- Cattle Details Register

10. Every Pound-Keeper shall keep a cattle details register ( hereinafter referred to as CR ) containing pages that are serially numbered and certified by the Divisional Forest Officer.
- Pound Keeper to enter cattle Details

11. (1) When cattle are brought to a pound, the Pound Keeper shall enter in the CR the following details namely:-

  - (a) the number and description of the animals
  - (b) the day and hour on and at which they were so brought, and
  - (c) the name and residence of the owners, if known.

(2) The Pound Keeper shall give a copy of the entry to the owners or their agents.

*[Signature]*

- 4 -

- Pound Keeper to look after impounded cattle** 12. The Pound Keeper shall take charge of feed and water the cattle until they are disposed off as hereinafter directed and for this purpose he shall keep a cattle feeding register in which he shall make entries of feeds and watering administered to the impounded cattle. The owner of the cattle may, if he so wishes, visit the cattle pound at the times of feeding and watering of his cattle and if he is not satisfied as to the proper feeding of the cattle, register a complaint to the Range Officer having territorial jurisdiction of the place of location of the cattle pound.
- Procedure on receiving complaint of improper care of cattle** 13. The Range Officer shall on receiving the complaint as provided for under rule 12, make an enquiry and submit a report to the Divisional Forest Officer who shall proceed to take action against the Pound Keeper under the Sikkim Government Servants' Conduct Rules, 1961, if he has been found to be negligent in maintaining the feeding schedule.
- Provided that any officer not below the rank of a Block Officer having territorial jurisdiction in the place of location of the cattle-pound may, if he finds that the Pound Keeper has not been maintaining the feeding schedule, make a report to the Divisional Forest Officer who shall then initiate action as provided for above.
- Feeding details to be made public** 14. The Pound keeper shall make known through a public notice to be prominently displayed, the rates of the feed as well as the feeding schedule to be followed.
- Contingency advance to be provided** 15. The Government shall provide a contingency advance to every cattle pound established under rule 3 to cover the expenditure towards maintenance of the pound and cattle which shall be under the charge of the Divisional Forest Officer.

*W. H. ...*

- 5 -

Impounding  
Officer to  
make report  
to Range  
Officer and  
procedure  
thereof.

16. The Impounding officer shall make a report of the seizure and impounding of cattle in Form C to the Range Officer with a copy to the Divisional Forest Officer at the earliest but not later than thirty-six hours of impounding the cattle under rule 8 who shall proceed as follows :-

The Range Officer shall :

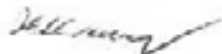
- (a) if the cattle is involved in an offence of grazing in a reserved forest, either prosecute the owners of the cattle in Form F of the Sikkim Forests (Compounding of Offences) Rules, 1998 or forward the case to the Divisional Forest Officer for compounding under section 74 of the Act; or
- (b) if the cattle is involved in an offence of grazing in an area closed by the Government for grazing under section 25 or 32 of the Act, levy for each head of cattle such fine as may be fixed by the government by notification from time to time under sub-section (1) of section 53 of the Act.

Range Officer  
to release  
cattle on  
bond or  
after pay-  
ment of  
fine

17. (1) In case the Range Officer proceeds to prosecute the owner as provided for in clause (a) of rule 17, then he may release the impounded cattle on the execution by the owner of a bond in Form D for the production of the cattle if and when required before the Magistrate having jurisdiction to try the offence on account of which the seizure had been made :

Provided that if the owner refuses to execute such bond within the period as mentioned at rule 19, the Range Officer shall write to the Magistrate stating this and obtain his permission to put the cattle to auction and deposit the money so obtained in the form of a security which shall be forfeited to the Government if the owner is adjudged guilty of the offence for which his cattle were seized.

(2) In case the Range Officer proceeds to compound the offence or levy a fine as provided under clause (b) of rule 17, he shall release the cattle after the compensation or the fee and such other charges charges



Contd. 6.

- 6 -

as are leviable under these rules, is received by him from the owner of the impounded cattle.

Provided that the owner or his agent, on taking back the cattle, shall sign a receipt for them in the register kept by the Range Officer for the purpose and which shall contain all the details pertaining to the cattle to be released which have been entered in the CDR.

Maximum period of impounding

18. No cattle shall be impounded under these rules for a period of more than seven days from the date of their being impounded.

Procedure for unclaimed cattle

19. If the impounded cattle is not claimed within forty-eight hours of their impounding as provided under rule 8, the Pound Keeper shall report the fact to the Range Officer who shall paste a notice in a conspicuous part of his office, the office of the District Collector and the office of the Divisional Forest Officer as well as announce it by beating of drums in the village or market place closest to the place of seizure of the cattle. The notice shall state :-

- (a) the number and description of the cattle;
- (b) the place where they were seized;
- (c) the place where they are impounded and
- (d) the date of seizure.

Unclaimed cattle to be disposed of

20. If the cattle is not claimed within five days from the date of notice made under rule 19, the Range Officer shall dispose of the cattle by open public auction and deposit the proceeds in Government revenue.

Procedure when cattle owner refuses to pay compensation or fine.

21. If the owner of the cattle or his agent appears and refuses or omits to pay or deposit the fees or compound the offence, the Range Officer shall proceed to dispose off the cattle as provided for under rule 20 after the expiry of seven days from the date of impounding of the cattle and after obtaining a



- 7 -

permission in writing of the Divisional Forest Officer, in Form E in duplicate, one copy of which shall be served upon the owner or if he refuses to accept it, be posted in a conspicuous place in the cattle pound.

- |   |  |
|---|--|
| Cattle owner to reimburse the cost of maintenance | 22. The owner of the cattle impounded or his agent shall reimburse the cost of maintaining his cattle in the cattle pound and the same shall be deposited by him in cash to the Range Officer.   |
| Procedure in respect of diseased cattle           | 23. Cattle which are found to be diseased or injured shall be kept separately in the cattle pound and an application shall be made in Form F to the Veterinary Officer within twelve hours by the Pound Keeper.  |
| Cattle not to be impounded except under rules     | 24. The Pound Keeper or any forest officer shall not impound cattle or dispose of impounded cattle except under the provision of these rules.  |
| Appellate Authority                               | 25. If any person is aggrieved by the seizure and impounding of his cattle under these rules, he may he may prefer an appeal in writing to the Conservator of Forests, within seventy-two hours of impounding of his cattle, who shall dispose of the appeal within forty-eight hours. The order passed by him shall be final. |
| Power of Government to amend rules.               | 26. The Government if it deems expedient and necessary so to do, may, by notification to be published in the Official Gazette, make amendments to the provisions of these rules.   |



( T.R.SHARMA ) IFS  
SECRETARY

FORESTS, ENVIRONMENT AND WILDLIFE DEPARTMENT  
File No.20/87C



GOVERNMENT OF SIKKIM  
OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR FORESTS  
GANGTOK

No. 114/2018/-94/20

Date 03.05.2001

N O T I F I C A T I O N

In supersession of the Department's Notification No. 124/KNF/2000 dated 01.05.2000 the State Government is in accordance with the provisions of the Wildlife (Protection) Act, 1972 (as amended upto 1993), pleased to revise the entry and other related fees chargeable to mountaineers, trekkers and other visitors including travel operators, guides, porters and pack animals in the Khangchendzonga (High Altitude) National Park and Wildlife Sanctuaries within Sikkim in the following manner with effect from 01.06.2001.

**I. ENTRY FEES IN THE KHANGCHENDZONGA (HIGH ALTITUDE) NATIONAL PARKS:**

1.	INDIANS	(i)	Rs. 150/- per head for first 7 days.
		(ii)	Rs. 25/- per head per day for additional days.
2.	FOREIGNERS	(i)	Rs. 250/- per head for first 7 days.
		(ii)	Rs. 50/- per head per day for additional days.
3.	STUDENTS		
	(a) Indians	(i)	Rs. 25/- per head for first 7 days.
		(ii)	Rs. 15/- per head per day for additional days.
	(b) Foreigner	(i)	Rs. 50/- per head for first 7 days.
		(ii)	Rs. 25/- per head per day for additional days.
4.	Local Guides and Porters with the team.		Rs. 10/- per head per day.
5.	Pack animals		Rs. 5/- per animal per day.
6.	Tent Pitching charge		Rs. 25/- per tent per day.

**II. ENTRY FEES IN THE WILDLIFE SANCTUARIES (WLS):**

1.	INDIANS	(i)	Rs. 25/- per head per day.
2.	FOREIGNERS	(i)	Rs. 50/- per head per day.
3.	STUDENTS		
	(a) Indians	(i)	Rs. 15/- per head per day.
	(b) Foreigners	(i)	Rs. 25/- per head per day.
4.	Local Guides and Porters with the team.		Rs. 10/- per head per day.
5.	Pack Animals		Rs. 5/- per head per day.
6.	Tent Pitching Charge		Rs. 25/- per tent per day.



GOVERNMENT OF SIKKIM  
OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR FORESTS  
GANGTOK.

- 3 -

III. CAMERA OPERATING FEES IN THE NATIONAL PARK AND SANCTUARIES

1	Still Camera -	Rs. 10/- per Camera per day.
2	Video Camera -	Rs. 500/- per Camera per day.
3	Movie Camera -	Rs. 2000/- per Camera per day.

IV. FILM MAKING FEES

	FOREIGNER		INDIAN	
	KNP	WLS	KNP	WLS
1	Feature Film ( one at a time )	50,000/-	25,000/-	10,000/-
2	Documentary Film ( one at a time )	20,000/-	15,000/-	5,000/-

( Film making fee is in addition to Camera operating fee ).

V. ACCOMMODATION IN THE WILDLIFE LOG HUTS ( SUBJECT TO AVAILABILITY )

1. Rs. 150/- per head per night.

STUDENTS

1. Rs. 50/- per head per night.

VI. CONCESSION : Mountaineering, and trekking expedition conducted through the local four itinerators, local guides and local porters will be given a concession of 20% on entry and tent pitching fees only for a period of two years.

VII. CONDITIONS :

- a) The team shall enter the National Park and the Wildlife Sanctuary with an appropriate ENTRY PERMIT obtainable in the Wildlife Circle of the Dept. or in the Wildlife Circle Post in each entry point.
- b) The team shall also ensure that necessary clearance for expedition in the restricted areas of Defence is obtained from the Ministries of Home Affairs and Defence of the Government of India and the State Home Dept.
- c) The team shall carry sufficient quantity of Kerosene oil and LPG for heating and cooking purposes and discourage use of firewood by members including members.
- d) The team members shall keep to the permitted route and places. The pack animals being used should be from any cattle diseases.
- e) The team shall ensure proper retrieval of garbage, poly bags, used tin, etc. from the camping sites and route and abstain from polluting rivets and streams with human and kitchen wastes.
- f) The team shall not enter with weapon which can decoy, injure, or kill an animal, indulge in hunting and poaching of wild animals, kindle fire or leave any fire burning.




GOVERNMENT OF SIKKIM  
OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR FORESTS  
GANGTOK.

- 3 -

destroy or remove or leave any fire burning, destroy or remove any wildlife, trees, signposts etc. in the protected area.

- g) The team shall have to apply in the form ( supplied ) any obtained permit for entry and other activity after paying necessary fees and shall also strictly adhere to the DO's and DON'Ts printed in the PERMIT.
- h) The team shall also respect to the mountains, lakes and the rocks, which are sacred to the local people and shall abide by the laws of the land.

  
( T. R. SHARMA ) IFS  
PRINCIPAL CCF - SECRETARY  
CUM  
CHIEF WILDLIFE WARDEN  
FILE NO. 124/KNP/098





**GOVERNMENT OF SIKKIM**  
**OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR FORESTS**  
**FOREST, ENVIRONMENT & WILD LIFE**  
**GANGTOK**

No. 23/ML/W, XIV, & ML

Date 4.9.2001

**NOTIFICATION**

Whereas it has been found expedient to delegate some of the powers and duties of the Chief Wildlife Warden, Government of Sikkim, under the Wildlife (Protection) Act, 1972 (as amended up to 1992) to some of his sub-ordinates under the said Act in the State of Sikkim,

Now, therefore, the Chief Wildlife Warden, Department of Forests, Environment and Wildlife, Government of Sikkim Gangtok, does delegate to the following Officers of the Department, subordinate to him, some of his powers and duties detailed hereunder against each of them under the said Act, and that those authorized officers will exercise those powers in the same manner and to the same effect as if each of them had been conferred directly by this Act and not by way of delegation.

To exercise the powers conferred by sub-section 2 of Section 5 of the Wildlife (Protection) Act, 1972 (as amended up to 1992) the delegation of powers and duties is made as under:-



**GOVERNMENT OF SIKKIM**  
**OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR FORESTS**  
**FOREST, ENVIRONMENT & WILD LIFE**  
**GANGTOK**

Ref. No. \_\_\_\_\_

Date \_\_\_\_\_

No.	Category of Posts	Provision of the said Act delegated
I	Forest Guard, Wildlife and Territorial	Power under clauses (a),(b)and (c) of sub-section(1),sub-section(3)and sub-section(3A) of section 50 and 35 Power of entry, search, arrest and detention
II	Block Officer, Wildlife and Territorial	Powers under clauses,sub-sections and sections of the said Act delegated to Forest Guard under the category of Posts I above Powers under section 33A -Immunization of Live Stock Powers under clauses (a),(b)and (c)of sub-section (1)of section 41-Inquiry and preparation of Inventories
III	Range Officer, Wildlife and Territorial	Powers under clauses, sub-sections and sections of the said Act delegated to Forest Guard under the category of Post I above and Block Officer under the category of post II above Powers under sub-section (6) and sections (8) of section 50-Power of entry, search, arrest and detention



**GOVERNMENT OF SIKKIM**  
**OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR FORESTS**  
**FOREST, ENVIRONMENT & WILD LIFE**  
**GANGTOK**

Ref. No. \_\_\_\_\_

Date: \_\_\_\_\_

IV	Assistant Conservator of Forests, Wildlife and Territorial	Powers under clauses, sub-sections and sections of the said Act delegated to Forest Guard under the category of Posts I above Block Officer, under the category of Posts II and Range Officer under the category of Posts III above. Powers under section 31- Prohibition of entry into Sanctuary with weapons Powers under sub-section (1) of section 39 Wild Animals etc. to be Government Property Powers under sub-section(2) of section 40 – Declaration.
V	Field Director/ Divisional Forest Officer, Wildlife and Territorial/ Deputy Conservator of Forests, Wildlife and Territorial	Powers under clauses, sub-section and sections of the said Act delegated to Forest Guard under the category of Posts- II, Range Officer under the category of Posts- III and Assistant Conservator of Forests, under the category of Posts-IV above. Powers under clause (b) of sub-section (a)of section 11- Hunting of Wild animals to be permitted in certain cases. Power under sub- section (1) of section 17 C and sub section (1) of section 17D – Dealing in Specified plants without being prohibited Powers under section 29 Destruction etc. in a sanctuary prohibited without a permit Powers under clause (a) (b) (c) and (d) of section 33 of Sanctuary Powers under section 54 –Power to Compound Offences, Powers under clause (h) of section 55- Cognizance of Offences.
VI	Conservator of Forests, Wildlife and Territorial	Powers delegated to all the officers under category I II III, IV & V.


The provisions of section 31, 33, 33A and 34 shall apply both for sanctuary and National Park.

By Order and in the name of the Governor

**T.W. SHARMA, IFS**  
 Pr. CCF-cum-Secretary-cum-CWLW  
 Forest, Environment & Wildlife Department  
Government of Sikkim Gangtok

File No. 1/ML/76

**SIKKIM**



**GOVERNMENT** **GAZETTE**

**EXTRAORDINARY**  
**PUBLISHED BY AUTHORITY**

---

**Gangtok, Saturday, 29th September, 2001 No. 355**

---

**GOVERNMENT OF SIKKIM**  
**HOME DEPARTMENT**  
**GANGTOK**

**No. 70/HOME/2001 .**

**Dated: 20.9. 2001.**

**NOTIFICATION**

Whereas the State Government has deemed it expedient and necessary for documentation of all sacred places of worship and institutions in Sikkim which are 100 (hundred) years old and above;

And whereas with a view to examine the background of all the monasteries, religious places of worship including important historical monuments and sacred lakes in Sikkim, the State Government had constituted a Committee vide Notification No. 52/Home/98 dated 24.9.1998;

And whereas the Committee has prepared and submitted to the Government on 24th April, 2001 the first phase report on sacred places of worship and religious institutions which are 100 (hundred) years old and above;

Now, therefore, the State Government is pleased to notify the following sacred peaks, caves, rocks, lakes, chhoedten and hot-springs as most sacred Buddhist places of worship in Sikkim and protect them under the provisions of the Places of Worship (Special Provisions) Act, 1991 and the State Government's Notification No.59/ Home/98 dated 26.10.1998, namely:-

**1. SACRED PEAKS:**

- |        |   |   |
|--------|---|---|
| (i)    | Ghangchen-m Zod-Nga:<br>(Khangchendzonga) | (Kanchenjunga-main 28,208 ft.)<br>(Kanchenjunga-South 27803 ft.)<br>(Kanchenjunga-West 27625 ft.) |
| (ii)   | Mt. Narsing, 19,111 ft.                   |   |
| (iii)  | Gabur Gangtsen:                           | (Kabru North, 24075 ft.)<br>(Kabru South, 24005 ft.)<br>(Kabru Dome, 21600 ft.)                   |
| (iv)   | Pandim Peak, 21658 ft.                    |   |
| (v)    | Mt. Simvo, 22346 ft.                      |   |
| (vi)   | Goecha Peak, 20100 ft.                    |   |
| (vii)  | Foik Peak, 20382ft.                       |   |
| (viii) | Pao Hungri (Pauhungri), 23180 ft.         |   |
| (ix)   | Mt. Siniolchu, 22609 ft.                  |   |

**2. SACRED CAVES:-**

- |       |  |
|-------|--|
| (i)   | Sharchhogbayphug at Sangmo, South Sikkim       |
| (ii)  | Khadésangphug at Sangriath, South Sikkim       |
| (iii) | Dechenphug above Nampung, West Sikkim          |
| (iv)  | Lharinyingphug via Kongri-Labdang, West Sikkim |

- (v) Phagmorong, West Sikkim  
(vi) Tragtungrong, West Sikkim.
- 3. SACRED ROCKS (NAYDO):-**  
(i) Yongzokdrak, West Sikkim  
(ii) Tragkar rock at Tashiding, West Sikkim  
(iii) Gyalwa Lhatsun Chhenpo's Footprint at Yuksam  
(iv) Coronation throne at Yuksam, West Sikkim  
(v) Thieghhok Yangtse Khadoi Drora rock, West Sikkim  
(vi) Guru Rinpoche's Footprint Naydo at Tsunthang (Chungthang), North Sikkim  
(vii) Kabilongtsok stone Naydo at Kabi, North Sikkim.
- 4. SACRED ROCKS (TSHO):-**  
(i) Omechho (Omai-tsho), West Sikkim  
(ii) Sungmteng Chho (Tsho), West Sikkim  
(iii) Lamchho (Lham-tsho), West Sikkim  
(iv) Tolechho (Dhole-tsho), West Sikkim  
(v) Kabur Lamchho (Gabur Lah-tsho), West Sikkim  
(vi) Khachhoedpalri Pemachen Tsho (Khachhoedpalri take), West Sikkim  
(vii) Kathogtsho at Yuksam, West Sikkim  
(viii) Tsho-mGo lake, East Sikkim  
(ix) Guru Dongmar Lake, North Sikkim  
(x) Tsho-lhamo, North Sikkim  
(xi) Mulathingkhai-tsho (Green lake) at Zema Glacier, North Sikkim
- 5. CHHOEDTENS (CHORTEN/STUPA):-**  
(i) Norbugang Chhoedten Tashi Hodber at Yuksam built by Naljor Chidshi  
(ii) Chhoedten Thongwa Rangdrol at Tashiding built by Gyalwa Lhatsun Chhenpo and its surrounding Chhoedten built more than 100 years ago.  
(iii) Khachhoedpalri Bheyul Chhoedten built in 19th century, a replica of Nepal's Boudhanath Stupa  
(iv) Dhud-Tsen-Lu-Sum Chhoedten at Rabdentse, West Sikkim  
(v) Gyalshing Mendang built by Kyabgon Jigme Pao to avert famine, West Sikkim  
(vi) Mermdang at Singnek, Tashiding, West Sikkim.
- 6. HOTSPRINGS (TSHACHHU):-**  
(i) Phurtshachhu at Khadosangphug, South/West Sikkim  
(ii) Ranglop tshachhu Borong, South Sikkim  
(iii) Gangyab chhutshen, West Sikkim  
(iv) Takrumtshachhu, North Sikkim  
(v) Yumasamdongtshachhu, North Sikkim  
(vi) Yumithangtshachhu, North Sikkim  
(vii) Zee tshachhu, North Sikkim  
(viii) Shagyong phedok tshachhu, North Sikkim  
(ix) Tholung kangtshachhu, North Sikkim

The State Government do hereby ban the scaling of the sacred peaks and also defilement of the sacred caves, sacred rocks, sacred lakes, Chhoedtens and sacred hot-springs as notified above.

By Order and in the name of the Governor.

S. W. Tenzing,  
Chief Secretary.  
F. No. 5/EA/Gen/97-98



GOVERNMENT OF SIKKIM  
HOMI DEPARTMENT  
GANGTOK

No. 60, HOME/2004

Dated 08/07/2004

**NOTIFICATION**

In exercise of the powers conferred by the Wildlife (Protection) Act, 1972 (53 of 1972) and in supersession of all other notifications in this regard, the State Government is hereby pleased to constitute the State Board for Wildlife, consisting the following members, namely: -

*1 Karim*  
*P. No. 10 of 2004*

- |   |   |                  |
|---|---|------------------|
| (a) Chief Minister  | - | Chairperson      |
| (b) Minister, Department of Forest, Environment and Wildlife Management   | - | Vice Chairperson |
| (c) Three members of Legislative Assembly:  |   |                  |
| (i) Shri Thirley Tshering Bhutta, MLA Kadi-Lingpa Constituency  | - | Member           |
| (ii) Shri N.K. Subba, MLA Hie-Bermick Constituency  | - | Member           |
| (iii) Shri Norzorig Lepcha, MLA Hakoong-Tatek Constituency  | - | Member           |
| (d) (i) One representative of the World Wild Life Fund, Sikkim Field Office, Gangtok                              | - | Member           |
| (ii) One representative of Khangchendzonga Conservation Committee, Yuktom   | - | Member           |
| (iii) One representative of the G.B. Pant Institute of Himalayan Environment and Development, Sikkim Unit, Tadong | - | Member           |
| (e) (i) Shri K.C. Pradhan (Retd., Chief Secretary)  | - | Member           |
| (ii) Shri Tashi Namgyal, (Ex-Inspector General of Police), Ungmo, South Sikkim                                    | - | Member           |
| (iii) Shri Tseten Lepcha-Tsungthang, North Sikkim   | - | Member           |
| (iv) D.K. Subba, Principal Director, Health Care, Human Services and Family Welfare Department                    | - | Member           |
| (v) Dr. S.K. Dewabi-STNN Hospital, Gangtok  | - | Member           |
| (vi) Shri Sanjay Acharya, Teacher, Sudunglakha School, East Sikkim  | - | Member           |
| (f) PCCF/Sikkim-Secretary, Forest, Environment and Wildlife Department, Gangtok, Sikkim                           | - | Member           |
| (g) Principal Secretary, Social Justice, Empowerment and Welfare Department, Govt. of Sikkim                      | - | Member           |



GOVERNMENT OF SIKKIM  
HOME DEPARTMENT  
GANUDOR

No. ....

Date: .....

- |     |  |   |                  |
|-----|--|---|------------------|
| (f) | Commissioner-cum-Secretary, Tourism Department, Govt. of Sikkim.                                       | - | Member           |
| (g) | Director General of Police, Sikkim.  | - | Member           |
| (h) | Director, Fisheries, Govt. of Sikkim.  | - | Member           |
| (i) | Director, Animal Husbandry, Live Stock, Fisheries and Veterinary Services Department, Govt. of Sikkim. | - | Member           |
| (j) | A representative of Armed Forces not below the rank of Brigadier.                                      | - | Member           |
| (k) | An Officer to be nominated by the Director, (Wildlife Preservation).                                   | - | Member           |
| (l) | A representative of the Wildlife Institute of India, Dehradun.   | - | Member           |
| (m) | A representative of the Zoological Survey of India.  | - | Member           |
| (n) | Chief Wildlife Warden, Govt. of Sikkim.  | - | Member Secretary |

2. The term of office of the members other than ex-officio members shall be for a period of two years.

3. The members other than those who are ex-officio shall be entitled to receive from the State Government an amount of Rs. 500/- (five hundred) only for each meeting for the State Board of Wildlife attendants.

BY ORDER AND IN THE NAME OF THE GOVERNOR.

  
(D.P. SHARMA)  
ADDITIONAL SECRETARY, HOME  
FILE NO.65/WL/F/87





- (10) Mr. Gokul Rai, Sikkim Paryavaran Samrakshan Singh Bikmat, South Sikkim - Member
- (11) Mr. Nima Tashi Bhutia, Sindrabung Khangchendzonga Eco-friendly Society & Yambong Eco-tourism committee, Nambu, West Sikkim - Member
- (12) Additional PCCF (concerned with the affairs of the SSS) - Member Secretary
2. The term of office of the members of the Sikkim State Biodiversity Board shall be 3 (three) years.
3. The head office of the Sikkim State Biodiversity Board shall be at Forest Secretariat, Deoral, Gangtok, Sikkim, 737 102.

BY ORDER AND IN THE NAME OF THE GOVERNOR.

N.D. CHINGAPA, IAS  
CHIEF SECRETARY  
F. No. 268/884/FEWMD



GOVERNMENT OF SIKKIM  
HOME DEPARTMENT  
GANOTOK

No. 25/HQDE/2006

Date: 20/03/2006

**NOTIFICATION**

I. The State Government is hereby pleased to declare the followings peaks open for Alpine Expedition with effect from 17<sup>th</sup> September, 2005.

Name of the peak (West Sikkim)	Location	Grade	WPA
Frey's Peak 5930 mtr	Changuang	AD+	KNP

Name of the peaks (North Sikkim)	Location	Grade	WPA
Lama Wangden 5868 mtr	Lachen	AD	KNP
Brumhangse 5635 mtr	Yumthang	D	SWLS

The following peaks already opened by the State Government vide Notification No. 54 (78) Home/84/30 dated 20<sup>th</sup> July, 1993 are renamed as Alpine peaks and included for Alpine Expedition along with the above three peaks:

Name of the peaks (West Sikkim)	Location	Grade	WPA
Mt. Tichenkang	West Sikkim	C	KNP
Mt. Joporu	West Sikkim	C+	KNP

i. The permit for Alpine Expedition to above five peaks will be issued by the Home Department to only those local tour operators authorized and notified by Tourism Department for conducting (in) Alpine Expedition.

ii. The royalty shall be paid under the Revenue Head of Forest, Environment and Wildlife Management Department. The procedure for obtaining permit from Home Department shall be as per Annexure 'A'.



GOVERNMENT OF SIKKIM  
HOME DEPARTMENT  
GANGTOK

No. 38/4000/2006

Date: 20/1/06

The following royalty shall be levied for the expedition:

- |       |                              |   |   |
|-------|------------------------------|---|---|
| (i)   | For foreign expedition team  | : | US \$ 350 per team of upto four members, US \$ 500 per team of upto eight members and US \$ 75 for every additional member. |
| (ii)  | For domestic expedition team | : | Rs. 15,000/- per team of upto eight members and Rs. 1,500/- for every additional member.                                    |
| (iii) | For local expedition team    | : | Rs. 3,000/- per team of upto eight members and Rs. 300/- for every additional member.                                       |

V. The tour operator shall be responsible for rescue operation, if any. The Tourism Department, however, shall render all legitimate assistance to the tour operators including coordination with different agencies.

VI. The tour operator conducting expedition shall scrupulously adhere to the code of conduct for eco-tourism in Sikkim and abide by all the terms and conditions laid down by the State Government for conducting the expedition. The code of conduct and terms and conditions will be enclosed with the permit for Alpine Expedition in form 'D'. The violation of any of the conditions and code of conduct shall debar the tour operator from conducting further Expeditions.

The Tourism Department will be responsible for ensuring that the trekking/expedition routes are kept litter free and conduct periodical cleaning operations, if necessary.

VII. The following minimum insurance coverage is compulsory.

- |     |                    |   |                          |
|-----|--------------------|---|--------------------------|
| (a) | Expedition members | : | Rs. 3 lakhs per member.  |
| (b) | Camp crews         | : | Rs. 1 lakh per person.   |
| (c) | Porters            | : | Rs. 50,000/- per person. |
| (d) | Animals            | : | Rs. 20,000/- per animal. |



GOVERNMENT OF SIKKIM  
HOME DEPARTMENT  
GANTOK

No. \_\_\_\_\_ Date \_\_\_\_\_  
VII. A total of 10 expeditions (6 foreign and 4 domestic) shall be permitted per year. However, the State Government may permit additional expedition, if such situation arises.

BY ORDER AND IN THE NAME OF THE GOVERNOR.

Sd/-  
(N.D. CHINGAPA) IAS  
CHIEF SECRETARY  
F. No. Gos/Home-11/2005/14

Copy to:

1. Principal Secretary to HCM
2. Commissioner-cum-Secretary, Tourism Department
3. PCCF-cum-Secretary, Forest, Env. And Wildlife Management Department
4. Sonam Gyatso Mountaineering Institute, Buzwahari
5. President, TAAS
6. President, SATU
7. President SAMA
8. Project Manager, EOCOS
9. PS to Chief Secretary
10. Gazette section for publication in the gazette
11. File and guard file

(O.P. SHARMA)  
ADDITIONAL SECRETARY/HOME

**FORM-A**

**FORMAT FOR APPLICATION BY TOUR OPERATOR FOR PERMISSION TO UNDERTAKE ALPINE EXPEDITION IN SIKKIM**

- Name of the Alpine Peak :
- Height :
- Name and nationality of the leader of the expedition :
- Period of expedition :
- Date/Schedule :
- Proposed trekking and climbing route :
- Number of Crew Members :
- Name of the tour operator :
- Address :
- Contact Number (s) :
- Registration Number :
- Name of the Proprietor :
- Date of Submission of Form :

**Document check list:**

1. Personal particular of all the foreigners in Form-B in duplicate with photograph.
2. Tour itinerary.
3. Photocopy of passport/Proof of Indian Citizenship.
4. Photocopy of Visa.
5. Summary of personal particular of foreigners with other detail.

**Declaration:**

1. It is hereby certified that the information provided is true to the best of our knowledge.
2. We agree to abide by all the terms and conditions laid down by the State Government for undertaking proposed expedition.

**Signature:**

**Name:**

**Designation:**

FORM-B

GOVERNMENT OF SIKKIM  
HOME DEPARTMENT

Photo

PERSONAL PARTICULAR FORM OF APPLICANT

01	Name of the applicant (in CAPITAL) letter	Mr./Mrs./Ms.
02	Father's/Husband's Name	Mr.
03	Place (town & country) & Date of Birth	
04	Nationality	1. Present: 2. Past:
05	Occupation (with address of the place of work, if employed)	
06	Mailing Address	
07	Permanent Address	
08	References: a) in Sikkim b) in the country of applicant	
09	(i) Passport Details (enclose photocopy) (ii) Proof of Indian Citizenship, if Indian (enclose photocopy)	
10	Details of Visa for India, if obtained (enclose photocopy)	
11	Places proposed to be visited	
12	Route intended to be followed	
13	Likely date of visit	
14	Purpose of visit	
15	Likely duration of visit	
16	Details of previous visit to Sikkim	
17	Have you previously visited any restricted/protected area in Sikkim. If so give details	
18	Has any earlier request for permit been refused. If so give details	
19	Insurance Policy No.	

The information given above is correct and complete to the best of my knowledge:

*Signature of the Applicant.*

**FORM-D**

**PERMIT FOR ALPINE EXPEDITION IN SIKKIM**

- I. Name of the Alpine Peak and height :
- II. Name of the leader of the Expedition :
- III. Number of Expedition team :
- IV. Detail of Expedition Team : List enclosed.
- V. Route to be followed :
- VI. Period of Expedition :
- VII. Name of the tour operator :
- VIII. Full Address with contact No. :
- IX. Name of the Liaison Officer with address and contact numbers :
- X. Terms and conditions : List Enclosed

**DEPUTY SECRETARY-II/HOME**

Copy to:

- 1. Chief Warden, KNP.
- 2. Deputy Inspector General of Police, Check Post.
- 3. GSO-1 (Int.), 17, Mountain Division, C/o 99 APO.
- 4. Concerned District Collector.
- 5. Deputy Secretary, Adventure, Tourism.

E

**TERMS AND CONDITIONS:**

Scrupulously follow the enclosed Code of Conduct for eco-tourism in Sikkim.

State Government will detail a Liaison Officer for the expedition. The tour operator shall pay a lump sum fee of Rs. 5,000/- to the LO and they shall also bear the cost of their lodging and fooding during the period of expedition.

Emphasis should be on employment of local people as cook, porters, guide, etc.

The expedition team shall follow the approved trekking/climbing route only.

The expedition team leader and the tour operator shall submit their feedback on the expedition to Home Department, Government of Sikkim within seven days from the date of completion of the expedition.

The fees, royalty etc. paid for undertaking the expedition shall not be refundable unless the expedition is rendered impractical by natural calamity before reaching the base camp or cancellation of the expedition by the State Government.

The insurance coverage of expedition team, camp crews, porters and animals are compulsory.

The expedition team shall ensure that no defilement of sacred lakes, caves or rocks enroute is done.

The foreign expedition team shall hold valid Inner Line Permit with them.

Photography and entry into Army installations enroute is strictly prohibited.

The State Government reserves the right to cancel the permit at any time.



CODE OF CONDUCT FOR ECO-TOURISM IN SIKKIM

1. Conserve Sikkim's natural and cultural heritage
  - Do not trample high altitude vegetation; do not pick any flowers or medical plants.
  - Do not disturb wildlife or its habitats.
  - Do not allow clients to purchase endangered animal parts or antique cultural artifacts.
  - Support local conservation efforts and income generation activities.
2. Avoid use of fuel wood; use alternative fuels
  - Use kerosene, LPG (or other non-wood fuel) for all cooking, heating, lighting including that by staff and porters.
  - Discourage campfires; encourage camp fire.
  - Follow safety rules when carrying, storing and using kerosene and gas.
3. Leave all camps and trails clean.
  - Separate and properly dispose of litter: burn burnable, bury biodegradable, and carry out all other non-biodegradable materials for deposit at designated trash site or for recycling.
  - Use toilet tents on all trails; set up and use toilet tents in an environmentally sound manner so as to avoid pollution of water sources (at least 100m away)
  - Use established campsites and kitchen sites; avoid trenching around tents.
4. Practice conservation in the kitchen
  - Avoid fuel-intensive menu items, e.g. baked foods and large menu selections.
  - Re-package foods into reusable plastic containers to reduce waste.
  - Suggest clients reduce waste by de- and repackaging also.
5. Practice proper hygiene and sanitation
  - Teach all staff about personal hygiene, sanitary kitchen and camp routines.
  - Properly treat the drinking water and uncooked vegetables for clients.
  - Dispose of washing and bathing water well away from streams; use biodegradable soaps.
6. Take responsibility for staff and porter welfare
  - Provide adequate warm clothing, sleeping cover, shoes, snow gear, food or cooking stoves and fuel, and take care of hired staff.
  - Periodically train staff in first aid, guide responsibilities, sanitation, etc.
7. Properly brief clients before leaving on a trek
  - Address cultural "do's" and "don'ts"; environmentally friendly behavior, safety precautions, proper dress, and respect for local beliefs, peoples and religious sites.
  - Plan days for proper altitude acclimatization when ascending; know how to identify and treat high altitude illness and how to provide emergency rescue.

**SIKKIM**



**GOVERNMENT** **GAZETTE**

EXTRAORDINARY  
PUBLISHED BY AUTHORITY

---

**Gangtok** **Monday 11<sup>th</sup> August, 2006** **No. 244**

---

Government of Sikkim  
Department of Forest, Environment and Wildlife Management

**NOTIFICATION**

**Guidelines for Lake Conservation in Partnership with Gram Panchayats and *Pokhri Sanrakshan Samiti's* in Sikkim**

**No. 355/F**

**Dated: 31.7.2006**

Whereas the Department of Forest, Environment and Wildlife Management, Government of Sikkim [hereinafter referred to as the Forest Department] has initiated a number of initiatives to promote nature conservation and ecotourism in the state;

And whereas the lakes in the state have immense Environment, ecological, cultural, spiritual and economic importance;

And whereas the lakes in Sikkim are important ecotourism destinations, offering important livelihood opportunities to the local communities;

And whereas impacts of unplanned tourism, unregulated pastoralism and other human activities pose a serious threat to the long term ecological security of these lakes;

And whereas most of the lakes of the state are located in remote, high altitude areas and securing the long term future of these lakes is largely dependent on the active participation and involvement of the local community;

And whereas there is a need to directly involve the local *Panchayati Raj* Institution which is the constitutional body at the village level in conservation efforts and decentralize and democratize decision making to the *gram sabha*;

Now therefore, in pursuance of clause (b) of section 33 read with sub-section (8) of section 35 of the Wildlife (Protection) Act, 1972 (53 of 1972) and clause (a) of sub-section (2) of section 26 of Indian Forest Act 1927 (16 of 1927) and clause (i) of sub-section (2) of section 83 of the Sikkim Forests, Water Courses And Road Reserve (Preservation And Protection) Act, 1988 (6 of 1988), the State Government has deemed it expedient to work in partnerships with *Gram Panchayats* and *Pokhri Sanrakshan Samitis* [hereinafter referred to as PSS] for the purpose of protection and conservation of the lakes in the state. The members of such *Samitis* shall be allowed benefits, subject to observance of the conditions provided for in this notification.

The composition, functions, duties, powers, ecotourism benefits and restrictive measures pertaining to such *Samitis* shall be as follows:

**1. IDENTIFICATION, CONSTITUTION, CONSERVATION PLAN, CAPACITY BUILDING AND FEDERATION**

**(A) Identification of the lake**

- (1) Lakes which need conservation action shall be identified by the Divisional Forest Officer, Territorial Division, (hereinafter referred to as the Divisional Forest Officer), local communities or Non Governmental Organizations where the local community is willing to offer their cooperation in the protection and conservation of the said lake.

**(B) Constitution of the *Pokhri Sanrakshan Samiti* (PSS)**

- (1) The PSS shall be constituted by the gram sabha in consultation with the concerned Ward Panchayat Member and the Divisional Forest Officer.
- (2) Where the gram sabha feels that it itself or any existing village based institution is capable of performing the functions and duties of the PSS, this institution will be designated as the PSS. Otherwise the PSS shall be constituted with those households who are living in the vicinity of the lake. Every family living in the vicinity of the lake shall, however, have the option of becoming a member of the PSS, if such family including the female members is interested in the conservation of the said lake. There shall normally be a joint membership of each household, i.e. husband becoming member, wife automatically becomes a member and vice versa.
- (3) It is proposed that the Ward Panchayat Member be the ex-officio President of the PSS however if the gram sabha feels otherwise then they may appoint a suitable person to this post and shall also designate a member secretary from amongst the members of the PSS.
- (4) The president shall apply to the concerned Range Officer for registration. The Divisional Forest Officer on the recommendation of the concerned Range Officer shall register the PSS in his office.
- (5) After registration of the PSS, the gram sabha shall appoint *Pokhri Rakshak*(s) or lake Guardian(s) from amongst the members of the PSS and provide him / her with photo identity card(s).
- (6) The President shall convene the meetings of the PSS as per the scheduled procedure. There shall be a minimum of four meetings of the PSS in a year on a quarterly basis.
- (7) The concerned Gram Panchayat and the Forest Department shall extend all necessary support and help to ensure the smooth and proper functioning of the PSS.
- (8) In case of any conflict within the PSS, the Assistant Conservator of Forests, Territorial in consultation with the Panchayat President shall resolve the conflict amicably.
- (9) However the legal status, land tenure and ownership of the lake and its catchment area shall remain unchanged.

**(C) Preparation of the lake Conservation Plan**

The Divisional Forest Officer and the PSS shall jointly with the support of State Environment Agency and other governmental and non governmental organizations prepare the lake Conservation Plan within one year of the registration of the PSS, which shall contain the following:

- (1) A map in 1:25,000 scale of the lake along with its immediate catchment area which shall constitute the *Pokhri Sanrakshan Shetra* or the lake Conservation Area of the PSS.
- (2) A baseline quantification of the quality of water of the lake in a quarterly manner.
- (3) A baseline quantification of the threats and impacts on the lake like solid waste disposal, sanitation and sewerage, catchment degradation, siltation, eutrophication unplanned tourism infrastructure etc.
- (4) A baseline quantification of the status, distribution and population of key wildlife species like water fowl and their habitat.
- (5) A baseline quantification of the numbers and seasonality of the tourist arrivals and the benefits accrued from ecotourism.
- (6) A conservation action plan which shall lay down the activities to be carried out in the forthcoming year with detailed physical and financial targets, process to be followed as well as a timeframe.

**(D) Capacity Building of the Pokhri Sanrakshan Samiti (PSS)**

It shall be the duty of the Forest Department to carry out the institution building and capacity building of the PSS in administration, accounts, socio-economic survey and biological survey works. The divisional forest officer shall provide all necessary guidance to the PSS to carry out their duties and functions as and when requested by them. Other governmental and non governmental organizations are also encouraged to support this human and institutional development effort.

**(E) Constitution of the State Level Federation of the PSS**

The *Rajya Pokhri Sanrakshan Sangh* (or the State Lake Conservation Federation) shall be a state level federation comprising of the presidents of the PSS all over the state. The PCCF cum Forest Secretary shall convene atleast one meeting of this federation along with other stakeholders annually to discuss various issues related to lake conservation and related livelihoods in the state.

**2. FUNCTIONS**

- (1) The PSS shall maintain a member's register showing necessary particulars of the members of the PSS e.g. Name, Parentage, Age, Address, Number of family members etc.
- (2) The PSS shall maintain a minutes book wherein proceedings of the meetings held from time to time as well as the proceedings of the Annual General Meeting of the PSS and *gram sabha* will be recorded under the signature of the Member-Secretary.
- (3) The PSS shall maintain one bank account, namely PSS revolving fund account in any nationalized bank or the State Bank of Sikkim. The President and member secretary shall jointly operate this account. The President shall be responsible for maintaining this account and submission of annual audit reports from a statutory auditor to the Range Officer, the Divisional Forest Officer, District Collector and the PCCF cum Secretary of the Forest Department.
- (4) The PSS, and the divisional forest officer shall jointly with the support of State Environment Agency other government and non-governmental organizations prepare the Annual Lake Conservation Plan comprising of the map, water quality, threats, wildlife, ecotourism and conservation action plan.
- (5) The funds accrued in the PSS revolving fund account shall be used to pay honorarium to the *Pokhri Rakshak(s)*, setting up of an effective garbage management system, preparing and publishing the Annual Lake Conservation Plan, capacity building of the PSS so that they can discharge their duties and functions more effectively, conservation of birds, wildlife and their habitats, restoration of the *Pokhri Sanrakshan Shetra*, financial audit, administrative expenses and for community development works as detailed in the Annual Lake Conservation Plan.
- (6) The PSS shall once every year in the *gram sabha* provide details of the functions, duties, and ecotourism benefits of the PSS. The *gram sabha* in this meeting shall also carry out the social audit of the PSS revolving fund account and the activities of the State Environment Agency regarding implementation of the current Annual Lake Conservation Plan. The Annual Lake Conservation Plan for the forthcoming year shall also be presented and approved by the *gram sabha* after incorporating their suggestions if any. Concerned Range Officer, Territorial shall be an observer in this meeting. A copy of this approved Annual Lake Conservation Plan shall be provided by the PSS to the concerned Range Officer, Divisional Forest Officer, District Collector and the PCCF cum Secretary of the forest department annually.

**3. DUTIES**

The duties of the PSS shall be as follows:

**(A) Protection and Conservation**

- (1) To ensure protection of the forests, environment, wildlife and biodiversity in the *Pokhri Sanrakshan Shetra* through members of the PSS jointly with the Forest Department staff.
- (2) To ensure that the migratory and residential birds and other flora and fauna or their habitat is not disturbed.
- (3) To protect the soil and moisture conservation works, Afforestation works, signages and other infrastructure within the *Pokhri Sanrakshan Shetra*.
- (4) To bring to the notice of the Forest Department of any kind of developmental activity being initiated within or adjoining to the *Pokhri Sanrakshan Shetra* at the earliest.
- (5) To carry out awareness and education drives, for sensitizing and capacity building of the local community for nature conservation.
- (6) To provide assistance and statistics as and when required by the Forest Department.

**(B) Assistance in Ecotourism**

- (1) To ensure that the tourism within the *Pokhri Sanrakshan Shetra* does not cause problems related to garbage, firewood use, sanitation or disturbance to birds, wildlife or their habitat and results in equitable economic benefits to the local community.
- (2) To provide prompt and quality service to the visitors.
- (3) To ensure that the shop keepers, hotels, guides, pack animal operators etc (hereinafter referred to as ecotourism service providers) and the visitors follow the Code of Conduct.
- (4) To explain to all the visitors about the code of conduct to be followed within the lake. It shall be the duty of the PSS to ensure responsible behaviour of the visitors and the ecotourism service providers.

**4. POWERS**

- (1) The President shall provide Photo Identification card to the *Pokhri Rakshak(s)*, after the registration of the PSS.
- (2) The *Pokhri Rakshak* shall have power for apprehending forest and wildlife offenders, incase they feel that the offender may escape. All such offenders apprehended, shall be handed over to the nearest forest office without any delay. They shall also be authorized to protect the infrastructure and facilities within the *Pokhri Sanrakshan Shetra*. In return the Divisional Forest Officer must guarantee prompt and appropriate action on the issue, and keep the gram sabha updated on the action taken.
- (3) The members of the PSS shall within six months of their registration pass a resolution indicating the Code of Conduct to be observed within the *Pokhri Sanrakshan Shetra*. Penalties for the violators of this code shall also be specified in detail. This code of conduct shall be passed by the concerned *gram sabha* and approved by the Divisional Forest Officer who shall ensure that none of the provisions are in contravention to any of the existing legislations. This total penal amount shall be credited in the PSS revolving fund account.
- (4) However the Divisional Forest Officer shall have the authority to annul any orders passed by the PSS in this regard and take fresh cognizance of the offence incase the due procedure of law has been violated.
- (5) All government departments shall seek the prior informed consent of the PSS before undertaking any development or tourism project in the *Pokhri Sanrakshan Shetra*.

**5. ECOTOURISM BENEFITS**

- (1) The PSS shall be authorized to levy and collect the *Pokhri Sanrakshan Shulk* or the Lake Conservation Fees of Rs 10/- per tourist per day. Printed and numbered fee receipts shall be provided to all the tourists after collecting the fees.
- (2) This fee so collected shall be credited into the revolving fund account of the PSS atleast on a monthly basis and 50% of it transferred in to the bank account of the State Environment Agency. However the total fund shall be used as per the approved Annual Lake Conservation Plan.

**6. PENAL ACTION, DISSOLUTION and RECONSTITUTION**

- (1) Failure to comply with any of the fore-mentioned conditions may entail penal action and/or cancellation of individual membership and/or dissolution of the PSS as the case may be as stated in subparagraphs (2), (3) and (4) below:
- (2) The *gram sabha* shall be authorized to take penal action against the PSS.
- (3) The Divisional Forest Officer shall be entitled to take appropriate action including dissolution of the PSS on the grounds stated above on the recommendation of the *gram sabha*.
- (4) The Divisional Forest Officer shall initiate the constitution of a new PSS, if any PSS is dissolved in the manner as mentioned above.

[T. R. Poudyal] IFS  
Principal Chief Conservator of Forests cum Secretary  
Department of Forest, Environment & Wildlife Management  
Government of Sikkim  
Gangtok  
File No: 43/EPC DIVISION/FEWD/2006



**GOVERNMENT OF SIKKIM  
HOME DEPARTMENT  
GANGTOK**

No. 99/Home/2007

Dated: 26/09/2007

**NOTIFICATION**

Sikkim has large number of glaciers and they are acting as natural reservoirs for supply of water to major river systems of the State. Reports of Inter-Governmental Panel on Climate Change regarding global warming and glacial melting has raised serious concern in the State.

2. The State Government is therefore, pleased to constitute a Commission to study the state of glaciers and its impact on water system in Sikkim under the Chairmanship of Prof. S. I. Hasanali, Sr. Fellow, Centre for Policy Research, New Delhi to review the current status of Glaciers and Snowmelt and potential impact of climate change on mountain eco-system and suggest measures for modern scientific and technological interventions and actions required on human resources generation, training and management that would cater to glaciology and related environmental management with the following composition of members:-

- |  |   |          |
|--|---|----------|
| (1) Prof. S. I. Hasanali, Senior Fellow, Centre for Policy Research, Dharmapuri Marg, New Delhi-110028                               | - | Chairman |
| (2) Dr. A. V. Kulkarni, Senior Scientist (Glaciology), Space Application Centre, Department of Space, Government of India, Ahmedabad | - | Member   |
| (3) Dr. Maheshband Sharma, Associate Professor, Centre for Studies of Regional Development, JNU, New Delhi                           | - | Member   |
| (4) Prof. Mohendra P. Lama, Vice-Chancellor, Central University, Sikkim  | - | Member   |
| (5) Shri K. C. Pradhan, Retired Chief Secretary, Sikkim  | - | Member   |
| (6) Director or his Representative, Wadia Institute of Himalayan Geology, 33, General Mahadeo Singh Road, Dehradun-248001            | - | Member   |
| (7) Director or his Representative, National Institute of Hydrology, Jai Vigyan Bhawan, Roopkee-247667 (Uttanchal)                   | - | Member   |
| (8) Shri M. J. Arunavita, IAS, Secretary, Science and Technology- Member Secretary Government of Sikkim, Gangtok.                    |   |          |

The Commission may, with the approval of the State Government, co-opt any other expert in the field as member of the Commission.

**3. The terms of reference of the Commission may be as under:-**

- (i) Compilation, collation of information from primary and secondary sources on glaciology.
- (ii) Review the current status of Glaciers and Snowmelt and their impact upon hydrological reserves.

- (iii) Assess the potential impacts of climate change on mountain eco-system and livelihood in Sikkim, and suggest inter-disciplinary steps and remedial measures for dealing with these impacts.
  - (iv) Identifying the scope and issues of collaborative research on glacier systems and related dynamics.
  - (v) Identifying the regional, national and international institutes with which the studies and management parameters of glaciology could be carried out as collaborative ventures.
  - (vi) Suggesting monitoring mechanism with involvement of local people and Himal Rakshak Network.
  - (vii) Setting up of preliminary data base and suggest the structures of Climate Change Unit in the State.
  - (viii) Suggest measures for modern scientific and technological interventions on the Issue of glaciology management in the context of emerging Climate Change Pattern.
  - (ix) Suggest action required on human resources generation, training and management that would cater to glaciology and related environmental management.
4. The Commission shall give its recommendations by the end of December, 2008.
  5. The Commission will hold its office at New Delhi as well as at Gangtok from time to time. Expenditure on professional fees, air travel, transport facility, lodging and other administrative expenditure while on visit to New Delhi and Sikkim and back of the Chairman and Members shall be borne by the State Government.

**BY ORDER AND IN THE NAME OF THE GOVERNOR.**

Sd/-  
(N. D. CHINGAPA) IAS  
CHIEF SECRETARY  
E. NO. Gns/DPER & NECA/07/11 (173)/CDEP

Copy to:

1. All concerned above.
2. Principal Secretary to CMO.
3. Secretary, Science and Technology.
4. Gazette division for publication in the gazette.
5. File and guard file.

  
(ROSHNI RAI)  
DEPUTY SECRETARY-I (C)/HOME



**GOVERNMENT OF SIKKIM  
HOME DEPARTMENT  
GANGTOK**

No. 37/Home/2008

Dated: 09/04/2008

**NOTIFICATION**

The State Government has vide Notification No 99/Home/2007 dt.26/09/2007 constituted the Glacier & Climate Change Commission to study the state of glaciers and its impact on water system in Sikkim under the Chairmanship of Prof S.L.Hasnain, Sr.Fellow, Centre for Policy Research, New Delhi.

In order to assist the Glacier & Climate Change Commission in carrying out various studies and compilation of information required by the Commission, the State Government is pleased to constitute a Support Core Group with scientists and officers of various State Government Departments as follows: -

S. no	Name of officer	Designation	Department
1	Shri C. Lachungpa	Conservator of Forests (Landuse & Environment)	Forest Environment & Wildlife Management Department
2	Shri Brijendra Swarup	DFO(T), West Division	Forest Environment & Wildlife Management Department
3	Shri J.B.Subbia	Field Director(KNP)	Forest Environment & Wildlife Management Department
4	Ms. Monalisa Dasg	DFO(T), North Division	Forest Environment & Wildlife Management Department
5	Dr. Yashoda Pradhan	Joint Director	Agriculture & Food Security Department
6	Shri Karma Dorjee Wazalingpa	District Project Officer (East)	Land Revenue & Disaster Management Department
7	Shri.Phigu Bhunia	Divisional Engineer	Mines & Geology Department
8	Dr. Serithil Kumar	Managing Director	Sikkim Milk Union
9	Shri Sandeep Tambe	Joint Secretary	Rural Management & Development Department
10	Dr. S.Anbalagan	Deputy Secretary	Science & Technology Department
11	Shri U.G.Sivastha	Sr.Scientific Officer	Sikkim State Council of Science & Technology



Dr. S. Anbalagan, Deputy Secretary, Department of Science & Technology will work as the convenor for the Support Core Group.

**BY ORDER IN THE NAME OF THE GOVERNOR.**

Sd/-  
**(N.D.CHINGAPPA) IAS**  
**CHIEF SECRETARY**  
**File No.Gos/DPER & NECA/07/11(173)/COD**

Copy to:

1. All concerned above
2. Principal Secretary to CMO
3. All concerned Secretaries
4. Secretary, Science & Technology
5. Gazette division for publication in the Gazette
6. File and guard file

  
**(ROSHNI RAI)**  
**DEPUTY SECRETARY-I (C)/HOME**

**SIKKIM**



**GOVERNMENT GAZETTE**

**EXTRAORDINARY  
PUBLISHED BY AUTHORITY**

Gangtok

Friday 10<sup>th</sup> February, 2006

No. 34

**GOVERNMENT OF SIKKIM**  
Forest, Environment and Wildlife Management Department  
**SIKKIM WILDLIFE (REGULATION OF TREKKING) RULES, 2005**

No.657/FEWMD

Dated:10.2.06.

In exercise of the powers conferred by sub-section (1) and clause (h) of sub-section (2) of section 54, of the Wildlife (Protection) Act, 1972 (Act No. 53 of 1972), the State Government hereby makes the following rules, namely:-

**1) Short title, extent and commencement**

- (1) These rules may be called the Sikkim Wildlife (Regulation of Trekking) Rules, 2005.
- (2) They extend to the whole of the Sikkim.
- (3) They shall come into force on the date of publication in the official gazette.

**2) Definitions**

- (1) (a) "Acts" means the Wildlife (Protection) Act, 1972.
- (b) "biodegradable material" includes all those materials that decompose naturally in nature, but excludes all paper products;
- (c) "compounding officer" means the person appointed by the State Government under section 54 of this Act;
- (d) "environment" includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property;
- (e) "environmental pollutant" means any solid, liquid or gaseous substance in such concentrations as may be, or tend to be injurious to environment;
- (f) "environmental pollution" means the presence in the environment of any environmental pollutant;
- (g) "wildlife area" for the purpose of these rules means area notified as Sanctuary, National Park, Biosphere Reserve or Conservation Reserve;
- (h) "government" means the Government of Sikkim;
- (i) "non-biodegradable material" includes all those materials that are not biodegradable materials;
- (j) "State" means State of Sikkim;
- (k) "trekking service provider" includes porters, pack animal operators, cooks, guides, their assistants and all other support staff;
- (l) "trekking company" means the person who at the time the offence or contravention was committed, was in charge of, and was responsible to the company for the conduct of the business of the company that had organized the trekking;
- (m) "trek manager" means the trekking company that has organized the trek, or in its absence the group leader of the trekking party or in the absence of both of these, the trekker himself;
- (n) "water body" includes lake, ponds, rivers, streams and others.

(2) Words and expressions used herein but not defined, but defined in the Act shall have the meanings respectively assigned to them in the Act.

### 3) Actions prohibited in wildlife area

(1) Within a wildlife area a trekker, trekking service provider or trekking company shall not:

- (a) use firewood;
- (b) damage or cut shrubs or thickets;
- (c) dispose non-biodegradable material within wildlife area;
- (d) pollute water body;
- (e) collect plants or their parts;
- (f) be accompanied by stray dogs or pet animals;
- (g) feed, shout, tease, chase, disturb or molest wild animals;
- (h) play loud music or use loud speakers;
- (i) deface or damage rocks, tree trunks or government infrastructure or facilities;
- (j) camp outside designated campsites;
- (k) trek outside designated nature trails;
- (l) defecate within 100 meters of any water body;
- (m) camp within 500 meters of the periphery of any lake;
- (n) cause environmental pollution;
- (o) defile sites of religious and cultural significance such as sacred mountains, lakes, moas, caves and shrines or
- (p) commit any other act that may be injurious to forests, water bodies, plants, animals or disturb the natural tranquility of such sites or become a nuisance to fellow trekkers.

(2) A trek manager shall:

- (a) engage trekking service providers who are genuine Sikkim subjects and possess the Certificate of Identification;
- (b) engage pack animals owned by genuine Sikkim subjects who possess the Certificate of Identification;
- (c) provide adequate cooked food for the trekking service providers while in a wildlife area and ensure that they do not use firewood;
- (d) obtain a permit and pay prescribed fees before entering a wildlife area;
- (e) register at the forest/wildlife checkpost before entering a wildlife area;
- (f) bury the biodegradable materials responsibly in designated sites while in a wildlife area;
- (g) arrange to carry sufficient kerosene and LPG for heating and cooking purposes.

(3) A trekker, trekking service provider or the trek manager shall not leave any non-biodegradable material in wildlife area during a trek, and such materials shall be declared at the forest/wildlife checkpost both before and after the trek.

(4) The pack animal operator shall arrange for fodder for the pack animals and ensure that they do not graze freely in wildlife areas.

(5) No person shall sell liquor, drugs or other intoxicants within a wildlife area.

(6) No person shall carry out any research or study within a wildlife area without the prior permission of the Government.

### 4) Penalties

(1) Whenever a trekker or a trekking service provider or a trekking company contravenes or attempts to contravene or abets the contravention of sub-rule 1 or 2 of Rule 3, an offence would be deemed to have been committed and the concerned trek manager shall be punishable with a fine which shall not be less than five thousand rupees but may extend to ten thousand rupees apart from the compensation for the damage caused.

(2) Whenever a trekker or a trekking service provider or a trekking company contravenes sub-rule 3 of Rule 3, an offence would be deemed to have been committed and the concerned trek manager shall

be punishable with fine which shall not be less than one thousand rupees but may extend to fifteen thousand rupees and the fine so collected shall be used to restore the wildlife area to its original state.

Provided that in case of a subsequent offence the fine shall not be less than ten thousand rupees and may extend to twenty-five thousand rupees and the concerned trekker or trekking service provider or trekking company shall be banned from trekking or organizing trekking in the wildlife areas of the State for a period of five years.

(3) Whenever any pack animal operator contravenes sub-rule 4 of Rule 3, an offence would be deemed to have been committed and the concerned pack animal operator shall be punishable with a fine which shall not be less than five thousand rupees but may extend to ten thousand rupees apart from the compensation for the damage caused.

Provided that in case of a subsequent offence the fine shall not be less than ten thousand rupees and may extend to twenty-five thousand rupees apart from the compensation for the damage caused and the pack animal operator and his pack animals shall be banned from entering the wildlife areas of the State for a period of five years.

(4) Whenever any person contravenes sub-rule 5 of Rule 3, an offence would be deemed to have been committed and the person shall be punishable with a fine which shall not be less than ten thousand rupees but may extend to ten thousand rupees.

(5) Whenever any person contravenes sub-rule 6 of Rule 3, an offence would be deemed to have been committed and the person shall be punishable with a fine which shall not be less than ten thousand rupees but may extend to twenty thousand rupees and the person shall be henceforth banned from entering the wildlife areas of the state.

**3) Detection of such offences**

(1) Other than forest officers, the Ecodevelopment Committees (EDC), Joint Forest Management Committees (JFMC) shall be authorized to detect offences under these rules and arrest the offender if there is reason to believe that he will abscond.

(2) Any person arrested under sub-rule (1) shall be handed over forthwith to the nearest forest/wildlife office.

(3) Registered Non Governmental Organizations (NGOs) and the trekking service providers shall be authorized to detect offences and inform the nearest forest/wildlife office.

**6) Reward**

(1) The compounding officer may order reward to be paid to a person who renders assistance in the detection of the offence or apprehending the offender out of the sum of money accepted as fine not exceeding twenty percent of such money.

(2) The compounding officer may meet up the expenses incurred for detecting the offence and apprehending the offender out of the sum of money accepted as fine not exceeding twenty percent of such money.

**7) Rules to apply in addition to other laws**

These rules shall apply in addition to the laws relating to forests, environment, wildlife and biodiversity.

T. R. Pouyal, IFS  
Principal Chief Conservator of Forests –cum- Secretary  
Department of Forest, Environment & Wildlife Management  
Government of Sikkim  
File No: 250/WL/CF/EE



GOVERNMENT OF SIKKIM  
FORESTS, ENVIRONMENT AND WILDLIFE MANAGEMENT DEPARTMENT  
FOREST SECRETARIAT, DRORALE, GANGTOK, SIKKIM - 737102

No. 25 /GOS/FRWMD.

Dated 06/07/2004

NOTIFICATION

In exercise of the powers conferred by Sub-section (2) of Section 2 of the Indian Forest Act, 1927 (16 of 1927), and in continuation of notification number 913/F dated 17.8.1996, the State Government hereby appoints the following officers to carry out all or any of the purposes of the said Act or rules made thereunder to be done by a Forest Officer, namely:

1. Additional Principal Chief Conservator of Forests.
2. Director of Forests.
3. Additional Director of Forests.
4. Joint Director of Forests.
5. Field Director of Forests.
6. Deputy Director of Forests.
7. Assistant Director of Forests.
8. Head Forest Guard.



(T.R. Poudyal, IFS),  
Principal C.C.F.-cum-Secretary, Forests,  
Forest, Environment and Wildlife Management Department,  
Government of Sikkim

File No.14 (12) FRWMD

**SIKKIM**



**GOVERNMENT GAZETTE**

**EXTRAORDINARY  
PUBLISHED BY AUTHORITY**

**Gangtok Friday, 15<sup>th</sup> December, 2006 No. 403**

Government of Sikkim  
Office of the PCCF-cum-Secretary  
Department of Forest, Environment and Wildlife Management  
Forest Secretariat, Deorail, Gangtok -737102, Sikkim

Ref No: 1978/F

Dated: 11/12/2006

In partial modification of Paragraph 7 of the Notification No.899/FFWMD Dated: 10/2/06 the "Narsing Himal Trek" comprising of the designated nature trails and designated camping sites as mentioned below is included in the already notified Gangtok Ecotourism Protection Zone in West Sikkim. This zone will now comprise of five approved trekking trails. The designated nature trails and designated camping sites in the Narsing Himal Trek are as follows:

Trek No.	Trek Name	Designated Nature Trails in Forest Area	Designated Campsites in forest area
1	<b>Narsing Himal Trek</b>  Entry Point: 10 <sup>th</sup> Mile, Borong road-head  Exit Point: 10 <sup>th</sup> Mile, Borong road-head  The nature trail from Poktal and passing sequentially	through Hataara, Thumki, Duri Urai, Barney Dara, Sakey Padu; Phodi Urai, Thulo Pathichaur, Titi Downray, Chongal and Rani Tsar.  The permitted day trails include Chongal herder's camp to Parchi Pokhe. This trek passes through important holy place namely Parchi Pokhe.  This trek passes through the wildlife sensitive habitats namely the Keyung Himalayan Tiger Conservation Zone and Laduwa khola Medicinal Plants Conservation Zone.  Pack animals (horses, donks and yaks) are not permitted on this trek. Lighting fire or cooking food is permitted only at the designated campsites and not during day treks.	Thumki herders Camp, Duri Urai Thulo Pathichaur Chongal herder's camp, Rani Tsar

**T. B. Poudyal, IFS**  
Principal CCF cum Forest Secretary  
Department of Forest, Environment and Wildlife Management  
Government of Sikkim

**SIKKIM**

**GOVERNMENT**



**GAZETTE**

**EXTRAORDINARY**  
**PUBLISHED BY AUTHORITY**

---

Gangtok	Friday 10 <sup>th</sup> February, 2006	No. 35
---------	--	--------

---

**GOVERNMENT OF SIKKIM**  
**OFFICE OF THE PCCF-cum-Secretary**  
**Department of Forest, Environment & Wildlife Management**  
**Forest Secretariat, Deorail, Gangtok - 737102, Sikkim**

No. 88/FEWMO

Dated: 15/02/06

**Guidelines for the Appointment of Himel Raihak:**

**The Need:**

- (1) About 50% of Sikkim (4,167 sq. km) lies above 3000 meters and most of this is classified as Reserve Forests. This sub-alpine and alpine landscape of the Sikkim Himalayas locally referred to as Himel has a unique ecosystem and cultural and wildlife values associated with it. It is a repository of unique, globally significant wildlife like the Snow Leopard, Musk Deer and Black Necked Crane and also provides an ideal habitat for their survival. The Himel also forms the headwaters of important perennial rivers and conserving this watershed is essential for the survival of thousands of villagers who live at the lower elevations. Improved ecological health of this ecosystem translates to sufficient water in the streams even in the lean season, which sustains agricultural and horticulture crops, directly translating to food and health security of the villagers living down stream. The Himel is also a repository of valuable medicinal plants, which form the basis for the indigenous systems of medicine. Most of the plants, lakes, rivers and caves here are considered sacred and are visited by pilgrims to pay homage.



**Present Status, Gaps and Challenges:**

- (2) Though most of lower and middle hill forests have been brought under the Joint Forest Management (JFM/EDC) network, the upper hill forests of the Himalayas, despite of determined efforts, still continue to be under inadequate management, beset with threats and need urgent interventions. The main threats being unregulated grazing, unplanned trekking tourism, hunting and trapping of wild animals, smuggling of medicinal and aromatic plants and lack of awareness amongst the security forces. Effective conservation of the Himel by forest staff alone is very difficult due to its high altitude, remoteness, rough terrain, harsh climate and limited resources available. Further lack of adequate infrastructure and facilities make every patrolling visit more like an expedition, with a large contingent of support staff and resultant high attendant costs.

**The Strategy:**

- (3) Hence it is proposed to enlist the support of the villagers, providing traditional subsistence livelihoods in the high altitudes of the Himalayas, in conservation management. Such villagers, who are willing and be recognized as Himel Raihak (Honorary Mountain Guardians) and their capacity building efforts. This will result in a more effective, participatory "on-ground" conservation of the Himel jointly with the Forest Department. Since it is their traditional livelihoods which compel the Himel Raihak to access the

Himal, these livelihoods will be permitted in a regulated manner, provided they perform their duties and responsibilities.

**Legal Status:**

- (4) Section 4 (1) of the Wildlife (Protection) Act 1972 empowers the state government to appoint
  - a. A Chief Wildlife Warden
  - b. Wildlife Wardens
  - [ (bt) Honorary Wild Life Wardens]
  - c. Such other officers or employees as may be necessary for the purposes of the Act. Himal Rakshaks can be appointed on a honorary basis, under sub-section (c) of section 4 of the Act read in conjunction with clause (b) of section 33, read with sub-section (8) of section 35 and sub-section (2) of section 36A of the Wildlife (Protection) Act, 1972 (53 of 1972). Under section 59 of the aforesaid act, such Himal/Rakshaks shall be deemed to be public servants within the meaning of section 21 of the Indian Penal Code.
- (5) The legal status, land tenure and ownership of the Himal shall remain unchanged

**Criteria for Selection:**

- (6) The following criteria should be kept in mind while assessing the suitability of a person as a Himal Rakshak: (a) Bonafide resident of the state of Sikkim. (a) Genuine concern for wildlife conservation. (b) Personal record free of any current involvement in any activity detrimental to the interests of nature and wildlife conservation. Any person involved in commercial exploitation of wildlife should not be considered. (c) Personally visit the Himal regularly in the normal course of his lifestyle (d) Willingness to render support to the official machinery. The nature of the livelihood is traditional and has been carried out since generations. (e) The livelihood is of subsistence level and for bonafide personal use and not for any commercial purpose. (f) This livelihood is the sole basis for the sustenance of the household. (g) The sensitive habitats / strict conservation zones are not disturbed. (h) Any other regulation that may be assigned by the concerned divisional forest officer or any other high authority.

Yak (and Hybrid Yak) herders from the districts of West, South and East Sikkim are not eligible for selection under this criterion, since there is no cold desert in these districts, which is the only natural home for the yak in the state.

An important point to bear in mind is the identification of Himal areas prone to threats or close to sanctuaries, national parks and conservation reserves. Selection of persons as Himal Rakshaks must be related to such high altitude problem areas because it is these areas which need priority attention and where public participation is needed most.

**Procedure for Appointment, Performance Appraisal and Termination:**

- (7) These guidelines for the appointment of Himal Rakshaks should be approved by the State Government.
- (8) When recommending any person for such appointment, the criteria laid down in paragraph 5 above must be kept in mind.
- (9) It is very important that the right persons are selected for appointment as Himal Rakshaks. The selection process would involve an initial selection by the concerned JFMCEDC jointly with the concerned Ward Panchayat and forwarded to the concerned Divisional Forest Officer who shall verify whether the criteria for selection has been adhered to or not. He shall then forward the names of suitable persons to the Chief Wildlife Warden of the state for onward appointment.
- (10) The appointment of any Himal Rakshak should in the first instance be generally for a period of one year. Thereafter on the recommendation of the concerned Divisional Forest Officer, it may be renewed for a period not exceeding 2-3 three years at a time.
- (10) Each Himal/Rakshak should be issued an identity card having his signature and photograph duly attested by the concerned divisional forest officer.
- (11) The performance of the Himal Rakshaks shall be reviewed annually by the concerned divisional forest officer jointly with the concerned JFMCEDC and the Gram Panchayat. In the absence of such appraisal, the appointment of the Himal/Rakshak shall be automatically renewed for the next year.



- (12) The divisional forest officer may at his/her discretion, terminate the appointment of any *Himal Rakshak* at any time, if he/she does not perform his duties and responsibilities or carries out any activity detrimental to the interests of nature and wildlife conservation.

**Duties and Responsibilities:**

- (13) The main duty and responsibility of a *Himal Rakshak* is to assist whole heartedly in wildlife conservation work with regard to the following matters:
- Control of poaching and clandestine trade in wild animals and products / articles thereof
  - Detection of offences under the Wildlife (Protection) Act and the rules made thereunder.
  - Preventing damage to the habitat of wildlife
  - Preventing smuggling of medicinal and aromatic plants for trade
  - Preventing instances of bio-piracy by tourists and others
  - Reducing the negative impacts from unplanned trekking tourism
  - Carrying the message of conservation to the people and enlisting their public support for nature and wildlife conservation
  - Carrying out biological surveys and monitoring
  - Render assistance to the forest personnel during their visits to the Himal
  - Any other matter related with the conservation of wildlife, which may be entrusted by the concerned Divisional Forest Officer.

**Powers:**

- (14) The *Himal Rakshak* shall report to the concerned JFMG/EDC and the concerned divisional forest officer and under section 59 of aforesaid Act he/she shall be deemed to be a public servant within the meaning of section 21 of the Indian Penal Code. Protection for action taken in good faith is provided under section 60 of the Act.
- (15) With a view of making the *Himal Rakshaks* useful and effective it is necessary that the following specific powers under the Wildlife (Protection) Act 1972 should be delegated to them: (a) Powers of entry, search, seizure and detention under section 50 for prevention and detection of offences under the Act.
- (16) Apart from the above, the State Government may delegate any other power under the aforesaid Act, as it may consider necessary.

**Benefits and Capacity Building:**

- (17) The *Himal Rakshaks* shall be permitted to continue their existing livelihood in the Himal in a regulated manner provided they perform their duties and responsibilities. The State Government is however not liable to pay any monetary remuneration to the *Himal Rakshaks*, in lieu of their service.
- (18) The State Government should recognize outstanding work or service rendered by a *Himal Rakshak*. Such recognition can be by way of a letter of commendation, or a certificate signed by the Forest Minister or Forest Secretary. Cash awards could also be considered for suitable cases.
- (19) The Forest Department shall in partnership with reputed NGOs and others seek to build the capacity of the *Himal Rakshaks* in conservation management. This would include trainings and support for collection of data in prescribed formats on status, distribution and threats to wildlife and their habitat.

**Cooperation:**

- (20) In the event of a warrant, the departmental staff should provide all possible help and assistance. However no staff or vehicle support can be provided to *Himal Rakshaks* as a matter of course.
- (21) Just as it is expected that the *Himal Rakshaks* should assist the forest personnel, it is equally essential that the Forest Department should take all possible steps to associate the *Himal Rakshaks* in their work. This can be achieved best by fostering a spirit of mutual trust and confidence.

T.R. Poudyal, IFS  
Principal Chief Conservator of Forests cum Secretary  
Department of Forest, Env. and Wildlife Management  
Government of Sikkim  
File No: 250/WLC/F/05

**SIKKIM**



**GOVERNMENT GAZETTE**

**EXTRAORDINARY  
PUBLISHED BY AUTHORITY**

<b>Gangtok</b>	<b>Friday 10<sup>th</sup> February, 2006</b>	<b>No. 39</b>
----------------	--	---------------

**GOVERNMENT OF SIKKIM**  
Office of the PCCF-cum-Secretary  
Department of Forest, Environment and Wildlife Management  
Forest Secretariat, Deorail, Gangtok -737102, Sikkim

No:892/FEWM)

Dated: 10/2/06

**Singalila Ecotourism Promotion Zone**

In exercise of the powers conferred by clause (h) of section 33, read with sub-section (8) of section 35 and sub-section (2) of section 36A of the Wildlife (Protection) Act, 1972 (53 of 1972), clause (d) of section 76 of Indian Forest Act 1927 (16 of 1927), and clause (i) of sub-section (2) of section 63 of the Sikkim Forests, Water Courses And Flood Reserve (Preservation And Protection) Act, 1988 (6 of 1988), the State Government hereby makes the following notification:-

**1. Background and Need**

It is essential to have zonation of protected areas for their effective management. Protected Areas should be zoned according to values in smaller pockets not necessarily as large cores, but a mosaic of smaller, management cores, spread in an area with tempered human use. Other zones for incentive programmes such as community based ecotourism need to be defined and set aside. The smaller cores should act as 'source' populations for sustaining wildlife populations of endangered species outside.

**2. Aims and Objectives**

With an objective to promote sustainable community based ecotourism with minimum negative impacts and provide incentives to the local community from conservation, the Singalila ecotourism promotion zone is being defined and set aside in West Sikkim district. The Singalila ecotourism zone comprises of 4 approved trails and 27 designated camping sites.

**3. Criteria for designating nature trails and camping sites**

Existing nature trails and camping sites have been preferred. Three new round trekking trails Everest Singalila, Yambong Singalila and Aweykingchok Dzongri are being promoted in order to reduce the impacts along the already overcrowded Khangchendzonga Base Camp trails. Camping right on the bank of high altitude lakes and in areas of critical conservation importance is to be discontinued.

**4. Existing status, threats and gaps**

Community based Ecotourism is an important source of seasonal income for the villagers residing in remote areas. The impacts of unmanaged tourism are accelerating the rate of destruction in areas, which were once regarded as inaccessible. The negative impacts of unplanned tourism like deforestation due to the use of firewood, unhygienic sanitation, garbage accumulation, smuggling of plants and animals have to be regulated and at the same time the benefits arising from this enterprise equitably shared. Unplanned tourism also threatens sensitive and biologically important high altitude ecosystems.

Unplanned tourism related pressure on the forest in terms of the firewood used for heating and cooking purposes has been more distinctly visible at some camping places. Water runoff along the trail due to continuous trampling by the pack animals are bringing about soil loss along the trail and in the pasturelands. Lack of proper garbage management system by the tourists, Himalayan Mountaineering Institute (HMI) trainees and their support staff in this high altitude tourist destination has led to continuous accumulation of garbage on the route up to Gocha La, HMI base camp and the surrounding sacred lake area. Another concern is the stray dogs, which accompany these trekking groups and prey on the ground nesting birds and lesser mammals. The pack animals e.g. horses, dzos and yaks used in the tourism enterprise compete with the wild herbivores for accessing the limited fodder resources in the summer pastures.

Due to the limited accommodation in the trekkers huts most of the tourists do camping in tents and toilet tents are widely used. Since campsites are not designated this has resulted in camping and setting up of toilet tents as per convenience. The porters and other support staff often defecate in the adjoining forests resulting in a spread of pollution. There is a shortage of permanent, functional, alpine toilets with running water facility in the camping sites. Also the pack animals do not have shelters at the designated camping sites.

#### 5. Baseline Habitat Survey during the summer of 2004 and 2005

Habitat surveys were conducted during the summer of 2004 and 2005 covering the Everest Singalla Trek, Yambong Singalla Trek, Khangchendzonga Base Camp Trek and the Areylungchok Dzongri Trek. During this survey critical wildlife habitats were identified at Yongzokdrak, Lampokhril, Areylungchok, and Naming for Blue Sheep, Medicinal Plants, Musk Deer and Himalayan Tahr respectively. Subsequently consultations with the villagers was organized at Yuksam, Nambu and Labdang based on which these trekking routes have been finalized, ensuring minimum impact to wildlife sensitive habitats and at the same time providing alternative livelihoods to the local community.

#### 6. Boundaries

The Singalla Ecotourism Promotion Zone in West Sikkim district shall comprise of four approved trails namely Khangchendzonga Base Camp, Yambong Singalla, Areylungchok Dzongri and the Everest Singalla and comprise of the designated nature trails and designated camping sites.

#### 7. Designated Nature Trails and Designated Campsites for ecotourism

The following trails are operational within Khangchendzonga National Park, Barsey Rhododendron Sanctuary and adjoining Reserve Forests in West Sikkim. The Khangchendzonga Base Camp is a trek operational since a long time, while the Yambong-Singalla, Everest-Singalla and Areylungchok-Dzongri are relatively new. The designated nature trail and camping sites need to be notified to ensure that the trekkers stick to the designated trails. They can switch from one trail to another only at the intersection points of the two trails. The following treks, nature trails and campsites are being notified in the Singalla Ecotourism Promotion Zone in West Sikkim.

Trek No.	Trek Name:	Designated Nature trails in forest area	Designated Campsites in forest area
1	Khangchendzonga Base Camp Trek Entry Point: Yuksam Exit Point: Yuksam	Existing nature trail starting from Yuksam and passing sequentially through Sashen, Bakhim, Tshoka, Phedang, Dzongri, Doring Taar, Chonggang, Koktshuring, Thangping and Lamune and back  Only day treks are permitted to Dzongri Top, Lampokhril (Lam Tsho), Sungmotang Tsho (Samri Lake) upto Teen Kune Phokri, Tshoka to Gursa / Jamlingang, and from Koktshuring to	Sashen, Bakhim, Tshoka, Phedang, Dzongri, Doring Taar, Chonggang, Koktshuring, Thangping and Lamune

<p>3 Everest – Singalila Trek Entry Point: Hee Bormick, Hiley, Soreng</p>	<p>It joins the Khangchendzonga Base Camp trek. Only day treks are permitted to Lachmi Pokhi. The nature trail from Hee Bormick and passing sequentially through Samma Tsar, Barsey, Jorbotey, Kaljhaar, Phalut, Chewabhangyang, Chitray, and then to Dechenphuk (Naytham) where it joins the Yambong – Singalila trek or drop down to Uttarey village. The nature trail from Hiley to Barsey and from Burtakhop (Soreng) to Barsey and then joining the above trail.</p>	<p>Pending Hiley, Samma Tsar, Barsey, Jorbotey, Kaljhaar, Phalut, Chewabhangyang, Chitrey</p>
<p>4 Areylungchok – Dzongri Trek Entry Point: Labdong Exit Point: Yuksam</p>	<p>The nature trail from Labdong and passing sequentially through Kasturi Urar, Khola Urar / Chamrey and then to Thangsing where it joins the Khangchendzonga Base Camp trek. This trek passes through the wildlife sensitive habitats namely the Areylungchok musk deer conservation zone and the Lampaohri medicinal plants conservation zone. Pack animals (horses, dros and yaks) are not permitted on this trek. Lighting fire or cooking food is permitted only at the designated campsites.</p>	<p>Kasturi Urar (above Labdong), Khola Urar / Chamrey</p>

## 8. Ecotourism Promotion Plan

### (A) Ecotourism Promotion Initiatives

- (1) Publicity of these regulations by installing adequate signages at Yuksam, Labdong, Nambu, Uttarey, Hee Bormick, Hiley, Barsey and near the trekkers huts, camping sites and conservation area.
- (2) Informing the travel agents, hordes, pack animal operators, panchayats, JFMG/EDC and local NGOs about these regulations.
- (3) Publicity of these regulations by taking out press release and launching a website of the forest department.
- (4) Provide feedback forms and also web enabled feedback to the trekkers so that they can provide feedback on their trekking experience.
- (5) Training and capacity building of travel agents, hordes, panchayats, JFMG/EDC and local NGOs about these regulations.
- (6) Designating the boundaries of the camping sites on the ground and providing basic amenities in the camping sites like running water, alpine toilets, kitchen cum porters barack and pack animal shelters.
- (7) These ecotourism promotion initiative should be incorporated into the existing schemes and programmes of the Khangchendzonga National Park and Khangchendzonga Biosphere Reserve in order to provide adequate funds for implementation of this zonation and conservation management plan.
- (8) The Tourism Department may also support in the promotion and development of the Singalila Ecotourism Zone in West Sikkim.

### (B) Ecotourism Regulations

- (1) Movement of visitors and support staff is prohibited outside the designated natural trails and designated camping sites.
- (2) Use of fire, smoking and "hot lunch" is not permitted on day treks.

- (2) Movement of pack animals (horses, donors and yaks) is prohibited into notified conservation zones.
- (4) Movement of pack animals (horses, donors and yaks) is prohibited on day treks.
- (3) The "code of conduct" or conservation code for trekking in forest areas has been notified by the State Government under the "Sikkim Wildlife (Regulation of Trekking) Rules 2005". The punishment and penalty for violation of the same has also been detailed therein.
- (iii) These ecotourism regulations shall be enforced by the forest officers in coordination with the Ecodevelopment and Joint Forest Management Committees.
- (7) Other than forest officers, the Ecodevelopment Committees (EDC), Joint Forest Management Committees (JFMC), registered Non Governmental Organizations (NGO), Himal Rakshaks and the trekking service providers shall be authorized to detect offences under these rules and arrest the offender if there is reason to believe that he will abscond. Any person so arrested shall be handed over forthwith to the nearest forest/wildlife office.
- (8) These provisions shall apply in addition to the laws relating to forests, environment, wildlife and biodiversity.

T. R. Poudyal, IFS  
Principal CCF cum Forest Secretary  
Department of Forest, Environment and Wildlife Management  
Government of Sikkim  
File No. 250/WLC/FS5



DEPARTMENT OF LABOUR  
GOVERNMENT OF SIKKIM  
GANGTOK



No. 1/DL  
No. 133L

Date: 15.01.2008

NOTIFICATION

Whereas certain proposals to classify and revise the minimum rates of wages to the categories of workers employed in the scheduled employments of "(1) Automobiles Engineering Works, (2) Bakeries and Confectioneries, (3) Construction or Maintenance of Roads and Buildings, (4) Construction of Projects including Dams, Tunnels, Hydro-electric and other multipurpose, (5) Dairy, Poultry and Animal Husbandry farming, (6) Casual contingency employees engaged by Government, Semi-Government, Public Sectors and Private Sectors, (7) Distilleries and Breweries, (8) Electronic Industries, (9) Handloom Industries, (10) Hotels, Restaurants, Eating Houses/Tea Shops, (11) Printing Press, (12) Shops & Commercial establishments, (13) Tours & Travel Agencies, (14) Cinema and Video Halls, Cable Operators, (15) Wood Works Carpentry and Masonry, (16) Tea Plantation, (17) Private Transportation, (18) Grill Industries, (19) Tyre and Trading Industries, (20) Ferro Alloys Industries, (21) Engineering Industries, (22) Forestry and Timbering Industries, (23) Leather Industries, (24) Paper & Pulp Industries, (25) Stone Breaking and Crushing", were published in the State Government Extraordinary Gazette No. 336, dated 31.07.2007 vide Notification No. 4/DL, 27.07.2007, in exercise of the powers conferred by clause (b) of sub-section (1) of Section 5 of the Minimum Wages Act, 1948 (11 of 1948). In the said Notification, objections and suggestions were sought from all those likely to be affected thereby before expiry of two months from the date of publication of said Notification.

Whereas, the objections and suggestions received on the said proposals have been considered by the State Government;

NOW THEREFORE, in exercise of the powers conferred by clause (b) of sub-section (2) of Section 5 of the Minimum Wages Act, 1948 (11 of 1948), and in supersession of the Notification No. 2/DL, dated 07.01.2004 and the Notification No. 3/DL, dated 26.08.2005, the State Government hereby classify the categories of the workers and revise the rates of minimum wages as specified in the table and schedule annexed hereto, payable to the workers employed in the schedule employments mentioned in Para I above

Table -1

Category of Workers	Daily Rate of Wages
1	2
Un-skilled	Rs. 100/-
Semi-Skilled	Rs. 115/-
Skilled	Rs. 130/-
Highly Skilled	Rs. 150/-

Table - II

1.	Loading of a full truck load of any kind through manual labour such as stone, stone chips, sand, bricks, timber, logs, bamboo etc.	Rs. 100/- only.
2.	Un-loading of a full truck load of any kind through manual labour such as stone, stone chips, sand, bricks, timber, logs, bamboo etc.	Rs. 100/- only.
3.	<p><b><u>MANUAL CARRIAGES(HEAD LOAD)</u></b></p> <p>(a) Upto 100 kg head load for 100 meters or less.</p> <p>(b) Upto half truck load of any kind such as stone, stone chips, sand, bricks, timber, logs, bamboo etc. for a distance of 100 meters or less.</p> <p>(c) Full truck load of any kind such as stone, stone chips, sand, bricks, timber, logs, bamboo etc. for a distance of 100 meters or less.</p>	<p>Rs.3/- only and for increase of each hundred meter will be the multiple of Rs. 3/- or part of Rs.3/- to be added for the estimated distance covered in meters.</p> <p>Rs. 250/- only and for increase of each hundred meter will be the multiple of Rs. 250/- or part of Rs. 250/- to be added for the estimated distance covered in meters.</p> <p>Rs.400/- only and for increase of each hundred meter will be the multiple of Rs.400/- or part of Rs. 400/- to be added for the estimated distance covered in meters.</p>



3. The revised rates are inclusive of dearness allowance but exclusive of other concession if any enjoyed by the employees.
4. The rates of daily wages of workers at various altitudes shall be as under:
  - (a) Upto 8000 ft. altitude - Workers shall be paid normal wages.
  - (b) From 8001ft.to 12000 ft. Altitude - Workers shall be paid 50% more than the normal wages
  - (c) From 12001ft. to 16000ft. Altitude - Workers shall be paid 75% more than the normal wages
  - (d) From 16001ft. & above Altitude - Workers shall be paid double the normal wages
5. If a workers works without being absent during the period of 6(six) days consecutively in a week, he/she shall be given one paid holiday on either Sunday or any other Hal day.
6. No worker shall be required to work for more than nine hours in a day with break of one hour.
7. No person below the age of 14 (fourteen) years shall be employed in any work.
8. There will be no difference between wages for male and female workers.
9. Where a worker works for more than eight hours in any day or more than forty eight hours in any week, he/she shall in respect of over time work, be entitled to wages at the rate of twice his/her ordinary rate of wages.
10. The minimum rates of wages are applicable to workers employed by contractors as well as workers engaged in private masonry works like house, building also.
11. If any question arises as to what particular work is Highly Skilled, Skilled, Semi-Skilled or Un-Skilled, it may be referred to the Labour Department, Government of Sikkim, whose decision shall be final.
12. These rates will be effective from the 1<sup>st</sup> day of April, 2008.

Categories of Workers

1. Un-Skilled Workers:
  1. Chowkidar (Watchman)
  2. Peon
  3. Sweeper (Salaikarmachari)
  4. Server
  5. Waiter (Bern)
  6. Cleaner
  7. Ordinary Worker
  8. Packer
  9. Helpers
  10. Office boy
  11. Nursery Watcher
  12. Earth Excavator
  13. Earth Digger
  14. Mali
  15. Khalasi
  16. Shop Assistant
  17. Weigh man
  18. Service boy
  19. Water boy
  20. Air boy
  21. Jali Workers (Cement Concrete Pipes)
  22. Assistant Pipe Fitter
  23. Bull Care Taker
  24. Boar Care Taker
  25. Cook
  26. Dog Catcher
  27. Dresser
  28. Dairy Care Taken
  29. Egg Recorder
  30. Field Worker
  31. Grass Cutter
  32. Helper (Operator Machineries)
  33. Helper (Fitter Operator)
  34. Horse Attendant
  35. Hospital/Dispensary Attendant
  36. Koin-Yeer
  37. Laboratory boy
  38. Line Assistant
  39. Milk Carrier

40. Patrol Man
41. Poultry Care Taker
42. Power House Cleaner/Oil Man
43. Room Attendant
44. Yak Attendant
45. Mule Attendant
46. Ponies Attendant
47. Driver (Donkey, Mule, Horse, Yak, Ponies etc.)
48. **Any other categories by whatever name called which are of an un-skilled nature.**

2. **Semi-Skilled:**

1. Assistant Fitter (Mechanic)
2. Assistant Black Smith
3. Assistant Gold Smith
4. Assistant Welder
5. Assistant Painter
6. Hammer Man
7. Assistant Baker
8. Head Attendant (Handloom Industries)
9. Coal Man
10. Pump Man
11. Polisher
12. Gate Keeper
13. Booking Assistant
14. Machine Labour
15. Earth Breaker
16. Rock Excavator
17. Hole Driller
18. Spray Man
19. Stone Breaker
20. Conductor
21. Booking Clerk
22. Ticket Checker
23. Time Keeper
24. Store Keeper
25. Switching Man
26. Duplicating Operator
27. Sales Man
28. Assistant Pipe Manufacturer
29. Press Man (Metalic)
30. Castingwala (Metalic)

31. Cutter (Metalic)
32. Circle Cutter (Metalic)
33. Assistant Mistry (Motor Body Builder
34. Puncture Fitter
35. Type and Tube Mistry
36. Assistant Line Man
37. Assistant Switch Board Operator
38. Assistant Turbine Operator
39. Bill Distributor
40. Carpenter Grade II
41. Carpenter Grade III
42. Compressor Operator
43. Crane Operator
44. Engine Operator
45. Field Assistant
46. Field Enumerator/Enumerator
47. Filter Operator
48. Fitter Grade II
49. Fodder Belder
50. Librarian (without diploma)
51. Lathe Man
52. Line Man
53. Mason Grade II
54. Mason Grade III
55. Meter Reader-cum-Bill Clerk
56. Mechanic
57. Painter Grade II
58. Painter Grade III
59. Pipe Fitter Grade I
60. Pipe Fitter Grade II
61. Revenue Assistant
62. Rigger
63. Stone Crusher Operator
64. Supervisor
65. Switch Yard Attendant
66. Switch Operator
67. Sub-Station Attendant
68. Senior Assistant Turbine Operator
69. Tailor
70. Dhobj
71. Cobbler
72. Barber
73. Tractor Helper
74. Turbine Operator
75. Vibrator Operator

76. Mixture Operator
77. Junior Weaver
78. Ordinary Workers (Underground works such as Mines, Tunnels, Dams etc.)
79. Sikkim Herald Packer and Distributor
80. Any other categories by whatever name called which are of a semi skilled nature.

3. **Skilled:**

1. Electrician
2. Fitter Grade I
3. Carpenter Grade I
4. Spray Painter
5. Painter Grade I
6. Artist
7. Litho Machine Man
8. Litho Press Man
9. Radio Man for Offset Machine
10. Flat Machine Man
11. Line Operator
12. Mono Operator
13. Composer Grade I
14. Head Cook
15. Head Baker
16. Quality Controller
17. Cutter (Tailoring)
18. Senior Weaver
19. Turner
20. Moulder
21. Plant Operator Mason
22. Mason Class I
23. Machine Man
24. Chemist
25. Chemical Analyst
26. Blender
27. Foreman
28. Boiler Attendant
29. Operator (Cinema)
30. Air Conditioner Operator
31. Head Mumshi
32. Cutter (Timber)
33. Laboratory Technician

35. Radio/T.V./Computer Mechanic
36. Photo Artist
37. Manager (Petrol Pump)
38. Technical Supervisor
39. Head Mistry (R.C.C.)
40. Compositor
41. Binder
42. Computer Operator
43. Dancer/Singer/Musician
44. Khang-So-Pa
45. Demand Clerk
46. Draughtsman
47. Hand Made Paper Worker
48. Lower Division Clerk/Typist
49. Librarian (With Diploma/Degree)
50. Light Vehicle Driver
51. Senior Pipe Fitter
52. Tracer
53. Welder-cum-Denter
54. Semi-Skilled Workers (Underground works such as in Mines, Tunnels, Dams etc.)
55. Medical Dresser or its equivalent by designation.
56. **Any other categories by whatever name called which are of a skilled nature.**

4. **Highly Skilled:**

1. Heavy Vehicle Driver
2. Bull Dozer Operator/Driver
3. Excavator Operator/Driver
4. Roller Driver
5. J.C.B. Driver
6. Plumber /Welder /Foreman /Electrician /Computer Mechanic having I.T.I. or any other Diploma Certificate.
7. Skilled Workers (Underground works such as Mines, Tunnels, Dams, etc.)
8. **Any other categories by whatever name called which are of a Highly Skilled nature).**

**EXPLANATION:**

**Definition of categories:**

- (a) **"Un-Skilled Work"** means work which involves simple operation requiring little or no skill or experience on the job.
- (b) **"Semi-Skilled Work"** means work which involves some degree of skill or competence, acquired through experience on the job, and which is capable of being performed under the supervision or guidance of skilled employee and includes unskilled supervisory work.
- (c) **"Skilled work"** means work which involves skill or competence acquired through experience on the job or through training as an apprentice in a technical or vocational institute and the performance of which calls for initiative and judgement.
- (d) **"Highly Skilled work"** means work which calls for degree of perfection and competence in the performance of certain jobs including clerical work acquired through intensive technical or professional training or adequate work experience for certain reasonable period and also required an employees to assume full responsibility for his judgment/decision involved in the executive of his job.

BY ORDER,

  
URKAYASTHA, SSJS,  
SECRETARY,  
OUR DEPARTMENT  
No.GOS/DI/97/03-04

  
R.K.P  
LABC  
File 1



**GOVERNMENT OF SIKKIM  
HOME DEPARTMENT  
GANGTOK**

No. 64 /Home/2008

Dated: 05/07/2008

**NOTIFICATION**

WHEREAS, to provide sustainable livelihood options to the local community, especially to the educated unemployed youth, so that they do not resort to unsustainable practices, the State Government has deemed it expedient to establish a Directorate of Eco-tourism under Forests, Environment and Wildlife Management Department, Government of Sikkim for incentive programmes, such as Community Based Eco-Tourism, Home-stay Eco-Tourism, Research Based Eco-Tourism, Adventure Eco-Tourism, Expedition Eco-Tourism, etc;

AND WHEREAS, the impacts of unmanaged tourism are the main reasons for destruction in the region, so whatever the negative impacts of unplanned tourism like deforestation due to the use of firewood, unhygienic sanitation, garbage accumulation, smuggling of plants with its derivatives and animals and its parts have to be regulated and at the same time the benefits arising from this enterprise will be shared amongst the entrepreneurs;

AND WHEREAS, unplanned tourism also threatens sensitive and biologically important high altitude wetlands and glaciers as such it is necessary to protect and preserve the sanctum sanctorum of sacred peaks, sacred caves, sacred rocks, sacred lakes, chortens, hot springs, etc as notified by Notification No.70/HOME/2001, dated 20.9.2001;

AND WHEREAS, more than 80% of the total geographical area of the State falls under the administrative jurisdiction of Forests, Environment & Wildlife Management Department and has recognized Eco-Tourism as a service sector;

AND WHEREAS, the whole structure of Directorate along with its accessories will be constructed after dismantling the existing old Galvanized Corrugated Iron (GCI) sheet structure and surrounding vacant site situated at the premises of Forest Secretariat, Deorail for accommodating the Office of the Directorate of Eco-Tourism, Office of the Khangchendzonga National Park- Khangchendzonga Bio Reserve of Wildlife Sector and Sikkim State Pollution Control Board. The financial resources may be arranged to construct a composite building for the purpose with the facilities like information centre, basic amenities, etc.

NOW THEREFORE, with the above objectives in view, the State Government is hereby pleased to establish Directorate of Eco-Tourism in the State of Sikkim under Forests, Environment & Wildlife Management Department, Government of Sikkim for the following purposes namely: -



- (1) to prepare Sikkim Eco-Tourism Policy;
- (2) to channelise and regulate all the Eco-Tourism activities in Protected Areas, Reserved Forests and other forest lands in the State;
- (3) to hand-over all the existing Forest Rest Houses and other structures (viz. notified trek routes of Protected Areas and Reserved Forests etc) to the Directorate of Eco-Tourism which are lying vacant/unutilized at present;
- (4) to impart training and capacity building of Eco-Tourism Service Provider's, travel operators, panchayats, Joint Forest Management Committee (JFMC)/Eco-Development Committee (EDC), Himal Rakshaks and local Non Governmental Organizations about the Sikkim Eco-Tourism policy and regulations;
- (5) to allow the execution and implementation of all the Eco-Tourism related works to be taken up within or outside the Protected Areas and Reserve Forests;
- (6) to incorporate into the existing schemes and programmes of the National Park and Sanctuaries in order to provide adequate funds for implementation of the zonation and conservation management plan;
- (7) to seek support from Tourism Department and other organizations and agencies in the promotion and development of the Eco-Tourism in coordination with the Directorate of Eco-Tourism;
- (8) delegate power to the officers and field staff posted in the Directorate of Eco-Tourism to exercise the Wildlife(Protection)Act,1972 and the Sikkim Forests, Watercourses and Road Reserve Preservation and Protection Act, 1988 and Indian Forests Act, 1927;

Z. The rules and regulations of the Eco-tourism shall be as follows namely:

- (1) Movement of visitors and support staff is prohibited outside the designated nature trails and designated camping sites.
- (2) Lighting of fire, cooking and 'hot lunch' is not permitted on day treks.
- (3) Movement of pack animals (horses, dzos and yaks) is prohibited within the national park and sanctuaries.
- (4) Holy sites, local traditions and customs are to be respected as this will help in preserving the rich heritage of our composite culture.
- (5) The 'Code of Conduct' or conservation code for trekking in forest areas has been notified by the State Govt. under the 'Sikkim Wildlife (regulation of Trekking) Rules,2005'. The punishment and penalty for violation of the same has also been detailed therein.

  
(6)

These eco-tourism regulations shall be enforced by the forest officers in coordination with the Eco-development, Joint Forest Management Committees, Panchayats and Himal Rakshaks.

- (7) Other than forest officers, the Eco-development Committees (EDC), Joint Forest Management Committees (JFMC), Panchayats, registered Non-Governmental Organizations (NGO), Himal Rakshaks and the trekking service providers shall be authorized to detect offences under these rules and arrest the offender if there is reason to believe that he will abscond. Any person so arrested shall be handed over forthwith to the nearest forest/wildlife office.
3. These provisions shall apply in addition to the laws relating to forests, environment, wildlife and biodiversity.

**BY ORDER AND IN THE NAME OF THE GOVERNOR**

**Sd/-**  
**(N. D CHINGAPA) IAS**  
**CHIEF SECRETARY**  
**File No. 06/Dir/W.L.&Eco-Tourism**

Copy to:

1. All Secretaries and HODs.
2. All PS to Hon'ble Ministers.
3. Principal Secretary, CMO.
4. PS to Chief Secretary.
5. Gazette section for publication in the gazette.
6. File and Guard file.

  
**(ROSHINI RAT)**  
**DEPUTY SECRETARY-I (C)/HOME**



**GOVERNMENT OF SIKKIM**  
**OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FOREST-cum-SECRETARY**  
DEPARTMENT OF FOREST, ENVIRONMENT & WILDLIFE MANAGEMENT  
FOREST SECRETARIAT, GANGTOK, DEORALI - 737 120

No. 282/PCCF/DFEWM/GoS

Dated 27-2-2009

**NOTIFICATION**

Whereas, frequent incidences of injuries to human life and property by Wildlife has come to the notice of the State Government

And whereas, it is apprehended that the victims might kill or destroy wild animals by poisoning and may develop hostile behavior.

Now therefore, in order to curb this menace, the State Government is hereby pleased to provide the following reliefs or ex-gratia payment to the injured or to the legal heirs of the victims of depredation caused by the following animals, namely:-

- |    |                        |                          |
|----|------------------------|--------------------------|
| I. | (1) Tiger              | (Panthera tigris)        |
|    | (2) Snow Leopard       | (Panthera uncia uncia)   |
|    | (3) Bear               | (Selenarctus thibetanus) |
|    | (4) Leopard or Panther | (Panthera pardus)        |
|    | (5) Tibetan Wolf       | (Canis lupus chanku)     |

I. The rate of Ex-gratia payment or relief has been categorized as follows, namely:-

- |                             |   |                 |
|-----------------------------|---|-----------------|
| (1) Human injury (simple)   | - | Rs. 10,000.00   |
| (2) Human injury (grievous) | - | Rs. 50,000.00   |
| (3) Human death             | - | Rs. 1,50,000.00 |

II. The rate of Ex-gratia payment for live-stock by Tiger, Snow-Leopard, Bear, Wolf, Panther or Leopard shall be as follows, namely:-

- |             |   |               |
|-------------|---|---------------|
| (1) Cow     | - | Rs. 10,000.00 |
| (2) Bull    | - | Rs. 12,000.00 |
| (3) Buffalo | - | Rs. 15,000.00 |
| (4) Calf    | - | Rs. 5,000.00  |
| (5) Goat    | - | Rs. 6,000.00  |
| (6) Sheep   | - | Rs. 5,000.00  |
| (7) Pony    | - | Rs. 5,000.00  |
| (8) Yak/Dzo | - | Rs. 15,000.00 |

2. The rate of Ex-gratia payment of crop damaged by Monkey, Wild boar, Bear, Porcupine, Civet, Deer, Peacock shall be as follows namely -

(1)	Cardamom	No. of rhizomes	@ Rs. 4/- each
(2)	Maize	No. of cob	@ Rs. 4/- each
(3)	Paddy	Area damaged	Actual assessment based on market value.
(4)	Millet	-do-	-do-
(5)	Potato	-do-	-do-
(6)	Tubers (simal tarul (tapioca), Ghararul, squash, sweet potato etc.)	-do-	-do-
(7)	Buck wheat	-do-	-do-
(8)	Wheat	-do-	-do-
(9)	Oat/Barley	-do-	-do-
(10)	Orange	-do-	-do-
(11)	Guava	-do-	-do-
(12)	Pear	-do-	-do-
(13)	Peach	-do-	-do-
(14)	Plum	-do-	-do-
(15)	Apple	-do-	-do-
(16)	Jack fruit	-do-	-do-
(17)	Wood apple	-do-	-do-
(18)	Banana	-do-	-do-
(19)	Caulliflower	-do-	-do-
(20)	Cabbage	-do-	-do-
(21)	Peas	-do-	-do-
(22)	Beans	-do-	-do-
(23)	Soyabeans	-do-	-do-

3. The Ex-gratia payment indicated above shall be paid only after making thorough assessment and fulfillment of the following conditions, namely -

- No Ex-gratia payment shall be made for any incident occurring within the boundaries of Reserve forest and Protected Areas (PAs).
- The Cattle should be accompanied by a cowherd at the time of killing or damage.
- Killing/damage is reported within 24 (twenty four) hours to the nearest Forest/Wildlife Office or Police Station.
- The animal killed should not be removed from the site or smeared with pesticides etc, the area of crop damage should be left undisturbed till the assessment has been made.

- (e) No flesh is removed from the carcass by the owner for eating or other purpose.
- (f) The verification of the animal killed/crop damaged by the wildlife mentioned in this Notification must be by a person not below the rank of Range Officer.
- (g) The verification should be done in the presence of cattle/crop owner and the local Panchayats. It should be supported by reliable witness and relevant documentary proofs and.
- (h) Ex-gratia payment indicated above shall be paid only after production of a Medical Certificate from a Government Hospital and in case of crop damage certified by concerned Panchayats, EDCs & IFMCs.

This Notification supersedes Notification No. 119/WL/F/97/08 dated July 20, 1999 published in extraordinary gazette number 168 dated the 21<sup>st</sup> July, 1999

By order and in the name of the Governor



(S.T. Lachungpa, IFS)  
Principal CCF-cum-Secretary  
Department of Forest, Env. & Wildlife Management  
File no. 261/WL/F/06



Provided also that the Authority may also co-opt upto five members who are experts in the fields of river conservation, hydrology, environment engineering, social mobilization and such other fields.

#### **4. Powers and Functions of the Authority-**

- (1) Subject to the provisions of the Environment (Protection) Act 1986, the Authority shall have the power to take all such measures and discharge functions as it deems necessary or expedient for effective abatement of pollution and conservation of the rivers of the State and for implementing the mandate of the State River Conservation Authority.
- (2) In particular, and without prejudice to the generality of the provisions of sub- paragraph (1), such measures may include measures with respect to all or any of the following matters, namely:-
  - (a) coordination and implementation of the river conservation activities including augmentation of sewerage infrastructure, catchment area treatment, protection of flood plains, creating public awareness and such other measures at the State level and regulation of activities aimed at the prevention, control and abatement of pollution in the rivers of the State to maintain water quality, and to take such other measures to river ecology and management in the State;
  - (b) implementation of the river basin management plan prepared by the State River Conservation Authority;
  - (c) maintenance of minimum ecological flows in the rivers of the State with the aim of ensuring water quality and environmentally sustainable development through implementing water conservation practices including recycling and reuse, rain water harvesting, and decentralized sewage treatment systems and promoting water augmentation by storage projects in the catchment;
  - (d) monitoring and review of the implementing of various programme or activities taken up by the implementing agencies for prevention, control and abatement of pollution in the rivers of the State;
  - (e) address issues related to land acquisition, encroachments, contracts, power supply and other such issues for the purpose of implementing the mandate of the Authority;
  - (f) power of entry and inspection under section 10 of the said Act and power to take sample under section 11 of the said Act for the purpose of exercising and performing the functions of the Authority;
  - (g) power to resort to the penal provisions contained in sections 15 to 21 of the said Act for the purpose of exercising and performing all or any of the above functions; and
  - (h) issuance of directions under section 5 of the said Act for the purpose of exercising and performing all or any of the above functions and to take such other measures as the Authority deems necessary or expedient for achievement of its objectives;
- (3) The powers and functions of the Authority shall be consistent with the provisions of the Environment (protection) Act, 1986 (29 of 1986).

#### **5. APPOINTMENT OF OFFICERS AND THEIR POWERS AND FUNCTIONS.**

The Authority may appoint officer or officers with such designation as it think fit for the purpose and may entrust to them such powers and functions under this Authority as it may deem fit.

#### **6. Meetings of the Authority:**

The Authority may regulate its own procedures for transacting its business including its meetings.

#### **7. Jurisdiction of Authority:**

The jurisdiction of the Authority shall extent to the entire State of Sikkim.

**8. Monitoring of effective abatement of pollution and conservation of rivers of the State:**

The Authority may evolve its own mechanism for monitoring of effective abatement of pollution and conservation of the rivers of the State

**9. Administration and technical support to the Authority:**

The Authority shall be provided administrative and technical support by the State Government in the Department of Forests and Environment, which shall be the nodal Department. The said Authority shall provide all financial and logistic support and such other facilities in respect of all its statutory functions.

**10. State Executive Committee:**

With the view to assist the said Authority, the State Government hereby constitutes the State Executive Committee (hereinafter referred to as "SEC") with such powers and functions as deemed necessary for implementation of Authority's decisions. It shall comprise of the following members, namely:-

- (a) Chief Secretary – ex officio Chairperson
- (b) Secretary, Environment and Forests-ex officio Member
- (c) Secretary, Finance-ex officio Member
- (d) Secretary, Urban Development-ex officio Member
- (e) Secretary, Water Resources/ Irrigation-ex officio Member
- (f) Chairman, State Pollution Control Board- ex officio Member
- (g) Engineer-in-Chief/ Managing Director, Project Implementing Agency-ex officio Member
- (h) Engineer-in-Chief, Irrigation Department-ex officio Member
- (i) Upto 5 experts from relevant fields  
Nominated by the State Government Member
- (j) Secretary Forests & Environment-ex officio Member Secretary

**11. Powers and functions of the State Executive Committee:**

The State Executive Committee shall oversee and monitor the implementation of various programmes/projects of the Authority and give necessary directions to the implementing agencies. It would report to the said Authority the progress of implementation and seek its directions. The SEC shall convene its meeting at least once in three months.

**12. Delegation of Powers:**

The Member Secretary of the SEC shall exercise powers of the Authority on its behalf for the purpose of performing the functions of the Authority on its behalf.

**By order and in the name of the Governor.**

**T.T.Dorjee, IAS  
Chief Secretary,  
Government of Sikkim.**





238

**GOVERNMENT OF SIKKIM**  
**OFFICE OF THE CHIEF WILDLIFE WARDEN**  
 DEPARTMENT OF FOREST, ENVIRONMENT & WILDLIFE MANAGEMENT  
 FOREST SECRETARIAT, DEOGALI, GANGTOK - 737 102

No: 16 /CWLW/FEWMD

Dated: 1/7/2010

**NOTIFICATION**

In exercise of powers conferred by clause (bb) of sub-section (1) of section 4 of the Wildlife (Protection) Act 1972 as amended upto 2006, the state Government hereby appoints the following persons as Honorary Wildlife Warden for the period of (2) two years with immediate effect -

Sl.No.	District	Name of the Honorary Wildlife Warden	Address	Jurisdiction
1	East	So Soom Palor Machungpa	Martam, East Sikkim	Entire East Sikkim
2	North	So Tseten Lepcha	Chungthang North Sikkim	KNP/KBR/WL/Entire North Sikkim
3	South	Kri Begyam Raj	Melli Dara, south	Entire South Sikkim
4	West	Sri Buddha Singh Subba (Retd. BO)	Soreng, West Sikkim	KNP/KBR/WL/Entire West Sikkim
5		Dr Kesang C Bhutia	Joint Director (R) AM&VS.	Entire State
6		Brigadier	67 Min Arty Bde.	Army area of operation in East Sikkim
7		Brigadier	112 Min Arty Bde.	Army area of operation in North Sikkim



(N.T. BHUTIA) 04/7/10  
 CHIEF WILDLIFE WARDEN  
 File No. 15/ADM/WL/W



GOVERNMENT OF SIKKIM  
OFFICE OF THE CHIEF WILDLIFE WARDEN  
FOREST ENVIRONMENT & WILDLIFE MANAGEMENT DEPARTMENT  
FOREST SECRETARIAT, DEORALI-737 102

Ref.No: 13/ADM/WL/F/21

Date:16.09.2010

**NOTIFICATION**

**DUTIES AND RESPONSIBILITIES OF HONORARY WILDLIFE WARDEN**

The main duty and responsibility of an Honorary Wildlife Warden is to assist whole heartedly the Forest, Env. & Wildlife Management Department especially in the following matters.

- a) Control of poaching and detection of clandestine trade in wild animals and products/articles thereof.
- b) Detection and prosecution of offences under the Wild (Protection) Act, 72 and the Rules made there under.
- c) Preventing damage to the habitats of wildlife in the Wildlife Protected Areas (WPA) and multiple-use areas.
- d) Identification and selection of areas suitable for the declaration as Sanctuaries, National Parks & Wildlife Conservation Areas.
- e) Measures for reducing the man-animal conflict, dealing the problem of damage by wild animals to life and property including crops and the assessment thereof and payment of compensation for the losses.
- f) Carrying the message of conservation to the people and eliciting their support for nature and wildlife conservation in the State. The efforts should be especially directed towards the local communities living in the fringes of wildlife protected areas and multiple-use areas.
- g) Any other matter connected with the protection of wildlife which may be entrusted to him/ her by the Wildlife Wing of the Department.

**POWERS**

In accordance with sub-section (3) of section 4 of the Wildlife (Protection) Act, 1972, an Honorary Wildlife Warden appointed under sub-section (1) (bb) of section 4 shall be subordinate to the Chief Wildlife Warden of the State and under section 59 of the aforesaid Act, he shall be deemed to be a public servant within the meaning of section 21 of the Indian Penal Code (450f 1860). Protection of action taken in good faith is provided under section 60 of the said Act. Some powers of Honorary Wildlife Warden

- a) Power to inspect records of license under section 47 (b) of the said Act.
- b) Powers of entry, search, seizure and detention under section 50 for prevention and detection of offences under the said Act.
- c) Honorary Wildlife Warden in his/ her jurisdiction may also carry out proper investigation and lodge a complaint in the Court under sub-section (b) of Section 55 of the said Act.
- d) Any other power that may be delegated to the HWLW by the Chief Wildlife Warden from time to time.



Contd.....

**GENERAL.**

1. No staff or vehicle support can be provided to Honorary Wildlife Warden in his/ her normal duties. However, if circumstances warrant, the Departmental shall provide all possible help and assistance.
2. The actual expenses incurred by Honorary Warden on travel by public transport for carrying out the duties assigned to him/her shall be reimbursed by the Department. In addition, actual expenses incurred in the detection of an offence under the Wildlife (Protection) Act, 1972 which leads to successful prosecution shall also be reimbursed.
3. In case of any outstanding work or service rendered by any Honorary Wildlife Warden, the State Government may recognize it.



  
(N. P. BHUTIA, IPS)  
CHIEF WILDLIFE WARDEN  
DEPARTMENT OF FOREST, ENV. & WILDLIFE MGMT.  
GOVERNMENT OF SIKKIM



**GOVERNMENT OF SIKKIM  
OFFICE OF THE PRINCIPAL CCF-CUM-SECRETARY  
FORESTS, ENVIRONMENT AND WILDLIFE MANAGEMENT DEPARTMENT**

No. 130/KNP-KBR/FORESTS.

Dated: 16 / 08 / 2010

**Pangmelung Singalila Trekking Trail**

In exercise of the powers conferred by clause (b) of section 33, read with sub-section (B) of section 25 and sub-section (2) of section 36 A of the wildlife (Protection) Act, 1972 (53 of 1972), clause (d) of section 76 of Indian Forest Act 1927 (16 of 1927) and clause (i) of sub-section (1) of section 83 of Sikkim Forests, Water Courses And Road Reserve (Preservation And Protection) Act, 1988 (6 of 1988), the State Government hereby makes the addendum to the Notification 892/FEWMD dated 10.02.2006 for notification of the **Pangmelung Singalila trekking trail**, as trek No 7 along with the camping sites viz. **Bajeraydara, Darali and Pangmelung** in West Sikkim.

In partial modification of Trek No 5 of Notification No.130/NP & Z/WL/Forest/29, Dated: 27.02.2007, as trek no. 6, after Trek No. 5 of para 7 of the Notification No.892/FEWMD, Dated:10/2/06, Singalila Eco-Tourism Promotion Zone, in West Sikkim now comprise of 7 (seven) approved trekking trails.

**Designated Nature Trail and Camping Sites**

Trek No.	Trek Name	Designated Nature Trails in Forest Area	Designated Campsites in forest area
7.	<b>Pangmelung Singalila Trek</b>  <b>Entry Point:</b> Melli & Khechupali, West Sikkim  <b>Exit Point:</b> Yuktam, Nambu, Utterav, Visr versat	The nature trail from Melli and Khechupali passing sequentially through Gufa dara, Mirgay Chowk, Dewrali, Gora Juray, Bhanyang, Bajaray dara, Kanturi Khola, Thulo Orar, Nageswari, Darali, Jagray Pokhari, Samsi, Jamlay Pokhari, Pangmelung and joins Singalila route at Dafey Bheer or Gomthang  This trek passes through some wildlife sensitive habitats of Himalayan Tahr, Serow, Himalayan Black bear, Musk deer and Phainants. Pack animals (horses, don and yaks) shall be permitted on this trek. Lighting fire or cooking food is permitted only at the designated campsites and not during day treks and other code of conduct be applied as per Sikkim Trekking Rules 2005.	Bajeraydara, Darali, Pangmelung  and will join the designated campsites of Singalila as per Singalila Ecotourism Promotion Zone, West Sikkim

Any agencies, trekking service providers, researchers, trekkers, expedition teams and company shall strictly follow the Sikkim Wildlife (Regulation of Teckking) Rules, 2005.

(S.T. Chakraborty, IFS)

Principal Chief Conservator of Forests-cum-Secretary  
Forests, Environment and Wildlife Management Department  
Government of Sikkim  
File No. 130/NP&Z/WL/Forests



No. 114/Home/2010

Dated: 8.10.10

### NOTIFICATION

The State Government, in supersession of Notifications No. 54 (75) Home/93/33 dated 2<sup>nd</sup> August, 1993, No. 13/Home/97 dated 14<sup>th</sup> March, 1997, No. 25/Home/2006 dated 20<sup>th</sup> March, 2006 and No. 37/Home/2010 dated 17<sup>th</sup> April, 2010, is hereby pleased to notify with immediate effect the following fees and guidelines for mountaineering expeditions and trekking and matters related thereto, namely:-

#### 1. ROYALTY

The royalty, imposed as an environment fee under the Wildlife (Protection) Act, 1972 as amended from time to time, payable under revenue head "0406-02-800-01-WLS", by the mountaineering expeditions and trekking shall be as follows:

##### (a) Climbing of Peaks:

Peaks above 8000 mtrs	-	US\$ 8000
Peaks between 7501-8000 mtrs	-	US\$ 7000
Peaks between 7001-7500 mtrs	-	US\$ 6000
Peaks between 6501-7000 mtrs	-	US\$ 5500
Peaks below 6500 mtrs	-	US\$ 5000

Note: (1) For Indian expeditions 50 % of the royalty stated above shall be charged.

(2) Mountaineering expeditions booked through registered travel agencies located in Sikkim, and expeditions sponsored by the Sonar Gyasa Mountaineering Institute, Gangtok and the Himalayan Mountaineering Institute, Darjeeling shall be eligible for a 20% rebate on the royalty prescribed above.

(b) Alpine Expeditions:

- (i) For foreign expedition team - US\$ 500 per team up to 4 members, US \$ 700 per team up to 8 members, and US \$ 100 for every additional member.
- (ii) For domestic expedition team - ₹ 15,000/- per team up to 8 members and ₹ 1500 for every additional member.
- (iii) For an all Sikkim expedition team - ₹ 5,000/- per team of up to 8 members and ₹ 500/- for every additional member.

The peaks that have been opened by the Government of Sikkim for Alpine expeditions are the following:-

<u>Name</u>	<u>Location</u>	<u>Gradation</u>
Frey's Peak - 5830 mtr	Chaurigang, West Sikkim	AD+
✓ Lama Wangden - 5868mtr	Lachen, North Sikkim	AD
SD ✓ Brankhangse - 5635 mtr	Yunthang, North Sikkim	D
MT Tischerkang-6010 mtr	West Sikkim	D
MT Boonru - 5932 mtr	West Sikkim	D+

Note: - The permit for Alpine expeditions to above five peaks will be issued only to those local Tour Operators who have been authorized and notified by the Tourism department for conducting the Alpine expeditions.

(c) Trekking:

- (i) For Foreign Groups: US \$ 200 for group of 5 to 10 members, US \$ 300 for group of 11 to 15 members and US \$ 400 for group of 16 to 20 members for Alpine Treks and 50% of the said amount for other treks.
- (ii) For Domestic Trekkers: ₹ 500 for individual, ₹ 3000 for group of 5 to 10 members, ₹ 4500 for group of 11 to 15 members and ₹ 6000 for group of 16 to 20 members for Alpine Treks and 50% of the said amount for other treks.

(iii) For an all Sikkim Group -

One third of the fee prescribed at (ii) above. Royalty will not be charged for treks in respect of a student from Sikkim.

Note: (1) The fee is for the duration of trek, which is usually 10 days on the average.

(2) Entry fee for entry into sanctuaries and national parks and other related fees as may be prescribed from time to time by the State Forests Department will be in addition to the Royalty prescribed above.

## 2. INSURANCE COVER:

The following minimum insurance coverage shall be ensured for the mountain climbing and Alpine expeditions:

- |                                  |   |                        |
|----------------------------------|---|------------------------|
| (a) Expedition members           | : | ₹ 3 lakhs per member.  |
| (b) Camp crews, Guides & Porters | : | ₹ 1 lakh per person.   |
| (c) Animals                      | : | ₹ 20,000/- per animal. |

## 3. MAINTENANCE FEE:

The Tourism department supported by the Forest, Environment & WL Management department shall be responsible for ensuring that mountain expedition and trekking routes are well maintained. For the purpose a nominal maintenance fee of ₹ 50 per head shall be payable by the Expedition and Trekking parties' under Tourism department Revenue head '1452-800-Other Receipts'. The Finance, Expenditure & Revenue department will provide an amount equivalent of the revenue so collected to the department through an annual budgetary provision.

## 4. SEARCH & RESCUE:

The Tour Operator shall be responsible for search and rescue and shall undertake the same under the overall control and directions of the Tourism department. To ensure timely and effective search and rescue in case of any mishap or accident the Tour Operators will be required to give bank guarantee of ₹ 1 lakh before permission for climbing of peaks is granted.

5. For effective coordination of the search and rescue efforts in case of serious mishap or accident following state level and district level committees are constituted:

(I) STATE LEVEL COMMITTEE

- |   |                    |
|---|--------------------|
| a. Secretary, Tourism Department  | - Chairman         |
| b. Secretary, Land Revenue & Disaster Mgt. Department or his representative | - Member.          |
| c. Secretary Forest, Env. & WL Mgt. Department or his representative        | - do -             |
| d. Director, Health Services  | - do -             |
| e. DIGP, Range  | - do -             |
| f. Representatives of Army/CPMF   | - do -             |
| g. Principal, SGM   | - do -             |
| h. President, Travel Agents Association of Sikkim                           | - do -             |
| i. President, Sikkim Association of Adv. Tour Operators                     | - do -             |
| j. President, Sikkim Amateur Mountaineering Association                     | - do -             |
| k. Joint Secretary, Adventure Tourism                                       | - Member Secretary |

(II) DISTRICT LEVEL / LOCAL LEVEL COMMITTEE

- |   |                    |
|---|--------------------|
| a. District Collector                             | - Chairman         |
| b. Superintendent of Police                       | - Member           |
| c. Chief Medical Officer                          | - do -             |
| d. District Forest Officer (Territorial)          | - do -             |
| e. Panchayat President of the area                | - do -             |
| f. President, Local Tourism Committee             | - do -             |
| g. Dy/Asst. Director of Tourism in district (TIC) | - Member Secretary |

6. The Tourism department shall maintain an updated Standard Operating Procedure (SOP) outlining the steps to be taken by various agencies in the event of a tourist related mishap, accident or misadventure in the State of Sikkim and further ensure that concerned government servants, tour operators and members of the expeditions/treks are aware of their responsibilities and are prepared to handle any mishap accident or misadventure.

7. PROCEDURE, CONDITIONS & RESPONSIBILITIES OF VARIOUS AGENCIES:

- (1) Tourism department shall be the nodal authority to permit and regulate all adventure sports activities, including mountain climbing, Alpine expeditions and trekking, in the State of Sikkim.
- (2) In carrying out its function in relation to above stated activities the Tourism department shall, however, ensure that no monopoly is created.



in favour of any agency, association or individual or a group of them in the conduct of such activities in the State.

(3) All applications for mountain climbing, Alpinist expeditions and treks shall be addressed to the Secretary, Tourism Department in the prescribed form who shall be the competent authority to issue the permits subject to the laws, rules and guidelines prescribed by the Central and State Governments.

(4) Permits shall be given by the appropriate authority in the Tourism department in the prescribed form giving all details and do's and don'ts, as prescribed by the Central and State Government authorities from time to time, for compliance by the tourists (domestic and foreign) and other concerned agencies. Not more than 10 expeditions per peak (6 foreign and 4 domestic) shall be permitted in a year.

(5) The State Government has, vide Notification No. 70/HOME/2001 dated 20.9.2001, banned the scaling of the sacred peaks and defilement of sacred rocks/lakes/clitchoedens/hot springs listed therein. Permits for climbing of peaks and trekking shall, therefore, be given only for peaks and routes that are presently open for climbing and trekking. For any new peak or trekking route approval of the competent authority will have to be taken, proposal for which should be moved by the Tourism Department well in time to the Home Department for appropriate action.

(6) In respect of foreigners, permission for expeditions/treks shall be given only by the competent authority in the Tourism department as prescribed by the Central Government and these powers shall not be exercised or delegated to any subordinate authority. Approval of the Ministry of Home Affairs, Government of India and in some cases the Ministry of Defense is necessary where the area covered by the expedition/trek or the time period involved is beyond the limits for which permission can be granted by the State authorities. Such cases, complete in all particulars, shall be forwarded by the Tourism Department to the Home Department at least three months in advance for reference to the Government of India for necessary clearance. A copy of the reference to MHA shall also be faxed by the Home Department to Sikkim Tourism Office at New Delhi.

- (7) It shall be the responsibility of the concerned authorities in the Tourism department, operators, LOs and guides to ensure compliance with the RAP/PAP regime in the State and that violations, if any are brought to the notice of the concerned authorities for necessary action as per law.
- (8) Permit from the office of the Superintendent of Police, Check posts, Gangtok shall also be taken for entry into the protected areas as defined under Schedule I of the Foreigners (Protected Areas) Order, 1958 as amended vide Foreigners (Protected Areas) Amendment Order, 1990 and under State Government Notification No. S/480/HP in respect of all tourists and non residents of these places.
- (9) Copy of the permit shall be invariably endorsed to the concerned District Collector, District Superintendent of Police, Police Check posts office and the appropriate Army/CPMF authorities in case the peak/trekking route falls near their camps. In case of foreigners a copy will also be endorsed to the FRO, Gangtok and the concerned Police Station.
- (10) The Tour Operators and members of the mountain climbing, Alpine expedition and trekking teams shall strictly abide by the law/rules, the Basic Minimum Standards, including Liaison Officers and Guides, and such other conditions or code of conduct as may be prescribed by the Tourism and Forest, Environment & WL Management departments from time to time. Non-compliance may lead to their being debarred from future expeditions/treks in addition to imposition of penalties prescribed therein.

By order and in the name of the Governor.


Sd/-  
(T.T. Dorji),  
Chief Secretary  
F. No. Home/Conf/148/2009/03

Copy to: -

1. Secretary, Tourism Department, Govt. of Sikkim, Gangtok.
2. Secretary, Land Revenue & Disaster Management Department, Govt. of Sikkim, Gangtok
3. ✓ PCCF-cum-Secretary, Forests, Env. & Wild Life Management Department, Govt. of Sikkim, Gangtok
4. Director General of Police, Sikkim, Gangtok
5. IG, Checkpost, Sikkim Police, Gangtok

Management Plan of the Khangchendzonga National Park

6. District Collector, North District, Mangan
7. District Collector, West District, Gyalshing
8. File and
9. Guard File

  
(C.M. Sharma)  
Addl. Secretary (Confdl.),  
Home Department



GOVERNMENT OF SIKKIM  
FOREST, ENVIRONMENT AND WILDLIFE MANAGEMENT DEPARTMENT  
DEORALI, GANGTOK-737102.

No. 08 /GOS/FEWMD.

Dated 22 / 10 / 2010.

NOTIFICATION

WHEREAS, the Forest Environment & Wildlife Management Department fixes the rates of royalty on different categories of timber and other forest produce levied from persons consuming them for different purposes.

AND WHEREAS, there is increase in the rates of all commodities during the past few years and since the Government is trying to raise more resources, it is felt necessary to increase the royalty rates on all categories of timber/trees and other forest produce like sand, stone etc. Most of the revenue is realized from sand and stones and there is not much scope to increase the number of locations for collection of sand and stones.

AND WHEREAS, The royalty rates were last revised in the year 2006 when the minimum wage rate was Rs.85.00 which has been revised twice after that in 2008 and in 2010 to Rs. 100.00 and Rs. 130.00 respectively. The increase in the minimum wage rate in 2010 as compared to 2006 is about 53%. The pay and allowances of the employees have also increased considerably.

NOW THEREFORE, to mobilize additional resources the royalty rates of all forest produce available within the State, the import fee of the forest produce brought from outside and all other fees to be levied by Forest, Environment and Wildlife Management Department have been enhanced by minimum of 30% over the existing rates and the enhanced rates are fixed as under with immediate effect.

ROYALTY ON TIMBERS

Item	Bustiwala		Commercial	
	Existing	Proposed	Existing	Proposed
<b>Special Class - I</b>				
Tenk, Malagiri, Khamari, Kimbu, Okhur, Ranichang	Rs. 25.00	Rs. 33.00	Rs. 120.00	Rs. 160
<b>Special Class - II (a)</b>				
Lekh Khari, Sissam	Rs. 21.00	Rs. 28.00	Rs. 120.00	Rs. 160
<b>Special Class - II (b)</b>				
Sal, Panisai, Juniper, Mandane	Rs. 11.00	Rs. 15.00	Rs. 62.00	Rs. 8.00

Management Plan of the Khangchendzonga National Park

Class	Bustiwala		Commercial	
	Existing	Proposed	Existing	Proposed
<b>Length below 9' 1" to 10' 00"</b>				
Special Class - I	Rs. 14.00	Rs. 18.50	Rs. 67.00	Rs. 88.00
Special Class - II	Rs. 11.00	Rs. 14.50	Rs. 53.00	Rs. 69.00
Class - A	Rs. 6.00	Rs. 8.00	Rs. 28.00	Rs. 37.00
Class - B	Rs. 5.00	Rs. 7.00	Rs. 22.00	Rs. 29.00
Class - C	Rs. 4.75	Rs. 6.50	Rs. 20.00	Rs. 26.00
Class - D	Rs. 4.00	Rs. 5.50	Rs. 18.00	Rs. 24.00
Class - E	Rs. 4.00	Rs. 5.50	Rs. 16.00	Rs. 21.00

Class	Bustiwala		Commercial	
	Existing	Proposed	Existing	Proposed
<b>Length below 10' 00" to 12' 00" or more</b>				
Special Class - I	Rs. 18.00	Rs. 23.50	Rs. 80.00	Rs. 104.00
Special Class - II	Rs. 15.00	Rs. 19.50	Rs. 68.00	Rs. 89.00
Class - A	Rs. 12.00	Rs. 16.00	Rs. 52.00	Rs. 68.00
Class - B	Rs. 10.00	Rs. 13.00	Rs. 38.00	Rs. 50.00
Class - C	Rs. 10.00	Rs. 13.00	Rs. 36.00	Rs. 47.00
Class - D	Rs. 8.00	Rs. 10.50	Rs. 32.00	Rs. 42.00
Class - E	Rs. 8.00	Rs. 10.50	Rs. 29.00	Rs. 38.00

**ROYALTY ON MISCELLANEOUS FOREST PRODUCTS:**

Particulars	Quantity	Existing	Proposed
Majito, Dhup / Sukpa	per 40 kgs	Rs. 58.00	Rs. 76.00
Rhododendron, Sunpati, Sorpian, Bhanrungpati.	per 40 kgs	Rs. 57.00	Rs. 75.00
Kagatey (Dahin), Pangra	per 40 kgs	Rs. 37.00	Rs. 49.00
Argeli, Padamechal	per 40 kgs	Rs. 48.00	Rs. 63.00
Bhorta leaves	per 40 kgs	Rs. 16.00	Rs. 21.00
Moss (green)	per 40 kgs	Rs. 53.00	Rs. 69.00
Moss (Sphagnum) white	per 40 kgs	Rs. 500.00	Rs. 650.00
Baniya, Phyakrey leaves	per 40 kgs	Rs. 26.00	Rs. 34.00
Ritha	per 40 kgs	Rs. 62.00	Rs. 81.00
Rheum spp. (chhuja), Kuchh (amliso), Plantation leaves, Walnut	per 40 kgs	Rs. 60.00	Rs. 78.00
Tree fern (to be discouraged due to being threatened)	per plant	Rs. 850.00	Rs. 1105.00
Bepari / Malate leaves	per 40 kgs	Rs. 17.00	Rs. 23.00
Thakro leaves	per 40 kgs	Rs. 15.00	Rs. 20.00
Nigro, Thotne	per 40 kgs	Rs. 65.00	Rs. 85.00
Seed of Sal, Kharapoy	per 40 kgs	Rs. 160.00	Rs. 208.00
Nettle (Sisnew)	per 40 kgs	Rs. 40.00	Rs. 52.00
Bamboo shoots	per 100 nos	Rs. 18.00	Rs. 24.00
Cane shoots	per headload	Rs. 65.00	Rs. 85.00
Mushroom (all types)	Per kg	Rs. 7.50	Rs. 10.00
Nakima, Lapsi fruit, Harra, Barra	Per kg	Rs. 6.50	Rs. 9.00
Pani amala leaves	Per 1000 nos	Rs. 10.00	Rs. 13.00

Management Plan of the Khangchendzonga National Park

Seabuckthorn fruits	Per kg	---	Rs. 5.00
Malagiri root	Per 40 kgs	---	Rs. 70.00
Kawli bark (used for incense making)	Per 40 kgs	---	Rs. 70.00
Leaf manure	Per 40 kgs	---	Rs. 25.00

**ROYALTY ON BAMBOOS**

Particulars	Quantity	Existing	Proposed
Bamboos	Per 1000 nos.	Rs. 400.00	Rs. 520.00
Bamboos (Pareng)	Per 100 nos.	Rs. 80.00	Rs. 105.00

**ROYALTY ON FIREWOOD & FODDER**

Particulars	Quantity	Existing	Proposed
Firewood (in busty)	Head load	Rs. 2.50	Rs. 3.50
Firewood (in town)	Head load	Rs. 6.50	Rs. 8.50
Fodder	Head load	Rs. 2.25	Rs. 3.00
Firewood	per pile	Rs. 45.00	Rs. 59.00
Firewood (for carpeting)	per pile	Rs. 120.00	Rs. 160.00

**ROYALTY ON MEDICINAL PLANTS**

Particulars	Quantity	Existing	Proposed
Jatamasi	per 40 lbs	Rs. 235.00	Rs. 310.00
Rhododendron	per 40 lbs	Rs. 55.00	Rs. 75.00
Hija roots	per 40 lbs	Rs. 67.00	Rs. 90.00
Pepla long / round	per 40 lbs	Rs. 130.00	Rs. 175.00
Chiroto	per 40 lbs	Rs. 115.00	Rs. 155.00
Aconite, Gante fruits	per 40 lbs	Rs. 135.00	Rs. 180.00
Kutki, Siltimbur	per 40 lbs	Rs. 190.00	Rs. 250.00
Totola	per 400 ripefruits/pods	Rs. 130.00	Rs. 170.00
Bodo Okhati	per kg	Rs. 130	Rs. 170.00
Juglans bark	per kg	Rs. 30.00	Rs. 40.00
High altitude alpine Tibetan medicinal herbs	per kg	Rs. 200.00	Rs. 275.00

**ROYALTY ON SAND, STONE ETC.**

Particulars	Quantity	Existing	Proposed
Stone chips	per 100 cft	Rs. 120.00	Rs. 160.00
Stones	per 100 cft	Rs. 60.00	Rs. 80.00
Flat stone	per 100 cft	Rs. 475.00	Rs. 620.00
Sand	per 100 cft	Rs. 70.00	Rs. 95.00

**IMPORT FEE**

Particulars	Quantity	Existing	Proposed
Poles (less than 2' girth of any species)			
Length below 8' 00"	per piece	Rs. 12.00	Rs. 16.00

Management Plan of the Khangchendzonga National Park

Length 8' 00" to 9' 00"	per piece	Rs. 15.00	Rs. 20.00
Length 9' 00" to 10' 00" or more	per piece	Rs. 17.00	Rs. 23.00
Length 10' 00" or more	per piece	Rs. 20.00	Rs. 26.00
Bamboos	per piece	Rs. 4.50	Rs. 6.00
Charcoal	per bag	Rs. 20.00	Rs. 26.00
Firewood	per pile	Rs. 125.00	Rs. 163.00
Stone	per 200 cft	Rs. 45.00	Rs. 59.00
Stone chips	per 200 cft	Rs. 75.00	Rs. 98.00
Quartz stone	per kg	Rs. 0.50	Rs. 1.00
New furniture	per piece	----	Rs. 10.00
Chirata / doko	per piece	----	Rs. 5.00
Cool	per 50 kgs	----	Rs. 5.00

**SELLING PRICE OF SAWN TIMBER, FIREWOOD AND CHARCOAL**

Species	Quantity	Existing	Proposed	
Teak	per cft	Rs. 500.00	Rs. 900.00	
Malagiri, Kimbu, Okhar, Rani Champ, Khamari	per cft	Rs. 400.00	Rs. 750.00	
Sal	per cft	Rs. 350.00	Rs. 750.00	
Parusaj	per cft	Rs. 350.00	Rs. 600.00	
Tooni	per cft	Rs. 250.00	Rs. 450.00	
Silver fir	per cft	Rs. 250.00	Rs. 750.00	
Katus	per cft	Rs. 225.00	Rs. 450.00	
Lampatey, Pipli	per cft	Rs. 225.00	Rs. 400.00	
Chekrasi, Saur, Pateley, Chimal, Gurang-	per cft	Rs. 225.00	Rs. 350.00	
Ghoghay Champ, Maple	per cft	Rs. 150.00	Rs. 450.00	
Buk, Phalat	per cft	Rs. 150.00	Rs. 400.00	
Pakhasaj, Kaula, Chir pine	per cft	Rs. 150.00	Rs. 350.00	
Phuste Champ, Arupatey, Siris, Dhupi, Utis, Simal, Gokul, Kadum, Maina, Chilauney, Mawa, Chatwan, Lapsi and all species not mentioned above.	per cft	Rs. 150.00	Rs. 250.00	
Mixed Firewood	Bonafide use	per pile	Rs. 500.00	Rs. 600.00
	Commercial use	per pile	Rs. 630.00	Rs. 750.00
Charcoal	per bag	Rs. 130.00	Rs. 250.00	

Note: The price of round timber in log form is 15% less than the price of sawn timber accordingly as per the species.

**IMPORT FEE FOR ALL SAWN TIMBERS**

Particulars	Quantity	Existing	Proposed
For bonafide use	per cft	Rs. 7.50	Rs. 12.00
For Govt. approved Timber Sale Agents	per cft	Rs. 15.00	Rs. 25.00
For contractors	per cft	Rs. 30.00	Rs. 40.00

## Management Plan of the Khangchendzonga National Park

### MISCELLANEOUS

Particulars		Quantity	Existing	Proposed
Giltai price for collection of sand & stone.		per sq ft	Rs. 0.30	Rs. 1.00
Licence fee for crusher machine		Machine on per hour	Rs. 5000 per annum in lump sum.	Rs. 1000 per hour regularly/p.a.
Forest Rest House room.		per day	Rs. 200.00	Rs. 300.00
Hiring charges of Conference Hall, Forest Secretariat, Gangtok.	Without banquet	per day	Rs. 3000.00	Rs. 5000.00
	With banquet	per day	Rs. 4000.00	Rs. 10000.00
**Entry fee in reserve forests for film shooting (per person)		per day	---	Rs. 10.00
**Entry fee in reserve forests for picnickers (per person)		per day	---	Rs. 25.00
**Tent pitching charge in designated camp sites within RF areas (per tent).		per day	---	Rs. 100.00
Cattle entering into state of Sikkim for commercial purpose	Cow	per cattle	Rs. 5.00	Rs. 5.00
	Buffalo	per cattle	Rs. 6.00	Rs. 8.00
	Pig	per cattle	Rs. 4.00	Rs. 6.00
	Goat & Sheep	per cattle	Rs. 3.00	Rs. 4.00

\*\* in millions (approx)

### ENTRY FEES AND OTHER IN PROTECTED AREAS & ZOO

Entry fee for Khangchendzonga National Park:

Particulars		Quantity	Existing	Proposed
Indian (per person)	For first seven days	per day	Rs. 150.00	Rs. 200.00
	For additional days	per day	Rs. 25.00	Rs. 30.00
Foreigners (per person)	For first seven days	per day	Rs. 250.00	Rs. 400.00
	For additional days	per day	Rs. 50.00	Rs. 75.00
Indian students (per person)	For first seven days	per day	Rs. 25.00	Rs. 40.00
	For additional days	per day	Rs. 15.00	Rs. 20.00
Foreign students (per person)	For first seven days	per day	Rs. 50.00	Rs. 75.00
	For additional days	per day	Rs. 25.00	Rs. 40.00
Local guides and porters with team		per team	Rs. 10.00	Rs. 20.00
Pack animals (per animal)		per day	Rs. 5.00	Rs. 10.00
Tent pitching charge (per tent)		per day	Rs. 25.00	Rs. 40.00
Camera operating fee in		Still	Rs. 10.00	Rs. 20.00
Khangchendzonga National Park (per camera)		Video	Rs. 500.00	Rs. 750.00
		Movie	Rs. 2000.00	Rs. 3000.00
**Feature film making fees (one at a time)		Indian	Rs. 25000.00	Rs. 30000.00
		Foreigner	Rs. 50000.00	Rs. 60000.00
**Documentary film making fees (one at a time)		Indian	Rs. 15000.00	Rs. 20000.00
		Foreigner	Rs. 20000.00	Rs. 30000.00

\*\* Film making fee is in addition to camera operating fee



Management Plan of the Khangchendzonga National Park

**Entry fee for Wildlife Sanctuaries:**

Particulars		Quantity	Existing	Proposed
Indian (per person)		per day	Rs. 25.00	Rs. 50.00
Foreigners (per person)		per day	Rs. 50.00	Rs. 100.00
Indian students (per person)		per day	Rs. 15.00	Rs. 25.00
Foreign students (per person)		per day	Rs. 25.00	Rs. 50.00
Local guides and porters with team		per month	Rs. 10.00	Rs. 20.00
Pack animals (per animal)		per day	Rs. 5.00	Rs. 10.00
Tent pitching charge (per tent)		per day	Rs. 25.00	Rs. 40.00
Camera operating fees in Khangchendzonga National Park (per camera)	Still	per day	Rs. 10.00	Rs. 20.00
	Video	per day	Rs. 500.00	Rs. 750.00
	Movie	per day	Rs. 2000.00	Rs. 3000.00
** Feature film making fees (one at a time)		Indian	Rs. 10000.00	Rs. 15000.00
		Foreigner	Rs. 25000.00	Rs. 40000.00
** Documentary film making fees (one at a time)		Indian	Rs. 50000.00	Rs. 75000.00
		Foreigner	Rs. 15000.00	Rs. 25000.00

\*\* Film making fee is in addition to camera operating fee.

**MOUNTAINEERING AND TREKKING EXPEDITION**

Particulars		Quantity	Existing	Proposed
Mountaineering and trekking expeditions conducted through the local tour operators, local guides and local porters inside the Protected Areas will be given concession of 20% on entry and tent pitching fees only for a period of two years.				5
Accommodation in Wildlife Log Huts	Adults	per day	Rs. 150.00	Rs. 200.00
	Students	per day	Rs. 50.00	Rs. 75.00
Entry fees to Zoo	Adults	per day	Rs. 10.00	Rs. 25.00
	Child (below 14 yrs.)	per day	Rs. 2.00	Rs. 10.00
	Educational visit of school /college students (per students)	per day	---	Rs. 5.00
	Medium Vehicle	per day	Rs. 40.00	Rs. 100.00
	Light vehicle	per day	Rs. 25.00	Rs. 40.00

By order and in the name of the Governor.

  
 (S.T. L. Bhutupa, IFS)  
 Principal CCPR- cum- Secretary  
 Forest, Environment and Wildlife Management Department  
 Government of Sikkim.



**GOVERNMENT OF SIKKIM  
OFFICE OF THE CHIEF WILDLIFE WARDEN  
DEPARTMENT OF FOREST, ENVIRONMENT & WILDLIFE MANAGEMENT  
GANGTOK**

F. No. 44/WL/P/33/II/50/FEWMD

Dated: 04/06/2011

**NOTIFICATION**


Whereas it has been found expedient to delegate some of the powers and duties of the Chief Wildlife Warden, Government of Sikkim, under the Wildlife (Protection) Act, 1972, to some of his sub-ordinate officers under the said Act.

Now, therefore, in exercise of the powers conferred by sub-section (2) of section 5 of the Wildlife (Protection) Act, 1972 (51 of 1972), the Chief Wildlife Warden, Government of Sikkim hereby delegates the following powers and duties to the following officers:

M No.	Section	Sub-Section	Clause	Power in brief	Delegated to
1	11	1	b	Grant permission of hunting of wild animals other than Sch.I	DF(WL), CF(WL), CTT
2	15C	1		Grant of license to cultivate specified plants and plant part	DF(O/WL), DFO(T), CF(WL), CTT
3	17D	1		Grant of license to do business in specified plants and plant part	CF(WL)
4	27	7	e	Take charge of remains of any dead animal, reported by any person, permitted to reside in the National Park or Sanctuary	ACT(WL), DFO(WL)
5	28	1	b and d	Grant of permit to enter beside in a NP or Sanctuary for photography and tourism	DFO(WL), CF(WL)
6	28	1	a and c	Grant of permit to enter beside in a NP or Sanctuary for investigation and study of wildlife, and for scientific studies	CF(WL)
	29			Allow modification of habitat or change in water course, in PA with concurrence of State Board, for improvement of PA	DF(O/WL), CF(WL)
8	31			Control, manage and maintain NP and sanctuaries	DF(O/WL), CF(WL)

  
(N. T. Ghurta, IFS)  
Principal Section Officer, Chief Wildlife Warden  
Department of Forest, Environment & Wildlife Management, Govt.  
Government of Sikkim, Gangtok

9	33A			Immunoisation of livestock around NP and sanctuary	RO(WL), ACT(WL), DFO(WL)
10	34		a and b	Register persons with arms within 10 KM of NP and sanctuary; issue/issue of new arms license	DFO(WL)
11	36	3		Grant permission to keep in possession, custody or control of Govt. property (hunted or seized animals, vehicles etc involved in crime and seized); to transfer above property, by way of gift, sale or otherwise; destroy the same	DFO(WL), DFO(T), CF(WL), CF(T)
12	40	2		Grant permission for acquire, sale or transport any Sch I or part II of sch II animal or their derivatives, declared under Sec. 40 subsec-1	DFO(WL), CF(WL)
13	41	1		Entry into premises of person declaring stock; Make enquiries and inventory Sch. I and Part-II of Sch. II animal and animal parts; Affix of identification marks on animals and animal parts	DO, RO(WL), RO(T), AC(WL), AC(T), DFO(WL), DFO(T), CF(WL), CF(T)
14	44			Receive stock declaration, issue license for dealing with animal stocks etc.	DFO(WL), CF(WL)
15	45			Cancel license granted under Sec. 44	DFO(WL), CF(WL)
16	30	1		Require any person to produce schedule animal, plants or their derivatives, or license in his custody; Search any vehicle, premises or baggage in possession of the suspect; Seize any schedule plant, animal, their derivative, vehicle or tools involved in suspected crime	FO, DO, RO(WL), RO(T), AC(WL), AC(T), DFO(WL), DFO(T), CF(WL), CF(T)
17		3		Arrest without warrant any person committing above offences without a license	FO, DO, RO(WL), RO(T), AC(WL), AC(T), DFO(WL), DFO(T), CF(WL), CF(T)
18		3A		Hand over custody of animal seized, to any person on bond before trial	RO(WL), RO(T), AC(WL), AC(T), DFO(WL), DFO(T), CF(WL), CF(T)
19		6		Deposit of meat, ungored trophy, plant or plant part (only) seized under Sec. 50(i)	DFO(WL), CF(WL), CF(T)
		8		Issue search warrant, enforce attendance of witness, compel discovery and production of document and material objects, and receive and record evidence	AC(WL), AC(T), DFO(WL), DFO(T), CF(WL), CF(T)
21	54			Compound offences, release of accused and cancel of license/permit under this act	DFO(WL), DFO(T), CF(WL), CF(T)

  
**(N. P. Bhutta, IFS)**  
 Wildlife Warden  
 Forest, Env. & Wildlife Deptt.  
 Government of Sikkim, Gangtok  
 21

22	55		to	Register complaint so that court can take cognizance of any offence under this act	ACT(WL), DFO(WL), DFOCC, CF(WL), CTCI
23	58(i)			Perform the functions of Competent Authority under chapter VI-A of WPA-1972	CTF (WL)

Note:

1. The DFO (WL) as mentioned above includes DFO (KNP)
2. All powers delegated to CF (WL) as above shall also be exercised by JD (KNP) and Director (KNP) in their respective jurisdictions.
3. The powers that are delegated as above have been mentioned in brief for ready reference. However, during implementation, exact text as per the base act of Wildlife (Protection) Act, 1972, as amended till date shall be referred.
4. This notification is issued in suppression of all previous notifications, delegating different powers under the abovementioned act to officers subordinate to Chief Wildlife Warden, Government of Sikkim.

This is issued with the approval of the state Government of Sikkim and will come into force with immediate effect.

**By order and in the name of the Governor,**

  
**(N. L. Ghatia, IFS)**  
**Chief Wildlife Warden**  
**File No. 44/WL/F/83/PART-II**  
**(N. T. Bhutia, IFS)**  
 Principal (J.L.)-cum-Deputy Wildlife Warden  
 Forest, Soil & Wildlife Mgmt. Deptt.  
 Government of Sikkim, Gangtok

URGENT



Pramod Krishnan  
Joint Director (Wildlife)  
F.No. 21/1/2009 WL.1

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT & FORESTS  
(WILDLIFE DIVISION)

Parvathan Bhavan,  
CCO Complex  
Lodi Road,  
New Delhi - 110 003

Telefax: 01-11-24361795  
E-mail: jd-w@moef.in  
Dated: 21.01.2009

To  
**The Chief Wildlife Warden**  
(All States/UTs)

**Subject: Centrally Sponsored Scheme – 'Integrated Development of Wildlife Habitats' -reg.**

Sir,

The undersigned is directed to convey that the Central Government has decided to expand the scope and incorporate additional components/activities in the ongoing Centrally Sponsored Scheme – "Assistance for the Development of National Parks and Sanctuaries" and rename it as 'Integrated Development of Wildlife Habitats' during the 11<sup>th</sup> Five Year Plan period.

In this regard, may kindly note the following:

1. The components and activities currently carried out under the existing Centrally Sponsored Scheme – "Assistance for the Development of National Parks and Sanctuaries" shall stand modified and hereafter be under the Centrally Sponsored Scheme – 'Integrated Development of Wildlife Habitats'.
2. A background note on the modified Scheme is at Annexure I.
3. Guidelines for sending proposals under the Scheme are enclosed at Annexure II.
4. Annual Plan of Operations (APOs) should be sent only for those Protected Areas/ High value biodiversity areas/ recovery programmes, that have approved & operational Management Plans/ Biodiversity Conservation Plans/ Recovery Plans and the various works proposed therein should be in accordance with the Plan. A certificate to this effect should accompany the APO.
5. APOs should be submitted separately for each Protected Area (National Parks, Wildlife Sanctuaries, Conservation Reserves and Community Reserves). However, in the case of proposals for

"Protection of wildlife outside the Protected Areas" the Chief Wildlife Warden shall submit a single comprehensive APO for all the identified high value biodiversity areas in the State/UT. However, such proposal has to have the details of the activities proposed in each such identified high value biodiversity areas. Similarly, in the case of Recovery Programmes, each proposal has to be based on a comprehensive and scientific 'Recovery Plan'. The Chief Wildlife Wardens of the concerned State/UTs (if the species' range is in more than one State/UT), shall jointly prepare the Recovery Plan with the help of a national scientific institute/organization of repute. The Recovery Plan has to be on a five-year basis with yearly break up of activities proposed. Based on the approved Recovery Plan, the Chief Wildlife Warden of the concerned State/UTs shall submit proposals in the form of a single comprehensive APO for activities falling in their jurisdiction.

6. All the proposals/ APOs should be countersigned by CWLW.
7. APOs without Utilization Certificate (duly countersigned by CWLW) for the grant released during the previous years will be ignored. All funds released in previous years and lying unspent with the State/ UTs should be accounted for.
8. Proposals for revalidation of the unspent balance (along with the list of the items) must also be sent along with APOs. Activities to be executed in the year should be included in the APO with due care. **NO DIVERSION PROPOSALS would be entertained at a later date.** Activities should be prioritized as per requirement of the area.
9. State/ UT Governments should indicate the State share for recurring items, for considering such items as per the guidelines of the scheme.
10. The proposals submitted for central assistance should have the approval of the State/ UT Governments to avoid the possibility of central assistance not getting utilized for want of subsequent sanction from the State/ UT Governments. However, an advance copy of the proposal may be sent.
11. The proposals should be computer typed. To avoid any delay and misplacement, **proposals maybe sent preferably through speed post.** An electronic version of the proposal (in Microsoft word format) may also be sent for speedy processing of the proposals. Copy of APOs can also be sent by email to [pl-wl@nic.in](mailto:pl-wl@nic.in)
12. All the APOs for a State/ UT should be preferably sent together in a single bunch under one covering letter.
13. After scrutiny of the proposals, meetings with Chief Wildlife Wardens will be fixed, if found necessary, dates for which will be intimated separately.

14. In case of purchase of vehicles, it should be clearly indicated that whether it is replacement or new purchase. Proper justification may be given in both the cases with details of vehicles and their deployment procured through Central Schemes during previous years.
15. Tentative financial allocation for Protected Areas during 2008-09 has already been communicated to the State/ UTs under the erstwhile CSS - 'Development of National Parks and Sanctuaries'. The same stands as such for the component 'Support to Protected Areas' under the modified Scheme - 'Integrated Development of Wildlife Habitats'. However, for components under 'Protection of Wildlife Outside Protected Areas' and 'Recovery Programmes for Critically Endangered Species and Habitats', token provision is given during the current financial year 2008-09. Hence such proposals shall be considered subject strictly to the availability of funds and fulfilment of other procedural requirements.

In view of the above, I am directed to invite appropriate proposals for seeking central assistance for components 'Protection of Wildlife Outside Protected Areas' and 'Recovery Programmes for Critically Endangered Species and Habitats' under the "Centrally Sponsored Scheme - 'Integrated Development of Wildlife Habitats' for the financial year 2008-09, so as to reach this Ministry latest by 15<sup>th</sup> February 2009.

Yours faithfully,



(Pramod Krishnan)  
Joint Director (Wildlife)

**Copy to:**

1. Secretary (Forests) (All States/UTs).
2. Principal Chief Conservator of Forests (All States/ UTs)
3. Member Secretary, National Tiger Conservation Authority, New Delhi.
4. Director, Wildlife Institute of India, Dehra Dun
5. Inspector General of Forests (Project Elephant), New Delhi
6. Member Secretary, National Tiger Conservation Authority

## Annexure I

# A note on the Centrally Sponsored scheme: 'Integrated Development of Wildlife Habitats'

### 1. Introduction:

The second half of the 20<sup>th</sup> century witnessed considerable changes in the wildlife conservation scenario in India, the most noticeable among these being the enactment of the Wildlife (Protection) Act, 1972 and emergence of a large number of Government-sponsored Protected Areas (PAs) in the form of National Parks and Wildlife Sanctuaries. The 650 odd PAs, encompassing around 4.8 per cent of the geographical area of the country, form the nucleus of the biodiversity conservation strategy of the country. By and large, these PAs have performed their intended roles of maintaining the ecological integrity of the nation. However, in the 21<sup>st</sup> century, the frontier of biodiversity conservation faces newer challenges.

The majority of our designated PAs are small, fragmented and surrounded by zones of intense anthropogenic activities exerting acute eliminative and retrogressive pressures on biodiversity. Hence, in the absence of appropriate scientific planning, management regimes and allocation of sufficient financial resources, these PAs may find it extremely difficult to accomplish their prime objective of biodiversity conservation in the future. It is also realized that substantial part of our green legacy lies outside the confines of conventional PAs. Government-owned production forests, community forests, panchayat forests, private forests, revenue forests, pasture lands, religious forests, wetlands, marine areas, river systems and other similar bio-formations are examples for this. Although some of these areas are relatively well protected, the scenario is bleak in many such areas. Such areas act as the 'sinks and zones of nemeses' for many of our threatened flora and fauna. Most of these areas also provide excellent linkages with the core PAs in the landscape and, as such, there is a need to conserve these areas on a landscape perspective.

The interface between the biodiversity rich areas (including PAs) and the dependent communities therein, also require critical interventions so as to douse the social conflicts arising at many places over issues of access and utilization of bio-resources. Man-animal conflicts are on the rise, causing substantial hardships to people; as a result, retaliatory actions against wildlife and forests have become rampant and order of the day at many places. Wildlife crime and illegal trade in wildlife also continue to be a cause of concern.



Thus, it is imperative to strengthen and consolidate the existing traditional wildlife conservation/enforcement efforts, habitat improvement practices, and infrastructure development. Major initiatives are also required for the protection of wildlife outside PAs, saving critically endangered species and habitats and initiating specific species/habitat recovery programmes, rationalization of PA boundaries, final notification and settlement of rights in areas of relocation of villages from crucial wildlife habitats, securing critical wildlife habitats such as corridors, mitigation of wildlife-human conflicts, reinvigorating ecodevelopment programmes and landscape level interventions, trans-boundary PA initiatives (across the neighbouring states/countries sharing common borders), rehabilitation of hunting communities, capacity enhancement activities, integrating research with wildlife management, etc.

As per the State of Forest Report 2005, the forest and tree cover in the country is around 23.39 %, of which forests constitute around 20.64 %. However, the PA network covers only 4.8% of the geographical area of the country with most of the PAs forming part of the forest area. Compared to the fact that 12 % of the global land area is under PA network, the extent of PA system in India is definitely much lower in proportion. By all practical means, the chances of adding any substantial non-forest areas into PA system are very remote. However, there is still considerable potential in converting many of the 'government owned territorial forest areas', which are repository of exemplary biodiversity, into PAs. Perhaps, the component of 'Protection of Wildlife Outside the Protected Areas' under the Scheme can initiate and steer this process. The areas identified, recruited and groomed under this component could be later converted into full-fledged PAs. Similarly, there is also a possibility of expanding the coverage of Conservation Reserves and Community Reserves.

Keeping these in view, during the 11<sup>th</sup> Plan period, a comprehensive Centrally Sponsored Scheme titled 'Integrated Development of Wildlife Habitats' has been decided to be made operational by adding more components and activities to the Centrally Sponsored Scheme – *Assistance for the Development of National Parks and Sanctuaries*, thus providing scope for administering focused as well as broad-spectrum conservation interventions in the field. The Scheme incorporates additional components/activities for implementing the provisions of the Wildlife (Protection) Act, 1972, National Wildlife Action Plan (2002-16), recommendations of the Tiger Task Force, 2005, and the National Forest Commission, 2006, and the necessities felt from time to time for the conservation of wildlife and biodiversity in the country.

Accordingly, the Scheme will now have the following components and outlay during the 11<sup>th</sup> Five Year Plan:

(in Rs crore)

S.No	Name of the component	Outlay
1.	Support to Protected Areas (National Parks, Wildlife Sanctuaries, Conservation Reserves and Community Reserves)	450.00
2.	Protection of Wildlife Outside Protected Areas	250.00
3.	Recovery programmes for saving critically endangered species and habitats	100.00
	<b>Total</b>	<b>800.00</b>

## 2. Components included under the Scheme:

### (i) Support to Protected Areas (National Parks, Wildlife Sanctuaries, Conservation Reserves and Community Reserves):

The Scheme – 'Assistance for the Development of National Parks and Sanctuaries' used to support only National Parks and Wildlife Sanctuaries. However, following the amendment to the Wildlife (Protection) Act, 1972, in 2003, two more categories of PAs (Conservation Reserves and Community Reserves) have also been recognized. As per the provisions of Section 36 of the said Act, the State Government may, after having consultations with the local communities, declare any area owned by the Government, particularly the areas adjacent to National Parks and Sanctuaries and those areas (such as corridors) which link one Protected Area with another, as a **Conservation Reserve** for protecting the landscapes, seascapes, flora and fauna and their habitat.

The said Section also empowers the State Government, where the community or an individual has volunteered to conserve wildlife and its habitat, declare any private or community land not comprised within a National Park, Sanctuary or a Conservation Reserve, as a **Community Reserve**, for protecting fauna, flora and traditional or cultural conservation values and practice. The management of Community Reserves shall primarily be done by the communities/individuals themselves.

As result, it has been decided to bring these two categories of PAs also under the ambit of the Scheme along with the existing National Parks and Wildlife Sanctuaries.

#### (ii) Protection of wildlife outside Protected Areas

At present, India has a network of 99 National Parks, 515 Wildlife Sanctuaries, 43 Conservation Reserves and 4 Community Reserves in different bio-geographic zones. The role of the PA system in maintaining the ecological integrity of the nation is well realized. However, these PAs can still be termed as discreet and isolated patches of forests managed exclusively for wildlife/biodiversity conservation. Many important habitats still exist outside these areas, which require special attention from the point of view of conservation. Habitats of sandalwood, red sanders, white cedar, rhododendrons, Southern Tropical Montane forests, grasslands, alpine meadows of Himalayan region, corridors connecting PAs and crucial wildlife habitats, deserts, tropical swamps, rivers, estuaries, bamboo & reed breaks, mangroves, coral reefs, deserts etc, are examples of such habitats existing outside conventional PAs. The tenurial status of such habitats ranges from government-controlled Reserved Forests to Protected Forests, revenue forests, interspersed vegetation in plantation sector, revenue lands, village forests, private forests, religious forests, territorial waters, Community Conserved Areas (CCAs) etc. Such habitats also act as corridors for wildlife between PAs thus ensuring connectivity in the landscape.

Although, the formal PAs are, by and large, under some kind of focused management, the absence of such attention in non-formal high value biodiversity formations falling outside the domain of PAs is resulting in the fragmentation of habitats and eventual loss of critical biodiversity. The problem is compounded by the fact that, in the absence of a dedicated conservation strategy, the wildlife in such areas often fall prey to the greed of poachers or to the ire of cultivators whose property or livestock they happen to damage. The derivatives of these poached animals often enter the supply chain of clandestine wildlife trade. Quite often, the existing institutional mechanisms in such areas are inadequately capacitated and mandated to deal with these problems. Hence, it is of paramount importance that such non-formal high value biodiversity areas are also brought under an institutional framework for ensuring better conservation.

Currently, there exists a distinct disconnect between production forestry and conservation forestry. By virtue of its prime objective of revenue generation, the production forestry quite often fails to mainstream the concerns

of biodiversity conservation to the desired extent in its functioning. There is a necessity to bridge this gap.

Further, wildlife protection in multiple use areas is one of the components of the National Wildlife Action Plan (2002-2016). The objective is to provide adequate protection to wildlife in multiple use areas such as Government forests outside PAs, various Community Conserved Areas (CCAs) like sacred groves, community and panchayat forests, identified private forests such as interspersed forests in tea, coffee and cardamom gardens and other production landscapes, farm lands, wastelands, wetlands, coastal habitats, heronries, wintering wetlands of birds, catchment forests, turtle nesting sites, pastures for livestock and wild herbivore, desert ecosystems, etc.

Recognizing that there are several traditional community-initiated and driven conservation programmes, it is proposed that budgetary support is made available to such initiatives also through the Scheme. Such initiatives may not necessarily be officially notified but should still be eligible for support as an incentive for community-led conservation practices. Support to such CCAs will ensure coverage to such otherwise neglected ecosystems and widen the focus of conservation beyond the frontiers of conventional PAs.

### **(iii) Recovery programmes for saving critically endangered species and habitats.**

Over the years, due to a variety of reasons, several species and their habitats have become critically endangered. Snow leopard, Great Indian Bustard, Kashmir Stag, Gangetic Dolphin, Nilgiri Tahr, Malabar Civet, marine turtles, etc are examples for this. It is proposed that the Scheme has the provision to extend support to such special recovery programmes for saving critically endangered species and their habitat based on the requirements felt from time to time. The following strategy is advocated in this regard.

Such programmes ought to start with the identification and formulation of 'Recovery Plans' for the most-critically endangered species of fauna and flora and habitats. This would start with the determination of the current status of the distribution of species and preparation of conservation action plans on a year-wise basis for the next five years in collaboration with a reputed scientific institute. The Scheme would support conservation actions based on the approved 'Recovery Plans'. If the species shows adequate recovery, a re-evaluation could take this off the list.

The species-oriented 'Recovery Plans' mentioned above has to be a project made with a flagship species at the apex and covering the prey base, habitats, ecotypes and biomes. This approach would be particularly useful in landscapes and biomes that are currently not adequately covered or protected under the PA system.

The objective of this component of saving critically endangered species/ecosystems cannot be covered under the components of Conservation of PAs and protection of wildlife outside PAs, as substantial chunk of their population occurs outside the PAs as disjunct population across a wider landscape/seascape. Similarly, the approach in this component has to be more innovative, holistic with long-term perspective on conservation and based on the principle of co-existence with the sustainable human use of their habitats.

The following programmes are initially proposed under this component.

1. Snow Leopard and the high-altitude Himalayas
2. Bustard (including Floricans) and Grasslands
3. Dolphin and River Systems
4. Hangul and alpine grasslands
5. Nilgiri Tahr, ridge forests and shola-grassland ecosystems in the Western Ghats
6. Marine turtles, dugongs and coral reefs & mangroves
7. Edible-nest Swiftlet and forests of the Andaman archipelago
8. Asian Wild Buffalo and grasslands and riverine forests of central and north India
9. Nicobar megapode and the littoral forests of the Nicobar Islands
10. Manipur Brow-antlered deer and floating water bodies and grasslands
11. Vultures
12. Malabar civet and low elevation moist forests in the west coast of peninsular India
13. The great one-horned or Indian rhinoceros and terai grasslands
14. Asiatic Lion
15. Swamp deer

The above-mentioned list is not exhaustive. Depending on the requirements from time to time, the Director, Wildlife Preservation, Government of India, in consultation with the Wildlife Institute of India or the relevant scientific institute / organization and with the approval of the Standing Committee of the National Board for Wildlife can initiate other recovery programmes or wind up an ongoing programme. Similarly, the Director, Wildlife Preservation can undertake assessment of the effectiveness of any 'recovery programme' already undertaken or being undertaken.

### **3. Expected "outputs" and "outcomes" of the Scheme:**

It is expected that during the 11<sup>th</sup> plan, the PA net work in the country shall continue to grow by integrating more representative ecosystems in various bio-geographical zones. At the end of the 10<sup>th</sup> Plan, only 341 (excluding Tiger Reserves) out of 661 PAs could be brought under the ambit of the Scheme. During the 11<sup>th</sup> Plan period, more PAs (including Conservation Reserves and Community Reserves) shall be brought under the ambit of the Scheme. This growth has to happen in qualitative terms too. Special emphasis shall be given to the conservation of important/prioritized PAs, Community Reserves, Conservation Reserves and other non conventional high value bio-formations, trans-boundary PAs, etc. More and more such areas shall be brought under proper management planning. The 11<sup>th</sup> plan shall also see the better protection of highly endangered and flagship species like Snow Leopard, Great Indian Bustard, Hangul, marine turtles, Nilgiri Tahr, etc by adopting the strategy of special species/habitat recovery programmes. The wildlife outside the PA systems shall be given better protection through required interventions.

Adoption of 'inclusivist agenda' for fostering the co-existence of man and wildlife, voluntary relocation of priority villages for creating inviolate space for wildlife, reinvigoration of ecodevelopment programmes, addressing the issue of man-animal conflict, etc. shall also be the outcome of the next plan. Initiation of proper management planning, rationalized PA boundaries, strengthened anti-poaching and enforcement machinery, improved habitat practices aimed at arresting the retrogressive forces and better infrastructure, management oriented research programmes, improved wildlife veterinary care and quality capacity building programmes for the enforcement staff etc shall also be the outcome of the 11<sup>th</sup> Plan.

## Annexure II

### Guidelines for submitting proposals under CSS: 'Integrated Development of Wildlife Habitats'

#### A. Proposed funding pattern under the Scheme during the 11<sup>th</sup> Plan:

Conservation and management of wildlife is primarily vested with the State/UTs, who are in physical possession of the area. Many State/UTs have set up regular wildlife wings within the State/UT Forest Departments. The implementation of the Scheme will be done in accordance with a work programme covering the 11<sup>th</sup> Plan period. The State/UTs are to submit Annual Plan of Operations (APOs) to the Central Government detailing the proposed course of action. This will be scrutinized and approved by the Central Government with such changes as necessary in accordance with the rules, procedures, and priorities of the particular area and availability of funds. The details of criteria of eligibility and pattern of funding under different components of the Scheme are given below.

#### B. Admissible items under the Scheme:

The broad activities proposed under the Scheme (across the components) are as below:

##### 1. Management planning and capacity building

- (i) Assistance to management planning in PAs/selected high value biodiversity areas/recovery programmes.
- (ii) Providing support to PAs/selected high value biodiversity areas/recovery programmes for research, nature education and awareness.
- (iii) Supporting PAs/selected high value biodiversity areas/recovery programmes for staff development, community empowerment and capacity building.
- (iv) Carrying out ecological, socio-economic and cultural surveys and independent monitoring and evaluation of PAs/selected high value biodiversity areas/recovery programmes.

## **2. Anti-poaching & infrastructure development**

- (v) Strengthening anti-poaching initiatives in PAs/selected high value biodiversity areas/recovery programmes.
- (vi) Strengthening infrastructure in PAs/selected high value biodiversity areas/recovery programmes.
- (vii) Strengthening wildlife veterinary care in PAs/selected high value biodiversity areas/recovery programmes.
- (viii) Strengthening Staff welfare activities in PAs/selected high value biodiversity areas/recovery programmes.

## **3. Restoration of habitats**

- (ix) <sup>4</sup> Strengthening habitat improvement practices in PAs/selected high value biodiversity areas/recovery programmes.
- (x) Providing safeguards/reetrofitting measures in and around PAs/selected high value biodiversity areas/recovery programmes.

## **4. Ecodevelopment and community oriented activities**

- (xi) Addressing man-animal conflicts in PAs/selected high value biodiversity areas/recovery programmes.
- (xii) Strengthening co-existence agenda in and buffer/fringe areas of PAs/selected high value biodiversity areas/recovery programmes with landscape approach through ecodevelopment activities.
- (xiii) Determining inviolate spaces and relocation of villages from crucial wildlife habitats (in PAs/selected high value biodiversity areas/areas falling under the recovery programmes) by providing a better relocation package, apart from supporting States for settlement of rights of such people.
- (xiv) Providing assistance to States for fostering ecotourism to benefit local people in PAs/selected high value biodiversity areas/recovery programmes.
- (xv) Providing assistance to activities in trans-boundary Protected Areas.

## **C. Conditions for Central Assistance:**

In order to qualify for financial assistance under the Scheme, the following conditions or commitments would have to be met by the concerned State/UT Governments:



- (1) that it would provide for trained man-power for the management of the PAs/selected high value biodiversity areas/recovery programmes;
- (2) that a detailed Management Plan/Biodiversity Conservation Plan/Recovery Plan would be drawn up as early as possible (if none exists already) for the proper management of the PAs/selected high value biodiversity areas/recovery programmes;
- (3) that the implementation of the Scheme shall be under the control and supervision of the State/UT Wildlife Organization headed by the Chief Wildlife Warden;
- (4) that the advice of the Director, Wildlife Preservation, Government of India, given on behalf of the Central Government, would be followed in all matters concerning wildlife, including the implementation of this Scheme as well as the management of PAs/selected high value biodiversity areas/recovery programmes;
- (5) that the State/UT Governments shall bear all financial commitments for all such recurring and non-recurring expenditure which are not provided by the Central Government; and
- (6) The State/UT Governments shall, while formulating the proposals, try to avoid any overlapping of activities under different components of the Scheme in the same area.
- (7) The Details of the activities to be supported under the Scheme is at **Appendix I**. Recurring expenditure includes all the maintenance and repair works. Details of the categorization of non-recurring and recurring activities are given at **Appendix II**.
- (8) The State/UT Governments shall, wherever appropriate, consult/collaborate/ involve the concerned Panchayat Raj Institutions while planning, formulating and implementing the Scheme.

Apart from the general provisions as dealt above, the following specific conditions with regard to eligibility criteria and pattern of funding shall also apply to the various components of the Scheme.

**Support to Protected Areas (National Parks, Wildlife Sanctuaries, Conservation Reserves and Community Reserves):**

**Eligible PAs:**

- National Parks, Wildlife Sanctuaries, Conservation Reserves and Community Reserves, other than those availing central assistance under the Centrally Sponsored Scheme - *Project Tiger*, which are duly notified under the Wildlife (Protection) Act, 1972 or the Jammu & Kashmir

Wildlife (Protection) Act, 1978 and are under the control of the Chief Wildlife Warden are eligible for central assistance under this component. However, duplication of assistance for the same activities in the same area would be avoided while implementing the Scheme, where assistance is also provided under the Centrally Sponsored Scheme - *Project Elephant*.

- Only those National Parks, Wildlife Sanctuaries, Conservation Reserves and Community Reserves, which have an approved Management Plan, are eligible for assistance under the Scheme. However, in the case of PAs submitting proposals for the first time, the requirement of approved Management Plan, as a prerequisite for eligibility for central assistance under the Scheme, would be exempted for one year.
- While implementing the Scheme in the case of Community Reserves, a MoU between appropriate relevant parties (Panchayats, communities, plantation owners, government agencies etc.) shall be made operational by the State/UT Government detailing the roles, responsibilities, sharing of costs, benefits etc.
- For those Wildlife Sanctuaries, National Parks, Conservation Reserves and Community Reserves, which are proposed to get the Central Assistance for the first time under the scheme, a copy of the notification, map and declaration in the format attached at Appendix III is to be submitted along with the proposals.

**b) Pattern of funding:**

- Under the Scheme, 100% assistance is provided for non-recurring items of expenditure for National Parks, Wildlife Sanctuaries, Conservation Reserves and Community Reserves.
- 50% cost of recurring expenditure is provided for National Parks, Wildlife Sanctuaries, Conservation Reserves and Community Reserves where the State Government provides for the balance 50% as the matching share.
- National Parks, Wildlife Sanctuaries, Conservation Reserves and Community Reserves in mountain regions, coastal zones, deserts, or those areas which support highly endangered species i.e., Snow Leopard, Red Panda, Rhino, Sangai Deer, Phayre's leaf monkey, Musk Deer, Hangul, Great Indian Bustard, Great Indian Hornbill, Siberian Crane, Chinkara, Chowsingha, Black Buck, Marine Turtles, Nilgiri Tahr, Lion Tailed Macaque, Bustards, Floricans, Pelicans, Gyps Vultures, Wild Ass, Grizzled Giant Squirrel,

- Clouded Leopard, Wild Buffalo, Hoolock Gibbon and Lion are eligible for 100% central assistance for both recurring and non-recurring items of expenditure.
- In the case of National Parks, Wildlife Sanctuaries, Conservation Reserves and Community Reserves falling in the high mountainous, snow clad regions (where working season is limited to a few months) in the States of Jammu & Kashmir, Himachal Pradesh, Uttarakhand and Sikkim, the central assistance shall be given in one installment. For other States, the approved allocation shall be released in two installments (80 per cent as 1<sup>st</sup> installment and balance as 2<sup>nd</sup> installment.)
  - Similarly, subject to site-specific adjustments, as a guiding principle, a 40:40:20 proportion of financial sharing shall be ensured between Centre, State and owners of the privately held land, when such areas are involved in the case of Community Reserves.

## (2) Protection of wildlife outside Protected Areas:

### a) Eligible areas:

- High value biodiversity areas such as habitats of sandalwood, red sanders, white cedar, rhododendrons, Southern Tropical Montane forests, grass lands, alpine meadows of Himalayan region, corridors connecting PAs, tropical swamps, estuaries, islands, mangroves, coral reefs, Community Conserved Areas (CCAs) like sacred groves, community and panchayat forests, identified private forests such as interspersed forests in tea, coffee, cardamom gardens and other production landscapes, farm lands, wastelands, wetlands, coastal habitats, backwaters, mangroves, heterotries and wintering wetlands, catchment forests, turtle nesting sites, tanks, ponds, marine areas, river systems, pastures for live stocks and wild herbivore etc, are some of such habitats eligible for assistance under this component.
- The tenurial status of such habitats may range from government-controlled Reserved Forests to Protected Forests, government land, revenue forests, interspersed vegetation in plantation sector, revenue lands, village forests, private forests, panchayat forests, religious forests, Community Conserved Areas, territorial waters etc.
- Areas contiguous to PAs/corridors for wildlife and thus has the potential to ensure continuity and linkages in the landscape shall be given priority under this component.

- After identifying such high value biodiversity formation, the Chief Wildlife Warden shall prepare a Biodiversity Conservation Plan for the selected area. This can be on the patterns of Management Plan of PAs/ Tiger Conservation Plans of Tiger Reserves (depending on the situation).
- In the case of areas falling in regular production forests, Biodiversity Conservation Plan has to harmonize and dovetail the essentials of biodiversity conservation into the regular Working Plans.
- While implementing this component in areas outside the government land, then the State/UT Government shall enter into a MoU between appropriate relevant parties (Panchayats, communities, plantation owners, government agencies etc.) detailing the roles, responsibilities, sharing of costs, benefits etc.
- For those high value biodiversity areas outside the Wildlife Sanctuaries, National Parks, Conservation Reserves and Community Reserves, which are proposed to get the Central Assistance for the first time under the scheme, a copy of the relevant details (notification, map, if any) and declaration in the format attached at Appendix IV is to be submitted along with the proposals.

**b) Pattern of funding:**

- Under this component, 100% central assistance is provided for non-recurring items and 50% assistance for recurring items of expenditure where a matching share is coming from the respective State/UT Governments.
- The selected high value biodiversity areas in mountain regions, coastal zones, deserts, or those areas which support highly endangered species i.e., Snow Leopard, Red Panda, Rhino, Sangai Deer, Phayre's leaf monkey, Musk Deer, Hangul, Great Indian Bustard, Great Indian Hornbill, Siberian Crane, Chinkara, Chowsingha, Black Buck, Marine Turtles, Nilgiri Tahr, Lion Tailed Macaque, Bustards, Floricans, Pelicans, Gyps Vultures, Wild Ass, Grizzled Giant Squirrel, Clouded Leopard, Wild Buffalo, Hoolock Gibbon and Lion are eligible for 100% central assistance for both recurring and non-recurring items of expenditure.
- The Chief Wildlife Warden shall submit a single comprehensive Annual Plan of Operation for all the identified high value biodiversity areas in the state. However, such proposal has to have the details of the activities proposed in each such identified high value biodiversity area.

After scrutiny of the proposals, the Central Government shall release the money to the Chief Wildlife Warden of the State Government in two installments (80 per cent as 1<sup>st</sup> installment and balance as 2<sup>nd</sup> installment). In the case of high value biodiversity areas falling in the high mountainous, snow-clad regions (where working season is limited to a few months) in the States of Jammu & Kashmir, Himachal Pradesh, Uttarakhand and Sikkim, the central assistance shall be made in one installment.

- Similarly, subject to site-specific adjustments, as a guiding principle, a 40:40:20: proportion of financial sharing shall be ensured between Centre, State and owners of the privately held land, when such areas are involved in the case of Community Reserves.

### **(3) Recovery programmes for saving critically endangered species and habitats.**

#### **a) Eligibility:**

The recovery programmes mentioned at Annexure I shall be the focal areas of action during the 11<sup>th</sup> Plan period. However, if the situation so warrants, the Director, Wildlife Preservation, Government of India, in consultation with the Wildlife Institute of India or the relevant scientific institute / organization and with the approval of the Standing Committee of the National Board for Wildlife can initiate other recovery programmes or wind up an ongoing programme.

For 'Recovery Programmes', which are proposed to get the Central Assistance for the first time under the scheme, a copy of the relevant details (notification, map, if any) and declaration in the format attached at Appendix V is to be submitted along with the proposals.

#### **b) Pattern of funding:**

- Under this component, 100% assistance is provided for both non-recurring and recurring items of expenditure.
- Each recovery programme has to be based on a comprehensive and scientific 'Recovery Plan'. The Chief Wildlife Wardens of the concerned State/UTs (if the species range is in more than one State/UT), shall jointly prepare the Recovery Plan with the help of a national scientific institute/organization of repute.

- The Recovery Plan has to be on a five-year basis with yearly break up of activities proposed.
- Based on the approved Recovery Plan, the Chief Wildlife Warden of the concerned state shall submit proposals in the form of a single comprehensive APO for activities falling in their jurisdiction.
- The Central Government, after scrutiny of the proposals, shall release the money to the Chief Wildlife Warden of the State Government in two installments (80 per cent as 1<sup>st</sup> installment and balance as 2<sup>nd</sup> installment). However, in the case areas falling in the high mountainous, snow-clad regions (where working season is limited to a few months) in the States of Jammu & Kashmir, Himachal Pradesh, Uttarakhand and Sikkim, the Central assistance shall be made in one installment.
- Similarly, subject to site-specific adjustments, as a guiding principle, a 40:40:20: proportion of financial sharing shall be ensured between Centre, State and owners of the privately held land, when such areas are involved in the case of Community Reserves.
- In addition, there shall be provision under this component to provide financial assistance to wildlife Institute of India or other relevant national institute/organization to conduct the status survey of critically endangered species, based on specific proposals received from such institute/organizations on case-to-case basis.

### **Other salient points for the submission of proposals:**

1. Each proposal under this Scheme should include detailed information on important/relevant aspects. Minimum information, which is compulsorily required for processing the proposals, is at Appendix VI.
2. For each item of work details like quantity, location, rate per unit, para of the Management Plan/ Biodiversity Conservation Plan/ Recovery Plan where recommended and site specific justification must be given as per the statement in Appendix VII.
3. In case of items like wireless sets, computers, vehicles, etc. additional information like total requirement for the area, already available units etc., may be given as per Appendix VIII.

Expenditure statement clearly indicating the targets and achievements for the central assistance provided in the previous years and revalidated/unspent amount of previous years must accompany the proposals as per Appendix IX.

Utilisation Certificate for the last release including amount revalidated/unspent should accompany the proposal in the proforma as per Appendix X.

\*\*\*\*\*

## Appendix I

### Details of the activities to be supported under the Centrally Sponsored Scheme: 'Integrated Development of Wildlife Habitats'.

The activities proposed under the Scheme under the various components are of cross cutting nature. Depending on the site-specific requirements, appropriate activities needs to be selected and implemented under various components. The following is the broad categorization of the activities under the Scheme.

#### 1. Management Planning and capacity building:

##### (i) Management Planning

Management planning forms the foundation of any conservation activity. This include assistance to management planning in PAs and other high value biodiversity areas/recovery programmes for preparing inventory of resources, status survey of critically endangered species/habitats, preparation of Management Plans/Biodiversity Conservation Plans/Recovery Plans and also for ecodevelopment, regional and landscape planning etc. This also includes procurement of hardware, software/GIS, computer and accessories, compass, range finder, GPS, camera, camera traps, satellite imageries, map digitization facility, weather stations, provisions for small consultancies, stakeholder consultations, seminars, workshops etc.

##### (ii) Strengthening wildlife research, education and nature awareness:

Undertake wildlife research, education and awareness activities, including setting up visitor information/interpretation centers and related facilities, conducting nature education/public awareness programmes for children, other stake holders and public, procurement of audio-visual equipments. It would also include undertaking necessary research, monitoring and evaluation programmes by the PA authorities either directly or through reputed institutions, procurement of equipments for research and education and monitoring of wildlife and wildlife habitat. Conducting census of wildlife, socio-economic survey, aerial and/or ground survey, enumeration/survey and status of wild animals, establishment of permanent preservation plots, coordination with foreign governments, international agencies including foreign



travel, exposure visits, study tours, conducting seminars, workshops, engaging consultancy services, publication of research findings etc.

**(iii) Staff development and capacity building:**

Activities include supporting the States for staff development and capacity building, including specialized trainings in the use of GIS, GPS, camera traps, anti-poaching operations, wildlife crime, habitat enrichment techniques, ecodevelopment initiatives, legal issues and wildlife forensics etc. It also includes study tours for the appraisal of good practices in other PAs, dissemination workshops, specialized trainings in park interpretation, management planning, procurement of audio-visual equipments, publication and procurement of study material, supporting identified State Institutions for the training of frontline staff etc.

**(iv) Independent evaluation and status survey in PAs/selected high value biodiversity areas/recovery programmes:**

During the 10<sup>th</sup> Plan period, an evaluation of 30 PAs was carried out by a panel of experts using international protocols. The results of this evaluation are shown below. The Management Effectiveness Evaluation (MEE) score of the 30 PAs is as follows: Very Good (7 PAs); Good (20 PAs) and Satisfactory (3 PAs). This process would be continued against measurable performance targets during the 11<sup>th</sup> Plan period after further refinement. Particular emphasis shall also be given to areas where financial support has been provided for highly endangered species. Similarly, there is also a necessity to undertake specific status surveys of species and ecosystems, ecological, socio-economic and cultural evaluation/survey in PAs/selected high value biodiversity areas and recovery programmes.

## **2. Anti-poaching & infrastructure development**

**(v) Anti-poaching activities**

The anti-poaching operations form the core activity in wildlife protection. Though highly site specific, the protection strategy in PAs and other high value biodiversity areas/recovery programmes, *inter alia*, include establishment and maintenance of patrolling camps, watch towers, deployment of camp labourers, protection mazdoors, conducting special site-specific protection measures during monsoon/winter ('Operation Monsoon/Winter' respectively), organizing vehicular patrolling, hiring of patrolling vehicles,

procurement/maintenance of elephant animal squads for patrolling, deployment of police/ex-army personnel / home guards etc., surveillance of water holes and other vulnerable areas, manning barriers, organizing surprise raids to apprehend offenders, supply of fire arms to various protection units, provision of secret funds to informers for the control of poaching and illegal trade in wildlife, legal support for defending court cases, constitution of awards/rewards for exemplary work by the subordinate staff etc. Similarly, the Scheme shall also support setting up of dedicated Crime Cells in the State/UT headquarters under the Chief Wildlife Warden to combat wildlife crimes, which shall liaise with the Wildlife Crime Control Bureau set up by the Central Government.

**(vi) Strengthening of infrastructure**

The activities include construction and maintenance of offices, field camps, nature education/interpretation centers, staff quarters, patrolling camps, house keeping buildings, museum, inspection camps, watchtowers, maintenance / creation / upgradation of road network, patrolling roads, bridle paths, culverts, bridges, canals etc., boundary demarcation and its maintenance, creation and improvement of existing laboratory and library facilities, establishment and maintenance of communication network including wireless, wireless tower, wireless stations, phone, internet etc, purchase of arms and ammunition, replacement/procurement and maintenance of patrolling and utility vehicles, veterinary ambulances, tractor, boats etc, procurement of field gear, night vision devices, camera traps, camera, binoculars, computers and accessories etc., procurement of field equipments, computer and accessories, GPS, camera traps, GIS hardware and software etc.

**(vii) Wildlife Veterinary care:**

Strengthening wildlife veterinary care by improving the veterinary facilities for the health care of wild animals and for controlling diseases like Rinder pest, Foot and Mouth Disease, anthrax etc, vaccination of livestock, facilities for captive breeding of endangered species, *ex-situ* conservation programmes, creation of rescue camps for wildlife, translocation and rehabilitation of wildlife, purchase of required equipments and medicines, and restocking of depleted areas, supporting the engagement of veterinary and research officers in important wildlife areas, setting up of facilities required for diagnosis of diseases, carrying out routine pathological examinations, post-mortem facilities, monitoring of animal health, creation and maintenance of captive animal population like elephants for various PA activities and necessary

provisions for engaging mazdoors and for the upkeep and feeding of the animals.

(viii) Strengthening Staff welfare activities

The field staff working in PAs/selected high value biodiversity areas/recovery programmes serves in remote and difficult areas, often subjected to endemic diseases like malaria, dengue, water-borne infections, apart from facing the risk of chance encounters with wild animals. Further, such postings are normally 'non-family postings', and the frontline personnel has to bear the cost of maintaining his/her family in a nearby village or town having the basic schooling and medical facilities. It is relevant to add, accommodation in such rural areas are seldom readily available. In addition, the field staff of such area has also to bear the brunt of local community dwelling in fringe areas, owing to restrictions on the latter for free access to forest resources. Thus, the role of frontline field personnel in such areas is different from his/her counterpart in regular Forest Divisions. The physical assault on the staff in such areas by people nurturing a grudge against the management is more common, often resulting in casualties. Therefore, it becomes essential to provide amenities for staff welfare, to attract the best talent in the working age group. During the 11<sup>th</sup> Plan period, staff welfare inputs like residential accommodation for the children of frontline staff in nearby towns/villages, supply of kerosene, medicine, field kit, mosquito net, torch and the like are proposed.

### 3. Restoration of habitats

(ix) Habitat improvement

Undertake various habitat improvement practices like better preservation of bio-topo like enrichment plantings, assisted natural regeneration, raising plantations of indigenous and fodder species, development of grasslands, meadows and wetlands, various soil and moisture conservation activities like gully plugging, contour bunding, staggered trenches etc. It also includes various water development activities like augmentation of water supply, creation and maintenance of water harvesting/retention structures like bunds, tanks, check dams, wells, ponds, streams etc, transportation and pumping of water, fire protection measures in the form of creation and maintenance of fire lines and fire brakes, cleaning of fire lines, engaging fire protection squads and mazdoors, procuring fire control equipments, advance early burning and other such fire control practices, participatory fire management by involving local people etc.,

removal of unwanted species of flora, fauna and invasive alien species, view line clearance, salt licks, flood protection, etc as per the specific requirements of the area.

**(x) Safeguards/retrofitting measures in the interest of wildlife conservation**

Several PAs/selected high value biodiversity areas/recovery programmes are affected by the presence of heavily used infrastructure like roads, railway tracks, canals and others. The high-tension electric lines passing through such areas cause mortality of wild animals due to electrocution. In the interest of wild animals several safeguards as well as retrofitting measures are required in such areas.

**4. Ecodevelopment and community oriented activities:**

**(xi) Addressing man-animal conflicts:**

Addressing the issue of man-animal conflict include installation of various animal barriers like electric, solar, chain link and barbed wire fencing, trenches, walls, live hedges etc., capture and relocation of problematic animals, creation of infrastructure for translocated animals, compensation for depredation by wild animals including cattle lifting, crop damage, loss of life and property, engaging people for monitoring and driving away of problematic animals, providing insurance cover for life, crops and property against animal depredation.

**(xii) Strengthening co-existence agenda**

The PAs, their surrounds and fringe areas and similar areas in and around the selected high value biodiversity formations recovery programmes have buffer and corridor value, and their ecological sustainability is important to prevent the area from becoming ecological sinks on account of poaching, over use of resources and unwise land use. This calls for intervention in such areas by promoting co-existence agenda in PAs, buffer/fringe areas through eco-development and landscape approach by constituting village eco-development committees and Joint Forest Management Committees. By supporting various micro plan activities of such grass root level institutions, a people inclusive conservation regime aimed at reducing negative dependency on forest resources and improved local livelihoods can be achieved. The activities under this include providing safe drinking water, housing, roads, energy saving initiatives like fixing of electrical or solar street lights, supply of improved chullahs, LPG, solar cookers, pressure cookers and gobar gas plants

etc., supporting ancient traditional practices, promoting agriculture suited to local ecological conditions including cultivation of medicinal plants and other minor forest produce, promotion of stall feeding of high yielding milch animals, rearing of apiculture, sericulture and pisciculture, promoting community based ecotourism programmes, setting up of cottage industries like handicrafts, supporting the marketing of various local produce, setting up of Self Help Groups, promoting the culture and traditions of the local communities, interactive field visits, study tours for villages and staff involved in ecodevelopment programmes, seminars, workshops, publication of publicity and education materials including cost of dissemination, mainstreaming conservation activities in the production sector in the landscape etc.

**(xiii) Determining inviolate spaces and relocation of villages from core-critical/crucial wildlife habitats:**

The Wildlife (Protection) Act, 1972, as well as the Scheduled Tribes and Other Traditional Forest Dwellers (recognition of Forest Rights) Act, 2006, require that right of people (Scheduled Tribes and other traditional forest dwellers) recognized in forest areas within core-critical habitats may be modified or resettled for providing inviolate spaces to wild animals. This requires payment of compensation (rights settlement in addition the relocation package offered under the CSS). Therefore, payment of compensation for the immovable property of people forms part of modifying/ setting their rights, which is a statutory requirement. This is independent of the rehabilitation package given for village relocation from Tiger Reserves under the Scheme *Project Tiger*<sup>10</sup>.

The proposed package (in consonance with the proposal under the CSS – *Project Tiger*) has two options:

**Option I** – Payment of the entire package amount to the family in case the family opts so, without involving any rehabilitation / relocation process by the Forest Department.

**Option II** – Carrying out relocation / rehabilitation of village from Protected Area / Tiger Reserve by the Forest Department.

- (i) In case of option I, a monitoring process involving the District Magistrate of concerned District (s) would be ensured so that the villagers rehabilitate themselves with the package money provided

- (ii) In case of option II, the following package (per family) is proposed, at the rate of Rs. 10 lakhs per family:

(a)	Agriculture land procurement (2 hectare) and development	35% of the total package
(b)	Settlement of rights	30% of the total package
(c)	Homestead land and house construction	20% of the total package
(d)	Incentive	5% of the total package
(e)	Community facilities commuted by the family (access road, irrigation, drinking water, sanitation, electricity, tele-communication, community center, religious places of worship, burial/cremation ground)	10% of the total package

- (iii) The relocation process would be monitored / implemented by the following two Committees:

**(State level Monitoring Committee)**

Chief Secretary of the State - Chairman

Secretaries of related departments - Members

Chief Wildlife Warden - Member-Secretary

**(District level Implementing Committee for ensuring convergence of other sectors)**

District Collector - Chairman

CEO - Member

Representative officials from: - Members

- PWD, Social Welfare, Tribal Department,

- Health Department, Agriculture Department,
- Education Department, Power and Irrigation
- Departments

Warden/manager of the PA/crucial wildlife habitat -

Member Secretary

- (iv) The above cost norms are indicative in nature to facilitate flexibility for State/site specific situation.
- (v) The relocated village would be taken up on a priority basis for eco development as well as local development through convergence of District level schemes.
- (vi) The labour oriented works involved in the relocation process would be preferably implemented through the villagers who are being relocated, so that they derive benefits out of the same apart from ensuring the field implementation to their satisfaction.
- (vii) In case resettlement has been done on a forestland, the new settlement will be eligible for access to forest resources for their bonafide use through the village level committee and Gram Sabhas.
- (viii) The District Administration would facilitate fair price shop, education and health center close to the relocated site.
- (ix) "Handholding" after relocation would be ensured through independent agency with ongoing ecodevelopmental inputs through central assistance and district level inputs, which should also have an inbuilt grievance redressal system.
- (x) The relocated villagers would be given priority for livelihood options emanating from the protected area.
- (xi) In case the cost of relocation including settlement of rights per family exceeds Rs.10.00 lakhs, the State Government has to meet the extra cost.
- (xii) The State/UT Governments shall, wherever appropriate, consult collaborate/ involve the concerned Panchayat Raj Institutions while planning, formulating and implementing the relocation processes.

The activities envisaged include determination of inviolate spaces, critical wildlife habitats, voluntary relocation of villages from PAs/selected high value biodiversity areas/recovery programmes by providing a better relocation package, apart from supporting the State Governments for settlement of rights of such people. It also includes acquisition and/purchase of land and wildlife corridors, rehabilitation of traditional hunting tribes living in and around PAs/selected high value biodiversity areas/recovery programmes.

Further, as relocation involves largely the forest dwelling rural poor, it should be ensured that any relocation/ resettlement is voluntary and in conformity with the provisions of the National Policy on Resettlement and Rehabilitation for project affected families. The proposal of relocation should be examined only when express willingness of the villagers is obtained, preparation for actual implementation is completed and the work can be started. The allocation earmarked for relocation should not be used for any other purpose. Norms for reallocation should clearly specify the components for which payment will be made to the people opting out of the identified location. Further as per the provisions of the Tribal Act, there is a provision to identify Critical Wildlife Habitats. A committee is also envisaged in furtherance of this objective. It is proposed that this committee looks into the appraisal and approval of relocation proposals on a case-to-case basis. However, if need arises, a separate committee can be constituted for this as well.

#### (xiv) Fostering Eco-tourism:

'Ecotourism' in the context of wildlife conservation is ecologically sustainable, nature-tourism, which is emerging as an important component of tourism industry. It is distinct from 'mass tourism', as having sustainable, equitable, community based and conservation oriented effort for improving the living standards of local, host communities living on the fringes of wildlife rich areas. Ecotourism is proposed to be fostered with financial support to the host community through ecodevelopment programmes, in accordance with site – specific 'Ecotourism plan' and carrying capacity of PAs.

The opportunities for stakeholders would include management of low cost accommodation for tourists, providing guide services, providing sale outlets, managing excursions, organizing ethnic dances and the like.



**(xv) Providing assistance to activities in Trans-boundary Protected Areas.**

Trans-boundary PAs means an area of land and/or sea that straddles one or more boundaries between countries beyond the limits of national sovereignty or jurisdiction, whose constituent parts are especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed co-operatively through legal or other effective means.

As per the decision taken in the meeting of the National Board for Wildlife held on 15<sup>th</sup> October 2003, a Task Force was constituted by the Ministry with a mandate to identify potential areas that can be declared as Trans-boundary Protected Areas and thereafter to prepare a Memorandum of Understanding between the concerned countries for better protection of such Protected Areas.

The frame work for implementation under this component shall, *inter alia*, include identifying and promoting common values, developing co-operative agreements, promoting coordinated and co-operative activities, involving and benefiting local people, achieving coordinated planning & PA development, working towards funding sustainability, monitoring and assessing progress, obtaining and maintaining support of decision-makers, dealing with tension or armed conflict etc.

## Appendix II

### **Categorization of various activities supported under the Centrally Sponsored Scheme: 'Integrated Development of Wildlife Habitats' into non-recurring and recurring activities.**

For the purpose of such categorization, the following guiding principle is adopted.

#### **I. Non-recurrent activity**

Any activity that may be of original nature and without any fixed periodicity and indented to build the necessary infrastructure and capacity may be treated as non-recurrent activity.

#### **II. Recurrent activity**

Any activity that is indented to maintain the infrastructure or capacity, which is already built in and with fixed annual periodicity, may be treated as recurrent activity. However, some of the activities, even if taken up annually but in different localities, shall be treated as non-recurrent activity only.

The activities listed below may not be exhaustive. Any non-listed activity has to be categorized based on the guiding principle given as above.

#### **A. Non-recurrent activities**

- Undertake management planning in PAs and other high value biodiversity areas/recovery programmes, etc.
- Preparation of inventory of resources, status survey of critically endangered species/habitats, etc.
- Preparation of Management Plans/Biodiversity Conservation Plans/Recovery Plans, etc.
- Preparation of ecodevelopment, regional and landscape plans, etc.
- Undertake ecological and socio-economic survey, small consultancies, stakeholder consultations, seminars, workshops etc required for management planning, etc.

- Construction of offices, field camps, nature education/interpretation centers and related facilities, staff quarters, patrolling camps, house-keeping buildings, museum, inspection camps, watchtowers, crime cell at headquarters, etc.
- Creation and upgradation of road network, patrolling roads, bridle paths, culverts, bridges, canals, procurement of elephant/animal squads for patrolling, etc.,
- Boundary demarcation, creation and improvement of existing laboratory and library facilities, etc.
- Establishment of communication network including wireless, wireless tower, wireless stations, phones, internet etc.
- Purchase of arms and ammunition, replacement/procurement of patrolling and utility vehicles (upto range level), veterinary ambulances, tractor, boats etc,
- Procurement of field gear, night vision devices, camera traps, camera, binoculars, computers and accessories etc.,
- Procurement of field equipments, computer and accessories, GPS, camera traps, GIS hardware and software, compass, range finder, camera, camera traps, satellite imageries, map digitization facility, weather stations, audio-visual equipments for education, procurement of equipments for research and education and monitoring of wildlife and wildlife habitat, etc.
- Undertake various retrofitting activities like underground laying of electric cables, irrigation channels, relaying of roads, building, bridges, etc.
- Provide residential accommodation for the children of frontline staff in nearby towns/villages, etc.
- Undertake various habitat improvement practices like better preservation of bio-topo like enrichment plantings, assisted natural regeneration, raising plantations of indigenous and fodder species, development of grasslands, meadows and wetlands, etc.
- Undertake various soil and moisture conservation activities like gully plugging, contour bunding, staggered trenches etc. It also includes various water development activities like creation of water harvesting/retention structures like bunds, tanks, check dams, wells, ponds, streams etc,
- Undertake various fire protection measures in the form of creation of fire lines and fire brakes, procuring fire control equipments, advance early burning and other such fire control practices, participatory fire

management by involving local people etc.,

- Undertake non periodic removal of unwanted species of flora, fauna and invasive alien species, view line clearance, creation of salt licks, flood protection, etc
- Installation of various animal barriers like electric, solar, chain link and barbed wire fencing, trenches, walls, live hedges etc.,
- Capture and relocation of problematic animals, creation of infrastructure for translocated animals, compensation for human loss by wild animals, etc.
- Supporting the approved microplan activities of the village ecodevelopment committees and Joint Forest Management Committees aimed at reducing negative dependency on bio-resources and improved local livelihoods such as providing safe drinking water, housing, roads, energy saving initiatives like fixing of electrical or solar street lights, supply of improved chullahs, LPG, solar cookers, pressure cookers and gobar gas plants etc., supporting alternate livelihood practices, promoting agriculture suited to local ecological conditions including cultivation of medicinal plants and other minor forest produce, promotion of stall feeding of high yielding milch animals, rearing of apiculture, sericulture and pisciculture, promoting community based ecotourism programmes, setting up of cottage industries like handicrafts, supporting the marketing of various local produces, setting up of Self Help Groups, promoting the culture and traditions of the local communities, interactive field visits, study tours for villages and staff involved in ecodevelopment programmes, conducting seminars, workshops, mainstreaming conservation activities in the production sector in the landscape etc.
- Determination of inviolate spaces, critical wildlife habitats, provide for voluntary relocation of villages from PAs/selected high value biodiversity areas/recovery programmes by providing a better relocation package, apart from supporting the State Governments for settlement of rights of such people, acquisition and/purchase of land and wildlife corridors, rehabilitation of traditional hunting tribes living in and around PAs/selected high value biodiversity areas/recovery programmes, etc.
- Undertake wildlife research, monitoring and evaluation programmes by the PA authorities either directly or through reputed institutions, conducting census of wildlife, socio-economic survey, aerial and/or ground survey, enumeration/survey and status of wild animals, etc.
- Establishment of permanent preservation plots, monitoring plots etc.

- Coordination with foreign governments, international agencies including foreign travel, exposure visits, study tours, conducting seminars, workshops, engaging consultancy services, publication of research findings etc.
- Strengthening wildlife veterinary care by improving the veterinary facilities for the health care of wild animals and for controlling diseases like Rinder pest, Foot and Mouth Disease, anthrax etc.,
- Vaccination of livestock, facilities for captive breeding of endangered species, *ex-situ* conservation programmes, creation of rescue camps for wildlife, translocation and rehabilitation of wildlife, purchase of required equipments and medicines, and restocking of depleted areas, supporting the engagement of veterinary and research officers in important wildlife areas, setting up of facilities required for diagnosis of diseases, carrying out routine pathological examinations, post-mortem facilities, monitoring of animal health, creation of captive animal population like elephants for various PA activities etc.

## B. Recurrent activities

- Maintenance of existing fire lines and engagement of people for fire protection, anti poaching and anti grazing operations, etc.
- Annual maintenance and deepening of water bodies, etc.
- Annual weeding operations, etc.
- Running of vehicles, POL and office expenses, etc.
- Annual maintenance of buildings, equipments, etc.
- Constitution of awards, for exemplary work to the subordinate staff, etc.
- Maintenance of captive animals and animal rescue centres, etc.
- Provision of rewards to informers for the control of poaching and illegal trade in wildlife, etc.
- Engaging daily wage mazdoors for strengthening infrastructure, etc.
- Maintenance of signages, etc.
- Hiring of Vehicles for protection, etc.
- Organizing vehicular patrolling, hiring of patrolling vehicles, etc.
- Deployment of police/ex-army personnel/home guards etc., surveillance of water holes and other vulnerable areas, manning barriers, organizing surprise raids to apprehend offenders, etc.
- Supply of field ration to various protection units, etc.

- Legal support for defending court cases, etc.
- Transportation and pumping of water, etc.
- Cleaning of fire lines, etc.
- Depredation by wild animals including cattle lifting, crop damage, and property, engaging people for monitoring and driving away of problematic animals, providing insurance cover for life, crops and property against animal depredation, etc.
- Publication of publicity and education materials including cost of dissemination, education and awareness activities, conducting nature education/public awareness programmes for children, other stake holders and public, etc.
- Maintenance of captive animal population, etc.
- Supply of kerosene, medicine, field kit, mosquito net, torch etc.
- Supporting the States for staff development and capacity building, including specialized trainings in the use of GIS, GPS, camera traps, anti-poaching operations, wildlife crime, habitat enrichment techniques, ecodevelopment initiatives, legal issues and wildlife forensics etc.
- Undertake study tours for the appraisal of good practices in other PAs, dissemination workshops, specialized trainings in park interpretation, management planning, supporting identified State Institutions for the training of frontline staff etc.
- Undertake various staff welfare measures such as supply of field ration etc.

\*\*\*\*\*

CERTIFICATE

(For National Park/ Wildlife Sanctuary /Conservation Reserve/ Community Reserve for which financial assistance is requested for the first time.)

It is certified that:

(Name of the PA.....)

- (i) This PA is under the administrative and technical control of Wildlife wing of the State headed by the CWLW.
- (ii) that the State Govt. will provide for trained manpower for management of the PA.
- (iii) that a detailed Management Plan would be drawn up as early as possible (if none exists already) for management of this PA and its buffer areas.
- (iv) that there will be no commercial forest working in any form within the boundary of the PA.
- (v) that the State Govt. agrees that the present boundaries of the PA will not be changed to reduce the existing areas.
- (vi) that the advice of the Director, Wildlife Preservation given on behalf of the GOI would be followed in matters concerning the implementation of the Scheme as well as the management of the PA.
- (vii) that the State Govt. accepts financial commitment for all such recurring and non-recurring expenditure which are not provided by the GOI.

(Signed)

Secretary Forests and Wildlife

\*\*\*\*\*

CERTIFICATE

(For High Value Biodiversity areas outside the National Park/ Wildlife Sanctuary /Conservation Reserves/ Community Reserves for which financial assistance is requested for the first time under the component of 'Protection of Wildlife Outside the Protected Area'.)

It is certified that:

(Name of the area.....)

- (i) This Scheme shall be implemented through the administrative and technical control of Wildlife wing of the State headed by the CWLW.
- (ii) that the State Govt. will provide for trained manpower for management of this area.
- (iii) that a detailed Biodiversity Conservation Plan would be drawn up as early as possible (if none exists already) for management of this area.
- (iv) that the advice of the Director, Wildlife Preservation given on behalf of the GOI would be followed in matters concerning the implementation of the Scheme as well as the management of the area.
- (vii) that the State Govt. accepts financial commitment for all such recurring and non-recurring expenditure which are not provided by the GOI.

(Signed)

Secretary Forests and Wildlife

\*\*\*\*\*



CERTIFICATE

(For Recovery Programme for Critically Endangered Species and Habitat for which financial assistance is requested for the first time.)

It is certified that:

(Name of the Recovery Programme.....)

(i) This Programme shall be implemented through the administrative and technical control of Wildlife wing of the State headed by the CWLW.

(ii) that the State Govt. will provide for trained manpowers for the programme.

(iii) that a detailed 'Recovery Plan' would be drawn up as early as possible (if none exists already) for management of this area.

(iv) that the advice of the Director, Wildlife Preservation given on behalf of the GOI would be followed in matters concerning the implementation of the Programme.

(v) that the State Govt. accepts financial commitment for all such recurring and non-recurring expenditure which are not provided by the GOI.

(Signed)

Secretary Forests and Wildlife

\*\*\*\*\*

Appendix VI

**MODEL FORMAT FOR PREPARING ANNUAL PLAN OF OPERATION (APO) UNDER CSS – 'INTEGRATED DEVELOPMENT OF WILDLIFE HABITATS'**

1. Name of the PA/ High Value Biodiversity Area/ Recovery Programme.
2. Legal Status (Date of issue of initial notification and final notification, etc.)
3. Number of villages within the PA/ High Value Biodiversity Area/ Recovery Programme.
4. Status of settlement of rights.
5. Status of Management Plan/ Biodiversity Conservation Plan/ recovery Plan (Period to be given.)
6. Census (population figures of important animals during last three census).
7. Biodiversity in the PA/ High Value Biodiversity Area/ Recovery Programme.
8. Type of forest /ecosystem with major species.
9. Staff position in the PA/ High Value Biodiversity Area/ Recovery Programme (Total sanctioned strength, Vacancy position etc.)
10. Wildlife Trained Staff in the PA/ High Value Biodiversity Area/ Recovery Programme
11. Entry fee charged in the PA/ High Value Biodiversity Area/ Recovery Programme
12. No. of tourists/visitors, visiting the PA/ High Value Biodiversity Area/ Recovery Programme annually and facilities available for tourists
13. Shooting for films / documentaries carried out during last 5 years
14. Postal address/ Tel No./email ID.
15. Funds provided under State Plan during the last 5 years
16. Funds provided under other schemes
17. Status of survey and demarcation of the boundaries.
18. No. of natural / unnatural deaths including Poaching/accidental deaths with Scheduled Animals reported
19. Fire incidents in the PA/ High Value Biodiversity Area/ Recovery Programme.
20. Type and No. of weapons and how they are put to use.
21. Type and No. of vehicles and how they are put to use and whether purchased from Central/State funds.
22. No. of various type of wireless sets (fixed/mobile/handsets) and how they are put to use.
23. No. of beats/sections/ranges/revenue villages/ private lands etc.
24. Major problems in the area.
25. Tenure of last 5 incumbents / in charge of the PA/ High Value Biodiversity Area/ Recovery Programme.
26. Photographs of the works carried out during the previous year under the Scheme.
27. Any other relevant information.

\*\*\*\*\*

APPENDIX VII

DETAILS OF ITEMS OF WORK PROPOSED

Item of Work	Parts of Management Plan/ Biodiversity Conservation Plan/ Recovery Plan which specifies this item	Quantity	Rate per Unit	Location	Site specific Justification
1.	2	3	4	5	6

APPENDIX VI

FOR WIRELESS SETS/COMPUTERS/VEHICLES/FIRE ARMS, ETC.

Item of work	Total Requirement	Already available	Where and to what use the existing have been put to	Year of Procurement	Source of funds	Remarks
1	2.	3	4	4	5	6

Management Plan of the Khangchendzonga National Park

### Model format for the Expenditure Statement

Along with Utilisation Certificate, item wise expenditure statement in the following Proforma must be sent:

Item of work	Sanctioned			Actual			Deviation, if any (give reasons)
	Amount	Quantity	Location	Amount	Quantity	Location	

FORM GFK 19.A

[See Government of India's Decision (3) under Rule 150]

Form of Utilisation Certificate\*

Sl. No.	Letter No. and Date	Amount	
			Certified that out of Rs. .... of grants-in-aid sanctioned during the year..... in favour of ..... under this Ministry/Department Letter No. given in the margin and Rs. .... on account of unspent balance of the previous year, a sum of Rs. .... has been utilized for the purpose of ..... for which it was sanctioned and that the balance of Rs. .... remaining unutilised at the end of the year has been surrendered to Government (vide No. .... dated.....) / will be adjusted towards the grants-in-aid payable during the next year.....
	Total	_____ _____	

Certified that I have satisfied myself that the conditions on which the grants-in-aid was sanctioned have been duly fulfilled/are being fulfilled and that I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Kinds of checks exercised.

- 1.
- 2.
- 3.

Signature .....

Designation .....

Date .....

[G.I, M.F., O.M. No. F-14 (1) - E.H (A) - 71, dated the 23<sup>rd</sup> April, 1975]

\* Note - Along with Utilisation Certificate, item wise expenditure statement as per the model format given in Appendix IX must be sent (Both should be duly signed by the Chief Wildlife Warden.)



Vegetation of 18000ft altitude (Alpine scrub) in the month of August.



Khangchendzonga National Park Field Staff under Chungthang Range, North Sikkim



Photo Plate - 2



Lachen Town under snow cover on 4-2-08.





A Butter fly at Zema on the way to Green Lake, on 4-7-06



A view of Zemu Glacier on 6<sup>th</sup> July 2006.

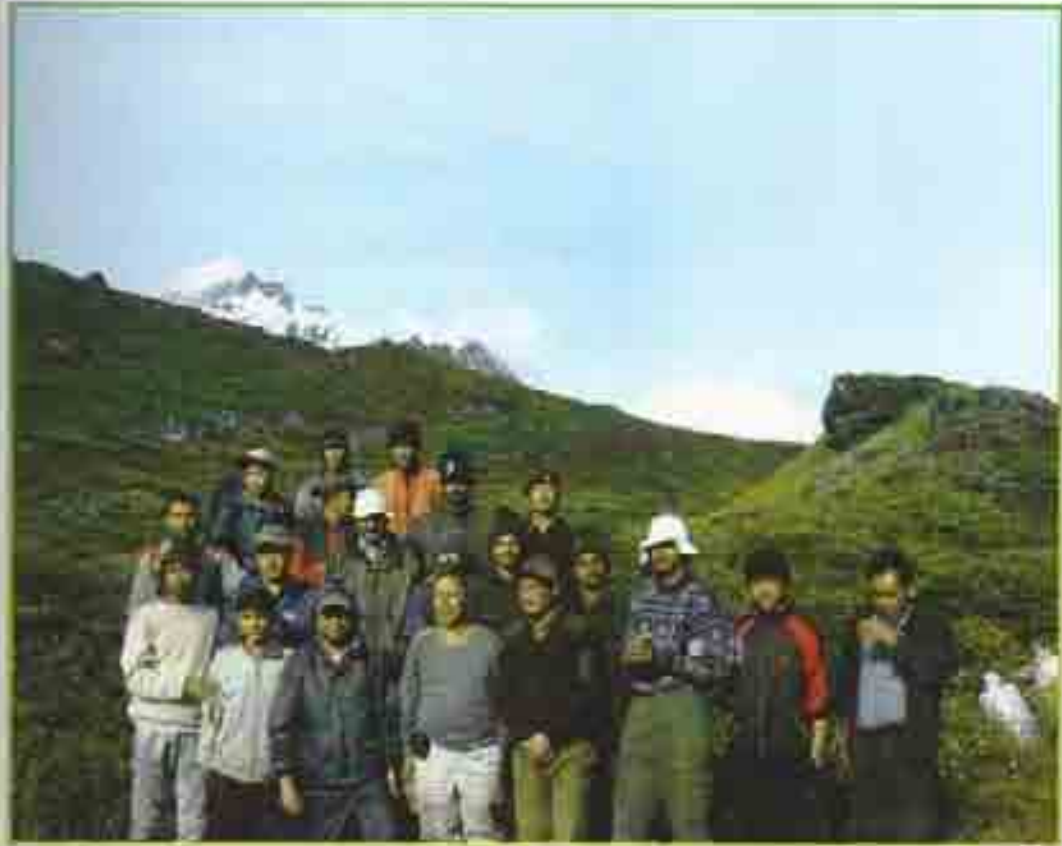


Log House at Kasturi Orar, West Sikkim



Interpretation Centre at Yuksom

Photo Plate - 5

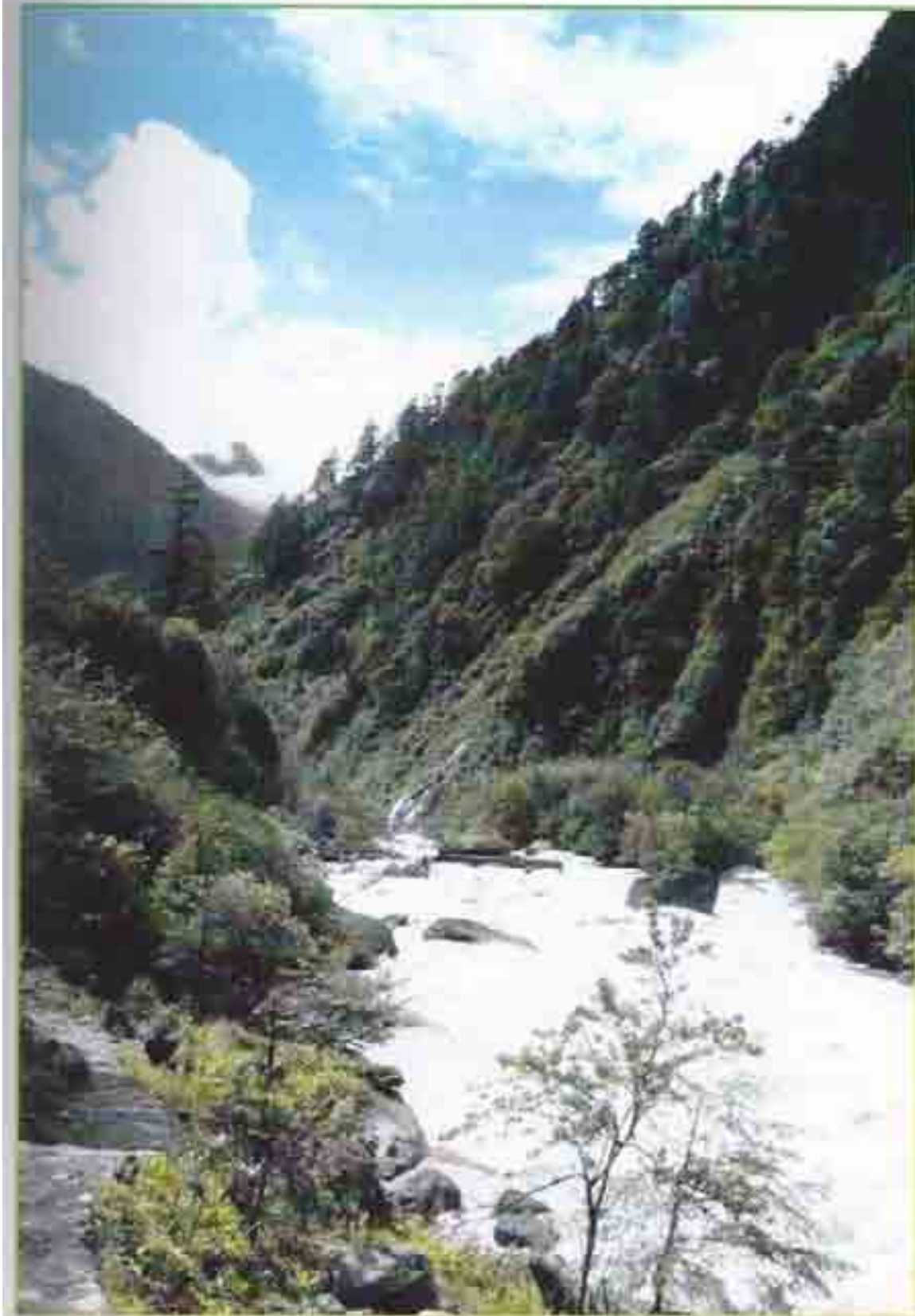


Green Lake Expedition team in front of Siniolchu Peak & Rhododendron meadows on 07-07-08.



Photo Plate - 6





Narrow Valley of Zemu River on the way to Green Lake.



Foreign Tourist with local guide above Soumitye Lake, 4200mts.  
Mt. Khangchendzonga and Onglathang Glacier on the Background





Dzorigri







View of Central portion of Khangchendzonga National Park, under Dzongu Range.



DIGP(NAEB), Govt. of India, interacting with EDCs & Panchayats at



Panax Species, KNP





Himalayan Thar (*Hemitragus jemlahicus*) at Phimpu, North Sikkim





Dr. Nand Dey (2008)

*Serow (Caprocarnis sumatraensis):* KNP-area at Zema | on 03-07-08.



J. B. Saha

*Blue Sheep (Pseudois nayur)* at Green Lake 07.07.06



Marmot (*Marmota bobak himalayana*) Gurudongmar



Goral (*Nemorhaedus goral*) at Namprikdang Under Dzongu Rane

Photo Plate - 15



Nyan or Great Tibetan Sheep (*Ovis ammon hodgsoni*) in Gurudungmar, 02/07.06



Photo Plate - 16



Nyan or Great Tibetan Sheep (*Ovis ammon hodgsoni*) in Gurudungmar, 02/07.06





Kishongla Lake, (4200m) North Sikkim.







Soumitye Lake(1400 feet)- KNP West Sikkim



Photo Plate - 19



A Pokhari at Dawathang area under Dzongu Range.





Tholun Chu, North Sikkim.



Babcha Lhamu (Devi) falls, Kishong, Dzongu, North Sikkim



A falls just below Tholung Monastery, Dzongu

Photo Plate - 22



Thulong Monastery in front of Khangchendzonga National Park, in North Sikkim.



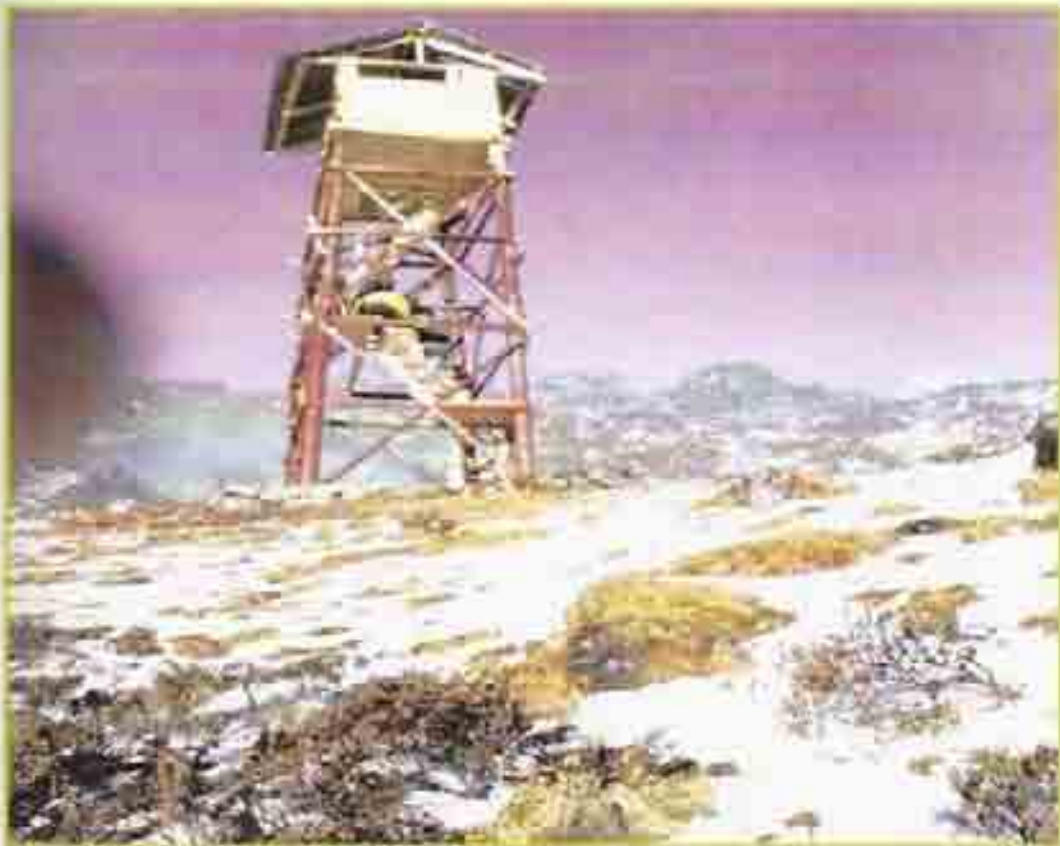


**Joint operation (SSB and KNP field staff) for removal of Yaksheds  
in KNP areas under Yuksom Range, Yambong West Sikkim.**





Watch Tower at Yabuk 15000ft. North Sikkim.





Nay Shank H. Subba

Long-tailed Minivet (*Pericrocotus ethologus*) available - Sub-tropical area - KNP





Photo Plate - 25



Log hut at Dzongri, West Sikkim



Log hut at Kishungla, North Sikkim



Log hut at Tamrong, North Sikkim

Photo Plate - 27



Log Bridge over Zema River leading to Lama Angdem- Kishongla at Jakthang





Code of Conduct displayed at Yuksam Forest Check Post



Blue Sheep at Base Camp



Musk Deer (*Moschus moschiferus*) at Base Camp, Dzongri



Red Panda (*Ailurus fulgens*)

Photo by: Phuphu Tshering Brulea,  
EDC President, Ghomi, West Sikkim



Trekking trail constructed at Chowri-Yambong 2009, in West Sikkim.



Himalayan Black Bear (*Selenarctos thibetanus*) at Dzongri



Health camp at khechepary, West Sikkim.



Three room Log Hut at Phimphu in North Sikkim.



Immunization programme at Dzongu



Awareness programme at Tashiding School



Yuksam (KNP-KBR) Check-Post



Labdang (KNP-KBR) Check-Post





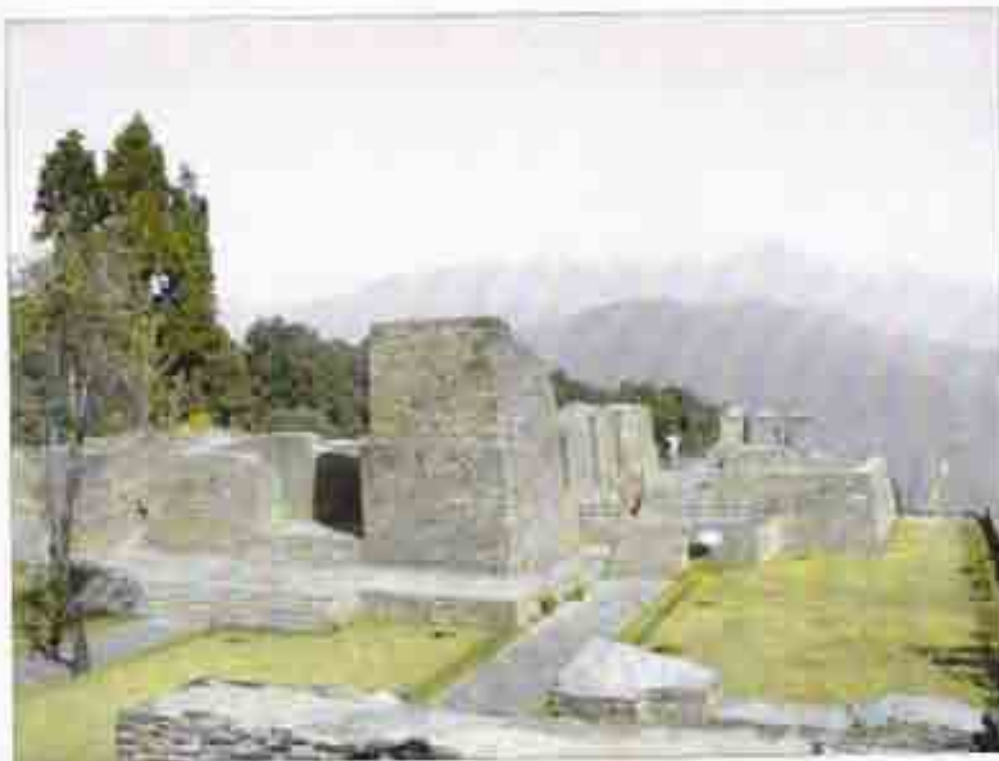
**Distribution of LPG connection to the forest fringe families through KBR Scheme**



**Now the vehicles can reach up to Interpretation Centre through new approach road at Yuksam**



KNP Check-post with Sign boards



Old Palace at Rabdentse, West Sikkim



Certificate for Handloom training is handed over to the trainees



Bambo rhizome Sprouting at Zali, North Sikkim



Newly Constructed Log Hut at Zali, North Sikkim.



Milching Cow distribution at Chungthang, North Sikkim.



Piglet distribution by Vet. Doctor, North Sikkim.



Nature trip to Jaldapara Wildlife Sanctuary



View of Mount Khangchendzonga from Gochela(5000 mts) -KNP West Sikkim



Blue Sheep at Lamunay-KNP West Sikkim

Management Plan of the Khangchendzonga National Park



View from Green Lake(5000mts)-KNP North Sikkim





Management Plan of the Khangchendzonga National Park



Primula at full bloom-KNP



Management Plan of the Khangchendzonga National Park



Red Panda(*AilurusFlulgens*) sighted at Bakhim -KNP West Sikkim photo by Gopal Limboo (EDC president)



Management Plan of the Khangchendzonga National Park



Blue Sheep (*Pseudois Nayaur*) sighting at Green Lake-North Sikkim



Trekking Inside KNP-Greenlake(NorthSikkim)

Management Plan of the Khangchendzonga National Park

Trekking Inside KNP- Green lake(North Sikkim)



Management Plan of the Khangchendzonga National Park

LIST OF FOR  
FORMATES TO DEAL WITH FOREST OFFENCES AS ENCLOSED

1.	Petrolling Report	W.I. Format	1
2.	Rough Sketch Map	do	2
3.	Complaint [Under section 55 of the Wildlife (Protection) Act – 1972]	do	3 – 6
4.	Arrest Memo [Under section 50(c) of the Wildlife (Protection) Act 1972]	do	7
5.	Case Diary [Under section 50(8) of the Wildlife (Protection) Act 1972]	do	8
6.	Seizure Memo [Under section 50(c) of the Wildlife (protection) Act 1972]	do	9
7.	Certificate of Safe Custody [Under section 50 (3A) of the Wildlife (Protection) Act – 1972]	do	10
8.	Statement [Under Section 50(8)(d) of the Wildlife (Protection) Act – 1972]	do	11
9.	First information Report [Under Section 50(4) of the Wildlife (Protection) Act – 1972]	do	12 – 13
10.	Summon [Under Section 50(8)(b) of the Wildlife (Protection) Act-1972]	do	14
11.	Bail Bond [Under Section 50 (c) of the Wildlife (Protection) Act-1972]	do	15
12.	Compound statement [Under Section 54 of the Wildlife (Protection) Act – 1972]	do	16
13.	Compound Order [Under Section 54 of the Wildlife (Protection) Act – 1972]	do	17

# PATROLLING REPORT

From No.

DIVISION  RANGE  BLOCK

DATE From  DATE To  DESTINATION

FC RESTS VISITED	ROUTE TAKEN	DISTANCE
RF		
Rhazmal & Gourcharan		

## SUMMARY REPORT

- High Felling
- Encroachment
- Grazing
- Forest Fire
- Poaching
- Fallen Tree
- Wildlife Sighting
- NTFP

## DETAILED REPORT

DATE   
PLACE

SIGNATURE  
NAME   
DESIGNATION

ROUGH SKETCH MAP



Revenue Block

Forest

Signature

Name

Designation



### COMPLAINT

[Under section 55 of the wildlife (Protection) Act-1972]

Part I

In The Court of:

1. Division :  Wildlife case no:

2. Complaint No:  3. Date:

4. Act :  Sections:

Act :  Sections:

Other Acts & sections :

5. Name of the I.O.  Rank

6. Name of the Complainant

7. Parentage

8. Detail of Property, Article, Document recovered / Seized during investigation and relied upon  
(- separate list can be attached, if necessary)

S.No.	Property Description	From whom Seized/Recovered	From where Seized/ Recovered	Disposal
1	2	3	4	5

# COMPLAINT

[Used section 55 of the wildlife (Protection) Act- 1972]

## 9. Particulars of the accused person: ( use separate sheet for each for each accused)

S.No.

(i) Name:

(ii) Parentage:

(iii) Date/Year of Birth:  (iv) Sex:  (v) Nationality:

(vi) Passport No:  (vii) Date and Place of Issue:

(viii) Religion:  (ix) Whether SC/ST:

(x) Occupation:

(xi) Address:

(xii) Date of Arrest:  (xiii) Date of Release on bail:

(xiv) Date on which forwarded to court:

(xv) Under Acts & Sections:

(xvi) Name of bailer/ surety and address:

(xvii) Previous convictions with case references:

(xviii) Status of the accused  
Forwarded/Bailed by the Police/ Bailed by the owner/ In Judicial Custody/ Absconding/ Prosecuted Offender

### COMPLAINT

(Under Section 53 of the Wildlife (Protection) Act - 1972)

10. Particulars of witness to be examined:


S.No.	Name	Percentage	Date/Year of Birth	Occupation	Address	Type of evidence to be tendered
1	2	3	4	5	6	7

11. Expert's Opinion: (Add separate sheet if necessary)

Part III

12. Brief facts of the case (Add Separate sheet, if necessary)

1



13. Despatched On:

Signature:  
Forwarded by Divisional Forest Officer

Name:  
Designation:

Signature of Investigating Officer  
Submitting the Complaint

Name:  
Designation:

## ARREST MEMO

[Under section 30(c) of the wildlife (Protection) Act-1972]  
{Separate memo to each accused}

1. Name of Accused:

Sex & Age:  Parentage:

Residence:  Occupation:

2. Reference of Act/s and Section/s

3. Injuries / Cause of injuries and physical condition of the accused at the time of arrest.

4. The accused, after being informed of the grounds of arrest and his legal rights, was duly taken into custody on \_\_\_\_\_ (date) at \_\_\_\_\_ (hour) at \_\_\_\_\_ (Place).

The Following article were found on physical search conducted on the person of the accused and were taken into possession for which a receipt was given to the accused :

5. Physical features, deformities and other details of the accused.

Date:

Signature of Forest Officer :

Designation :



### SEIZURE MEMO

[Under section 50(c) of the wildlife (protection) Act- 1972]

Name of the accused

Sex and Age  Occupation

Parentage:

Address  Wildlife Case No

#### DESCRIPTION OF MATERIALS SEIZED

1. Sawn Timber

S.No	Species	Length (Foot)	Breadth (inch)	Height (inch)	No. of Pieces	Volume (cft)

2. Timber in Log Form

S.No	Species	Girth (Foot)	Length (Foot)	Volume (cft)

3. Others

S.No	Item Description	No.

4. Name, Address and signature of at least two witnesses.

A.

B.

5. SEIZURE :- Date:  Time:  Place:

The above mention items have been seized form my custody on accounts of it not being Legal.

Signature of accused

Signature of Forest Officer

Designation:

## CERTIFICATE OF SAFE CUSTODY

[Under section 50(3A) of the wildlife (Protection) Act - 1972]

The following things seized in wildlife Case No:  are in my safe custody. I undertake to safeguard them from damage and loss, and shall produce the same on demand by an authorized officer of Department of Forest, Environment and wildlife.

### Details of Things Taken Over for Safe custody

S No	Item	Details

Signature

Name

Sex and Age

Occupation

Parentage

Address

Date :

Signature of Forest Officer :

Designation :



# STATEMENT

(Under section 30(k) (d) of the Wildlife(Protection) Act- 1972)

Wildlife Case No	<input type="text"/>	Name of Officer	<input type="text"/>		
Name	<input type="text"/>	Sex & Age	<input type="text"/>		
Residence	<input type="text"/>				
Parentage	<input type="text"/>		Occupation	<input type="text"/>	
Date	<input type="text"/>	Time	<input type="text"/>	Place	<input type="text"/>
<input type="checkbox"/> Accused	<input type="checkbox"/> Co-Accused	<input type="checkbox"/> Witness			

[Attach separate sheet, if necessary]

Name, address and signature of at least two witnesses.

A. \_\_\_\_\_ Signature

B. \_\_\_\_\_ Name :

## FIRST INFORMATION REPORT

[ Under Section 50(4) of the Wildlife ( Protection) Act- 1972]

1. Division  Wildlife Case No

2. Reference of Act/s and Section/s

3. Information Received : Day  Date  Time

Place of Occurrence

4. Details of Accused

Name

Sex and Age  Occupation

Parentage

Address

5. Complainant/ Informant

Sex and Age  Occupation

Parentage

Address

6. Particulars of Offence

7. Reason for delay in reporting by the complainant / Informant

8. FIR Contents : (Attach separate sheet, if required )

9. Action taken : Since the above report reveals commission of offence (s) U/S as mentioned in Item no.2, registered the case under Wildlife Case No :

FIR read over to the complainant / informant, admitted to be correctly recorded and a copy given to the complainant / informant free of cost.

Signature of the Complainant/ Informant

Dispatch to court

Date

Time

Signature of Forest officer

Name :

Designation :


# SUMMON

(Under section 50(B)(b) of the wildlife (protection) Act- 1972)

To,

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Whereas your attendance is necessary to answer to a charge of/ assistance in

You are hereby required to appear in person before me, on the \_\_\_\_\_ day of \_\_\_\_\_  
\_\_\_\_\_ 20 \_\_\_\_\_ at \_\_\_\_\_

Herein if i not,

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_

Seal:

Signature of Forest Officer

Designation :

**BAIL BOND**

[Under section 54(c) of the wildlife (Protection) Act- 1972]

I, \_\_\_\_\_, of \_\_\_\_\_,  
 being brought before the \_\_\_\_\_ under  
 a Charge/Sum non to compel my appearance to answer the charge of \_\_\_\_\_,  
 \_\_\_\_\_, do hereby bind myself to  
 attend in the office of the \_\_\_\_\_  
 or in the court of the \_\_\_\_\_  
 as and when required, to answer to the said charge, and to continue to attend until otherwise  
 directed by the officer / court ; And, in case of my making default herein, I bind myself  
 to forfeit to the government the sum of Rs \_\_\_\_\_  
 Dated this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

SIGNATURE OF ACCUSED

---

I \_\_\_\_\_ of \_\_\_\_\_  
 do hereby declare myself surety for the above named accused, that he/she shall attend before  
 \_\_\_\_\_ in the office/court of \_\_\_\_\_  
 \_\_\_\_\_ as and when required, to answer to the charge on  
 which he/she has been accused, and shall continue so to attend the office; and , in case of his  
 making default therein, I bind myself to forfeit to the Government the sum of Rs \_\_\_\_\_  
 \_\_\_\_\_

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

SIGNATURE OF SURETY

## COMPOUNDING STATEMENT

(Under section 54 of the wildlife (Protection) Act-1972)

1. I   
herby do undertake of my own free will , to pay compensation in connection with  
Wildlife Case No.
2. Should I fail to remit the amount of compensation imposed, the compounding authority is free  
to take any further action including confiscation of things, relating to which the offence was  
committed by me.
3. I also clearly understand that compounding of the offence by compounding authority is dis-  
cretionary and my willingness to pay compensation or payment made in anticipation of com-  
pounding order, does not prevent the compounding authority to decide a different course of  
action.

Signature of Accused

4. Name , address and signature of at least two witnesses.

A.

---

B.

---

Date

Signature of Forest Officer

Place

Designation

## COMPOUNDING ORDER

[Used section 54 of the wildlife (protection) Act- 1972]

1. In view of the compounding statement given by the accused, I hereby order that a sum of  
i.e.  in words  Rupees  
by paid towards compensation by the offender in connection with  
Wildlife Case No.
2. If the compensation is not paid in full within five days from the date of receipt of this order,  
the compounding authority is free to take any further action including confiscation of materi-  
als relating to which the offence was committed by me.
3. Appeal lies on this order with the Conservator of Forests, Wildlife Circle, if preferred within  
48 hours from the date and time of receipt of this order.

Place:  Signature of Forest Officer:

Date:  Designation:

---

## RECEIPT

Signature of Accused

Name

Date  Time

**Plant species used for curing different ailments by the Lepcha tribe of Dzongu valley, bounding Khangchendzonga Biosphere Reserve, in North Sikkim, India**

(Source: Pradhan, B.K. and Badola, H.K. 2008. Ethnomedicinal plant use by Lepcha tribe of Dzongu valley, bordering Khangchendzonga Biosphere Reserve, in North Sikkim, India. Journal of Ethnobiology and Ethnomedicine 4:22 doi:10.1186/1746-4269-4-22

S. No.	Botanical Name	Family	Parts used and the methods
1	<i>Abies densa</i> Griff.	Abietaceae	Fresh leaves Juice is taken orally to relieve stomach pain and fever.
2	<i>Aconitum ferox</i> Wall ex Ser.	Ranunculaceae	Rhizome, extremely poisonous, is detoxified by continuous boiling with water for 24 hours or more and then cut into small pieces and dried. Dried pieces are chewed to cure cough, fever, skin diseases and to relieve gout pain.
3	<i>Aconitum heterophyllum</i>	Ranunculaceae	Rhizome is dried up and taken to relieve body-ache, fever, cold, cough, nose discharge etc.
4	<i>Aconitum spicatum</i> Stapf.	Ranunculaceae	Rhizome is detoxified by non-stop boiling with water at least for 24 hours, and cut into small pieces and dried, and chewed in case of food poisoning, diarrhoea, cough, inflammation of intestine. Dried rhizome is powdered and consumed to relieve body pain, ear and nose discharge.
5	<i>Acorus calamus</i> Linn.	Araceae	External application of rhizome paste cures skin diseases and on the forehead in case of fever. Small piece of dried rhizome is taken curing distressing cough. Dried cut piece is given to child for speech clarity or to stammering child.
6	<i>Aesandra butyracea</i> (Roxb.) Baehni	Sapotaceae	Fruit juice applied on the body before sleeping to soften skin; fruit edible.
7	<i>Ageratum conyzoides</i> Linn.	Asteraceae	Leaf juice is applied externally to heal surface wounds. Decoction of herb is also given to cure stomach ailments such as diarrhoea, dysentery and intestinal colic with flatulence
8	<i>Allium cepa</i> Linn.	Liliaceae	Eating raw bulbs eaten raw reduces fever acting as cooling agent.
9	<i>Allium sativum</i> Linn.	Liliaceae	Raw bulbs are taken in case of indigestion and altitude sickness. Bulb paste cures skin diseases, and the bulb juice is poured in the ear to treat earache. Bulb fried with mushroom act as antidote on snake bite. To drive the snake away from the vicinity of the house during summer months, the rhizome is crushed to mix into with water to sprinkle around the house.
10	<i>Amaranthus tricolour</i> Linn.	Amaranthaceae	Curry prepared from green leaves stops diarrhoea. Seeds grounded into powder, mixed with water and taken as an infusion to cure general gastric problems. Beaten seeds are fried with butter and fed to pregnant women to lessen pregnancy pains.
11	<i>Amomum subulatum</i> Roxb.	Zingiberaceae	Gargle with seed decoction with water, is used to treat teeth and gum infection. Pounded root mixed with water treats urinary infection in cattle.



12	<i>Ampelocissus sikkimensis</i> (Laws) Planch.	Vitaceae	Plant juice cures sores in mouth and tongue of an infant, and treats foot and mouth disease in cattle.
13	<i>Artemesia vulgaris</i> Linn.	Asteraceae	Crushed leaves inserted in the nose stop bleeding. Water, mixed with crushed leaves, in taking bath prevents and cures allergy. Raw leaves chewed are good for mouth ulcer; also find uses in rituals.
14	<i>Bauhinia variegata</i> Linn.	Caesalpiniaceae	Dried buds are chewed to cure ulcers and bleeding piles. During toothache bark juice is taken in the form of tonic.
15	<i>Bergenia ciliata</i> (Haw.) Sternb.	Saxifragaceae	Crushed rhizome is tied around the fractured bone to heal; the paste is applied on the cuts and wounds.
16	<i>Bischofia javanica</i> Blume	Bischofiaceae	Chewing raw leaves treat sore throat. Drinking bark cure diarrhoea.
17	<i>Brassica campestris</i> Linn.	Brassicaceae	Seed oil is applied to wounds to speed up healing and prevent infection. Oil applied on forehead relieves headache. To keep hair black and healthy, the oil is applied with massage.
18	<i>Calamus macracanthus</i> T. Anders.	Arecaceae	Juice of crushed leaves used as eye drop cures eye infection and other eye diseases.
19	<i>Canna indica</i> Linn.	Cannaceae	Edible rhizome is boiled and taken during fever.
20	<i>Cannabis sativa</i> Linn.	Urticaceae	Pounded seeds mixed with water taken in very minute quantity during severe body pain; the leaves given to cattle in flatulence.
21	<i>Carica papaya</i> Linn.	Caricaceae	Raw fruit is crushed, squeezed and the milky extract given to females for aborting unwanted pregnancy.
22	<i>Cedrela toona</i> Roxb.	Meliaceae	Bark is crushed and the paste is applied to cure ulcers. Flower is chewed to promote menstrual discharge in females.
23	<i>Celastrus paniculatus</i> Willd.	Celastraceae	Seed paste is applied in case of skin irritation/allergy; good for gout.
24	<i>Cinnamomum tamala</i> (Buch.-Ham.) Nees. & Eberm.	Lauraceae	Leaves are rubbed on the body surface of the scabies affected person.
25	<i>Cissampelos pareira</i> L.	Menispermaceae	Plant extract is given to treat diarrhoea, dysentery, indigestion and urinary disorders. Root is used as antidote. Leaves applied on wounds heal and cure stomach pain.
26	<i>Citrus aurantifolia</i> Christum	Rutaceae	Root powder mixed with water kills stomach worms. Fruit prevent vomiting sensation. Pounded leaves and seeds relive stomach ache in cattle.
27	<i>Citrus medica</i> Linn.	Rutaceae	Chewing dried fruit skin helps preventing dysentery. Fruit is good for indigestion. Roots are tied together along with a copper coin and placed in women's naval during child birth, which is believed to expedite the expulsion of the placenta after child birth.
28	<i>Citrus reticulata</i> Blanco.	Rutaceae	Juice by squeezing fruit skin is applied into the eyes to cure eye problems; dried fruit skin chewed to treat stomachache, tonsillitis, fever, and headache.

29	<i>Clematis buchananiana</i> DC	Ranunculaceae	Juice extracted by crushing fresh roots is inhaled, for having strong smell, to treat sinusitis and headache.
30	<i>Colocasia antiquorum</i> var. <i>esculenta</i> Linn.	Araceae	Juice of crushed roots and leaves is applied on warts. Corms are eaten as vegetable. Fresh leaves and rhizomes are used to stimulate lactation in cows.
31	<i>Coriandrum sativum</i> Linn.	Apiaceae	Shoot is chewed raw to expel gas and bowel, helpful in digestion; mixed with Fenugreek and Thyme taken along with tea relieves stomach pain.
32	<i>Costus speciosus</i> Smith.	Zingiberaceae	Rhizome mixed with sugar used to treat veneral diseases; being pungent, it is used as a substitute to zinger. Juice taken before breakfast cures urinary tract infections.
33	<i>Cucurbita pepo</i> Linn.	Cucurbitaceae	Seed powder taken with water acts as vermifuge. Fresh leaf paste acts as a soothing agent if applied on the burn portion. Ripen fruits cure jaundice.
34	<i>Curcuma aromatica</i> Salisb.	Zingiberaceae	Rhizome powder taken with water relieves nausea, stomachache and expels gas.
35	<i>Curcuma caesia</i> Roxb.	Zingiberaceae	Fresh rhizome is eaten raw to expel gas.
36	<i>Curcuma longa</i> Linn.	Zingiberaceae	Drinking water boiled with root cures throat pain, cold, cough and fever.
37	<i>Curcuma zedoaria</i> Roxb.	Zingiberaceae	Fresh rhizome paste is applied externally to cure skin diseases. Rhizome eaten raw cures diarrhoea and colic, and helps in digestion
38	<i>Cynodon dactylon</i> (Linn.) Pers.	Poaceae	Crushed root juice is taken to relieve piles. Root paste applied heals cuts and wounds. Boiled leaf and root juice help in treating diarrhoea and dysentery.
39	<i>Daphne cannabina</i> Wall.	Thymelaeaceae	Root is crushed and the boiled juice is given during food poisoning. Raw leaves are fed to baby goats during diarrhoea and fever. Traditional paper is made from the bark and the stalks are used to weave mats.
40	<i>Datura fastuosa</i> Linn.	Solanaceae	In case of rabid dog bite, seed eaten raw in very minute quantity. To treat asthmatic fits, smoke from burnt leaves is inhaled.
41	<i>Dicentra thelictrifolia</i> (Wall) Hk.f & Th.	Fumariaceae	Taking water boiled with crushed root stops excessive bleeding in females.
42	<i>Dichroa febrifuga</i> Lour.	Hydrangeaceae	Leaf powder is taken during fever. Ink is prepared from berries.
43	<i>Dillenia indica</i> Linn.	Dilleniaceae	Fruit juice mixed with sugar and water is taken to treat fever. Fruit helps to relieve constipation. Leaves are used to treat dysentery.
44	<i>Diplazium polypodioides</i> Bl.	Filices	Eating fresh and dry root helps stop dysentery.
45	<i>Disocorea alata</i> Linn.	Dioscoreaceae	To relieve throat pain, rhizome is eaten raw.
46	<i>Drymeria cordata</i> Willd. ex Roem & Schult.	Caryophyllaceae	The plant is warmed while wrapped in a cloth and emanating vapour inhaled in the case of sinusitis and nose blockade. Also, it is a remedy for headache. To relieve sore throat pain, fever and headache, the plant either eaten raw or cooked.

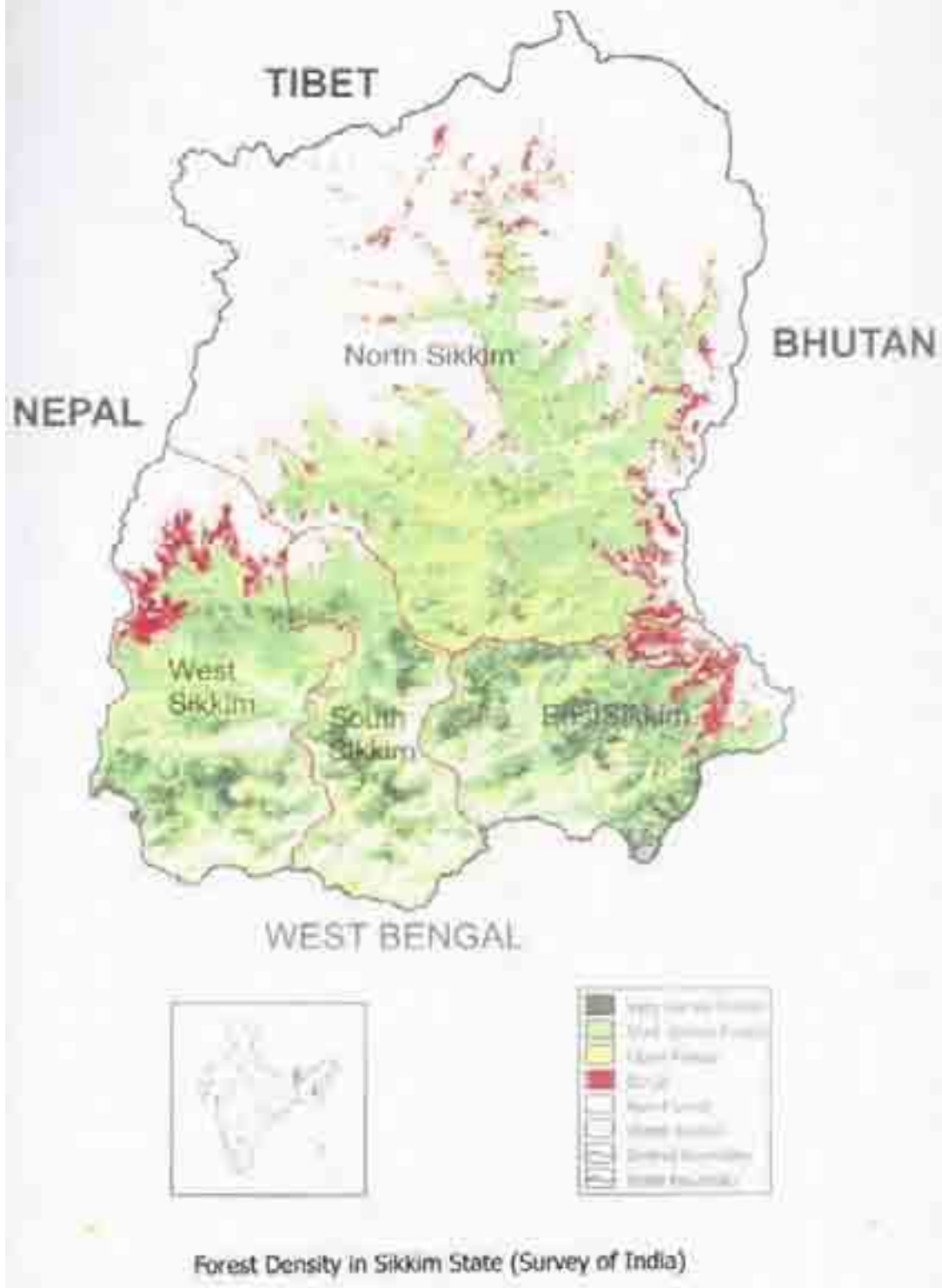
47	<i>Eleusine coracana</i> Linn.	Poaceae	Fermented seeds are taken with traditional drink as medicine during bodyache due to exhaustion. It is also given to the gastric patients.
48	<i>Entada pursaetha</i> ssp. <i>sinohimalensis</i> Grierson & Long	Mimosaceae	Juice or paste of crushed bark is applied externally to cure skin diseases. Paste of seeds is applied to cure mumps. Seed powder is mixed with water for cleansing hair, and has an anti-dandruff agent.
49	<i>Equisetum debile</i> Roxb. Ex Vaucher	Equisetaceae	Juice obtained from crushing aerial part is applied on the fresh wounds, nose bleeding etc. to clot blood.
50	<i>Eupatorium cannabinum</i> Linn.	Asteraceae	Juice obtained through crushing fresh leaves and tender shoots is applied to cuts, and the remains are placed over the wounds to stop bleeding immediately and this is highly effective in the prevention of infection further.
51	<i>Euphorbia pulcherrima</i> Linn.	Euphorbiaceae	Plant latex is applied on the toothache site to relive pain; this need great care as the latex is allergic.
52	<i>Evodia fraxinifolia</i> Hook. f.	Rutaceae	Ripe fruit is boiled to crush and the paste is applied on the forehead during giddiness; chewing raw or dried fruit treat indigestion. Fruits are also used to make chutney.
53	<i>Fagopyrum esculentum</i> Moench	Polygonaceae	Powdered grains are baked into chapattis (Bread) and given to treat diarrhoea.
54	<i>Ficus cunia</i> Ham.	Moraceae	The latex is applied externally to reduce boils.
55	<i>Ficus hirta</i> Vahl.	Moraceae	Root decoction treats food poisoning.
56	<i>Ficus religiosa</i> Linn.	Moraceae	Water extract of any plant part is given during burning sensation of the genitals. Bark soaked in water and the water is taken to stop vomiting. Fruit juice is used in to treat cracked feet.
57	<i>Gouania leptostachya</i> DC	Rhamnaceae	Past of leaves is applied to cure sores and inflammation.
58	<i>Helianthus annus</i> Linn.	Asteraceae	Root decoction as a gargle relieves toothache; dried flower chewed cures ulcers, fever, cough and cold. Leaves crushed and mixed with water and taken bath cures Allergy and skin diseases are treated taking bath with leaves crushed into water.
59	<i>Heracleum wallichii</i> DC.	Apiaceae	Dried fruits are chewed to treat sinusitis and influenza. Root juice is taken to cure diarrhoea; seeds are locally used as chatni.
60	<i>Hibiscus esculentus</i> Linn.	Malvaceae	Fruit mucilage acts as soothing agent on cuts.
61	<i>Holarrhena antidysenterica</i> Wallich	Apocynaceae	Powder of barks, seeds and leaves is taken with water helpful in in dysentery.
62	<i>Hordeum vulgare</i> Linn.	Poaceae	Gruel is made by the powdered grains and given in case of painful indigestion. Barley water with honey is prescribed in bronchial coughs.
63	<i>Hydrocotyle asiatica</i> Linn.	Apiaceae	Fresh plant parts crushed and ingested orally cure sores of throat and lungs. Leaf juice is used as eye drops to cure eye infection. Dressing with leaf paste reduces swelling or and applied in wounds. Juice of shoots treats gastritis and constipation.

64	<i>Juglan regia</i> Linn.	Juglandaceae	Fresh bark juice is taken to remove worms from the stomach. Bark and leaves crush act as a fish poison. The nuts are eaten. The shell of the fruit when crushed gives out black color which was used previously to paint the door and the windows.
65	<i>Kaempferia sikkimensis</i> (King ex Baker) K. Larsen	Zingiberaceae	Poultice formed from crushed bulbs is applied to heal bone fractures, dislocation and wounds.
66	<i>Lantana camara</i> Linn.	Verbinaceae	The juice of crushed leaves is applied to the fresh cut and wounds to heal. Crushed leaves are tied over the sprain to relieve pain.
67	<i>Leea macrophylla</i> Roxb.	Leeaceae	Seeds are wrapped, as small pack, in a cloth and tied around the neck of the children, which is believed to cure stomach pain. Also, the seeds are chewed to treat viral fever.
68	<i>Lindera neesiana</i> (Wall ex Nees) Kurtz.	Myrsinaceae	Seeds crushed and taken with water stops vomiting sensation.
69	<i>Litsea citrata</i> Blume	Lauraceae	Fruits are chewed to treat stomach disorders, headache; also used in making chutney.
70	<i>Lobelia angulata</i> Forst.	Lobeliaceae	Whole plant is boiled and given in case of throat pain and fever. Tender shoot is smashed and the juice is applied externally to treat boils and inflammation.
71	<i>Luffa aegyptiaca</i> Mill. ex Hook. f.	Cucurbitaceae	Juice of leaves cures conjunctivitis. Tender fruit is taken as vegetable. The course sponge of mature fruit is used as a bath scrub.
72	<i>Lycopersicon esculentum</i> Mill.	Solanaceae	Raw fruit is taken during indigestion and to prevent bleeding from the gums.
73	<i>Marsdenia roylei</i> Wight.	Asclepiadaceae	Decoction of unripe fruit, root and leaf is to relieve burning sensation in the genitals.
74	<i>Mentha arvensis</i> Linn.	Lamiaceae	Raw leaves chewed help to check stomach related disorders: gastritis, acidity, indigestion etc., also used to flavour chutney.
75	<i>Mimosa pudica</i> Linn.	Mimosaceae	Decoction of roots is helpful to control piles; root paste is applied externally to cure boils.
76	<i>Momordica charantia</i> Linn.	Cucurbitaceae	Fruit juice is good for diabetics; juice acts as blood purifier. Juice of tender shoot or root is applied at the point of snake bite.
77	<i>Morus indica</i> Linn.	Moraceae	Bark and leaf decoction cures sore throat; fruit is edible and cures throat infection and swelling. Seed extract is applied to heal foot cracks.
78	<i>Mucuna macrocarpa</i> Wallich	Fabaceae	Seed powder taken with water helps remove round worm from stomach.
79	<i>Musa paradisiacal</i> Linn.	Musaceae	Person suffering from fever is advised to drink sap released from the plant directly.
80	<i>Mussaenda frondosa</i> Linn.	Rubiaceae	Whole plant is boiled and decoction is given to treat fever, asthma and cough.
81	<i>Nasturtium officinale</i> R. Br.	Brassicaceae	The aerial part decoction is given to relieve body pain; also eaten as salad.

82	<i>Oroxylum indicum</i> (L.) Kurz	Bignoniaceae	Bark and seeds are powdered and mixed with water, and strained; the concoction is fed to patients suffering from high fever or pneumonia, which believed to restore health or brings down fever. Unbroken pod is also used in rituals.
83	<i>Oxalis corniculata</i> Linn.	Geraniaceae	Whole plant is chewed raw and the juice acts as an appetizer; also checks boil. Fresh plant decoction taken treats dysentery. Fruit is consumed to lessen throat pain.
84	<i>Paederia scandens</i> Merrill	Rubiaceae	Dried fruit is powdered and applied over teeth to relieve tooth ache and prevent tooth decay.
85	<i>Pandanus nepalensis</i> St. John	Pandanaceae	Tying or wrapping up the young and tender leaves from upper part of the stem on the surface act as an antidote to snake poison/bite. It may also be chewed as breath sweetener. Fresh leaves act as cockroach repellent. Leaves are used for making mats, carry bags, fishing bags and for thatching purpose. Fruits are seen being eaten by monkeys and rats.
86	<i>Phyllanthus emblica</i> Linn.	Euphorbiaceae	Fruit is eaten raw to treat cough, diarrhoea, and dysentery.
87	<i>Phytolacca acinosa</i> Roxb.	Phytolacaceae	Fresh leaves are boiled and consumed to relieve bodyache and diarrhoea.
88	<i>Picrorhiza kurrooa</i> Benth.	Scrophulariaceae	Dried rhizome is boiled in water and taken to cure fever, cough, etc.
89	<i>Pieris ovalifolia</i>	Ericaceae	Leaves either crushed or mixed with water are rubbed on the body to reduce inflammation, irritation and allergies.
90	<i>Piper longum</i> Linn.	Piperaceae	Dried seed powder paste is applied to reduce sprains; the powdered roots are given to treat cold and cough.
91	<i>Plantago eroasa</i> Wallich	Plantaginaceae	Leaf paste is applied to heal wounds. Seed powder is taken with water treats diarrhoea and dysentery.
92	<i>Polygonum viviparum</i> Linn.	Polygonaceae	Root juice boiled with water is given in case of fever and stomach upset.
93	<i>Prunus cerasoides</i> D. Don	Rosaceae	Bark is powdered and applied externally on the fractured bone along with other processes of treatment; fruit is edible.
94	<i>Psidium guajava</i> Linn.	Myrtaceae	Young leaves and tender shoots taken raw cure mouth ulcers, sore throat, cough, toothache. Drinking bark powder mixed in hot water is best local remedy for dysentery with blood in stool; fruits are edible.
95	<i>Pteris biaurita</i>	Pteridaceae	Mashed petiole extract applied on the cuts and wounds stop bleeding and infections.
96	<i>Rhododendron arboreum</i> Smith	Ericaceae	Dried flowers crushed and mixed with water stop excessive bleeding in female. Fresh leaves chewed stop dysentery. Flower petals clear throat choking due to fish or chicken bone.
97	<i>Rhododendron campanulatum</i> D. Don	Ericaceae	Leaves are chewed and the juice from the crushed leaves relieves cough.

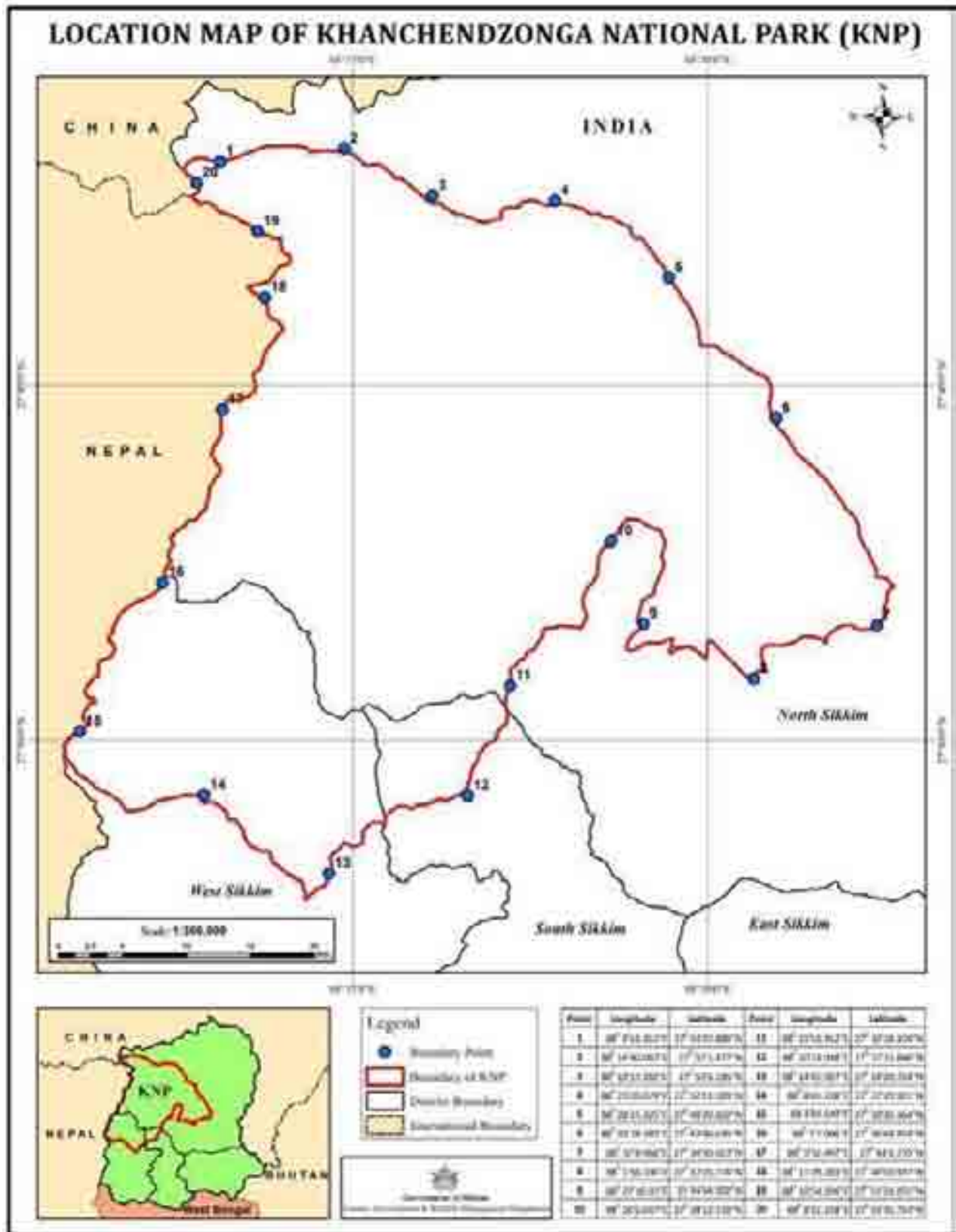
98	<i>Rhus semialata</i> Murr.	Anacardiaceae	Sour juice of fruits is boiled with water, and concentration is further mixed with water and raw egg, treats diarrhoea and dysentery. It is also used as food preservative.
99	<i>Rubia cordifolia</i> Roxb. ex Fleming	Rubiaceae	Root decoction with water is given to cure urinary infection; paste is used as an ointment to skin diseases. Root is also used to make dyes.
100	<i>Rubus ellipticus</i> Smith	Rosaceae	Young shoot is chewed raw to relieve sudden stomach pain. Root decoction given to the children to get rid of stomach warm. Root paste is applied on forehead during severe headache; fruit is edible.
101	<i>Rumax nepalensis</i> Sreng.	Polygonaceae	Juice prepared by smashing leaves and young shoots is applied to heal wounds. Root is crushed and the juice applied on the scalp prevents hair loss.
102	<i>Saccharum officinarum</i>	Poaceae	Juice is taken to cure jaundice.
103	<i>Sapindus mukorossi</i> Gaertn.	Sapindaceae	Scalp is washed with fruit to remove dandruff and lice.
104	<i>Schima wallichii</i> (DC.) Korth.	Theaceae	Bark is rubbed on the caterpillar infected portion removes its hair.
105	<i>Semecarpus anacardium</i> Linn. f.	Anacardiaceae	Root paste (poisonous) is applied externally on the affected portion cures skin diseases. Decoction of the bark is given to the animals to treat worms.
106	<i>Solanum khasiana</i> C.B. Clarke.	Solanaceae	Smoke, through burning the seeds, is directed to the infected teeth to cure toothache and tooth decay.
107	<i>Spermadictyon suaveolens</i> Roxb.	Rubiaceae	Root paste is applied externally to relieve joint pain.
108	<i>Sphagnum squarrosum</i> Crome	Sphagnaceae	Hunters and graziers use whole moss for dressing wounds in place of absorbent cotton or gauze. It is also act as an important source of fuel for them.
109	<i>Stephania hernandifolia</i> Walp.	Minispermaceae	Paste of crushed leaves is applied on the boils for opening; water kept in bulbous root is sprinkled in the poultry farm to prevent from bird flu.
110	<i>Swertia chirayita</i> (Roxb. Ex Flem.) H. Karst.	Gentianaceae	Juice obtained through boiling the entire plant is taken to cure fever, cold, cough, diarrhoea, and stomach-ache.
111	<i>Thysanolaena maxima</i> Kurtz.	Poaceae	Root paste applied on boils helps it in opening up faster. Juice from boiled roots used as gargle in case of bad breath and kills worms in stomach on drinking. Broom and roots are tied together along with a copper coin and placed in women's naval during child birth, believed to expedite expulsion of the placenta after child birth. During wedding rituals and Pujas (Prayers) for newly constructed houses, individual stalks or bouquet are placed in several locations around the house to create an auspicious environment.
112	<i>Tupistra nutans</i> Wall.	Liliaceae	Inflorescence is powdered and mixed with water and taken to relieve body pain.

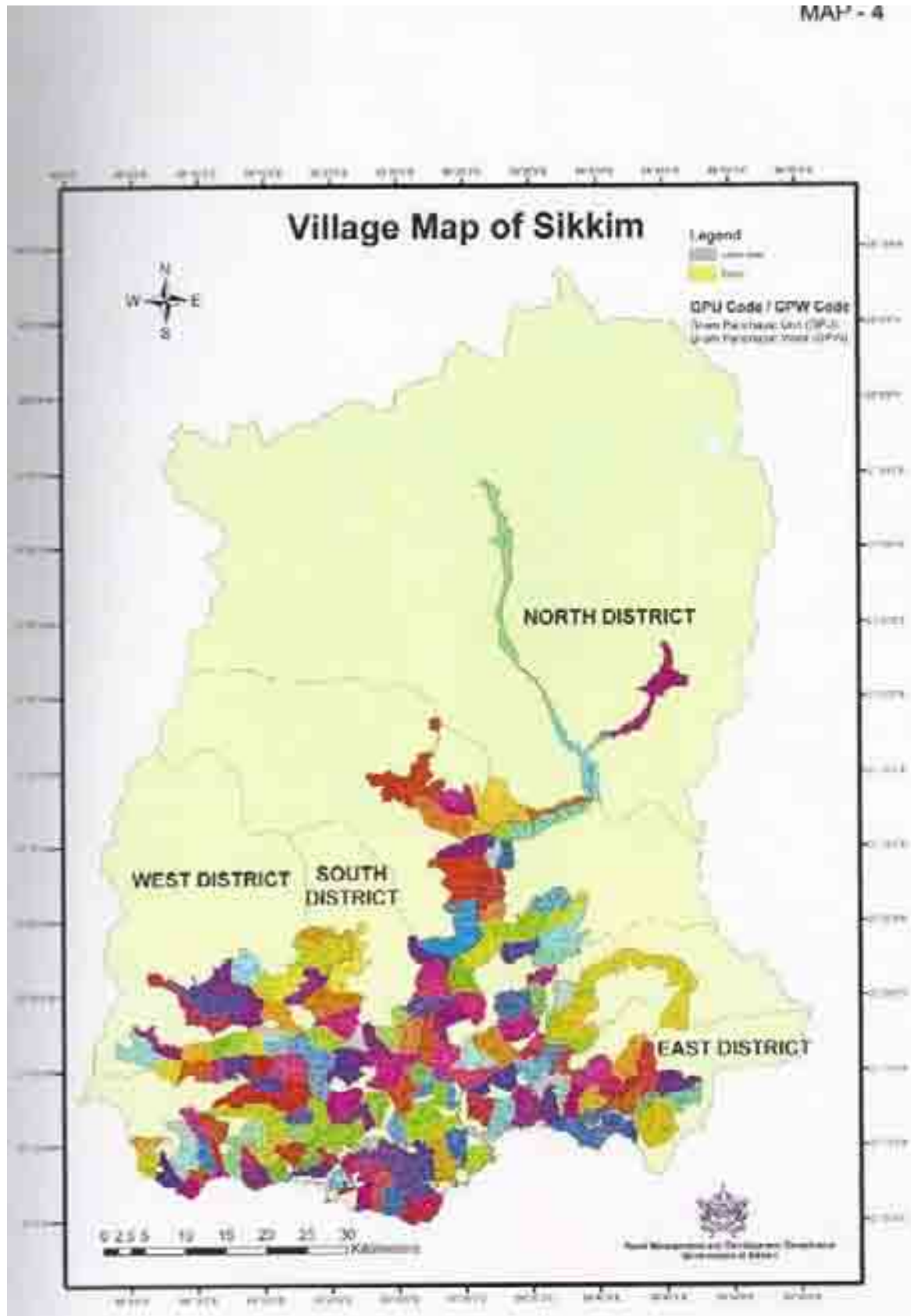
113	<i>Usnea sikkimensis</i>		Parmeliaceae	Hunters and graziers use it to bandage surface wounds and skin eruptions or boils. It is inserted in the nostril to stop nose bleeding. Shepard put it in the shoe to prevent or treat blisters.
114	<i>Urtica dioica</i> Linn.		Urticaceae	Root paste is applied on minor bone fracture and dislocation. Root and seed decoction is taken to treat diarrhoea and cough. Curry, prepared using shoot tips, is given to female during child delivery as their slipperiness is believed to help delivering child. It should not be taken by a person who has been bitten by rabid dogs which is believed to aggravate the problem. Stems are beaten, dried and boiled to make threads and woven into traditional nettle clothing. Spines believed to stimulate milk production, when cows do not lactate, they are believed to be possessed and beaten with nettles for normal lactating. Shamans beat humans during exorcism rituals with nettles in a belief to drive away evil spirits from body; this should not be touched or eaten by family members of deceased person on the day of death. If the decease is one's father or mother, this prohibition remains for one year. Nettle is planted on the child's grave in a belief that the evil spirit of child will not come out to trouble other family members.
115	<i>Valeriana hardwickii</i> Wallich		Valarianaceae	Extract of crushed roots is taken to treat urine trouble.
116	<i>Viscum articulatum</i> Burm.f..		Loranthaceae	Paste prepared from the entire dried plant is applied to heal fractured bone, and dislocation.
117	<i>Zanthoxylum alatum</i> Roxb.		Rutaceae	Branchlet used as toothbrush to relieve toothache. Berries (2-3) taken to cure stomach ache and toothache. Berries are crushed and rubbed on the leg which acts as leech guard.
118	<i>Zingiber officinale</i> Rose.		Zingeberaceae	Rhizome is roasted and chewed to treat cough, fever and throat problem.

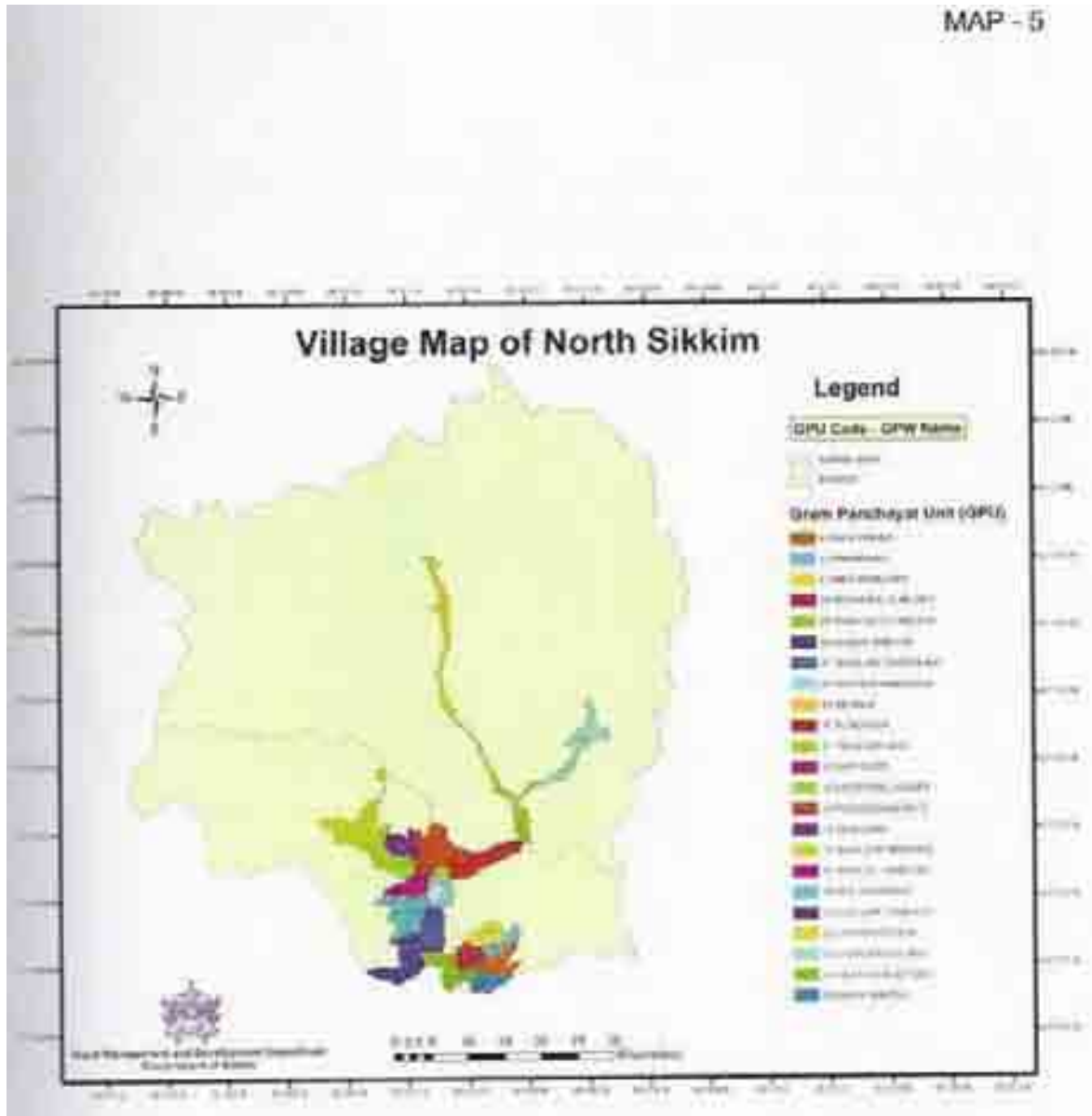


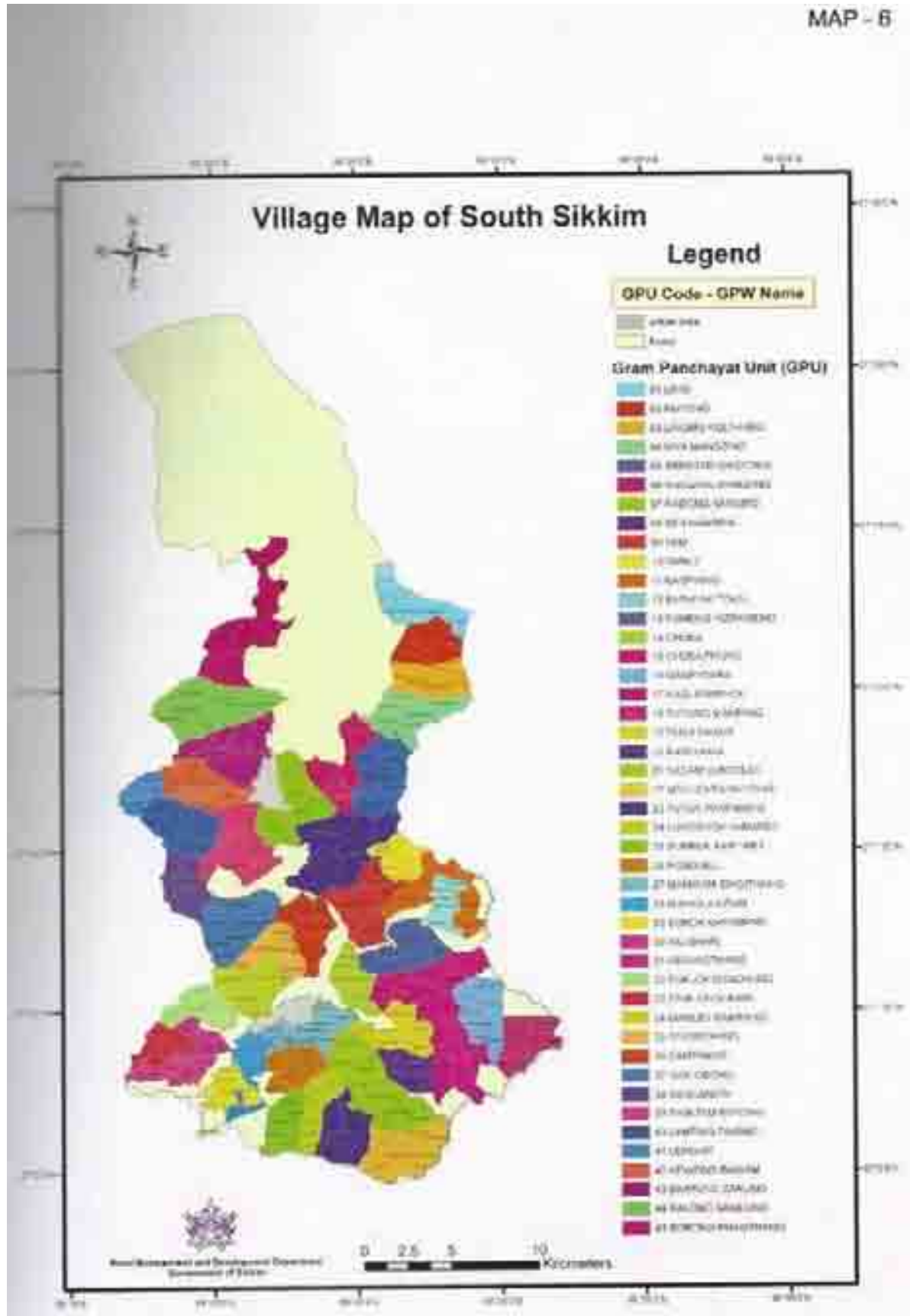


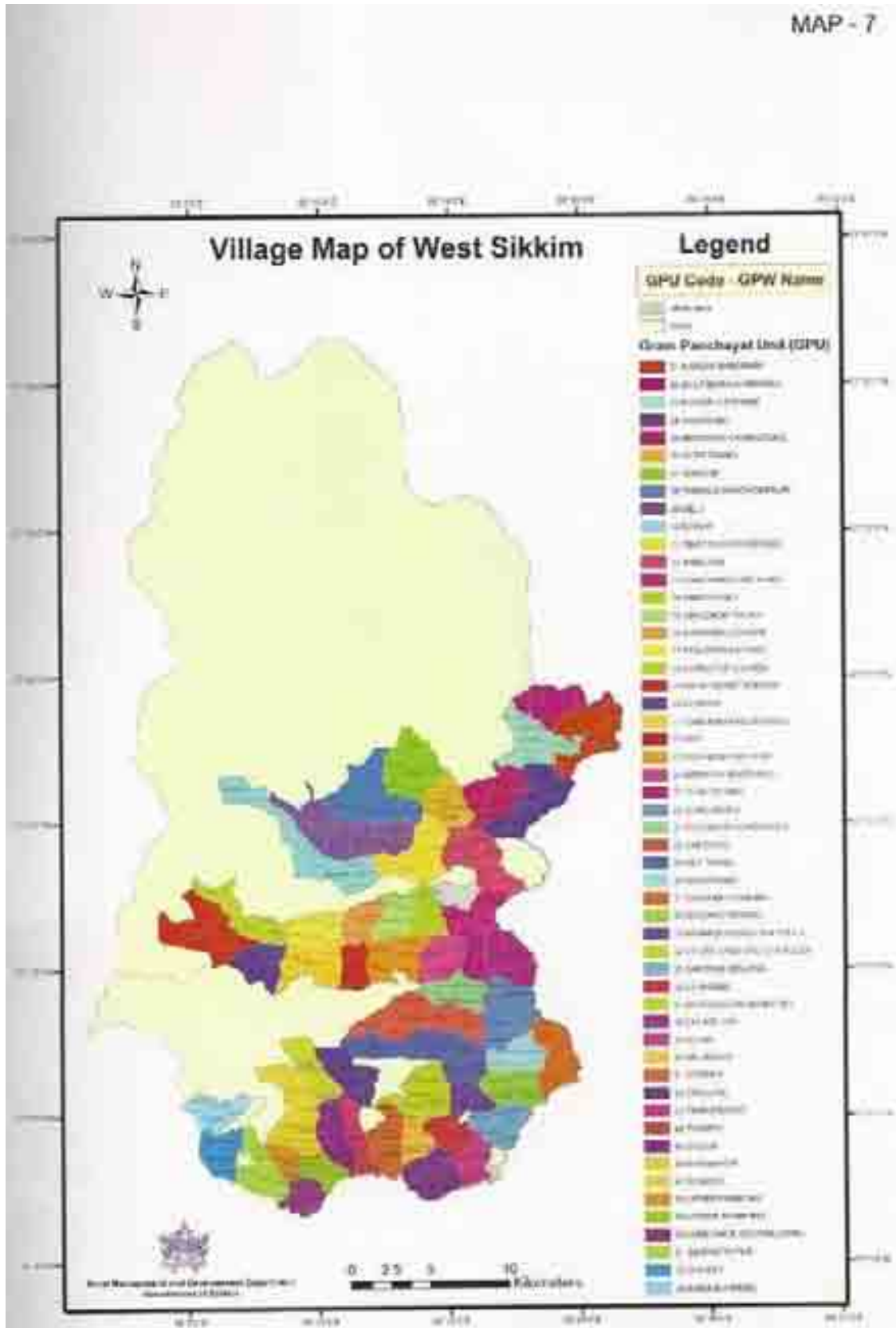
Management Plan of the Khangchendzonga National Park

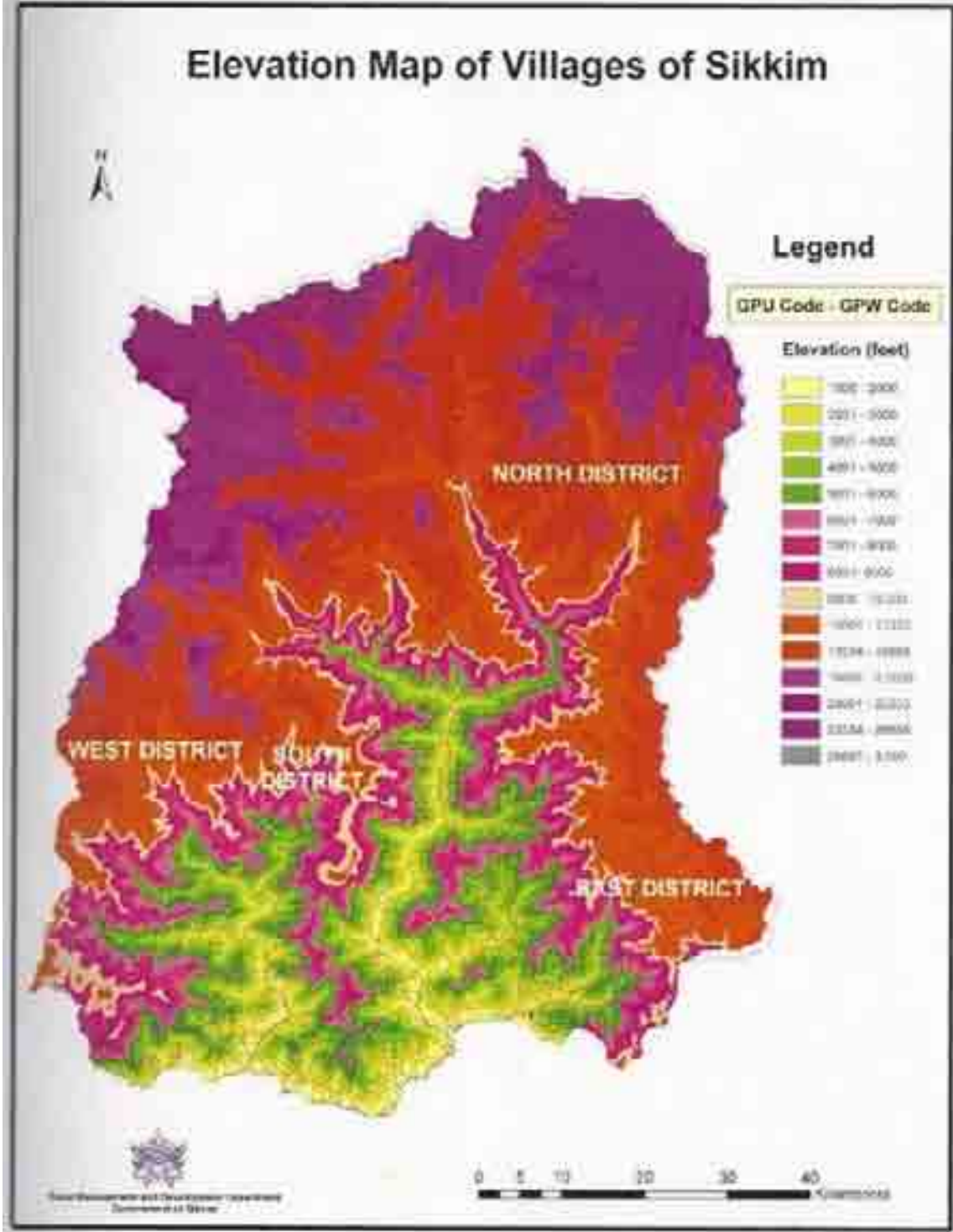














GOVERNMENT OF SIKKIM  
OFFICE OF THE CONSERVATOR OF FORESTS (WILDLIFE)  
DEPARTMENT OF FOREST, ENVIRONMENT AND WILDLIFE MANAGEMENT  
FOREST SECRETARIAT, GANGTOK, DEORALI-737102

Ref no. 07/CP/WL

Date 5.4.2007

To

The DFOs (Wildlife),  
South, West, North, East & KNP  
Namchi, Geyzing, Mangang & Gangtok

Subject : Management Plan of Protected Areas (PAs)

All the Management Plan of (PAs) have been thoroughly discussed and scrutinized by the expert committee and sought expert views, opinion and more or less it was finalized. Since this is a time bound programme which was supposed to be completed before 31<sup>st</sup> March 2008, you are directed to give priority for completion of document of PAs on or before 15<sup>th</sup> April 2008, to enable us to submit the same with Annual Plan of Operation (APO) in the Ministry before 30<sup>th</sup> April 2008. Timely action is highly appreciable.

Sd/-  
H.P. Pradhan, IFS  
Conservator of Wildlife

Memo No. 07 /CFWL

Dated: 5.4.2008

Copy to :

1. PCCF-cum-Secretary, for favour of kind information.
2. APCCF-cum-Wildlife Warden, for favour of kind information.

05/04/2008



GOVERNMENT OF SIKKIM  
OFFICE OF THE ADDL. PRINCIPAL C.C.F.-CUM-CHIEF WILDLIFE WARDEN  
FORESTS, ENVIRONMENT & WILD LIFE MANAGEMENT DEPARTMENT  
GANGTOK

NO. 757/A/CWW

DATED: 9<sup>th</sup> Jan. 2008


To

The Divisional Forest Officer,  
North/East/South/West/KNP,  
Forest, Env. & Wildlife Management Department,  
Government of Sikkim,  
Gangtok.

SUB : COMPLETION OF WILDLIFE MANAGEMENT PLAN.

Reference M.No.689/Secy./Forests dated 27/12/07 all the Divisional Forest Officers of Wildlife Sector are once again reminded to complete the Management Action Plan of PA's & KNP in time i.e. 31<sup>st</sup> March, 2008 is the fixed deadline. The draft of the same has to be submitted before the Committee formed for vetting and scrutiny.

This has to be taken up very seriously because of any chances of non release of fund from the Centre which all the DFOs are aware of.

  
(N.T. Bhatia) IFS,  
ADDL. P.C.C.F.-CUM-CHIEF WILDLIFE WARDEN.

Copy to :-

1. P.C.C.F.-cum-Secretary Forests for kind information.
2. Conservator of Forest(Wildlife) for information needful direction.
3. Joint Director, KNP for information.
4. Record File.

  
9/1/08





GOVERNMENT OF SIKKIM  
OFFICE OF THE PCCF-cum-SECRETARY  
FOREST, ENVIRONMENT & WILDLIFE MANAGEMENT DEPARTMENT  
FOREST SECRETARIAT, GANGTOK, DEORALI-737 102

Ref no 689/ Secretary


Date 21/11/ 2007

To,

All Divisional Forest Officers,  
North, East, South & West (Wildlife Division) & KNP  
Mangan, Gangtok, Namchi & Gyalsing

Sub: **Wildlife Management Plan.**

In the last departmental coordination meeting held on 24/11/2007, it had been widely discussed on various activities of department and specifically serious views had been taken on the issue of preparation and completion of **WILDLIFE MANAGEMENT PLAN (WLMPs) of Protected Areas (PAs) of Sikkim**. The documentation of WLMPs is mandatory for sound management and development of PAs i.e. Sanctuaries and National Parks. The Ministry is also under the impression that Sikkim state is far lagging behind on preparation WLMPs and this issues has been raised in the every CWLW meeting in Delhi for non-compliance of GOIs directives. Lapses due to incompleteness of Management Plan of PAs will have direct adverse impact on flow of fund under % CSS from the ministry for development of PAs. Hence all the divisions are directed to work on this exclusively for preparation and completion of **Draft WL Management Plan** by <sup>31<sup>st</sup></sup> of January, 2008 and completion of the same by 31st March, 2008 positively. The scrutiny Committees is being constituted for time to time discussion of draft WLMPs as per the guidelines.

  
(S.T. Lachungpa, IFS)  
PCCF-cum-Secretary



URGENT

No.21-1/2006-WL-I

Date: 4<sup>th</sup> April 2006

OFFICE ORDER NO. 4

भारत सरकार

पर्यावरण एवं वन विभाग

GOVERNMENT OF INDIA

MINISTRY OF ENVIRONMENT & FOREST

To  
The Chief Wildlife Warden  
(All States/UTs)

Subject: Annual Plan of Operations (APOs) 2006-07 under Centrally Sponsored Scheme-  
"Assistance for Development of National Parks and Sanctuaries" - invited.

Sir,

The undersigned is directed to invite proposals for seeking central assistance under the Centrally Sponsored Scheme, "Assistance for Development of National Parks and Sanctuaries" for the year 2006-2007 so as to reach this Ministry latest by 30<sup>th</sup> of April 2006.

Please note that during Xth Five Year Plan the objectives of this scheme would encompass the objectives of other two schemes, namely, "Eco-Development around Protected Areas" and "Beneficiary Oriented Tribal Development Scheme" also since the three schemes have been merged. Consequently the items of work/activities earlier taken up under the above mentioned (merged) schemes can now be taken up under CSS "Assistance for Development of National Parks and Sanctuaries"

1. The tentative allocation under this scheme for different States / UTs is enclosed at Annexure - I.
2. Guidelines for sending proposals under this scheme are enclosed at Annexure - II.
3. APOs only for those National Parks and Sanctuaries that have approved management plans should be sent, and the various works proposed should be in accordance with the management plan. A certificate to this effect should accompany the APO.
4. APOs should be made separately for each National Park/Sanctuary inclusive of the works under Ecodevelopment (as proposed in the approved microplans). Separate APOs sent for eco-development works will be ignored.
5. Individual APOs should be countersigned by CWLW.
6. APOs without Utilization Certificate for the grant released last/during 2005-06 (duly countersigned by CWLW) will be ignored. All funds released in previous years and lying unspent with the states should be accounted for.
7. Proposals for revalidation of the unspent balance (along with the list of the items) must also be sent along with APOs. Activities to be executed in the year should be included in the APO with due care. NO DIVERSION PROPOSALS would be entertained at a later date. Activities should be prioritised as per requirement of the Park.
8. It may be noted that the financial assistance may be sought only for few identified Sanctuaries and National Parks, which are of high bio-diversity value. The focus should not be diluted over a large number of Protected Areas.



जहाँ है हरियाली।

पर्यावरण भवन, सी. जी. ओ. कॉम्प्लेक्स, लोदी रोड, नई दिल्ली-110003  
PARYAVARAN BHAVAN, C.G.O. COMPLEX, LODHI ROAD, NEW DELHI-110003

*Mr. T.B. Subba  
D.F.O (KNP).  
For immediate  
action as  
discussed  
PL. @ B. K. S.  
18/4/06*

**ANNEXURE - I****TENTATIVE ALLOCATION OF FUNDS UNDER CSS- ASSISTANCE  
FOR DEVELOPMENT OF NATIONAL PARKS AND SANCTUARIES  
FOR THE YEAR 2006-2007****RS IN LAKHS**

<b>S.NO</b>	<b>STATE / UT</b>	<b>TENTATIVE ALLOCATION</b>
1	ANDAMAN & NICOBAR	50
2	ANDHRA PRADESH	200
3	BIHAR	100
4	CHANDIGARH	20
5	CHHATTISGARH	250
6	DADRA NAGAR	20
7	DAMAN DIU	5
8	GOA	55
9	GUJARAT	295
10	HARYANA	80
11	HIMACHAL PRADESH	260
12	JAMMU & KASHMIR	200
13	JHARKHAND	180
14	KARNATAKA	460
15	KERALA	300
16	LAKSHADWEEP	5
17	MADHYA PRADESH	360
18	MAHARASHTRA	320
19	ORISSA	300
20	PUNJAB	70
21	RAJASTHAN	280
22	TAMILNADU	310
23	UTTAR PRADESH	310
24	UTTARANCHAL	110
25	WEST BENGAL	330
26	DELHI	30
	<b>TOTAL</b>	<b>4900</b>
<b>NORTH EASTERN STATES</b>		
1	ARUNACHAL PRADESH	60
2	ASSAM	100
3	MANIPUR	60
4	MEGHALAYA	50
5	MIZORAM	60
6	NAGALAND	40
7	SIKKIM	40
8	TRIPURA	40
	<b>TOTAL</b>	<b>450</b>

Management Plan of the Khangchendzonga National Park

9. State Governments should mention the State share for recurring items, for considering such items as per guidelines of the scheme.
10. The proposal submitted for central assistance should have the approval of the State Government to avoid the possibility of central assistance not getting utilised for want of subsequent sanction from the State Governments. However, an advance copy of the proposal may be sent.
11. The proposals should be computer typed. To avoid any delay and misplacement, proposals may be sent in the name of the undersigned preferably through speed post. Copy of APOS may also be sent by email to <jd.wl@nic.in>.
12. All APOs for a state should be sent together in a single bunch under one covering letter. Individuality of APO for each wildlife sanctuary/national park however should be maintained.
13. Proposals received in piecemeal i.e. for one or a few PAs at-a-time from a state, will be ignored.
14. After scrutiny of the proposals meeting with Chief Wildlife Wardens will be fixed if found necessary, dates for which will be intimated separately.

The Protected areas for which central assistance is sought should be listed priority wise. Protected area listed in the higher priority would be allotted funds first from the tentative allocation. The rest of the Protected areas would be considered in September 2006, depending upon the availability of funds under the scheme.

Yours faithfully,

  
(Dr. Alka Bhargava)  
Joint Director (WL)

Copy to:

1. Secretary (Forest) (All States/UTs).
2. Principal Chief Conservator of Forests (All States/ UTs)

**Guidelines for Submitting Proposals Under CSS "Assistance for Development of National Parks and Sanctuaries"**



**ELIGIBLE PAAs :**

-National Parks and Sanctuaries, other than those getting central assistance under Centrally sponsored scheme, Project Tiger/ Project Elephant, which are duly notified under Wildlife (Protection) Act and are under the Control of the Chief Wildlife Warden are eligible for Central Assistance under this scheme.

**Only those National Parks and Sanctuaries, which have an approved Management Plan, are eligible for assistance under the scheme.**

-For those Wildlife Sanctuaries and National Parks which are proposed to get the Central Assistance for the first time under the scheme, a copy of the notification, map and declaration in the format attached at *Annexure A* is to be submitted along with the proposals.

**PATTERN OF FUNDING:**

-Under this scheme 100% assistance is provided for non-recurring item of expenditures for both National Parks and Sanctuaries.

-50% cost of recurring expenditure is also provided for National Parks where the State Government provides 50% of the matching share.

-National Parks and Sanctuaries in high mountain regions, coastal zones and deserts, and supporting large number of endangered species i.e., Snowleopard, Red Panda, Rhino, Sangai Deer, Phary's leaf monkey, Musk Deer, Hangul, Great Indian Bustard, Chinkara, Chowsingha, Black Buck and Marine Turtles are eligible for 100% central assistance for both recurring and non-recurring item of expenditures.

-Recurring expenditure includes all the maintenance and repair works like, desilting of water bodies, running charges of vehicles, cleaning of fire lines, engaging daily wage workers, etc.

**ADMISSIBLE ITEMS:**

- Admissible items of expenditure, which are funded under the scheme, are listed at *Annexure B*.



(86)

**GOVERNMENT OF SIKKIM**  
**OFFICE OF THE APCCF-cum-CHIEF WILDLIFE WARDEN**  
**DEPARTMENT OF FOREST, ENVIRONMENT & WILDLIFE MANAGEMENT**  
FOREST SECRETARIAT, DEORALI, GANGTOK-737 102

L. No. 115/CWLW

Date 03.01.2008

**N O T I F I C A T I O N**

Documentation of Wildlife Management Plan (WLMP) of all Protected Areas (PAs) i.e. Sanctuaries and National Parks in the state is mandatory for the purpose of sound and effective management of pristine habitats and their flora and fauna for protecting, propagating or developing wildlife, biodiversity and its environment. The preparation of WLMPs is under active progress and it is committed to complete and finalize the documents by the end of 31/03/2008. As per the guidelines for preparation of WLMPs, chapter wise scrutiny and vetting is essential for authentication and processing of data. Prescription of WLMPs is equally important for future management and development of PAs which needs to be factored in with expert views and suggestions.


In view of the above, the competent authority has been pleased to approve and constitute an Expert Committee with the following members for vetting and securitization of WLMPs from time to time:

1. Shri N.T. Bhutia, IFS, APCCF-cum-Chief Wildlife Warden.
2. Shri. Thomas Chandy, IFS, CCF (T).
3. Shri. S.B.S. Bhaduria, IFS, CCF, Land Use and FCA.
4. Shri S.J. Lukson, Director, Parks & Zoo.
5. Representatives from Mines & Geology Department, GeS.
6. Shri. Chetang Lachungpa, IFS, CF, Land Use.
7. Dr. Dipankar Ghosh- In-charge, WWF, Sikkim Unit.
8. Dr. A.K. Sahu, Scientist, BSI, Gangtok.
9. Shri. H.P. Pradhan, IFS, CF (WL) - Member Secretary.

The committee will start functioning with immediate effect.



b/c

  
(N.T. Bhutia, IFS)  
Addl. PCCF-cum-Chief Wildlife Warden

**Reference prepage:**

The draft Wildlife Management plan of all the protected areas in the State have been completed and placed below for favour of kind perusal. Copies of Draft Wildlife Management Plan have also been submitted to the Ministry of Environment and Forest, Government of India, which has been accepted in Principle. The details of the Protected Areas (PAs) are given below.

**SIKKIM: WILDLIFE PROTECTED AREA AT A GLANCE**

S N	Name	Area (sq. km)	District	Bio-geographic Province	Altitude (m)	Notification No. & Date	Co-ordinates	
							Long	Lat
1	Bamsey Rhododendron Sanctuary	104.00	West	2 C	2110 - 4100	39/WL/7/91/2 AWP & WL dt. 08.06.95	88° 02' W 88° 11'	27° 10' W 27° 13'
2	Tamenglong Wildlife Sanctuary	51.76	East	2 C	1524 - 2389	34/WL/82 dt. 02.04.84	88° 27' W 88° 35'	27° 10' W 27° 23'
3	Kyanggola Alpine Sanctuary	31.00	East	2 C	1292 - 4116	41/WL/83/625 dt. 29.08.84 Expanded vide 44/WL/9/92/1 S&F & WL dt. 05.12.1992	88° 44' W 88° 43'	27° 23' W 27° 24'
4	Mason Wildlife Sanctuary	35.34	South	2 C	2000 - 3263	63/WL/7/78 dt. 09.03.87	88° 21' W 88° 23'	27° 21' W 27° 23'
5	Painjalta Wildlife Sanctuary	124.00	East	2 C	1700 - 4790	26/WL/7/89 dt. 07.11.00	88° 22' W 88° 31'	27° 09' W 27° 22'
6	Shingba Rhododendron Sanctuary	43.00	North	1 C	3048 - 4571	46/WL/7/92/1 S&F & WL dt. 05.11.92	88° 43' W 88° 40'	27° 43' W 27° 48'
7	Khangchendzonga National Park	1784.00	North/West	1 B & 2 C	1400 - 8598	95/CP dt. 24.08.07	88° 03' W 88° 39'	27° 27' W 27° 33'
8	Khasi Bird Sanctuary	6.00			226 - 875	38/0/WL/200 5 dt. 03.07.05	88° 03' W 88° 22'	27° 00' W 27° 07'
	<b>Total area (A)</b>	<b>2183.14</b>						
9	810' Buffer zone	836.00	North/West					
10	Khangchendzonga Biosphere Reserve (KNP+Buffer -1784+836)	2620.00	North/West	1 B & 2 C	2125 - 5537	10/KNP/WL/27 dt. 17.03.1997	88° 27' W 88° 33'	27° 33' W 27° 48'
11	<b>Total Geographic area (Sikkim)</b>	<b>7046.00</b>						

- Note: 1. Protected Area Network does not include area under buffer zone of a biosphere reserve  
 2. Total area admn by FEWM Deptt (RF i/c PAs) + Khas+Gauchamn = 5452+285+104 = 5841 Sq. km  
 3. Territorial Sector (RF + Khas + Gauchamn = 3268.90 + 285 + 104 = 3657.90 Sq. km) i.e. 51.55% of State's Geog. area.  
 4. Wildlife Sector (KNP + Sanctuaries = 3019.10 Sq. km) i.e. 42.54 % of State's Geog. Area.

3129/CS/08

- North**
  1. Shingba Rhododendron Sanctuary.
- East**
  1. Fambonglho Wildlife Sanctuary.
  2. Kyongnosla Alpine Sanctuary.
  3. Pangolakha Wildlife Sanctuary.
- South**
  1. Manam Wildlife Sanctuary.
  2. Kitam Bird Sanctuary.
- West**
  1. Barsey Rhododendron Sanctuary
- North and West**
  1. Khangchendzonga National Park

The Draft Wildlife Management Plan may be forwarded and recommended for seeking approval of the Government, please.

~~Accession~~

Ref: NSP-2423

*[Signature]*  
12/09/08

*[Signature]*  
H.P. Pradhan, IFS  
Conservator of Forest (Wildlife)

Draft Wildlife Management Plan (DWLMP) of 7 (seven) Wildlife Sanctuaries and Khangchendzonga National Park - vetted by the Expert Committee of Forest, Env. & Wildlife Management Department and agreed in principle by the Ministry of Environment & Forest, Government of India during discussion. Hence, DWLMP is completed and submitted for favour of kind perusal and approval of the Government, please.

~~Asst  
Secy.  
CS.~~

*[Signature]*  
(S.T. Lachungpa, IFS)  
PCCF-cum-Secretary

*[Signature]*  
12/09/08

Chief Secretary  
Govt. of Sikkim

*[Signature]*  
N.D. Chingapa, IAS  
Chief Secretary  
Govt. of Sikkim

*[Signature]*  
12/09/08

~~CS~~

*[Signature]*  
12/09/08

*[Signature]*  
12/09/08

*[Signature]*  
12/09/08





GOVERNMENT OF SIKKIM  
DEPARTMENT OF FOREST ENVIRONMENT & WILDLIFE MANAGEMENT  
DEORALI, GANGTOK-737102  
EAST SIKKIM.

No. 2/6 ADM/F/WMD

Dated: 12/05/2014

OFFICE ORDER

Consequent upon the approval of PCCF-cum-Principal Secretary, Forest, Environment & Wildlife Management Department, a Departmental Committee comprising of the following officers is hereby constituted to revise and update the Khangchendzonga National Park Management plan under the guidance and supervision of national consultant, SBFP.

- |   |   |                  |
|---|---|------------------|
| 1. Director, KNP                                      | = | Chairman         |
| 2. Additional Director, KNP                           | = | Member           |
| 3. Joint Director, KNP                                | = | Member           |
| 4. Divisional Forest Officer, KNP, North              | = | Member           |
| 5. Divisional Forest Officer, KNP, Biodiversity, SBFP | = | Member           |
| 6. Divisional Forest Officer, KNP West                | = | Member Secretary |

The Wildlife Institute of India (WII) authorities shall also be consulted for the purpose. The exercise shall begin with updation and revision of KNP and be completed within three months from the date of approval.

The committee shall update the development in the work to the senior officers of the department headed by Principal Secretary-cum-Principal Chief Conservator of Forest by way of presentation on monthly basis.

The committee will, through Chief Conservator of Forest, Wildlife submit the report to the Chief Wildlife Warden who shall obtain the approval of the Government.

(In Order)

sd/-

(Arvind Kumar) IFS

PCCF-cum-Principal Secretary

Dated: 13/05/2014

Memo No. 2/6-2/6-ADM/F/WMD

Copy to:-

1. All the officers mentioned above
2. PCCF-cum-CWLW-cum-Principal Secretary, FEWMD
3. File &
4. Guard file

Under Secretary to the Government of Sikkim  
Forest, Environment & WL Management Department

## Management Plan of the Khangchendzonga National Park

### References

1. Our National Resources our Responsibilities Green initiative for sustainable Development by Hon'ble Chief Minister Shri Pawan Chamling.
2. Soil Conservation and Land Management by S. K. Datta. IFS.
3. Annual Administrative Report 2003-2004. Forest ENV and Wildlife Management Deptt.
4. 'Panda' A BI- Annual Newsletter on Environment Forest and Wildlife Vol. I No.2 July Dec. 1994.
5. The Sikkim Forests, Water courses and Road Reserve (Preservation and Protection) Act 1988.
6. The Wildlife (Protection) Act. 1972.
7. Draft Wildlife Management Plan for Khangchendzonga National Park-1990 1995.  
By S.L. Luksom (Field Direction)
8. Sikkim A Tourist - Paradise  
Anthropological Survey of India Kolkata.
9. Integrated Management Action Plan for Wet Lands of Sikkim State 2005-2006.
10. Management Plan of Senchal Wildlife Sanctuary, Darjeeling.
11. Along the Zema Glacier's and onto the Green Lake weekly focus. Sikkim Express Tuesday 25th Sept.2007.  
Rajesh Verma, Director, Internation Technology. Govt. of Sikkim.
12. The Glacier's Warning "Opinion" Now. 29 November 2005.
13. ICE,ICE, maybe. There is nothing unusual about the meltdown of the sacred Lingam in the Amarnath cave this year,  
explains T.V. Jayan.  
The Telegraph, Calcutta Sunday  
8 July 2007.
14. Understanding Ecotourism (Part-I) & (Part II) Weekly Focus, Sikkim Express, Tuesday 4th Sept. 2007.
15. "Nobel" special Edition for Khangchendzonga Celebration - Newsletter Vol-I No-4.  
Gangtok - Sept 16 Friday 2005.
16. Be a Responsible Traveler, Ecotourism Sikkim Express, Tuesday 29th January 2008.
17. Excerpts from the speech delivered by Chief Minister Pawan Chamling during the 1st Glacier and Climate Change Commission Meeting held at Chintan Bhawan Gangtok on January 17th 2008
18. Work Draft 28-July-05 for Management Plan of Sagarmatha National Park, Nepal.
19. Vegetative composition of Khangchendzonga Biosphere Reserve.  
Dibatrata Maity  
A.S. Chuhan BSI.
20. Khangchendzonga Biosphere Reserve Habitat service Report 10th -21th May 2005, Conducted by the team headed Dr. G. S. Rawat Prof. & Head Department Habitat Ecology WII.

## Management Plan of the Khangchendzonga National Park

21. An Expedition to the Green Lake in Zema Valley of North Sikkim from 2nd to 11th July 2006.  
Team Members: Dr. G. S. Rawat, WII,  
Dr. Nakul Chettri, ICI MOD.  
Dr. Depankar Ghose WWF  
Sri Sandep Tambe IFS &  
J.B. Subba.
22. An Ecological Study of Pastoralism in the Khangchendzonga National Park, West Sikkim.
23. A Guide to Planning Wildlife Management in protected areas & Managed Landscapes.  
Vishwas B. Sawarkar WII.
24. Regional Ecotourism (Community Based Tourism) Hands- Training. A Report Yuksom Sikkim and Mangmaya Darjeeling, 22nd-28th February 2007. ICIMOD.
25. Stakeholder Consultation on Planning and Improvement of corridors between Protected Areas within Khangchendzonga Landscape overview and outcomes of the Planning consultation,  
Darjeeling Tourist Lodge -8th 9th July 2003-ICIMOD.
26. Exhumation history of a section of the Sikkim Himalayas, India; records in the metamorphic mineral equilibria and compositional zoning of garnet. Earth and Planetary Science Letter 183 (200).  
[www.elsevier.com/locate/epsl](http://www.elsevier.com/locate/epsl).
27. The Forest of Symbols embodied in the Tholung sacred landscapes of North Sikkim India.  
Vibha Arora.
28. Chapter 10 Wildlife Conservation Plan under Environment Management Plan - 1200MW Teesta-Stage - III H.E. Project. Chungthang North Sikkim. WAPCOS centric for Environment.
29. Biodiversity Conservation Plan and Catchment Area Treatment Plan of Environment Management Plan under 280 MW Panan - HE Project Dzongu, North Sikkim CISMHE.

### ABBREVIATIONS USED

1.	RF	-	Reserve Forest.
2.	KNP	-	Khangchendzonga National Park.
3.	IPCC	-	Intergovernment Panel on Climate Change.
4.	GLOF	-	Glacial Lake Outburst Flooding.
5.	MoEF	-	Ministry of Environment & Forest.
6.	NWFP	-	Non Wood Forest Produce.
7.	NTFP	-	Non Timber Forest Produce.
8.	ISPS	-	Indo Swiss Project Sikkim.
9.	AHLFVS	-	Animal Husbandry, Livestock, Fisheries and Veterinary Service.
10.	TMI	-	The Mountain Institute.
11.	NGO	-	Non-Governmental Organisation.
12.	MAP	-	Management Action Plan.
13.	FDA	-	Forest Development Agency.
14.	NAP	-	National Afforestation Programme.
15.	CSS	-	Central Sponsored Scheme.
16.	KBR	-	Khangchendzonga Biosphere Reserve.
17.	NWP	-	Non Wood Produce.
18.	EDC	-	Eco-Development Committee.
19.	PA	-	Protected Area.
20.	CWLW	-	Chief Wildlife Warden.
21.	VFTF	-	Visitors Flow Task Force.
22.	MoU	-	Memorandum of Understanding.
23.	GoI	-	Government of India.
24.	WII	-	Wildlife Institute of India.
25.	ACF	-	Assistant Conservator of Forest.
26.	DFO	-	Divisional Forest Officer.
27.	DCF	-	Deputy Conservator of Forest.
28.	SAP	-	Sikkim Aram Police.
29.	NJP	-	New Jalpaiguri.
30.	STDC	-	Sikkim Tourism Development Corporation.
31.	KCC	-	Khangchendzonga Conservation Committee.
32.	ZI	-	Zone of Intervention.
33.	NAEB	-	National Afforestation Ecodevelopment Board.
34.	PRA	-	Participatory Rural Appraisal.
35.	MLAS	-	Mutanchi Lhom Aal Shizume?
36.	MEE	-	Management Effectiveness Evaluation.
37.	BRO	-	Border Road Organisation.
38.	SSB	-	Sima Suraksha Bat.
39.	MW	-	Megha Watt.
40.	HE	-	Hydro Electric.
41.	EMP	-	Environment Management Plan.
42.	FMD	-	Food & Mouth Disease.
43.	CAT	-	Catchment Area Treatment.
44.	RG	-	Rangnang.
45.	DRSM	-	Dry Rubble Stone Masonry.
46.	SPP	-	Species.
47.	C.E.	-	Cement Concrete.
48.	GBH	-	Girth Breast Height.
49.	LPG	-	Liquidified Petroleum Gas.

## Management Plan of the Khangchendzonga National Park

50.	JFM	-	Joint Forest Management.
51.	PHED	-	Public Health Engineering Department.
52.	FEWMD	-	Forests, Environment Wildlife Management Deptt.
53.	TAR	-	Tibetan Autonomous Region.
54.	FD	-	Field Director.
55.	SC & ST	-	Schedule Castes & Schedule Tribe.
56.	SHD	-	Sustainable Human Development.
57.	TREMAC	-	Training Research, Evaluation & Monitoring Advisory Committee.
58.	WL	-	Wild Life.
59.	TRAC	-	Training Research & Academic Council.
60.	GPS	-	Global Positioning System.
61.	PG	-	Post Graduate.
62.	RO	-	Range Officer.
63.	BO	-	Block Officer.
64.	HFG	-	Head Forest Guard.
65.	FG	-	Forest Guard.
66.	BSF	-	Border Security Force.
67.	T.V.	-	Television.
68.	ICIMOD	-	International Centre for Integrated Mountain Development.
69.	CISMHE	-	Centre for Inter-Disciplinary Studies of Mountain Hill Environment.
70.	WAPCOS	-	Water & Power Consultancy Services.
71.	KNP	-	<b>Khangchendzonga National Park</b>