

# MANAGEMENT PLAN

**Bir MotiBagh Wildlife Sanctuary**

**Patiala, Punjab**

**(2019-2020 to 2029-30)**

by

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ਉਪਰੋਕਤ ਵਿਸ਼ੇ ਸਬੰਧੀ ਆਪ ਵੱਲੋਂ ਹਵਾਲੇ ਅਧੀਨ ਪੱਤਰ ਰਾਹੀਂ ਭੇਜੀ ਗਈ ਬੀੜ ਮੋਤੀਬਾਗ ਜੰਗਲੀ ਜੀਵ ਸੈਂਚਰੀ, ਪਟਿਆਲਾ ਦੀ ਮੈਨੇਜਮੈਂਟ ਪਲੈਨ (ਸਾਲ 2019-20 ਤੋਂ 2029-30 ਤੱਕ) ਪ੍ਰਵਾਨ ਕੀਤੀ ਜਾਂਦੀ ਹੈ। ਪ੍ਰਵਾਨਤ ਮੈਨੇਜਮੈਂਟ ਪਲੈਨ ਦੀਆਂ 5 ਰੇਗਦਾਰ ਕਾਪੀਆਂ ਇਸ ਦਫਤਰ ਨੂੰ ਭੇਜੀਆਂ ਜਾਣ।

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## INTRODUCTION

Forests and oceans act as the best sources of carbon sinks as they absorb huge quantities of carbon dioxide thus help to maintain the mean annual temperature of the globe suitable of earthlings. But industrial revolution has contributed a lot in increasing the global warming. In the last century alone, the global surface temperature increased from  $0.74^{\circ}\text{C} \pm$  to  $0.18^{\circ}\text{C}$ . The world, especially the third world countries like India, Bangladesh, and Sub-Saharan Africa etc. are experiencing the harmful impacts of global warming like famine, floods, rise in sea level, submergence of coastal areas, appearance of more virulent pests- diseases and arrival of new diseases like mad cow disease, bird flu, dengue, chikungunya, swine flu etc.

In 2006 Sir Nicholas Stern former exchequer of United Kingdom in his report 'economics of climate change' has scientifically highlighted the role of forests in mitigation of global warming. According to his report, existing forests and new forests play a major role in mitigation of global warming; there is a strong need to go for afforestation, stop deforestation, and to protect existing forests. Habitat protection is the first step to ensure the preservation and conservation of wildlife.

Wildlife, both flora and wild fauna like birds, animals, reptiles, insects and other microbes are integral part of the nature. Though the Britishers had various laws to protect Indian wildlife, but the real strength to protect Indian wildlife came only after independence when UNEP conference was held in Stockholm, Sweden in 1972. This conference resulted in the formulation and enactment of Indian wildlife protection Act, 1972. In 1983 Govt. of India for the first time formed a special committee with Wildlife Institute of India as its nodal member to prepare guidelines to write wildlife management plan.

Punjab, being an agrarian state has very small area of fragmented forests (290,000 ha i.e. 5.76% of its geographical area against 33% as prescribed under national forest policy 1952). The state of Punjab has a total of 21 protected areas out of which 13 are wildlife sanctuaries (WLS), 4 are



community reserves and 4 conservation reserves. Out of the total forest area of 290,000 ha of the state, the total protected area is 45155.17 ha amounting to 15.57% of its forest area and only 0.68% of geographical area. In order to preserve the existing wildlife and also to increase the awareness about the role of forests there is a strong urgency to write a management plan based on scientific data collection, analysis-interpretation and future recommendation. The previous management plan is from 2006-07 to 2015-16, The period of this management plan was extended upto 31/03/2019.

The current management plan is prepared for period 2019-20 to 2029-30. Effort has been made to make this management plan scientifically true and to guide the management for future preservation-conservation of important patch of protected area.

## EXECUTIVE SUMMARY

Bir Motibagh is one of the most important PAs in Patiala district and one of the first declared Wildlife Sanctuaries in Punjab. The area represents Indus Plain Subdivision of 4A Punjab Plains Province in 4 Semi-Arid Bio geographic Zone of India.

The area is comparatively rich in biodiversity and harbours many rare and endangered small flora and fauna. For centuries, this bir has witnessed many shows of strength and hunting as it was an important 'Shikargah' of erstwhile princely state of Patiala. The management history of Bir Motibagh dates back to 1939 when it was declared Wildlife Sanctuary (WLS) under The Preservation of Faunae of Patiala Act, 1996 B.K (1939). After independence it was again declared Wildlife Sanctuary (WLS) vide notification No.F-150/50 dated 28/02/1952. Thereafter, it was managed under regular working plans and continued to be a sanctuary. At present, total forest area of Bir Moti Bagh is more than 654.37 Hect. which includes 524.48 Hect. of Bir Moti Bagh Wild Life Sanctuary also declared as second class forest vide notification no. 2026/Ft. (IV)-61/3654 dated 05/06/1961. The total area of Sanctuary is fenced by chainlink. The exact area of the fenced Moti Bagh Wildlife Sanctuary (WLS) will be calculated by total station survey. The first working plan for Patiala was written for the period 1955-56 to 1980-81 of which Bir Motibagh was a part. This Management Plan is to replace the previous Management Plan for Bir Motibagh written for the duration 2006-07 to 2018-19. Not all the objectives were achieved as mentioned in the previous Management Plan. The current plan has been written for the year 2019-20 to 2029-30 focusing on management of area with the following objectives:

- To secure the conservation of biodiversity and to enhance the status of wildlife by habitat amelioration works in a natural representative habitat of Bir Motibagh WLS.
- To maintain and strengthen the protection measures against external disturbances like illegal grazing, collection of fuel wood, fire, disease etc.

- To remove the alien and invasive species from the WLS and restore the natural habitat suitable for wildlife and to safeguard the hydrological and edaphic factors of the Bir Motibagh WLS through soil and moisture conservation.
- To improve the quality of life of people living around WLS by providing them with alternative means of livelihood, which will also reduce their dependence on the PA.
- To promote conservation-education and environmental awareness of the local communities with the help of meaningful interpretation and development activities.
- To strengthen the activities of training, research and monitoring for effective management of Wildlife in the sanctuary.
- To develop a mechanism for the interdepartmental, inter-agency dialogue, for achieving the broader goal of welfare of the Wildlife as well as the local inhabitants of the area

Guidelines given by Wildlife Institute of India were followed while writing the plan.

The Plan comprises of three parts-

**Part I**-it includes 4 chapters:

1. Introduction to the area
2. Background information and attributes
3. History of management and present practices
4. The protected area and the interface land use situation

**Part II**- it deals with 8 chapters:

5. Vision, Objectives and Problems
6. The strategies
7. Ecotourism, Interpretation and Conservation education
8. Eco-development
9. Research, Monitoring and Training
10. Organization and administration



11. The budget

12. The schedule of operations and miscellaneous regulations

**Part III-** it comprises of annexure, control forms, maps and diagrams etc.

**Problems perceived in achieving the objectives are as follows-**

- Abundance and prolific regeneration of Prosopis.
- Presence of Stray Cattle and Monkey menace.
- Infrastructural and logistical constraints.
- Lack of conservation education initiatives.
- Human-animal (monkey) conflicts.

**The strategies proposed** in Chapter 6 to tackle the problems is to divide the Wildlife Sanctuary into 3 zones-

- Biodiversity Conservation zone
- Ecotourism zone
- Eco-development zone

Each zone has its own set of objectives and strategies.

Five theme plans which are applicable to different areas of the WLS, irrespective of the zonation are as under-

1. General protection plan
2. Habitat restoration plan
3. Species reintroduction plan
4. Wildlife health management plan (including monitoring and population estimation).
5. Interagency co-management plan

Chapter 7, 8 and 9 deal with Tourism, Eco-development and Research & monitoring respectively including various measures for conducting these activities.

Chapter 10 deals with present and proposed staff that would be required to manage the sanctuary.

Chapter 11 is about Budget which would be required to fulfill strategies. It will include state allocation and central aid as well as other projects.

Chapter 12 is the last chapter dealing with schedule of operation, month-wise activities of each operation, format for deviation forms etc.

## CHAPTER 1

### INTRODUCTION TO THE AREA

#### **1.1 Name, Location, Constitution and Extent**

Bir Moti Bagh Wildlife Sanctuary falls in the jurisdiction of Patiala Forest Division (Wildlife), in the tehsil Patiala of Patiala district. It is situated on the Patiala - Dakala Road about 5 km from Patiala town. The area lies between 76°20' to 76°25' East longitude and 30° 15' to 30°20' North Latitude. The Survey of India toposheet number covering the sanctuary is 53 B/7 (Scale 1"= 1 mile).

The management history of Bir Motibagh dates back to 1939 when it was declared Wildlife Sanctuary (WLS) under The Preservation of Faunae of Patiala Act, 1996 B.K (1939). After independence it was declared Wildlife Sanctuary (WLS) vide notification No.F-150/50 dated 28/02/1952. At present, total forest area of Bir Moti Bagh is more than 654.37 Hect. which includes 524.48 Hect. of Bir Moti Bagh Wild Life Sanctuary also declared as second class forest vide notification no. 2026/Ft. (IV)-61/3654 dated 05/06/1961. The total area of Sanctuary is fenced by chainlink. The exact area of the fenced Moti Bagh Wildlife Sanctuary (WLS) will be calculated by total station survey. The detail of location of Bir Moti Bagh WLS in the state and in district is indicated in Map No.1 and Map No.2 respectively.

Bir Moti bagh WLS is divided into 24 Compartments for management purpose. Compartment wise area of sanctuary is given in Annexure 1.1

#### **1.2 Approach and access**

Bir Moti Bagh WLS is approachable by road. One can reach Patiala by Rail and then can take either bus or taxies for Bir Moti Bagh which is 8 Km from Patiala Railway Station. On way to sanctuary one can see historically significant monuments of Qila Mubarak, famous Baradari Gardens, National institute of Sports, Shish Mahal and North Zone Cultural Centre. The entry to the sanctuary is from the Patiala - Dakala link road which passes along its southern fringe.

### **1.3 Statement of Significance**

1. Bir Moti Bagh WLS is a representative landscape of Indus Plains Subdivision of 4A Punjab Plains Province in 4 Semi-Arid Bio geographic Zone of India.
2. It is an important PA of Patiala district harboring a considerable breeding population of Blue bull, Jackal, Wild boar and Rhesus monkey. It also forms a home for many species of wild fauna like Nilgai, Sambar, Porcupine, Hog deer, Common hare, Monitor lizard, Peafowl, spotted owlet, Black & Grey partridges and other small reptilian species, many birds and insects.
3. Bir Moti Bagh was one of the important shikargah (hunting and shooting reserve) of the ruler of Patiala State. Its proximity with other forest areas and PAs in Patiala district will ensure the conservation of wild fauna in a larger regional landscape.
4. It is a well-known wilderness area with typical ecological and biological features, rich in terms of timber, fruit and the other indigenous plants etc which can act as a repository for remnant biodiversity and wildlife of the state.
5. Bir Moti bagh WLS is one among the 13 sanctuaries and one of the first declared PAs in the state. It is therefore one of the important conservation units in Punjab which can act as a centre for conservation education and generating awareness among public.

The SWOT analysis for Bir Moti Bagh WLS and its bio-data is summarized in Annexure 1.2 and Annexure 1.3 respectively.



## CHAPTER 2

### BACKGROUND INFORMATION AND ATTRIBUTES

#### **2.1 Boundaries:**

At present, total forest area of Bir Moti Bagh is more than 654.37 Hect. which includes 524.48 Hect. of Bir Moti Bagh Wild Life Sanctuary also declared as second class forest vide notification no. 2026/Ft. (IV)-61/3654 dated 05/06/1961. The total area of Sanctuary is fenced by chainlink. The exact area of the fenced Moti Bagh Wildlife Sanctuary (WLS) will be calculated by total station survey. There is no distinction between core and buffer area. The total periphery of sanctuary is about 12.60 Km which is surrounded by the revenue boundary of adjoining villages of the area.

##### **2.1.1 External Boundary**

The shape of sanctuary is compact with continuous boundary. The boundary of the WLS is fenced with GI Chain Link. The fencing was done during 2015-16. There is no dispute of boundaries within Bir Moti Bagh WLS. A list of compartments bordering North, East, South and West of the WLS is given below:

**North:** Compartment no. C4, C5, C13 and C14

**North east:** Compartment no. C21

**East:** Compartment no. C22, C23 and C24

**West:** Compartment no. C1, C2, C3 and C4

**South:** Compartment no. C1, C8, C9, C17, C18 and C24

The area detail of these compartments is as annexed in appendix 1.1. The extent of **ecological boundary** of Bir Moti Bagh WLS consists of all adjoining forest blocks, patches and strips of the territorial forest division in the vicinity, so ecological boundary may extend up to neighboring forests and bordering revenue lands in non forest areas.

### **2.1.2 Internal Boundary**

Internal boundary is marked by compartment boundaries of the sanctuary. Each of the compartments is maintained as a separate unit by fire lines. The whole area is traversed by these fire lines forming a network. Most of the compartments are rectangular in shape which makes them easy to manage. Proper survey of area of compartment both in the field and in the map needs to be carried out using GPS.

A detailed map of the sanctuary is enclosed as Map 3 to show external and internal boundaries of the Bir Moti bagh WLS.

## **2.2 Geology, rock and soil**

The geological formation represented in the sanctuary consists of clay, sand, silt and gravel belt. The soil material forms parts of Indo-Gangetic plains deposits.

The soil is deep alluvium varying from clay to salty loam. It is derived from alluvial deposits of rivers. Due to heavy texture of the soil, it becomes sticky & loose after absorption of water but becomes very hard after drying. The soil is poor in available nitrogen and organic matter, but rich in clay content. Depth of clay varies at places and goes deep to 9 meter (30ft.). There are patches of saline soil, largely developed due to impeded drainage and high water. Kankar pan is also found in the saline patches at varying depths in the sanctuary. The penetration of water is extremely slow as a result, trees are unable to achieve growth without treatment of cultural operations like harrowing and watering continuously for a number of years.

## **2.3 Terrain**

The tract forms part of the Indo-Gangetic alluvial plain. By and large, it is flat but traversed with ditches and drains. Tangri Choe and Patiala Nadi are the major rainwater streams passing in the vicinity of Bir Moti Bagh. Patiala Nadi is a hill torrent which rises near Manimajra in district Panchkula (Haryana) and carrying with it several other torrents flows through Bir Moti

Bagh. These streams cause occasional floods especially during the rainy season and ultimately merge with Ghaggar River. A small water course passes through a portion of the sanctuary providing water for the animals during rainy season.

## 2.4 Climate

The climate is extremely hot in summers and cold in winters. The three distinct seasons which follow are:-

- (i) The south-western monsoon begins in the first week of July and extends up to mid September.
- (ii) The winter season starts from about the middle October till about middle of February coldest months being December- January.
- (iii) The summer starts from middle of April and continue till August. May being the hottest month.

### 2.4.1 Rainfall

Most of the rains occur during mid July and to mid September and small proportion falls during the summer months of April, May and June. Annual average rainfall varies from 294.1 mm to 1002.2 mm. The rainfall data of Patiala district with effect from 2006-2017 is given in Annexure 2.1

Period (2006-2017)	Average Maximum rainfall	Month	Average minimum rainfall	Month
Patiala Tehsil	156.15 mm	July	1.97 mm	October

\* 'Statistics of Patiala' - Agriculture department

### 2.4.2 Temperature

The temperature during summer goes as high as 46° C whereas in winter it touches the freezing point At times frost is common during these months. May and June are the hottest months whereas December and January are the coldest. The Temperature data from year 2006 to 2016 is given in Annexure 2.2

Period (2006-2016)	Mean monthly maximum temperature	Month	Mean monthly minimum temperature	Month
Patiala district	44.5 °C	May	2.7 °C.	December

\* 'Working plan- Patiala'

### 2.4.3 Humidity

As per rainfall and temperature, humidity gradually increases from the month of June to mid October. After that humidity decreases and winter season starts. During December - January the humidity and temperature are very low.

### 2.4.4 Wind

During summer season dry and hot winds cause drought conditions. Dust storms are common during hot weather. Strong winds following rains also cause uprooting of trees and breakage of branches.

### 2.4.5 Drought and its periodicity

The Bir Moti Bagh WLS experiences dry weather all through the year. Most of the rainfall is received between June to September. During winter there is negligible rain in Bir Moti Bagh WLS. Thus, the overall climate is dry and drought prone.

### 2.4.6 Frost

During winter season, frost is quite frequent but is very severe whenever there is long drying spell and causes considerable damage to seedlings of kikar, mango and neem and some times it rightly kills them.

#### **2.4.7 Dew and Hail Storms**

Dew does occur during rainy winter months but has not got much significance for the vegetation but certainly for the herbivorous animals. No record of observations regarding hail storms is available. Fog occurs during winter months of December and January. Dense fog reduces visibility which induces chances of hunting under the fog cover.

#### **2.5 Water Sources**

There is no natural source of water or water holes in the forest except that Patiala Nadi which flows on the outskirts of Bir brings water in the rainy season. Although canal water supply is available, but due to its inadequate supply, electric pumps have been installed in the Bir. The sub-soil water is suitable for irrigation and drinking of animals. There is a continuous low lying topography forming depression through compartment numbers 14, 15, 19, 20, 21, 22 & 23, which collects water during rainy season. However this water channel gets dried-up during the summer causing great inconvenience to wildlife population. Detail of water resources is given in Annexure 2.3 and Map 3.

### **2.6 Range of wildlife, status and distribution**

#### **2.6.1 Vegetation**

##### **2.6.1.1 The bio geographic classification**

As per the bio geographic classification of India (Rodger and Panwar 1988), the area falls under bio geographic zone 4 i.e. 'Semi arid' and biotic province 4A - 'Punjab Plains'.

##### **2.6.1.2 The forest types, cover and food for wild animals.**

The original vegetation in the sanctuary area were of the type dry tropical thorn and scrub forests which fall under the 'sub group' 5-B (Northern tropical dry mixed deciduous forests, according to the revised classification of the forest types of India by Champion & Seth (1968).



Due to the various edaphic factors like soil, climate and biotic factors which have played on the natural vegetation of this bir forest the vegetation can be recognized as “ Saline and alkaline scrub savannah sub type E8 of group 5-B.”

The crop consists of both planted and natural, indigenous and exotic trees and shrubs. The main tree species found are Prosopis juliflora, Eucllyptus hybrid (Mesquite), Acacia nilotica (Kikar), Dalbergia sissoo (Shisham), Albizia lebbek (Sirris), Morus alba (toot) and Acacia leucophloea, Zizphus mauritiana (Beri). The less common trees found are Mangifera indica (Mango), Syzygium cumini (Jamun), Butea monosperma (Dhak), Azadirachta indica (Neem), Melia azedarach (Drek) Ficus religiosa (Pipal), Phoenix sylvestris (Khajoor) Cordia dichotoma (Lasura). Eucllyptus hybrid and Prosopis juliflora were planted after removal of indigenous old growth. A number of new species have been introduced on trial basis among which are Cassia simea, Casuarina equisetifolia, Teak (Tectona grandis), Toon (Toona ciliata), Imli (Tamarindus indica), Chukrasia tabularis and Bamboo (Dendrocalamus strictus). However due to failure of plantation (except Eucllyptus and Prosopis) many compartments have been overtaken by the mesquite growth which creates hindrance in regeneration of natural vegetation for wild animals and also obstructs free movement of Wildlife.

The undergrowth consists of Zizyphus nummulaira (Mallah), Adhatoda vesica (Basuti), Calotropis procera (Aak), Capparis sepiaria (Heens) Capparis decidua (Karir), Carissa spinarum (Karonda) and Cassia tora (Panwar).

A number of grasses and herbs are also found of which Saccharum spontaneum (Kahi), Saccharum munja (Kanna), Vetiveria zizinioides (Panni) are important. The tall grasses are Cenchrus ciliaris (Arjan), Heteropogon contortis (Sarala), Typha elephantina (Dab), Pharagmites karka (Nara), Arundinaria falcata (Nara), Eulalipsis binata (Bhabbar) etc. in blanks as well

as over the entire area. *Malva parviflora*, *Galium aparine*, *Veronica agrestis* are the common winter annuals.

The detailed list of flora and vegetation composition of Bir Moti bagh WLS has been given in Annexure 2.4 & Annexure 2.5.

### **2.6.1.3 Species and communities of conservation importance; key areas.**

Bir Moti Bagh WLS is an important repository of the diverse floristic elements. Even though it is not as rich in terms of endemic plants or animals, it does harbor many of the important elements of tropical dry deciduous forest.

## **2.6.2 Animals**

### **2.6.2.1 Vertebrates**

The sanctuary is an abode of many herbivorous species but deficient in carnivorous species. A variety of bird species are found in the sanctuary of which peacock, blue-rock pigeon, common dove, lapwing, hoopoe, babblers (seven sisters), common myna, pied mynah, partridges and robins are common. Along water drains pintails, waterfowls, cormorants, egrets, herons, crow pheasants and green bee-eaters are also seen. Among the animals rhesus monkeys, blue bull, wild boar and jackal are found in abundance. The population of rhesus monkeys and blue bull is constantly on the increase. The small Indian mongoose is also seen. Garden lizard, cobra, krait, viper and rat snakes are also found in the sanctuary. A check list of wild animals is given as Annexure 2.6 (A). An population estimate of wildlife animals was done for Bir Motibagh in the month of March 2019 and the details are appended as Annexure 2.6 (B), Annexure 2.6 (C)

Systematic list of reptilian species has not been prepared but reports of occurrence of many reptilian species/sub species in Bir Moti Bagh WLS are available. This includes Cobra, Krait, Viper, Monitor lizard, turtles etc. The class amphibian is represented by order Anura which includes the frogs and toads. There are good chances of fish variety in water course, but there is no inventory regarding amphibian and fish species found in Bir Moti bagh WLS.

## **D) Amphibians and Fishes:**

### **2.6.2.2 Invertebrates, their status, distribution and habitat**

With greater emphasis on mammals, invertebrates have been mostly ignored. The knowledge of the occurrence and status of the invertebrates in this WLS is important from management point of view. Insects being primary feeders are important part of the ecosystem. Larvae and ants feed extensively on decaying remnants. Honey bees, butterflies, wasps, termite, bugs, beetles and ants etc are different types of insects found in Bir Moti Bagh WLS. Honey bee can be an important economical insect of the area. Other invertebrates form the important food of birds and few animals.

Systematic documentation/inventory of fishes, amphibians, birds, reptiles and invertebrates will be done in future by involving researches of reputed institute like Punjabi University Patiala, Zoological survey of India, Wildlife Institute of India etc.

## CHAPTER 3

### HISTORY OF MANAGEMENT AND PRESENT PRACTICES

#### 3.1 General History

Prior to integration of Princely States, the areas formed forests of erstwhile Patiala and States and were maintained mainly as Game preserves or grazing grounds for State cavalries, elephants and cattle. In Bir Moti Bagh Maharaja of Patiala introduced various types of Animals and Birds such as Chital, Sambar, German- Boar, Jungle fowl etc. at a heavy cost. A cross breed of German Boar is still found besides Hog Deer, Sambar, Cheetal, Gray and Black Partridges are also found in sufficient numbers. There was no regular system of management nor any programme of felling and planting was followed. The forest produce was removed by State from time to time for which no record was maintained. Grazing of cattle of the local villagers was permitted on the fixed fees or contract basis as a concession.

The area was handed over to the Forest Department during 1958, when a regular programme of raising plantations was initiated. Irrigated plantations were attempted at few places. In the past two decades extensive area of the Bir was brought under plantations and various species of exotics (Eucalyptus hybrid and mesquite) were introduced after removal of indigenous old growth. In some areas, irrigated plantations were attempted, whereas in others silvicultural research plots were established. Attempts were also been made to reclaim the saline and alkaline patches by application of farm yard manure and gypsum, cultivation of medicinal plants, salt resistant species etc. At present, the crop, therefore, consists of mainly planted Eucalyptus, kikar, *Prosopis* (mesquite), mulberry and a host of other miscellaneous species. Most of the Bir area is now dominated by mesquite which provide little food but more harm to Wildlife. Canopy closure due to *Prosopis juliflora* obstructs the sunlight to the ground, the allelopathic effect

of the *Prosopis juliflora* does not allow seedling growth/germination process of other species (vegetation), thus affecting the wildlife habitat.

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

#### **3.2.1 Silvicultural Systems and tending operations**

Working plans, under which Moti bagh forests were systematically managed in past are as follows-

The area was managed under the prescriptions of Sh. Bhagat Singh's Working Plan (1955-56 to 1980-81) and Sh. S.K. Kapur's Working Plan (1981-82 to 1990-91). The objectives of management of these working plans were mainly to increase the growing stock of the forests and prescriptions for wildlife conservation were not dealt with.

Sh. R.K. Luna's Working plan (1991-92 to 2000-01) for the first time introduced the working plan for wildlife protection circle in which Bir Moti Bagh was included in this working circle. The main objects of management were to increase the wildlife population of the sanctuary according to carrying capacity, to identify, preserve and protect the wildlife species representative of the area and finally to improve the ecology of the area.

However, during the period of working plan, the sanctuary remained under the control of forest department and execution of forestry operations continued. New plantations were also raised under various schemes.

#### **3.2.2 Firewood Harvest and Collection**

As per provisions of the Wildlife (Protection) Act 1972, the Bir Moti bagh WLS is free from all commercial extractions including firewood collection. However sometimes villagers from adjoining areas of Bir Moti bagh WLS do enter the forest to collect firewood illegally. The problem is not severe as the area is compact and vigilance of staff keeps it under check.

### **3.3 Non Wood Forest Produce (NWFP) Collection**

Commercially important minor forest products are negligible in Bir Moti bagh WLS due to dominance of such species that are not yielding such products. No statistics are available for quantity and expected value of the resources available.



### **3.4 Leases.**

At present, the Bir Moti bagh WLS area is not burdened with any type of leases. The canteen run for the deer park is given on annual contract only for the establishment and running the shop and land is not leased.

### **3.5 Other Programmes and activities**

The Mazaar of Baba Pir compartment Number 12 is a place of frequent religious congregation. The movement of people in large numbers may adversely affect the wildlife and their habitat. A safe passage to the public fenced on both sides needs to be developed.

### **3.6 Forest Protection**

#### **3.6.1 Legal Status**

##### **A) Notifications**

Bir Moti bagh was maintained as a shikargarh by Patiala State. Bir Moti Bagh was forest declared as wildlife sanctuary vide Notification No. I dated 19-1-96/1-5-39 under the Preservation of faunae of Patiala Act, 1996 BK (Annexure 3.1). Bir Moti Bagh was declared as a sanctuary vide Patiala & East Punjab State Union Government (PEPSU) Notification No. F-150/50 dated 28-02-1952 (Annexure 3.2) under the preservation of Fauna of Patiala Act, 1996. It was declared as protected forest (second class forest) by Punjab Govt. Notification No. 2026/Ft (IV)-61/3654-3659 dated 05-07-1961 (Annexure 3.3). Later this Act was repealed after the enforcement of the Punjab Wildlife Preservation Act, 1959. The Wildlife (Protection) Act, 1972 was enforced in Punjab state with effect from 1-4-1975 and this bir forest was deemed to have been notified under this Act as sanctuary.

##### **B) Resource Use and Entry regulations**

No settlement of the rights of local people and concessions has been mentioned in the 1952 notification. Technically no private or community rights are in existence in or over forest area of WLS.

For entry regulation there is only one check post at the entrance gate. There should be a provision of separate entry to deer park and the sanctuary. Entry up to the deer park is open for public. Any person desirous of entering in to the sanctuary area shall take the permission from Chief Wildlife Warden (CWLW) or authorized officer. The entry tickets and new entry gate will be proposed for entry into the sanctuary for the tourist.

### **3.6.2 Hunting**

Hunting is totally banned under provision of Wildlife (Protection) Act, 1972. No rights or privileges exist in the area for hunting of wild animals and birds. No arms licenses are issued to anyone within a distance of 10 km from the WLS without the approval of the Chief Wildlife Warden, Punjab. The list of villages for the grant of NOC (no objection certificate) for arms licenses within 10 km of the sanctuary area is given as Annexure 3.3.

### **3.6.3. Illegal activities**

#### **3.6.3.1. Poaching**

Poaching is generally not common. The details of offence cases, both wildlife and other are listed as Annexure 3.4. The cases reflect the good preparedness level of field staff to meet such challenges. It also reflects on the alertness of the staff to control the number of offences.

#### **3.6.3.2. Illegal cutting of trees**

The villagers around the Bir Moti Bagh WLS sometimes illegally collect timber and firewood from wind fallen branches and dead trees in the surrounding forest areas and whenever they get a chance they do resort to illicit felling.

#### **3.6.3.3 Illegal removal of NTFP, encroachment and other illegal activities**

There is no commercial harvesting by the department or through contractors. Illegal removal of NTFP is negligible.

The encroachment on forest land is not reported. However presence of a pilgrimage site in compartment 12 threatens the chances of any encroachment in future which needs to be prevented at initial stage. In addition chances of any encroachment are always there at boundary that needs to be tackled.

### **3.6.4 Livestock Grazing**

Illegal grazing from stray cattle remains potential factor contributing towards degradation of forest and reduced forage for wildlife and controlling this is the biggest challenge for the staff. Although the problem is not severe the unequipped staff and poor infrastructure support dilute the efforts of controlling it.

### **3.6.5 Wild fires**

The area being largely dry deciduous is prone to fire, due to the highly combustible undergrowth consisting of a dense mass of dry grass and twigs of *Prosopis*, which dry up during summers.

### **3.6.6 Insect attacks and pathological problems**

No major insects are found to damage the crop here. Termites are found in large scale and at some places trees stumps are covered with termite's mounds.

### **3.6.7 Wildlife Health**

There is no record of wildlife diseases and epidemics in the area. But wild animals need protection against contagious diseases like rinderpest, foot and mouth disease, hemorrhagic septicemia etc which might get transmitted through domestic and stray animals.

Bir Moti Bagh WLS does not have any facility for capture, isolation and treatment of injured or diseased animals at present. Such facility is essential and can be created at deer park/sanctuary for entire wildlife division.

### **3.6.8 Interagency programmes and problems**

There are several developmental activities such as tourism, public works and rural development in and around Bir Moti Bagh WLS, which are being implemented by different departments. Some of these programmes can be utilized for conservation education and awareness. On the other hand other departments should also ensure that developmental activities undertaken by them are not harmful to the sanctuary.

### **3.7 Tourism**

The sanctuary because of its situation near Patiala town has great potential for local tourists and can provide a forum for environmental education to the schools and students of the University/colleges, besides providing a source of recreation. Quite a good number of visitors come to Deer Park daily and this number increases on weekends and holidays. The Interpretation Centre caters to the educational needs of the visitors about wildlife. The deer park exhibits the representative species of the sanctuary as well as region. Within the Bir Moti Bagh WLS, the ecology, forest and wildlife altogether gives a unique identity to the area and there is potential for developing it for the wildlife tourists, naturalists, trekkers and visitors.

### **3.8 Research, Monitoring and training**

Bir Moti bagh WLS forest has completed more than 50 years under scientific management. Such a forest area can become a valuable site for carrying out various ecological, behavioral and anthropological studies.

#### **A) Research and monitoring**

For effective management, it is necessary to have a basic knowledge about the occurrence of various floral and faunal species, distribution over the area and their population dynamics.

Systematic documentation/inventory of fishes, amphibians, birds, reptiles, invertebrates and vegetation will be done in future by involving researches of reputed institute like Punjabi University Patiala, Punjab University Chandigarh, Zoological survey of India, Botanical survey of India and Wildlife Institute of India etc.

#### **B) Training**

The frontline staff is not trained in wildlife management. Special training in population estimation, animal health and habitat study eco-development and eco tourism are very much required to increase the knowledge and skill of the staff.

### **3.9 Wildlife Conservation Strategies and their evaluation**

Review of Past and Present Wildlife Management Practices-

The first working plan for the Patiala Forest Division was written by Sri Bhagat Singh (1955 to 1980) in which Bir Moti bagh WLS was included as a part of it. However in later working plans wildlife conservation was dealt as a separate chapter.

In Sri R.K. Luna's working plan (1991-92 to 2000-01) following measures were suggested to restore the ecological status of the area.

1. Demarcation and fencing of area.
2. Provision of Water holes.
3. To control illicit grazing.
4. Planting of fodder stock and pasture lands.
5. Elimination of Eucalyptus crop.
6. Preservation of snags and dens.
7. Fire protection measures.
8. Control of poaching.
9. Census of wild animals and co-ordination between forest and wildlife staff.

The wildlife department undertook development work under centrally sponsored schemes (CSS) with effect from 1990-91. Details of development works done under CSS are given at Annexure 3.5.

### **3.10 Administrative Setup:**

As per the reorganization of Wildlife Department done by the Punjab Govt. Vide Notification No. 34/9/2000/FT-IV/2656 dated 19-02-2001, the administrative control of sanctuary falls under the jurisdiction of Divisional Forest Officer (Wildlife), Patiala which comes under Parks & Protected Areas Circle Punjab Chandigarh headed by a Conservator of Forest (Wildlife). At field level, the sanctuary is looked after by One Range Officer, Veterinary Pharmacist, Forest Guards and 5 Multipurpose Worker. The present position of staff under DFO (WL) Patiala is given in Annexure 3.6.

### **3.11 Communication**

#### **A) Road Communication**

There is a good network of roads in the vicinity of the sanctuary. About 12 km long peripheral path and about 24 km long fire lines have been



developed in the sanctuary. These paths and fire lines are maintained by the department to prevent fire and to access area. The detailed description of these fire lines along with the location is given in the Annexure 3.7 and Map 3.

### **B) Wireless communication**

For quick message transfer, mobile phone/tele communications are one of the most important tools in any PA but unfortunately Bir Moti bagh WLS is not having effective network of tele and wireless system. The mobile phones and other communication networks need to be strengthened in the interest of wildlife.

### **C) Vehicles/Mobility**

There is one Petrol Gypsy with the Wildlife Division Office, and one tractor. For effective management of any PA, it needs to be equipped with a variety of vehicles ranging from multiutility vehicles to specific purpose vehicles. There is dire need of a pickup van and one tractor- trolley and tanker for this WLS.

## **3.12 Summary of threats to wildlife**

Due to proximity to the urban habitat, natural calamities and other external and internal factors, the sanctuary faces many problems for management of wildlife which are discussed below: -

- (a) **Proximity to Town:** - The sanctuary is situated at the outskirts of Patiala town amidst agricultural land and thickly populated villages like Ravaas, Ramgarh, Kherha and Suller. This has drawback as pressure from poachers, wood cutters and grass cutter besides the atmospheric pollution of the city comes to WLS. The sewage system of the city is also drained in the Patiala Naddi passing through the sanctuary which reduces the water quality and becomes a source of water and soil pollution.
- (b) **Overpopulation of monkeys:** - The number of rhesus monkeys has increased in the past which cause damage to the wildlife habitat as well as nearby agricultural crops. This results in the wrath of the farmers who show lack of interest towards wildlife conservation.

- (c) **Stray Cattle:** - Stray cattle within the sanctuary area graze area and thus share the space and forage meant for the wild animals. This reduces the habitat quality and increases the chance of disease transfer. People also come and feed the cattle across the chainlink near the Patiala-Dakala road passing at the periphery of the sanctuary. The wild animals also share this fodder.
- (d) **Ground cover:** - Between the top canopy and the ground cover woody growth of *Prosopis* (Mesquite) has come up in large proportion overtaking the ground cover. The forage cover within sanctuary has therefore substantially dwindled. Its growth also hinders the free movement of wild animals in some parts of the sanctuary.
- (e) **Soil texture and Seepage:** - The sources of drinking water for the wild animals are mainly either the canal water or the tube wells. But during the dry season, soil gets compact with wide cracks and as a result the water seeps down. Therefore, the animals face water scarcity during the hot season when it is needed the most. More tube wells, waterholes and deepening of water channel are needed to meet the water requirements.
- (f) **Scarcity of Fruit and Fodder Trees:** - In the natural vegetation, there is very scanty representation of fruit trees, which can provide food to the avifauna, monkeys and other herbivores. To enhance the forage value of area, plantations of fodder and fruit trees need to be raised.
- (g) **Forest fires:** - Forest fires are a great threat to the vegetation and wild animals. The dakala link road passing along the boundary of the sanctuary is quite busy. Due precautions are to be kept on the road side, on the pedestrians to prevent fire particularly in the hot season. In the harvesting season when farmers burn the crop residues, the fire can spread from the fields to the sanctuary area and cause irreparable loss.
- (h) **Plantation of Eucalyptus Trees & Prosopis:** - The native vegetation of the sanctuary in the past has been replaced with fast growing species particularly *Prosopis*. There is a need for gradual removal and replacement of *Eucalyptus* and *Prosopis* by natural vegetation and indigenous species.

## CHAPTER 4

### THE PROTECTED AREA AND THE INTERFACE LANDUSE SITUATION

#### **4.1 Existing situation in the Zone of Influence**

Bir Moti Bagh Wildlife Sanctuary is located on one side of the Patiala city and is surrounded by agricultural lands on the other three sides. From the study it has been found that 15 villages situated along with or near the periphery of the sanctuary are mainly subject to interferences (Annexure 4.1). Due to completion of fencing of Bir Moti Bagh grazing by domestic livestock, fuel wood collection, illicit felling, poaching, encroachment etc have been stopped. However monkeys and wildboar do raid the crops of adjoining villages. The monkey-human conflict is also very common due to presence of large number of monkeys at the periphery of the sanctuary.

##### **4.1.1 The location, extent, boundaries and natural attributes of Zone of Influence**

The areas from where influences are likely to be exerted extend at least 3 km outside the PA. Thus Bir Moti Bagh WLS having its zone of influence as follows-

On southern border of Bir Moti Bagh WLS, zone of influence 'A' is proposed for area of villages Suller, Kheri gujaran, Ravas brahmana and Jalal khera. Patiala city also touches one corner of WLS.

On western side all along the boundary, the sanctuary comes directly in contact with revenue land of villages Raimajra, and Gholori that is proposed as Zone of Influence 'B'.

Village Dalanpur, Dharamkot, Saniarheri and Kulleh majra touch the boundary of sanctuary from north side, so these villages need to be taken as Zone of Influence 'C'.

Eastern border is smallest in stretch and having villages Safera, Jhandi, Ramgarh, Kallar bhaini and Khera jattan. This will form Zone of Influence 'D'. Zone of influence around Bir Moti bagh is shown in Map 3.

#### **4.1.2. Villages Inside and Outside the PA. Ethnic Identities, traditions, customs, relationship between distinct groups of people, relationship with forests**

People of adjoining villages are predominantly farmers of Jat Sikh community comprising majority of the total population. Other communities are Scheduled castes, traders and backward classes.

Main occupations are agriculture, trade and related commerce. Since inception of irrigation facilities in the area, the people worked extensively, earning their livelihood from agriculture almost round the year, this has resulted in commercial agriculture. Main festivals are Baisakhi, Lohri, Diwali. Group dance, local fair, community kitchen and social get together are marked activities during festival season. As such, Moti Bagh WLS has no direct bearing on the livelihood requirements of local people but indirectly activities such as grazing and firewood collection affect it. Before the fencing of the sanctuary the people around the sanctuary used to collect the fire wood and fodder from the sanctuary.

#### **4.1.3. The state of the people's economy. Vocations, land use, use of forest and non-forest based natural resources by people and seasonal patterns**

Total population of these 15 villages is about 35000 having 3000 families; out of which 48% are below poverty line. The land holding pattern of households in adjoining villages in Bir Moti Bagh Sanctuary is shown the (Annexure 4.2).

On one hand, people residing around the PA influence the various characteristics of wildlife. On the other hand, by establishing PA; access of local people is curtailed to the natural resources. This not only affects the attitudes of the local people towards the PA but also results in adverse social impacts on the residents. Therefore, it is necessary to take into consideration the social and economic structure of these villages for tackling the negative impact of people to PA and vice a versa.

#### **4.1.4. Implications of the land use and resource dependency for the conservation of PA**

Neighboring villages and their residents have serious adverse impact on their surrounds. As villagers leave their non-productive cattle in the forests and in the cities they compete for food with wild herbivores, which are thus put to disadvantages. This biotic pressure disturbs the forest ecology. Presence of villages on the immediate border of a Sanctuary leads to hardships to the villagers too, as agriculture crops are prone to damage by wild animals within the sanctuary like wild boar, monkeys etc.

##### **A) Agriculture and land use pattern**

This region is known as the agrarian society and the farming is done using latest technology and inputs. 54% of the total families are landless, 10% families have land up to 1 Acre and 20% families have land varying from 1 Acre to 5 Acre. (Annexure 4.2) Agriculture is totally irrigated and drains, water canals, tube wells and diesel pumps etc., are used for it. Fertilizers and pesticides are used in most of the cases as people could afford them and also have access to irrigational facilities. These chemicals used by farmers around the sanctuary do cause negative effect on wildlife populations by affecting the subsoil water by polluting them. The birds and bees within and around the sanctuary also get affected due to use of pesticides by the farmers.

##### **B) Resource Dependency**

All the communities residing around Bir Moti Bagh WLS do not directly depend on the forest resources. 95% of the total families use LPG, agricultural waste & cow dung as fuel. Rest of the families which is about 5% of total families was dependent partially on fuel wood. However their direct dependence on the sanctuary is in the form of head loading, grass cutting, encroachment, leaving their stray cattle within sanctuary etc had been reduced drastically due to fencing of the sanctuary.

#### **4.1.5. Forest/Protected Area Management practices and their implication for people**

Restriction on resource extraction from sanctuary has caused resentment and indifferent attitude towards the WLS. Problem posed by overpopulated monkeys and crops destruction by wild boar and blue bull are sensitive issues in the surrounding of the Bir Moti Bagh WLS. In majority of the villages within impact zone, agriculture fields get affected. These problems have been affecting local communities and this PA requires strategies for better management and long term conservation of Bir Moti Bagh WLS while not drawing any negative or hostile action from local populace. Eco-development activities as proposed to be taken up in these villages to minimize the pressure on the sanctuary and reduce man-animal conflict. As mentioned in Chapter No. 8.

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

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

The Zila Parishad in this area takes up different development programmes. Different schemes such as reported by NREGA, Punjab Nirman Programme, Integrated Rural Development Programme, Agriculture sub-plan etc are taken up. Education facilities in form of primary and secondary schools are existing in Zone of Influence area. There are primary health centers for looking after the health of the people. Community building, organization of villagers, awareness in health and education etc. are the area where work is needed to be done by NGOs.

Some of the important tourism attractions of this area are Moti bagh, Deer park, Sheesh Mahal, Kila Mubarak, National Sports Institute, Kali Devi temple etc.

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

The rapidly developing market forces are extending their influence on the local economy of villagers around the Bir Moti Bagh WLS. This influence



results in change of economy of people and ecology of surrounding forests. The local products and hence local communities are trying to compete with market forces and as a result ecological concerns might get neglected.

There is constant demand of timber wood and fuel wood in the surrounding areas. This negative market factors disturbs the economy of people and ecology of Bir Moti Bagh WLS.

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

There are 51 villages within 10 km of the Bir Moti bagh WLS. The problems which are being faced by these people are listed below:

**1. Human Animal (Monkey) Conflict:** The agriculture practices of communities residing at the periphery of the Bir Moti Bagh WLS forms the basis of human animal conflict. Monkeys sometimes stray out from sanctuary to these crop fields for readily available food. This brings local population in conflict with wildlife. If the crops are raided frequently then people get agitated and try to take revenge. All these aspects indicate that livelihood of adjoining areas needs to be taken into consideration while devising a management plan for WLS as it has direct bearing on fauna-flora of this protected area.

**2. Stoppage of grazing:** Stray animals within the Sanctuary damage the wildlife habitat. The stray cattle need to be kept out of sanctuary in order to ensure better habitat for wildlife population.

**3. Denial of Forest resource:** Due to declaration of PA the extraction of forest produce have been stopped from the Bir Moti Bagh WLS. Due to chainlink fencing illegal removal of firewood has been stopped which was one of the causes of conflict with local population earlier.

**4. Lack of awareness:** Most of the villagers in Zone of Influence are still not fully educated and lack awareness about biodiversity and wildlife. There is no background for environmental education in villages which can generate awareness among their minds.

## CHAPTER 5

### VISION, OBJECTIVES AND PROBLEMS

#### 5.1 The Vision

Bir Moti Bagh had been one of the important block forests of Patiala Forest Division mainly because of its proximity of historical town and also because it remained an important shikargarh (Hunting ground) of Maharaja of Patiala. Due to extensive exploitations of natural vegetation existing in Bir forest in the past few decades and bringing the area under new plantation cover, the ecology of Bir Moti Bagh has changed tremendously. After the reorganization of the State of Punjab, the state was left with diminutive biodiversity. The Bir forests of erstwhile princely states attracted the main attention of forester and environmentalist alike therefore there was a strong thinking that the block forest may be preserved in situ to conserve the little left wildlife fauna and remains of forests in Punjab. Under these circumstances the Bir Moti Bagh started to catch the imagination of the foresters and administrators. In the years to follow, many measures have been taken to bring back the glory and ecology of the past. As a result of these measures, the sanctuary has become an important tourist spot for the urban as well as rural people. In the future the sanctuary is set forth to attract more and more tourists to see the wildlife in nature itself.

The management of Bir Motibagh WLS should be planned in such a way so as to ensure the conservation of representative biodiversity in perpetuity with emphasis on faunal conservation, maintenance of its biological and ecological features, promotion of scientific research and generating the sense of belongingness among the people for the entire conservation efforts.

Therefore the vision for Bir Moti bagh WLS is

*“Bir Moti bagh will be the ideal repository of representative biodiversity and wildlife of the Punjab plains generating empathy and awareness in the mind of stake holders towards local fauna and flora and a desire to protect them.”*

## 5.2 Objectives of management

And

## 5.3 Problems in achieving objectives

**Objective 1:** To secure the conservation of biodiversity and to enhance the status of wildlife by habitat amelioration works in a natural representative habitat of Bir Moti Bagh WLS.

**Problems:** The problems in achieving above target include poaching, habitat deterioration, invasion by *Prosopis juliflora*, congress grass, poor protection and law enforcement, anthropogenic pressures, poor herbivore population, poor research and monitoring activities, protection related problems due to the unskilled and unequipped field staff, lack of awareness.

**Objective 2:** To maintain and strengthen the protection measures against external disturbances like illegal grazing, trespassing, collection of fuel wood, fire, disease etc.

**Problems:** Habitat deterioration, anthropogenic pressures, grazing by stay cattle within sanctuary, monkey menace, vehicular traffic, disease threats.

**Objective 3:** To remove the alien and invasive species from the WLS and restore the natural habitat including grasslands suitable for wildlife and to safeguard the hydrological and edaphic factors of the Bir Moti bagh WLS through soil and moisture restoration

**Problems:** Fire, encroachment, poor soil quality, poor regeneration, poor cover, microhabitat disturbance, weed infestation in the form of prolific regeneration of *Prosopis*, lack of natural water resource, human pressure, lack of information regarding original floristic, , funds availability, insufficient research inputs, grazing, fire.

**Objective 4:** To promote conservation-education and environmental awareness of the local communities with help of meaningful interpretation and development activities.

**Problems:** Traditions and customs (feeding monkeys and cows etc), shortage of trained staff, absence of institutionalized schemes & programme, inadequate infrastructure, weak inter-department co-ordination, lack of extension activities, inadequate motivation among the local people, inadequate publicity efforts.

**Objective 5:** To strengthen the activities of training, research and monitoring for effective management of wildlife in the sanctuary.

**Problems:** Inadequate infrastructure facilities, shortage of funds, no scientific research input, untrained staff, unsystematic monitoring protocol, lack of institutional coordination.

**Objective 6:** To help the people living around the sanctuary by providing them with alternative means of livelihood, which will also reduce their dependence on the PA.

**Problems:** Extensive agriculture, agriculture pattern in surrounding areas using pesticide etc, market demand, increased population pressure, lack of awareness, feeling of freely accessible resource, lack of socio-economic studies.

**Objective 7:** To promote Eco-tourism with an aim to bring people close to nature.

**Problems:** Paucity of funds, trained manpower, development of the area, lack of awareness etc.

## CHAPTER 6

### The Strategies

#### 6.1 Boundaries

The detail of physical boundaries has been discussed in section 2.1 of part I of the plan. The outer boundary is shared with the revenue areas of neighboring villages on three sides and on one side of the WLS Dhakala road passes. Some of the problems with boundary of Bir Moti Bagh wildlife sanctuary are

1. The periphery of the sanctuary is fenced by chain link. This fencing needs to be repaired and maintained regularly as per requirement.
2. The area adjacent to crop fields remains vulnerable to damage and biotic interference specially by monkeys and wild boars.
3. The **ecological boundaries** of Bir Moti Bagh Wildlife Sanctuary go beyond its physical boundaries. The herbivores especially monkeys venture out into the adjoining agricultural fields.

#### 6.2 Zonation

The Bir Moti bagh wildlife sanctuary consists of 24 compartments. At present, there is no zonation, but compartment No. 10 is being treated as tourism area in which deer park and wildlife interpretation centre are situated. The visitors are allowed up to compartment No. 10 only. The objectives which have been envisaged in section 5.2 can be achieved in better way if the entire area is divided into different zones. The main emphasis will be given to habitat preservation with efforts to restore the ecology and original vegetation. Zonation for the entire sanctuary including the trans-boundary areas is as follows:

Sr. No	Name of Zone	Details
1	<b>Biodiversity Conservation Zone</b>	Entire area of sanctuary except eco-tourism zone
2	<b>Ecotourism zone</b>	Compartment no. 9 and parts of Compartment 9,10,17,19,21,23,12,11 and 7
3	<b>Eco-development zone**</b>	Village areas of zone of influence. (Around 15 villages come under the zone of influence )

\*\* For Eco-development zone, area of only 15 villages within the zone of influence, have been considered, however deviations will be made if new villages are included in this zone as per management requirement. The village area is not added in this zone i.e. the area of sanctuary does not include area of eco-development zone.

### **6.3 Zone Plans**

#### **6.3.1 Biodiversity Conservation Zone**

##### **6.3.1.1 Constitution**

Bir Moti Bagh area was declared as sanctuary not only to protect wild animals but also to conserve the biodiversity of the tropical deciduous forests of Punjab plains. Hence, for continuation of measures taken since its inception, the entire sanctuary (except tourism zone) will be treated under the Biodiversity Conservation Zone during this management plan period. The primary objective of constituting this zone is to safeguard the area against all forms of biotic interference. Only essential habitat management works for the conservation of biodiversity and for the allowance of the natural process of ecological succession shall be undertaken to tackle highly degraded habitat sites and weed infested areas.

### **6.3.1.2 Objectives**

1. To conserve the representative biodiversity and to safeguard the natural ecological succession in the area by ameliorating the degraded weed infested habitat and water resources to make it habitable for wildlife.
2. To minimize the external disturbances by accelerating process of elimination of causative factors if any.
3. To undertake research and monitoring work to understand the ecological process.

### **6.3.1.3 Problems**

The major problem in management is poor habitat quality. Dominance of eucalyptus and prosopis in the sanctuary has lead to imbalance in habitat composition and depletion of grasses. Large population of stray cattle within the sanctuary destroys the wildlife habitat. The high population of rhesus monkey is also creating nuisance in the area. In addition, funds, manpower, water supply in summers are other constraints.

### **6.3.1.4 Past management approach**

Plantation of fodder, fruits, medicinal plants, eucalyptus, prosopis (mesquite) and other misc species had been undertaken in past through out the area of the sanctuary. Road cum fire line to the tune of 24 km. have been constructed dividing the sanctuary into 24 compartments. To control the forest fires three watch towers had been constructed. To meet the need of drinking water of wild animals a number of water holes have been laid out which are fed with tube-well whenever needed. One check post has also been brought out. To improve the communication network, the wireless system had been installed in the sanctuary which is nonfunctional at present and should be replaced by mobile phones.

### **6.3.1.5 Management strategy**

#### **A) General Strategies**

The Biodiversity Conservation Zone will be managed in following manner:

- i) No tourists or any other person except the authorized wildlife staff and their vehicles will be allowed inside this zone of sanctuary. Visits of

researchers and public (in areas other than tourism zone) will be possible only after the permission from the CWLW or his authorized officer.

- ii) No person will be allowed to halt within the sanctuary during night time except the authorized staff and officers and the census staff during wildlife census. All labour oriented work (except watch & ward) will be done only during day time.
- iii) No activity should be undertaken in this area except the approved maintenance works, habitat restoration and improvement works, forest and fire protection works and research and monitoring. The details of these works are given in various theme plans and under chapter no 9.
- iv) Proper protection of the boundary fencing should be ensured through a chain link fence which will be repaired and maintained as per the requirement, along the entire boundary.
- v) The other regular habitat management activities like weed control, habitat amelioration, fire protection, moisture conservation, water hole, fodder development etc will be carried out as per the requirement of site and as prescribed in the theme plans.

#### **6.3.1.6 Monitoring/Evaluation**

- i) Protection measures and enforcement will be monitored by regular vigil, inspection and surprise checks by authorities at all level.
- ii) Monitoring of the vegetation and related habitat change can be done using the permanent plots that will be laid within the area.
- iii) For the treated areas, vegetation and soil characteristics changes will be monitored as discussed in chapter 9, so that comparison can be made in later years.
- iv) The increased wildlife use will itself be the indicator of success.

#### **6.3.3 Ecotourism zone**

The details of management of this zone are described in chapter 7.



### **6.3.4 Eco-development zone**

The details of management this zone are described in chapter 8.

## **6.4 Theme Plans**

Several strategies on virtue of their nature are azonal or common to several or all zones e.g. anti-poaching, fire protection, maintenance of water sources, control of weeds etc. Separate sub-plans are developed for components called Theme Plans. Five theme plans visualized for this sanctuary are as follows-

6.4.1 General protection plan

6.4.2 Habitat restoration plan

6.4.3 Species reintroduction plan

6.4.4 Wildlife health management plan

6.4.5 Inter-agency co-management plan

### **6.4.1. General protection plan**

#### **6.4.1.1 Introduction**

General protection plan deals with the protection of Bir Moti bagh Sanctuary from all the threats including natural calamity. It is very necessary to protect it from external disturbances like encroachment, illicit felling, poaching, illegal grazing, trespassing, flood, fire etc.

#### **6.4.1.2 Objective**

1. To safeguard the wildlife and their habitat against ill effects of illegal anthropogenic activities
2. To protect the microclimate and the natural ecological processes and functions of the area.

#### **6.4.1.3 Limiting factors**

The limiting factors are presence of stray animals, trespassing, location amidst habitation, over population of monkeys, poor surveillance, shortage of

funds and manpower etc. The area of the sanctuary is not very large but limited number of staff, mobility, communication and various other factors make management a challenge.

#### **6.4.1.4 Strategy**

##### **A) General protection**

General protection is very important for the conservation of biodiversity of Moti Bagh WLS. It will be achieved through the following measures-

- i) For the better coordination of protection activities, there is need of a permanent post of a Deputy DFO/ Wildlife Warden who will also be heading the vigilance squad. (Details are given in chapter 10.1.1)
- ii) A continuous monitoring protocol including the patrolling schedule, surprise visits, surveillance at vulnerable areas etc should be developed for the field staff including DFO. This includes details of distance & area covered by patrolling staff, animal evidences seen, record of illegal activity, offences etc. Entries will be maintained in patrolling register.
- iii) The fire lines will be kept clean of debris and unwanted growth to prevent fire and will also be used as inspection path. Wireless communication will be revived and strengthened.
- iv) Keeping track of habitual offenders, wildlife trade etc. through developing rapport with the villagers and through informers, and liaison with police department.
- v) Creation of registered secret special service fund on the line of police department. This can be done by pursuing the matter at the higher level and to secure fund for this purpose.
- vi) A separate registered wildlife development society can be made for the controlled development works for the WLS.
- vii) Watch towers shall be erected at appropriate locations.

## **B) Boundary consolidation**

It is important to maintain the integrity of boundary. The periphery of the Bir Moti Bagh WLS is protected by 11.50 K.M long chain link fencing. So encroachment in the forest area is not a common feature in Moti Bagh but people might tend to expand their agricultural fields if boundary fencing is not properly maintained. This problem can be dealt with.

- i) Staff should remain vigilant and no trespass/encroachment will be allowed. Offenders should be prosecuted accordingly.
- ii) It is essential to erect toe wall chain link fencing with angle iron along the both side of the path from the main gate to the Majar of Baba Pir to restrict the movement of people going there for religious congregation.
- iii) Awareness activities and trust building will be tried through eco development activities.

## **C) Fire Prevention**

For fire prevention following strategies will be implemented-

- i) Cutting and burning of fire lines of different width is prescribed. The width of the external fire line all along the boundary and between the compartments should be maintained as 10-15 meters. The internal fire lines within the compartments do not exist at many places. These should be developed as 5 to 7 mt. wide depending upon the density of vegetation.
- ii) Deployment of fire watchers and erection of watch towers at strategic locations and permanent watch towers as prescribed below-
  - a. During fire seasons 16 additional fire watchers will be deployed to patrol the entire area in addition to regular watch & ward.
- iii) 3 new permanent watch towers will be fixed at different locations preferably near water holes.

- iv) There is a need to develop good rapport with the villagers and convince them about ill effects of fire. Staff's initiative can be helpful in identifying persons and dissuading them from such activities.
- v) During fire season a vehicle will be kept ready round the clock at Division headquarter and the squad will attend the fire as early as possible.
- vi) The equipment like water bottles, fire fighting kits, torches, 2 water tankers equipped with pressure pump etc. required for fire watchers & fire fighters etc will be procured in advance. At least six such kits will be purchased for the WLS.
- vii) All fire incidents will be correctly reported with exact location and extent. Cause of fire should be identified and recorded. Fire reporting will be done by the beat in-charge and sent to the Wildlife Warden for division record. The report will contain:
  - Name of Bir, beat and compartment numbers
  - Extent of area burnt, losses shown on Map
  - Probable cause of fire
  - Time of occurrence and putting off of fire, date.
  - Fire line network in that area
  - Name of offender if known

#### **D) Flood protection**

- i) Raising and strengthening of the existing 'bundh' on Badi Nadi is essential to protect the sanctuary area from the floods due to overflowing of the river during the rainy season.
- ii) The area of compartment no. 1, 2, 7, 8 next to 'bundh' are vulnerable to flood so there is need for creating earthen mounds which can act as rescue shelter for wild animals in case of water inundation. In total there should be at least 10 such high level mounds.

#### **E) Miscellaneous management**

- i) Vehicles like pick up van and veterinary ambulance will be made available for the patrolling staff.

- ii) Mobile sets will be provided at all the important points to field staff.
- iii) Staff may be given arms training and arms & ammunition. Legal hitch in use of arms will be brought to the notice of higher authorities.
- iv) Steps will be taken to get the young and motivated staff. Staff motivation level can be enhanced by providing them certain incentives.
- v) The detailed record keeping of offences/problems will be maintained.
- vi) The important issues of protection will be discussed in the monthly meeting with DFO (Territorial) at district level and with CF (Parks & PA) at circle level.

#### **6.4.1.5 Monitoring and evaluation**

Monitoring and evaluation shall be done on a regular basis and interventions altered according to the needs of the prevailing circumstances.

### **6.4.2 Habitat restoration plan**

#### **6.4.2.1 Introduction**

Habitat management in wildlife areas primarily involves restoration of natural vegetation, develop undisturbed habitat, proper water regime, improvement of ecological balance etc with adoption of suitable practices for the long term conservation.

#### **6.4.2.2 Objectives**

1. To ensure habitable conditions to the flora and fauna so as to bring the area as close as possible to its natural functioning.
2. To protect, augment and manipulate the available natural resources for attaining the goal of conservation
3. To maintain and improve the ground water and water resources and the soil quality which will help in improving the ecology

#### **6.4.2.3 Limiting factors**

Important limiting factors include monoculture, anthropogenic pressure, invasive species, poor crop composition, grazing, water scarcity, shortage of money and manpower, poor baseline data for analysis, etc.

#### 6.4.2.4 Strategy

Since the area has been exposed to the greater level of human and cattle disturbances it is essential to undertake ameliorative works on priority to develop the habitat conducive for wildlife. The habitat management of Bir Moti bagh wildlife sanctuary will be a multi-pronged approach. It involves following activities

##### A) Control of invasive and alien species

Bir Moti bagh wildlife sanctuary has been infested with many invasive and alien species like *Prosopis juliflora*, *Capparis sepiaria*, and *Parthenieum* etc. At some places these have spread over large areas which need to be checked. This deteriorates habitat quality in terms of area reduction under other indigenous fodder species even though it provides cover and to some extent food to the animals and birds. Other than this, a large part of area is covered under *Eucalyptus* plantation in form of monoculture which has changed the original vegetation type. Following measures will be taken to control these undesirable species.

- (i) The uprooting of invasive species Mesquite, Eucalyptus, Congress Grass etc. will be done from all the areas of the sanctuary. The replacement of *Prosopis juliflora* (mesquite), Eucalyptus, Congress grass etc. with indigenous species in a phased manner at the rate 50 ha/year will be ensured after closing the area of plantation temporarily by chain link fencing for at least 5 years. Plots of area upto 10 Hac. will be taken for plantation in different parts of the sanctuary. Irrigation with permanent water supply will be done. Tall indigenous plants will be planted after digging the soil beyond existing kankar pan. Different success models of plantation may be tried.
- (ii) Treatment of soil before plantation with gypsum, farm yard manure will be done.

- (iii) Strict grazing control in the uprooted areas will be done to prevent damage to regeneration by putting enclosures of 10 acres each.
- (iv) Prosopis, capparidaceae etc. present near water sources will be retained.
- (v) Shisham with mixed trees areas show less spread of weed. Artificial regeneration will be done to create this composition.
- (vi) Bamboo plantation will be done in compartment with high moisture level as bamboo prevents weeds growth and also useful for fodder eating species and birds.

#### **B) Fodder/ Forage management**

Uncontrolled grazing by stay cattle inside the sanctuary and heavy infestation of prosopis not only reduces the quality and quantity of browse and fodder but also affects forest regeneration, causes soil degradation and creates openings for the weeds. Following measures are suggested for improving forage availability for wildlife.

- (i) Ensure strict enforcement to stop illegal grazing in the WLS.
- (ii) There are many degraded sites in the sanctuary, which do not support vegetation at present. Such sites should be developed for forage and fodder development for WL. It is important to arrest the spread of weed and convert some areas in to palatable grassy patches for the benefit of wild herbivores and ultimately the ecosystem. Meadows so developed would be prime areas for WL.
- (iii) It is recommended to develop several grassy meadows in the sanctuary and all blank patches after complete removal of all the exotic trees and shrub vegetation and closing this area by chain link fencing.

- (iv) To augment forage values of land, plantation of fruit bearing nutrition's species will be undertaken wherever possible and desirable. The main species will be Jamun, Gular, Mulberry, Bauhinia, Khjoor, Bel, Lasura, Ber, Barh, Peepal etc.
- (v) Treatment of soil before plantation with gypsum, farm yard manure etc. Construction of loose boulder structures, Stoned pitched forest ponds etc. will improve soil quality and water balance of the area.
- (vi) The choice of species will be as per requirement of wild life. Plantation sites, area, extent will be selected by DFO (WL). Maintenance and protection will also be ensured and covered in the plantation expenditure.
- (vii) Artificial salt licks will be provided at suitable locations to fulfill mineral requirement of the WL, artificial wallows will be made near water holes (Blue bulls etc. may require such wallows)

**C) Water resource management** - The sanctuary falls under the semi arid zone of western India. The plants and animals have evolved with the water as a limiting factor. However wildlife faces hardship in peak summers hence some manipulation is needed.

- i) Water will be maintained in all the water holes, drain and pools through out the year. Annual clearing and deepening works will be undertaken. Wherever needed the ground water recharge will be ensured by undertaking moisture conservation activities.
- ii) There is a continuous stretch of low lying topographical feature inside the sanctuary running through the compartment no. 15 , 19, 20 21 , 22 & 23 which should be suitably developed as permanent water body.
- iii) Water can be channelised to this water course from the irrigation channel passing along the sanctuary. This water structure will improve the microclimate of the sanctuary as well as attract migratory birds during the winter and will be major tourist attraction.



- iv) Suitable fish seed/fingerlings can be introduced in this water body to fulfill the need of piscivorous birds and animals. In addition small reptiles like turtles etc may be released with suitable improvement in the habitat.
- v) It is proposed to develop approximately 26000 Sq. Mt. of area as water bodies in the sanctuary. It is also recommended to install solar operated motors to replace diesel pumps and electric motors for water bodies.
- vi) The temporary water holes (in compartment 3, 12, 15 etc) will be converted into permanent structure by providing stone pitching wherever needed.
- vii) Check dams will be constructed in the water course which runs through the sanctuary. Location having narrow width and relatively stable base should be selected for constructing check dams.
- viii) 2 forest ponds of 300m<sup>2</sup> each are proposed after examining their location in the sanctuary.

**D) Dismantling of old structures**

For improving the habitat of the sanctuary and to make it a suitable home for various herbivores there is need to restore habitat as near natural as possible. This will require removal of those factors which give artificial look to the area and do not merge with the surrounding. Sanctuary area should be made free from unnecessary concrete structures as far as possible. Various old buildings & quarters, not being used for sanctuary management, should also be dismantled. Sanctuary area should be devoid of any residential buildings since their existence leads to biotic interference. Some old buildings in compartment number 7 will be retained and repaired to be used as shelter for watch and ward.

**E) Elimination of stray/nuisance animals**

Large number of stray cattle and dogs in the sanctuary are detrimental to sanctuary habitat and its wildlife population. It has been reported that approximately 350 stray cattle and 150 stray dogs are sharing the natural

resources on which the wild animals primarily depend for their survival. . This stray population should be shifted from the sanctuary area at the earliest.

- (i) **Stray cattle-** a) Restricting of stray cattle to some part of sanctuary so that whole sanctuary does not get affected by stray cattle by separating one or two compartment by chainlink.  
b) Sterilization of male cattle with help of Animal Husbandry Department will be done to restrict breeding of stray cattle.  
c) Public participation will be done in order to managing the stray cattle inside restricted area.
- (ii) **Stray dogs-** The municipal corporation/Animal Husbandry department can be very helpful in solving the problem of stray dogs by catching, shifting and sterilization of stray dogs.
- (iii) **Rhesus monkey-** It is estimated that nearby 3800 especially in compartment 1 and 2 rhesus monkeys are roaming freely in the WLS area especially over the Patiala-Dakala road because people are offering them various kind of food as religions custom. One of the viable options is to establish rescue centre for them with segregation of sex to restrict their further breeding. Awareness will be created among the people about the harmful effect of feeding the monkeys. Plantation of the fruit trees will be done in the sanctuary so those monkeys do not venture out of the sanctuary in search of food.

#### **6.4.2 .5 Monitoring and evaluation**

- i) Regular vegetation monitoring and analysis will be done to see the changes in the quality of habitat and composition of species.
- ii) The change in the habitat use by wild animals will be recorded.
- iii) Pre weeding and post weeding effects in meadows will be studied by laying down special 5m X5m quadrants in the area of operation.
- iv) Water level in all water sources will be recorded in the month of March every year. Any drastic decrease in level at any time indicates that there

may be water shortage that year and augmentation is needed from outside.

### **6.4.3 Species reintroduction plan**

#### **6.4.3.1 Introduction**

The area of the sanctuary has been a precious natural resource and history bears testimony that it was once a very good habitat for herbivores like spotted deer, Hog deer, Black buck, Blue bull and other deer and antelopes. Due to degradation of habitat in the past, some of the wildlife seem to have been affected adversely. It is expected that once the habitat is improved through development of grassy meadows, plantation of suitable tree and shrub species and development of water resources, the condition will be conducive for breeding and rehabilitation of species such as Black buck, Spotted deer, Hog deer, Turtle and resident birds like Egret, Purple moorhen, Water hen, Cormorant etc. in the sanctuary. It is, therefore, recommended that suitable wildlife species should be introduced and rehabilitated in the improved habitat of the sanctuary.

#### **6.4.3.2 Objectives**

1. To maintain overall faunal diversity and prevent their local extinction.
2. To reintroduce a small population of selected deer species such as spotted deer, Black buck by translocating a breeding group from other area or Zoos or Deer park.
3. To ensure and maintain a viable population of blackbuck along with other deer species for scientific, aesthetic, cultural and ecological values.
4. To attract migratory birds to large water body existing in the WLS

#### **6.4.3.3 Limiting factors**

The technical and managerial interventions will need a detailed research backup prior to execution. Main constraints will be damaged fencing, water scarcity, poor habitat quality and excessive biotic interference etc. The plan also needs to be analyzed for the past experience, extent of area and surrounding land use pattern.

#### 6.4.3.4 Strategies

The conservation of the re-introduced deer population requires a long-term strategy based on the available experiences and observations recorded. The following conservation imperatives are very significant for the survival of small populations of reintroduced species.

- i) **Pre reintroduction planning:** Translocations from deer parks or other areas will be done in phased manner. It is proposed to shift excess population of blackbuck from Moti bagh Deer Park to WLS. A plan to translocate animals from zoos and other deer parks after chemical immobilization is recommended. In addition the WLS can be used as a shelter for rescued animals to be released here.
- ii) **Preparation of site:** Before reintroduction the WLS requires relief for some time to recover from various biotic and abiotic pressures. Keeping this in view the PA management will carry out practice of erecting fenced enclosures in some portions of the grasslands where reintroduction will be executed to allow the area to recuperate, until they grow rich in the heterogeneous grass species. This operation should be carried out every year in 10-12 plots of 5-7 acres each at different sites within sanctuary.
- iii) **Release and reintroduction:** 3 enclosures of size 1-2 acres would be constructed in selected recuperated areas for immediate release of animal after translocation from source population.
- iv) **Post release operation-**From these small enclosures animals would be released gradually to the larger enclosures and finally open in WLS, once they increase in number and their density builds up. This would make the population viable, and save them from becoming the prime targets of predators soon after their reintroduction.

#### 6.4.3.5 Monitoring and evaluation

All the introduced animals will be regularly monitored. PA management must ensure that the social structure of the population is maintained including all possible age and sex classes of the species.

## **6.4.4 Wildlife health management plan**

### **6.4.4.1 Introduction**

Wildlife health within WLS has not been given due attention. Although no big epidemic so far has been reported from this area but management should keep itself ready for any disaster or emergency situation. Health of birds is also an important issue on the backdrop of recent bird-flu cases in the country. Regular population estimate of animals is required to be done to assess the population.

### **6.4.4.2 Objectives**

1. To introduce and maintain the wildlife health monitoring protocol and disease surveillance system
2. To prevent and control the epizootic diseases to the wild animals
3. To build wild animal rescue and rehabilitation facilities.

### **6.4.4.3 Limiting factors**

Presence of stray animals, lack of expertise and infrastructure, lack of trained staff and event of bird flu etc are some of the constraints.

### **6.4.4.4 Strategy**

- i) It is essential to protect the wild animals from any disease outbreak. Wild animals need protection against contagious diseases transmitted through domestic cattle/dogs. The most important prevention is to immediately drive out stray cattle and dogs from sanctuary.
- ii) Measure should be taken to vaccinate all the cattle of adjoining villages. Immunization should be ensured with certificate or tagging of the animals.
- iii) Help of local animal husbandry department will be taken for immunization, surveillance, prevention and control. The district level coordination committee meeting can be used as forum for addressing such problems.
- iv) A veterinary laboratory will be established at wildlife sanctuary having facilities for sample collection and preservation, equipments & chemicals, basic tests and analysis (blood, urine, faecal sample,

microbiological and histo-pathological testing etc). A post mortem room and incineration facility to be established. Veterinary help can be taken from Animal Husbandry Department as long as regular veterinarian is not posted.

- v) All cases of major cattle and poultry diseases etc in adjoining areas will be reported.
- vi) General health of wild animals will be regularly monitored. Staff will be trained in collecting samples and study disease symptoms.
- vii) The rescue and rehabilitation facility for treatment of diseased animal needs to be strengthened. One rescue centre should be established at deer park for entire division. This centre must be equipped with necessary animal capturing and tranquilizing devices. Trapping cages, dart-gun, squeeze cages, ropes etc will be kept ready for any emergency situation and man animal conflict. Selected staff will be trained in tranquilization and rescue operations.

#### **6.4.4.5 Monitoring and evaluation**

- i) Regular sample analysis and body health condition studies will be done to monitor any change in health of wild animals.
- ii) Documentation of disease spread in adjoining villages will also help in monitoring.

#### **6.4.5 Inter-agency co-management plan**

##### **6.4.5.1 Introduction**

Although thick human habitation areas surrounding Moti Bagh WLS provides little scope to visualize corridor connecting it to other potential areas of territorial 'Bir' forests or PAs still for wildlife conservation planning at larger landscape, it is required to incorporate similar approaches in working plan of territorial forests as well. Therefore it is prudent to take into account the mutually impacting management practices of adjoining areas and policies of other agencies so as to achieve the environment friendly approach and better conservation of the wildlife.

#### 6.4.5 .2 Objectives

1. To minimize the adverse impact of conflicting management practices.
2. To ensure the better co-ordination and institutionalized mechanisms to achieve long term wildlife conservation.

#### 6.4.5 .3 Limiting factors

Low priority areas in state agenda, different jurisdiction in neighboring forests, need based approach, procedural delay, inadequate coordination among various departments, lack of integrated approach, lack of financial support, legal hurdles, shortage of trained staff, low profile of wilderness area.

#### 6.4.5.4 Strategy

- i) **Peripheral areas co-management committee:** A quarterly meeting of wildlife division of Patiala under the chairmanship of CF (PPA) needs to be institutionalized, to discuss all related issues. These may include staff positions, communication measures, forestry operation works in wildlife divisions, analysis of working plan prescriptions, FDA works, man animal conflict cases in territorial area, combined patrolling, coordinated rescue operation, raids and intelligence sharing etc.
- ii) **District level coordination committee:** The district level coordination committee, as per state government notification no. 34/45/98-Ft.IV dated 2.2.1999 should immediately be set up with a view to promote effective inter-departmental coordination for the control of illegal trade in wildlife and wildlife products in the state. This committee will work as per guidelines of the said notification.
- iii) **Creation of the sanctuary level Advisory committee:** The "Sanctuary level Advisory Committee" has been constituted vide Notification No.1/07/2000-Ft-5/ 996771/1 dated 07/06/2017 Annexure 6.1.
- iv) **6.4.5.5 Monitoring and evaluation**

The success of these mechanisms can be evaluated against the smoother functioning of the forest, WL, irrigation, Revenue departments, especially on ground level, more reliable data on various parameters and acceleration of the pending activities due to the various administrative hassles.

## CHAPTER 7

### ECOTOURISM, INTERPRETATION AND CONSERVATION EDUCATION

#### **7.1 General**

The importance of wildlife in the survival of human being is well known. It is therefore, essential to make the people aware of its importance. Eco-tourism thus comes handy as a tool for wildlife management and awareness creation. Facilities for wildlife viewing such as nature trails, watch towers and hides should be developed to encourage the people to visit the sanctuary.

Considering its location within Patiala town and neighboring PAs like Bhunerheri, the area is suitable for strengthening and promoting the ecotourism activities. At present Bir Moti bagh has some interpretation and conservation education facilities but there is much scope for its further extension and development.

#### **7.2 Objectives**

Ecotourism can be a tool for spreading conservation education, when supported with adequate interpretation facilities. Objectives of each of them are interlinked and can be summarized as follows-

1. To explore the possibilities of promoting ecotourism within the potential of the area.
2. To gather the public support for long term conservation.
3. To promote conservation education through interpretative skills and educative activities.

#### **7.3 Issues and Problems**

At present no entry fee is charged for visit to the sanctuary. Tourists are allowed to visit only to the Compartment No. 10 of the sanctuary, which hosts the Deer Park. A number of visitors/tourists come to see the Deer Park daily and happen to see the Wildlife Sanctuary. For the tourist drinking water, benches, toilet and canteen are the facilities available at the entrance of deer



park. Some of the constraints which management faces in developing ecotourism are as follows-

1. Lack of state level project for developing ecotourism in these areas.
2. Insufficient infrastructure and facilities to handle educational groups and visitors.
3. Lack of coordination among the various agencies.
4. Absence of professional approach for promoting ecotourism.
5. Shortage of manpower and trained staff.
6. Inadequate publicity and information, shortage of funds.

However the help of extension wing of forest department can be taken for various extension activities.

#### 7.4 The strategies

This will include identification of the area where visitors can be allowed for wildlife viewing. The area will be demarcated properly and various facilities like animal watchtowers and hideouts, trekking paths, machans, watch towers will be developed in the area.

The specific sub-zones are identified for the tourism activity and interpretation. The tourism zone will have three sub zones viz. deer park, nature trail and interpretation centre. Conservation education will be considered as an azonal activity (Theme based).

##### 7.4.1 Identification of the tourism and interpretation sub-zone

**Table 7.1 Sub zonation**

Sr. No	Name of the sub-zone	Details
1	Moti bagh Deer Park	Parts of compartment 10 and Compartment No. 9 will be included in expanding deer park towards periphery.
2	Moti bagh Interpretation centre	Interpretation facilities and tourism zone in Compartment 10
3	Moti bagh Nature Trail	Parts of six compartments 9,10,17,19,21,23,12,11 and 7 will be included to develop ' <i>nature trail</i> ' along the water course.

#### **7.4.2 Strategies for the development of Ecotourism**

After improving the habitat and subsequent introduction of blackbuck, chital and other species, the sanctuary can be opened for the visitors with strict rules and regulations. Interpretation centre inside the park needs improvement. Similarly visitor facilities need to be developed within tourism zone of WLS.

##### **A) Moti bagh Deer Park**

- i) The deer park is located at present in compartment no. 10 of WLS which is interior in the sanctuary. This park has Small Zoo status as per recognition of Central Zoo Authority of India.
- ii) The master layout plan has been approved by C.Z.A vide letter No. F.No. 19-75/92-CZA(218)(Vol.I)(PKR)/2894/2018 Dated . 09/04/2018 Annexure 7.1
- iii) The park will have separate Master Plan for 20 years submitted for approval. It spells the activities in details for its management and development.
- iv) All the ecotourism activities related to deer park will be designed and developed as per approved Master plan.

##### **B) Moti bagh Interpretation centre**

- i) The Nature Interpretation Center located within deer park is open for park visitors. It has facilities of movie show, library, talks, lecture hall, display gallery etc.
- ii) This interpretation centre will be redesigned and developed as per suggestion in Master Plan as well as in this Management Plan.
- iii) The interpretation centre needs to be made more conspicuous and attractive and at the same time it should be given near natural look to merge with the ambience also. This will be done with consultation of designer.
- iv) The theme for display will include audio-visual devices, models, dioramas, photographs and paintings of regional flora and fauna and culture etc. New themes will be added from time to time as per requirement.

- v) Public amenities like toilets and drinking water facility will be improved at interpretation centre complex.
- vi) Brochures, stickers and leaflets will be provided to interested visitors free of cost. A record of all such distributions will be maintained on daily basis.
- vii) Nature education camps, quiz, competitions etc can be regularly organized for students.

### **C) Moti bagh Nature trail**

At present there is no entry fee prescribed for the sanctuary but a fee structure can be decided by state govt. for future. Those having a permit to enter sanctuary only will be allowed in tourism sub zone.

There is possibility to develop a nature trail which can become very good means of educating people, giving them first hand experience of forests and promote the ecotourism. The trail is proposed in the compartment 9,10,17,19,21,23,12,11 and 7 along the water course and by allotting the area is above compartments. The details are as below

- i) Before laying down trail deepening of water course is needed to increase its capacity and beauty of the area.
- ii) A short trail (earthen path) in the forest (about 2.5 Km) will be designed along the water course. The width of trail may depend upon space available and may vary at different point. Precaution will be taken to ensure minimum disturbance to vegetation etc.
- iii) This nature trail is proposed as a part of daily tourism for nature education, however it will be opened for visitors only after initial observations and analysis on animal disturbances, visitor's carrying capacity etc.
- iv) No camping will be allowed to any visitor. No unauthorized, unapproved visit will be permitted.
- v) No person will try to feed any animal inside the sanctuary. No litter will be thrown inside the sanctuary. The offender will be duly prosecuted.

- vi) All the relevant rules of sanctuary regarding entry and activities inside will be binding on tourists. They will not move out or deviate from the given route or disobey the staff.

**D) Expanding the tourism activities '*beyond*' Moti bagh**

There are several tourist points in and around Patiala city. All these should be exposed to the tourists. The archaeological, historical and biological features in the city like Qila Mubarak, Sheesh Mahal, Bird Aviary as Baradari garden, National Sports Institute, etc must be listed in the brochure of WLS. Activities like bird watching, nature trail walk, competitions, quiz, 'pariyavaran yatra', talk shows and workshops etc. can be conducted for school children and volunteer youths. This will be useful in promoting ecotourism as well as conservation education.

**7.4.3 Strategies for the promotion of conservation education**

Conservation education is a continuous process through which people are made aware of the importance of the nature, flora, fauna, ecological functions and conservation activities. Conservation education for Moti bagh will be achieved through ecotourism, eco-development and interpretation activities beside occasional celebrations, visits and workshops. The strategy will be.

- i) Organizing film shows, talks, nature workshops, bird watching, quiz etc for schools, villages, city residents and other departments to disseminate message of conservation to the students and local public.
- ii) Visits/ conducted tours of the students to various places of wildlife importance like Baradari Aviary, Chhatbir Zoo etc.
- iii) Conducting field exercise and training to local youth and school children in fire fighting, animal rescue & first aid etc will generate interest towards conservation.
- iv) School children and volunteers of NGOs can be involved in helping staff in animal care and landscaping, donation for feed and medicine for

animals etc. This will be implemented only after approval of competent authority.

- v) Distributing booklets, pamphlets, stickers, caps, posters to the visitors.

### **7.5 Regulations, monitoring and evaluation**

Regulation and monitoring will be done as below.

- i) Operational guidelines will be issued for all the stakeholders/partners for non invasive tourism.
- ii) For whatever activity within the sanctuary area, all the rules and regulations of PA's will be strictly followed. Guidelines will be displayed prominently and included in brochures as well.
- iii) Even though much scope is there for promoting tourism, still maximum permissible number of tourists at a time will be monitored. Maximum number of visitors per day and days for visit will be fixed. There should not be more visitors within the sanctuary at any given time than the maximum permissible limit.
- iv) No vehicle or walk will be allowed during night time.
- v) All the details of number of tourists, areas allowed will be maintained and used for the evaluation. The success or failure of particular ecotourism activity will also be evaluated critically for continuing such activities in future.

**7.6** Eco-sensitive zone around Sanctuary has been declared vide Notification No. S.O. 1055(E) Dated 11th March, 2016. which includes details of zonal master plan for the eco-sensitive zone, list of activities prohibited or to be regulated within the eco-sensitive zone, eco-sensitive zone monitoring committee etc..  
Annexure 7.2

## CHAPTER 8

### ECODEVELOPMENT

#### **8.1 Description of PA and its surrounds**

Bir Moti bagh WLS is located in the Patiala tehsil of Patiala district of Punjab. It is located within the vicinity of main town. The details of location, access and communication, history, climate, geological factors, vegetation and fauna have been given in chapter I and chapter II of Part I.

#### **8.2 Impact zone, human settlements and social structure**

The impact zone consists of villages, areas around the sanctuary, which are closely interlinked with the forests and affected with any activity within sanctuary and vice-a-versa. The details of impact zone, human settlements of the vicinity, social structure etc is described in chapter IV of the part I.

#### **8.3 Occupations, Forest dependency and conflicts**

The region in general falls under productive agricultural belt and almost entire population depends upon agriculture for domestic as well as commercial needs. People are mostly well off and do not have large stake on forests. However, they do indulge in illegal grazing, illicit felling, trespassing, setting fire, poaching etc. Most of the stray, weak and unwanted cattle are dumped in the forests for grazing. On the other hand there are few instances of crop raiding by wild animals.

In general the PA-people interface is not very smooth as there is contrast in the objectives and priorities on the two sides of periphery. Due to several restrictions in the forest resource use and monkey menace, people are not so friendly with the PA management.

#### **8.4 Current Eco-development activities and its history**

The FDA project is being implemented in the Patiala Forest division since past 2-3 years. Earlier there was a proposal of Afforestation and

Development Project of Bir Moti bagh Wildlife Sanctuary, Patiala (2004-05 to 2008-09), under National Afforestation Programme of Govt. of India which was prepared at Division level but could not be implemented. Thus there is no background of any programme which can aim at promotion of ecotourism to win the trust of local people and enhancing productivity of the area.

## **8.5 Proposed Eco-development**

### **8.5.1 Target villages**

All the 15 villages of bordering area will be initially considered for the activities of eco-development. Other villages falling within 10 km of sanctuary area may also be considered for eco-development activities if required with adequate deviation in the plan. The details of villages are shown in Map 4 and Annexure 4.1 & 4.2

Among the 15 adjoining villages from **zone of influence**, three most suitable villages will be selected for initial inputs. This is because if the people respond well and if the outcome is better, the energy required and efforts needed for convincing other villages will be less.

Village identification for initial inputs will be done by conducting rapid assessment of the villages by the D.F.O Wildlife with help from local staff.

### **8.5.2 Problem identification**

The main problems that need to be tackled under eco-development and problems perceived in success of eco-development are as below.

#### **A) Problems that need to be tackled under Eco-development**

- i) Growing rift between local people and PA management
- ii) Illicit felling/ firewood collection
- iii) Human-animal conflict
- iv) Encroachment on forest land
- v) Poaching and hunting
- vi) Illegal grazing and presence of stray cattle within sanctuary
- vii) Increasing monkey population

viii) Low motivation and awareness level of people

### **B) Problems perceived in success of Eco-development**

- i) Unavailability of funds
- ii) No background of any such scheme or project
- iii) Poor response from people and delay in changing mindset of people
- iv) Low motivation level of staff and officials
- v) Shortage of trained manpower
- vi) Failure in follow up actions
- vii) Institutionalization of such programmes

### **8.5.3 Goal and objectives**

The goal of the eco-development plan will be:

‘To conserve wildlife by maintaining natural health of Bir Moti bagh WLS with help of local people’.

### **8.5.4 Objectives**

1. To mitigate biotic pressure and reduce the resource dependency of local communities upon the Moti Bagh forests.
2. To generate alternative livelihood options for the local communities through eco-development.
3. To ensure people’s participation in management of Bir Moti bagh for a peaceful co-existence between human & animal
4. To raise awareness level among local community for the long term conservation of Bir Moti Bagh.

### **8.5.5 General Strategies**

#### **A) Constitution of Eco-development committee.**

Following approach will be followed

- i) Eco-development zone will be selected from the zone of influence as given in section 4.1.1 and 6.2.
- ii) PRA exercise will be conducted in selected villages to assess the people’s perception about wildlife, eco-development, their needs, dependence,



problems, apprehensions, socio-economic condition, attitudes, values and ethos. They will be allowed to identify and prioritize their needs.

- iii) Micro-planning will be done in phased manner taking 3 villages per year. Micro plan will be prepared based on the results of PRA exercise and in consultation with villagers.
- iv) The village eco-development committee (EDC) will be selected by villagers themselves. Works to be undertaken will be finalized with mutual discussions between EDC and department.

#### **B) Co-operation and mutual trust building**

Integrating the activities of other departments and ensuring coordination and trust building among the stake holders will be done through district level coordination committee. Programmes of Integrated Rural Development Projects, District Rural Development Agency (DRDA), Zila Parishad, Panchayat samiti, Animal husbandry, Agriculture, Irrigation, and Public Works Department (PWD) etc will be integrated with eco-development activities.

#### **C) Addressing administrative, financial and technical constraints**

Shortage of funds, policies of government, legal aspects, and technical constraints will be taken care of. Funds for such activities can be procured from state government or Govt. of India under different schemes. Other funds like Centrally Sponsored Scheme (CSS) for National parks & sanctuaries, Green India Mission, MNRGEA, NABARD, PUNCAMPA, Zila Parishad, local area development funds, territorial forest department schemes, district administration funds will be channelized and works will be carried out through EDCs.

#### **D) Training and awareness**

The awareness among people as well as staff is the crucial issue in such activities.

- (i) Visits and study tours to other protected areas for staff and EDCs will be conducted to show them success story.

- (ii) Resource persons from such areas and institutions will be invited for experience sharing and motivating villagers.
- (iii) Efforts will be made to make people think of their welfare, ecological needs, and importance of Bir Moti Bagh WLS etc.
- (iv) People will be trained adequately in the chosen income generation activities.

#### **E) Entry point activities (EPA)**

EPA will be identified and implemented initially to gain the trust of the people and to ensure smooth functioning of other activities. Basic infrastructure will be created through EPAs, for example-

- i) Supply of hand pumps Rainwater Harvesting Structures.
- ii) Construction of small community hall/ *Gaushala* / rescue centre as per requirement
- iii) Supply of alternative energy devices like solar cooker and improved chullahs to minimize illicit use of forest resource.
- iv) Supply of sports kit to the youth may show good response.
- v) Providing fan, stationery and other infrastructure to schools
- vi) Construction of Cattle proof trenches around farm land etc.
- vii) Supply of adequate medicinal help to domestic cattle of surroundings villages to check the transfer of disease.

#### **8.5.6 Sector wise strategies and summary of proposals**

**A) Grazing regulation and cattle management-**The stray cattle exert tremendous pressure on the forests and degrades the habitat drastically.

- i) Efforts will be taken to eliminate the cattle from the sanctuary and check their re-entry once the fencing is properly repaired.
- ii) The cattle driven out of sanctuary will be kept in *Gaushalas* established for this purpose. Efforts will be made to convince the EDC to establish new *Gaushalas* if not existing. Initial investments like construction of *Gaushala* and essential articles could be procured from the funds meant for eco-development. The responsibility of managing these units will be

given to EDC. Funds from Animal Welfare Board can be roped in for this purpose.

- iii) Veterinary health camps will be organized with help of animal husbandry department. Immunization will be ensured as per norms of WL (P) Act.

#### **B) Problem of crop raiding by Monkeys-**

Crop raiding by monkey in the fringe areas, is a big social challenge which needs to be addressed through eco-development.

- i) Completion of fencing of Bir Moti Bagh and compensation given by the Punjab Govt. for crop damage incurred to the farmers will may generate sympathy towards wildlife as well as good will for the sanctuary.
- ii) EDC will be motivated to form a patrolling team among themselves who will patrol and protect their crop during night.
- iii) Special efforts will be taken to ensure sufficient forage and food material for wildlife with WLS through adequate habitat enrichment measures.

#### **C) Control of Rhesus monkey population**

Excess monkey population has turn into a problem for the nearby areas as well as wildlife habitat. This is further aggravated by the people who offer food to them. The monkeys seem to be addicted to such type of luxuries and come out of the sanctuary. Following strategy will be implemented to control this excess population-

- i) For areas outside the sanctuary, there is a need to make people aware about the consequences of such action. Proper publicity will be ensured by putting sign boards and hoardings deterring people from such activities. No person will be allowed to offer food to monkeys or enter with eatables inside the sanctuary. Strict action should be ensured as per provision of the Act to prevent this.
- ii) Awareness will be created among the people about the harmful effect of feeding the monkeys. Plantation of the fruit trees will be done in the sanctuary so those monkeys do not venture out of the sanctuary in search of food. One of the other viable options is to establish rescue center

(after taking permission of Center Zoo Authority Govt. of India) for them with segregation of sex to restrict their further breeding.

- iii) To control the population in wild, sterilization and rehabilitation of excess population will be tried.

**D) Control and Prevention of illegal removal of forest resource**

- i) EDC will be given task of preventing fuel and firewood collection within their villages. Awareness will be raised against all types of illegal activities through EDC.
- ii) Regular meeting of EDCs will be conducted and concerned guard will attend it as member secretary. He will monitor and analyze the effectiveness of EDCs in controlling such illegal activities.
- iii) Means for economic benefits for the local will be provided through various Income generating activities (IGA) as discussed in next section.

**E) Social and Economical empowerment**

- i) The villagers will be assisted in getting benefits of all available government schemes which are not detrimental to the sanctuary and its elements.
- ii) Cultural programmes promoting local tradition, folk arts will be organized in collaboration with other agencies to provide recognition as well as culture exposure.
- iii) For economic empowerment, activities will be proposed and finalized village wise, with discussions with EDC.
- iv) Promotion of agro forestry in neighboring fields, by supplying saplings of high yielding trees and monitoring the progress closely for 3-4 years.
- v) Supply of improved seeds and organic fertilizers/vermicompost for villagers. Organic farming methods using compost and neem cake etc will be encouraged by training and demonstration.
- vi) Promoting village based/cottage industries or group activities like making baskets, ropes from local grasses, fisheries, poultry industry, mango and jamun syrup and pickles, honey bee keeping, silk cultivation on toot trees etc. Training in tailoring activity for women.

- vii) Self-help groups will be promoted in the later phase once people become empowered in other sense.
- viii) Training, awareness programme, visits will be undertaken for villagers and staff.

**8.5.7 Financial forecasts**-The details are given in the table below-

**Table 8.1 Physical/financial forecast of eco-development plan**

Sr. No	Activity 2019-20 - 2029-30	Physical target	Financial target	Remarks
1	Identification of target areas (i) PRA exercise (ii) Micro plan (iii) Formation of EDC	All the villages surrounding WLS	11.25 lakhs	15 villages will be covered @ 75000 Rs/village
2	Entry point activities (i) Community assests (ii) Stationary for students (iii) Compensation for crop damage (iv) Mobile dispensary (v) Hand pumps (vi) Plantation	Rescue centre (Monkeys) 4 community hall Uniform /Shoe / Stationary cattle proof trecnh 20 Health camps 15 Hand pumps Plantation @ 15 hac/year	100 lakhs 40 lakhs 4 lakhs 30 lakh 10 lakh 30 Lakh/yr	
3	Income Generation activities	All activities proposed	10 lakhs	@ 10,000/IGA/SHG/Year
4	Training/ tours	Staff, villagers	10 Lakhs	Lumpsum @ 100000 Rs/year
		Total	245.55 Lakhs	

### 8.6 Monitoring and evaluation

For Monitoring and Evaluation issue wise indicators will be set up and results will be analyzed. Participation of people it self will be an indicator. Reduction in the number of crop raid cases, reduction in illegal fuel wood /Head load removal may be other indicators.

## CHAPTER 9

### RESEARCH, MONITORING AND TRAINING

#### 9.1 Research and Monitoring

Bir Moti bagh WLS does not have any history of basic or applied research, which is an important management tool in deciding the future strategy and careful implementation.

##### 9.1.1 Research

The past activities in the sanctuary although not directional towards scientific management, but have contributed a lot in the overall understanding of the wildlife value of the area and issues related to the management.

#### **A) Identification of the thrust areas and development of long term research strategy**

The thrust areas for research in Bir Moti bagh WLS can be as follows-

- i) Research on the habitat, vegetation, its changed pattern, habitat factors, fodder quality and availability.
- ii) The detailed inventory of different species, their population estimation and distribution in the sanctuary.
- iii) Animal parasites, faecal analysis, disease related researches.
- iv) Role of *Prosopis* and Eucalyptus its positive and negative effects, threshold level for its removal, cover characteristics.
- v) Socio-economic studies on local people, their needs, ethos, values and general mentality, impact of eco-development.
- vi) Movement pattern of blue bull and other animals to peripheral forests, spill over populations.
- vii) Study of inter-specific relationship between stray dogs and jackals vis-à-vis negative effect of domestic predators on wild carnivores.

- viii) Scope for reintroduction/ introduction needs to be studied.
- ix) Study on animal's response to reintroduction, post reintroduction changes in habitat (after reintroduction).
- x) Study of positive and negative effects of microclimate on reintroduction of animals.

**B) The GIS and RS based database generation and management information system**

- i) GIS based mapping of Bir Moti Bagh WLS needs to be done to generate reliable baseline data.
- ii) Detailed information of area, identification and distribution of plant and animal species, availability of food, habitat, water sources, changes, habitat use around the PA, encroachment, weed infestation etc will be documented, periodically, seasonally or annually depending upon management requirement analyzed and conclusions will be drawn.
- iii) The computer based management information system at the division level is also suggested to aid quick management decisions. Help of research & information wing of the department can be taken in this activity.

**C) Research infrastructure development and coordination**

- i) Various equipments like GPS, range finder, computer (software and hardware), field and laboratory equipments will be procured during the plan period.
- ii) Research fields will be selected and outside partners will be selected for collaborative works. These include among other, Punjabi University, Guru Angaddev Veterinary University, Wildlife Institute of India, Research wing of Forest Department Punjab, other Universities, BNHS, ZSI, BSI, and IIRS etc.

**9.1.2 Monitoring**

Monitoring is an important tool in understanding the impact of management activities, ecological changes that take place and future course of

action. In Bir Moti bagh WLS following monitoring activities will be undertaken-

**A) Vegetation monitoring**

- i) 9 permanent monitoring sample plots will be selected evenly distributed over entire area. The size of each plot will be around 0.1 Ha. These plots will be monitored for various parameters like ground vegetation, crop density, crop composition etc. Uniform methodology will be followed in all the sample plots.
- ii) These sample plots will also be used to collect data on the weed infestation, regeneration, soil quality, ground water availability, grazing percentage, fire effects, diseases etc.

**B) Monitoring for climatic and edaphic factors**

Annual data on weather, rainfall, temperature, humidity, hailstorm, will be collected from weather monitoring centre of the district or metrological department. Study of soil quality, soil erosion will be conducted with help from Universities etc.

**C) Monitoring the socio-economic changes and land use pattern around Bir Moti bagh WLS.**

This will be done with collaboration of educational and research institutes, territorial forest division and other line departments. It will throw light on the impact of eco-development, government policies, and change in land use pattern. The pattern of agriculture, education level, agricultural inputs, use of eco-friendly technology, attitudinal change etc will be studied.

**D) Monitoring of animals, population structure, densities etc**

- i) As per the guidelines available by the Wildlife Institute of India the population estimation will be undertaken in entire area to monitor herbivores and other animals.



- ii) Birds, butterflies and lower angiosperms are good indicators of habitat change. Their abundance, change in distribution over a period will be monitored.
- iii) Unique/special habitats and microhabitats will be continuously monitored and habitat use or discontinuation in their use will be recorded.

#### **E) Wildlife health monitoring**

Animal health, food pattern etc will be studied with help of pellet analysis, general physical and behavioral attributes etc. Details are given in theme plan under section 6.4.4

### **9.2 Training**

Wildlife management needs specialized approach to manage and deal with. Staff, in absence of formal training, may not perform well even if they are good at general forestry activities -

#### **9.2.1 On the job training**

- i) The staff posted at PA can serve the area better if they are exposed to short term trainings like census methodology, age, sex and health assessment, reading indirect evidences, rescue and rehabilitation, sample collection, identification of plants, birds and animals, habitat monitoring etc. Regular refresher courses should be conducted in collaboration with state level training college.
- ii) The staff will also be trained in application of wildlife law, weapon handling, PRA exercise for eco-development, some inputs on ecotourism and interpretation.
- iii) They need to be exposed to the other well managed PAs of different states to broaden their approach and vision.

#### **9.2.2 Formal training courses**

- i) Arrangement of formal training of frontline field staff should be pursued, to maintain the momentum of research, monitoring and scientific management work.

- ii) Field staff should be encouraged to attend the short term refresher courses even in the other departments on eco-development, wildlife health, ecotourism etc whenever possible.
- iii) Some short module for frontline wildlife staff on the pattern of diploma and certificate courses of WII can be initiated at state training college.

### **9.2.3 Establishing a Learning Centre.**

Bir Moti bagh WLS itself can be developed as an important learning centre for people living in close proximity of this. Long term association of staff with this area can be translated into important source of information. All the staff will be encouraged to systematically document the information they gather during their stay. This area should be promoted as an important wildlife destination. This will invite more research inputs in the area, as there are so many educational institutions are situated near Bir Moti Bagh WLS, to promote it as training centre as well as learning centre.

## CHAPTER-10

### ORGANISATIN AND ADMINISTRATION

#### 10.1 Structure and Responsibilities

##### Structure

(A) The Staff strength is not very adequate as per requirement of the field. For better management following staff strength is prescribed for Bir Moti Bagh WLS-

##### Tree Diagram

DFO (WL)-1



Dy. DFO-1



Range Forest Officer-1



Dy. RFO/ Vet.Pharmacist-1



Forest Guards-2



Watchers/ Daily Wagers (As per requirement)



Computer Technician-1



Social facilitator (at division level)-1



Veterinary Officer-1

\* The post of RFO and below is exclusively suggested for WLS.

##### Responsibilities

The hierarchical responsibilities of the man power is given below:-

DFO (WL)	-will be the overall incharge of the Division DFO will Supervise all the activities and Coordinate with higher authorities.
Dy. DFO (WL)	- Dy. DFO will be the incharge of vigilance Squad. The Dy. DFO will supervise all the staff under him and field requirements. The Dy. DFO will coordinate between staff and DFO.
RFO	- will be the incharge of wildlife Range and execute all the works within the WLS.
Dy. RFO/Vet.Pharm.	- will act under RFO to help him in execution of work, Protection, Investigation and court cases.
Forest Guards	- will be incharge of beats and will be responsible for all the works and protection of beat.
Watchers/Daily Wagers	- will be employed on Protection/ Patrolling duties and other field works under the supervision of Forest Guards.
Computer Technician	- will maintain all the record in computer, GIS data, digital maps etc. in the Division office.
Wireless operator	- will be the incharge of wireless communication.
Veterinary officer	- will deal with the animal health issue, postmortem of dead animals rescue operations etc.
Social facilitator	- will be appointed for the establishing links with local people framing eco-development activities and arranging meetings with wildlife functionaries.

## 10.2 Staff Amenities.

The Bir Moti Bagh WLS does not have any infrastructure for staff. The availability of housing and other facility will enable the staff to perform their duties more efficiently.

### A) Amenities, Infrastructure, Uniform, Weapon and communication

- Each staff be provided a accommodation near to the WLS area as far as possible.
- Transport facilities up to Forest Guard should be provided for effective execution of work and patrolling. Bike to Forest Guard/ Foresters and bicycle to watcher/ Daily wager must be given.

- A four wheel vehicle like animal ambulance, rescue vehicle may be made available at WLS to meet any emergency/ rescue operation etc.
- Check posts, watch towers, tube well rooms will be renovated.
- Facilities like safe drinking water, furniture, electricity, field kit will be provided to all the staff.
- Uniforms along with a field equipments viz. binoculars, measuring tape, compass, Khukri, field boots, warm clothing in winters must be provided as per state forest manual.
- All the staff must be given the uniform, arms and training to use arms. Necessary amendments in the relevant Acts may be sought through competent authorities.

**(B) Incentive and Rewards**

- A special pay must be given to all the field staff for encouraging the staff. The provisions of GOI for special pay must be explored and implemented.
- Rewards/ incentive or commendation certificate should be given to the staff for meritorious work done to motivate the staff. The DFO (WL) may give citation/ certificate to the meritorious staff.
- The provisions for awards available at central government level should be explored and applied as per procedure for officials and non officials.
- A corpus fund can be created for the welfare of WLS by the WLS authorities or the families of Staff working in Sanctuary. This corpus fund may be used as welfare fund/ to run the Souvenir shop.

## CHAPTER 11

### THE BUDGET

#### 11.1 The Plan budget

The budgetary requirements of Bir Moti bagh WLS have never been fulfilled. There has been huge gap between requirement and actual allotment. In fact there is no provision for separate budget to the sanctuary. It is one of the most important constraints against proper functioning of the administration. At present the main source of funding for Bir Moti bagh WLS as well as Moti Bagh Deer Park are the Non-Plan budgetary allocations of Punjab government to the wildlife division.

There is an urgent need to explore additional sources for funding. This can be done by the following means

- i) Undertaking works under various schemes and programmes of territorial forest division. Development programmes of DRDA can also be channelised if these in harmony with the management plan objectives. Therefore PA authorities must take this issue to policy level so that management activities will be accomplished. For Deer Park which is recognized by Central Zoo Authority of India, funds can be arranged from CZA schemes for this purpose.
- ii) Funds will be sought from central government through proper channel-
  - a. under CSS scheme
  - b. grants from GOI
  - c. Green India Mission
  - d. under NP/Sanctuary allocation of MoEF
  - e. FDA project
  - f. CZA funds
  - g. Animal Welfare Board, Punjab

- iii) For research, monitoring, health activities relevant projects will formulated and get sanctioned. Joint research activities with research institutes, universities will help strengthening targeted tasks as well as no separate money from mainstream budgets will have to be spent.
- iv) The urban and rural development activities will be linked with eco-development activities. It will support the budgetary part of the project.
- v) Equipments, logistic provisions, uniforms, shoes, other material needed for protection purpose, animal health lab equipments, chemicals, some items for interpretation, nature education, publications etc will tried to be procured with collaboration of NGOs and other agencies.
- vi) Administration should also try to get funding from different government and non-governmental institutions. Formation of Patiala WL Foundation, a society, may help securing such funds within statutory framework.
- vii) All equipments for population monitoring needs to be purchased.

## **11.2 Planning of the activities**

The work plan for the period 2019-20 to 2029-30 has been given in **Annexure. 11.1**

**CHAPTER 12**  
**THE SCHEDULE OF OPERATIONS AND  
MISCELLANEOUS REGULATIONS**

**12.1 The schedule**

The targeted activities over the plan period will be carried out with annual physical and financial targets. The schedule of operations will be further fine tuned with annual plan of operations. Any shortfall in funds or activity due to specific reasons will be adjusted against the next year plan.

**12.2 Record of deviations and implemented targets**

For several reasons management will have to deviate from the plan strategy. This is due to change in policy, change in expected output, constraints of funds, circumstantial needs etc. All such deviations should be prepared in the form of deviation proposals. At division level a book will be maintained for such deviations. All such deviations should be duly sanctioned by sanctioning authorities.

**12.3 The record of employment potential**

The management strategies proposed in this plan will generate many man-days of work. Each activity will be entered under the respective work schedule. All works, high as well as low priority and possible employment generation under different schemes will also be mentioned. Records of all permanent, casual and seasonal employment, potential and actual generation of employment will be maintained at level of DFO (WL).

**12.4 The control forms**

Control forms are essential to monitor the activities undertaken under the plan prescriptions. The control forms to be used are given in Annexure 12.1.



## **12.5 Maintenance of compartment history**

It is essential to oversee the changes over the years in the management policies. The compartment history gives us better idea about the treatment, modification and output obtained by the compartment over the years. This information will be entered in the prescribed format given in Annexure 12.2. As long as GIS based information is not available these forms will be maintained by beat guards under supervision of forester and wildlife inspector and submitted to the DFO (WL). Compartment histories will be prepared on annual basis.

## **12.6 Use of a pocket field guide for plan implementers.**

A pocket guide for the field staff will be prepared in 'Gurumukhi' containing following information-

- Location details & compartment wise detailed map of Moti Bagh
- Objectives & Strategies of the plan
- Implementation tips
- Monitoring methodology and field observations to be made
- Concepts of habitat change, their distribution, monitoring etc.

# SATELLITE VIEW OF BIR MOTI BAGH PATIALA

MAP.....

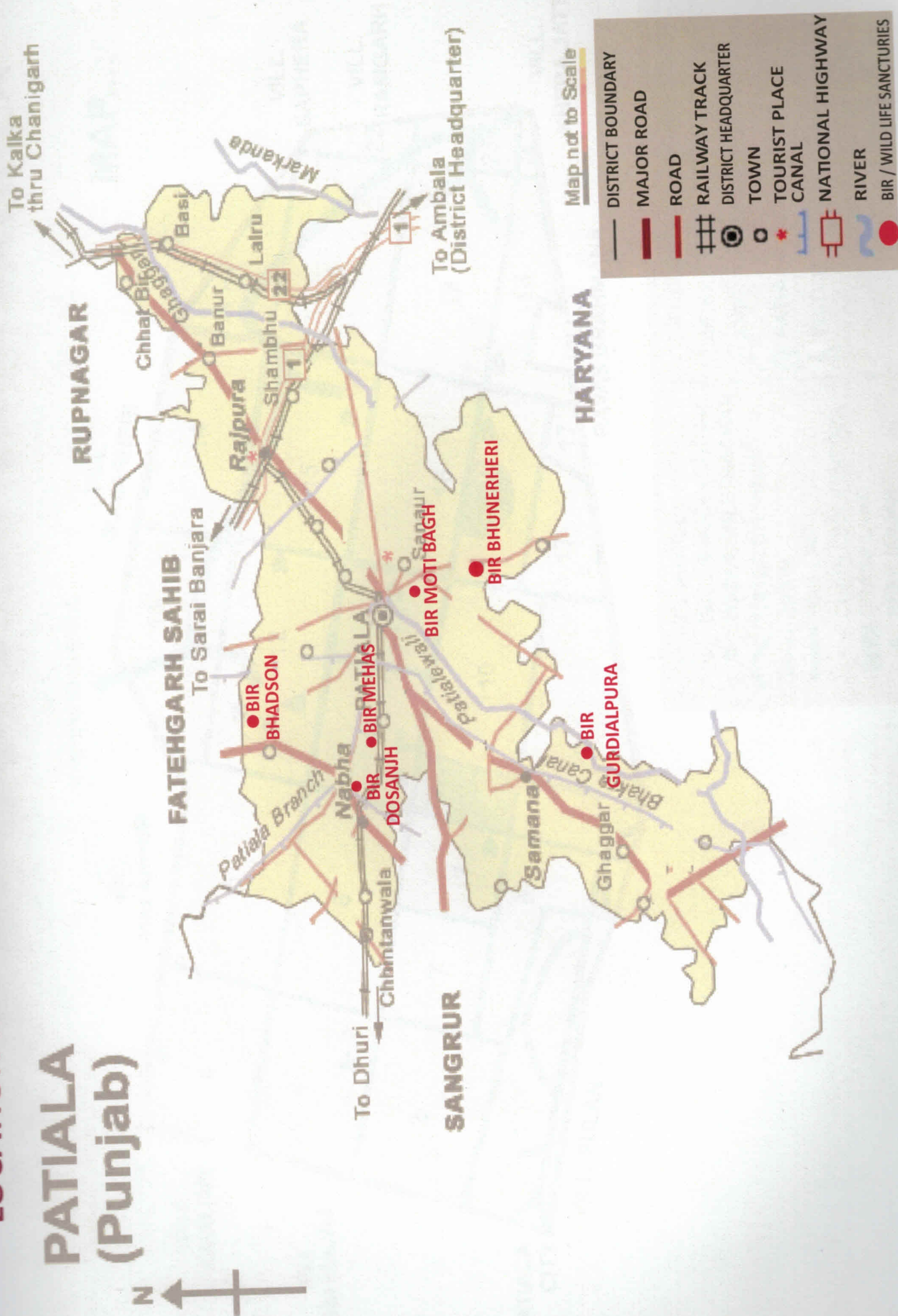




# LOCATION MAP OF WILDLIFE SANCTUARIES (BIRS) IN PATIALA

MAP.....

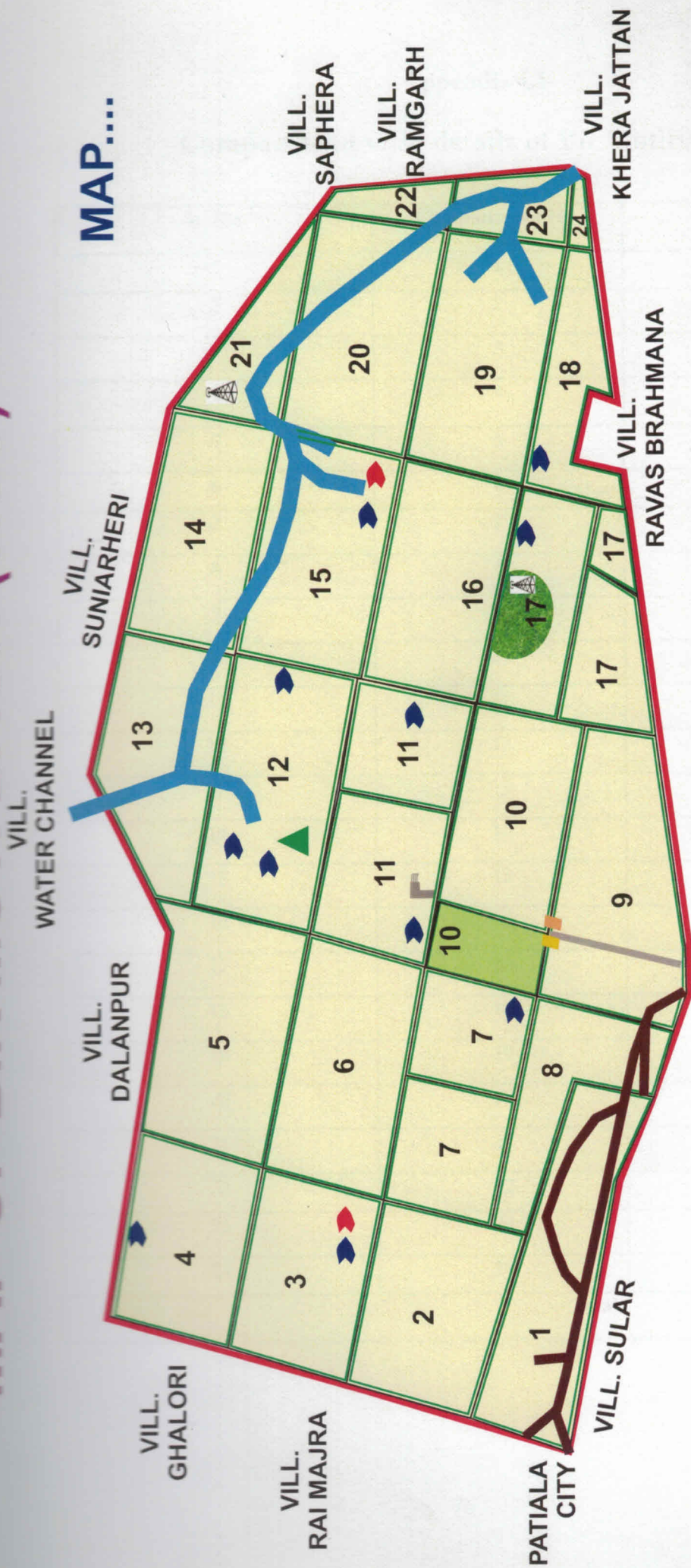
## PATIALA (Punjab)





# MAP OF BIR MOTI BAGH (WLS) PATIALA

MAP.....



	ENTRY GATE OF PATIALA ZOO PATIALA		TUBEWELL
	ENTRY GATE OF BIR MOTI BAGH SANCTUARY		WATER HOLE (PAKKA)
	APPROACH ROAD OF PATIALA ZOO		WATER HOLE (KACHHA)
	PATIALA ZOO PATIALA		WATER CHANNEL
	WATCH TOWER		DRAIN
			FIRE LINE
			CHAIN LINK FENCING
			GRASS LAND
			PEER MAJAR

## Appendix 1.1

### Compartment wise details of Bir Motibagh WLS

Sr. No.	Compartment No.	Area in Ha.
1	1	26.00
2	2	32.37
3	3	28.80
4	4	32.00
5	5	37-20
6	6	30-80
7	7	31.40
8	8	33.60
9	9	34.40
10	10	28.40
11	11	26.10
12	12	28.80
13	13	26.20
14	14	31.20
15	15	33.60
16	16	30.40
17	17	43.20
18	18	23.10
19	19	28.85
20	20	34.45
21	21	16.10
22	22	5.70
23	23	8.80
24	24	2.90
<b>Total</b>		<b>654.37</b>

## Appendix 1.2

### SWOT ANALYSIS

STRENGTH	OPPURTUNITY
<ol style="list-style-type: none"> <li>1. Rich biodiversity area amidst agriculture background</li> <li>2. Learning centre for common especially local people.</li> <li>3. Remnants of indigenous animal species like blue bull, sambar, jungle cat, jackals found</li> <li>4. Shelter for many local native birds, reptile and other small invertebrates</li> <li>5. In-situ as well as Ex-situ conservation unit</li> </ol>	<ol style="list-style-type: none"> <li>1. Considerable size to provide long term conservation</li> <li>2. Investment can give good results like restoration of area</li> <li>3. Can be developed as tourism destination for the region</li> <li>4. Research and studies can be taken up as area is accessible and compact.</li> <li>5. Local people can get economical and social benefits by promoting it.</li> </ol>
THREATS	WEAKNESS
<ol style="list-style-type: none"> <li>1. High level of external disturbance in the area due to its proximity to town</li> <li>2. Increasing monkey population</li> <li>3. Encroachment/ Expansion of Agriculture</li> <li>4. Low priority in state level agenda</li> </ol>	<ol style="list-style-type: none"> <li>1. Invasive species like Prosopis etc.</li> <li>2. Monoculture of Eucalyptus, Mesquite.</li> <li>3. Stray domestic cattle, dogs</li> <li>4. Less habitat diversity</li> <li>5. Water is liming factor</li> <li>6. Objectives of other agencies are not in harmony with conservation</li> </ol>

## Annexure 1.3

### Summary of Sanctuary Bio-data

Date of Establishment	:	Notification No.150/50 dated February 28. 1952 under the Fauna of Punjab Act.
Area	:	(1296 acres)
Biotic Province	:	4A (Punjab Plains)
Location	:	District Patiala; Latitudinal Range: 30° 15'; to 30°20' North: Longitudinal Range 76°20' to 76°-25' East: Nearest Town Patiala (8Km): Nearest Railhead: Patiala (8Km): Nearest Airport Chandigarh (75Km)
Topography	:	Altitudinal Range: 200-250m; Temperature: 3.5° C to 46°C; Average Rainfall: 870mm.
Vegetation Forests	:	Sub type E8 Saline and alkaline scrub savannah.
Fauna	:	Mammals: Blue bull, Jungle cat, wild boar, Hog deer, Jackal and Common Hare etc.  Birds: Grey and Black Partridges, Peafowl, Large Indian Parakeet, Rose Ringed Parakeet,  Reptiles: Cobra, Rat Snake, Monitor Lizard, Porcupine.
Cultural Heritage	:	Used to be the hunting ground of Princely State Patiala.
Management Details	:	1. Elimination of Prosopis and Eucalyptus and other alien and weedy growth 2. Growing of fodder, fruit and leguminous plants and grasses. 3. Reintroduction of deer species
Human Pressure	:	Surrounded by thickly populated area.
Information for visitors	:	When to visit - November to February  Where to stay - Hotels, Guest Houses, Resorts etc available.
Approach	:	8 Km. from Patiala city.
Contact Address	:	Divisional Forest Officer (Wildlife), Opposite Mini Secretariat, Patiala.  Conservator of Forests (Wildlife) Parks & PA circle, Sector-68, Forest Complex, S.A.S Nagar, Punjab.  Principal Chief Conservator of Forest (Wild Life), Sector-68, Forest Complex, S.A.S Nagar, Punjab.

## Annual Rainfall (mm) in Patiala District

Month	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Average rainfall (month wise)
<b>April</b>	0.00	30.20	0.00	3.20	20.8	0	18.2	45.7	2	2	10.70
<b>May</b>	0.00	4.80	0.00	6.00	2	0	19.6	6.8	39.3	47.72	13.27
<b>June</b>	236.30	31.80	130.00	201.00	38.2	107.5	20.6	90.6	180.8	95.5	106.82
<b>July</b>	142.10	155.20	339.80	95.60	194.4	155.6	56.3	234.7	150.7	250.7	165.78
<b>August</b>	165.10	173.40	125.60	220.60	119.6	275.2	34.4	21.2	90.8	135.8	130.35
<b>September</b>	313.20	142.50	332.40	138.80	160.8	38.8	242	67	0	80	131.84
<b>October</b>	0.00	0.00	0.00	0.00	0	0	7.6	10	0	0	1.81
<b>November</b>	5.20	0.00	0.00	0.00	0	0	0	8.12	0	0	1.84
<b>December</b>	0.00	0.00	34.00	6.40	0	5.6	23	0	0	0	6.11
<b>January</b>	10.90	12.20	6.80	11.20	28.8	51.4	14.6	2.01	35.5	35.7	18.21
<b>February</b>	10.10	16.20	20.20	0.00	93	39.8	35.3	0.8	18.8	33.8	31.88
<b>March</b>	31.70	0.00	13.40	0.00	23.2	37.2	85	50.6	55.8	48.98	30.50
<b>Total Annual Rainfall</b>	914.6	566.3	1002.2	682.8	680.8	711.1	556.6	537.53	573.7	730.2	

Source:



## Annexure 2.2

## Temperature Data (°C) of Patiala District

Month/ Yr	2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
January	26.2	3.4	25.3	2.9	27.1	3.9	22.7	3.1	26.3	4.1	23.0	3.3	25.4	3.7	22.7	2.8	24.7	3.2	23.8	5.6
February	26.3	3.2	29.7	4.3	24.7	3.4	25.2	4.1	27.2	3.7	26.5	4.1	27.3	2.9	25.6	3.2	27.6	3.7	26.4	8.7
March	28.7	6.9	30.2	7.2	28.4	6.4	29.3	6.1	28.5	7.5	32.3	7.8	29.6	6.9	27.7	6.7	30.7	6.9	29.8	5.1
April	41.1	11.3	42.3	13.1	42.7	12.7	40.7	13.7	43.3	14.7	42.9	13.7	41.7	13.1	42.7	12.9	40.9	11.7	39.9	12.9
May	41.9	18.7	44.3	18.1	43.3	17.7	41.7	17.0	43.3	19.1	42.9	18.3	44.5	15.5	43.2	18.9	41.8	17.9	40.1	16.8
June	43.7	23.2	44.1	24.3	42.9	23.7	44.2	23.9	43.9	24.0	43.0	22.7	44.1	23.9	43.9	23.2	43.3	23.1	41.8	22.4
July	41.6	23.6	42.7	24.2	41.7	22.7	42.3	27.2	39.3	23.7	40.7	22.3	41.9	23.7	42.4	22.9	41.9	23.4	41.2	23.6
August	36.7	22.1	38.5	22.9	37.6	23.0	39.2	23.3	36.9	22.7	37.9	21.7	38.7	22.7	36.7	22.2	40.2	23.5	39.7	22.8
September	32.8	21.7	33.7	19.4	35.6	19.3	34.9	19.7	33.9	18.3	32.6	17.9	37.5	19.1	33.9	18.3	34.6	17.7	35.6	16.9
October	35.5	17.7	33.7	12.9	32.9	13.4	35.3	12.3	36.2	13.6	33.6	13.9	34.7	14.1	33.9	13.2	35.2	13.9	34.5	12.7
November	28.7	23.0	31.2	8.5	29.6	7.8	30.3	8.6	28.6	6.9	28.3	6.3	30.2	8.2	27.5	7.5	28.9	17.4	29.5	18.4
December	24.0	9.9	25.5	4.2	24.4	3.7	24.0	4.6	31.1	2.9	27.3	3.9	25.5	3.9	24.6	4.3	24.2	3.3	23.4	5.5

(Source: Working Plan Patiala)

### Annexure 2.3

#### Water Resources within Bir Motibagh WLS

Sr.no	Water resource	Location	Number	Condition
1	Motor Pump	C.No.11	1	Functional
2	Diesel engine pump	C.No.17	1	Non-Functional
		C.No.3	1	Non-Functional
3	Water hole ( Pucca)	C.No.3	1	Functional Seasonal
		C.No.15	1	Functional Seasonal
4	Water hole ( Katcha)	C.No.11	2	Functional
		C.No.12	3	1 Functional Seasonal 2 Non Functional
		C.No.17	1	Functional
		C.No.18	1	Functional
		C.No.3	1	Functional Seasonal
		C.No.4	1	Functional Seasonal
		C.No.12	3	Functional Seasonal
		C.No.7	1	Functional Seasonal
		C.No.15	1	Functional Seasonal

Annexure-2.4

LIST OF TREES, SHRUBS AND GRASSES of BIR MOTIBAGH WLS, PATIALA  
(BOTH INDIGENOUS AND EXOTIC)

<u>S.No.</u>	<u>Local Name</u>	<u>Botanical Name</u>	<u>Family</u>	<u>Habit</u>
	<b>TREES</b>			
1	Arjun	<u>Terminalia arjuna</u>	Combretaceae	A large evergreen tree.
2	Ber, Beri	<u>Zizyphus mauritiana</u>	Rhamnaceae	A fruit tree.
3	Barh	<u>Ficus benghalensis</u>	Urticaceae	A large sized deciduous tree.
4	Bahera	<u>T. belerica</u>	Combretaceae	A large evergreen tree.
5	Bel	<u>Aegle marmelos</u>	Rutaceae	Evergreen armed tree.
6	Dhak, flame	<u>Butea monosprema</u>	Leguminosae	A moderate deciduous tree.
7	Hins	<u>Capparis sepieria</u>	Urticaceae	A large sized deciduous tree.
8	Jand	<u>P. cineraria</u>	Leguminosae	Deciduous tree.
9	kikar	<u>Acacia nilotica</u>	"	A moderate to large deciduous thorny tree
10	Kala siris	<u>Albizia lebbeck</u>	Leguminosae	A medium sized deciduous tree
11	Karaunda	<u>Carissa carandas</u>	Apocynaceae	A large sized deciduous tree.
12	Khajoor	<u>Phoenix dactylifera</u>	Arecaceac	Evergreen tree
13	Lasura	<u>Cordia dichotoma</u>	Boraginaceae	A medium sized tree.
14	Mesquite	<u>Prosopis juliflora</u>	Leguminosae	A shrub to middle sized thorny tree.
15	Mulberry, Toot	<u>Morus alba</u>	Urticaceae	A small deciduous tree.
<u>S.No.</u>	<u>Local Name</u>	<u>Botanical Name</u>	<u>Family</u>	<u>Habit</u>
16	Neem	<u>Azadirachta indica</u>	Meliaceae	A large sized evergreen tree.
17	Phalahi	<u>Acacia nilotica</u>	Leguminosae	A small to middle sized thorny tree
18	Pipal	<u>Ficus religiosa</u>	Urticaceae	A large sized deciduous tree.
19	Rehru	<u>Acacia leucophloea</u>	Leguminosae	A small sized shrub or tree

20	Safeda or Mysore gum	<u>Eucalyptus hybrid or E.tereticornis</u>	Myrtaceae	A large sized evergreen tree.
21	Shisham, Tahli	<u>Dalbergia sissoo</u>	Leguminosae	A large sized evergreen tree.
22	Simbal	<u>Bombax ceiba</u>	Malvaceae	A medium sized tree.
23	Teak, (Sagwan)	<u>Tactona grandis</u>	Verbanaceae	A large sized deciduous tree.
	<b>SHRUBS</b>			
1	Ak	<u>Calotropis procera</u>	Asclepidaceae	A shrub
2	Bathu	<u>Chenopodium album</u>	Chenopodiaceae	A annual weed
3	Bhang	<u>Cannabis sativa</u>	Urticaceae	A tall annual weed.
4	Kau	<u>Capparis decidua</u>	Capparidaceae	A thorny shrub
5	Karaunda	<u>Capissa spinariun</u>	Apocynaceae	-do-
6	Puthkanda	<u>Achyranthes aspera</u>	amaranthaesae	An erect shrub
7	Mallah	<u>Ziziphus nummularia</u>	Rhamnaceae	A bushy shrub
8	Giloe	<u>Tinospora malabarica</u>	Menispermaceae	A twining large sized climber
<u>S.No.</u>	<u>Local Name</u>	<u>Botanical Name</u>	<u>Family</u>	<u>Habit</u>
	<b>GRASSES</b>			
1	Anjan	<u>Cenchrus ciliaris</u>	Urticaceae	A perennial grass
2	Dib	<u>Desmostachya bipinnara</u>	-do-	-do-
3	Khabbal	<u>Cynodon dectylon</u>	-do-	-do-
4	Kahi	<u>Saccharum spontaneum</u>	-do-	-do-

The list is not exhaustive

## Annexure 2.5

### Compartment wise Vegetation composition (Bir Motibagh WLS)

Serial/ Compartment No.	Name of Species					
	Eucalyptus	Prosopis	Shisham	Acacia	Bamboo	Misc.
1	15%	80%	2%	-	-	3%
2	2%	84%	2%	2%	-	10%
3	-	86%	2%	2%	-	10%
4	2%	81%	2%	-	-	15%
5	20%	68%	1%	1%	-	10%
6	2%	82%	1%	-	-	5%
7	10%	74%	-	-	1%	15%
8	10%	75%	5%	-	-	10%
9	20%	74%	1%	-	-	5%
10	20%	75%	-	-	-	5%
11	20%	92%	1%	-	-	5%
12	1%	96%	-	-	-	3%
13	8%	90%	-	-	-	2%
14	15%	95%	-	-	-	-
15	5%	95%	-	-	-	-
16	-	99%	-	-	-	1%
17	10%	89%	-	-	-	1%
18	1%	98%	-	-	-	1%
19	-	98%	-	-	-	2%
20	-	99%	-	-	-	1%
21	-	99%	-	-	-	1%
22	-	99%	-	-	-	1%
23	-	99%	-	-	-	1%
24	-	99%	-	-	-	1%

## Annexure 2.6 (A)

### CHECK LIST OF WILD ANIMALS OF BIR MOTIBAGH WLS, PATIALA

Sr. No.	Common Name	Scientific Name	Status & Schedule
1	Blue bull	Boselaphus tragocamelus	Schedule -III
2	Common Indian Hare	Lepus nigricollis	Schedule-IV
3	Common Mongoose	Herpestes adwardsi	Schedule-II, Part-II
4	Common house rat	Rattus rattus	Schedule-V
5	Common squirrel	Funambulus pennantii	Schedule-II, Part-II
6	Cobra	Naja naja	Schedule-II, Part-II
7	Indian Porcupine	Hystrix indica	Schedule-IV
8	Jackal	Canis aureus	Schedule -II, Part-II
9	Krait	Bungarus caeruleus	Schedule -II, Part-II
10	Monitor Lizard	Varanus spp.	Schedule-I, Part-II
11	Rhesus Monkey	Macaca mulatta	Schedule-II, Part-I
12	Viper	Daboia russelii	Schedule -II, Part-II
13	Wild cat	Felis chaus	Schedule -II, Part-II
14	Hog Deer	Axis porcinus	Schedule -III, Part-II
15	Spotted Deer	Axis axis	Schedule -III, Part-II
16	Tortoise	Testudinidae	Schedule -IV, Part-II
17	Wild Boar	Sus scrofa	Schedule -III, Part-II
18	Sambar	Rusa unicolor	Schedule -II, Part-II

## Annexure 2.6 (A) (Continue)

### CHECK LIST OF WILD BIRDS OF BIR MOTIBAGH WILDLIFE SANCTUARY, PATIALA

Sr.No.	Common Name	Scientific Name
1	Pond Heron	<i>Ardeola grayii</i>
2	Cattle Egret	<i>Bulbulcus ibis</i>
3	Blackwinged kite	<i>Elanus caeruleus</i>
4	Brahminy kite	<i>Haliastur indus</i>
5	Shi-kra	<i>Accipitar badius</i>
6	Black partridges	<i>Francolinus francolinus</i>
7	Grey partridges	<i>Francolinus francolinus</i>
8	Pea fowl	<i>Pavo cristatus</i>
9	Red wattled lapwing	<i>Venellus leucurus</i>
10	Indian ring dove	<i>Streptopelia decocto decocto</i>
11	Spotted Dove	<i>streptopelia chirenis</i>
12	Large Indian Parakeet	<i>Psittacula egpatria</i>
13	Rose Ringed Parakeet	<i>Psittacula krameri</i>
14	Black drongo	<i>Dicrurus adsimiliss</i>
15	Pied Myna	<i>Strunus contra</i>
16	Bank Myna	<i>Acridotheres ginginianus</i>
17	House Crow	<i>Corvus splendens</i>
18	Indian Robbin	<i>Corvus corax</i>
19	Red vented Bulbul	<i>Pucnonotus café</i>
20	Common Babbler	<i>Turdoides caudatus</i>
21	Jungle Babbler	<i>Turdoides Striatus</i>
22	Magpie Robin	<i>Copsychus saularis</i>
23	Purple Sunbird	<i>Nectarinia asiatica</i>
24	House sparrow	<i>Passer domesticus</i>
25	Indian weaver bird	<i>Ploceas phillippinus</i>
26	Red Munia	<i>Estrilda amandava</i>
27	Brahmany Mynah	<i>Strunus pagodarun</i>
28	Tailor Bird	<i>Orthothomous sutorius</i>
29	Koel	<i>Eudyanamy scolopacea scolopacea</i>
30	Hoopoe	<i>Upupa epopus</i>
31	Cockoo	<i>Clamator jacobiana</i>
32	Pariah Kite	<i>Malvus migrana</i>
33	Red Vented Bulbul	<i>Pucnonotus badius</i>
34	Black Drongo	<i>Dicrurus adsimiliss</i>

(Cond.)

## Annexure 2.6 (B)

### Wildlife Population Estimation in Moti Bagh WLS

The first census of wild animals was done on 11-12<sup>th</sup> April, 1985. The following population was recorded-

S.No.	Species	Male	Female	Total
1	Blue bull	51	60	111
2	Black-buck	4	1	5
3	Hog deer	11	9	20
4	Jackal	26	31	57
5	Rhesus monkey	155	170	325
6	Spotted deer	4	1	5
7	Wild boar	48	67	115

The second census was done on 27.3.95 and the results are tabulated below-

S.No.	Species	Male	Female	young	Total
1	Blue bull	16	8	-	24
2	Black-buck	8	6	-	14
3	Common teal	-	-	-	-
4	Grey partridge	-	-	34	34
5	Hog deer	5	3	-	8
6	Indian hare	-	-	-	-
7	Jackal	Unidentified	-	-	-
8	Jungle Cat	-	-	-	-
9	Peafowl	53	102	-	155
10	Rhesus monkey	221	372	-	593
11	Spotted deer	6	10	-	16
12	Wild boar	Unidentified	-	-	-



## Annexure 2.6 (B) (Continue)

### Wildlife Population Estimation in Moti Bagh WLS

The third census of wild animals was done in month 03/2019. The following population was recorded-

S.No.	Species	Male	Female	Total
1	Blue bull	75	100	175
2	Monkey	1000	1800	2800
3	Hog deer	8	12	20
4	Jackal	40	60	100
5	Sambar	7	8	15
6	Spotted deer	2	4	6
7	Wild boar	80	120	200
8	Porcupine	Sex not identified		25
9	Civet Cat	Sex not identified		10
10	Common Indian Hare	Sex not identified		55
11	Monitor Lizard	Sex not identified		40
12	Mongoose	Sex not identified		60
13	Wild Cat	Sex not identified		18
14	Tortoise	Sex not identified		15
15	Squirrel	Sex not identified		200
16	Rat Snake	Sex not identified		30
17	Viper Snake	Sex not identified		25
18	Cobra Snake	Sex not identified		30
19	Krait Snake	Sex not identified		20
20	Python Snake	Sex not identified		20
17	Fruit Bat	Sex not identified		60
18	Stray Dog	40	60	100
19	Stray Cattle	100	150	250
20	Peacock	100	120	220

### Annexure 2.6 (C)

#### CHECK LIST OF WILD ANIMALS OF BIR MOTIBAGH WLS, PATIALA

Sr. No.	Common Name	Scientific Name
1	Blue bull	<i>Boselaphus tragocamelus</i>
2	Jackal	<i>Canis aureus</i>
3	Rhesus Monkey	<i>Macaca mulatta</i>
4	Common Indian Hare	<i>Lepus nigricollis</i>
5	Sambar	<i>Rusa unicolor</i>
6	Indian Porcupine	<i>Hystrix indica</i>
7	Common Mongoose	<i>Herpestes edwardsi</i>
8	Jungle Cat	<i>Felis chaus (Gille tenstaedt)</i>
9	Fruit Bat	<i>Rousettus leschenaulti</i>
10	Smaller Indian Civet	<i>Vivetracula indica</i>
11	Common house rat	<i>Rattus rattus</i>
12	Monitor Lizard	<i>Varanus spp.</i>
13	Common squirrel	<i>Funambulus pennantii</i>
14	Cobra	<i>Naja naja</i>
15	Krait	<i>Bungarus caeruleus</i>
16	Viper	<i>Daboia russelii</i>
17	Hog Deer	<i>Axis porcinus</i>
18	Wild boar	<i>Sus cristatus</i>
19	Spotted Deer	<i>Cervus axis</i>
20	Common Indian Hare	<i>Lepus ruficaudatus</i>
21	Mongoose	<i>Herpestes edwardsi</i>
22	Indian Porcupine	<i>Hystrix indica</i>
23	Peacock	<i>Pavo cristatus</i>

### Annexure 2.6 (C)

#### CHECK LIST OF WILD ANIMALS OF BIR MOTIBAGH WLS, PATIALA

Sr. No.	Common Name	Scientific Name
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6	Indian Porcupine	Hystrix indica
7	Common Mongoose	Herpestes adwardsi
8	Jungle Cat	Felis chaus (Gille tenstaedt)
9	Fruit Bat	Rousettus leschenaulti
10	Smaller Indian Civet	Vivetracula indica
11	Common house rat	Rattus rattus
12	Monitor Lizard	Varanus spp.
13	Common squirrel	Funambulus pennantii
14	Cobra	Naja naja
15	Krait	Bungarus caeruleus
16	Viper	Daboia russelii
17	Black Buck	Antilope cervicapra
18	Hog Deer	Axis porcinus

**His Highness' Govt., Patiala.**

*Prime Minister's Office*

Case No. 3147 of 1996.

*5-1993* | *313*  
Subject.

*Uniformity of Procedure regarding Trail of  
Under game Preservation Act.*

B. No. 129

F. No. 5981

No. of file on allied  
subject if any.

*Misc*

Lead..... *P.M.*  
Basta No..... *129*  
File No..... *5981*

Registered P. No. 1

ਰਜਿਸਟਰਡ ਪੀ. ਨੰ. ੧

੧ ਓ ਸਤਿਗੁਰ ਸਾਹਿਬ



# His Highness' Govt. Gazette Patiala.

ਹਿਸ ਹਾਈਨੈਸਿਸ ਗਵਰਨਮੈਂਟ ਗਜ਼ਟ ਪਟਿਆਲਾ

Published by Authority.

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Vol. No. 80.

PATIALA WEDNESDAY JETH 4, 1996 / MAY 17, 1989.  
G. N. S. 470.

No. 5.

## PART IV.

ACTS SANCTIONED BY HIS HIGHNESS SHRI 108 MAHARAJA DHIRAJ MOHINDER  
BAHADUR AND RULES FRAMED THEREUNDER.

Ministry of Law, (Legislation Branch), Patiala

### NOTIFICATION.

No. 1 Dated 19-1-96/1-5-89.

The Preservation of Faunae of Patiala Act, No. 1, of 1996, along with the notifications and the Rules thereunder, which have been sanctioned by His Highness Shri 108 Maharaja Dhiraj Mohinder Bahadur vide Ijlas-i-Khas order No. 184/8 AR 96, dated 24-4-89, are published hereinbelow for general information.

M. N. RAINA,  
Minister of Law,  
His Highness Govt., Patiala.

## The Preservation of Faunae of Patiala Act, 1996.

(No. 1 of 1996)

An Act to consolidate and amend the law relating to the protection and preservation of wild animals and wild birds.

### Preamble.

Whereas it is expedient to consolidate and amend the law relating to the protection and preservation of wild animals and wild birds, by making better provision therefor, it is hereby enacted as follows:—

### PART I.

#### Preliminary.

Short title, extent  
and commencement.

1. (i) This Act may be called the Preservation of Faunae of Patiala Act, 1996.
- (ii) It extends to the whole of the Patiala State.
- (iii) It shall come into force from the date of its publication in the Patiala Government Gazette.



2. The Patiala Game Preservation Act, 1936, and the rules thereunder, the Ijlas-i-Khas order No 59, dated 17th July, 1938 and any other order or Hidayat hitherto in force in the State regarding the protection and preservation of wild animals and wild birds are hereby repealed and all exemptions granted under any enactment, order or Hidayat hereby repealed shall be deemed to be withdrawn.
3. In this Act, unless there is anything repugnant in the subject or context:—
- 'Faunae' 'Animal'. (i) 'Faunae' means all *faeae naturae* and includes animal and "animal" means and includes wild animals and wild birds.
- 'Wild animal and wild bird.' (ii) The expression 'wild animal and wild bird' shall be deemed to include the flesh thereof and in the case of wild birds, the eggs, egg-shells, nests and the plumage thereof.
- 'Close Season' (iii) 'Close season' means, both with reference to the plains and the hills, the period from the 25th day of February to the 15th day of October every year.
- 'Hunting' (iv) 'Hunting' includes tracking for the purpose of discovering the lie of wild animals, driving or destroying animals or birds by snow, fire, or otherwise, poisoning carcasses of animals, shooting of game from motor vehicles, carts or vehicles drawn by horses, bullocks, buffaloes or camels, spearing and running deer and hare with dogs, laying of bombs for the destruction of wild animals, watching in the neighbourhood of water and salt-licks with intent to shoot or trap animals or birds resorting to such places, setting of snares or traps, taking out or destroying eggs of game birds, poisoning or dynamiting or netting of rivers and other waters and erection of dams, wires, or fixed traps.
- 'Permit Holder' (v) 'Permit holder' means any person who has in his possession a permit issued to him by name under section 7 of this Act.
- 'Exempted person' (vi) 'Exempted person' means any person who has been duly and specially authorised by the Ijlas-i-Khas under Section 12 of this Act to hunt or shoot without permit.
- 'Licence' (vii) 'Licence' means any licence issued under section 8 of this Act for the purposes indicated in Sections 19, 20 and 21.
- 'Special Licence' (viii) 'Special Licence' means any licence issued under Section 9 of the Act for the purposes indicated therein.
- 'Trophy' (ix) 'Trophy' shall denote any part of an animal, or substance or article produced from any such animal when dead, or the eggs, egg-shells, nests or plumage of any bird, which the Ijlas-i-Khas may notify under this Act. The expression 'trophy' shall not, however, include any trophy or part of a trophy which by a process of bonafide manufacture has lost its original identity.
- 'Zamindar' (x) 'Zamindar' shall, for the purposes of this Act, mean the actual cultivator of the soil.
- 'Prescribed' (xi) 'Prescribed' means prescribed by rules made by the Ijlas-i-Khas under this Act.

## PART II.

## Wild life Sanctuaries and Wild Life Reserves.

Power to declare any area to be a wild life sanctuary for wild animals and wild birds.

4. (1) The Ijlas-i-Khas may, by notification in the Patiala Government Gazette, declare any forest area to be a wild life sanctuary for wild animals or wild birds or both, and it shall be unlawful for any person to hunt, shoot, kill or capture any wild animal or wild bird or specified animal or bird, as the case may be, within such area at any time, except by or under the the control of the Ijlas-i-Khas.
- (2) The Ijlas-i-Khas may, by notification in the Patiala Government Gazette, alter the boundaries, ownership or character of any wild life sanctuary declared under sub-section (1).



(3) The Ijlas-i-Khas or any other authority appointed by the Ijlas-i-Khas in this behalf may provide facilities to the general public for observing the faunae in wild life sanctuaries.

Wild Life Reserves.

5. All forest areas in the State other than those which may be declared wild life sanctuaries under Sub-Section (1) of Section 4 of this Act, shall be treated as wild life reserves, in which it shall be unlawful for any person to hunt, shoot, kill or capture any wild animals or wild birds except under a permit or a special order granted under sections 7 and 12 of the Act respectively.

PART III.  
Faunae Preservation Authorities.

Faunae Preservation Authorities.

6. (1) In addition to the Ijlas-i-Khas, there shall be the following faunae preservation authorities, namely:—

- (i) Game Preservation Officer,
- (ii) Conservator of Hill Forests,
- (iii) District Faunae Committees.

Game Preservation Officer.

(2) The Game Preservation Officer shall mean the Officer appointed by the Ijlas-i-Khas to carry out the objects of this Act in the Plains.

Conservator of Hill Forests.

(3) The Conservator of Hill Forests shall mean the officer appointed by the Ijlas-i-Khas to carry out the objects of this Act in the Hills.

District Faunae Committee.

(4) A faunae committee shall be constituted by the Ijlas-i-Khas for each district to act in co-operation with the Game Preservation Officer or the Conservator of Hill Forests, as the case may be, for the purpose of carrying out the objects of this Act and shall be vested with such powers and duties as may be prescribed in the Rules framed under this Act.

PART IV.

Permits, licences and Exemptions.

Issue of permits.

7 (1) A permit to hunt and shoot, may on payment of such fee and subject to such rules and limitations as may be prescribed under this Act, be issued by the Game Preservation Officer or the Conservator of Hill Forests, as the case may be, with the approval of the Ijlas-i-Khas:

Provided always that the Ijlas-i-Khas may refuse a permit without assigning any reason therefor.

(2) The Ijlas-i-Khas shall specify the number of permits to be issued for each district.

Issue of licence under sections 19, 20 and 21.

8 (1) A licence required under sections 19, 20 and 21 of this Act shall be issued by the Game Preservation Officer or the Conservator of Hill Forests, as the case may be, specifying the limits within which it shall be valid, and on payment of such fee and subject to such rules and in such form as may be prescribed under this Act.

(2) For the purposes of this section, the area in respect of which a licence may be issued shall be divided into districts and each district shall be further sub-divided into sub-divisions.

Special licence.

9. Where in the opinion of the Ijlas-i-Khas it is desirable in the interests of scientific research or for the better protection or preservation of crops or other property, it may grant to any person a special licence subject to such restrictions and conditions as it may impose, entitling the holder thereof to do such acts which are by this Act declared to be otherwise unlawful.

Person in possession of specified wild animal or wild animal produce his licence when required.

10. Any person in possession of any wild bird or wild animal specified in Schedules A and B shall be required to produce his permit or licence within a week.

Cancellation and suspension of permits and licences.

(1) The Ijlas-i-Khas may, by notification in the Official Government Gazette, cancel or suspend all or any permits or licences throughout, or any part of the State.

(2) Any permit or licence may be suspended:

(i) by the Game Preservation Officer or the Conservator of Hill Forests, as the case may be, for reasons to be recorded in writing.



(ii) by any Magistrate before whom the holder of such permit or licence is convicted of an offence under this Act or the rules framed thereunder.

Provided always that the authority passing such orders of suspension shall in each instance submit the case to the Ijlas-i-Khas for final orders of cancellation or otherwise.

12. (1) Any person may, by special order, be authorised by the Ijlas-i-Khas to hunt or shoot in any area specified therein without a permit.

(2) The Ijlas-i-Khas may, at any time, in its discretion withdraw any special order granted under sub-section (1).

#### PART V

#### General Prohibitions.

Prohibition of hunting etc. without permit.

13. No person shall hunt, shoot, capture or otherwise destroy or attempt to do so, any wild animal or wild bird specified in schedule A anywhere in Patiala State except under a permit issued under the provisions of this Act or under a special order of the Ijlas-i-Khas under section 12 of this Act and to the extent and in the manner permitted thereby.

Provided that no permit holder or exempted person shall hunt, shoot, capture or otherwise destroy any wild animal or wild bird specified in the aforesaid schedule during closs season.

Hunting, shooting or catching of animals or birds not within the terms of permit.

14. A permit holder shall not hunt, shoot or catch, or allow to be hunted, shot or caught any wild animals or wild birds the hunting or shooting or catching of which is not permitted by the terms of the permit.

Prohibition of shooting of females etc.

15. No person shall hunt, shoot, capture or otherwise destroy females of wild goat or sheep or of deer or antelopes, or males of such animals without horns, or with horns in velvet.

Prohibition of shooting etc. in vicinity of sanctuaries.

16. No person shall hunt, shoot, capture or otherwise destroy any wild animal or wild bird in or within a radius of two miles of any area which may be declared to be a sanctuary under this Act.

Prohibition of shooting etc. of specified animals and birds.

17. No person shall hunt, shoot, capture or otherwise destroy any wild animal or wild bird specified in Schedule B annexed to this Act.

Power to issue notification prohibiting hunting etc. of particular animals.

18. Whenever the Ijlas-i-Khas has reason to believe that any particular kind of wild animal or wild bird is being largely destroyed for the sake of its skin, horn or plumage and needs special protection, it may, by notification, in the Patiala Government Gazette, prohibit the hunting, shooting or capture of such animal or bird.

Possession and capture of specified animals and birds except under licence.

19. Except for the purposes of game preservation or scientific research or State Zoo and to the extent and in the manner permitted and specified under a licence, no person shall capture or have in his possession any wild bird or wild animal specified in Schedules A and B.

Prohibition of keeping all birds except under licence.

20. No person shall keep all birds of any kind for the purpose of alluring other birds of its kind except under a licence and to the extent and in the manner permitted thereby.

Prohibition of coursing or hawking except under licence.

21. No person shall course or hawk except under a licence and to the extent and in the manner permitted thereby.

Prohibition of antiing birds and animals.

22. No person shall, with intent to evade the provisions of this Act, entice away from the Patiala State territory to a foreign territory any wild bird or wild animal included in Schedules A and B.

Use of certain methods of hunting etc. prohibited.

23. (1) No person shall use potash bombs for injuring, or killing any wild animals or wild birds or surround animals by fires for hunting purposes.

(2) The improper use of motor vehicles or other wheeled vehicles or air-craft (including air-craft lighter than air) shall be prohibited both (i) for the purpose of hunting, killing or capturing animals and (ii) in such manner as to drive, stampede or disturb them for any purpose whatsoever including that of filming and photographing.



(3) The Ijlas-i-Khas may, by notification in the Patiala Government Gazette, prohibit the use of all or any of the following methods of capturing or destroying wild animals, namely:—

- (a) the use of dazzling lights, flares, poisons or poisoned weapons, for hunting animals;
- (b) the use of nets, pits or enclosures, gins, traps or snares or of set guns and missiles containing explosives and poisons for hunting animals;
- (c) the drying of animals in snow;
- (d) the watching in the neighbourhood of water or salt-licks to shoot animals.

Restrictions on the manufacture, export, import and internal traffic, of articles from animals or trophies,

24. (1) The Ijlas-i-khas shall take any measures necessary to control and regulate in the State the internal, and the import and export, traffic in, and the manufacture of articles from animals or any part thereof or trophies with a view to prevent the import or export of, or any dealing in, animals or trophies other than such as have been originally killed, captured or collected in accordance with the provisions of this Act.

(2) The export of animals or trophies outside Patiala State shall be prohibited except under a certificate granted to the exporter by a competent authority prescribed by the Ijlas-i-khas.

#### PART VI. PENALTIES.

25. (1) Whoever hunts, shoots, captures or otherwise destroys any wild animal or wild bird specified in schedule A anywhere in Patiala State in contravention of the provisions of Section 13 shall, on conviction before a Magistrate, be punished with imprisonment for a term which may extend to 3 months, or with fine which may extend to Rs. 200/- or with both.

(2) Whoever, being a permit holder or an exempted person, hunts, shoots, captures or otherwise destroys any wild animal or wild bird specified in schedule A in contravention of the proviso to section 13 shall, on conviction before a Magistrate, be punished with imprisonment for a term which may extend to three months or with fine which may extend to Rs. 100/-, or with both.

26. Whoever, being a permit holder, hunts, shoots or captures, or allows to be hunted, shot or captured any wild animal or wild bird in contravention of Section 14, and

whoever hunts, shoots, captures or otherwise destroys females of wild goat or sheep or deer and antelopes, or males of such animals without horns, or with horns in velvet, in contravention of the provisions of section 15;

shall, on conviction before a Magistrate, be punished with imprisonment for a term which may extend to one month or with fine which may extend to Rs. 50/-, or with both.

27. Whoever commits any of the following offences, namely:—

- (a) hunts, shoots, captures or otherwise destroys any wild animal or wild bird in, or within a radius of two miles of any sanctuary in contravention of the provisions of Section 16;
- (b) hunts, shoots, captures or otherwise destroys any wild animal or wild bird in contravention of the provisions of Section 17;

shall, on conviction before a Magistrate, be punished with imprisonment for a term which may extend to three months, or with fine which may extend to Rs. 200/-, or with both.

28. Whoever commits a breach of the provisions of this Act shall where no express provision is made in this Act for the punishment of such an offence, be punishable with imprisonment for a term which may extend to one month, or with fine which may extend to Rs. 50/-, or with both.

29. Where an offender is sentenced to a fine under any of the foregoing sections, it shall be competent to the court which sentences such offender to direct by the sentence that, in default of payment of

For breach of Section 13.

For breach of sections 14 and 15.

For breach of sections 16 and 17.

Punishment for offences not specifically provided in the Act.

Sentence of imprisonment for non-payment of fine.



the fine, the offender shall suffer imprisonment for a term not exceeding one fourth of the term of imprisonment which is the maximum fixed for the offence and such imprisonment shall be in excess of any other imprisonment to which he may have been sentenced.

Confiscation of any thing used in the commission of an offence.

30. Notwithstanding anything hereinbefore contained, the convicting Magistrate, on conviction of any person for an offence under this Act, may in addition to any other penalty imposed, confiscate the arms, net, trap or snare, used in the commission of such offence, directing the arms to be sent to the ASLAHKHANA and the net, trap or snare, to the Game Preservation Officer or the Conservator of Hill Forests, as the case may be, for disposal in such manner as may be prescribed in this behalf.

#### PART VII.

#### MISCELLANEOUS.

Jurisdiction.

31. (1) All offences under this Act shall be triable by a court not inferior to that of the Magistrate of the second class;

Provided that the Game Preservation Officer or the Conservator of Hill Forests, as the case may be, shall be deemed to be a Magistrate of the second class for the purposes of this Act to try offences specified in Schedule C;

Provided further, that the jurisdiction of the Game Preservation Officer or the Conservator of Hill Forests, as the case may be, to try offences specified in schedule C, shall extend to the limits of the districts of Patiala and Kohistan respectively.

Procedure.

32. For the purposes of the Criminal Procedure Code, all offences under this Act shall be cognizable, non-compoundable and bailable and summons shall ordinarily be issued in the first instance.

Appeal or revision.

33. An appeal or revision against any order passed under section 31 shall lie in the manner laid down in the Code of Criminal Procedure in force in the State.

Operation of other laws not barred.

34. Nothing in this Act shall be deemed to prevent any person from being prosecuted under any other law for any act or omission which constitutes an offence against this Act or the rules made under it, or from being liable under such other law to any higher punishment or penalty than that provided by this Act:

Provided always that no person shall be punished twice for the same offence.

Abetment and attempts.

35. Whoever abets within the meaning of the Penal Code, the commission of any offence punishable under this Act, or attempts to commit any such offence and in such attempt does any act towards commission of the same, shall be punished as if he had committed the offence.

Savings.

36. (1) Nothing contained in this Act shall prejudice:—

- (i) the right to kill or capture in good faith, any wild animal or wild bird by any person in defence of himself or of any other person; or
- (ii) the right of any zamindar to kill any animal specified in schedule D within the precincts of his field, which may cause damage to his crops, subject to such conditions as may be prescribed in the rules framed in this behalf; or
- (iii) the right to kill, capture, sell, purchase or possess for scientific, public or State purposes any wild animal or wild bird by or on behalf of the State authorities; or
- (iv) the right of the State to permit the hunting, killing or capturing of any species (a) in time of famine, (b) for the protection of human life, public health or domestic stock, (c) for any requirement relating to public order.

Trophies of wild animals found dead etc., to be the property of the State.

37. All trophies of wild animals found dead, or accidentally killed or killed in defence of any person shall be the property of the State and shall be disposed of in such manner as may be prescribed in this behalf.

Power to add to or exclude from schedules.

38. The IJlas-i-khas may, by notification published in the Patiala Government Gazette:

- (i) add to or exclude from Schedules A, B and D any wild animal or wild bird; and
  - (ii) add to or exclude from Schedule C any offence;
- Subject to such conditions as it may impose in each case.

Power to make rules.

39. (1) The Ijlas-i-khas may make rules for the purpose of carrying into effect the provisions of this Act; and may from time to time repeal, alter and add to such rules.

(2) In particular and without prejudice to the generality of the foregoing power, the Ijlas-i-khas may make rules for all or any of the following purposes, namely:

- (a) to prescribe the strength of Faunae Committees and the manner in which the members shall be appointed and to define the powers and duties of such committees;
- (b) to prescribe the number of permits to be granted for each district;
- (c) to prescribe the form in which, and the terms and conditions under which a permit or licence may be granted;
- (d) to prescribe the fees to be charged for any permit or licence;
- (e) to prescribe in the permit or licence the number and size of any species of wild bird or wild animal that may be killed, captured or possessed under a permit or licence;
- (f) to provide for the confiscation of any wild bird or wild animal killed or captured, in contravention of the provisions of this Act;
- (g) to prescribe the person or class of persons who may require the production of a licence under section 10;
- (h) to prescribe the authority competent to grant an export certificate;
- (i) to prescribe the manner in which the trophies of wild animals found dead or accidentally killed or killed in defence of any person shall be disposed of;
- (j) to prescribe the manner in which any article confiscated under section 30 of the Act shall be disposed of;
- (k) to prescribe the conditions subject to which a zamindar may kill wild animals specified in schedule D.

(3) In making a rule under this section, the Ijlas-i-Khas may direct that a breach of it shall be punishable with fine which may extend to fifty rupees, or in default with imprisonment of either description for a term which may extend to one month.

(4) All rules made under this section and all repeals and alterations thereof shall be published in the Patiala Government Gazette and shall come into force from the date of their publication.



**SCHEDULE A**  
(See Section 13).

Schedule of wild animals and wild birds which may be hunted, shot or captured or otherwise destroyed under a permit or special order and to the extent permitted thereby.

1	2	3	4
Serial No.	Scientific Name.	English Name.	Vernacular Name.
		<b>Animals.</b>	
1	<i>Sus Eristatus</i>	The Indian Wild Boar	Suar, budh.
2	<i>Boselaphus tragocamelus</i>	Nilgai or Blue Bull	Nilgao, Nilgai, lilgai, bangai, rauja, gond, bain.
3	<i>Antilope cervicapra</i>	Indian Antelope or Black Buck	Hiran, haran, kala hiran, mirag, modain, kalhra.
4	<i>Cerbus porcinus</i>	The Hog Deer	Para, pahra, parha.
5	<i>Lepus ruficaudatus</i>	The Common Indian Hare	Khargosh, seru, pharru, susya, sassu, susa, sasa, seha, saiyah, sahu.
6	<i>Lepus Dayanus</i>	The Sind Hare	do.
7	<i>Lepus hypsibius</i>	The Upland Hare	do.
8	<i>Equus hemionus</i>	The wild Ass	Gorkhar, ghur, ghuran, jungli khota.
		<b>Birds.</b>	
9	<i>Coturnix coturnix</i>	The Common Quail	Bater, bara bater, gagas bater, khair bater, china bater.
10	<i>Anser anser</i>	The Grey Lag Goose	Sona, kurria, sona, hans, hans raj, mug.
11	<i>Anser Brachyrhynchts</i>	The Pink-footed Goose	...
12	„ <i>Indicus</i>	The Bar-headed Goose	Hans, karey hans, raj hans, mag, birwa.
13	<i>Cygnus cygnus</i>	The Whooper (swan)	...
14	„ <i>Bewicki</i>	Bewick's Swan	...
15	„ <i>minor</i>	Alpheraky's Swan	...
16	„ <i>olor</i>	The Mute Swan	...
17	<i>Tadorna tadorna</i>	The Sheldrake	Safed chakwa, shah chakwa, safed surkhab.
18	<i>Casarca ferruginea</i>	The Ruddy Sheldrake or Brahminy Duck	Surkhab, Chakwa, Chakwi, lal surkhab.
19	<i>Anas platyrhyncha</i>	The Mallard	Nilsir, nilrugi, murghabi.
20	<i>Eunetta falcata</i>	The Crested or Falcated Teal	...
21	<i>Marecapenelope</i>	The wigeon	Peasan, patari, chhota lal sir murghabi.
22	<i>Chaulelasmus streperus</i>	The Gadwall	Mila, bhuar, boykhur, murghabi.
23	<i>Nettion formosum</i>	The Baikal or Clucking Teal	Chhota murghabi, kerra putari, souchuruka, murghabi.
24	„ <i>Crecca</i>	The Common Teal	
25	<i>Defila acuta</i>	The Pintail	Sanh, Sink-par, murghabi.
26	<i>Querquedula querquedula</i>	The Garganey or Blue Winged Teal.	Caitwa, khira, putari, murghabi.

1	2	3	4
Serial No.	Scientific Name.	English Name.	Vernacular Name.
27	<i>Spatula</i>	The Shoveller	Tidari, purane, takerwala, ghira, murghabi.
28	<i>Marmaronetta angustirostris</i>	The Marbled Teal	...
29	<i>Netta rufans</i>	The Red-crested Pochard	Lal sir, murghabi.
30	<i>Nyroca ferina</i>	The Pochard or Sun Bird	Lal sir, burarnat, murghabi.
31	" <i>rufa</i>	The White-eyed Pochard or White Eye	Karchiya, burar mada, laf'igri murghabi.
32	" <i>Marila</i>	The Scaup	...
33	" <i>Fuligula</i>	The Tufted Pochard	Dubaru, abtak, rohvara, murghabi
34	<i>Glaucionetta clangula</i>	The Golden Eye	...
35	<i>Erismatura leucocephala</i>	The White-headed or Stiff-tailed Duck	...
36	<i>Mergellus albellus</i>	The Smew	...
37	<i>Mergus merganser</i>	The Goosander	...
38	<i>Mergus serrator</i>	The Red-breasted Merganser	...
39	<i>Sarkidiornis melanotos</i>	The Nukta or Comb Duck	Nukta, murghabi.
40	<i>Asarcornis scutulatus</i>	The White-winged Wood Duck	...
41	<i>Rhodonessa caryophyllacea</i>	The Pink-headed Duck	Lal sira, gulab sira, murghabi.
42	<i>Nettapus coromandelianus</i>	The Cotton Teal.	Giri, girria, girya, murghabi.
43	<i>Dendrocygna javanica</i>	The Lesser Whistling Teal	Sili, silahi, murghabi.
44	" <i>Fulva</i>	The Large Whistling Teal	Bara silahi, murghabi.
45	<i>Anas pœcilorhyncha</i>	The Indian Spotbill or Grey Duck.	Garpai, gugral, bata, batak, humjur, murghabi.
46	<i>Streptopelia chinensis</i>	The Indian Spotted Dove	Ghuggi, fakhta, tottru, chhota fakhta.
47	<i>Streptopelia decaocto</i>	The Indian Ring Dove.	Ghuggu, fakhta, ghaggi, panduk, geyra.
48	<i>Pterocles orientalis</i>	The Large Imperial or Black-bellied Sandgrouse	Bhattitar, bakht, bakhtitar, bhata, bhalar, siah sina, bhotitar, dukru, mindru, chhota bhattitar, chittidar, Bhattidar, churar.
49	" <i>Indicus</i>	The Painted Sandgrouse	
50	" <i>Caronatus</i>	The Coronetted Sandgrouse	
51	" <i>Alchata</i>	The Large Pin-tailed sandgrouse	
52	" <i>Exustus.</i>	The Common Indian Sandgrouse	Kuk, kaling, korinda kung.
53	<i>Syrrhaptes tibetanus</i>	The Tibetan Sandgrouse	
54	<i>Pavo cristatus</i>	The Common Peafowl	Mor, manjhr, bodar.

1	2	3	4
Serial No.	Scientific Name.	English Name.	Vernacular Name.
55	<i>Pevdicula asiatica.</i>	The Bush Quail	Lowa, lawa, batol, batoli, choonuk.
56	<i>Ammoperdix griseogularis</i>	The See-see Partridge.	Sisi, sasi, sussi, kakki, chaukla.
57	<i>Francolinus francolinus</i>	The Black Partridge	Kala titar, koddi titar.
58	" <i>Pondicerianus</i>	The Grey Partridge.	Titar, tittur, bagga titar, patila.
59	<i>Turnix dussumieri.</i>	The Little Button Quail.	Lawa, chhota lawa.
60	" <i>Maculatus.</i>	The Indian Button Quail.	
61	<i>Porphyrio Pliocephalus.</i>	The Indian Purple Moor (hen)	Kaim, kalim, khima.
62	<i>Fulica atra atra.</i>	The Common Coot.	Khuskal, dasari, thekari, kali mur- ghabi.
63	<i>Anthropoides virgo.</i>	The Demoisella crane.	Karkarru, chhota kunj.
64	<i>Tetrax tetrax.</i>	The Little Bustard.	Chhota tilur, karwanak.
65	<i>Choriotis nigriceps.</i>	The Great Indian Bustard.	Khalmor, tugdar, gurain, tilur.
66	<i>Chlamydotis undulata.</i>	The Honbara or Macqueen's Bustard.	Houbara, tilur, khermora, karwa- nak.
67	<i>Sypheotides Indica.</i>	The Lesser Florican or Likh.	Likh, Chhota charat, karwanak.
68	<i>Burhinus oedienemus</i>	The Stone Plover.	Lambi karwanak, hasri, abl.
69	<i>Esacus recurvirostris.</i>	The Great Stone Plover.	
70	<i>Cursorius coromandelicus</i>	The Indian Courser.	Nukri.
71	" <i>Cursor.</i>	The Eastern Cream-colour- ed Courser.	
72	<i>Vanellus vanellus.</i>	The Lawping, Pee-wit or Green Plover.	Bodhur.
73	<i>Pluvialis Apricarius.</i>	The Golden Plover.	
74	" <i>dominicus.</i>	The Eastern Golden Plover.	
75	<i>Numenius arquata.</i>	The Curlew.	Burra chaha, sumkukri chaha, Jalakri.
76	<i>Capella nemoricola.</i>	The Wood Snipe.	
77	" <i>Solitaria.</i>	The Eastern Solitary Snipe	Chaha, jalakri.
78	" <i>Gallinago.</i>	The Common or Fantail Snipe.	
79	" <i>Stenura.</i>	The Pin-tail Snipe.	
80	" <i>Media.</i>	The Great Snipe.	Chhota chaha.
81	<i>Lymnocyptes minima.</i>	The Jack Snipe.	
82	<i>Rostratula bengalensis.</i>	The Painted Snipe.	Rangila chaha, chabarcha.
83	<i>Crocopus phoenicopterus</i>	The Green Pigeon.	Kandel, harrial, kokla, slatta, nilsir, guggu, गया.
84	<i>Sphenocercus sphenurus</i>	The Wedge-tailed Green Pigeon.	



1	2	3	4
Serial No.	Scientific name.	English name.	Vernacular name.
85	<i>Columba livia</i> .	The Blue Rock Pigeon.	Kabutar.
86	" <i>rupestris</i> .	The Blue Hill Pigeon.	
87	<i>Columba oenas</i> .	The Eastern Stock Pigeon or Dove.	Salara Kabutar, kamar kular.
88	<i>Columba leuconota</i> .	The White-bellied or Snow Pigeon.	Bhusli, bujul, bhujri, rapia, charan luku.
89	<i>Dendrotreron hodgsonii</i>	The Speckled Wood-Pigeon	Kamlowa, chittal kabutar.
90	<i>Columba palumbus</i> .	The Eastern Wood-Pigeon or Ring Dove.	Dhond, Kabutar.

## SCHEDULE B.

(See section 17.)

Schedule of wild animals and wild birds which shall not be hunted, shot, captured or otherwise destroyed under the Act

Animals.			
1	<i>Felis pardus</i>	The Leopard or Panther	Bagh, berag, golbagh, chitra, purra, unagh, mirg.
2	" <i>lynx</i>	The Lynx	Siyah-gosh, ekh, patsalan, tsogda.
3	<i>Viverra zibetha</i>	The Large Indian Civet	Khatas, kastura, mooskbilla, bansokar.
4	<i>Mustela flavigula</i>	The Indian Marten or Pine Marten	Chitralla, turala, shikra, dhinkloo.
5	<i>Ursus ussuratus</i>	The Himalayan Black Bear	Bhalu, kala bhálu, richh.
6	<i>Ovis vignei</i>	Urial	Uriyal, huryial, sha, kohi-dumba, koch, gad, garahd.
7	<i>Ovis hodgsoni</i> (misnamed <i>Ovis Ammon</i> )	The Great Tibetan Sheep	Nian.
8	<i>Ovis namensis</i>	Bharal, or Blue Sheep	Miatu, bhara, bhara, wart.
9	<i>Capra sibirica</i>	The Himalayan Ibex	Trangol, katrol, tangrol, skin.
10	<i>Hemitragus jemlaicus</i>	Thar	Tahr, thar, mishi, meli, sbi, karth, korth, kart.
11	<i>Nemorhaedus bubalinus</i>	Serow, or Himalayan Goat, Antelope	Goa, yamu, emru, aimu, sarao, jangal.
12	<i>Cames goral</i>	Goral	Pij, ban-bakri, ghorar, gurrur, ghoral, ghural, gadh, sar.
13	<i>Pantholops hodgsoni</i>	Tibetan Antelope	Tsus, chus, chiru, chuhu.
14	<i>Moschus moschiferus</i>	The Musk Deer	Kastura, raunsa, hina, bijri, rochh, rachwi, ran-whin.
15	<i>Cervulus muntjac</i>	The Barking Deer	Kakar or kakkar.
16	<i>Cervus axis</i>	The Spotted Deer	Chital, chittal, chitra, jhank, pagal hiran, charba hiran.
17	<i>Tetracerus quadricornis</i>	Four-horned Antelope	Chambaha, chamba, d d.

1	2	3	4
Serial No.	Scientific name.	English name.	Vernacular name.
18	<i>Gazelle bennetti</i>	Indian Gazelle or Ravin Deer	Chinkara, chikara, kalpunch, ask, abu, ratta, gora hiran, chitka hiran, chhatika.
19	<i>Cervus unicolor</i>	The Sambhar	Sambar, samar, sambhar, barasingh.
20	<i>Ursus arctus</i>	The Red Bear, or Snow Bear	Bhraboo, lagru, rotta bhalu, rata bhalu, bhrud, shaham, lal bhalu, lal richh.
21		Red and Yellow Deer	
22		Rowbucks	
		Birds.	
23	<i>Gallus bankiva</i>	The Common Red jungle-fowl	Jungli murgli, ban kukar, kukar.
24	<i>Catreus wallichii</i>	The Chir Pheasant	Chir, chihir, chaman, chair.
25	<i>Cereornis macropodus</i>	The Pukras or Koklas Pheasant	Koklas, khwakta, phokras plachh, Khwakah.
26	<i>Gennæus hamiltonii</i>	The White-crested kalij	Kolsa, kalij, kalesha.
27	<i>Lophophorus impejanus</i>	The Impeyan Pheasant or Monal	Monal, karrari, nil, bod, narel, neroala, nilwal.
28	<i>Tragopan melanocephalus</i>	The Western Horned Pheasant	Phulgar, jaji, jijurana jowar.
29	<i>Excalfactoria chinensis</i>	The Blue-breasted Quail	Bater, bara bater, khaira bater, china bater.
30	<i>Arborophila torqueola</i>	The Hill Partridge	Piora, pemra, pahari titar, ban titar.
31	<i>Alectoris græca</i>	The Chukar or Chikor	Chukor, chukra, chakur, khonk, kaunk, kakh, chahru.
32	<i>Tetraogallus himalayensis</i>	The Himlayan Snow Cock	Golind, golaund, lip lipya.
33	" <i>Tibetanus</i>	The Tibetan Snow Cock	Golind, golaund, gourkagu.
34	<i>Lerwa lerwa</i>	The Snow Partridge	Ram chakru, ram chpkor, tillu, dhedu, chakru.
35	<i>Otis tarda</i>	The Great Bustard	Khalmor, tugdar, gurain, tilur, bara tugdar.
36	<i>Scolopax rusticola</i>	The Wood-cock	Sjmkukri, jalakri, julkukri, sumkukri.

## SCHEDULE C.

(See section 31)

Schedule of offences under the Act which may be tried by the Game Preservation Officer or the Conservator of Hill Forests, as the case may be.

Serial number.	Offence.
1	Keeping call-birds in contravention of the provisions of section 20.
2	Coursing or hawking in contravention of the provisions of section 21.
3	Enticing away any wild animal or wild bird from Patiala State in contravention of the provisions of section 22.



**SCHEDULE D.**

(See section 36 (ii))

Schedule of wild animals which may be killed by Zamindars for the bonafide protection of their crops.

1	2	3	4
Serial No.	Scientific name.	English name.	Vernacular name.
1	<i>Sus cristatus.</i>	The Indian Wild Boar.	Suar, budh.
2	<i>Boselaphus tragocamelus</i>	Nilgai or Blue Bull.	Nilgai.
3	—	Deer.	Hiran.

**NOTIFICATION.**

No. 1.

In exercise of the powers conferred by sub-section (1) of Section 4 of the Preservation of Fauna Act, 1906, the IJas-i-Khas is pleased to declare the following forest areas in the State as Wild Life Sanctuaries in which all hunting, shooting, killing or capturing of any wild animal or wild bird shall be unlawful except by or under the control of the IJas-i-Khas:—

1. The entire hill area in Patiala State from Pinjora Forests upwards.
2. Bir Motibagh.
3. Bir Bhruntheri.
4. Bir Samaur.
5. Bir Bahadurgarh.
6. Bir Khuli (grass farm).
7. Bir Phallauli.
8. Field Tilla's Pastura.
9. Bhupinder Sagar.
10. Ghuram Jahoos.
11. Dhosie Hills (Narnaul).

**NOTIFICATION**

No. 2.

In exercise of the powers conferred by Section 8 of the Preservation of Fauna of Patiala Act, 1906, the IJas-i-Khas is pleased to divide the area in respect of which a licence under sections 19, 20 and 21 may be issued, into the following districts and sub-divisions:—

- |                      |                        |
|----------------------|------------------------|
| 1. Patiala District. | 1. Tehsil Patiala.     |
|                      | 2. Tehsil Raipura.     |
| 2. Bassi District.   | 1. Tehsil Sirhind.     |
|                      | 2. Tehsil Dhuri.       |
| 3. Sunam District.   | 1. Tehsil Sunam.       |
|                      | 2. Tehsil Bhawanigarh. |
|                      | 3. Tehsil Nurwana.     |
| 4. Barnala District. | 1. Tehsil Barnala.     |
|                      | 2. Tehsil Bhatinda.    |
|                      | 3. Tehsil Mansa.       |
| 5. Narnaul District. | 1. Tehsil Narnaul.     |

**Preservation of Faunae of Patiala Rules, 1996.**

In exercise of the powers conferred by Section 39 of the Preservation of Faunae of Patiala Act, 1996, the Ijlas-i-Khas is pleased to make the following rules:—

**Rules.**

- Short title.** 1. These rules may be called the Preservation of Faunae of Patiala Rules, 1996.
- Commencement.** 2. They shall come into force from the date of their publication in the Patiala Government Gazette.
- Definitions.** 3. In these rules, unless there is anything repugnant in the subject or context:—
- (a) "The Act" means the Preservation of Faunae of Patiala Act, 1996.
  - (b) "Issuing Authority" means the Game Preservation Officer for the plains and the Conservator of Hill Forests for the hills.
  - (c) "Committee" means a District Faunae Committee appointed to carry out the purposes of the Act.

**PART I.**

**Constitution and the powers and functions of District Faunae Committees.**

- Constitution of the District Faunae Committee.** 4. A District Faunae Committee shall consist of the Nazim as President and four members of whom two shall be officials and two non-officials.
- Term of office of members.** 5. The terms of office of all other members shall be two years.
- Removal of members.** 6. The Ijlas-i-Khas may at any time remove any member of a Committee who is in its opinion unfit to act or persistently remiss in the discharge of his duties.
- Conduct of business.** 7. (a) Every Committee shall meet at such intervals as may be considered necessary by the President.  
(b) The quorum of a meeting of the Committee shall consist of three members including the President.
- Functions and powers of the Committee.** 8. The Committee shall:—
- (i) advise the Issuing Authority about the protection of the Faunae of the district;
  - (ii) explain to the zamindars the extent and the conditions subject to which wild animals causing damage to crops may be killed;
  - (iii) see that the provisions of the Act and the Rules thereunder are duly observed by the zamindars, permit holders, licensees and exempted persons; and
  - (iv) perform such other functions and exercise such other powers as may be assigned to it under the Act.

**PART II.**

**Permits and Licences.**

9. The number of permits to be issued for any one district shall not exceed the limit specified in column 3 of the following table:—

Table.

Serial No.	Name of the District.	Maximum number of permits to be issued.
1.	Patiala District	30
2.	Bassi District	15
3.	Sunam District	30
4.	Barnala District	30
5.	Narnaul District	20
6.	Kohistan District	...

Maximum number of permits to be issued for each district.

Applications for permits and licences.

10. Every person who wishes to obtain a permit or licence under the Act shall apply in writing to the Issuing Authority and shall in such application furnish the following particulars:—

- (a) Name;
- (b) Father's name;
- (c) Residence;
- (d) Occupation;
- (e) Area for which a permit or licence is required;
- (f) The number and species of wild animals or wild birds sought to be hunted, shot, captured, possessed, hawked, coursed etc., etc.;
- (g) Period for which a permit or licence is required;
- (h) Number of retainers and dogs to accompany;
- (i) Whether licensed under, or exempted from, the Patiala Arms Act, 1994;

and such other particulars as may be required to enable such permit or licence to be granted.

Permit under Section 7 to be issued in Form I.

11. (1) A permit under section 7 of the Act shall be granted in Form I appended to these rules:

provided that a permit to shoot shall be given to such persons only as are entitled to carry firearms for sport under the Patiala Arms Act, 1994, or to those persons who are exempted from the operation of that Act.

Retainers not permitted to shoot without a permit.

(2) Retainers shall not be permitted to shoot unless they are in possession of a permit under the Act, for which the proper fee has been paid.

Cancellation of permit.

(3) The cancellation of a licence or the withdrawal of an exemption under the Patiala Arms Act, 1994 shall automatically cancel the permit to shoot granted under the Act.

Licence under Section 8 to be issued in Form II.

12. (1) A licence under section 8 of the Act shall be granted in Form II appended to these rules.

Licence under Section 9 to be issued in Form III.

(2) A special licence under section 9 of the Act shall be issued in Form III appended to these rules.

Permit or licence to be subject to the provisions of the Act and rules thereunder.

13. (1) Every permit or licence shall be subject to the provisions of the Act and the Rules thereunder.

Language of permits or licences.

(2) Every such permit or licence shall be printed in English or in Vernacular as the Issuing Authority may direct.

Duration of permit or licence.

14. (1) Save as herein otherwise provided, every permit or licence shall, unless previously cancelled, be in force for such period and expire on such day as the Issuing Authority may enter in the appropriate Form.

Permit or licence to be returned on expiry.

(2) On the expiry of any permit or licence the permit holder or the licensee shall return it to the Issuing Authority and shall record on its back the number of wild animals or wild birds hunted, shot, killed, captured, possessed, coursed, or hawked by him, as the case may be.

Fees payable for permits or licences.

15. (1) Every permit or licence granted under the Act shall be chargeable with the following scale of fees:—

- |   |          |
|---|----------|
| (a) (i) Permit for a full season.   | Rs. 55/- |
| (ii) Permit for one fortnight.  | Rs. 25/- |
| (iii) Permit for one week.  | Rs. 10/- |
| (b) (i) Licence under Sec. 19 of the Act for one year.                      | Rs. 10/- |
| (ii) Licence under Sec. 20 of the Act per season.                           | Rs. 10/- |
| (iii) Licence for coursing under Section 21 of the Act per pair per season. | Rs. 10/- |
| (iv) Licence for hawking under Section 21 of the Act per season.            | Rs. 20/- |

Exemption from payment of fee

(2) The Jilasa-i-Khas may, by general or special order, grant exemption from, or reduction of, the fee payable in respect of any permit or licence.



Been payable for  
duplicates.

16. Where a permit or licence granted under the Act is lost or accidentally destroyed, the Issuing Authority may grant a duplicate:—

- (a) Where the permit or licence was granted without payment of any fee, free of all fee; or
- (b) in any other case, on payment of a fee of Rs. 2/- where the duplicate of a permit is required, or, on payment of a fee of one rupee, where the duplicate of a licence is required.

Discretion and control  
of issuing authority.

17. The Issuing Authority may refuse to grant a licence or the duplicate of a permit or licence:

Provided that the applicant may appeal to the Ijlas-i-Khas whose order in this behalf shall be final.

Collection of fees.

18. All fees payable under rule 15 or rule 16 shall be paid in cash or in such other manner as the Ijlas-i-Khas may direct.

Refund of fees.

19. Where a fee of not less than rupee one payable under these rules has been realised, and the application for the grant of a permit or licence or the duplicate thereof is refused, the value of the fee shall be refunded upon application for the same being made within three months from the date of such refusal.

Permits or licences  
shall be non-transfer-  
able.

20. (1) Every permit or licence shall be issued in the name of one person only and shall not be transferable.

Cancellation of per-  
mit or licence.

(2) The death of a permit holder or licensee shall automatically cancel this permit or licence.

Register of permits  
or licences.

21. The Issuing Authority shall maintain a register in Form T appended to these rules of all permits and licences issued under the Act and all permits and licences shall be entered therein as soon as they are issued.

### PART III.

#### General Rules.

Persons authorised  
to demand production  
of permits or licences.

22. The following persons are authorised to require the production of a permit or licence under Section 10 of the Act:—

- (a) All Gazetted Officers, Civil or Military, in the service of the State;
- (b) All Police officers not below the rank of a Sub-Inspector;
- (c) All Forests Officers not below the rank of a Range Officer;
- (d) All Fisheries Officers not below the rank of a Range Officer;
- (e) All Magistrates including Honorary Magistrates;
- (f) Any member of the District Fauna Committee; and
- (g) Any other persons specially authorised by the Ijlas-i-Khas in this behalf.

Disposal of animals  
captured in contra-  
vention of the Act.

23. Where any animal is captured in contravention of the provisions of the Act, it shall forthwith be delivered to the Committee and the Committee, shall, as soon as possible, send the same to the Game Preservation Officer or the Conservator of Hill Forests within whose jurisdiction the animal was captured.

Disposal of animals  
killed in contraven-  
tion of the Act or  
killed in defence of  
person.

24. Where any animal is killed in contravention of the provisions of the Act, or the trophy of any dead animal or of any animal accidentally killed or killed in defence of person is found, it shall be entrusted to the Committee. The Committee shall forthwith send it to the Game Preservation Officer or the Conservator of Hill Forests within whose jurisdiction it was killed or found, who shall order the flesh to be disposed of or destroyed as the circumstances of the case may admit and the skin, antlers, horns or other trophies to be kept deposited; provided that, where the Committee is of the opinion that the dead body of the animal shall become useless by the time it reaches the Game Preservation Officer or the Conservator of Hill Forests, as the case may be, it may order the flesh to be disposed of or destroyed as the circumstances of the case may admit, and send the skin, antlers, horns or other trophies to any of the said officers concerned.

Disposal of articles  
confiscated under sec-  
tion 80 of the Act.

25. (1) The convicting Magistrate shall send any articles confis-  
cated under section 80 of the Act to the Game Preservation Officer or  
the Conservator of Hill Forests within whose jurisdiction the offence  
was committed.

(2) The Game Preservation Officer or the Conservator of Hill  
Forests may authorise any person to dispose of the confiscated articles  
by public auction at such time and place and subject to such conditions  
as he may direct;

Provided that if any such articles are, in the opinion of the Game  
Preservation Officer or the Conservator of Hill Forests, as the case may  
be, not likely to fetch a reasonable price if sold, as aforesaid, they may  
be either destroyed or disposed of in such manner as he thinks fit,  
giving reasons for not selling by auction.

(3) The sale proceeds shall be deposited in the State Treasury.

Zemindar shall not  
kill specified animals  
for commercial pur-  
poses.

26. No Zemindar shall kill or cause to be killed any animal  
specified in schedule D of the Act for commercial purposes, that is, for  
selling flesh, skins, horns, bristles, etc., etc.

Zemindar to observe  
close season.

27. Except for blue bull and wild boar, the zamindars shall  
observe close season for other animals specified in Schedule D of the  
Act.

Deposit of skins  
with the Tehsildar.

28. (1) The zemindar shall deliver the skin of any specified  
animal killed by him to the Tehsildar concerned or to such other  
officer as may be authorised by the Tehsildar in this behalf.

(2) The Tehsildar shall send the skins deposited with him to the  
Game Preservation Officer or the Conservator of Hill Forests within  
whose jurisdiction the animal was killed.

Breach of Rules.

29. Any breach of these rules, other than a breach which is an  
offence punishable under the Act, shall be punishable with fine which  
may extend to fifty rupees or in default with imprisonment of either  
description for a term which may extend to one month.

FORM I.

(Coat of Arms)

(See Section 7, and rule 11)

Permit to hunt and shoot under Section 7 of the Preservation of Faunae of Patiala Act, 1996.

Serial Number of permit \_\_\_\_\_

Date of issue \_\_\_\_\_

- 1. Name, description and residence of permit holder. \_\_\_\_\_
- 2. District for which the permit has been granted. \_\_\_\_\_
- 3. Period for which the permit is valid \_\_\_\_\_
- 4. Name, number and species of wild animals and wild birds permitted to be shot etc. \_\_\_\_\_
- 5. Number of retainers and dogs to accompany. \_\_\_\_\_
- 6. Special instructions. \_\_\_\_\_

Signature \_\_\_\_\_

Game Preservation Officer.  
Conservator of Hill Forests.

Conditions.

This permit is granted subject to all the provisions of the Preservation of Faunae of Patiala Act and the rules framed thereunder.

FORM II.

(Coat of Arms.)

[ See Section 8 and rule 12 (1) ]

Serial No. of licence \_\_\_\_\_

Date of issue \_\_\_\_\_

Licence to:—Possess or capture any wild bird or wild animal under Section 19 of the Preservation of Faunae of Patiala Act, 1996, or  
Keep call birds under Section 20 of the Preservation of Faunae of Patiala Act, 1996, or  
Course under section 21 of the Preservation of Faunae of Patiala Act, 1996, or  
Hawk under Section 21 of the Preservation of Faunae of Patiala Act, 1996.

- 1. Name, description and residence of licensee \_\_\_\_\_
- 2. Sub-Division for which the licence is granted. \_\_\_\_\_



- 3. Period for which the licence is granted \_\_\_\_\_
- 4. Name, number and species of wild birds licenced to be captured or possessed \_\_\_\_\_  
\_\_\_\_\_
- 5. Name, number and species of birds to be kept, or coursed or hawked. \_\_\_\_\_  
\_\_\_\_\_
- 6. Special instructions. \_\_\_\_\_  
\_\_\_\_\_

Signature \_\_\_\_\_

Game Preservation Officer,  
Conservator of Hill Forests.

Conditions.

This licence is granted subject to all the provisions of the Preservation of Faunae of Patiala Act and the Rules framed thereunder.

FORM III.

(Coat of Arms)

[See Section 9 and Rule 12 (2).]

Serial No. of _____	Date of _____
Special Licence _____	Issue _____

Special Licence to\* \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- 1. Name, description and residence of licensee \_\_\_\_\_  
\_\_\_\_\_
- 2. Area for which the licence is granted \_\_\_\_\_
- 3. Period for which the licence is valid \_\_\_\_\_
- 4. Name, number and species of wild animals or wild birds permitted to be shot, captured, possessed etc. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 5. Special instructions \_\_\_\_\_  
\_\_\_\_\_

Signature \_\_\_\_\_

Game Preservation Officer,  
Conservator of Hill Forests.

Conditions.

This special licence is granted subject to all the provisions of the Preservation of Faunae of Patiala Act and the Rules framed thereunder.

\* Note the purpose here for which the special licence is granted.

FORM IV  
(See Rule 21)

Register of permits or licences issued under the Preservation of Fauna of Patiala Act, 1906.

Date of issue.	Name of applicant and father's name.	Address in full.	No. and date of licence under the Patiala Arms Act or exemption order.	No. and particulars of permit or licence.	Fees recovered.	District or sub-division for which the permit or licence is granted.	Signature of Authority issuing the permit or licence.	Remarks.
1	2	3	4	5	6	7	8	9



## **Annexure- 3.2**

Copy of Notification No.F-150/50 dated 28.2.1952 published in Patiala and East Punjab State Union Government Gazette Extraordinary dated 9-3-1952 part I-sec. I page 1954

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### **AGRICULTURE & FORESTS DEPARTMENT**

#### **NOTIFICATION No.F-150/50 dated 28-2-1952.**

In exercise of the powers conferred by sub-section (I) of Patiala Act, 1996 (No.I of 1996) and in super session of Notification No.I appended to the printed copy of the preservation faunae of Patiala order 2006 this highness the Rajpramukh is pleased to declare the following forest areas in the State to be Wild Life Sanctuaries, namely:-

1. Tara Devi
2. Karoi
3. Chail and Pashgaon
4. Bir Motibagh
5. Bir Shikargarh
6. Bir Bhunerheri
7. Bir Mehswala
8. Doshanjan
9. Bhadson and Aishwan
10. Bhupinder Sagar.

**JAIDEV SINGH**  
**Secretary to Government**

## Annexure - 3.1

### AGRICULTURE DEPARTMENT FORESTS NOTIFICATION The 5<sup>th</sup> July, 1961

No. 2026/Ft. (IV)-61/3654- In exercise of the powers conferred by the provision to sub-section (3) of section 29 of the Patiala Forest Act 1999 (No.VII of 1999 BK) and all other powers enabling him in this behalf, the Governor of Punjab is pleased to declare the area of Government Birs demarcated by boundary pillars, whether under tree growth or not, described in the following schedule to be Second Class Forests.

#### SCHEDULE

	District	Tehsil	Name of Bir	Hadbast No.	Description Khasra Nos.	Area in acres
	1	2	3	4	5	6
1	Patiala	Patiala	Bir Bhunerheri	154	1 to 152	2058
2	--do--	--do--	Miranpur	267	1 to 92	839
3	--do--	--do--	Bir Sarkar (Kheri Mallah)	76	1 to 14	159
4	--do--	--do--	Bir Ghogpur (Bhagwanpura)	263	1 to 32	274
5	--do--	Rajpura	Bir Ghaat	285	1 to 22, 23-min 24 to 28, 29-min, 30, 31. 32 min, 33min, 34 min, 35 to 37, 38min, 39 min, 41 to 52, 54, 56, 58 to 64	606
6	--do--	Patiala	Bir Kule Majra	143	1 to 23, 60/24, 25/1, 61/25, 64/26, 66/37, 68/29, 70/32, 33 to 36/3 72/37, 33 to 58	694
7	--do--	--do--	Bir Kheri Gujran	34	195 to 315	176
8	--do--	--do--	Bir Sanaur	121	1 to 54,	330
9	--do--	--do--	Bir Pajal	207	1 to 23/1	291
10	--do--	--do--	Bir Motibagh	67	1 to 73	1296

11	--do--	Nabha	Bauran	203	1 to 6 8 to 11, 17, 18, 242/29, 243/29, 48 To 50, 52 to 57, 59, 287/61, 289/61 294/62, 63, 64 253/64, 253/65, 255/69, 258/70 min, 71 min, 72 to 77, 79, 81 to 99, 100 min, 106 min 107 to 109, 111 to 117	997
			Annhi Dohrian (Mashmula Nabha-Khas)		3,5,7 & 16, 2091	1013
11	Patiala	Nabha	Bauran	203	1 to 6, 8 to 11, 17, 18, 242/29, 243/29, 48 to 50, 52 to 57, 59, 287/61, 289/61, 294/62, 63, 64, 253/64, 253/65, 255/69, 258/70 min, 71 min, 72 to 77, 79, 81 to 99, 100 min, 106 min, 107 to 109, 111 to 127	997
			Annual Dohrian (Mashmula Nabha-Khas)		Khasra Numbers 3, 5,7 and 16, 2091	1013
12	--do--	--do--	Bir Doshajhan	207	7 To 22,23 min, 33 min, 39 min, 41 min, 42 min, 43 to 47, 48 min, 49 to 55/1, 57, 58 min, 59 min, 61 min, 139/62,65, 149/63, 75 min, 88 to 83, 84 min 85 to 87, 157/88, 159/88, 165/89 min, 90 min, 161/91, 92 min, 93 to 126.	1279

13	--do--	--do--	Bir Mehas		188, 169/3, 4, 180/5, 185/8 196/9, 199/16, 11, 12, 15, 17 to 32, 200/33, 34, to 207/33,34 , 36, 38 to 46, 48 to 61, 72, 75 to 78, 115 to 128.	
			Bir Mohshmula Nabha		Kharra No. 1331, 2614 and 2753	4/524
14	Patiala	Nabha	Bir Bhadson	142	1 to 157	2662
15	--do--	--do--	Bir Agaul	167	1 to 172, 174	2931
16	--do--	--do--	Bir Amlah	27	1, 27 min, 44 min, 51, 58 min, 59 to 62, 248/63, 64, 249/65, 259/65, 264/147, 266/65, 279/65, 71, 96, 111, 282/147, 14, 389/152, 153, 390/154,	
17	Sangrur	Sangrur	Bir Aishban	38	1 to 17, 18 min, 20 min, 21 min, 23	661

No. 2026/Ft-IV-61/3655- Whereas by Punjab Government Notification No. 2026/Ft- (IV)-61/3654, dated the 5<sup>th</sup> July, 1961, certain Government waste lands demarcated by boundary pillare whether under tree growth or not as mentioned in the Schedule annexed to the said notification have been declared to be VI Class Forests under section 29 of the Patiala Forest Act, 1999-BK.

Now, therefore, the Governor of Punjab in exercise of the power conferred by Section 30 of the said Act is pleased:-

- (i) to declare all tree standing upon those lands to be reserved the date of Publication of this notification in the official Gazette; and
- (ii) to prohibit from the same date, the quarrying of stones, bur of lime or charcoal or collection or subjection to any ring process, or removal of any forest produce in the said Forests and the breaking up or clearing for cultivation for building, herding cattle or for any purpose, of any land any of the said Forests.

No.2026/Ft-(IV)-613656- whereas by Punjab Government notification No.2026/Ft-(IV)/3654 dated the 5<sup>th</sup> July, 1961 certain Government waste lands whether tree growth or not mentioned in the Schedule annexed to the said notification has been declared to be Second Class Forest under section 29 of the Patiala Forest Act, 1999-BK

Now, therefore, in exercise of the powers conferred section 52 of the Act, The Governor of Punjab is pleased to make the following rules applicable lands specification in the schedule of the aforesaid notification:-

### **RULES**

- 1 No person shall cut, saw, convert and remove trees and timber and cell manufactures and remove forest produce from these area concepts with the premise of the Divisional Forest Officer concerned.
- 2 No person shall clear and break up land for cultivation or for others purposes with the permission of the Divisional Forest Officer concerned will consult conservator of Forests concerned, before according such permission.
- 3 No person shall cut grass and posture any cattle without the previous permission of the Divisional Forest Officer provided the right holders entitle to graze their cattle according to the entries in the Revenue recording may graze their cattle in the thrown openby the said officer for exercise of the right by the right holders.
- 4 No person shall set fire, or kindly a fire without taking reasonable permutations to prevent its spreading to any tree reserved- vide Punjab Government Notification No.2026/Ft/(IV) 61-3654, dated 5<sup>th</sup> July, 1961 whether standing, felled or fallen or any portion of the said forests.
- 5 No person shall leave burning any fire kindled by him in the vicinity or any such tree of the said forests.
- 6 No person shall fell any tree or drag any timber so as to damage any tree reserved as aforesaid.
- 7 Fishing, hunting and shooting is prohibited except with the permission of the Divisional Forest Officer Concerned.



# भारत का राजपत्र

## The Gazette of India

असाधारण

EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (ii)

PART II—Section 3—Sub-section (ii)

प्राधिकार से प्रकाशित

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पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय

अधिसूचना

नई दिल्ली, 11 मार्च, 2016

**का.आ. 1055(अ).**—एक प्रारूप अधिसूचना, भारत सरकार के तत्कालीन पर्यावरण और वन मंत्रालय की अधिसूचना संख्यांक का.आ. 1454(अ), तारीख 2 जून, 2015 द्वारा ऐसे सभी व्यक्तियों से, जिनके उससे प्रभावित होने की संभावना है, उस तारीख से, जिसको उक्त अधिसूचना वाले भारत के राजपत्र की प्रतियां जनसाधारण को उपलब्ध करा दी गई थी, साठ दिन की अवधि के भीतर आक्षेप और सुझाव मांगने के लिए प्रकाशित की गई थी ;

कुल मिलाकर बीर मोतीबाग वन्यजीव अभयारण्य, 654 हेक्टेयर क्षेत्र वाला समतल भूमि है और पटियाला शहर से लगभग 5 किलोमीटर पटियाला-डकला सड़क पर स्थित है और यह खाईयों और नालियों से युक्त टेढ़ा-मेढ़ा है और सम्पूर्ण वन्यजीव अभयारण्य लगभग समकोणीय आकृति का है ;

और, जहाँ संरक्षित क्षेत्र, चैंपियन और सेठ के वनों के वर्गीकरण के अनुसार उप-समूह 5 (बी) के उत्तरी पुष्क मिश्रित पर्णपाती वन प्रकार के हैं और मुख्य वृक्ष प्रजाति प्रोसोपिसजूलिफ्लोरा, अकाकिया निलोटिका, डिलवरजिययासिसो, अलबिजियालेबबेक इत्यादि है ;

और, जहाँ क्षेत्र विविध पशु और पक्षियों को संरक्षण देने के लिए जाना जाता है जिनमें है ब्लैक बक, वाइल्ड बोर, चीतल, होग डियर, ब्लू बूल, जैकाल, रेहसियूस बंदर, पिफाउल, ब्लैक और ग्रे पाररटिरिज्स और क्यूइल्स ;

और, इस क्षेत्र का परिरक्षण और संरक्षण करना आवश्यक है तथा जिसके विस्तार और सीमाओं को इस अधिसूचना के पैरा 1 में बीर मोतीबाग वन्यजीव अभयारण्य के चारों ओर पारिस्थितिक संवेदी जोन के रूप में विनिर्दिष्ट किया गया है और पर्यावरण की दृष्टि से उद्योगों या उद्योगों के वर्ग को तथा उनकी संक्रियाओं और प्रक्रियाओं को उक्त पारिस्थितिक संवेदी जोन में प्रतिषिद्ध करना आवश्यक है ;

अतः, अब, केन्द्रीय सरकार, पर्यावरण (संरक्षण) नियम, 1986 के नियम 5 के उपनियम (3) के साथ पठित पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 3 की उपधारा (1), उपधारा (2) के खंड (v) और खंड (xiv) और उप धारा (3) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, पंजाब राज्य में बीर मोती बाग वन्यजीव अभयारण्य की सीमा से 100 मीटर तक के विस्तारित क्षेत्र को बीर मोती बाग वन्यजीव अभयारण्य पारिस्थितिकीय संवेदी जोन (जिसे इसमें इसके पश्चात् पारिस्थितिक संवेदी जोन कहा गया है) के रूप में अधिसूचित करती है, जिसका विवरण निम्नानुसार है, अर्थात् :-

1. पारिस्थितिक संवेदी जोन का विस्तार और उसकी सीमाएं--(1) पारिस्थितिक संवेदी जोन का विस्तार लगभग 111.10 हेक्टेयर क्षेत्र को मिलाकर मोती बाग वन्यजीव अभयारण्य की सीमा से 100 मीटर तक क्षेत्र का है। इसका सीमा विवरण उपाबंध - I पर दिया गया है।

(2) पारिस्थितिक संवेदी जोन पूर्व की ओर 30°18'1.86" अक्षांश उ. और देशान्तर 76°25'3.794" पूर्व (उपाबंध-I नक्शा का बिन्दु सं. ख); पश्चिम-दक्षिण ओर अक्षांश 30°16'30.319" उ. अक्षांश और 76°22'53.359" पूर्व देशान्तर (उपाबंध-I नक्शा का बिन्दु सं. ई); उत्तर की ओर अक्षांश 30°18'36.68" उ. और देशान्तर 76°24'17.39" पू. (उपाबंध-I नक्शा का बिन्दु सं. ए) और दक्षिण की ओर अक्षांश 30°16'18.113" उ. और देशान्तर 76°24'17.39" पू. (उपाबंध -I नक्शा का बिन्दु सं. डी) तक सीमित है।

(3) पारिस्थितिक संवेदी जोन सीमा का मानचित्र इसके अक्षांश और देशान्तर के साथ उपाबंध I के रूप में उपाबद्ध है।

(4) पारिस्थितिक संवेदी जोन सीमा प्रमुख बिन्दुओं पर इसके अक्षांश और देशान्तर के साथ-साथ इसके अंतर्गत आने वाले 7 ग्रामों की सूची उपाबंध II के रूप में उपाबद्ध है।

2. पारिस्थितिक संवेदी जोन के लिए आंचलिक महायोजना - (1) राज्य सरकार, पारिस्थितिक संवेदी जोन के प्रयोजनों के लिए राजपत्र में इस अधिसूचना के अंतिम प्रकाशन की तारीख से दो वर्ष की अवधि के भीतर, स्थानीय व्यक्तियों के परामर्श से, और इस अधिसूचना में दिए गए अनुबंधों का पालन करते हुए आंचलिक महायोजना तैयार करेगी।

(2) आंचलिक महायोजना का अनुमोदन राज्य सरकार में सक्षम प्राधिकारी द्वारा किया जाएगा।

(3) पारिस्थितिक संवेदी जोन के लिए आंचलिक महायोजना राज्य सरकार द्वारा ऐसी रीति जैसा इस अधिसूचना में विनिर्दिष्ट है और सुसंगत केन्द्रीय और राज्य विधियों तथा केन्द्रीय सरकार द्वारा जारी मार्गदर्शक सिद्धांतों, यदि कोई हो, के अनुरूप भी तैयार की जाएगी।

(4) आंचलिक महायोजना सभी संबद्ध राज्य विभागों के साथ परामर्श से पर्यावरणीय और पारिस्थितिकीय विचारणों को उसमें एकीकृत करने के लिए तैयार की जाएगी, अर्थात्:-

- (i) पर्यावरण ;
- (ii) वन ;
- (iii) नगर विकास ;
- (iv) पर्यटन ;
- (v) नगरपालिका ;

- (vi) राजस्व ;
- (vii) कृषि ; और
- (viii) पंजाब राज्य प्रदूषण नियंत्रण बोर्ड ।

(5) आंचलिक महायोजना अनुमोदित विद्यमान भू-उपयोग, अवसंरचनात्मक और क्रियाकलापों पर कोई निर्बंधन अधिरोपित नहीं करेगी जब तक कि इस अधिसूचना में इस प्रकार विनिर्दिष्ट न हो और आंचलिक महायोजना सभी अवसंरचना और क्रियाकलापों में दक्षता और पारिस्थितिक अनुकूलता का संवर्द्धन करेगी ।

(6) आंचलिक महायोजना में अनाच्छादित क्षेत्रों के जीर्णोद्धार, विद्यमान जल निकायों के संरक्षण, आवाह क्षेत्रों के प्रबंधन, जल-संभरों के प्रबंधन, भूतल जल के प्रबंधन, मृदा और नमी संरक्षण, स्थानीय समुदायों की आवश्यकताओं तथा पारिस्थितिक और पर्यावरण से संबंधित ऐसे अन्य पहलूओं, जिन पर ध्यान देना आवश्यक है, के लिए उपबंध होंगे ।

(7) आंचलिक महायोजना सभी विद्यमान पूजा स्थलों, ग्रामों और नगरीय बंदोबस्तों, वनों के प्रकार और किस्मों, कृषि क्षेत्रों, ऊपजाऊ भूमि, हरित क्षेत्र जैसे उद्यान और उसी प्रकार के स्थान, उद्यान कृषि क्षेत्र, आर्किडों, झीलों और अन्य जल निकायों का अभ्यंकन करेगी ।

(8) आंचलिक महायोजना स्थानीय समुदायों की जीवकोपार्जन को सुनिश्चित करने के लिए, पारिस्थितिक संवेदी जोन में विकास को पारिस्थितिक अनुकूल विकास के लिए विनियमित करेगी ।

3. राज्य सरकार द्वारा किए जाने वाले उपाय-- राज्य सरकार इस अधिसूचना के उपबंधों को प्रभावी करने के लिए निम्नलिखित उपाय करेगी, अर्थात् :-

(1) भू-उपयोग - पारिस्थितिक संवेदी जोन में वनों, उद्यान-कृषि क्षेत्रों, कृषि क्षेत्रों, आमोद-प्रमोद के प्रयोजन के लिए चिन्हित किए गए पार्कों और खुले स्थानों का वाणिज्यिक और औद्योगिक संबद्ध विकास क्रियाकलापों के लिए उपयोग या संपरिवर्तन नहीं होगा :

परंतु पारिस्थितिक संवेदी जोन के भीतर कृषि भूमि का संपरिवर्तन के अधीन मानीटरी समिति की सिफारिश पर और राज्य सरकार के पूर्व अनुमोदन से, स्थानीय निवासियों की आवासीय जरूरतों को पूरा करने के लिए और पैरा 4 की सारणी के स्तंभ (2) के अधीन मद सं. 24, 28, 30 और 35 के सामने सूचीबद्ध क्रियाकलापों को पूरा करने के लिए अनुज्ञात होंगे, अर्थात् :-

- (i) प्रदूषण उत्पन्न न करने वाले लघु उद्योग;
- (ii) पारिस्थितिक अनुकूल पर्यटन क्रियाकलापों के लिए पर्यटकों के अस्थायी आवासन के लिए पारिस्थितिक अनुकूल आरामगाह जैसे टेंट, लकड़ी के मकान आदि ;
- (iii) वर्षा जल संचय; और
- (iv) कुटीर उद्योग, जिसके अंतर्गत ग्रामीण दस्तकार हैं ।

परंतु यह और कि जनजातीय भूमि का उपयोग राज्य सरकार के पूर्व अनुमोदन और संविधान के अनुच्छेद 244 या तत्समय प्रवृत्त विधि के उपबंधों के अनुपालन के बिना, जिसके अंतर्गत अनुसूचित जनजाति और अन्य परंपरागत वन निवासी (वन अधिकारों की मान्यता) अधिनियम, 2006 (2007 का 2) भी है, वाणिज्यिक या उद्योग विकास क्रियाकलापों के लिए अनुज्ञात नहीं होगा :



परंतु यह और भी कि पारिस्थितिक संवेदी जोन के भीतर भू-अभिलेखों में उपसंजात कोई त्रुटि, मानीटरी समिति के विचार प्राप्त करने के पश्चात् राज्य सरकार द्वारा प्रत्येक मामले में एक बार संशोधित होगी और उक्त त्रुटि के संशोधन की सूचना केंद्रीय सरकार के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय को देनी होगी।

परंतु यह और भी कि उपर्युक्त त्रुटि का संशोधन में इस उप पैरा के अधीन यथा उपबंधित के सिवाय किसी भी दशा में भू-उपयोग का परिवर्तन सम्मिलित नहीं होगा।

परंतु यह और भी कि जिससे हरित क्षेत्र में जैसे वन क्षेत्र, कृषि क्षेत्र आदि में कोई पारिणामिक कटौती नहीं होगी और अनप्रयुक्त या अनुत्पादक कृषि क्षेत्रों में पुनः वनीकरण करने के प्रयास किए जाएंगे।

(2) **प्राकृतिक जल स्रोतों** -- आंचलिक महायोजना में सभी प्राकृतिक जल स्रोतों की पहचान की जाएगी और उनके संरक्षण और पुनर्नवीकरण के लिए योजना सम्मिलित होगी और राज्य सरकार द्वारा ऐसे क्षेत्रों पर या उनके निकट विकास क्रियाकलाप प्रतिषिद्ध करने के लिए ऐसी रीति से मार्गनिर्देश तैयार किए जाएंगे।

(3) **पर्यटन** - (क) पारिस्थितिक संवेदी जोन के भीतर पर्यटन संबंधी क्रियाकलाप, जो आंचलिक महायोजना का भाग रूप में निम्नलिखित रूप में होंगे।

(ख) पर्यटन महायोजना पर्यटन विभाग, पंजाब सरकार द्वारा राजस्व और वन विभाग, पंजाब सरकार के परामर्श से तैयार होगी।

(ग) पर्यटन संबंधी क्रियाकलाप निम्नलिखित के अधीन विनियमित होंगे, अर्थात् :-

(i) पारिस्थितिक संवेदी जोन के भीतर सभी नए पर्यटन क्रियाकलापों या विद्यमान पर्यटन क्रियाकलापों का विस्तार केंद्र सरकार के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय के मार्गदर्शक सिद्धांतों के द्वारा तथा राष्ट्रीय व्याघ्र संरक्षण प्राधिकरण, द्वारा जारी पारिस्थितिक पर्यटन (समय-समय पर यथा संशोधित) मार्गदर्शक सिद्धांतों के अनुसार, पारिस्थितिक पर्यटन, पारिस्थितिक शिक्षा और पारिस्थितिक विकास को महत्व देते हुए पारिस्थितिक संवेदी जोन की वहन क्षमता के अध्ययन पर आधारित होगा;

(ii) पारिस्थितिक संवेदी जोन के भीतर होटल और रिसोर्ट अनुज्ञात नहीं होंगे।

(iii) आंचलिक महायोजना का अनुमोदन किए जाने तक, पर्यटन के लिए विकास और विद्यमान पर्यटन क्रियाकलापों के विस्तार को वास्तविक स्थल विनिर्दिष्ट संवीक्षा तथा मानीटरी समिति की सिफारिश पर आधारित संबंधित विनियामक प्राधिकारियों द्वारा अनुज्ञात किया होगा।

(4) **नैसर्गिक विरासत** -- पारिस्थितिक संवेदी जोन में महत्वपूर्ण नैसर्गिक विरासत के सभी स्थलों जैसे सभी जीन कोश आरक्षित क्षेत्र, शैल विरचनाएं, जल प्रपातों, झरनों, घाटी मार्गों, उपवनों, गुफाएं, स्थलों, भ्रमण, अश्वरोहण, प्रपातों आदि की पहचान की जाएगी और उन्हें संरक्षित किया जाएगा तथा उनकी सुरक्षा और संरक्षा के लिए इस अधिसूचना के प्रकाशन की तारीख से छह मास के भीतर, उपयुक्त योजना बनाएगी और ऐसी योजना आंचलिक महायोजना का भाग होगा।

(5) **मानव निर्मित विरासत स्थलों** - पारिस्थितिक संवेदी जोन में भवनों, संरचनाओं, शिल्प-तथ्य, ऐतिहासिक, कलात्मक और सांस्कृतिक महत्व के क्षेत्रों की पहचान करनी होगी और इस अधिसूचना के प्रकाशन की तारीख से छह माह के भीतर उनके संरक्षण की योजनाएं तैयार करनी होगी तथा आंचलिक महायोजना में सम्मिलित की जाएगी।

(6) **ध्वनि प्रदूषण** -- पारिस्थितिक संवेदी जोन में ध्वनि प्रदूषण के नियंत्रण के लिए राज्य सरकार का पर्यावरण विभाग वायु (प्रदूषण निवारण और नियंत्रण) अधिनियम, 1981 (1981 का 14) और उसके अधीन बनाए गए नियमों के उपबंधों के अनुसरण में मार्गदर्शक सिद्धांत और विनियम तैयार करेगा।

(7) **वायु प्रदूषण** -- पारिस्थितिक संवेदी जोन में, वायु प्रदूषण के नियंत्रण के लिए राज्य सरकार का पर्यावरण विभाग वायु (प्रदूषण निवारण और नियंत्रण) अधिनियम, 1981 (1981 का 14) और उसके अधीन बनाए गए नियमों के उपबंधों के अनुसरण में मार्गदर्शक सिद्धांत और विनियम तैयार करेगा।

(8) **बहिस्त्राव का निस्सारण** -- पारिस्थितिक संवेदी जोन में उपचारित बहिस्त्राव का निस्सारण जल (प्रदूषण निवारण तथा नियंत्रण) अधिनियम, 1974 (1974 का 6) और उसके अधीन बनाए गए नियमों के उपबंधों के अनुसार होगा।

(9) **ठोस अपशिष्ट** -- ठोस अपशिष्टों का निपटान निम्नलिखित रूप में होगा -

- (i) पारिस्थितिक संवेदी जोन में ठोस अपशिष्टों का निपटान भारत सरकार के तत्कालीन पर्यावरण, और वन मंत्रालय की समय-समय पर यथा संशोधित अधिसूचना सं. का.आ. 908(अ), तारीख 25 सितंबर, 2000 नगरपालिक ठोस अपशिष्ट (प्रबंध और हथालन) नियम, 2000 के उपबंधों के अनुसार किया जाएगा ;
- (ii) स्थानीय प्राधिकरण जैव निम्नीकरणीय और अजैव निम्नीकरणीय संघटकों में ठोस अपशिष्टों के संपृथक्करण के लिए योजनाएं तैयार करेंगे ;
- (iii) जैव निम्नीकरणीय सामग्री को अधिमानतः खाद बनाकर या कृमि खेती के माध्यम से पुनःचक्रित किया जाएगा ;
- (iv) अकार्बनिक सामग्री का निपटान पारिस्थितिक संवेदी जोन के बाहर पहचान किए गए स्थल पर किसी पर्यावरणीय स्वीकृत रीति में होगा और पारिस्थितिक संवेदी जोन में ठोस अपशिष्टों को जलाना या भष्मीकरण अनुज्ञात नहीं होगा।

(10) **जैव चिकित्सीय अपशिष्ट**- पारिस्थितिक संवेदी जोन में जैव चिकित्सीय अपशिष्टों का निपटान भारत सरकार के तत्कालीन द्वारा पर्यावरण और वन मंत्रालय की समय-समय पर यथासंशोधित अधिसूचना सं.का.आ.630 (अ) तारीख 20 जुलाई, 1998 द्वारा प्रकाशित जैव चिकित्सीय अपशिष्ट (प्रबंध और हथालन) नियम, 1998 के उपबंधों के अनुसार किया जाएगा।

(11) **यानीय परिवहन** - परिवहन की यानीय गतिविधियां आवास के अनुकूल विनियमित होंगी और इस संबंध में आंचलिक महायोजना में विशेष उपबंध अधिकथित किए जाएंगे और आंचलिक महायोजना के तैयार होने और राज्य सरकार के सक्षम प्राधिकारी के द्वारा अनुमोदित होने तक, मानीटरी समिति प्रवृत्त नियमों और विनियमों के अनुसार यानीय गतिविधियों के अनुपालन को मानीटर करेगी।

**4. पारिस्थितिक संवेदी जोन में प्रतिषिद्ध और विनियमित क्रियाकलापों की सूची** - पारिस्थितिक संवेदी जोन में सभी क्रियाकलाप पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) के उपबंधों द्वारा शासित होंगे और नीचे दी गई तालिका में विनिर्दिष्ट रीति में विनियमित होंगे, अर्थात् :-

## सारणी

क्रम सं.	क्रियाकलाप	टीका-टिप्पणी
(1)	(2)	(3)
<b>प्रतिषिद्ध क्रियाकलाप</b>		
1.	वाणिज्यिक खनन, पत्थर की खदान और उनको तोड़ने की इकाइयां।	(क) सभी प्रकार के नए तथा विद्यमान खनन (लघु और वृहत खनिज), पत्थर की खानें और उनको तोड़ने की इकाइयां वास्तविक स्थानीय निवासियों की घरेलू आवश्यकताओं के सिवाय प्रतिषिद्ध होंगी ;  (ख) खनन संक्रियाएं, माननीय उच्चतम न्यायालय की रिट याचिका (सिविल) सं. 1995 का 202 टी.एन. गौडाबर्मन थिरुमूलपाद बनाम भारत सरकार के मामले में आदेश तारीख 4 अगस्त, 2006 और रिट याचिका (सी) सं. 2012 का 435 गोवा फाउंडेशन बनाम भारत सरकार के मामले में तारीख 21 अप्रैल, 2014 के अंतरिम आदेश के अनुसरण में सर्वदा प्रचालन होगा।
2.	आरा मीलों की स्थापना।	पारिस्थितिक संवेदी जोन के भीतर नई और विद्यमान आरा मीलों का विस्तार अनुज्ञात नहीं होगा।
3.	जल या वायु या मृदा या ध्वनि प्रदूषण कारित करने वाले उद्योगों की स्थापना।	पारिस्थितिक संवेदी जोन के भीतर नए और विद्यमान प्रदूषण कारित करने वाले का विस्तार अनुज्ञात नहीं होगा।
4.	किसी परिसंकटमय पदार्थों का उपयोग या उत्पादन।	लागू विधियों के अनुसार प्रतिषिद्ध (अन्यथा उपबंधित के सिवाय)।
5.	होटल और विश्राम स्थलों की वाणिज्यिक स्थापना।	पारिस्थितिक संवेदी जोन के भीतर होटलों और विश्रामस्थलों जैसे विद्यमान वाणिज्यिक स्थापनों के किसी नवीकरण या विस्तार की अनुज्ञा नहीं दी जाएगी।
6.	जलावन लकड़ी का वाणिज्यिक उपयोग।	लागू विधियों के अनुसार प्रतिषिद्ध (अन्यथा उपबंधित के सिवाय)।
7.	नए बृहत जल विद्युत परियोजना का स्थापना।	लागू विधियों के अनुसार प्रतिषिद्ध (अन्यथा उपबंधित के सिवाय)।
8.	पर्यटन से संबंधित क्रियाकलाप जैसे रोप-वे, गर्म वायु गुब्बारों आदि द्वारा अभयारण्य क्षेत्र के ऊपर से उड़ना जैसे क्रियाकलाप करना।	लागू विधियों के अनुसार प्रतिषिद्ध (अन्यथा उपबंधित के सिवाय)।

9.	प्लास्टिक थैलों का उपयोग ।	लागू विधियों के अनुसार प्रतिषिद्ध (अन्यथा उपबंधित के सिवाय) ।
10.	प्राकृतिक जल निकायों या भू-क्षेत्र में अनपचारित बहिस्सर्व और ठोस अपशिष्टों का निस्तारण ।	लागू विधियों के अनुसार प्रतिषिद्ध (अन्यथा उपबंधित के सिवाय) ।
11.	सन्निर्माण क्रियाकलाप ।	पैरा 3 के उप पैरा (1) सूचीबद्ध क्रियाकलापों सहित स्थानीय निवासियों की घरेलू आवश्यकताओं के सिवाय पारिस्थितिक संवेदी जोन की सीमाओं के भीतर किसी प्रकार के नए सन्निर्माण की अनुमति नहीं दी जाएगी । प्रदूषण कारित न करने वाले लघु उद्योगों से संबंधित सन्निर्माण क्रियाकलाप को विनियमित किया जाएगा और न्यूनतम पर रखा जाएगा ।
<b>विनियमित क्रियाकलाप</b>		
12	वृक्षों की कटाई ।	(क) राज्य सरकार में सक्षम प्राधिकारी की पूर्व अनुमति के बिना वन, सरकारी या राजस्व या निजी भूमि पर या वनों में किंही वृक्षों की कटाई नहीं होगी । (ख) वृक्षों की कटाई संबंधित केंद्रीय या राज्य अधिनियम या उसके अधीन बनाए गए नियमों के उपबंध के अनुसार विनियमित होगी ।
13.	कृषि प्रणालियों में आमूल परिवर्तन ।	लागू विधियों के अधीन विनियमित होंगे ।
14.	वाणिज्यिक जल संसाधन जिसके अंतर्गत भू-जल संचयन भी है ।	(क) भूमि के अधिभोगी के वास्तविक कृषि और घरेलू खपत के लिए जल का निष्कर्षण सतही और भूमिगत जल अनुज्ञात होगा । (ख) औद्योगिक, वाणिज्यिक उपयोग के लिए सतही और भूमिगत जल का निष्कर्षण के लिए संबंधित विनियामक प्राधिकरण पूर्व लिखित अनुज्ञा अपेक्षित होगी जिसके अंतर्गत कितने परिणाम में वह निष्कर्षण करेगा, भी है । (ग) सतही या भूजल का विक्रय अनुज्ञात नहीं होगा । (घ) जल के संदूषण या प्रदूषण, जिसके अंतर्गत कृषि भी है, को रोकने के लिए सभी उपाय किए जाएंगे ।
15.	विद्युत केबलों, परेषण लाइनों और दूरसंचार टावरों का परिनिर्माण ।	भूमिगत केबलों को प्रोत्साहन देना ।
16.	होटलों और लॉज के विद्यमान परिसरों में बाड लगाना ।	लागू विधियों के अधीन विनियमित होंगे ।

17.	विद्यमान सड़कों को चौड़ा करना और उन्हें सुदृढ़ करना।	उचित पर्यावरण समाघात निर्धारण और न्यूनीकरण उपाय यथा लागू अनुसार होंगे।
18.	रात्रि में यानिक यातायात का संचलन।	लागू विधियों के अधीन वाणिज्यिक प्रयोजन के लिए विनियमित होंगे।
19.	विदेशी प्रजातियों को लाना।	लागू विधियों के अधीन विनियमित होंगे।
20.	पहाड़ी ढालों और नदी तटों का संरक्षण।	लागू विधियों के अधीन विनियमित होंगे।
21.	वाणिज्यिक साइनबोर्ड और होर्डिंग।	लागू विधियों के अधीन विनियमित होंगे।
22.	वायु (जिसके अन्तर्गत ध्वनि है) और यानीय प्रदूषण।	लागू विधियों के अधीन विनियमित होंगे।
23.	प्राकृतिक जल निकायों या सतही क्षेत्र में उपचारित बहिर्वाह का निस्सारण।	उपचारित बहिर्वाह के पुनचक्रण को प्रोत्साहित करना और अबमल या ठोस अपशिष्टों के निपटान के लिए विद्यमान विनियमों का अनुपालन करना होगा।
24.	प्रदूषण उत्पन्न न करने वाले लघु उद्योग।	पारिस्थितिक संवेदी जोन से गैर प्रदूषण, गैर परिसंकटमय, लघु और सेवा उद्योग, कृषि उद्यान, कृषि या कृषि आधारित देशीय माल से औद्योगिक उत्पादों का उत्पादन उद्योग और जो पर्यावरण पर कोई विपरीत प्रभाव नहीं डालते हैं, अनुज्ञात किए जाएंगे।
25.	वन उत्पादों और गैर काष्ठ वन उत्पादों का संग्रहण।	लागू विधियों के अधीन विनियमित होंगे।
26.	सुरक्षा बलों के कैम्प।	लागू विधियों के अधीन विनियमित होंगे।
27.	नए काष्ठ आधारित उद्योग।	पारिस्थितिक संवेदी जोन की सीमा के भीतर नए काष्ठ आधारित उद्योगों की स्थापना को अनुज्ञात नहीं किया जाएगा:  परंतु विद्यमान काष्ठ आधारित उद्योग तब तक जारी रह सकेंगे जब तक तत्समय प्रवृत्त किसी विधि के अधीन उन्हें प्रतिषिद्ध नहीं कर दिया जाता है।
28.	पारिस्थितिक अनुकूल पर्यटन क्रियाकलापों हेतु पर्यटकों के अस्थायी अधिभोग हेतु पारिस्थितिक अनुकूल कुटीर जैसे तम्बू, लकड़ी के आवास।	लागू विधियों के अधीन विनियमित होंगे।
<b>संवर्धित क्रियाकलाप</b>		
29.	स्थानीय समुदायों द्वारा चल रही कृषि और बागवानी प्रथाओं के साथ पशुपालन, पशुपालन कृषि और मछली पालन।	लागू विधियों के अधीन विनियमित होंगे।

30.	वर्षा जल संचयन ।	सक्रिय रूप से बढ़ावा दिया जाए ।
31.	जैविक खेती ।	सक्रिय रूप से बढ़ावा दिया जाए ।
32.	सभी गतिविधियों के लिए हरित प्रौद्योगिकी को ग्रहण करना ।	सक्रिय रूप से बढ़ावा दिया जाए ।
33.	नवीकरणीय ऊर्जा स्रोत का उपयोग ।	लागू विधियों के अधीन अनुज्ञात होंगे ।
34.	वानस्पतिक घेराबन्दी ।	लागू विधियों के अधीन अनुज्ञात होंगे ।
35.	कुटीर उद्योगों जिसके अंतर्गत ग्रामीण कारीगर आदि भी हैं ।	सक्रिय रूप से बढ़ावा दिया जाए ।

**5. मानीटरी समिति-** केंद्रीय सरकार, पारिस्थितिक संवेदी जोन के प्रभावी मानीटरी के लिए एक मानीटरी समिति का गठन करेगी जो निम्नलिखित से मिलकर बनेगी, अर्थात् :-

(क)	जिला कलक्टर, पटियाला	-	अध्यक्ष
(ख)	मुख्य वन परिरक्षक (वन्यजीव), पंजाब सरकार	-	सदस्य
(ग)	ग्रामीण विकास विभाग और पंचायत, पंजाब सरकार का प्रतिनिधि	-	सदस्य
(घ)	क्षेत्रीय अधिकारी, पंजाब राज्य प्रदूषण नियंत्रण बोर्ड		सदस्य
(ङ)	पर्यावरण के क्षेत्र में कार्य करने वाले गैर सरकारी संगठनों (जिसके अंतर्गत विरासत संरक्षण भी है) का प्रत्येक मामले में एक वर्ष की अवधि के लिए पंजाब राज्य सरकार द्वारा नामनिर्दिष्ट एक प्रतिनिधि	-	सदस्य
(च)	पंजाब सरकार द्वारा नामनिर्दिष्ट प्रत्येक मामले में एक वर्ष की अवधि के लिए पारिस्थितिक और पर्यावरण क्षेत्र का एक विशेषज्ञ	-	सदस्य
(छ)	ग्रामीण विकास और आवास विभागपंजाब सरकार का प्रतिनिधि ,		सदस्य
(ज)	कृषि विभागतिनिधिपंजाब सरकार का प्र ,	-	सदस्य
(झ)	संभागीय वन अधिकारी (का भारसाधक .ए.पी)	-	सदस्य सचिव

## 6. निर्देश निबंधन

(1) मानीटरी समिति इस अधिसूचना के उपबंधों के अनुपालन को मानीटर करेगी ।

(2) पारिस्थितिक संवेदी जोन में भारत सरकार के तत्कालीन पर्यावरण और वन मंत्रालय की अधिसूचना सं. का.आ. 1533(अ) तारीख 14 सितंबर, 2006 की अनुसूची में के अधीन सम्मिलित क्रियाकलापों और इस अधिसूचना के पैरा 4 के अधीन प्रतिषिद्ध गतिविधियों के सिवाय आने वाले ऐसे क्रियाकलापों की दशा में वास्तविक विनिर्दिष्ट स्थलीय दशाओं पर आधारित मानीटरी समिति द्वारा संवीक्षा की जाएगी और उक्त अधिसूचना के उपबंधों के अधीन पूर्व पर्यावरण निकासी के लिए केंद्रीय सरकार के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय को निर्दिष्ट की जाएगी ।

(3) इस अधिसूचना के पैरा 4 के अधीन यथा विनिर्दिष्ट प्रतिषिद्ध क्रियाकलापों के सिवाय, भारत सरकार के पर्यावरण और वन मंत्रालय की अधिसूचना संख्यांक का.आ. 1533(अ) तारीख 14 सितंबर, 2006 की अधिसूचना के अनुसूची के अधीन ऐसे क्रियाकलापों, जिन्हें सम्मिलित नहीं किया गया है, परंतु पारिस्थितिक संवेदी जोन में आते हैं, ऐसे क्रियाकलापों की वास्तविक विनिर्दिष्ट स्थलीय दशाओं पर आधारित मानीटरी समिति द्वारा संवीक्षा की जाएगी और उसे संबद्ध विनियामक प्राधिकरणों को निर्दिष्ट किया जाएगा।

(4) मानीटरी समिति का सदस्य-सचिव या संबद्ध कलक्टर या संरक्षित क्षेत्र का प्रभारी ऐसे व्यक्ति के विरुद्ध, जो इस अधिसूचना के किसी उपबंध का उल्लंघन करता है, पर्यावरण (संरक्षण) अधिनियम, 1986 की धारा 19 (1986 का 29) के अधीन परिवाद फाइल करने के लिए सक्षम होगा।

(5) मानीटरी समिति मुद्दों के आधार पर अपेक्षाओं पर निर्भर रहते हुए संबद्ध विभागों के प्रतिनिधियों या विशेषज्ञों, औद्योगिक संगमों या संबद्ध पणधारियों के प्रतिनिधियों को अपने विचार-विमर्श में सहायता के लिए आमंत्रित कर सकेगी।

(6) मानीटरी समिति प्रत्येक वर्ष की 31 मार्च तक की राज्य के मुख्य वन्यजीव वार्डन को अपनी वार्षिक कार्रवाई रिपोर्ट **उपाबंध III** पर उपाबद्ध रूप विधान के अनुसार उक्त वर्ष के 30 जून तक प्रस्तुत करेगी।

(7) केन्द्रीय सरकार का पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय मानीटरी समिति को अपने कृत्यों के प्रभावी निर्वहन के लिए समय-समय पर ऐसे निदेश दे सकेगा, जो वह ठीक समझे।

7. इस अधिसूचना के उपबंधों को प्रभाव देने के लिए केंद्रीय सरकार और राज्य सरकार अतिरिक्त उपाय, यदि कोई हों, विनिर्दिष्ट कर सकेंगे।

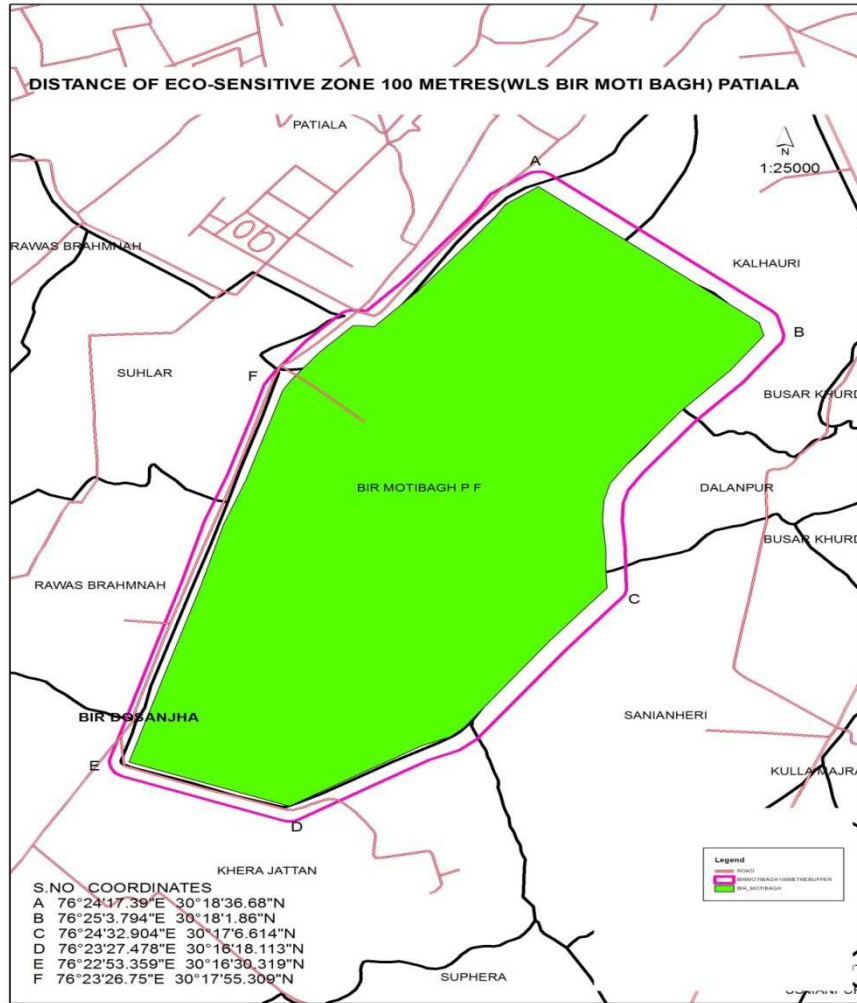
8. इस अधिसूचना के उपबंध, भारत के माननीय उच्चतम न्यायालय या उच्च न्यायालय या राष्ट्रीय हरित प्राधिकरण द्वारा पारित कोई आदेश या पारित होने वाले किसी आदेश, यदि कोई हों, के अधीन होंगे।

[फा. सं. 25/38/2014-ईएसजेड-आरई]

डा. टी. चांदनी, वैज्ञानिक 'जी'

उपाबंध - I

बीर मोतीबाग वन्यजीव अभयारण्य, पंजाब की वन्यजीव अभयारण्य की पारिस्थितिक संवेदी जोन की सीमा का इसके अधिकतम और विस्तार के अक्षांश और देशांतर सहित मानचित्र





**उपाबंध-II**

बीर मोतीबाग वन्यजीव अभयारण्य, पंजाब पारिस्थितिक संवेदी जोन के अंतर्गत आने वाले ग्रामों की सूची

क्र.सं.	नाम	अक्षांश			देशांतर		
		डिग्री	मिनट	सेकेण्ड	डिग्री	मिनट	सेकेण्ड
1.	घलोरी	30	18	05.38	76	25	27.84
2.	सुल्लार	30	17	46.39	76	23	17.86
3.	रावस ब्रह्मना	30	16	48.96	76	23	02.07
4.	खेरा जातन	30	16	25.26	76	22	42.43
5.	रामगढ़	30	15	49.92	76	23	23.17
6.	दालनपुर	30	17	34.16	76	24	55.42
7.	सुनेहरी	30	16	47.43	76	24	49.01

**उपाबंध-III**

पारिस्थितिक संवेदी जोन मानीटरी समिति - की गई कार्रवाई की रिपोर्ट का रूप विधान

1. बैठकों की संख्या और तिथि ।
2. बैठकों का कार्यवृत्त : कृपया मुख्य उल्लेखनीय बिंदुओं का वर्णन करें । बैठक के कार्यवृत्त को एक पृथक अनुबंध में उपाबद्ध करें ।
3. आचलिक महायोजना की तैयारी की प्रास्थिति जिसके अंतर्गत पर्यटन महायोजना ।
4. भू-अभिलेख में सदृश्य त्रुटियों के सुधार के लिए ब्यौहार किए गए मामलों का सारांश ।
5. ईआईए अधिसूचना, 2006 के अधीन आने वाली गतिविधियों की संविधा के मामलों का सारांश । ब्यौरे एक पृथक उपाबंध के रूप में उपाबद्ध किए जा सकते हैं ।
6. ईआईए अधिसूचना, 2006 के अधीन न आने वाली गतिविधियों की संविधा के मामलों का सारांश । ब्यौरे एक पृथक उपाबंध के रूप में उपाबद्ध किए जा सकते हैं ।
7. पर्यावरण ( संरक्षण ) अधिनियम, 1986 की धारा 19 के अधीन दर्ज की गई शिकायतों का सारांश ।
8. कोई अन्य महत्वपूर्ण विषय ।

**MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE****NOTIFICATION**

New Delhi, the 11th March, 2016

**S.O. 1055(E).**—Whereas, a draft notification was published in the Gazette of India, Extraordinary, vide notification of the Government of the India in the erstwhile Ministry of Environment, Forest and Climate Change number S.O.1454 (E), dated the 2<sup>nd</sup> June, 2015, inviting objections and suggestions from all persons likely to be affected thereby within the period of sixty days from date on which copies of the Gazette containing the said notification were made available to the public;

Whereas, Bir Moti Bagh Wildlife Sanctuary by and large is a flat land having an area of 654 hectare and located on Patiala-Dakala Road about 5 kilometre from Patiala town and is traversed with ditches and drains and a compact wildlife sanctuary of almost rectangular appearance;

And whereas, the protected area as per the forest classification of Champion and Seth, has the forests that fall under the sub-group 5(b) of the Northern Dry Mixed Deciduous Forest Type and the main tree species are *Prosopisjuliflora*, *Acacia nilotica*, *Delbergiasissoo*, *Albizialebeck* etc.;

And whereas, the area is known to support a variety of animals and birds, which includes Black Buck, Wild Boar, Chital, Hog Deer, Blue Bull, Jackal, Rhesus Monkey, Peafowl, Black and Grey Partridges and Quails;

And whereas, it is necessary to conserve and protect the area, the extent and boundaries of which is specified in paragraph 1 of this notification around the protected area of the Bir Moti Bagh Wildlife Sanctuary as Eco-sensitive Zone from ecological and environmental point of view and to prohibit industries or class of industries and their operations and processes in the said Eco-sensitive Zone;

Now, therefore, in exercise of the powers conferred by sub-section (1), and clauses (v) and clause (xiv) of sub-section (2) and sub-section (3) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government hereby notifies an area to an extent upto 100 metres all around the boundary of the Bir Moti Bagh Wildlife Sanctuary in the State of Punjab as the Bir Moti Bagh Wildlife Sanctuary Eco-sensitive Zone (hereinafter referred to as the Eco-sensitive Zone), details of which are as under, namely:-

1. **Extent and boundaries of Eco-sensitive Zone.**—(1) The Eco-sensitive Zone is an area of 100 meters all around the boundary of the Bir Moti Bagh Wildlife Sanctuary comprising an area of 111.10 hectares approximately and boundary description of such zone is given in **Annexure- I**.

(2) The Eco-sensitive Zone is bounded by 30°18'1.86"N latitude and 76°25'3.794"E longitude towards East (point No. B of Annexure I map); 30°16'30.319"N latitude and 76°22'53.359"E longitude towards west-south (point No. E of Annexure I map); 30°18'36.68"N latitude and 76°24'17.39"E longitude towards north (point No. A of Annexure I map) and 30°16'18.113"N latitude and 76°24'17.39"E longitude towards south (point No. D of Annexure I map).

(3) The map of Eco-sensitive Zone boundary together with its latitudes and longitude is appended as **Annexure-I**.

(4) The list of seven villages falling within the Eco-sensitive Zone along with their longitude and latitude at prominent points is appended as **Annexure-II**.

2. **Zonal Master Plan for the Eco-sensitive Zone.**—(1) The State Government shall, for the purpose of the Eco-sensitive Zone prepare, a Zonal Master Plan, within a period of two years from the date of publication of final notification in the Official Gazette, in consultation with local people and adhering to the stipulations given in this notification.

(2) The said Plan shall be approved by the competent authority in the State Government.

(3) The Zonal Master Plan for the Eco-sensitive Zone shall be prepared by the State Government in such manner as is specified in this notification and also in consonance with the relevant Central and State laws and the guidelines issued by the Central Government, if any.

(4) The Zonal Master Plan shall be prepared in consultation with all concerned State Departments, namely:-

- (i) Environment;
- (ii) Forest;
- (iii) Urban Development;
- (iv) Tourism;
- (v) Municipal;
- (vi) Revenue;
- (vii) Agriculture; and
- (viii) Punjab State Pollution Control Board,

for integrating environmental and ecological considerations into it.

(5) The Zonal Master Plan shall not impose any restriction on the approved existing land use, infrastructure and activities, unless so specified in this notification and the Zonal Master Plan shall factor in improvement of all infrastructure and activities to be more efficient and eco-friendly.

(6) The Zonal Master Plan shall provide for restoration of denuded areas, conservation of existing water bodies, management of catchment areas, watershed management, groundwater management, soil and moisture conservation, needs of local community and such other aspects of the ecology and environment that need attention.

(7) The Zonal Master Plan shall demarcate all the existing worshipping places, village and urban settlements, types and kinds of forests, agricultural areas, fertile lands, green area, such as, parks and like places, horticultural areas, orchards, lakes and other water bodies.

(8) The Zonal Master Plan shall regulate development in Eco-sensitive Zone so as to ensure eco-friendly development and livelihood security of local communities.

3. **Measures to be taken by State Government.**-The State Government shall take the following measures for giving effect to the provisions of this notification, namely:-

(1) **Landuse.**- Forests, horticulture areas, agricultural areas, parks and open spaces earmarked for recreational purposes in the Eco-sensitive Zone shall not be used or converted into areas for commercial or industrial related development activities:

Provided that the conversion of agricultural lands within the Eco-sensitive Zone may be permitted on the recommendation of the Monitoring Committee, and with the prior approval of the State Government, to meet the residential needs of local residents, and for the activities listed against serial numbers 24, 28, 30 and 35 in column (2) of the table in paragraph 4, namely:-

- (i) small scale industries not causing pollution;
- (ii) Eco-friendly cottages for temporary occupation of tourists, such as tents, wooden houses, etc. for eco-friendly tourism activities;
- (iii) rainwater harvesting; and
- (iv) cottage industries including village industries, convenience stores and local amenities :

Provided further that no use of tribal land shall be permitted for commercial and industrial development activities without the prior approval of the State Government and without compliance of the provisions of article 244 of the Constitution or the law for the time being in force, including the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (2 of 2007):

Provided also that any error appearing in the land records within the Eco-sensitive Zone shall be corrected by the State Government, after obtaining the views of the Monitoring Committee, once in each case and the correction of said error shall be intimated to the Central Government in the Ministry of Environment, Forest and Climate Change:

Provided also that the above correction of error shall not include change of land use in any case except as provided under this sub-paragraph:

Provided also that there shall be no consequential reduction in green area, such as forest area and agricultural area and efforts shall be made to reforest the unused or unproductive agricultural areas.

(2) **Natural springs.**-The catchment areas of all natural springs shall be identified and plans for their conservation and rejuvenation shall be incorporated in the Zonal Master Plan and the guidelines shall be drawn up by the State Government in such a manner as to prohibit development activities at or near these areas which are detrimental to such areas.

(3) **Tourism.**-(a)The activity relating to tourism within the Eco-sensitive Zone shall be as per Tourism Master Plan, which shall form part of the Zonal Master Plan.

(b) The Tourism Master Plan shall be prepared by the Department of Tourism, Government of Punjab in consultation with Department of Revenue and Forests, Government of Punjab.

(c) The activity of tourism shall be regulated as under, namely.-

(i) all new tourism activities or expansion of existing tourism activities within the Eco-sensitive Zone shall be in accordance with the guidelines issued by the Central Government in the Ministry of Environment, Forest and Climate Change and the eco-tourism guidelines issued by the National Tiger Conservation Authority (as amended from time to time) with emphasis on eco-tourism, eco-education and eco-development and based on carrying capacity study of the Eco-sensitive Zone;

(ii) new construction of hotels and resorts shall not be permitted within the Eco-sensitive Zone;

(iii) till the Zonal Master Plan is approved, development for tourism and expansion of existing tourism activities shall be permitted by the concerned regulatory authorities based on the actual site specific scrutiny and recommendation of the Monitoring Committee.

(4) **Natural heritage.**- All sites of valuable natural heritage in the Eco-sensitive Zone such as the gene pool reserve areas, rock formations, waterfalls, springs, gorges, groves, caves, points, walks, rides, cliffs, etc. shall be identified and preserved and plan shall be drawn up for their protection and conservation, within six months from the date of publication of this notification and such plan shall form part of the Zonal Master Plan.

(5) **Man-made heritage sites.**- Buildings, structures, artefacts, areas and precincts of historical, architectural, aesthetic and cultural significance shall be indentified in the Eco-sensitive Zone and plans for their conservation shall be prepared within six months from the date of publication of this notification and incorporated in the Zonal Master Plan.

(6) **Noise pollution.**- The Environment Department of the State Government shall draw up guidelines and regulations for the control of noise pollution in the Eco-sensitive Zone in accordance with the provisions of the Air (Prevention and Control of Pollution) Act, 1981(14 of 1981)and the rules made thereunder.

(7) **Air pollution.**- The Environment Department of the State Government shall draw up guidelines and regulations for the control of air pollution in the Eco-sensitive Zone in accordance with the provisions of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981)and the rules made thereunder.

(8) **Discharge of effluents.**- The discharge of treated effluent in Eco-sensitive Zone shall be in accordance with the provisions of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974)and the rules made thereunder.

(9) **Solid wastes.** - The disposal of solid wastes shall be as under,-

(i) the solid waste disposal in Eco-sensitive Zone shall be carried out as per the provisions of the Municipal Solid Waste (Management and Handling) Rules, 2000 published by the Government of India in the erstwhile Ministry of Environment and Forests *vide* notification number S.O. 908 (E), dated the 25<sup>th</sup> September, 2000as amended from time to time;

(ii) the local authorities shall draw up plans for the segregation of solid wastes into biodegradable and non-biodegradable components;

(iii) the biodegradable material shall be recycled preferably through composting or vermiculture;

(iv) the inorganic material shall be disposed in an environmental acceptable manner at site identified outside the Eco-sensitive Zone and no burning or incineration of solid wastes shall be permitted in the Eco-sensitive Zone.

(10) **Bio-medical waste.**—The bio-medical waste disposal in the Eco-sensitive Zone shall be carried out as per the provisions of the Bio-Medical Waste (Management and Handling) Rules, 1998 published by the Government of India in the erstwhile Ministry of Environment and Forests *vide* notification number S.O. 630(E), dated the 20<sup>th</sup> July, 1998 as amended from time to time.

(11) **Vehicular traffic.** - The vehicular movement of traffic shall be regulated in a habitat friendly manner and specific provisions in this regard shall be incorporated in the Zonal Master Plan and till such time as the Zonal master plan is prepared and approved by the competent authority in the State Government, the Monitoring Committee shall monitor compliance of vehicular movement under the relevant Act and the rules and regulations made thereunder.

**4. List of activities prohibited or to be regulated within the Eco-sensitive Zone.**—All activities in the Eco-sensitive Zone shall be governed by the provisions of the Environment (Protection) Act, 1986 (29 of 1986) and the rules made thereunder and be regulated in the manner specified in the table below, namely:-

**Table**

S. No.	Activity	Remarks
1	2	3
<b>A. Prohibited Activities:</b>		
1.	Commercial mining, stone quarrying and crushing units.	(a) All new and existing mining (minor and major minerals), stone quarrying and crushing units shall be prohibited except for the domestic needs of <i>bona fide</i> local residents.  (b) The mining operations shall strictly be in accordance with the interim order of the Hon'ble Supreme Court dated the 4 <sup>th</sup> August, 2006 in the matter of T.N. Godavarman Thirumulpad Vs. Union of India in Writ Petition (Civil) No.202 of 1995 and order of the Hon'ble Supreme Court dated the 21 <sup>st</sup> April, 2014 in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No.435 of 2012.
2.	Setting up of saw mills.	No new and expansion of existing saw mills shall be permitted within the Eco-sensitive Zone.
3.	Setting up of industries causing water or air or soil or noise pollution.	No new or expansion of existing polluting industries shall be permitted within the Eco-sensitive Zone.
4.	Use or production of any hazardous substances.	Prohibited (except as otherwise provided) as per applicable laws.
5.	Establishment of hotels and resorts.	No new or expansion of existing commercial establishments such as hotels and resorts shall be permitted within the Eco-sensitive Zone.
6.	Commercial use of firewood.	Prohibited (except as otherwise provided) as per applicable laws.
7.	Establishment of new major hydroelectric projects.	Prohibited (except as otherwise provided) as per applicable laws.

8.	Undertaking activities related to tourism like over-flying the sanctuary area by hot-air balloons	Prohibited (except as otherwise provided) as per applicable laws.
9.	Uses of plastic carry bags.	Prohibited (except as otherwise provided) as per applicable laws.
10.	Discharge of untreated effluents and solid waste in natural water bodies or land area.	Prohibited (except as otherwise provided) as per applicable laws.
11.	Construction activities.	No new construction of any kind shall be permitted within the Eco-sensitive Zone, except for the domestic needs of local residents including the activities listed in sub-paragraph (1) of paragraph 3. In case of the construction activity related to small scale industries not causing pollution shall be regulated and kept at the minimum.
<b>B. Regulated Activities:</b>		
12.	Felling of trees.	(a) There shall be no felling of trees on the forest or Government or revenue or private lands without prior permission of the Competent Authority in the State Government.  (b) The felling of trees shall be regulated in accordance with the provisions of the concerned Central or State Act and the rules made there under.
13.	Drastic change of agriculture system.	Regulated under applicable laws.
14.	Commercial water resources including ground water harvesting.	(a) The extraction of surface water and ground water shall be permitted only for <i>bona fide</i> agricultural use and domestic consumption of the occupier of the land.  (b) Extraction of surface water and ground water for industrial or commercial use including the amount that can be extracted, shall require prior written permission from the concerned regulatory authority.  (c) No sale of surface water or ground water shall be permitted.  (d) Steps shall be taken to prevent contamination or pollution of water from any source including agriculture.
15.	Erection of electrical cables and telecommunication towers.	Promote underground cabling.
16.	Fencing of existing premises of hotels and lodges.	Regulated under applicable laws.
17.	Widening and strengthening of existing roads and construction of new roads.	Shall be done with proper Environment Impact Assessment and mitigation measures, as applicable.

18.	Movement of vehicular traffic at night.	Regulated for commercial purpose, under applicable laws.
19.	Introduction of exotic species.	Regulated under applicable laws.
20.	Protection of hill slopes and river banks.	Regulated under applicable laws.
21.	Commercial sign boards and hoardings.	Regulated under applicable laws.
22.	Air (including noise) and vehicular pollution.	Regulated under applicable laws.
23.	Discharge of treated effluents in natural water bodies or land area.	Recycling of treated effluent shall be encouraged and for disposal of sludge or solid wastes, the existing regulations shall be followed.
24.	Small scale industries not causing pollution.	Non-polluting, non-hazardous, small-scale and service industry, agriculture, floriculture, horticulture or agro-based industry producing products from indigenous goods from the Eco-sensitive Zone and which do not cause any adverse impact on environment shall be permitted.
25.	Collection of Forest Produce or Non-Timber Forest Produce (NTFP).	Regulated under applicable laws.
26.	Security Forces Camp.	Regulated under applicable laws.
27.	New wood based industry.	No establishment of new wood based industry shall be permitted within the limits of Eco-sensitive Zone: Provided that new wood based industry may be set up in the Eco-sensitive Zone using 100% imported wood stock.
28.	Eco-friendly cottages for temporary occupation of tourists such as tents, wooden houses, etc. for eco-friendly tourism activities.	Regulated under applicable laws.
<b>C. Permitted Activities:</b>		
29.	Ongoing agriculture and horticulture practices by local communities along with dairies, dairy farming and fisheries.	Permitted under applicable laws.
30.	Rain water harvesting.	Shall be actively promoted.
31.	Organic farming.	Shall be actively promoted.
32.	Adoption of green technology for all activities.	Shall be actively promoted.
33.	Use of renewable energy sources.	Permitted under applicable laws.
34.	Vegetative fencing.	Permitted under applicable laws.
35.	Cottage industries including village artisans, etc.	Shall be actively promoted.

5. **Eco-sensitive Zone Monitoring Committee.-** The Central Government hereby constitutes a Monitoring Committee, for effective monitoring of the Eco-sensitive Zone, which shall comprise of the following namely:-

- |     |  |                     |
|-----|--|---------------------|
| (a) | District Collector, Patiala  | – Chairman          |
| (b) | Chief Conservator of Forests (Wildlife), Government of Punjab  | – Member.           |
| (c) | Representative of Department of Rural Development and Panchayat, Government of Punjab  | – Member.           |
| (d) | Regional Officer (RO), Punjab State Pollution Control Board  | – Member            |
| (e) | One representative of Non-Governmental Organisations working in the field of environment to be nominated for a term of one year by the Government of Punjab                  | – Member.           |
| (f) | One expert in the area of ecology and environment from any reputed Institution or University of the State to be nominated for a term of one year by the Government of Punjab | – Member.           |
| (g) | Representative of Department of Rural Development and Housing Department, Government of Punjab   | – Member.           |
| (h) | Representative of Agriculture Department, Government of Punjab   | – Member.           |
| (i) | Divisional Forest Officer (In-charge of PA)  | – Member Secretary. |

6. **Terms of Reference.-** (1) The Monitoring Committee shall monitor the compliance of the provisions of this notification.

- (2) The activities that are covered in the schedule to the notification of the Government of India in the erstwhile Ministry of Environment and Forests number S.O. 1533(E), dated the 14<sup>th</sup> September, 2006, and are falling in the Eco-sensitive Zone, except for the prohibited activities as specified in the table under paragraph 4 thereof, shall be scrutinised by the Monitoring Committee based on the actual site-specific conditions and referred to the Central Government in the Ministry of Environment, Forest and Climate Change for prior environmental clearances under the provisions of the said notification.
- (3) The activities that are not covered in the schedule to the notification of the Government of India in the erstwhile Ministry of Environment and Forests number S.O. 1533(E), dated the 14<sup>th</sup> September, 2006 and are falling in the Eco-sensitive Zone, except for the prohibited activities as specified in the table under paragraph 4 thereof, shall be scrutinised by the Monitoring Committee based on the actual site-specific conditions and referred to the concerned regulatory authorities.
- (4) The Member-Secretary of the Monitoring Committee or the concerned Chief Conservator of Forests (Wildlife) shall be competent to file complaints under section 19 of the Environment (Protection) Act, 1986 against any person who contravenes the provisions of this notification.
- (5) The Monitoring Committee may invite representatives or experts from concerned Departments, representatives from industry associations or concerned stakeholders to assist in its deliberations depending on the requirements on issue to issue basis.
- (6) The Monitoring Committee shall submit the annual action taken report of its activities as on the 31<sup>st</sup> March of every year by the 30<sup>th</sup> June of that year to the Chief Wild Life Warden of the State as per proforma appended as **Annexure III**.
- (7) The Central Government in the Ministry of Environment, Forest and Climate Change may give such directions, as it deems fit, to the Monitoring Committee for effective discharge of its functions.



7. The Central Government and State Government may specify additional measures, if any, for giving effect to provisions of this notification.

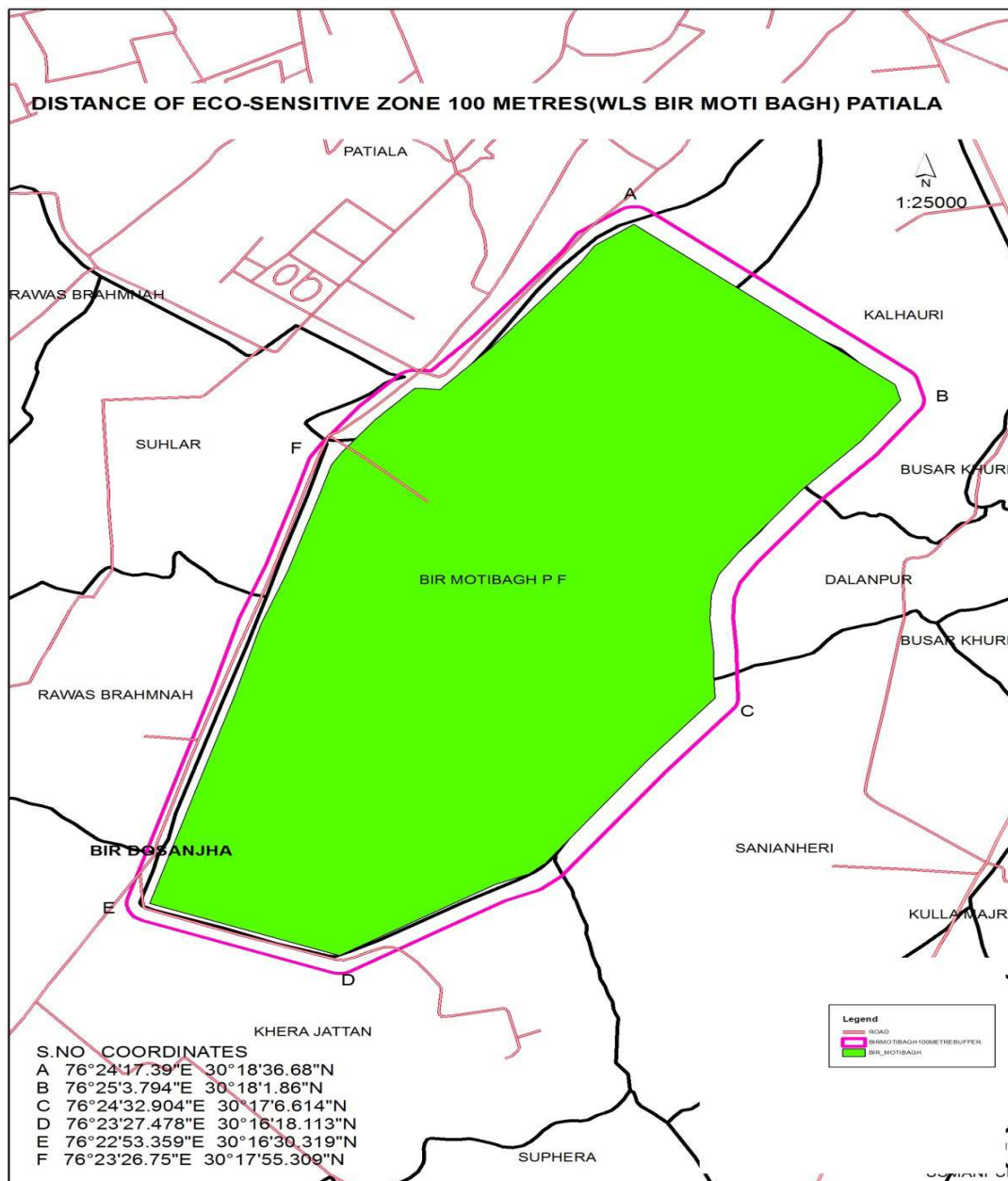
8. The provisions of this notification shall be subject to the orders, if any, passed, or to be passed, by the Hon'ble Supreme Court of India or the High Court or National Green Tribunal.

[F.No. 25/38/2014-ESZ/RE]

Dr. T. CHANDINI, Scientist 'G'

### Annexure I

**Map of Eco-sensitive Zone boundary of Bir Moti Bagh Wildlife Sanctuary, Punjab together with its latitudes and longitude of extremes and extent.**



**Annexure II****List of villages falling within the proposed Eco-sensitive Zone of Bir Moti Bagh Wildlife Sanctuary, Punjab.**

S.No	NAME	Latitude			Longitude		
		Degree	Minute	Second	Degree	Minute	Second
1.	Ghalori	30	18	05.38	76	25	27.84
2.	Sullar	30	17	46.39	76	23	17.86
3.	Rawas Brahmna	30	16	48.96	76	23	02.07
4.	Kherajattan	30	16	25.26	76	22	42.43
5.	Ramgarh	30	15	49.92	76	23	23.17
6.	Dalanpur	30	17	34.16	76	24	55.42
7.	Suniarheri	30	16	47.43	76	24	49.01

**Annexure III****Proforma of Action Taken Report:- Eco-sensitive Zone Monitoring Committee.-**

1. Number and date of meetings:
2. Minutes of the meetings: mention main noteworthy points. Attach minutes of the meeting on separate Annexure.
3. Status of preparation of Zonal Master Plan including Tourism Master Plan:
4. Summary of cases dealt for rectification of error apparent on face of land record.  
[Details may be attached as Annexure].
5. Summary of cases scrutinised for activities covered under Environment Impact Assessment notification, 2006:  
[Details may be attached as separate Annexure]
6. Summary of case scrutinised for activities not covered under Environment Impact Assessment notification, 2006.  
[Details may be attached as separate Annexure]
7. Summary of complaints lodged under section 19 of the Environment (Protection) Act, 1986:
8. Any other matter of importance:

### Annexure- 3.4

#### Detection and Prosecution Report (Bir Moti Bagh WLS)

Sr. No.	Name of offender	Date of Offence	Detail of Offence	Relevant sections of WL(P) Act	Reporting staff	Name of the court	Present status of case
1	Jarnail Singh S/o Bali Ram R/o Ravas Brahmna	31-07-00	Illegal Cutting	27,29,39,51,WL (P) Act 1972	Suresh Kumar Wildlife Guard	C.J.M Patiala	Against Department
2	Bashir Singh S/o Sh. Fateh Singh R/o Mumaan Nagar, Bikerpur, Distt. Faizabad (U.P) Haal Rajpura Ropar	25-09-04	Seized live birds of Partridge from the custody of accused	9,39,49,51 WL (P) Act 1972	Malkit Singh Wildlife Guard Bir Moti Bagh. Gurinder Singh Wild Life Guard Bir Moti Bagh	C.J.M Patiala	Case filed as accused declared P.O
3	Anwar Ali		Illegal Cutting	27,29,39,51,WL (P) Act 1972	Jagtar Singh, Wildlife Guard, Bir Moti Bagh	C.J.M Patiala	Fine 10000/-

### Annexure- 3.5

#### Development works done under the Central Assistance from Govt. of India, MOEF (Moti Bagh WLS) & R.K.V.Y

The details of funds received and utilized under 100% Central Assistance scheme of Govt. of India since 1990-91 to 1999-2000 are given as under:-

Year	Nature of Work	Amount Released (Rs)	Amount Spent (Rs.)
1990-91	Construction of water holes	50000.00	50000.00
	Purchase of Salt licks	10000.00	10000.00
	Purchase of LCV	270000.00	-
	Total	330000.00	60000.00
1991-92	Construction of one check dam.	100000.00	-
	Construction of Wildlife Interpretation centre	200000.00	
	Purchase of Trans-enlargement Slides, Wildlife books, film boards etc. for Interpretation Centre	150000.00	
	Total	450000.00	
1992-93	Purchase of water tractor trolley for translocation of injured animals & cattle etc	100000.00	88994.00
	Printing of pamphlets, posters Stickers on Bir Motibagh Sanctuary Purchase of T.V for Interpretation Centre	100000.00	98031.00
	Const. of two watch & hard Towers	100000.00	--
	Total	300000.00	187025.00
1993-94	Purchase of books, films for library of interpretation Centre	50000.00	49526.00
	Development of one water-hole and one tube well deep bore	100000.00	90801.00
	Const. of one additional hall for Interpretation Centre	150000.00	149711.00
	Total	300000.00	290038.00

1994-95	Const. of Check post on main gate	50000.00	49980.00
	Creation of one fodder plot	75000.00	75732.00
	Census of Wild animals	10000.00	9386.00
	Purchase of films, photos boards	60000.00	46955.00
	Const. of two watch towers	100000.00	98751.00
	Total	295000.00	280804.00
1995-96	Plantation of fodder & fruit trees	65000.00	65000.00
	Removal of stray cattle from Sanctuary.	25000.00	--
	Publication and extension Purchase of books, production of photos, posters, brochures etc	25000.00	24301.00
	Total	115000.00	89301.00
1996-97	Removal of stray cattle	25000.00	25000.00
	Publicity & extension, purchase of books production of photos/posters,brochures etc	699.00	699.00
	Total	25699.00	25699.00
1997-98	Raising of plantation for improvement of habitat @ Rs 10000/hectare in 12 ha area	120000.00	--
	Purchase of equipment such as films, photos, slide etc	25000.00	24699.00
	Total	145000.00	24937.00
1998-99	Raising of plantation for improvement of habitat @ Rs 10000/hectare in 12 ha area	120000.00	25400.00
	Total	120000.00	25400.00
1999-00	Construction of Wireless room 1 No	60000.00	59276.00
	Raising of plantation for improvement of habitat @ Rs 10000/hectare in 12 ha area	94600.00	94600.00
2014-15	3.50 K.M Chain link Fencing R.K.V.Y	10917819	10917819
	Total	10917819	10917819
2015-16	8 K.M Chain link Fencing RKVY	7784399	7784399
	Total	7784399	7784399

### Annexure 3.6

#### Details of Staff in O/O DFO (WL) Patiala

S.No.	Designation	Sanctioned Cadre	Present strength	Required strength
1	DFO (WL)	-	-	1
2	Deputy DFO (EACF)	1	1	1
3	Range Forest Officer(RFO)	3	1	3
4	Dy Ranger	1	1	1
5	Community Development Officer	-	-	1
6	Assistant Medical Officer / veterinary pharmacist/ Vet.Comp.	1	1	1
7	Forester	5	5	7
8	Forest Guard	13	13	20
9	Surveyor	-	-	1
	<b>Office Staff</b>			
10	Office Superintendent	1	1	1
11	Sr. assistant	1	1	1
12	Clerk/ Jr. Assistant	3	3	0
13	Stenotypist (Senior Grade)	-	-	1
14	Accountants	-	-	1
15	Artist	-	-	1
16	Driver	1	1	2
17	Head Attendant	-	-	1
18	Multipurpose Worker	6	1	6
19	Mali	-	-	3
20	Peon	2	1	2
21	Chowkidar	-	-	1
22	Hygiene Worker	1	-	2
23	Water man	-	-	1
24	Office Cleaner	-	-	1
	<b>Total</b>	<b>39</b>	<b>30</b>	<b>60</b>

### Annexure- 3.7

#### Abstract of fire lines in Bir Moti Bagh WLS

Sr. No	Compartment No.	Length of Fire Lines
1	1, 2, 3	7.097 km
2	5, 6, 7	2.543 km
3	7, 8	3.222 km
4	8, 9	5.291 km
5	10, 11	3.459 km
6	11, 12	2.182 km
7	12, 13	1.865 km
8	12, 13, 14	4.977 km
9	15, 16	3.131 km
10	17, 18	5.403 km
11	16, 19	2.388 km
12	19, 20	2.351 km
13	20, 21	2.092 km
14	22, 23, 24	1.999 km
<b>Total</b>		<b>48.000 Km</b>

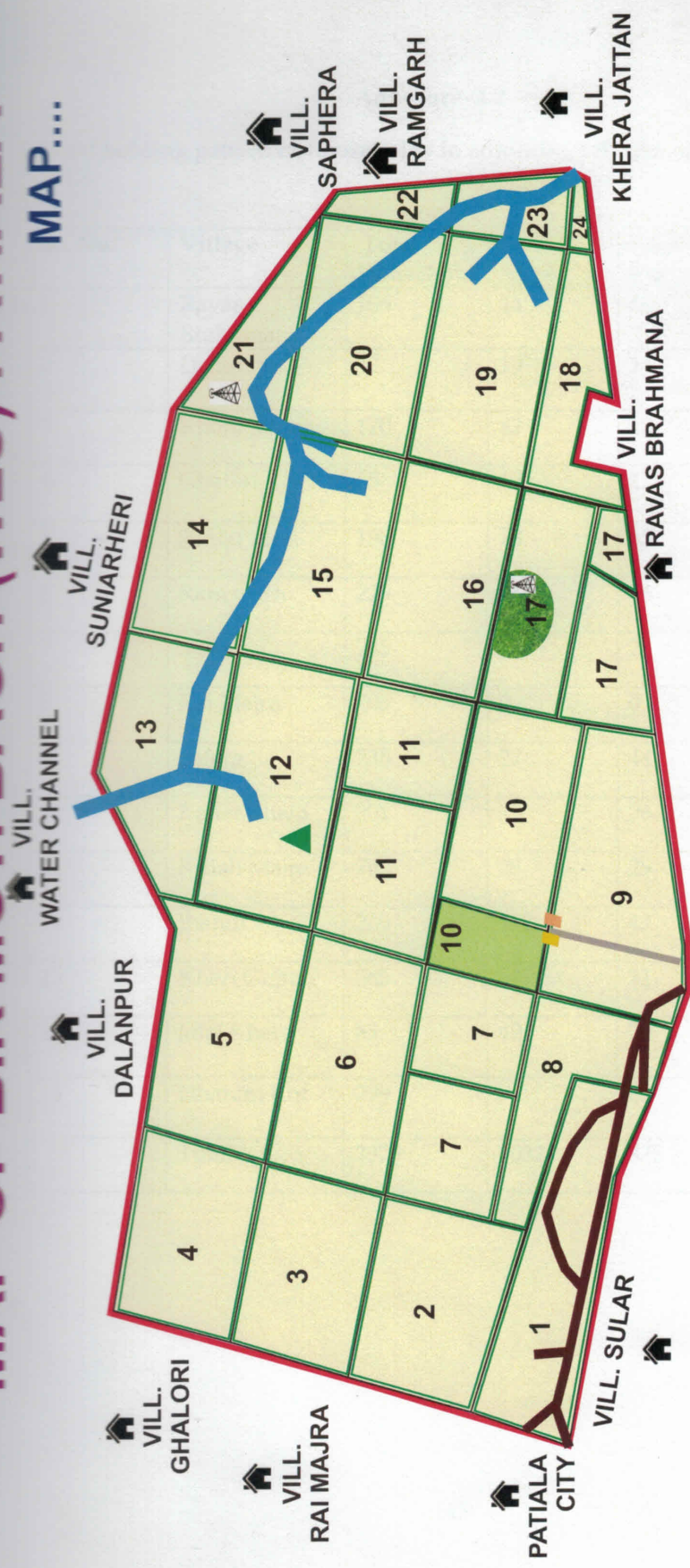
### Annexure- 4.1

#### LIST OF VILLAGE AROUND 10 KM BIR MOTIBAGH WLS

Sr. No.	Name of settlement	Sr. No.	Name of settlement
1	Alipur	27	Lagrovi
2	Alipur Arain	28	Mahadipur
3	Budhanpur	29	Mardanheri
4	Bhanra	30	Nainkalan
5	Bhanari	31	Patiala Town
6	Bilaspur	32	Partapgarh
7	Bhatian	33	Panjola
8	Bhunerheri	34	Ravas Brahmna
9	Bathoikalan	35	Ram Garh
10	Dalan Pur	36	Rai Majra
11	Dudhar	37	Ranbirpur
12	Dakala	38	Saifdipur
13	Dharam Kot	39	Saniar Heri
14	Darola	40	Sullar
15	Fatehpur	41	Safera
16	Ghalori	42	Sanaur
17	Jhandi	43	Sahibnagar
18	Jalal Khera	44	Shermajra
19	Jasowal	45	Siona
20	Jhill	46	Sidhuwal
21	Jaula	47	Salempur Brahmana
22	Jalalpur	48	Salempur Jattan
23	Khera Jattan	49	Tarain
23	Kallar Bheni	50	Tejan
24	Kuleh Majra		
25	Kheri Gujran		
26	Khaktan		
Total Villages within 10 km = 52			



# MAP OF BIR MOTI BAGH (WLS) PATIALA MAP....



	ADJOINING VILLAGE		ENTRY GATE OF PATIALA ZOO PATIALA
	WATER CHANNEL		ENTRY GATE OF BIR MOTI BAGH SANCTUARY
	DRAIN		APPROACH ROAD OF PATIALA ZOO
	FIRE LINE		PATIALA ZOO PATIALA
	CHAIN LINK FENCING		WATCH TOWER
	GRASS LAND		
	PEER MAJAR		

## Annexure- 4.2

Land holding pattern of households in adjoining villages of Bir Motibagh  
WLS

Sr. No.	Village	Total Household	Land < 5acre	Land > 5 acre	Landless Household
1	Ravas Brahmna	106	44	10	52
2	Dalan Pur	42	19	14	9
3	Khera Jattan	170	82	13	75
4	Ghalori	55	17	12	26
5	Saniar Heri	198	78	55	65
6	Ram Garh	229	110	16	103
7	Sullar	245	37	23	185
8	Rai Majra	205	0	0	205
9	Safera	235	27	44	164
10	Kallar Bheni	201	73	26	102
11	Kuleh Majra	75	28	29	18
12	Jhandi	265	128	42	95
13	Kheri Gujran	565	347	31	187
14	Jalal Khera	85	42	20	23
15	Dharam Kot	299	0	0	299
	<b>Total</b>	<b>2975</b>	<b>1032</b>	<b>335</b>	<b>1608</b>

Government of Punjab  
Department of Forests and Wildlife Preservation  
(Forest Branch)

NOTIFICATION

No. 1/7/2000-Ft-5/99677/1

Chandigarh, dated the 7-6-2017

The Punjab State Board for Wild life constituted vide this department notification No. 1/7/2000-FT-5/494 dated 17.1.2013 and further period extended for one year vide notification No. 1/7/2000-FT-5/724343/6 dated 31.3.2016 is hereby dissolved with immediate effect. Further in pursuance of Section 6 of the Wildlife (Protection) Act, 1972 as amended by the Wild Life (Protection) Amendment Act 2002 (16 of 2003), the Governor of Punjab is pleased to reconstitute Punjab State Board for Wild Life consisting of the following members, namely:-

	Hon'ble Chief Minister of Punjab.	Chairman
2	Hon'ble Minister of Forest and Wildlife, Punjab.	Vice- Chairman
3	MLA to be nominated later on	Member
4	MLA to be nominated later on	Member
5	MLA to be nominated later on	Member
6	Raja Malwinder Singh (9872800082)	Member
7	Shri Raninder Singh, New Moti Bagh Palace, Patiala.	Member
8	Shri Hardit Singh Sidhu (9815900711)	Member
9	Maj A.P. Singh (9814381729)	Member
10	Shri Jaskaran Singh Sandhu (9814221800)	Member
11	Shri Tikka Shivchand Bhalan (9417184084)	Member
12	Lt. Col (Retd) P.S. Grewal, H.No.42A, Raghbir Marg, Patiala (8289051128)	Member
13	Shri Rupinder Sandhu (9872841145)	Member
14	Shri Jasbir Singh Jassu (9216544898)	Member
15	Shri Vishavdev Singh Sidhu (9814000711)	Member
16	Smt. Rima Dhillon, Member of Avian Habitat and Wetland Society.	Member
17	Shri Narbir Singh, Vice President, Avian Habitat and Wetland Society, H.No. 287, Sector 10, Chandigarh.	Member
18	Secretary to the State Government in-charge of Forests and Wildlife.	Member



19	Secretary to the State Government in-charge of Tribal Welfare.	Member
20	Principal Chief Conservator of Forests (HoFF), Punjab	Member
21	Managing Director, State Tourism Development Corporation, Punjab.	Member
22	Officer of the State Police Department not below the rank of Inspector-General.	Member (To be nominated by the DGP, Punjab.)
23	Representative of the Armed Forces not below the rank of a Brigadier.	Member (To be nominated by Brigadier (Admn. and Prs.) HeadQuarter, Western Command, Chandimandir.)
24	Director, Department of Animal Husbandry of the State.	Member
25	Director, Department of Fisheries of the State.	Member
26	Representative of Ministry of Environment, Forests and Climate Change.	Member (To be nominated by the Director MOEF, Govt. of India.)
27	Representative of the Wildlife Institute of India, Dehradun.	Member (To be nominated by the Director Wildlife Institute Deharadun.)
28	Representative of the Botanical Survey of India.	Member (To be nominated by the Director Botanical Survey of India.)
29	Representative of the Zoological Survey of India	Member (To be nominated by the Director Zoological Survey of India.)
30	Chief Wild Life Warden, Punjab.	Member-Secretary

#### II. Procedure to be followed by the Board:-

- d) The Board Shall meet at least twice a year at such places as the State Government may direct.
- e) The Board shall regulate its own procedure (including the quorum).
- f) No act or proceeding of the Board shall be invalid merely by reason of the existence of any vacancy therein or any defect in the constitution thereof or any irregularity in the procedure of the Board not affecting the merits of the case.

#### III. Duties of State Board for Wildlife:-

It shall be the duty of the Punjab State Board for Wild Life to advise the State Government:-

- f) In the selection and management of areas to be declared as protected areas.
- g) In formulation of the policy for protection and conservation of the wild life and specified plants.
- h) In any matter relating to the amendment of any Schedule.
- i) In relation to the measures to be taken for harmonising the needs of the tribals and other dwellers of the forest with protection and conservation of wild life and.
- j) In any other matter connected with the protection of wild life, which may be referred to it by the State Government.
- IV. The headquarters of the Board will be at Chandigarh and it will work in collaboration with the National Board for Wild Life.
- V. Term of official members  
The term of office of the members other than those who are members ex-officio shall be three years from the date of publication of the notification, which may be extended for a such further period not extending three year at a time.
- VI. Filling up of vacancies  
The manner of filling up of vacancies arising subsequently referred to in clause (d) and (e) of Section 6(1) of the Wild Life (Protection) Act, 1972 shall be governed by the rules and regulations framed by the Board in consultation with the State Government.
- VII. The official members will draw T.A and D.A admissible to them under rules.
- VIII. Payment of TA/DA to the non-official members of the Board shall be regulated strictly in accordance with the Punjab Government Rules/instructions in force on the subject and the same procedure shall be followed as in the case of erstwhile Punjab State Wild Life Advisory Board.
- IX. Travelling allowance bills of the non-official members will be countersigned by the Member-Secretary of the Board.
- X. The expenditure involved on T.A and D.A of non-official members of the Board will be debited to the Head "2406-Forestry and Wildlife".

Place : Chandigarh  
Dated : 6-8-2017.

Himmat Singh  
Special Chief Secretary, Govt of Punjab,  
Department of Forests & Wildlife Preservation.

Endst No. 17/2000-Ft-5/995771/2-9 Chandigarh, dated 7-6-2017  
A copy of the above is forwarded to the following for information and necessary action:-



- 1) Principal Secretary/CM Punjab.
- 2) Director, Wildlife Preservation, Govt of India, Ministry of Environment, Forests and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, Ali Ganj, New Delhi.
- 3) The Principal Chief Conservator of Forests, Punjab, Mohali & Chief Wildlife Warden, Punjab, Mohali.
- 4) Controller, Printing & Stationary, Punjab, Chandigarh, through Nodal Officer o/o Principal Chief Conservator of Forests. All the Members of the State Board for Wildlife.
- ✓ 5) All the Commissioners of the Divisions in the State.
- 6) All Deputy Commissioners in the State.
- 7) All Senior Superintendent of Police, Punjab.
- 8) Brigadier (Admn. and Prs.) Head Quarter, Western Command, Chandimandir.

*rough PCC R*

*NS*

Additional Secretary, Government of Punjab,  
Department of Forests and Wildlife Preservation, *PC*



GOVERNMENT OF INDIA

भारत सरकार

MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय

**Central Zoo Authority**

केन्द्रीय चिड़ियाघर प्राधिकरण



F. No. 19-75/92-CZA(219)(Vol. I)(PKR) / 2894/2018

By Post / E-mail  
Date: 09.04.2018

To,

The Chief Wildlife Warden,  
Department of Forest and Wildlife Preservation,  
Government of Punjab,  
Forest Complex, Sector - 68, Mohali - 160 062 (Punjab),  
E-mail: cwlw@punjab.gov.in

**Sub:-** Renewal of recognition to the Patiala Zoo, Patiala, Punjab for period beyond 31.01.2014 under Section 38H(1) of the Wildlife (Protection) Act, 1972 - reg.

**Ref:-**

1. This office letter F. No. 19-75/92-CZA(218)(M) dated 17.01.2011.
2. Application letter No. 1362 dated 10.08.2017 received from the Divisional Forest Officer, Wildlife Division, Patiala, Punjab.

Sir,

Reference is invited to above cited correspondence. It is to inform that the evaluation of the Patiala Zoo, Patiala, Punjab was carried out by Dr. Devender Kumar, Scientific Officer, CZA on 15.10.2017. The evaluation report of the Patiala Zoo, Patiala, Punjab as submitted by the evaluating officer was considered by the Technical Committee in its 85<sup>th</sup> Meeting held on 23.03.2018. After detailed deliberations, the Technical Committee decided for renewal of recognition of the Patiala Zoo, Patiala, Punjab for a period of two years. A copy of the evaluation report as submitted by the evaluating officer is enclosed with this letter for your kind perusal and needful action.

The renewal of recognition to the Patiala Zoo, Patiala, Punjab as a "Small Category Zoo" as per the provisions of Section 38H(1) of the Wildlife (Protection) Act, 1972 is for a period up to 31.03.2020 subject to the compliance of the following directives under the Recognition of Zoo Rules (RZR), 2009 and mid-term evaluation of the zoo and to regularise the period after 31.01.2014:-

Sr. No.	Norm under RZR, 2009	Particulars of suggestions/recommendation	Time Period to Comply
<b>1. General requirements</b>			
1	10.1 (7)	The Zoo shall initiate efforts towards proper arrangements for managing liquid waste and storm water as per approved Master (Layout) Plan and complete it.	One year
<b>2. Administrative and Staffing Pattern</b>			
2	10.2 (1)	The Officer-in-Charge of the Zoo should be delegated adequate financial and administrative powers for taking immediate decisions concerning health and welfare of the captive wild animals.	Immediately
3	10.2 (2)	The zoo shall deploy Veterinary Officer, Biologists / Education Officer at zoo, because the Zoo is housing endangered species of animals.	One year or as early as possible
<b>3. Development and Planning</b>			
4	10.3 (1)	The zoo should prepare Master Plan for its long term development and get it approved by the Central Zoo Authority.	Immediately

Continued....

B-1 Wing, 6<sup>th</sup> Floor, Pt. Deendayal Antyodaya Bhawan, CGO Complex, Lodhi Road, New Delhi-110003  
बी-1 विंग, छठा तल, पंडित दीनदयाल अन्तोदय भवन, लोधी रोड, नई दिल्ली-110003  
Tel.: 011-24367846, 24367851, 24367852, Fax: 011-24367849  
E-mail: cza@nic.in, Website: http://www.cza.nic.in



4. Animal housing, display of animals and animal enclosures			
5	10.4 (1, 2 & 5)	The zoo should demolish the old enclosures housing birds and civet cat etc. which are quite small in size with lesser height and not as per the Central Zoo Authority specifications. The zoo should construct new enclosure as per the approved Master (Layout) Plan following prescribed minimum size dimensions of the Central Zoo Authority for each species. The animal enclosure in the Deer Park shall be designed to ensure the safety of animals, caretakers and visitors.	One year or phase wise
6	10.4 (7)	The appropriate screening should be provided in each adjacent enclosure while re-developing enclosures as per approved Master (Layout) Plan. At present the enclosures are separated only by chain-link fence in-between.	One year
7	10.4 (10)	The Signages need improvement and should display biology, behaviour and scientific information of the species housed in the enclosure. It may be bilingual.	Three Month
5. Upkeep and healthcare of animals			
8	10.5 (4)	The provision of feeding cells and kraal as per the dimensions, designs and the standards specified by the CZA should be made available to the animals.	Three month
9	10.5 (8)	A schedule should be prepared by the Veterinary Officer of the Zoo for periodic health monitoring of animals and the same should be strictly followed. The schedule of vaccination and de-worming of different species of the zoo animals should be displayed at the enclosure.	Immediately
10	10.5 (9)	All the staff handling animals shall be screened against zoonotic diseases at least once in a year and records should be maintained thereof.	Immediately
11	10.5 (10)	The zoo should prepare and maintain Keeper's Diary, Daily Reports, Animal History Cards and Treatment Cards, as per standards specified by the Central Zoo Authority.	Immediately
Veterinary and Infrastructure Facilities			
12	10.6 (1)	The Zoo should construct full fledged veterinary unit including treatment room, operation theatre and in-patient wards as per the approved Master (Layout) Plan with all basic diagnostic facilities, pharmacy, diagnostic and comprehensive range of drugs. Isolation ward and quarantine facilities located away from the hospital should also be developed.	One year
13	10.6 (5)	A veterinary support staff should be deployed in the zoo by the Zoo Operator.	At the earliest
7. Post-mortem and disposal of carcasses of animals			
14	10.7	The zoo should construct a post-mortem room on the location as approved in the Master (Layout) Plan.	Six month
9. Acquisition and breeding of animals			
15	10.9 (4)	The civet cat & Crocodile housed without pairs should be provided mate, else these animals should be shifted to nearby recognised zoo having appropriate housing facility.	Three Months

Continued....



16	10.9 (9)	The zoo should strictly follow the population control measures for all prolific breeding species i.e. deer and antelope and bring down the population to a minimum as prescribed by the Central Zoo Authority.	Immediately
17	10.9 (10)	The zoo should practice mock drills as per the disaster management plan for managing any such incidence in future.	Immediately
<b>10. Research Activities</b>			
18	10.10 (1)	The zoo should initiate research activities by involving nearby university or related institution.	One year
<b>11. Education and Outreach Activities</b>			
19	10.11 (1)	The zoo should carryout various educational activities for the awareness of the public.	Immediately
<b>3. Visitor Facilities</b>			
20	10.12 (2)	The snake anti-venom and lifesaving drugs should be procured and maintained by the zoo for safety of its employees and visitors.	Immediately
21	10.12 (3)	The provision of ramps should be made available for the physically challenged persons for viewing wild animals in all enclosures and at all civic facilities.	One year

A half yearly report regarding progress made in implementation of the aforesaid conditions should be submitted to the Central Zoo Authority.

The renewal of recognition to the Patiala Zoo, Patiala, Punjab for period beyond 22.03.2020 as a "Small Category Zoo" would be considered on the basis of compliance of the conditions stated above and general performance of the zoo.

The recognition to the Patiala Zoo, Patiala, Punjab shall be revoked by the Central Zoo Authority, at any point of time if the Zoo Operator is found not complying with the stipulated conditions.

Yours sincerely



(Dr. D.N. Singh)  
Member Secretary

Encl. As above

Copy to:-

1. The Divisional Forest Officer, Wildlife Division, Patiala, Opposite District Administrative Complex, Patiala - 147 001 (Punjab), E-mail: dfowildlifepatiala@gmail.com - for information and with a request that the conditions stipulated may be got implemented.
2. The DPA, CZA - to update database.

**Bir Motibagh WLS**

**Annexure 11.1**

Description of works	Proposed details	Year wise phasing of the financial forecast (in Lakhs)										Grand Total (in lakhs)
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
<b>Non Recurring</b>												
<b>Management Plan</b>	The WLS requires a comprehensive management plan, to carry out any approved technical intervention	3	2	-	-	-	-	-	-	-	-	5
<b>Total of 1</b>		<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>
<b>Survey &amp; Demarcation</b>												
<b>Repair of Boundary fencing (11.5 Km)</b>	Approx.11.5 km boundary fenced using agnle iron post and chian link fencing along compartments 1-24	5	5	3	3	3	3	2	3	4	5	36
<b>B) Station survey of the Sanctuary</b>	-	3	-	-	-	-	-	-	-	-	-	3
<b>Total of 2</b>		<b>8</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>39</b>
<b>Infrastructure &amp; communication improvement</b>												
<b>Buildings</b>												
	one block officer residence	-	-	20	-	-	-	-	-	-	-	20
	two wild life guard residence	-	-	30	-	-	-	-	-	-	-	30
	store room	-	-	5	-	-	-	-	-	-	-	5
	one class four residence	-	-	7	-	-	-	-	-	-	-	7
Check Posts 4	Creation of new 4 check posts in C.No. 9,17,21,12 and 2	6	6	-	7	7	-	-	-	-	-	26
Watch towers 6	One each in compartments 2-3, 6-7, 11, 17, 19 and 21	14	14	-	16	-	-	22	-	22	-	88
Submersible pump sets 6	Compartment No. 7, 13, 14, 17, 19 and 20	3	3	3	-	4	4	5	-	-	-	22

Description of works	Proposed details	Year wise phasing of the financial forecast (in Lakhs)										Grand Total (in lakhs)	
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10		
<b>Non Recurring</b>													
Development of paths & fire lines, compartment boundaries	Improvement of path all along the periphery in the form of a periphery road; new fire lines within the compartments need to be created.Total length of path along boundary approx 54 km, and length of proposed fire lines and compartment boundaries is approx.50 km, width of pathways along boundary and firelines is 4.0 m,Total area involved 17.4 ha, Creation of fire lines and pathways @ 1.5 lacs Ha	10	10	10	10	10	10	12	12	15	15	114	
Patrolling kits 5 @ 30000/kit	Consisting of Powerful torch, raincoat, sling bag (waterproof), gumboots, hat/cap Swiss knife, measuring tape, compass, notebook and pen	1	1	1	1	1	1	1	1	1	1	10	
Wireless Communication/Mobile phones	3 mobile phones for 1 Forester and 2 Guards & future replacement	-	2	-	-	-	2	-	-	-	2	6	
Development of electric supply	Electricity connection at check posts	3	3	-	3	-	-	-	3	-	3	15	
Entrance gate	Creation of new entry gate in comptt. 9 & 10	3	-	-	-	-	-	-	-	-	-	3	
Binoculars	Four of 8x40 magnification	1.5	1.5	1.5	1.5	-	-	-	-	-	-	6	
Vehicle / Tractor	One Tractor with Trolley and water tanker	15	-	-	-	-	17	-	-	-	-	32	
<b>Total of 3</b>		<b>56.5</b>	<b>40.5</b>	<b>77.5</b>	<b>38.5</b>	<b>22</b>	<b>34</b>	<b>40</b>	<b>16</b>	<b>38</b>	<b>21</b>	<b>384</b>	
<b>Habitat Development</b>													
Improvement of existing water feature	An existing distributary and minor runs through the middle of the WLS												

Description of works	Proposed details	Year wise phasing of the financial forecast (in Lakhs)										Grand Total (in lakhs)
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
<b>Non Recurring</b>												
Water holes	Creation of 3 stone pitched/Kacchawater hole of 40 mt. diameter in comptt. 2,5,10,11 & 16 stone pitching of existing water body in all comptts drudging and desiltation of minor/distributary is needed.	9	9	9	-	-	-	-	-	-	-	27
	Mtc. of water holes	5	5	5	5	5	5	5	5	5	5	50
Drudging & deeping of water channel and existing kachha water hole and Creation of new water channels to connect water holes from tube wells		6	6	6	6	6	6	6	6	6	6	60
Restoration of Motibagh Sanctuary (110.30 Ha per year)	Uprooting of Mesquite in Bir Motibagh Sanctuary	100	100	100	100	100	120	120	120	140	140	1140
	Estimated cost per hectare for tall plants plantation of saline & alkaline areas Bir Motibagh Sanctuary	180	240	240	240	240	240	260	270	270	300	2480
	Chainlink Fencing	60	50	70	60	60	70	60	70	60	50	610
	Cost of Tubewell, tubewell room, tanker etc.	10	10	10	10	10	10	10	10	10	20	110
<b>Grassland development (16.4 Ha per year)</b>	Grassland development work in Bir Motibagh Sanctuary with chainlink	70	70	70	70	70	70	70	70	70	31	661
<b>Plantation of fruit/fodder trees and shrubs (approx. 110 ha.)</b>	In phased manner in all compartments @ 11 ha/yr											0
Land leveling, dig pitting	@ 0.1/ha	11	11	11	11	11	11	11	5	5	5	92
Plantation	@ 0.3/ha	100	10	10	10	10	10	10	10	10	10	190
Irrigation of 3 years	@ 0.05/ha	25	10	10	10	10	10	10	10	10	10	115

Description of works	Proposed details	Year wise phasing of the financial forecast (in Lakhs)										Grand Total (in lakhs)	
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10		
<b>Non Recurring</b>													
2 weeding in first year	@ 0.05/ha	15	15	15	15	15	15	15	15	15	15	15	150
1st year Maintenance	@ 0.51/ha	15	15	15	15	15	15	15	15	15	15	15	150
2nd Year Maintenance	@ 0.44600/ha	15	15	15	15	15	15	15	15	15	15	15	150
<b>Development of saltlicks</b>	Artificial saltlicks to be developed near each water hole and check dam	5	2	5	2	2	3	3	3	5	5	5	35
<b>Control of stray cattle &amp; dog</b>	All the cattle need to be captured/driven out of the PA once the boundary wall and fencing is completed to prevent their re-entry	2	2	2	2	2	2	2	2	2	2	2	20
<b>Control of monkey population</b>	Strict vigil proposed all over the WLS for not allowing people to feed the monkeys.Castration of males seems to be an appropriate strategy to control their population	2	1	1	3	2	1	1	1	2	1	1	15
<b>Partation of Stray Cattel in 250 to Compatment 1 and 2</b>		20	20	20	20	20	-	-	-	-	-	-	100
<b>Control of monkey population</b>	Strict vigil proposed all over the WLS for not allowing people to feed the monkeys.Castration of males seems to be an appropriate strategy to control their population	2	1	1	3	2	1	1	1	2	1	1	15
<b>Establishing Monkey Rescue Center</b>		80	80	80	-	-	-	-	-	-	-	-	240

Description of works	Proposed details	Year wise phasing of the financial forecast (in Lakhs)										Grand Total (in lakhs)
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
<b>Non Recurring</b>												
<b>Rehabitates ill</b>		20	20	20	20	20						
<b>Total of 4</b>		<b>752</b>	<b>692</b>	<b>715</b>	<b>617</b>	<b>615</b>	<b>604</b>	<b>614</b>	<b>628</b>	<b>642</b>	<b>631</b>	<b>6410</b>
<b>Wildlife Health management</b>												
Establishing wildlife health Lab	Construction of Wild Life Health Lab	-	15	-	-	-	-	-	15	-	-	30
	Construction of Veterinary Elclosures (C.No.2)	-	50	-	-	-	-	50	-	-	-	100
	Purchase of histopathological Chemicals	1	1	1	1	1	1	2	2	2	2	14
	Purchase of Remote Injection Gun	4	-	-	-	5	-	-	6	-	7	22
	Purchase of Pistal Short Range	2	2	-	-	-	3	-	1	3	-	11
	Purchase of Blow Pipe 2 No.	2	1	1	1	1	1	1	1	1	1	11
	Purchase of tranquilizes	2	2	2	2	2	2	2	2	3	3	22
	Purchase of rescue Van	15	-	-	-	-	-	-	-	-	15	30
	Purchase of trapping cages	2	2	2	2	2	2	2	2	2	2	20
	Purchase of squeeze cages	3	3	1	1	3	1	3	1	3	1	20
	Purchase of glass container	1	1	1	1	1	1	2	2	2	2	14
	Purchase of injecting vials	1	1	1	1	1	1	1	1	1	1	10
	Purchase of Tags	1	1	1	1	1	1	1	1	1	1	10
	Purchase of Vaccines	2	2	2	2	2	2	2	2	2	2	20
	Purchase of Preservatives	1	1	1	1	1	1	1	2	2	2	13
	Purchase of containers	1	1	1	1	1	1	2	2	2	2	14
	Purchase of essential surgical and lab equipments	1	1	1	1	1	1	1	1	1	1	10

Description of works	Proposed details	Year wise phasing of the financial forecast (in Lakhs)										Grand Total (in lakhs)
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
<b>Non Recurring</b>												
Wildlife census	A detailed wildlife census and compile checklists of all floral and faunal species, including taxonomically lower groups to be made in consultation & support of Professor, Scientists & students of nearby University/college	4	4	4	4	4	4	4	4	6	8	46
<b>Total of 5</b>		<b>43</b>	<b>88</b>	<b>19</b>	<b>19</b>	<b>26</b>	<b>22</b>	<b>74</b>	<b>45</b>	<b>31</b>	<b>50</b>	<b>417</b>
<b>Ecotourism, Interpretation and Awareness</b>												
<b>Nature Interpretation Centre</b>												
1 building for Interpretation Centre cum Library	Construction of one new building	20	-	-	-	-	25	-	-	-	-	45
Multi-media / LCD projector	One for Centre	2	-	-	-	-	-	-	-	3	-	5
Audio visual Device, Printed laminated panels	6 panels @ 5'x4' & 10 panels @ 3'x3, & 100 panels@ 2'x2'	2	-	2	-	2	-	-	2	-	2	10
Models & Dioramas	5 models & 5 dioramas	5	-	5	-	8	-	10	-	12	-	40
Other equipments	One Digital camera & other items	2	2	2	2	2	2	2	2	2	2	20
Awareness	Generation of mass support	1	1	1	1	1	1	1	1	1	1	10
Signage & Boards	25 signage @ 5000 each 8 signboards @ 20000	3	3	3	3	3	3	4	4	4	4	34
Library	One library with collection of 500 books	4	4	4	5	5	5	5	5	5	5	47
Education camps/workshops	Covering nearby areas @ 50 camps per year	5	5	5	5	5	5	5	5	5	5	50
Publicity material	Publicity material, films, brochure, pamphlets, hoardings, website development, booklets, checklists	2	1	1	1	1	1	1	1	2	2	13
Ecotourism												0

Description of works	Proposed details	Year wise phasing of the financial forecast (in Lakhs)										Grand Total (in lakhs)
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
<b>Non Recurring</b>												
Development of a nature trail for tourists	Walk Trail of 10 K.M will be made across WLS in Copartment No.9,17,18,19,24,23,22,21, 14,13,5,7 and 10.	10	0	10	0	10	0	0	0	0	0	30
Machan and hides, view points		2	2	2	2	2	2	2	2	2	2	20
One Thematic Gate of Bir Motibagh WLS		10	-	10	-	10	-	-	-	-	-	30
Vehicles for tourism	Provision of vehicles like Mini bus for tourists to go for a round inside sanctuary	15	-	-	-	-	30	-	-	35	-	80
Tour programmer for school children	Special arranged tours for local school children	2	2	2	2	2	2	2	2	2	2	20
<b>Total of 6</b>		<b>85</b>	<b>20</b>	<b>47</b>	<b>21</b>	<b>51</b>	<b>76</b>	<b>32</b>	<b>24</b>	<b>73</b>	<b>25</b>	<b>454</b>
<b>Eco development – Details of physical and financial targets given in chapter 8</b>												
<b>Total of 7</b>		<b>14.85</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>194.85</b>
<b>Research, Monitoring &amp; Training</b>												
Research												
Short term research	Wildlife/ biological research	2	2	2	2	2	2	3	3	3	4	25
Long term research	Habitat change, landscape conservation, socioeconomic research & survey	2	2	2	2	3	3	4	4	5	6	33
Monitoring												0
Wildlife population monitoring	Regular census	2	2	2	-	-	1	1	1	-	3	12
Wildlife health monitoring	Health protocol	3	3	2	2	2	2	2	2	3	3	24
Vegetation monitoring plots	Regular sampling & study	1	1	1	1	1	1	2	2	2	2	14
Learning Centre	Documentation of all information, systemic collection of relevant details. Co-ordination- dissemination of information	2	2	1	1	1	2	2	2	3	3	19



Description of works	Proposed details	Year wise phasing of the financial forecast (in Lakhs)										Grand Total (in lakhs)
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
<b>Non Recurring</b>												
	Generation of database in GIS domain, software, exercises, documentation	6	3	3	3	3	4	4	4	5	5	40
Training												0
In house training	Holding regular workshops by senior and already tarined officers for other staff. Training in areas such as conducting wildlife census, identification of avian fauna etc could be arranged using already available departmental expertise	2	2	2	2	2	2	2	2	2	2	20
External training	Suitable organizations such as WII, BNHS, and other resource persons should be requested for imparting training in areas such as estimating habitat quality, monitoring of introduced species, behavioral ecology of wild ungulates etc	2	2	2	2	2	2	2	2	2	2	20
<b>Total of 8</b>		<b>22</b>	<b>19</b>	<b>17</b>	<b>15</b>	<b>16</b>	<b>19</b>	<b>22</b>	<b>22</b>	<b>25</b>	<b>30</b>	<b>207</b>
<b>Recurring expenditure</b>												
Boundary	Repair & maintenance	2	2	2	2	2	2	2	2	2	2	20
Check post	-do-	1	1	1	1	1	1	1	1	1	1	10
Watch tower	-do-	1	1	1	1	1	1	1	1	1	1	10
Fire line	-do-	40	40	40	40	40	40	40	60	60	60	460
Pump sets (old and new)	-do-	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	2	8
Culverts/ Check dams	-do-	1	1	1	1	1	1	2	2	2	2	14

Description of works	Proposed details	Year wise phasing of the financial forecast (in Lakhs)										Grand Total (in lakhs)
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
<b>Non Recurring</b>												
water holes	-do-	10	10	10	10	10	10	10	10	10	10	100
wireless / patrolling kit	-do-		-	0.5	-	0.4	-	0.5	-	0.5	0.6	2.5
Nature Interpretation Centre Building	-do-	-	-	0.5	0.5	0.6	0.6	0.8	0.8	1	1	5.8
Electronic items in NIC	-do-	-	-	0.2	0.2	0.4	0.4	0.6	0.6	0.8	0.8	4
Staff Amenities	Awards/ incentives		6	4	4.5	5	5.5	6	7	8	9	55
one pickup van and one minitruck / POI /equipment	Repair & maintenance	2	2	2	3	3	4	4	5	5	5	35
<b>Staffing</b>												
Wildlife Guard	@ Rs 50000/month (Approx)	6	6	6	6	6	6	6	6	6	6	60
Multimedia operator	1 @ Rs 15000/month(Approx)	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	18
Driver	1 @ Rs 40000/month(Approx)	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	48
Sweeper	1 @ Rs 5000/month(Approx)		0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	4.8
<b>Total of 9</b>		<b>70.1</b>	<b>76.7</b>	<b>75.9</b>	<b>76.9</b>	<b>78.1</b>	<b>79.2</b>	<b>82.1</b>	<b>103</b>	<b>105.5</b>	<b>107.6</b>	<b>855.1</b>
<b>Grand total</b>		<b>1054.5</b>	<b>963.2</b>	<b>974.4</b>	<b>810.4</b>	<b>831.1</b>	<b>857.2</b>	<b>886.1</b>	<b>861</b>	<b>938.5</b>	<b>889.6</b>	<b>8965.95</b>