CHAPTER 17

Organisation of The Forest Department and Administrative Charges

1. WILD LIFE AREAS IN RAJASTHAN: The total area of Protected Areas in Rajasthan is 9634.2577 sq km which is about 28.19% of the Forest land in Rajasthan. There are 3 National Parks, 25 Sanctuaries and 5 Zoos in Rajasthan which are as under:

2. Protected Areas OF Rajasthan

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of Area</th>
<th>District</th>
<th>Area Sq. Km.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) National Parks</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1</td>
<td>Keoladeo National Park</td>
<td>Bharatpur</td>
<td>28.73</td>
</tr>
<tr>
<td>2</td>
<td>Ranthambore National Park</td>
<td>Sawai Madhopur</td>
<td>282.03</td>
</tr>
<tr>
<td>3</td>
<td>Mukundra Hills National Park</td>
<td>Kota, Chittorgarh</td>
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</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>510.31</td>
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<tr>
<td>(B) Sanctuaries</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1</td>
<td>Sariska and Sariska ‘A’ Sanctuary</td>
<td>Alwar</td>
<td>495.39</td>
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<tr>
<td>2</td>
<td>Darrah Game Sanctuary</td>
<td>Kota, Jhalawar</td>
<td>239.76</td>
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<tr>
<td>3</td>
<td>Van Vihar Sanctuary</td>
<td>Dholpur</td>
<td>25.60</td>
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<tr>
<td>4</td>
<td>Jaisalmand Sanctuary</td>
<td>Udaipur</td>
<td>52.34</td>
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<tr>
<td>5</td>
<td>Mt. Abu Sanctuary</td>
<td>Sirohi</td>
<td>326.10</td>
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<tr>
<td>6</td>
<td>Kumbhalgarh Sanctuary</td>
<td>Rajsamand, Udaipur</td>
<td>610.528</td>
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<tr>
<td>7</td>
<td>Talchappar Sanctuary</td>
<td>Churu</td>
<td>7.19</td>
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<td>8</td>
<td>Sitamata Sanctuary</td>
<td>Udaipur, Chittorgarh</td>
<td>422.94</td>
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<tr>
<td>9</td>
<td>National Chambal Sanctuary</td>
<td>Kota, Bundi, Sawai Madhopur, Karauli &amp; Dholpur</td>
<td>280.00</td>
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<tr>
<td>10</td>
<td>Nahargarh Sanctuary</td>
<td>Jaipur</td>
<td>52.40</td>
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<tr>
<td>11</td>
<td>Jamwa Ramgarh Sanctuary</td>
<td>Jaipur</td>
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<tr>
<td>12</td>
<td>Jawahar Sagar Sanctuary</td>
<td>Kota, Bundi, Chittorgarh</td>
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<tr>
<td>13</td>
<td>Desert National Park</td>
<td>Jaisalmer, Barmer</td>
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<td>14</td>
<td>Ramgarh Vishdhari</td>
<td>Bundi</td>
<td>307.00</td>
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<td>15</td>
<td>Bhaninsrogarh Sanctuary</td>
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<td>16</td>
<td>Keladevi Sanctuary</td>
<td>Karauli, Sawai Madhopur</td>
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<td>Shergarh Sanctuary</td>
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<td>No.</td>
<td>Sanctuary Name</td>
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<tr>
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</tr>
<tr>
<td>18</td>
<td>Todgarh Rawali Sanctuary</td>
<td>Ajmer, Rajsamand</td>
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<td>19</td>
<td>Phulwari Ki Nal Sanctuary</td>
<td>Udaipur</td>
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<td>20</td>
<td>Sawai Mansingh Sanctuary</td>
<td>Sawai Madhopur</td>
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<td>21</td>
<td>Bandh Barethiya Sanctuary</td>
<td>Bharatpur</td>
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<td>22</td>
<td>Sajjangarh Sanctuary</td>
<td>Udaipur</td>
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<td>23</td>
<td>Bassi Sanctuary</td>
<td>Chittorgarh</td>
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<td>24</td>
<td>Ramsagar Sanctuary</td>
<td>Dholpur</td>
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<td>25</td>
<td>Kesargarh Sanctuary</td>
<td>Dholpur</td>
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<th>District</th>
<th>Area (in ha)</th>
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<tr>
<td>1</td>
<td>Bisalpur</td>
<td>Tonk</td>
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<td>2</td>
<td>Jod Beed Bikaner</td>
<td>Bikaner</td>
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<td>3</td>
<td>Sundamata</td>
<td>Jalore, Sirohi</td>
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<td>4</td>
<td>Guda Bishnoi</td>
<td>Jodhpur</td>
<td>2.31317</td>
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<tr>
<td>5</td>
<td>Shakambari</td>
<td>Sikar Jhunjhunu</td>
<td>131.00</td>
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<tr>
<td>6</td>
<td>Gogelav</td>
<td>Nagore</td>
<td>3.58</td>
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<tr>
<td>7</td>
<td>Jhunjhunun Beed</td>
<td>Jhunjhunun</td>
<td>10.4748</td>
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<td>8</td>
<td>Rotu</td>
<td>Nagaur</td>
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<td></td>
<td><strong>370.3625</strong></td>
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<td></td>
<td><strong>G.Total</strong></td>
<td></td>
<td><strong>9634.2577</strong></td>
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3. **The Objectives**

The main objectives of management of Wild Life in the State are:-

I. Conservation of bio-diversity (Flora and Fauna) and gene pool reserves through a Protected Area Network (PAN) such as National Parks, Sanctuaries, Conservation Reserves and Community Reserves.

II. Conservation of Rare and Endangered Species of flora and fauna of the State by undertaking in-situ and ex-situ conservation measures.

III. Providing proper protection to the wildlife in multiple use areas forming corridors and linking them with the Protected Areas for genetic continuity

IV. Augmenting supply of fuelwood, fodder, timber and NTFPs for meeting the demands of local people.

V. To improve productivity of grasses, fuel wood and other species in the buffer zone to reduce pressure on core zone.

VI. Improvement of Habitat quality.

VII. To develop and maintain existing corridors to encourage proliferation of wildlife.
VIII. To undertake Soil and water conservation measures for Water Resource Augmentation and making water available for wild animals in the lean periods of summers and droughts

IX. Infrastructure development at Eco-tourism sites away from the designated Core area.

X. Participatory eco-development works to secure the cooperation and participation of the local people residing on the fringes of protected areas as well as inside the protected areas.

XI. Education and awareness promotion through interpretation and extension aimed at public awareness of the importance of wildlife to human society.

XII. Improvement of capacity of the staff through appropriate training programme and strengthen the infrastructure

4. Infrastructure

I. The Principal Chief Conservator of Forests and Chief Wildlife Warden is the over all in charge of all matters relating to wildlife conservation in all National Parks, Wildlife Sanctuaries and Conservation Reserves/ Community Reserves of the State. The powers under Wildlife Protection Act, 1972 are exercised by him under various provisions of the Act.

II. The management of Wildlife Sanctuaries, National Parks and Conservation/Community Reserves is to be done as per the approved management plans drawn up for each of the Protected Areas. The management plans are to be prepared as per the general guidelines prescribed by the Ministry of Environment & Forests, Govt. of India.

III. The management plans are written for a period of 5 years / 10 years. Preparation of management plans starts two years in advance. It is the responsibility of the concerned Deputy Conservator of Forest (Wildlife), Conservator of Forests / Conservator of Forests & Field Director and Chief Conservator of Forests to carry out the wildlife management according to the prescriptions of the management plans. The Annual Plan of operations for wildlife management should be based on the management plans.

IV. A State Board for Wild Life has been constituted under the chairmanship of Hon'ble Chief Minister to advise the State Government on matters related to management of Wild Life as envisaged in the Wild Life Protection Act 1972.
V. A 'Rajasthan Protected Areas Conservation Society' has been constituted in compliance with the directions of the Hon'ble Supreme court for utilization of the compensatory amount of Rs 23.84 crores for wildlife conservation of Protected areas.

VI. A 'Rajasthan Ecotourism Development Society' has been constituted for promotion of ecotourism in the state and to implement the Ecotourism Policy of the State Govt.

5. Conservation of Bio-diversity

I. The vast floral and faunal diversity of the state is evident from the fact that there are about 2500 species of plants, 450 species of birds, 50 species of mammals, 20 species of reptiles and 14 species of amphibians besides numerous species of insects, butterflies, microflora and fauna.

II. Some of the biodiversity rich areas of the State have been declared as the Ramsar sites, namely, Keoladeo National Park in Bharatpur (also a World Heritage site) and Sambhar Lake in Jaipur. These are to be protected and managed on a sustainable basis as they are not only important as unique ecosystems but also rich in variety of products useful for nutrition, health and medicinal value.

6. In-situ conservation

6.1. National Parks

The State has declared three National Parks, viz., Keoladeo National Park, in Bharatpur having an area of 28.73 sq. km., Ranthambhor National Park in Sawai madhopur having an area of 282.03 sq. km and Mukundra Hills having an area of 199.55 sq. km. Thus, total area under National Parks is 510.31 sq. km. These areas have been given total protection and no exploitation is allowed for commercial and other purposes until and unless specifically permitted for scientific reasons. Besides protection, other activities in the National Parks include:

I. Habitat improvement

II. Creation of water holes.

III. Undertaking fire control measures.

IV. Eradication of weeds.

V. Culling of problem animals.
VI. Regulation of Ecotourism.

VII. Eco-Development works.

VIII. Research and Training.

IX. Translocation of stray carnivores causing threat to the adjoining habitations.

X. Checking the movement of ungulates straying out of the Park.

XI. Over all development of the area is aimed to minimize the dependence of peripheral population on the resources of multiple use areas around National Parks. Seeking cooperation of local population in protection of National Parks by forming Eco-development committees and Village Forest Protection and Management Committees (VFPMC) is also to be taken up on priority.

6.2. Wildlife Sanctuaries

Rajasthan has 25 Wildlife Sanctuaries covering an area of 8753.5852 sq. km. The activities undertaken in these areas are more or less the same as those taken up for the protection and management of National Parks. However, the following activities are regulated as per the Act

I. Habitat improvement.

II. Restriction on the entry.

III. Permit to enter or reside in a sanctuary is granted as per the law.

IV. Destruction of the habitat prohibited in a Sanctuary.

V. Causing fire is prohibited.

VI. Entry with weapons is prohibited.

VII. Use of injurious substances is banned.

6.3. Conservation and Community Reserves

Conservation Reserves are invariably areas owned by the State Government, declared after having consultations with local community for protecting landscape, seascape, flora & fauna and their habitat. Community Reserves are private and community lands where the community or an individual has volunteered to conserve wildlife and its habitat for protecting fauna & flora and traditional or cultural conservation values and practices. These are declared by
State Government. Rajasthan has 10 Conservation Reserves covering an area of 392.873 sq. km. The activities undertaken in these areas are more or less the same as those taken up for the protection and management of National Parks and Wildlife sanctuaries. However, the following activities are regulated as per the Act.

I. Habitat improvement.
II. Restriction on the entry.
III. Destruction of the habitat prohibited in a conservation/community Reserve.
IV. Causing fire is prohibited.
V. Entry with weapons is prohibited.
VI. Use of injurious substances is banned.

6.4. Tiger Reserves

A 'tiger reserve' includes a Core or 'Critical Tiger Habitat areas and a Buffer or peripheral area. Core or Critical Tiger Habitat are such areas which are required to be kept as inviolate for the purpose of tiger conservation without affecting the rights of the scheduled tribes or forest dwellers.

Rajasthan has 3 Tiger Reserves namely Sariska, Ranthambhore and Mukundra Hills. Later is to act as satellite core area for RTR. The activities undertaken in these areas are more or less the same as those taken up for the protection and management of National Parks. However, the following activities are regulated as per the Act.

I. Delineation of Critical tiger habitat and Buffer areas.
II. Habitat improvement.
III. Infrastructure development for protection.
IV. Restriction on the entry.
V. Destruction of the habitat is prohibited.
VI. Creation of inviolate space.
VII. Relocation of villages.
VIII. Eco-development works specially in peripheral areas.
IX. Research and training.
X. Causing fire is prohibited.
XI. Entry with weapons is prohibited.
XII. Use of injurious substances is banned.
7. Issues and strategy

Keeping the status, emerging challenges and future objectives of biodiversity conservation in mind, the various issues that need to be addressed are as follows:

7.1. Relocation of Human Settlements from core areas of Tiger Reserves: It is essential to have a minimum inviolate area which mainly forms the core of the tiger reserves. The inviolate space in the core areas is necessary to support viable breeding population of tigers and other endangered species. Pressure on human habitation is detrimental in sustaining high density tiger populations.

7.2. **Creation of Tiger Conservation Foundation:** The Tiger Conservation Foundation for Ranthambore and Sariska Tiger Reserves have been constituted under the chairmanship of Hon'ble Forest Minister to facilitate flexibility in management practices and to generate required funds from other sources for management of tiger reserves and infrastructure development.

7.3. Declaration of Eco-sensitive zones: Eco-sensitive zones are required to be declared around National Parks and Wildlife sanctuaries as per the revised guidelines issued by Ministry of Environment & Forests, Govt. of India. Activities such as mining, Hotels, Industries, etc are to be prohibited, regulated or managed inside the declared eco-sensitive zones.

7.4. Landscape Planning: Habitat loss is the most widespread cause of species endangerment in the world affecting 85% of imperiled spp. However, the most important factor leading to the endangerment of the majority of wildlife is the human impact on the species and their environment. Eco-regional planning or Landscape planning by creation of Biological corridors, biosphere reserves, and ecosystem management as approaches to integrate biodiversity conservation and socio-economic development at increasingly larger spatial scales need to be taken up.

7.5. The Biosphere Reserve: Biosphere Reserves need to be created to facilitate movement of wild animals through Corridors in the Protected Areas. Development of wildlife habitat and infrastructural development works would be taken up in the area.

7.6. Networking of Protected Areas: The existing PAN areas are widely scattered and have become ecological islands with severely depleted corridors linking them. There is a serious threat to the wildlife
population due to 'islanding' of the PAN areas. The population of small size and simple structures tend to be more susceptible to the loss of genetic variability than large geographically dispersed and sub-divided population. Loss of genetic variability has been diminishing the chances of survival of the population by inbreeding depression and loss of evolutionary potential. There is a need to increase the number of Protected Areas depending upon the genetic variation and biogeographic distribution of species and ecosystems and linking them with broad, stable and balanced corridors so that the physical and ecological boundaries of fauna coincide. For this purpose, multiple use areas with the potential of acting as corridors will have to be identified and scientifically managed. An intensive programme of rehabilitation needs be started in the following corridors to facilitate uninterrupted geneflow:

1. Ranthambhor- Ramgarh (Bundi).
2. Ranthambhor- Kailadevi
3. Kailadevi -Van Vihar
4. Kailadevi - Bandh Baretha
5. Ramgarh (Bundi) - Jawahar Sagar
6. Jawahar Sagar - Bhainsroadgarh
7. Bhainsroadgarh - Bassi - Sitamata Jaisalmand
9. Sariska- Jamwaramgarh

The area comprising the various corridors is of multiple land use category including the forest areas, community pasture lands and privately owned agricultural lands. It is considered necessary that an area of 0.1 million ha. would be rehabilitated within these corridors by undertaking the following activities:

I. Protection and afforestation.

II. Soil conservation and water harvesting measures.

III. Development of ecotourism and recreational facilities.

IV. Effective anti-poaching measures.

7.7. Man-Animal conflict: As a result of management restriction imposed
in the PAN, the local people quite often come in conflict with the Wildlife Management. Frequent confrontation with the people, due to damage to their crops by wild animals, takes place which creates hatred in their mind towards wild animals and management staff. It is more pronounced during winters and summers when the wild animals concentrating on fringe areas stray out in search of green fodder and water. Therefore, the following activities shall be organised so as to manipulate the habitats through management interventions in such a way that the population straying out is confined to the PAN areas:

I. Undertaking intensive Eco development programme.
II. Augmenting fodder production within the PAN areas.
III. Translocation of the excess animal population to restored habitats.
IV. Bringing in the concept of Participatory Management.
V. Diverting major share of ecotourism tariff for the welfare of local people.
VI. Incentives in terms of awards, rewards for contribution for conservation.
VII. Compensation for loss of property.

7.8. The Government has prescribed the following rates of Compensation / Ex-gratia in case of loss of human life, permanent incapacitation, temporary incapacitation and for domestic animals when attacked by wild animals in and around sanctuaries:

1. Loss of human life Rs. 2,00,000 /-
2. Permanent incapacitation Rs. 100,000 /-
3. Temporary incapacitation Rs. 20,000 /-(certificate to be issued by a competent medical officer)

<table>
<thead>
<tr>
<th>Category of animals</th>
<th>Amount of Compensation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Buffalo &amp; Ox</td>
<td>Rs. 10,000 /-</td>
</tr>
<tr>
<td>2. Cow</td>
<td>Rs. 5,000 /-</td>
</tr>
<tr>
<td>3. Young ones of Buffalo/cow</td>
<td>Rs. 2,000 /-</td>
</tr>
</tbody>
</table>

4. Goats/Sheep  Rs. 1,000/-
5. Camel  Rs.10,000/-
6. Donkey/Mule  Rs. 1,000/-

7.9. **Eco development**: Eco development activities help in minimizing the dependence of the local people on biodiversity resources of the PAN area. The main activities that need to be undertaken are as follows:

I. Extensive education and awareness raising through extension programme.

II. Improved animal husbandry practices including stall feeding, breed improvement and animal health care.

III. Improved land practices including agro-forestry, silvi-pasture and watershed development in the adjoining areas.

IV. Development of minor irrigation facilities.

V. Promotion of economic generation activities like pisciculture, apiculture, cottage industries, agro based industries, ecotourism, harvesting and processing of NTFP.

VI. Employment generation through forestry and related activities.

VII. Promoting the use of fuel efficient devices and alternate sources of energy.

VIII. Creation of village nurseries to provide seedlings of indigenous species for tree planting.

IX. Development of Village Community Centres.

X. Development of facilities like drinking water, transportation, schooling, medical and health.

XI. Development of multiple use buffer areas for sustainable land use.

XII. Linking the conservation of biodiversity with the sustenance of the local people.

XIII. Constitution of Ecodevelopment Committees for promotion of participatory management.

XIV. It has been estimated that area engulfing the distribution of forests including PAN upto the influencing distance of about
10 km. from the forest boundaries is around 8 million ha. Ecologically it is desirable to initiate Eco development activities in this entire area but financially is not possible to arrange enormous resources needed for the purpose. Therefore, it is viable to confine Eco development activities around the PAN especially in the areas having direct impact on conservation efforts.

7.10. **Breeding and Translocation:** Concerted efforts for conservation in some of PAN areas like Kumbhalgarh, Ravli Tadgarh, Bassi, Sitamata, Keladevi, Phulwari Ki Naal, after their declaration as wildlife sanctuaries has resulted in ecological restoration of the habitats significantly. However, animal population could not build up to optimum levels as it had gone below the critical threshold due to habitat disturbances. With due protection, the habitats have been restored and are intact and adequate protective measures are in effect. Such areas are ready to receive translocated populations of wild animals. It is ecologically viable that surplus population of ungulates in the form of social units be captured from other areas and introduced to such areas. Further to augment the population it is also possible to breed such animals from the wild stock and then relocate them to the release sites.

The Great Indian Bustard (*Choriotis nigriceps*) which has become endangered is confined only to a few locations such as Sonkhalia and Jaisalmer. It is, therefore, possible to breed the Great Indian Bustard in captive conditions at Sonkhalia (Ajmer) from the wild stock. At the same time hatching of eggs collected from the wild and subsequently releasing them to their wild habitats may be resorted to. Such programmes of breeding and reintroducing other endangered species could also be undertaken.

8. **Ex-situ Conservation**

I. There are five Zoos existing in the State which are located at Jaipur, Jodhpur, Udaipur, Kota and Bikaner. These Zoos are being managed as per the guidelines of Central Zoo Authority. As per the Concept Plan approved by the CZA, the present Zoos will be developed as Aviaries with small number of other animals. Zoos of Jodhpur, Kota, Udaipur and Jaipur are proposed to be shifted at the Biological Parks of Machia, Abheda, Sajjangarh and Nahargarh Biological Parks located near the respective cities. These parks have been designed as
per the guidelines of CZA.

II. Rescue centers are being created for rescuing and providing immediate treatment to the injured and diseased wild animals at strategic locations. Rescue centers have been created at Jodhpur, Nagaur and Bikaner. Fully equipped Rescue Vans are being provided for rescue operation.

9. **Wildlife Census:**

Periodic population estimates of the wildlife should be carried out. For uniformity, continuity and reliability of data for scientific acceptability the following procedure should be followed:

I. The annual Waterhole Census to be carried out in the month of May on full moon day. Students, N.G.Os and other volunteers may be involved in the census exercise.

II. Counting units should be demarcated either by treating beats separately or by combining 2-3 adjoining beats. These counting units once delineated will remain in force for at least 10 years. All these units should be numbered and maps should be prepared on 1:50,000 scale indicating roads, Waterholes, special habitats etc.

III. The Wildlife Staff visiting the wildlife areas during their regular patrolling should report the sightings. All the sightings should be compiled and marked on the maps at Range level and Division level. The beat officer (in charge) shall also record sightings in his beat report.

IV. Transect surveys are carried out to determine the density of animals per sq. km. Line transect methods should be followed. Standard Line transects should be identified and marked. It is the duty of beat incharge. The details of the transects should be described in the records of the Range.

V. The Vehicle Transact method should be followed for recording the sex ratio.

10. **Strengthening and Infrastructure development**

10.1. The management of PAN areas is to a great extent dependant on proper infrastructure facilities. There is shortage of field staff for protection of the PAN areas. The protection in rest of the areas is severely restricted in some places due to inadequacy of staff. Therefore, desired protection is not being provided. An increasing
trend in the poaching over the years has been noticed. As the poachers are usually better equipped with modern arms and fast moving vehicles the protection staff fails to apprehend the poachers. The staff needs to be provided with modern arms and matching mobility. Special task forces need to be created for each protected areas to face exigencies. Adequate infrastructure of intelligence gathering is also necessary with a view to apprehend the commission of such poaching cases. The following activities are proposed to be undertaken:

10.2. Strengthening the infrastructure.
10.3. Group patrolling by armed staff, increasing the number of protection staff and providing patrolling kits.
10.4. The staff to be equipped with modern weapons.
10.5. Appointing legal advisors for each Protected Area for speedy disposals of cases.
10.6. Use of modern techniques of communication and effective mobility.
10.7. Massive program of habitat restorations in and around the PAN.
10.8. Launching of extensive awareness programs for the local population.
10.9. Shifting of extractive use of PAN to non-extractive use by local population by inducting them directly into ecotourism.
10.10. Trade and safe guarding their interests against exploitation by big houses.
10.11. Providing alternatives and wood substitutes to the local people dependent upon the PAN resources by launching a massive program of Eco development.
10.12. As per Section 33 A of Wildlife (Protection) Act, 1972 it is essential to take measures to immunize the cattle residing within 5 km radius. Immunization plan should be made in consultation with animal husbandry department.

11. Protection against Wildlife offences
11.1. All the Villages falling within 2 km radius of the wildlife areas are potential threats for the wildlife. Socio-economic data of the villages is very vital for controlling crime/offences and monitoring biotic pressures. At each naka, Village crime/information reports should be maintained. The information of these records should be updated once in 6 month at range level and 3 months at naka level. It is mandatory
for all the senior officials visiting naka to check the village reports at least once in a year.

11.2. All the seized weapons, wildlife products and other related material should be kept in safe custody.

11.3. Anti-poaching checklist - A park manager who is in charge of the protection of an area must be prepared for anti-poaching operations at all times. If poaching is already rampant, immediate steps must be taken to put an anti-poaching plan into operation, which may have the following salient points

11.3.1. Train staff in arms handling, ambush, counter-ambush, interrogation, undercover operations, identification of species and litigation

11.3.2. Arrange for adequate arms and ammunition and work out annual replacement schedules.

11.3.3. Check layout and maintenance of fixed and mobile communication system units.

11.3.4. Vehicles should be kept in working condition. One vehicle with driver and staff should be available for emergency duty.

11.3.5. Shift patrolling duties so that every staff member is acquainted with entire terrain.

11.3.6. Establish a network.

11.3.7. Set up patrol parties.

11.3.8. Hold village meetings, consider setting up village patrols and consult Honorary Wildlife Warden.

11.3.9. Organize Joint meetings with police officers.

11.3.10. Utilise the services of NGOs for promotion of awareness about poaching problems.

11.3.11. A patrolling plan must be drawn up by each range officer on a monthly basis or on a pre-decide frequency.

11.3.12. The plan can follow the demarcations of a range, section and beat.

11.3.13. Patrolling paths should ideally be plotted in a random manner. In areas where this is not possible paths already
made by man or animal may be used.

11.3.14. Patrolling paths must be changed regularly. This may be based on a random choice to maximise coverage or based specifically on intelligence reports.

11.3.15. Ideally patrolling should be done by a team of 4-5 people. A minimum of three persons per patrol is necessary for effective challenge in case of an encounter.

11.3.16. If manpower is insufficient, reduce number of patrols and shift paths more frequently. Do not reduce number of persons in a patrol party.

11.3.17. The patrol path must be plotted so that communication with nearby check posts, guard huts or the main headquarters is possible at any given time. Ideally, walkie-talkies must be provided to each team. If this is not possible plan the location of anti-poaching huts or check posts so that patrol parties are always within a couple of kilometres from a check point. This is essential in areas where exit points for poachers are within the same distance. In case of interior areas communication equipment is essential.

11.3.18. Train patrolling parties in camouflage, ambush, counter ambush, etc and keep them in good physical condition. Arms training must be regularly refreshed and practiced.

11.3.19. Daily patrol findings must be logged in a patrol book/Rojnamcha kept at the beat office. This must be submitted to the Range office at regular intervals as decided by the Range officer.

11.3.20. Patrol findings must be analyzed to plan new patrol routes and strategies.

11.3.21. Rotate patrol parties at regular intervals.

11.3.22. Remember that staff incentives are an important motivating factor. Good workers should be regularly recommended for rewards.

11.3.23. Liaise with local villagers during a patrol to gain information and their confidence.

11.3.24. Patrolling is the most effective physical deterrent to poaching. Patrolling must be done in conjunction with
intelligence gathering to achieve best results. Patrolling should ideally be done on foot or bicycles as it is a silent method and covers all sorts of terrain.

12. **Ecotourism**

12.1. Due to growing popularity of Nature and wildlife, a large tourist traffic is now attracted towards National Parks, Wildlife Sanctuaries and Closed areas round the year in the State. This category of visitors adds to the biotic pressure on the PAN areas. It is therefore necessary to develop a strategy that harmonizes with Wildlife Management goals. Sustainable solution lies in the adoption of Ecotourism parameters.

12.2. Nature tourism (eco-tourism) is distinguished from mass tourism or resort tourism by having a lower impact on the environment and by requiring less infrastructure development. The key elements of eco tourism include a natural environment as the prime attraction, an optimum number of environment-Friendly visitors, activities that do not have any serious impact on the ecosystem and the positive involvement of the local community in maintaining the ecological balance.

12.3. Ecotourism Policy has been enforced for promotion of ecotourism in wilderness areas of the State.

12.3.1. Regulation of Ecotourism: The role of ecotourism in Protected Areas is to spread awareness and elicit peoples' support for conservation of wildlife and their habitats. Revenue generation has been kept secondary to conservation objectives. In order to regulate entry of eco-tourists in the PAs as well as to avoid any instance of excessive tourism in these areas, the Government of India has suggested to work out the carrying capacity of each Protected Area and limit the intake of visitors to the extent of its carrying capacity only.

12.3.2. In view to the guidelines issued by GOI and to ensure its compliance in a smooth and effective way as well as to promote and regulate the visitors' intake in these PAs an Ecotourism Charter needs to be formulated. The Ecotourism charter aims to develop the best management practices (BMP) in ecotourism to educate and regulate all stakeholders viz hoteliers, tour operators, resource
managers, visitors, host communities, concerned government departments, NGOs on one hand and, on the other, help the ecotourism managers, to implement the BMP for sustainable development.

12.4. **Guidelines For Government Officials:**

12.4.1. Ensure the involvement, appropriate participation and necessary coordination of all the relevant public institutions at all levels.

12.4.2. Promote collaboration between govt. authorities, private tour operators, other service providers, research institutions and NGOs.

12.4.3. Formulate national, regional and local site-specific ecotourism policies and development strategies.

12.4.4. Promote and develop educational programmes addressed to children and young people to enhance awareness about nature conservation and sustainable use, local and indigenous cultures and their relationship with ecotourism;

12.4.5. Promote the development of eco-tourist facilities by providing financial support wherein materials are required to be environmentally sound.

12.4.6. Strengthen, nurture and encourage the community's ability to maintain and use traditional skills, particularly home-based arts and crafts, agricultural produce, traditional housing and landscaping that use local natural resources in a sustainable manner.

12.4.7. Use internationally approved and reviewed guidelines to develop certification schemes, eco-labels and other voluntary initiatives geared towards sustainability in ecotourism, encouraging private operators to join such schemes and promoting their recognition by consumers.

12.4.8. Resort to site-specific micro-planning for community based ecotourism to ensure that basic environmental and health standards are identified and met by all ecotourism development even in the most rural areas.

12.4.9. Include micro, small and medium-sized ecotourism
institutions such as Eco-development Committees and Village Forest Protection and Management Committees, as well as community based and NGO-based ecotourism operations in the overall promotional strategies and programmes.

12.4.10. Encourage and support the creation of regional networks and cooperation for promotion and marketing of ecotourism products.

12.4.11. Provide incentives to tourism operators and other service providers (such as marketing and promotion advantages) for them to adopt ecotourism principles and make their operations more environmentally, socially and culturally responsible.

12.4.12. Institute baseline environmental impact assessment (EIA) studies and surveys that record the social environmental state of destinations, with special attention to endangered species, and invest, or support institutions that invest in research programmes on ecotourism and sustainable tourism.

12.5. **CONDUCTED TOURS AND ECO-GUIDES:** In order to ensure minimum impact of visitors’ intervention on the natural forest ecosystems and to have effective check on the movements of visitors inside the National Parks and other PAs guided / conducted tours have been prescribed. It also helps expose the visitors to the best probable sites and places of significance for eco-tourism and wildlife point of view. The movement of conducted or guided tours shall be limited to defined circuits/routes within or connecting the tourism zone areas only. Vehicles of defined size and make shall be allowed for the purpose. For the purpose of conducted tours inside PAs, the following, components shall be adhered to strictly.

12.5.1. Entry of visitors and vehicles shall be limited to carrying capacity of the Park and / or the PA concerned.

12.5.2. No vehicle shall be allowed inside the Park or any PA without the registered eco-guides; who will ensure the movement of vehicle on the defined routes and check the movement visitors and allow stoppage, rest and exposure at defined spots only.

12.5.3. On foot excursions inside the Park or PAs are not allowed
except on eco-trails and eco-tracks specially defined for the same.

12.5.4. Eco-guides and staff involved in the eco-tourism shall be specially trained in interpretation and behavioral skills and shall have to follow approved dress code and shall be registered with the Park authority and updated at regular intervals.

12.5.5. Mini buses with closed windows have been prescribed for conducted tours, while open jeeps and gypsies may be allowed for guided tours.

12.5.6. Charges for hired vehicles and eco-guides shall be as per approved list by the Park authorities. Rates shall be displayed on the board at the Reception at every entry point of the Park and the PA concerned.

12.6. **DO'S AND DONT'S IN THE PAs:**

Formulation and observance of standard codes of conduct is essential for smooth and effective running of an affair associated with people. Thus, for effective and smooth conduct of eco-tourism in PAs there is potential need of formulation of code of conduct for the visitors in the form of Do's and Don'ts in the PAs. A standard list of Do's and Don'ts in the PAs' shall be prepared for each PA and displayed at all the entry points and other prominent sites in the PA concerned. A model list of Do's and Don'ts in the PAs is given below:

12.6.1. Entry into the Park without valid permission is strictly prohibited. Please do not enter the PAs without valid permit or pass. Tress-passers will be prosecuted as per the provisions of law.

12.6.2. Carrying of firearms, ammunition or toxic material of any kind inside the PAs is strictly prohibited.

12.6.3. Kindling or burning of fire, cooking of meal and carrying inflammable material of any kind inside the Park or any other PA is strictly prohibited.

12.6.4. Nature and wild animals do not like disturbance of any kind. Do not make noise or loud cries and do not throw stones or offer edible things to the wild animals while venturing through PAs.
12.6.5. Do not go close to snakes or other wild animals. It may be dangerous.

12.6.6. Do not carry articles made of plastic such as plastic bags, bottles, glasses, cups, etc. inside the park.

12.6.7. Do not litter around and throw waste papers or articles in the Park. Use the places or Dust bins meant for the purpose.

12.6.8. Use of horn, searchlights and musical instruments are not allowed.

12.6.9. Carry and use of liquor inside the PA is strictly prohibited.

12.6.10. Swimming in the water bodies and river pools is risky. There may be crocodiles in the water bodies and you may become feed to them.

12.6.11. Permission is allowed only for the time period between the sunrise and the sunset. Visit during the night hours is strictly prohibited.

12.6.12. Observe silence if you really want to enjoy nature in its naked best.

12.6.13. Nature is mysterious. Keep a vigilant eye around while moving. Every moment has the potent to be a lifetime experience for you. Don’t miss this opportunity.

12.6.14. For your enjoyment please do not disturb wild animals. Wild creatures also need privacy like us.

12.6.15. Take the help of eco-guides to maximize the gains and joy of your visit.

12.6.16. Only guided and conducted tours shall be permissible in the PAs. The speed of vehicles shall not exceed in any case more than 35 km. per hour.

12.6.17. The visitors should observe the above Dos and Donts to avoid any possibility of the visit becoming a nightmare. They should co-operate with the Park managers for their own well being and safety as well as for the safety and well being of the beautiful creatures of this Park. This will make the visit a memorable experience of life.
12.7. **RESPONSIBILITIES OF NON GOVERNMENTAL ORGANIZATIONS**

12.7.1. Provide technical, financial, educational, capacity building and other support to ecotourism destinations.

12.7.2. Host community organizations, small businesses and the corresponding local authorities in order to ensure that appropriate policies, development and management guidelines, and monitoring mechanisms are being applied towards sustainability.

12.7.3. Monitor and conduct research on the actual impacts of ecotourism activities upon ecosystems, biodiversity, local and indigenous cultures and the socio-economic fabric of the ecotourism destinations.

12.7.4. Cooperate with public and private organizations.

12.7.5. Ensure that the data and information generated through research is channeled to support decision-making processes in ecotourism development and management.

12.7.6. Cooperate with research institutions to develop the most adequate and practical solutions to ecotourism development issues.

12.8. **Responsibilities of private tour operators**

12.8.1. Minimize negative impact of tourism related development on environment and natural resources.

12.8.2. Be responsible towards sustainable management of physical environment and protection of natural attributes (flora and fauna) of the area being visited.

12.8.3. Prepare and implement site-specific plan in conformity with prevailing legal framework policy guidelines, and local customs aimed at resource protection, community benefits, and visitors' satisfaction.

12.8.4. Design and build tourist accommodations and facilities around the wilderness areas in a manner that it contributes to ecological well being of the natural environment and minimizes negative impacts.

12.8.5. Promote usage of non-wood fuel for their operations and ensure that none of their support staff uses wood-based fuel.

12.8.6. Promote and participate non-conventional energy in the villages falling within their area of operation.
12.8.7. Be willing to enter into an agreement with host communities (viz. Joint Forest Management Committees) for supply of local food material and dairy products and allowing them to sell their local handicrafts and artefacts from operators' premises.

12.8.8. Extend employment opportunities to local people on priority and take steps to impart and upgrade skills.

12.8.9. Install have an environmentally sound garbage disposal and waste (including waste water) recycling mechanism in place.

12.8.10. Give quality interpretation at all times; explain local cultures and describe natural history. Encourage interaction with local people while overseeing contact to avoid cultural errors.

12.8.11. Conduct briefings before each stop, including behaviors to avoid, restricted practices and zones, special alerts for fragile and endangered species, specific distances to maintain with local wildlife, and local regulations.

12.8.12. Brief visitors on proper behavior - on trails, in campsites, around wild animals, around fragile plants - and with trash, with human waste, with fires, and with soaps.


12.8.14. Advise against collecting souvenirs from natural areas, such as feathers, bones and shells, unless it is specifically condoned by local authorities.

12.8.15. Advise against purchasing specific crafts that are produced from threatened natural resources.

12.8.16. Establish clear guidelines for staff regarding opportunities and company support available for training, via internal training programs (natural and cultural history) and via training programs available locally (language skills and first aid, accounting, mechanics).

12.8.17. Establish an operators' consortium for training. - Establish a relationship with a local educational facility and work to integrate needed training components into the curriculum. - Work with nongovernmental organizations to establish an ecotourism training program.

12.8.18. Hire locally-owned businesses including transport (vehicle and boat rental services), accommodations (hotels, lodges, camps), and restaurants.
12.8.19. Buy local supplies from food and craft vendors and avoid all products made from endangered or threatened species.

12.8.20. Hire local office and field staff. Pay competitive wages, above minimum wage for the region, and offer acceptable benefits.

12.8.21. Contribute to community enterprises and development efforts that support a wide variety of local residents, with special sensitivity to indigenous groups.

16.3 **Online Booking For Tourists:**

Online booking has been started for tourists on 18.09.2010 for Ranthambhore, Sariska and Keoladeo National Park. This would facilitate tourists, especially the foreign tourists, to plan their visit to these areas well in advance. An increase in revenue is also expected.