

Part – I

Chapter I

Introduction:

A reservoir was constructed by irrigation department at Attiveri in midst of forests of Mundgod range in Yallapura Forest Division in the year 1992. Birds started attracting by this reservoir in large numbers year after year noticing this Yallapur Forest Division started improving this area by taking up development works for birds habitat and sent proposals to declare this as a sanctuary for the protection and conservation of the bird life. This area was declared as Attiveri Bird Sanctuary by the Government in the year 2000.

Attiveri Bird Sanctuary is situated in Mundgod taluka of Uttar Kannada District. The sanctuary consists of a reservoir built across Tayavvanahalla at Attiveri in Mundgod taluka passing through the forests of Dundasi forest range in Haveri forest division. Extent of the sanctuary is 560 acres comprising 548 acres of reserve forest and 12 acres private lands.

1.1 Name Location Constitution and Extent:

The Sanctuary is called as Attiveri bird Sanctuary. The Sanctuary is located in the Borders of Mundgod & Kalghatgi taluka of Uttar Kannada and Dharwad District respectively. The Sanctuary is constituted as per Government of Karnataka Notification no FEE 140 FWL 93 Dated 3/10/2000 with an extent of area 2.226 sq. km (Annexure-X).

1.2 Approach & Access:

The Sanctuary is well connected to important cities like Hubli, Sirsi, Haveri, Belgaum, Bangalore by road railway and air. To Approach the sanctuary from Bangalore to Tadas cross on P.B. Road then diversion towards Mundgod is 400 km from Mundgod Town is 17 km. The nearest Railway station and Airport is Hubli, which is 43 km away.

1.3 Statement of Significance:

In the year 1992 an irrigation tank was built across Thayavanahalla at Attiveri village to cater the irrigation needs of the local farmers. This resulted in submergence of natural forest around the nallah. Some of the trees that were left out started attracting varieties of birds, both local and migratory. In the first year

witnessed about 20 SPP, followed by 35 SPP in the next year. As the reservoir is located in the midst of a moist deciduous forest in a calm and serene locality with abundant feeding grounds in the surroundings, it became a heaven for the birds to seek refuge here for their breeding activities. Birds perching to the tress partially submerged in the water, stand testimony to the fact that, safety is the prime concern for the birding activity. Come winter every year, it is a pleasure to see varieties of birds flocking in thousands here.

More than 1200 pairs of birds are found breeding in this man made habitat. White Ibis, Herons, little Cormorants, Spoonbills, Painted storks are some of the SPP, which breed here, Birds like Lapwings, Water hen Stilt, Darter, Indian shag etc are found throughout the year. Pintails, Gargany, Shoveller, Plovers etc migrate here for breeding between Novembers to February. Many small and big tanks in the adjacent areas of Mundagod, Haliyal and Yellapur taluks also help the birds to nest, feed and breed, thus making up this sanctuary an ideal aquatic habitat.

Chapter – II

Background Information and Attributes

2.1 Boundaries: The sanctuary comprises a reservoir constructed across Tayavvanahalla. The boundaries are well defined in the notification comprising reserve forests of Mundgod and Kalaghatagi ranges of Yallapur and Dharawad Forest Divisions respectively.

2.2 Geology, rock and soil & Terrain: Soil is red sandy as well as black rich loam of secondary origin formed as result of primary disintegration of both trap and gneiss charged with organic matter.

2.3 Climate: Mean annual rain fall varies from 1000 mm to 1500mm. The Sanctuary is exposed to torrential thunder showers starting from May – June with heavy monsoon showers in June – July & August.

Winds: The two monsoons winds that blow over the sanctuary are:

- 1) The South – Westerly wind between June & September.
- 2) The North – Easterly wind between September & December

2.4 Temperature: The climate in general is dry with minimum and maximum temperature varies between 15⁰ C to 37⁰ C respectively.

2.5 Water Sources: The irrigation tank which was built across Thayavanahalla at Attiveri Village to cater the irrigation needs of the local farmers is the main water source.

2.6.1 Vegetation: The Biotic factors and edaphic variations have played a dominant role in determining nature of the forests growing in Sanctuary area. The local as well as migratory birds are attracted to the flowering and fruit yielding trees found in the vicinity. *Acacia arabica* considered of special interest as they are good for nesting which are found in good number.

The Common Tree Species Found are:

- | | | |
|-------------------------------------|---|----------------|
| 1) <i>Albizia lebbek</i> | - | Bage. |
| 2) <i>Acacia arabica</i> | - | Karjiali. |
| 3) <i>Artocarpus integrifolia</i> | - | Halasu. |
| 4) <i>Acacia leucophea</i> | - | Bili Jali. |
| 5) <i>Bombax malabarica</i> | - | Buralu. |
| 6) <i>Bambusa arundinacea</i> | - | Dowga. |
| 7) <i>Borassus flabellifer</i> | - | Palmyra tree. |
| 8) <i>Calophyllum inophyllum</i> | - | Yenne Honne |
| 9) <i>Dalbergia species</i> | - | Tadasa. |
| 10) <i>Eugenia caryophyllata</i> | - | Kunti neerala. |
| 11) <i>Lagerstroemia lanceolata</i> | - | Nandi. |
| 12) <i>Erythrina indica</i> | - | Hungarike. |

- | | | |
|----------------------------------|---|-----------|
| 13) <i>Morinda tinctoria</i> | - | Matti. |
| 14) <i>Murraya koenigi</i> | - | Karibevu. |
| 15) <i>Polyalthia longifolia</i> | - | Ashoka. |
| 16) <i>Phyllanthus emblica</i> | - | Nelli. |
| 17) <i>Tectona grandis</i> | - | Teak |
| 18) <i>Terminalia paniculata</i> | - | Kindal |
| 19) <i>Eugenia jambulana</i> | - | Nerale. |

2.6.2 Animals Attiveri Bird Sanctuary is mainly a sanctuary of local birds and Migratory Birds. However other fauna found in the sanctuary are wild Boar, Python, Cobra, Rat Snakes, Vipers, Indian Porcupine, Jackal, Indian hare, spotted deer, Wolf, Common Mongoose, Common Langur. The list of animals are annexed at Annexure-XI.

Variety of birds are also seen in the sanctuary among them most commonly seen are as annexed as per annexure-XII.

Chapter – III

History of Management & Present Practices.

3.1 General: An extent of 560 Acres comprising 532 acres in Mundgod & 28 acres in Kalghatagi taluks (2.226 sq. kms.) is declared as Attiveri Birds Sanctuary. Vide Notification No. FEE-17-FWL-1999 dtd: 17-8-2000. Notification enclosed vide Annexure VIII. The entire area is reserved forests comprising an enclosure of 12 acres malki land and a reservoir of 100.69 ha. The Length of the dam is 741 mtr, with a maximum water storage capacity of 14.32 Million cubic feet and a minimum water storage capacity of 28.09 Million cubic feet. The construction of Dam was completed during 1992, across the Tayavvanahall. During 1992 rain water was stored in the dam, the inundated trees and bushes started attracting the birds. The birds started nesting on these trees and bushes. When this became routine, the area was protected as Bird sanctuary. It is estimated that nearly 300 pairs started nesting and roosting in the first year only i.e. during 1992. During 1993 nearly 1200 pairs came to make their home and breed young ones.

The Sanctuary offers ample opportunity for tourists. Keeping this in view it is necessary to develop basic infrastructure to provide facilities for the tourists. Already in the last three years children park, dormitory cafeteria toilet block, stroll ramp works are carried out but they are incomplete, in future these works are to be completed.

3.2 Timber Operations Including Bamboo and Firewood Harvest: The maximum area is comprising of water body and its fore area. A small portion of reserve forests are left around the water body which do not contain any bamboos and fire wood for commercial exploitation.

3.3 Non wood forest produce (NWP) collection: None of the non wood forest produce is available in this sanctuary.

3.4 Leases: None of the Forest land is granted on lease basis for non forestry purpose.

3.5 Forest Protection: Sanctuary is covered by chain links mesh fencing and cattle proof trench.

- 1) Surroundings are protected from biotic disturbances and encroachments by villagers and cultivators by deploying watch and ward.
- 2) Fishing activities are prohibited in the reservoir.
- 3) Firewood collection, grazing are to be prohibited.

3.6 Tourism: The Sanctuary offers ample opportunity for tourists. Keeping this in view it is necessary to develop basic infrastructure to provide facilities to the

tourists. Here the approach will be environment friendly and all activities aimed at development of tourism will be implemented in consonance with the natural surroundings, Visits to the sanctuary should be organized in such a way to maximize people's enjoyment and increase visitors concern for nature conservation.

Already in the last three years under rural tourism scheme and Central assistance for development of National Parks and Sanctuaries the following tourism activities are carried out to attract tourists.

- i) Kinder Garden / Children Park
- ii) Dormitory, Toilet block and cafeteria.
- iii) Stroll Ramp
- iv) Watch Towers
- v) Paragolas,

Following facilities can be made available in the Sanctuary

- Providing nature camp facilities for Children and Tourists.
- Sporting and Sight Seeing.
- Incomplete stroll ramp to be completed
- Purchase of Boats
- Drinking water facilities.
- Improvement of Paragola and Watch towers.

3.7 Administrative set up: At present one Range Forest Officer with his headquarter at Ranebennur one forester and some contract base mazdoors look after the protection and developmental activities of the sanctuary under the supervision and control of Assistant Conservator of Forest wildlife sub-division, Ranebennur.

3.8 Communication: Telephone and E-mail facility to the office has been provided to Assistant Conservator of Forests office, Ranebennur. One static wireless set is required in the Sanctuary.

Chapter – IV

The Protected area and the inter face land use situation

4.1 The existing situation in the zone of influence:

The people residing around the sanctuary are not using this area directly for any purpose. Since there is no dependency on the Protected area, people around the Protected area are much co-operative and farming is the major occupation.

Farmers are actually benefited by birds because to certain extent they feed on insects in their fields and control the pest population.

But usage of chemicals and fertilizers and pesticides by farmers to protect the agricultural crop may influence the population of insects and other amphibians and fishes which are the feeding grounds of some migratory birds. The after effects are not yet studied but these activities have no influence on the population of the migratory birds as per the census. Even then the farmers may be educated and encouraged in using bio-fertilisers and other less harmful pesticides.

Part – 2

Proposed Management.

Chapter – 5

Plan objectives and Problems

5.1 Objectives of Management.

Attiveri bird sanctuary is very important sanctuary from point of unique location and biological diversity. Since the “**Rio Conference**” the world is awakening to the complex bio-diversity of this planet and necessity to maintain it for human survival and well being. Hence, this plan is drawn up for a period of 5 years for the period 2009-10 to 2013-14.

Objectives:

The following objectives are set for the management of sanctuary.

It is prime duty to protect the sanctuary and the flora and fauna are to be conserved and protected. Attiveri bird sanctuary is a beautiful piece of nature harboring numerous endemic and migratory birds with distinct ecological features.

Hence prime object is to protect this treasure to the fullest extent possible. So that many endangered endemic and migratory birds inhabiting the area are adequately protected and propagated.

- a) Restore the degraded portions of the sanctuary through habitate improvement
- b) To create awareness among the people about the need to protect the nature in general and the sanctuary in particular
- C) Migratory birds like Garganey, pintails, storks etc., regularly invade and destroy the agricultural crops in nearby fields very often the whole crop in the field was found to be divested by the birds resulting in man and animal conflicts. So the more important object of the management here is to prevent such conflicts by developing feeding grounds around the sanctuary.
- D) To maintain and develop to the extent considered necessary tourism for recreation, education and scientific exploration.

5.2 Problems in achieving objectives:-

The Attiveri reservoir is depended on rain water. During good monsoon it fills up and overflow otherwise it would not be. Hence, it is to be manipulated so that the birds should get protected by creating artificial islands surrounded by water channels to maintain dead storage level around the islands which facilitates the birds to nest and roost even during bad monsoon without any disturbance. The cattle of villages belonging to Astikatta, Attiveri, Gouli Daddi, depends for grazing and drinking water on this sanctuary is a serious problem.

Chapter – 6

The Strategies

6.1 Boundaries:-

As per notification No. FEE/17/FWL/99 dated: 17-08-2000 declared as Attiveri bird sanctuary over an extent of 560 hectares comprising of 548 acres 4 guntas of Reserve Forest and 11 acres 36 guntas of private land. The proposed budget provision is as per Annexure-IV.

6.2 Zonation:-

As such the habitat is restricted to reservoir and its foreshore can be treated as a *Core Zone* which is having a zero disturbance. Fishing activities are banned in the reservoir.

The area is surrounded by natural forest and agriculture fields irrigated by this reservoir are treated as *Buffer Zone*.

Restoration Zone:-

Birds in the sanctuary selected the islands which are totally man made and covered by deep waters for nesting activities. Hence, small islands have to be created and consolidated mechanically and planted with *Acacia Nilotica*. Which improves the habitat for nesting and breeding of birds.

6.3 Theme Plans:

The following strategies are proposed for meeting the objectives of management.

6.3.1 Habitat improvement:

Habitat improvement will be based on the following considerations.

- 1) Protecting area against biotic degradation.
- 2) Improving the habitat for birds and other fauna.
- 3) Conserving, protecting and increasing the bio diversity.

6.3.1.1 Habitat development works:

The following works are proposed with regard to habitat improvement.

- a) The trees presently being used by birds for nesting should be protected from flood waters, duly strengthening the islands by constructing rubble stone revetment and maintenance of water levels around the islands by regulating water flow into the channels formed around the islands.

- b) Tree planting with suitable species should be taken up to ensure the future availability of good nesting sites. The barren patches in the island because of alkaline soil need be planted with trees after suitably treating the soil. Exotic weeds found in the sanctuary need to be eradicated. Planting with suitable species which help in feeding and breeding birds to be done.
- c) New islands are to be created artificially and planted with suitable tree species for providing roosting sites for birds.
- d) Measures for controlling predators like stray dogs are to be taken up by catching and translocating them to elsewhere.

The proposed Budget provision is as per Annexure-V.

6.3.2.Strategies to overcome protection problems:

6.3.2.1 Control of illegal fishing:

Fishing is totally banned within the sanctuary area. Day and night patrolling is done to book cases of illegal fishing. Boats used for tourism are being used for night patrolling.

6.3.2.2 Control of illegal grazing:

Since, the sanctuary is surrounded by villages and irrigated fields during summer cattle are driven inside the sanctuary for illegal grazing and drinking water. To control this chain link fencing is proposed at all strategic points on the boundary.

6.3.2.3 Fire Protection: Around the water body of the sanctuary there exists deciduous scrub forest with lot of grass, it is vulnerable for fire. Hence, clearing of fire lines along the boundary and other vulnerable places are to be taken up in advance during summer. Fire watchers need to be engaged to put off any accidental fire.

6.3.2.4 Publicity awareness:

To spread the message of conservation of wildlife, publicity material like brochures, hand bills should be prepared and distributed freely among the tourists, general public, school children and the people surrounding villages to create awareness regarding the importance of conserving wildlife. The proposed budget provision is as per Annexure-VIII.

Chapter – 7

Tourism Interpretation and Conservation education.

7.1 General:

Attiveri Bird Sanctuary happens to be one of the important tourism spot for watching birds. Perhaps the other tourism spots like Tibetan Camp, Chigalli Lamp, Sirsi Marikamba Temple, Sahasra Linga, Yana etc., are other linked places of attraction. Boating all along the side of the islands closely watching various resident and migratory birds is a wonderful experience to the tourists. The Rowing boats which are not at all disturbing the peaceful existence of birds is a unique feature. In future rowing boats should be used for this purpose. From the point of view of conservation education Attiveri Bird sanctuary is adjudged a best spot.

7.2 Objectives:

- (a) To develop eco-tourism for recreation, education and scientific exploration.
- (b) To provide wilderness experience to genuine enthusiasts in particular and to the public in general.
- (c) To educate the people especially those living nearby the sanctuary areas regarding the need to maintain such sanctuary and their by enlisting their co-operation.
- (d) To develop love for all types of wild life and to inculcate the idea of conservation of bio diversity in the minds of the public in general and children in particular.

7.3 Problems:

The grazing and fire wood gatherers are the main cause for the destruction of the sanctuary and its surroundings. Hence, preventive measures have been given much importance in the habitat development. There are occasional instances of poaching of birds in the sanctuary. Considering all these aspects, the following measures are suggested.

- 1) Establishing protection and anti-poaching quads.
- 2) Protection from fire by
 - a) Employing firewatchers during summer:
 - b) Fire line clearance.
- 3) Protection from grazing in the sanctuary area.
- 4) Prohibition of fishing in the reservoir.

7.4 The Strategies:

The sanctuary has good approach from Hubli, Sirsi, Haveri and Dandeli for tourists. A reservoir is constructed across Tayyvana Halla in 1992. Artificial islands are created in the reservoir for nesting and breeding, lot of winter migratory birds visits this sanctuary from November to February, lot of visitors visit this sanctuary.

Attiveri Bird Sanctuary is open to tourists throughout the year Tourists are allowed inside between 6.00 A.M. and 6.00 P.M. Thus the regulation of visitors is planned to minimize the disturbance during sensitive periods.

Tourism activities are taken up from the funds released by tourism department. A dormitory consist of two halls and two rooms on the 1st floor are built up for visitors accommodation. A cafeteria is also constructed to provide refreshment to the visitors.

The use of plastic inside the sanctuary area is strictly banned. Adequate number of caution boards area displayed.

To create awareness and educate the visitors laminated boards are displayed regarding migratory birds. This has to be updated by constructing a interpretation centre with audio visual equipments.

To generate resource for management of park there should be a periodical change in fees.

Entrance Fees:

Indian: Rs. 20/person

Foreigners Rs. 75/person

Camara charges:

Still camara: Rs.50

Handycam:Rs.100/-day

Larger video camera :Rs.200/-day

It is also proposed to make wide publicity by displaying information about the sanctuary at suitable places. It is also planned to bring brochures with valid information regarding the history and birds visiting the sanctuary. Barricades have to be raised round the garden area. Repairs to ponds and paragolas and sitting benches have to be done periodically. The approach road which is widened and asphalted. The vehicle parking area has to be metalled and asphalted. The boatmen are to be given proper training as guides by resource persons.

The proposed Budget provision is as per Annexure-VI.

Chapter – 8

ECO-DEVELOPMENT

8.1 Objectives:

- i) To involve the fringe villagers in and around the sanctuary, in PA planning, protection and conservation by educating them on the values of the protected area.
- ii) Developing site specific eco-development micro-plans with the participation of the villagers.
- iii) Develop alternate sources of bio-mass and income to divert pressure on the protected area while strengthening the economic condition of the villagers.
- iv) When villagers away from the traditional dependence of protected area by providing alternate sources of livelihood and training.
- v) To build up awareness among the villagers towards conservation by appropriate education programs.

8.2 Specific Issues:

- i) Traditionally the villagers surrounding the sanctuary have been dependant on the protected area for fuel-wood and small timber.
- ii) With no grazing grounds in the villages they are dependent on the Park to graze their animals as well as to collect fodder.
- iii) Relationship between Park staff and villagers are not very cordial because of restrictions imposed. Hence it is required to ensure cordial relationship.

8.3 Broad Strategies:

Dependence of villagers for small timber, fuel wood, grazing grounds on protected area has to be addressed properly. Attiveri Bird Sanctuary surrounded by 9 villages with nearly 10000 population. Following activities may be taken up as a strategy for lessening the dependency of neighboring village community on park area and ensure cordial relationship with them.

- 1) To reduce the dependency on firewood; fuel efficient smokeless chulas, biogas and LPG have to be provided.

- 2) To discourage the farmers in traditional use of chemical fertilizers and pesticides which inturn kill the insects, frogs etc., being the feed for birds, wormy compost pits and technique of organic farming and usage of bio pesticides may be provided.
- 3) Providing safe drinking water by digging borewells to improve hygiene and health of the villagers and also to avoid the women from walking long distance in search of water.
- 4) To supply fruit yielding, medicinal and agro forestry species of plants to attain self sustainability and generate income in course of time.
- 5) Improvement of cattle by artificial insemination and replacement existing low yielding milch cattle with high yielding ones is to be done to reduce the number of cattle.
- 6) Stall feeding has to be encouraged through introduction of improved fodder varieties for high yielding milch animals so as to reduce the incidence of grazing.

8.4 Monitoring and evaluation:

The monitoring of eco-development activities are important to achieve the annual physical and financial targets, the output and effects until the beneficiaries reach a position of maintaining and continuing the programmed activities.

The evaluation of the impact of eco-development on the sanctuary area and on surrounding area held in further planning.

The proposed Budget provision is as per Annexure-VII.

CHAPTER-9

RESEARCH, MONITORING AND TRAINING

9.1 Research and Monitoring:

As mentioned earlier, research has had a very low priority in the PA s of the State. Higher order investigations can be developed through consultancy programmes with Universities, specialist Institutions and through contractual arrangements. A portion of the land may be utilized to study population dynamics, seasonal migration and also bio-diversity etc., The documentation of all their process is a must.

9.1.1 Objectives:

- i) To reduce progressively the extent and degree of uncertainty on which management decisions and strategies are based.
- ii) To develop the consultative process and mechanism to ensure that research addresses information needs that are critical to this project and to the long term management of the sanctuary.
- iii) To develop interest in research and expertise in local institutions around the sanctuary.
- iv) To ensure that sanctuary supports and attracts sustained research that would meet the information needs from time to time.

9.1.2 Research Facilities:

The sanctuary has no basic facilities for research. To start with, a field laboratory or research station with Researcher is very essential. The laboratory should be equipped with basic equipments like computers, refrigerator, microscopes, oven, weighing machine, veterinary instruments etc. A vehicle has to be kept at the researchers control, enabling him to coordinate all the research works and their findings. Additional field stations should also be set up based on the requirements of research.

9.1.3 Topics for Research:

The following topics can be considered for research in the sanctuary, priority wise:

- i) Assessment of bio-diversity of lesser known and functionally important groups.
- ii) Microbial ecology of lentic/lotic aquatic bodies.

- iii) Survey of ticks and mosquitoes.
- iv) Floristic diversity and regenerations studies.
- v) Communicable disease and health monitoring in both migratory birds and surrounding village and commercial poultry birds.
- vi) Monitoring the impact of fire occurrence and fire prevention activities on habitat and species distribution.
- vii) Eco-tourism strategy, visitor management interpretation centre, publicity and propaganda.
- viii) Assessment of bird diversity in the sanctuary.
- ix) Human impact due to grazing, collection of fuel wood, bamboo and small timber.
- x) Habitat degradation and infestation of exotic weeds.
- xi) Migration and seasonal movement patterns of birds.
- xii) Carrying capacity of the sanctuary for migratory birds.
- xiii) Impact of seasonal flood on bio-diversity.
- xiv) Monitoring prey population in the forage grounds.

9.1.4 Monitoring:

Monitoring through a consistent set of measures would periodically do the following:

- i) Provide an integrated view of the present status of bio-diversity in the sanctuary.
- ii) Provide a view of socio-economic conditions and interactions between PA and people around the PA that are relevant to the project.
- iii) Evaluate whether the project activities have had the desired effect.
- iv) Identify inadequacy, ineffectiveness which cause non-compliance with expected values.

It is not necessary that all monitoring and research is to be carried out by the researchers. Monitoring can also be done by the field staff on a day to day basis of :

- i) Birds health and diseases by the departmental veterinarian.

- ii) Impact of tourism.
- iii) Feeding behavior of avian fauna.
- iv) Migration pattern of birds.
- v) Changes in vegetation to be monitored as per ecologists advice.
- vi) Thinning, removing of exotic species like subabul.
- vii) Interaction between people inside & outside the PA.
- viii) Whether project activities have had the desired effect.

9.2 .Training:

Generally, all the staff posted in the sanctuary, that is watcher upwards would have undergone professional training in forestry before joining the department. But as Wildlife management has, over the years encompassed many disciplines like ecology, tourism, public relations, Wildlife management , land use planning etc, it is very necessary to carry out refresher courses for all the staff at various level and bring them abreast of the day to day requirements.

9.2.1 Study tours:

It is worth while if study tours are conducted for the staff of PA to visit other PAs within and outside the State to learn how other PAs are managed.

9.2.2 Training programmes of Wildlife Institute-Dehradun :

Wildlife Institute of India runs many refresher courses and workshops in different PAs all over the Country. This should be taken advantage of and officers from the PAs sent regularly to attend these courses. Following are some of the courses conducted by the Wildlife Institute of India.

Table: Some courses conducted by the Wildlife Institute of India.

<u>Dehradun</u>			
Sl.No	Name of Course	Duration	Eligibility
1.	Post graduate diploma course in wildlife management	9 months	DCF & ACF
2.	Certificate course in wildlife management	3 months	RFO

3.	Wildlife management training	3 months	FR & FG
4.	Wireless operation and weapon training at police academy.	-	FR & FG
5.	Tourism management ,receptionist, interpretation.	-	ACF & RFO
6.	Wildlife health, chemical immobilization, power fencing	-	RFO & FR
7.	Capsule course in wildlife	7-15 days	CCF & CF
8.	Remote sensing at IIRS-Dehradun	10 months	DCF & ACF

9.2.3.Strengthening Prosecution capabilities of the staff:

Several of our offence cases, fail in courts of law due to improper recording, inadequate processing and wrong interpretation of legal provisions. Prosecution capabilities of the staff are required to be strengthened. A few sample cases of both success and failure can be selected by the officers of the Forest Department and with the assistance of a Legal Advisor, discussed with other lower staff periodically, so that a set of guidelines are prepared as to how a case is to be dealt with. A week training at Gungargatti by legal experts will be an advantage.

The proposed Budget provision is as per Annexure-IX.

CHAPTER -10

ORGANISATION AND ADMINISTRATION

10.1 Structure and Responsibilities:

This sanctuary is under the administrative control of Principal Chief Conservator of Forests, Wildlife, Bangalore and Conservator of Forests, Dharwad Circle, Dharwad. At present the Range Forest Officer in charge of Ranebennur Black Buck Sanctuary looks after the activities of this Sanctuary too, under the supervision and control of Assistant Conservator of Forests, Wildlife Preservation Sub-Division, Ranebennur.

For proper Management of the Sanctuary provision of one Forester and two Forest Guards along with their residential accommodation near the Sanctuary is a must. The proposed organization pattern will be as follows:

Section Forester's establishment

Sl. No.	Designation	Proposed	Existing	Required
1	Forester	1	1	-
2	Forest Guards	1	-	1
3	Boat Drivers	2	1	1
4	Forest Watchers	5	4	1
5	Tourist Guide	1	1	-
6	House keeper	1	-	1
7	Sweeper	1	-	1

The proposed Budget provision is as per Annexure-III.

10.2 Staff amenities:

Even though the sanctuary is small, construction of residential quarters and construction of cottages can be considered by acquiring forest land away from sanctuary area.

Sl. No.	Type of residential building	Location	Proposed	Existing	Required
1	Forest Guard and Forest watchers	Attiveri Bird sanctuary	5	-	5

Protection of the sanctuary from illegal fishing and grazing etc., has to be taken on priority. As such there are no staff quarters construction of staff quarters can be taken up. The staff may be provided with walkie-talkies and other instruments like binoculars, weapons for effective patrolling.

CHAPTER-11

THE BUDGET

11,1 The Plan Budget

Proposed budgetary provisions for operations of management plan strategies are appended separately.

Background information and attributes

An area of 560 Acres comprising 532 acres in Mundgod & 28 acres in Kalghatagi taluks (2.226 sq. kms.) is declared as Attiveri Birds Sanctuary. Vide Notification No. FEE-17-FWL-1999 dtd: 17-8-2000. Notification enclosed vide Annexure VIII. The entire area is reserved forests comprising an enclosure of 12 acres Pvt. Land & a reservoir of 100.69 ha. The Length of the dam is 741 mtr, with a maximum water storage capacity of 5.4695 Million cubic meters and a mean storage capacity of 2.2627 Million cubic meters. The construction of Dam was completed during 1990, across the Tayavvanahall. During 1990 rains water was stored in the dam. The inundated trees bushes, (surrounded by the water) started attracting the birds. The birds started nesting on these trees and bushes. When this became routine, the area was protected as Bird sanctuary. It is estimated that nearly 300 pairs started nesting and roosting in the first year only i.e. during 1990. During 1991 nearly 1200 pairs came to make their home and breed young ones.

Regional analysis: Inside the Attiveri Birds Sanctuary only one village viz. Attiveri Gouli Doddi is situated. There are about 6 families of goulies residing with their cattle. There is no threat to the sanctuary from these goulies. Hence, there is no necessity of shifting to these families from the sanctuary. Following villages are situated round about the sanctuary:

- 1) Attiveri, 2) Hunagund, 3) Arishingeri
- 4) Vadagatti and 5) Agadi.

(All belongs to Mungod Taluk of Uttara Kannada Dist)

- 1) Nelliharvi, 2) Astikatta. 3) Bendakatta 4) Beruvalli

(All belongs to Kalaghatagi Taluk of Dharwad Dist)

Birds of Attiveri

1.	Little Grebe
2.	Indian Shag
3.	Little Cormorant
4.	Darter Or Snake Bird
5.	Grey Heron
6.	Purple Heron
7.	Little Green Heron
8.	Pond Heron
9.	Cattle Egret
10.	Large Egret
11.	Smaller Or Median Egret
12.	Little Egret
13.	Painted Stork
14.	Open Billed Stork
15.	White Necked Stork
16.	Lesser Adjutant
17.	White Ibis
18.	Glossy Ibis
19.	Spoon Bill
20.	Lesser Whistling Teal
21.	Pintail
22.	Spot Bill Duck
23.	Garganey
24.	Shoveller
25.	Combduck
26.	Marsh Harrier
27.	Osprey
28.	White Breasted Waterhen
29.	Coot
30.	Pheasant Tailed Jacana
31.	Bronze Winged Jacana
32.	Red Wattled Lapwing
33.	Little Ringed Plover
34.	Spotted Sand Piper
35.	Common Sandpiper

36.	Little Stint
37.	Indian Black Winged Stilt
38.	Stone Curlew
39.	Indian Riverlern
40.	Black Ibis

II. ARBOREAL AND TERRESTRIAL BIRD

41.	Black Winged Kite
42.	Parrah Kite
43.	Brahminy Kite
44.	Shikra
45.	White Barked Vulture Or Bengal Valutire
46.	White Scavenger Valutre
47.	Indian Grey Partridge
48.	Grey Jungle Fowl
49.	Indian Peafowl
50.	Indian Spotted Dove
51.	Blue Rock Pigeon
52.	Indian Ring Dove
53.	Rose Ringed Parkeet
54.	Plum Or Blossom Headed Parkeet
55.	Pied Crested Cuckoo
56.	Common Hawk
57.	Indian Koel
58.	Crow Pheasant Or Coucal
59.	Spotted Owlet
60.	Common Indian Night Jar
61.	Crested Tree Swift
62.	Indian Pied King Fisher
63.	Small Blue Kingfisher
64.	White Throated Kingfisher
65.	Blue Tailed Bee Eater
66.	Small Green Bee Eater
67.	Blue Jay Or Indian Roller
68.	Hoopoe
69.	Malbar Pied Hornbill
70.	Common Grey Hornbill

71.	Crimson Breasted Barbet Or Copper Smith
72.	Large Green Barbet
73.	Lesser Golden Backed Wood Pecker
74.	Marhatta Or Yellow Fronted Pied Wood Pecker
75.	Brown- Crowned-Pigmy Woodpecker
76.	Malbar Crested Lark
77.	Indian Small Sky Lark
78.	Indian Wire Tailed Swallow
79.	Red Rumped Swallow
80.	Eastern Swallow
81.	Rufous Backed Shrike Or Long Tailed Shrike
82.	Bay Backed Shrike
83.	Indian Golden Oriole
84.	Black Drongo Or King Crow L
85.	Black Headed Myna
86.	Rosy Paster Or Rosy Starling
87.	Indian Myna
88.	Jungle Myna
89.	Indian Tree Pie
90.	Indian House Crow
91.	Indian Jungle Crow
92.	Common Wood Shrike
93.	Malbar Small Minivet
94.	Scarlet Minivet
95.	Black Headed Cuckoo
96.	Peninsular Indian Lora
97.	Gold Fronted Chloropsis
98.	Gold Mantled Chloropsis
99.	Red Whiskered Bulbul
100.	Red Vented Bulbulw
101.	White Browd Bulbul
102.	Yellow Eyed Babbler
103.	White Headed Babbler
104.	Jungle Babbler
105.	Tickell's Bule Flycatcher
106.	Veriditer Fly Catcher
107.	Paradise Fly Catcher

108.	White Browed Fantail Flycatcher
109.	White Spotted Fantail Flycatcher
110.	Streaked Fantail Warbler
111.	Ashy Wren Warbler
112.	Indian Tailor Bird
113.	Indian Mugpie Robin
114.	Malbar Shama
115.	Indian Robin
116.	Pied Bush Chat
117.	Indian Grey Tit
118.	Yellow Checked Tit Or Black Lored Tit
119.	Indian Tree Pipit
120.	Indian Paddy Field Pipit
121.	Large Pied Wagtail Or White Eye Browed Wagtail
122.	Grey Wagtail
123.	Grey Headed Yellow Wagtail
124.	White Wagtail
125.	Tickells Flower Pecker
126.	Purple Rumped Sunbird
127.	Purple Sunbird
128.	House Sparrow
129.	Indian Baya Weaver Bird
130.	White Throated Munia
131.	Spotted Munia
132.	White Backed Munia
133.	Blyth's Reed Warbler

Annexure-1**Important physical achievements during the past management plans period from 2001-02 to 2008-09**

Sl No.	Name of the work	Quatity
1	Construction of 10000 liters capacity water tank	1 No.
2	Drilling of bore well	1 No.
3	Construction of community hall	1 No.
4	Distribution of grafted mango seedling to the village formers	5033 No.
5	Formation of small artificial islands	13 No.
6	Erection of welcome arch board	1 No.
7	Display of sign boards for publicity purpose	12 No.
8	Construction of new toilet blocks for tourists	2 No.
9	Construction of drinking water pond	1 No.
10	Purchase of binoculars for tourists for bird watching	3 No.
11	Erection of solar lamps	5 No.
12	Construction of stroll ramps	150 mtr
13	Providing arch shape foot bridge near children park	1 No.
14	Improvement of approach road to Attiveri bird sanctuary	1.60 km
15	Purchase of pedal boats	2 No.
16	Raising of plantations	20 hectare
17	Survey and demarcation	3 km
18	Providing gate at the tank bund entrance	1 No.
19	Construction of check dam	3 No.
20	Formation of mini nala bund	1 No.
21	Providing chain link mesh fencing around the park at Attiveri bird sanctuary	375 sqm
22	Construction of cafeteria toilet block	1 No.
23	Construction of dormitory at Attiveri bird sanctuary	1 No.
24	Construction of cafeteria canteen	1 No.
25	Construction of storm water drain at Attiveri bird sanctuary	60 mtr
26	Construction of information center	1 No.
27	Construction of paragola	4 No.

Annexure-II

Financial targets and achievements of the past management plans period from 2001-02 to 2008-09

Sl No.	Budget Head	2001-02		2002-03		2003-04		2004-05		2005-06		2006-07		2007-08		2008-09	
		Tar	Ach	Tar	Ach	Tar	Ach	Tar	Ach	Tar	Ach	Tar	Ach	Tar	Ach	Tar	Ach
1	2406-02-110-0-47 CSS Attiveri (state)	-	-	-	-	5.00	5.00	5.00	5.00	5.00	4.00	4.50	4.50	3.50	3.50	4.50	4.50
2	2406-02-110-0-47 CSS Attiveri (central)	15.00	15.00	9.76	7.00	11.10	11.098	5.70	5.70	6.75	6.75	18.81	17.51	24.20	16.30	16.388	16.388
3	Rural tourism scheme for development of Attiveri bird sanctuary	-	-	-	-	18.00	-	18.00	-	18.00	18.00	-	-	-	-	-	-
Total		15.00	15.00	9.76	7.00	34.10	16.10	28.70	10.70	29.75	28.75	23.31	22.01	27.70	19.80	20.89	20.89

Annexure - III

Proposed budgetary provision for establishment for the period from 2009-10 to 2013-14

Sl No	Particulars	No. of Post	Budget (Rs. in lakh)					Total
			2009-10	2010-11	2011-12	2012-13	2013-14	
1	Foresters	1	1.10	1.21	1.33	1.46	1.60	6.70
2	Forest Guards	1	0.97	1.06	1.17	1.29	1.42	5.91
3	Boat Drivers	2	0.74	0.81	0.89	0.98	1.08	4.50
4	Helpers	2	0.74	0.81	0.89	0.98	1.08	4.50
5	Watchers	5	1.49	1.63	1.79	1.97	2.13	9.01
6	Tourist guide	1	0.37	0.40	0.44	0.49	0.54	2.24
7	House Keeper	1	0.37	0.40	0.44	0.49	0.54	2.24
8	Sweeper	2	0.74	0.81	0.89	0.98	1.08	4.50
Total		15	6.52	7.13	7.84	8.64	9.47	39.60

Annexure-IV

Proposed budgetary Provisions for boundary demarcation and Protection for the period from 2009-10 to 2013-14

Sl No.	Particulars of works	2009-10		2010-11		2011-12		2012-13		2013-14		Total	
		Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
I	Boudary Democration												
1	Boundary consolidation by providing CPT	1 km	0.64	1 km	0.64	-	-	-	-	-	-	2 km	1.28
2	Repair and maintainance of CPT	1 km	0.31	1 km	0.34	1 km	0.38	1 km	0.41	1 km	0.45	5 km	1.89
3	Fixing of boundary stone	5 km	1.10	5 km	1.10	-	-	-	-	-	-	10 km	2.20
Total			2.05		2.08		0.38		0.41		0.45		5.37

Annexure-V

Proposed budgetary Provisions for Habitate Development Units for the period from 2009-10 to 2013-14

Sl No.	Particulars of works	2009-10		2010-11		2011-12		2012-13		2013-14		Total	
		Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
I	Enrichment of planting												
1	Raising of foreshore plantation and maintenance	10 ha	4.00	20 ha	4.40	20 ha	1.50	20 ha	1.50	10 ha	1.00	20 ha	12.40
2	Removal of unwanted weeds like lantana etc.,	10 ha	0.15	10 ha	0.17	10 ha	0.18	10 ha	0.20	10 ha	0.22	50 ha	0.92
3	Formation of artificial islands	2 No. / 8000 cum	16.00	2 No. / 8000 cum	17.60	2 No. / 8000 cum	19.36	2 No. / 8000 cum	21.29	2 No. / 8000 cum	23.42	10 No. / 40000 cum	97.67
4	Formation water channels around the artificial islands	200 rmt / 1000 cum	0.50	200 rmt / 1000 cum	0.55	200 rmt / 1000 cum	0.60	200 rmt / 1000 cum	0.66	200 rmt / 1000 cum	0.73	1000 rmt / 5000 cum	3.04
5	Maintenance of existing islands	15 No.'s	1.00	17 No.	1.00	19 No.'s	1.00	21 No.	1.00	23 No.	1.00	23 No.	5.00
6	Providing artificial nests	LS	0.50	LS	0.50	LS	0.50	-	-	-	-	LS	1.50
7	Creation of view lines	2 km	0.07	2 km	0.08	2 km	0.09	-	-	-	-	6 km	0.24
8	Engaging fire watcher in summer season	5 No.	0.77	5 No.	0.84	5 No.	0.93	5 No.	1.02	5 No.	1.13	5 No.	4.69
9	Creation of fire lines and maintenance	6 km	0.07	6 km	0.08	6 km	0.09	6 km	0.03	6 km	0.04	6 km	0.31
10	Engaging protection watcher	5 No.	1.86	5 No.	2.04	5 No.	2.25	5 No.	2.47	5 No.	2.72	5 No	11.34
Total			24.92		27.26		26.50		28.17		30.26		137.11

Annexure-VI

Proposed budgetary Provisions for Eco Tourism Works and Providing facilities to the tourists period from 2009-10 to 2013-14

SI No.	Particulars of works	2009-10		2010-11		2011-12		2012-13		2013-14		Total	
		Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1	Formation of trailing/tracking path	5 km	5.00	5 km	5.00	-	-	-	-	-	-	10 km	10.00
2	Construction of bridge for crossing the nalas	5 Nos	5.00	5 Nos	5.50	5 Nos	6.00	5 Nos	6.65	5 Nos	7.30	25 Nos	30.45
3	Providing tented accommodation	2 Nos	8.00	2 Nos	9.68	2 Nos	10.6	2 Nos	11.7	2 Nos	12.9	10 Nos	52.91
4	Construction of toilet blocks	LS	2.00	LS	2.00	-	-	-	-	-	-	LS	4.00
5	Digging of bore well	1 No.	1.50	-	-	-	-	-	-	-	-	1 No.	1.50
6	Providing drinking water facilities	LS	2.00	LS	2.00	-	-	-	-	-	-	LS	4.00
7	Engaging boat driver cum guide	2 Nos	0.75	2 Nos	0.83	2 Nos	0.91	2 Nos	1	2 Nos	1.1	2 Nos	4.59
8	Construction of hides / watch towers to watch the birds	5 Nos	2.50	-	-	-	-	-	-	-	-	5 Nos	2.50
9	Improvement of kinder garden	LS	3.00	LS	0.50	LS	0.50	LS	0.50	LS	0.50	LS	5.00
10	Repair and maintenance of sign boards	LS	0.50	LS	0.50	LS	0.50	LS	0.50	LS	0.50	LS	2.50
11	Improvement and maintenance of approach road	1.6 km	1.00	1.6 km	1	1.6 km	8.00	1.6 km	1.00	1.6 km	1.00	1.6 km	12.00
12	Maintenance of dormitory, cafeteria, tent house etc.,	LS	1.00	LS	1.00	LS	1.00	LS	1.00	LS	1.00	LS	5.00
13	Electricity charges	LS	2.00	LS	0.50	LS	0.50	LS	0.50	LS	0.50	LS	4.00
14	Providing solar heaters, lanterns and maintenance at nature camp	LS	10.00	LS	0.50	LS	0.50	LS	0.50	LS	0.50	LS	12.00
Total			44.25		29.01		28.55		23.36		25.28		150.45

Annexure-VII

Proposed budgetary Provisions for Eco Development Works for the period from 2009-10 to 2013-14

SI No.	Particulars of works	2009-10		2010-11		2011-12		2012-13		2013-14		Total	
		Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1	Construction of wormy compost pits	100 pits	5.00	100 pits	5.50	100 pits	6.05	-	-	-	-	500 pits	16.55
2	Distribution of grafted seedlings	LS	0.50	LS	0.50	LS	0.50	LS	0.50	LS	0.50	LS	2.50
3	Providing safe drinking water by digging bore wells	2 No.'s	1.62	2 No.'s	1.62	-	-	-	-	-	-	4 Nos	3.24
4	Providing solar street light	5 No.'s	1.50	5 Nos	1.50	5 Nos	1.50	5 No	1.50	5 Nos	1.50	25 Nos	7.50
5	Providing LPG stoves	100 No.'s	1.70	100 Nos	1.87	100 Nos	2.05	100 Nos	2.26	100 No.	2.49	500 Nos	10.37
6	Awareness creation programmes	LS	0.50	LS	0.50	LS	0.50	LS	0.50	LS	0.50	LS	2.50
Total			10.82		11.49		10.60		4.76		4.99		42.66

Annexure-VIII

Proposed budgetary Provisions for Publicity and Awareness for the period from 2009-10 to 2013-14

Sl No.	Particulars of works	2009-10		2010-11		2011-12		2012-13		2013-14		Total	
		Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1	Providing signage and maintenance	10 Nos	0.50	15 Nos	0.75	-	-	LS	0.50	LS	0.50	LS	2.25
2	Providing hoardings at important places	2 Nos	2.00	2 Nos	2.00	2 Nos	2.00	1 No.	1.00	1 No.	1.00	8 No.	8.00
3	Printing of vouchers and hand bill etc.	LS	0.50	LS	0.50	LS	0.50	LS	0.50	LS	0.50	LS	2.50
4	Conducting awareness program for school children and general public	LS	0.50	LS	0.50	LS	0.50	LS	0.50	LS	0.50	LS	2.50
Total			3.50		3.75		3.00		2.50		2.50		15.25

Annexure-IX

Proposed budgetary Provisions for Research, Monitoring and Training for the period from 2009-10 to 2013-14

Sl No.	Particulars of works	2009-10		2010-11		2011-12		2012-13		2013-14		Total	
		Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1	Conducting census of wildlife	LS	0.25	-	-	-	-	-	-	LS	0.25	LS	0.50
2	Conducting study tours for staff	LS	0.50	LS	0.50	LS	0.50	LS	0.50	LS	0.50	LS	2.50
3	Conducting of seminars, workshops	LS	0.25	LS	0.25	LS	0.25	LS	0.25	LS	0.25	LS	1.25
4	Conducting awareness program for school children and general public	LS	0.50	LS	0.50	LS	0.50	LS	0.50	LS	0.50	LS	2.50
5	Payment to the consultancy experts for specific study assignments	LS	0.50	LS	0.50	LS	0.50	LS	0.50	LS	0.50	LS	2.50
Total			2.00		1.75		1.75		1.75		2.00		9.25

Annexure-X

Abstract of budget requirement of Attiveri bird sanctuary for the period 2009-10 to 2013-14

SI No.	Particulars of works	2009-10		2010-11		2011-12		2012-13		2013-14		Total	
		Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1	Establishment (Annexure-III)	10 Nos	6.52	10 Nos	7.13	10 Nos	7.84	10 Nos	8.64	10 Nos	9.47	10 Nos	39.60
2	Boundary demarcation and protection (Annexure-IV)	LS	2.05	LS	2.08	LS	0.38	LS	0.41	LS	0.45	LS	5.37
3	Habitat development works (Annexure-V)	LS	24.92	LS	27.26	LS	26.50	LS	28.17	LS	30.26	LS	137.11
4	Development of eco-tourism and providing facilities to the tourists (Annexure-VI)	LS	44.25	LS	29.01	LS	28.55	LS	23.36	LS	25.28	LS	150.45
5	Eco-development (Annexure-VII)	LS	10.82	LS	11.49	LS	10.60	LS	4.76	LS	4.99	LS	42.66
6	Publicity and awareness (Annexure-VIII)	LS	3.50	LS	3.75	LS	3.00	LS	2.50	LS	2.50	LS	15.25
7	Research, Monitoring and Training (Annexure-IX)	LS	2.00	LS	1.75	LS	1.75	LS	1.75	LS	2.00	LS	9.25
Total			94.06		82.47		78.62		69.59		74.95		399.69