

# ANNUAL PLAN OF OPERATIONS FOR

## "Phulwari-ki-Nal Wildlife Sanctuary"

### For The Year 2007-2008

**1. NAME OF SANCTUARY:**

PHULWARI-KI-NAL WILDLIFE SANCTUARY,  
H.Q. KOTRA  
DISTT. UDAIPUR (RAJASTHAN).

**2. LEGAL STATUS (DATE OF ISSUE OF INITIAL NOTIFICATION AND FINAL NOTIFICATION :**

The forest areas of Aravalli hills in Kotra and Jhadol tehsils of Udaipur district near Gujarat border was declared as Wildlife Sanctuary in 1983 vide Government of Rajasthan Notification No. F11(1)/8/83 dated 6<sup>th</sup>October,1983 under the provision of Wildlife (Protection) Act, 1972. The total area of the Sanctuary is 511.41 Sqkm. It is being managed by the Wildlife Wing since August, 1988. The final notification under Section 26A by State Government is still to be issued. The action to be performed by the collector under Section 19 to 25 of Wild Life (Protection) Act, 1972 have been completed and notified wide notification number F.39/1(2)Raj/96/2231-39, Dated 19<sup>th</sup>August,1998. Legal status wise details of area is as follows:

**(I) DISTRICT WISE AREA:**

(Area in Hectares)

S. No.	District	R.F.	P.F.	Total
1	Udaipur	36592	14549	51141

**(II) LEGAL STATUS WISE AREA:****(Area in Hectares)**

<b>SNo.</b>	<b>Total Area of Sanctuary</b>	<b>R.F.</b>	<b>P.F.</b>	<b>Unclassified</b>
1.	51141	36592	14549	-

**3. NUMBER OF VILLAGES WITHIN PA:**

As many as 134 villages are present inside the Phulwari sanctuary details of which are as following:

**Village inside the sanctuary**

Kotra	Dhedmariya, Gura, Amlia, Palesar, Bilvan, Sarli, Khajuria, Sakmaji-Mata, Upla-Thala, Thodimal, Ariwara, Patharpari, Nal-Digavari, Saktalia, Chamund-Mahuwa, Badli, Umaria, Poptali, Sisvia, Ambadeh, Gaupipla, Dungaria, Chauri Magri, Arjunpura, Chauki, Knajuwa, Vali, Godalwara, Khakriya, Kundal, Kansan, Talab, Mahari, Borli-Kala, Borli-Khurd, Nal, Sara, Luk, Rajpura, Balikaruni, Sawan- Kyara, Hasreta Sikla, Gura, Goramari, Meri, Kotra, Nakola, Sandol, Vav- Viran, Mandval, Seri, Sekli, Budiya, Vasela, Dairi, Medi, Luhari, Porkola, Amari, Mahad, Khokhara, Jher, Dia, Dotar, Badadar, Kharawani, Ashawara, Sura, Amba, Manasi, Dhanodar, Gura, Maldar Kala, Maldar Khurd, Digawari Kala, Maldar Khurd, Digawari Kala, Digawari Khurd, Kausa, Padalwara, Kana-Padar.	80
Jhadol	Jetiwara, Hirumal, Kunda, Gamari, Bitta, Birothi, Nayagaon, Bhakumba, Newaj, Kunda, Dob, Adkalia, Nalnama, Gudli, Rohimal, Basiwara, Daiya, Ambasa, Mal, Vahighata, Kavel, Bujha, Sandvasa, Sundala, Chhali-Bokara, Sarvan, Lathuni, Tinduri, Ambavi, Amba, Pipalwara, Kodar, Umaria, Gura, Burawara, Adahaldu, Parmer, Kot, Mandawa, Dharavan, Amda,	54

	Panarwa, Khajurna, Bhoiwara, Bhagorwas, Bhesana, Manpur, Anjroli-Dolji, Anjroli-Kala, Surimala, Komaria, Babarbara, Aajroli-Khas Dolaria.	
	<b>TOTAL</b>	<b>134</b>

All these villages are tribal dominated. Bhil, Bhil-meena, Garasia and Kathodi are main tribal inhabiting here. Most of villages are purely inhabited by a single tribe but some are of mixed type. Each village has several hamlets called 'Phalas'. These are inhabited by a single or multiple clans. Kathodi are semi-nomadic in nature but now government is providing them housing facilities thereby gradually leaving their nomadic habits. There is a good harmony among different tribes.

**4. STATUS OF SETTLEMENT OF RIGHTS :**

The rights of the villagers in the sanctuary area have been settled earlier under Section 24 of Wildlife (Protection) Act, 1972 and later on all these rights have again been allowed as such by the Collector, Udaipur under the provision of Section 19-25 of Wild Life (Protection) Act, 1972 wide notification number F.39/1(2)Raj/96/2232-39, Dated 19<sup>th</sup> August,1998. However in compliance of orders of Supreme Court of India in IA No 548 and orders dated 11.05.2001 in respect of I.A. No 617 & 619 villagers are not allowed to exercise existing rights in Sanctuary area .

**5. MANAGEMENT PLAN (2003-2004 TO 2012-2013) :**

The Management plan of the Sanctuary for the year 2003-2004 to 2012-13 has been prepared as per new guidelines received from GOI and approved by the Chief Wild Life Warden Rajasthan wide order No F ( ) Dev/CWLW/ 1850-55 dated 24<sup>th</sup> December,2004.

**6. CENSUS (POPULATION FIGURES OF IMPORTANT ANIMALS DURING LAST FIVE CENSUS) :**

As per the census conducted during previous years the estimated figure of the important animal species in the sanctuary are as follows:

S. No.	Name of Species	No. of Animals During the Year				
		2002	2003	2004	2005	2007
1.	Leopard	10	12	13	12	12
2.	Sloth Bear	8	12	14	16	17
3.	Hyena	16	17	18	29	31
4.	Jackal	126	100	104	109	120
5.	Four Horned Antelope	3	4	10	15	16
6.	Wild Boar	-	-	4	-	-
7.	Fox	40	35	37	49	51
8.	Porcupine	27	23	22	31	32
9.	Common Palm Civet	18	17	15	20	29
10.	Small Indian Civet	-	-	-	-	-
11.	Jungle Cat	27	30	29	43	53
12.	Grey Jungle Fowl	-	-	25	34	41
13.	Red Spurfowl	56	-	-	-	-
14.	Langur	211	206	232	392	408
15.	Common Mongoose	56	34	69	87	87
16.	Ruddy Mongoose	-	-	-	20	22
17.	Crocodile	1	6	6	*	*
18.	Indian Peafowl	118	*	234	275	289
19.	Hare	61	76	81	118	121
20.	Grey Partridge	80	*	*	284	290
21.	Cattle Egret	*	*	*	540	550
22.	Flying Fox	792	1292	*	*	*
23.	Yellow Footed	*	*	268	280	288

	Green Pigeon					
24.	Indian Monitor Lizard	44	22	31	66	69
25.	Pangolin	1	2	*	*	*
26.	Flying Squirrel	19	21	23	25	30
27.	Shikra	-	*	*	*	*
28.	Egyptian Vulture	-	*	*	*	*
29.	White-backed / Long-billed Vulture	6	*	*	*	24
30.	Eagle	-	*	2	*	2
31.	Owl	-	*	8	12	14
32.	Python	*	*	*	13	12
33.	Monkey (Rhesus Macaque)	*	*	*	88	89
34.	Quail	*	*	*	63	69

**Note:** \* Census was not Conducted in the year 2006.  
\* Not included in the Census.

## 7. **ANIMAL FOUND IN THE SANCTUARY :**

The area of wild life sanctuary Phulwari provides an ideal habitat to Herbivores, Carnivores & variety of terrestrial, arboreal & water birds. The important animals are Leopard, Sloth Bear, Striped Hyaena, Jackal, Four-horned Antelope, Fox, Porcupine, Civet, Jungle Cat, Grey Jungle Fowl, Langur, Mongoose, Indian Hare, Crocodile, Balloon frog, Flying Squirrel, White-napped Tit, Pangolin, Red Spurfowl, Giant Wood Spider etc.

Due to heavy biotic interference and cattle pressure of surrounding villages the habitat of sanctuary is getting deteriorated. However few closures out of available funds have been created at different place but they are not enough to bring the desired results. Panther is at present at the apex of the biological pyramid of the Sanctuary. The past glory of Sanctuary can be restored if effective protection is

provided, grazing pressure is reduced and few more herbivores are added in the Sanctuary area.

## 8. **TYPE OF FOREST WITH MAJOR SPECIES :**

The floral constituents of the Phulwari Wildlife Sanctuary are mostly edapho-climate climax type forests. As per the Champion & Seth's classification the forests of this sanctuary fall under the II category of Tropical Dry Deciduous forests, which can be sub classified as:

Group 5 Tropical Dry deciduous forests

Sub group 5 B - Northern tropical dry deciduous forest.

C<sub>2</sub> - Northern tropical dry mixed deciduous forest.

The main species dominating are *Wrightia tinctoria*, *Boswellia serrata*, *Lanea grandis*, *Madhuca indica*, *Pongamia pinnata*, *Dendrocalamus strictus*, *Sterculia urens*, *Butea monosperma*, *Erythrina suberosa*, *Anogeissus latifolia*, *Syzygium heynaianum*, *Adina cardifolia*, *Diospyros melanoxylon*, *Chlorophytum borivillanum*, *Centela asiatica*, Orchids, Tuberos plants etc.

## 9. **STAFF POSITION :**

S. No.	Name of Post	Sanctioned Strength	Posted	Vacant
1.	A.C.F.	1	1	-
2.	Range Officer	3	3	-
3.	Forester	6	5	1
4.	Asstt. Forester	6	3	3
5.	Forest Guard	20	13	7
6.	Driver	1	1	-
7.	Cattle Guards	12	9	3

## 10. **WILD LIFE TRAINED STAFF :**

The Staff posted in the Sanctuary is not specially trained in the Wildlife Management. However all the staff personals are trained in Wildlife Management by the Department during their induction training.

**11. ENTRY FEE CHARGED :**

Since Oct., 1999 entry fee is being charged from the visitors as per the orders issued by State Govt. The details of entry fee charged is as follows :

S. No.	Particulars	Entry Fee (In Rs.)
1.	Indian Citizen	10.00
2.	Non Indian Citizen	80.00
3.	Students (Indian)	2.00
4.	Bus	100.00
5.	Gypsy / Car / Mini Bus	65.00
6.	Two Wheeler	10.00
7.	Tonga / Auto Drive / Horse	20.00
8.	Cycle Rickshaw	5.00
9.	Cycle	3.00

**12. NUMBER OF TOURIST / VISITORS VISITING THE SANCTUARY ANNUALLY AND FACILITIES AVAILABLE FOR TOURISTS:**

Generally wildlife viewers and tourists do not come to the Sanctuary, because of its location in Tribal zone. However academicians and researchers from schools, colleges and various institutions regularly visit the Sanctuary. Many study tours are conducted by Forest Department over here.

The following Rest house exists inside and around the Sanctuary, where visitors can stay, and enjoy watching Wildlife besides picturesque Aravalli hill ranges :

S. No.	Name of Rest House	Place	No. of Suits
1.	Forest Rest House	Mamer	2
2.	Forest Rest House	Panarwa	2
3.	Forest Rest House	Kotra	2

**13. SHOOTING OF FILMS / DOCUMENTARIES CARRIED OUT DURING LAST FIVE YEARS :**

During last 5 years no shooting of films / documentary have not been done in the Sanctuary.

**14. POSTAL ADDRESS :**

Assistant Conservator of Forests,  
Wildlife Sanctuary Phulwari,  
H.Q. Kotra  
Distt. Udaipur (Rajasthan)  
Pin Code : 307025

**15. FUNDS PROVIDED UNDER STATE PLAN DURING THE LAST FIVE YEARS :**

During last 5 years the funds provided under state plan for development in the Sanctuary are as follows :-

S. No.	Year	Name of Scheme	Amount (Rs. In lac)	Actual Expenditure (Rs. In lac)
1	2002-2003	State Plan: Maint	0.10	0.10
2.	2003-2004	State Plan: Maint	0.05	0.05
		Raj. Forestry & Bio. Project: Adv. Closure & SMC measures	40.25	40.25
3.	2004-2005	State Plan: Maint	1.20	1.20
		Raj. Forestry & Bio. Project: New Works (450 Hac)	64.84	64.84
		Committed Works 03-04 (250 Hac)		
		SMC Structures (9 No)		
		Anicut (2 nos)	8.00	8.00
4.	2005-2006	Raj. Forestry & Bio. Project: New Works (150 Hac)	46.645	46.645
		Committed Works (450 Hac)		
		SMC Structures (8 Nos)		
		Infra Structure Dev. (9 Nos.)		

5	2006-2007	Raj. Forestry & Bio. Project:		
		New WorksPEO (450 Hac)	40.285	40.285
		Committed Works PEO (150 Hac)	0.922	0.922
		Committed Works Plantation (100 Hac)	5.884	5.884
		Committed Works Maintenance (250 Hac)	3.90	3.90
		SMC Structures (6 Nos)	2.045	2.045
		Infra Structure Dev. (1 Nos.)	1.50	1.50
		Twelfth Finance Commission (Boundary Pillar construction )	2.293	2.293

**16. FUNDS PROVIDED FOR SANCTUARY UNDER OTHER SCHEME :**

Details of funds provided under various schemes during the year 2006-2007 are given below:

S. No.	Name of Scheme	Amount (Rs. In lac)	Actual Expenditure (Rs. In lac)
1.	World Food Programme	2.05	0.00
2.	Central Sponsored Scheme (Annexure: F)	14.00	13.98
3	National Rural Employment Guarantee Programme	107.00	106.14

**17. STATUS OF SURVEY AND DEMARCACTION OF THE BOUNDARIES :**

The sanctuary comprises of eleven forest blocks. Except Dhedmariya block the area and interior lines of all blocks are settled. Out of remaining 871 boundary pillars to be constructed, 277 pillars have been constructed in Phulwari , Umariya, and Adahaldu Forest blocks in the year 2006-2007.

**18. NUMBER OF NATURAL / UNNATURAL DEATH INCLUDING POACHING / ACCIDENTAL DETAILS W.R.T. SCHEDULED ANIMALS REPORTED :**

No case of natural/ Unnatural death or Poaching with respect to scheduled wild animal has been reported from the Sanctuary area during the year 2006-07.

**19. FIRE INCIDENTS IN THE SANCTUARY :**

The forests of the sanctuary are prone to forest fires. Occasional ground fire incidences occur during summer, which are controlled with the help of local people. Existing fire lines are maintained regularly subject to the availability of funds.

**20. TYPE AND NUMBER OF WEAPONS AND HOW THEY ARE PUT TO USE :**

S.No.	Name of Weapons	Nos.
1.	Muzzle Loader/ Muscat	07

These weapons are carried by the sanctuary staff with them during patrolling duties.

**21. TYPE AND NUMBER OF VEHICLES AND HOW THEY ARE PUT TO USE AND WHETHER PURCHASED FROM CENTRAL/ STATE FUNDS :**

S. No.	Name of Vehicle	No. of Vehicles	Purchased from Central / State Fund	How they are put to use
1.	Jeep	1	C.S.S	Used by the incharge (ACF) of the Sanctuary for protection & inspection
2.	Canter (Mini truck)	1	C.S.S.	Used for the protection purpose by Flying Squad.
3.	Motor Cycle	3	C.S.S	Used by the Range Officers for protection and inspection purpose

**22. NUMBER OF VARIOUS TYPE OF WIRELESS SETS (FIXED / MOBILE / HAND SETS) AND HOW THEY ARE PUT TO USE :**

There are 14 Fixed sets, 2 Mobile sets and 28 Hand sets available with the staff of WLS for communication purpose, the details of which are as follows:

S. No.	Type of Sets	No. of Sets	Use Place
1.	Mobile Set	1	Fixed in Jeep of Sanctuary Incharge ACF
2.	Mobile Set	1	Fixed in Canter
3.	Fixed Set	4	Range Office Kotra and Out posts
4.	Fixed Set	5	Range Office Mamer and Out posts
5.	Fixed Set	5	Range Office Panarwa and Out posts
6.	Hand Set	1	With ACF
7.	Hand Set	3	With Range Officers
8.	Hand Set	10	With Foresters & Asstt. Foresters
9.	Hand Set	14	With Forest Guards

**23. NO. OF BEATS / SECTION / RANGES :**

For the management of Sanctuary the whole area has been divided in the following units :

S. No.	Name of Range	No. of Sections (Naka)	No. of Beats
1.	Range Kotra	3	7
2.	Range Panarwa	3	7
3.	Range Mamer	3	8
	<b>Total</b>	<b>9</b>	<b>22</b>

**24. HOW OFTEN THE VEHICLES ARE REQUISITIONED BY THE DISTRICT ADMINISTRATION :**

Although the vehicles of Wildlife are requisitioned by district administration, but later they on production of Election Commission's and Ministry of Environment & Forests directions in this regard, they are exempted.

**25. MAJOR PROBLEMS IN THE AREA :**

The major problems of the P.A. are enlisted below:

- i) Encroachment on Forest land.
- ii) Illicit felling, mostly of Bamboo and Khair (*Acacia catechu*) trees.
- iii) Deficiency of staff in comparison to the extent and difficult terrain of the sanctuary.
- iv) Disturbances due to villages situated inside the Sanctuary.
- v) Social backwardness and orthodox beliefs of native tribal population
- vi) Repeated droughts.
- vii) Anti-Government attitude of some NGOs and political groups.
- viii) Poverty and illiteracy of tribal population.

**26. TENURE OF LAST 7 INCUMENTS / INCHARGE OF SANCTUARY :**

During last 11 years the following officers have worked as a incharge of the Sanctuary.

S. No.	Name of Officer	Rank	Duration
1.	Sh. V.S. Rana	ACF	27.12.95 to 15.12.98
2.	Sh. P.S. Chundawat	ACF	15.12.98 to 20.05.03
3.	Sh. L.L. Parmar	A.C.F	20.05.03 to 29.06.03

4.	Dr. S.K. Sharma	I/C A.C.F.	29.06.03 to 28.08.04
5.	Sh. Rafeeq Mohammad Sheikh	A.C.F	28.08.04 to 27.07.05
6.	Sh Kumar Swami Gupta	A.C.F	27.07.05 to 07.11.05
7.	Sh Naresh Chandra Chaturvedi	A.C.F	07.11.05 to till date

**27. ANY OTHER RELEVANT INFORMATION:**

The Phulwari Wildlife Sanctuary is well protected, exploring full range of habitat in Aravalli range. It is important from geographical point of view as it includes Teak and Rosewood in a fairly good percentage in its vegetative composition. Phulwari Sanctuary is ecologically important as it forms a part of the largest viable forest tract among the fragmented forest belt of Rajasthan. It is pro-runner to Mt. Abu sanctuary on western direction. The forest of the sanctuary is dense (canopy density being 0.6 to 0.7). It provides an ideal attraction for tourists. The Wakal river, which is the main tributary of river Sabarmati, bisects the sanctuary into two unequal halves. There are several gorges (deep water holes) in the river-bed itself which are ideally suited for crocodiles and are seldom spotted.

The sanctuary has rendered protection to some rare and endangered fauna such as Sloth bear, Panther, Ratel, Pangolin, Grey Jungle Fowl, Aravalli Red Spurfowl, Flying Squirrel, Crocodile, Alexandrine Parakeet, Indian Balloon frog etc. The floral diversity of Phulwari is unique. The interspersed varied habitat make available wide range of plant species. A number of taxa of algae, fungi, Bryophytes, Pteridophytes, and Angiosperms are available here. This sanctuary is rich in orchids, tuberous plants, climbers and lianas as well. Even crustose lichens are also present on rock and tree trunks. The undergrowth is thick. Bamboo (*Dendrocalamus strictus*) grows luxuriantly. One can find the finest quality of bamboo in this protected area. Valleys and moist 'nallahs' are full of variety of medicinal plants. A large number of them are very important from

ethnomedicological point of view. Phulwari-ki-Nal wildlife Sanctuary is important from conservation point of view because of following reasons:

- i) Since forest of the Aravallis constitute the eastern most boundary of great Thar desert, hence vegetation cover of the sanctuary plays significant role to check the advancement of desert toward eastern side. In other words, Aravallis act as a barrier between desert and eastern fertile plains.
- ii) Phulwari constitutes part of the catchments of Wakal (Sabarmati) river which bisects the sanctuary. It is lifeline of this sanctuary and agriculture fields in downstream.
- iii) Various micro and macro habitats in the sanctuary support good number of medicinal plants along with rich flora and fauna of the region.
- iv) As many as 134 tribal villages are present within and 53 villages are present at outskirts of sanctuary which fully or partly depend on the forest of sanctuary for their lively-hood and subsistence.
- v) Forests of the sanctuary provide ecological security and ameliorated environment to the semiarid region of southern Rajasthan and northern Gujarat, which is threatened by the expanding desert.

Since this sanctuary is situated near Gujarat border and Polo forests of Vijay Nagar Range of Gujarat are in continuity with forests of Daiya-Ambasa, hence it is harbours spill over population of wild animals of Gujarat area and vice-versa.

**28. DETAILS OF WORKS DONE UNDER C.S.S. IN 2007-2008:**

Enclosed as **Annexure –F.**

## WORKS PROPOSED FOR THE YEAR 2007-2008

The details of works proposed for the year 2007-2008 are as follows:

**1. MAINTENANCE OF ASSETS: CREATED DURING PREVIOUS YEARS:**

*Phulwari-ki-Nal wildlife Sanctuary has good population of Chowsingha (Four horned Antelope) and rich floral & faunal diversity of Aravalli hill ranges, hence invites special attention for maintenance of assets created during past (recurring expenditure) as per guidelines issued by Ministry of Environment & Forests along with their letter Number 21-1/2006-WL-1 dated 4<sup>th</sup> April, 2006.*

Assets created during previous years under CSS & other development schemes are in urgent need of maintenance and minor repairs to utilize them on sustainable basis for welfare of wild animals. Following works are proposed during the plan period:

- (i) Desilting & maintenance of Eight Anicuts namely Birothi, Ambasa (Ambaveri) Panarwa, Kodernal, Padakhadra, Daiya, Bholwara and Gamri ki nal is proposed to ascertain the availability of drinking water for wild animals throughout the year. Financial assistance of Rs. 4.00 lac is required for the purpose.
- (ii) Desilting, repairs of one Anicut at Village Tindori in Ambasa forest block of WLS is proposed to ascertain the availability of drinking water for wild animals throughout the year. Financial assistance of Rs. 3.00 lac is required for the purpose.
- (iii) Repair and maintenance of four existing Forest Guard Chowkies at Patharpadi, Panarwa, Birothi & Nalwa in WLS is proposed to ascertain stay facilities to staff personnels involved in protection duties. These existing quarters need minor repairs etc. as well facilities like toilets, drinking water & electricity/ solar connections. Financial assistance of Rs. 2.00 lac is required for the purpose.

- (iv) Maintenance of 25 Km long firelines to protect the biodiversity of area from fire hazards in Kotra range (7km.), Panerwa range (10km.) and Mamer range (8km.) of WLS is proposed during the annual plan period with financial outlay of Rs.2.00 lac.
- (v) Maintenance and repairs of 10 Km long existing nature trails in parts from Bheader Baoji to Gamri ki Nal (7km.) & Nal to Bhimtalai (3km.) in WLS is essential to promote eco-tourism and access to the Sanctuary area. Financial assistance of Rs. 2.00 lac is required for the purpose.
- (vi) In order to ascertain the effective protection and to deal with the miscreants the Repair and maintenance of Wireless network including purchase of accessories and batteries is essential. This will require a financial assistance of Rs.0.50 lac .
- (vii) Running & maintenance of motor vehicles used in management of Sanctuary will require a financial assistance of Rs.0.50 lac .

**2. ENSURING WATER FACILITIES IN SANCTUARY AREA (SOIL & MOISTURE CONSERVATION WORK) :**

Phulwari-ki-Nal Sanctuary and adjoining territorial forest situated in west of sanctuary up to Sirohi district border makes an ecotone between hilly forests of Aravallis and Thar Desert. The hilly area of Sanctuary besides acting as barrier for checking eastward extension of desert, forms catchment for many rivers and Nallahs. Run off from the hills of Sanctuary is drained out by many Nallahs and ultimately these Nallahs join Wakal river. As many as 6 dams have been constructed on these rivers, originating or passing through Phulwari Sanctuary . The hills have rugged topography and steep slopes, resulting into rapid surface runoff of rain water. As a combined effect of these factor the area of Sanctuary is vulnerable of soil erosion and less of water conservation. Limited availability of water causes shortage of drinking water for wild animals during summer month. However, Wakal river acts as a mega water hole and provide water to wild animals nearly round the year. To improve the water availability and to conserve the soil following actions are proposed:

- (i) Construction of 5000 Cumtr Kuccha checkdams in Deoli, Harwa, Asawara, Adahaldhu & Ambasa forest block of WLS is proposed to check speed of surface runoff to check soil erosion with financial outlay of Rs. 5.25 lac.
- (ii) Two cause ways are proposed to be constructed on Khanchan- Luhari forest road and Bhaderbaoji to Gamdi in Devli block of WLS to promote tourism during the rainy season, which will also serve as water retention structures. Financial assistance of Rs. 5.00 lac is required for the purpose.
- (iii) One new Ramp-Well is proposed to be constructed in Bhagagarh area of Daiya FB to ensure water availability in summers in WLS of Rs 3.00 lac.
- (iv) One Tractor with trolley & water tanker of 3000 Ltrs. capacity which can be attached with tractor is to be purchased to transport the water to waterholes during pinch period and drought conditions with an outlay of Rs. 5.00 lacs.

### **3. PROTECTION:**

Heavy biotic pressure and excessive grazing during past has resulted in reduced regeneration of many important plant species and squeezed area for movement of wild animals. Although after declaration of Sanctuary many initiatives have been taken during the previous year to enhance regeneration of few important species, resulting into increased number of wild animals, but the efforts should be further intensified by providing effective protection to floral & faunal constituents of the sanctuary. Grazing, poaching, collection of fuel wood, fire incidences due to negligence of dwellers and graziers and encroachment are severe threats that management of Sanctuary has to face. To safe guard against these threats following activities are proposed:

- (i) One new Forest Guard Chowky at Jhed in Mamer range of WLS is to be constructed during the annual plan period with financial outlay of Rs. 3.50 lac.
- (ii) Purchase of two motorcycles for park management to have constant vigilance over the activities of visitors and graziers as well to supervise the

development activities of the PA with financial outlay of Rs. 0.84 lac is proposed.

- (iii) For effective management and protection of Sanctuary, timely communication is most essential. Looking to the vastness of the area present number of wireless sets are inadequate. Besides this few existing sets have become obsolete, since they are very old. To ensure quick communication and to deal with any adverse situation four hand sets are proposed to be purchased during the plan period with financial outlay of Rs. 0.60 lac.
- (iv) To facilitate survey and demarcation, essential survey equipments including GPS are to be purchased during the plan period with financial outlay of Rs. 0.30 lac.
- (v) Networks of informers should be developed in villages having suspected persons and at public places like Bus Stand and Railway Station & get information about the miscreants. These informers should be rewarded on providing correct information although secretly. Financial outlay of 0.15 lac has been kept for the purpose.
- (vi) Staff personals involved in management of Sanctuary are to be rewarded suitably for their outstanding contribution in the field of protection and development of sanctuary. Financial outlay of 0.25 lac has been kept for the purpose.
- (vii) Cattle kill or loss to human life in villages adjoining to P.A boundary by carnivores of Sanctuary should be compensated in accordance with provisions & procedure laid down in this regard. Financial outlay of 0.10 lac has been kept for the purpose.
- (viii) Basic amenities like drinking water, toilets etc. are to be provided to the field staff which remains involved day & night in protection and welfare of Sanctuary resources. Financial outlay of 1.50 lac has been kept for the purpose.

#### 4. **AMELIORATION OF HABITAT :**

Few pockets of Phulwari Wildlife Sanctuary in buffer zone has depleted habitat because of excessive biotic pressure mainly due to grazing. This has resulted into low prey density having adverse impact on carnivore population. Sufficient prey base is required for growth and sustainability of large predators like panther. Villages situated around the Sanctuary and cattle population is the main source of biotic interference, which has resulted degradation of the habitat and development of obnoxious weeds like *Lantana*, *Xanthium*, *Acanthospermum hispidum* etc. To augment the situation following activities are proposed:

- (i) 180 Hect. area will be selected on periphery of core area of Sanctuary in Daiya, Deoli, Harwa, Ambasa, Adahaldu and Phulwari forest blocks and intensive measures will be taken including creation of effective fencing, removal of unwanted weeds, soil and moisture conservation measures & Cultural operations of Bamboos, development of good quality of grasses and allowing regeneration of fodder yielding trees for wild animals. Financial assistance of Rs.18.00 lac is required for the purpose.
- (ii) Obnoxious weeds like lantana will be removed from 30 hect. of area in Daiya, Deoli, Mamer & Phulwari forest block of WLS, so as to make the habitat more conducive for development & propagation of better species and in turn the wild life. Financial outlay of Rs.2.77 lac has been proposed for the purpose.
- (iii) To reduce the possibility of man-animal conflict, rule out the possibility of encroachments as well to provide effective protection and ensure propagation of wild animals, the delineation of susceptible areas of Sanctuary from adjoining villages by creating Pucca stone wall fencing is essential. Construction of 1000Rmtr Pucca stone wall fencing in Adahaldu forest block of WLS is proposed to be constructed during the annual plan period with financial outlay of Rs. 12.00 lac.

**5. CONSERVATION OF BIO-DIVERSITY :**

The area of Phulwari wild life Sanctuary has rich floral and faunal diversity of Aravalli hill ranges. These hills are inhabited by number of medicinal plants, tree species and faunal associates. However, because of deciduous nature of forest the whole area is vulnerable to fire incidences. A single uncontrolled fire may adversely affect the ecosystem, including the wildlife. The forest fires are mostly experienced during summer months i.e. from March to June. The fires are mostly of accidental type, caused sometime due to negligence of villagers visiting the Sanctuary along with cattle herds, using Sanctuary routes as a shortest one or visiting the places of historical importance & pilgrimage situated within the limits of Sanctuary. Major adverse impact of forest fire in the Sanctuary is on Bamboo clumps and grasslands which forms ideal habitat for wild animals of the sanctuary.

To prevent forest fires and damage caused by it and ultimately to conserve the rich biodiversity of Sanctuary following measures are proposed to be adopted:

- (i) Creation of 30 kms. long new fire lines in forest block Phulwari, Deoli, Adahaldhu, Asawara 10 Kms in each FB in WLS are proposed during the annual plan period with financial outlay of Rs. 2.40 lac.

**6. TOURISM PROMOTION & ECOTOURISM INITIATIVES :**

Phulwari wildlife Sanctuary has good scope of tourism since it has rich floral diversity along with multifarious tribal culture. Besides this, Sanctuary is a natural home for number of wild animals and more than 200 species of terrestrial, arboreal & water birds. At present very few people visit the Sanctuary because of lack of awareness and tourist facilities. It is essential that the management of Sanctuary should provide infrastructural facilities for promotion of tourism and ecotourism in the area like nature trails, view points, park literature, signages, camping places & camping equipments etc. however while promoting tourism basic principles of wildlife conservation will be given priority. Following initiatives are proposed for promotion of tourism and eco-tourism in the area:

- (i) Foremost necessity for promotion of tourism in Sanctuary area is to provide appropriate facilities to the tourist at places of stay. Two forest rest houses at Panerva & Mamer are existing in the Sanctuary. These rest houses needs few infrastructure facilities as well the maintenance of existing resources. It is proposed to develop these facilities in these rest houses, with an outlay of Rs. 1.00 lac.
- (ii) The tourism presently is restricted along the roads in the Sanctuary area. On the other hand the Sanctuary area is having thick groves in valleys and streams providing conducive environment for promotion of ecotourism. To explore such areas, 4 Km. long new nature trails is to be developed in Mamer forest block of the WLS to admire the nature from close quarters with financial outlay of Rs. 2.00 lac.
- (iii) One Bird watching point is propose to be created along the nature trail during the annual plan period with financial outlay of Rs.1.50 lac.
- (iv) Camping equipments should be provided at Sanctuary headquarter so as to facilitate out door camping facilities to the Eco-tourists, with financial outlay of Rs.0.50 lac.
- (v) Publicity has to play a vital role in establishment of Sanctuary on the tourist map of the state. To publicize rich natural heritage of Sanctuary, coloured information brochures & folders are to be brought out. Important trees of biotop should be labeled and signages having features and paintings of animals & birds should be put up at places, where there is high probability to sight them. Financial outlay of 1.00 lac has been kept for the purpose.

## **7. ECO-DEVELOPMENT:**

As many as 134 villages are situated inside the Sanctuary whereas 53 villages are on the periphery. More than 0.45 lac cattle and 0.75 lac inhabitants of these villages have resource dependency on WLS. Since livelihood of large population living in villages on periphery of Sanctuary depend on forest resources of

Sanctuary hence development of adjoining forest areas will not only help in uplifting the economic status of people, but also build confidence between park management and stakeholders. Eco development works will reduce the dependency of local population on Sanctuary resources. Soil & moisture conservation works in Sanctuary area will help in increasing the water regime and ground water recharge in surrounding villages. The eco-development has two main thrust i.e. (1) Improvement of Sanctuary management & (ii) involvement of local people in development activities so that negative impact on Sanctuary could be minimized. Following eco-development works are proposed in the villages situated in outskirts of Sanctuary during the plan period:

- (i) Entry point activities as envisaged by the Ecodevelopment committees (EDC's) so as to bring the villagers at common platform to inculcate the feeling of belongingness to the Sanctuary resources. Three EDC's namely Dhedmaria, Panerwa and Mamer of WLS are selected to start with, for which a provision of Rs. 3.00 lac has been kept during the annual plan period.
- (ii) To reduce the quantity of wood consumption in cremation of bodies, it is proposed to construct 3 improved crematoriums in four villages namely Mamer, Panerwa and Ambasa during the plan period, with financial outlay of Rs. 1.50 lac.
- (iii) Fuel wood is the major source to cook the food in families residing inside and within 5 km from the periphery of the sanctuary. The conventional Chullahs consume large quantity of wood. To reduce the consumption of fuel wood it is proposed to promote improved smokeless Chullahs in 400 houses of 16 villages in and around the sanctuary. Such Chullahs will be installed in houses, those are lacking LPG connections. This will require financial outlay of Rs. 1.80 lac.
- (iv) The economy of tribals inhabited in villages situated within & on the periphery of WLS is based on agriculture, which in turn is effected by frequent droughts in the area. Further, the small land holdings with tribals aggravate the situation. To augment the situation it is proposed to promote agroforestry practices as an alternate source of income generation and thus

to inculcate the feeling of belongingness to Sanctuary resources among them. It is proposed to procure and distribute 4000 grafted fruit bearing seedlings among the villagers during the annual plan period, however the number of seedlings to be distributed will be restricted to 15 to 25 each household depending upon the availability of land. Financial assistance of Rs.1.00 lac will be required for the purpose.

## **8. MIS / EDUCATION / RESEARCH / MONITORING / CENSUS & TRAINING :**

For scientific management of Sanctuary well defined MIS, Generation of awareness, Educating the people living in and around Sanctuary about importance & benefits of sanctuary, research regarding wildlife habitat, monitoring & evaluation of ongoing development activities, population estimates of wild animals within & outside PA and training to park managers with regard to recent advances in wildlife management are the essential components. Following strategic considerations are proposed during the annual plan period:

- (i) Present, is the age of information technology. Repeated processing of data and information transmission takes a considerable time to reach its destination. Besides this, upkeep of records pertaining to land, encroachments, poaching, monitoring & evaluation of development programmes etc. is required at the Sanctuary level. To facilitate processing of information faster, it is proposed to equip the Sanctuary incharge head quarter with one computer preferably a Laptop with accessories, with financial outlay of Rs. 0.75 lac.
- (ii) Awareness about conservation & protection of natural resources will be generated among the villagers, school children and city inhabitants by organizing exhibition, puppets shows, video film shows and by organizing ecotracking programmes to the Sanctuary areas with financial outlay of Rs. 0.50 lac.

- (iii) Wildlife census plays a vital role in scientific management of Sanctuary area. The census is not only a powerful tool to evaluate the management practices in past but also provides a vision for future management practices to be adopted in welfare of Wild Animals of Sanctuary. An outlay of Rs. 0.30 lac has been kept for the census operations to be carried out during the year 2007-08.
- (iv) Wild Life management now-a-days has emerged as a science and scientific management of Sanctuary area has become most essential element to conserve and rehabilitate the rich biodiversity present in the Sanctuary areas. The staff is expected to digest the recent advances in the field of wildlife management & protection of PA. This generates the need for regular refresher courses and training to the staff involved in management of PA. Financial outlay of Rs. 0.45 lac has been proposed during the annual plan period for the purpose.
- (v) It is very essential to educate the villagers and city inhabitants living in and around the Sanctuary area, towards wildlife protection and conservation. Educational inputs will include understanding for protecting the natural forests, importance of establishment of Sanctuary & role of Forest Department in its development and protection. This will also help local communities to understand relationship with existing resources. Indigenous methods like development & dissemination of pamphlets & posters as well meetings at village level platforms will be adopted to educate the people during the annual plan period with financial outlay of Rs. 0.25 lac.
- (vi) Impact of management prescriptions applied in the field needs proper monitoring to measure the success of various interventions to help in making necessary checks for future management. Financial outlay of Rs. 0.15 lac has been proposed for conducting the monitoring studies during the annual plan period.

**9. OTHERS :**

Offices of the Range Officers and Sanctuary incharge need few facilities to carry out their day to day operation. It is need of time that these offices should be furnished with bare minimum furniture and other office equipments. To equip the offices of Three Range Officers and PA incharge a provision of Rs. 0.25 Lac is kept during the plan period.

*Abstract of works proposed & their priority wise details along with relevant paragraphs of Management Plan is enclosed at “ANNEXURE-D”.*

**Assistant Conservator of Forest**  
Phulwari-ki-Nal WildlifeSanctuary  
Udaipur (Raj.)

**Dy. Chief Wild Life Warden**  
**Udaipur (Raj.)**

**SUMMARY OF WORKS PROPOSED  
FOR THE YEAR 2007-08  
Phulwari Ki Nal Wildlife Sanctuary  
(Priority wise details of Works Proposed)**

<b>S. No.</b>	<b>Item of Work</b>	<b>Quantity</b>	<b>Total Amount required (Rs. In Lacs)</b>
<b>1</b>	<b>MAINTENANCE OF P.A. ASSETS:</b>		
* (a)	Maintenance of Water Resources	8 Nos.	4.00
* (b)	Desilting & repair of Anicut	1 No.	3.00
(c)	Maintenance of forest Guard Chowkies	4 Nos.	2.00
* (d)	Maintenance of Firelines	25 km.	2.00
(e)	Maintenance of Nature Trails	10 km.	2.00
(f)	Maintenance of Wireless Network	L.S.	0.50
(g)	Running & Maintenance of Motor Vehicles	L.S.	0.50
<b>2</b>	<b>ENSURING WATER FACILITIES IN SANCTUARY AREA:</b>		
* (a)	Construction of Kuchha Check Dams	5000 Cumtr	5.25
(b)	Construction of New Cause way cum water retention structure	2 Nos.	5.00
(c)	Construction of Ramp-well	1 No.	3.00
* (d)	Tractor with Trolley & Tanker	1 No.	5.00
<b>3</b>	<b>PROTECTION</b>		
(a)	Buildings:		
	Forest Guard Chowki	1 No.	3.50
* (b)	Motorcycle	2 Nos.	0.84
(c)	Wireless Sets	4 handsets	0.60
(d)	Survey equipments	L.S.	0.30
* (e)	Secret Information System	L.S.	0.15
* (f)	Reward to staff	L.S.	0.25
(g)	Compensation for Cattle Kill & Loss to human life	L.S.	0.10
(h)	Basic amenities to field staff	L.S.	1.50
<b>4</b>	<b>AMELIORATION OF HABITAT</b>		
* (a)	Habitat Improvement	180 hact.	18.00
(b)	Opening up of Lantana infested area	30 hact.	2.77
(c)	Construction of Pucca stone wall fencing	1000 Rmtr	12.00
<b>5</b>	<b>CONSERVATION OF BIO-DIVERSITY</b>		
* (a)	Creation of New File Lines	30 Km.	2.40
<b>6</b>	<b>TOURISM PROMOTION &amp; ECOTOURISM INITIATIVES</b>		
(a)	Development of Tourism facilities at existing forest rest houses	L.S.	1.00
(b)	Development of Nature Trails	4 Kms	2.00
* (c)	Creation of Bird Watching Point	1 No.	1.50

(d)	Camping Equipments	L.S.	0.50
(e)	Publicity, Brochure & Signage	L.S.	1.00
<b>7</b>	<b>ECO-DEVELOPMENT</b>		
(a)	Entry Points Activity	L.S.	3.00
(b)	Improved Crematorium	3 Nos.	1.50
(c)	Improved Chullahas	400 Nos.	1.80
(d)	Agro-forestry	4000 Nos.	1.00
<b>8</b>	<b>MIS/EDUCATION/RESEARCH/ MONITORING/CENSUS &amp; TRAINING</b>		
*(a)	Computer preferably a Laptop & Accessories	1 No.	0.75
(b)	Awareness Programme	L.S.	0.50
*(c)	Census	L.S.	0.30
(d)	Training	3 Prog.	0.45
(e)	Development & Procurement of Education Material	L.S.	0.25
(f)	Monitoring Studies	L.S.	0.15
<b>9</b>	<b>OTHERS</b>		
(a)	Office Equipments	L.S.	0.25
	<b>TOTAL</b>		<b>90.61</b>

(Rs. Ninety Lac & Sixty One thousand only)

*Phulwari-Ki-Nal wildlife sanctuary has good population of Chowsingha (Four horned antelope) and rich floral & faunal diversity of Aravalli hill ranges, hence invites special attention for maintenance of assets created during past (recurring expenditure) as per guidelines issued by Ministry of Environment & Forests along with their letter Number 21-1/2006-WL-1 dated 4th April, 2006.*

\*Forecast for financial outlay of item of works is based on labour rate Rs.73/- per day

Assistant Conservator of Forest  
Phulwari-ki-Nal Wildlife Sanctuary  
Udaipur (Raj.)

Dy. Chief Wild Life Warden  
Udaipur (Raj.)

**SUMMARY OF WORKS PROPOSED  
FOR THE YEAR 2007-2008  
Phulwari Ki Nal Wildlife Sanctuary**

**(Priority wise details of Works Proposed)**

S. No.	Item of work	Para of Management Plan which specifies the item	Quantity	Rate per Unit	Total Amount required (Rs. In Lacs)	Location	Side specific Justification
<b>1</b>	<b>MAINTENANCE OF P.A. ASSETS:</b>						
*(a)	Maintenance of Water Resources	6.12.2 (ii), 6.12.2 (viii)	8 Nos.	0.50 each	4.00	1. Eight Anicuts: Birothi, Ambasa (Ambaveri), Panarwa, Kodarnala, Padakhadra, Bholwara, Daiya, Gamdi ki Nal	To improve the water availability for wild animals.
*(b)	Desilting & repair of Anicut	6.12.2 (ii), 6.12.2(viii)	1 No.	3.00	3.00	Ambasa (Tindori)	To improve the water availability for wild animals.
(c)	Maintenance of forest Guard Chowkies	6.9.1	4 Nos.	0.50 each	2.00	Kotra range-Birothi, Panarwa Range-Ambasa, Mahad, and Nalwa	To provide amenities to staff personnels involved in protection duties.
*(d)	Maintenance of Filelines	6.4.3(I)	25 km.	8000 per km.	2.00	1. Kotra range; 7 km 2. Panarwa range; 10 km; 3. Mamer range; 8 km	To protect the sanctuary area from fire hazards and thus to ensure conservation of bio-diversity.
(e)	Maintenance of Nature Trails	6.14.4(ii), 6.15.2 (a-iv)	10 kms.	0.20 per km.	2.00	1. Bhader Baoji to Gamdi ki nal (7 kms) 2. Nal to Bhimtalai (Mamer) 3 km.	To promote Eco-tourism & ensure effective protection.
(f)	Maintenance of Wireless Network	6.9.2.4	L.S.	–	0.50	For whole sanctuary	To ensure round the clock protection & to deal with offenders.
(g)	Running & Maintenance of Motor Vehicles	6.2.1 (ii)	L.S.	–	0.50	For whole sanctuary	To ensure effective protection.

<b>2</b>	<b>ENSURING WATER FACILITIES IN SANCTUARY AREA:</b>						
*(a)	Construction of Kuchha Check Dams	6.1.3.4.2, 6.11, 6.13.1	5000 Cumtr	105.00 per cumtr	5.25	Deoli, Harwa, Asawara, Adahaldu, Ambasa, Forests blocks 1000 cu.mtr. Each	To check soil erosion & improve the water availability in downstream.
(b)	Construction of New Cause way cum water retention structure	6.11.1	2 Nos.	2.50 each	5.00	1. Khachan to Luhari(Fulwari forest block)2. Bhaider Baoji to Gamdi (Deoli forest block)	To improve the existing tracking routes and to ensure water availability in the sanctuary and mobility for patrolling.
*(c)	Construction of New Ramp-well	6.11.1	1 No.	3.00	3.00	Daiya FB (Bhagarharh)	To ensure water availability in summer in the wild life sanctuary.
(d)	Tractor with Trolley & Tanker	6.12.2 (xi)	1 No.	5.00	5.00	For whole sanctuary area	To transport the water during drought and pinch period.
<b>3</b>	<b>PROTECTION</b>						
(a)	Buildings:						
	Forest Guard Chowki	6.9.3 (I)	1 No.	3.50 each	3.50	1.Jhed (Range Mamer)	Check point cum residential building for Forest Guard.
*(b)	Motorcycle	6.1.3.4.4, 6.2.1 (ii)	2 Nos.	0.42	0.84	For whole sanctuary	To increase mobility of park managers
(c)	Wireless Sets	6.9.3 (ii)	4 hand set	_	0.60	For whole sanctuary	For effective and quick communication about the sanctuary management activities and to deal with any adverse situation.
(d)	Survey equipments	6.5.2 (v)	L.S.	_	0.30	For whole sanctuary	To verify the Sanctuary boundaries.
*(e)	Secret Information System	(6.2.1 (iii-d)	L.S.	_	0.15	For whole sanctuary	To get information about movement of miscreants
*(f)	Reward to staff	6.2.1 (iv)	L.S.	_	0.25	For whole sanctuary	To motivate staff personals for protection of park
(g)	Compensation for Cattle Kill & Loss to human life	6.8	L.S.	_	0.10	For whole sanctuary	To generate confidence among villagers about PA and management

(h)	Basic amenities to field staff (including electrification in Check posts, handpumps etc.)	10.4.1	L.S.	_	1.50	Kotra, Patharpadi, Birothi, Nalwa, Ambasa, Mahad	Providing amenities to staff personals involved in protection.
<b>4 AMELIORATION OF HABITAT</b>							
* (a)	Habitat Improvement	6.4.1.C, 6.13	180 Hectare	10000/- per hact.	18.00	Ambasa, Adahaldu, Fulwari, Daiya, Deoli, Harwa (30 ha. Each)	
(b)	Opening up of Lantana infested area	5.4.1.a, 6.13,6.22.4	30 Hact.	9220/- per hact.	2.77	Daiya, Deoli, Mamer (10 ha. Each)	To remove the obnoxious weeds and thus to ameliorate the habitat.
(c)	Construction of Pucca stone wall fencing	6.1.3.4, 6.1.3.4.1	1000 Rmtr	1200/- per Rmtr	12.00	Adahaldu forest block-1000 Rmtr.	Suitable fencing will be created around the villages to check encroachment and grazing & to reduce chances of man-animal conflict.
<b>5 CONSERVATION OF BIO-DIVERSITY</b>							
(a)	Creation of New Fire Lines	6.4.3	30 Kms	8000/- per km.	2.40	In forests block-Fulwari, Deoli, Adahaldu, Asawara (10 km.each Forest Block)	To protect the sanctuary area from fire hazards and thus to ensure conservation of bio-diversity.
<b>6 TOURISM PROMOTION &amp; ECOTOURISM INITIATIVES</b>							
(a)	Development of Tourism facilities at existing forest rest houses	6.14.4, 6.15.2	L.S.	_	1.00	Panarwa & Mamer Rest house	To promote the tourism in sanctuary area.
(b)	Development of Nature Trails	6.13.1, 6.14.4, 6.15.2	4 kms.	0.50 per km.	2.00	Forest block Mamer 4 kms.	To promote the Eco-tourism in sanctuary area
* (c)	Creation of Bird Watching Point	6.14.4, 6.15.2	1 No.	1.50	1.50	Dhowania Kund (Deoli Forest Block)	To promote the Eco-tourism in sanctuary area
(d)	Camping Equipments	10.3	L.S.	_	0.50	For whole sanctuary	To promote the Eco-tourism in sanctuary area

(e)	Publicity, Brochure & Signage	6.2.1 (iv), 6.15.2 (iv)	L.S.	_	1.00	For whole sanctuary	To generate awareness among in habitants and tourists about safety measures during their visits to sanctuary.
<b>7</b>	<b>ECO-DEVELOPMENT</b>						
(a)	Entry Points Activity	6.3.2, 8.4	L.S.	_	3.00	Dhedmariya, Birothi, Panarwa, Mamer	To generate community participation/belongingness in sanctuary management
(b)	Improved Crematorium	8.4 (d)	3 Nos.	0.50 each	1.50	Mamer, Ambasa, Panarwa	To reduce consumption of fuelwood and thus to reduce dependency on sanctuary resources.
(c)	Improved Chullahas	6.3.2.(ii), 8.4 (d)	400 Nos.	450/- each	1.80	Kotra, Panarwa, Anjroli, Patharpadi, Amba, Medi, Mahad, Ambasa, Dhedhmaria, Jher (Mahad), Mamer, Birothi, Guran, Badli, Mahad & Daiya	To reduce consumption of fuelwood and thus to reduce dependency on sanctuary resources.
(d)	Agro-forestry (Distribution of Fruit/Bambo plants seedlings)	6.1.3.1	4000 Nos	25/- each	1.00	Kotra, Panarwa, Anjroli, Patharpadi, Amba, Medi, Mahad, Ambasa, Dhedhmaria, Jher (Mahad), Mamer, Birothi, Guran, Badli, Mahad & Daiya	To reduce pressure on bamboo forests and to provide alternate source of income to tribal population inhabiting the villages within & on periphery of WLS, so as to inculcate feeling of belongingness towards sanctuary resources.
<b>8</b>	<b>MIS/EDUCATION/RESEARCH/ MONITORING/CENSUS &amp; TRAINING</b>						
*(a)	Computer Laptop & Accessories	6.2	1 No.	0.75	0.75	For whole sanctuary area	For collection & processing of datas pertaining to resources of PA

(b)	Awareness Programme	6.4.2, 6.17	L.S.	_	0.50	For whole sanctuary area	To generate awareness among the people about benefits of PA resources and need for its conservation.
*(c)	Census	6.18.2	L.S.	_	0.30	For whole sanctuary area	Estimation of wild animals for scientific management of park
(d)	Training	6.2.1 (iv).f	3 Prog.	0.15 each prog.	0.45	For whole sanctuary area	To keep staff updated with recent advances in wildlife management
(e)	Development & Procurement of Education Material	6.4.3., 6.17	L.S.	_	0.25	For whole sanctuary area	To education the people about benefits of PA resources and practices detrimental to the health of sanctuary.
(f)	Monitoring Studies	9.2	L.S.	_	0.15	For whole sanctuary area	To measure the success of management interventions.
<b>9</b>	<b>OTHERS</b>						
(a)	Office Equipments	10.4.1	L.S.	_	0.25	For whole sanctuary area	To increase efficiency of staff personals involved in part management.
	<b>TOTAL</b>				<b>90.61</b>		

(Rs. Ninety Lac & Sixty One thousand only)

*Phulwari-Ki-Nal wildlife sanctuary has good population of Chowsingha (Four horned antelope) and rich floral & faunal diversity of Aravalli hill ranges, hence invites special attention for maintenance of assets created during past (recurring expenditure) as per guidelines issued by Ministry of Environment & Forests along with their letter Number 21-1/2006-WL-1 dated 4th April, 2006.*

\*Forecast for financial outlay of item of works is based on labour rate Rs.73/- per day

**Assistant Conservator of Forest  
Phulwari-ki-Nal Wildlife Sanctuary  
Udaipur (Raj.)**

**Dy. Chief Wild Life Warden  
Udaipur (Raj.)**

**FOR WIRELESS SETS/COMPUTERS/VEHICLES/FIRE ARMS ETC.**

<b>Item of Work</b>	<b>Total Requirement of the W.L.S./Park</b>	<b>Already Available with the W.L.S. / Park</b>	<b>Where and to What use the Existing have been put to</b>	<b>Remarks</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Vehicle (Motor Cycles)	Six	Three	For Protection & Management of Sanctuary	To increase the mobility of park managers and to ensure effective protection two motorcycles are required during the annual plan period.
Vehicle (Tractor with Trolley & Tanker)	ONE	Nil	-	To ensure water supply at water holes especially during draught & summer season one Tractor with trolley & tanker is required.
Wireless Sets	16 Fix sets 34 Hand sets	16 Fix sets 28 Hand sets	For communication purpose	Four Hand Sets are required to strengthen the communication system.
Computer	THREE	One	-	One Computer preferably a Laptop is required at Sanctuary Incharge Headquarter.

**Assistant Conservator of Forest**  
Phulwari-ki-Nal Wildlife Sanctuary  
Udaipur (Raj.)

**Dy. Chief Wild Life Warden**  
**Udaipur (Raj.)**

## REVALIDATION REQUIREMENT

SANCTIONED WORKS OF ANNUAL PLAN OF OPERATION FOR THE YEAR 2006-07 WHICH COULD NOT BE CARRIED OUT EITHER BECAUSE OF DELAYED RELEASE OF SECOND INSTALLMENT OR THE EXPENDITURE COMMITTED IS LESS THAN THE ESTIMATED AMOUNT:

### Details Of Savings

(Amount in Lacs)					
S.No.	Item Of Works	Sanctioned Amount	Expenditure incurred	Savings (Amount to be revalidated)	Reasons
1.	Basic amenities to field staff	1.50	1.48	0.02	On account of actual expenditure incurred on proposed items.
<b>TOTAL</b>		<b>1.50</b>	<b>1.48</b>	<b>0.02</b>	

Savings of the year 2006-07 of Rs. 0.02 lac are to be adjusted towards the sanction of proposed item of works for the year 2007-2008.

**Assistant Conservator of Forest**  
Phulwari-ki-Nal Wildlife  
Sanctuary  
Udaipur (Raj.)

**Dy. Chief Wild Life Warden**  
**Udaipur (Raj.)**

## ANNEXURE – G

### Phulwari-ki-Nal Wild Life Sanctuary

FORM GFR 19-A

[See Government of India's Decision (1) below Rule 150]

Form of Utilization Certificate

S. No.	Letter No.and Date	Amount (in lac Rs)	
1	Govt. of India 13001220/WL Dated 21.09.2006  State Govt. F3(30)Forest/2003 Dated 17.11.2006	14.00	Certified that out of Rs. <b>14.00 Lacs</b> of grants in-aid sanctioned during the year <b>2006-2007</b> as first installment in favour of <b>Phulwari-ki-Nal Wild Life Sanctuary</b> under this Ministry / Department Letter No. given in the margin and Rs. <b>Nil</b> on account of unspent balance of the previous year, a sum of Rs. <b>13.98 Lacs</b> has been utilised for the purpose of executing the work for which it was sanctioned and that the balance of Rs. <b>0.02 Lacs</b> remaining unutilised at the end of Financial year 2006-07. Remaining amount of Rs. <b>0.02 Lac</b> will be utilized during the year 2007-2008.
<b>TOTAL</b>		<b>14.00</b>	

[G.I. M.F., O.M. No. F.14(1) - E.11(A) - 73, dated the 23rd April , 1975.]

(ii) Certified that I have satisfied myself that the condition on which the grants-in-aid was sanctioned have been duly fulfilled / are being fulfilled and that I have exercised the following checks to see that the money was actually utilised for the purpose for which it was sanctioned.

Kinds of checks exercised:

1. Physical verification of works by senior Officers, Dy. Chief Wildlife Warden, Asst Conservator of Forests for their quality and quantity.

Date: 17<sup>th</sup> May, 2007

Dy. Chief Wildlife Warden  
Udaipur (Raj.)

**ALONG WITH UTILISATION CERTIFICATE ITEM WISE EXPENDITURE STATEMENT**  
**WILDLIFE SANCTUARY PHULWARI KI NAL**

**Works carried out under CSS year 2006-2007**

S. No.	Item of Work	Sanctioned			Achievement			Deviation, if any (give reasons)
		Amount (Rs. in Lacs)	Quantity	Location	Quantity	Amount (Rs. in Lacs)	Current Status	
1	2	3	4	5	6	7	8	9
1	Maintenance of Water Sources	1.00	2 Nos.	Anicut Dungariya & Dhowania	2 Nos.	1.00	Physical & Financial Targets Achieved as proposed.	--
2	Maintenance of Fire Lines	1.00	12.5 Km	Kotra-5 Km Panarwa-7.5 Km	12.5 Km	1.00	Physical & Financial Targets Achieved as proposed.	--
3	Construction of Kuchha Check Dams	2.00	1905 Cumt	Block Dhedmaria-1000 Mamer-905 Cumt	1905 Cumt	2.00	Physical & Financial Targets Achieved as proposed.	--
4	Forest Guard Chowki	2.00	1 Nos	At Jhed Range Mamer	Nil	Nil	--	Could not be carried out because second installment was not released.
5	Purchase of Motor Cycle	0.50	1 Nos	For whole Sanctuary area	1 Nos	0.41	Physical & Financial Targets Achieved as proposed.	Expenditure incurred on proposed items on actual basis.
6	Purchase of Wireless sets	1.00	6 Hand Sets	For whole Sanctuary area	6 Hand Sets	1.00	Physical & Financial Targets Achieved as proposed.	--
7	Secret Information System	0.15	LS	For whole Sanctuary area	LS	0.01	On actual basis	Expenditure incurred on proposed items on actual basis.
8	Reward to Staff	0.10	LS	For whole Sanctuary area	LS	0.10	Physical & Financial Targets Achieved as proposed.	--
9	Compensation to cattle kill & loss to human life	0.10	LS	For whole Sanctuary area	LS	0.05	On actual basis	Expenditure incurred on proposed items on actual basis.
10	Basic Amenities to field staff	1.50	2 Nos	Tube well & Hand pump at Kotra	LS	1.48	On actual basis	Expenditure incurred on proposed items on actual basis.

11	Habitat improvement	3.50	35 Hac	Ambasa-15 Hac Ada Haldu-20 hac	Ambasa-15 Hac Ada Haldu-20 hac	3.50	Physical & Financial Targets Achieved as proposed.	--
12	Opening up of Lentana infested area	1.50	16.5 Hac	At Phulwari Block	16.5 Hac	1.50	Physical & Financial Targets Achieved as proposed.	--
13	Creation of New Fire Line	1.00	12.5 Km	Panerwa: 5 Kms Mamer: 7.5 Kms	12.5 Km	1.00	Physical & Financial Targets Achieved as proposed.	--
14	Entry Point Activity	5.00	LS	For whole Sanctuary area.	Village Plateform Panerwa	0.46	On actual basis	Expenditure incurred on proposed items on actual basis.
15	Census	0.50	LS	For whole Sanctuary area.	LS	0.47	On actual basis	Expenditure incurred on proposed items on actual basis.
<b>Total</b>		<b>20.85</b>				<b>13.98</b>		

\* First installment released against the sanction of Rs. 20.85Lac was 13.98 lac only. Second installment was not released.

Deputy Chief Wildlife Warden  
UDAIPUR

## ANNUAL REPORT (2006–2007)

### PHULWARI-KI-NAL WILDLIFE SANCTUARY

**1. Status of Protected Area :**

Area	Dt. of Notification	Section under which notification	Settlement proceeding completed or not
511.41 Sq.Km	06.10.1983	Sec 18 Of WLP Act , 1972	Completed

The management plan of the Sanctuary has been prepared for the period of ten years i.e from year 2003–2004 to 2012–2013 as per guidelines issued by GOI and has been approved by Chief Wild Life Warden wide order No.F( ) Dev./CWLW/1850-55 Dated 24<sup>th</sup> December, 2003. Settlement proceedings are over. The area of the Sanctuary is a part of watershed for many rivers like Wakal & Sabarmati. There are 134 villages situated within the Sanctuary and 53 villages within zone of influence of Sanctuary. The inhabitants of these villages have direct impact on Sanctuary resources to earn their livelihood by rearing their cattle, collecting fuelwood and MFP's. Area is prone to grazing because of high cattle population in villages around sanctuary area, which has an adverse impact on habitat of wild animals.

**Types of area under sanctuary:**

Total Area	R.F.	P.F.	Govt. Land Other Than Forests Land	Pvt. Land	Waterbodies
511.41 Sq.km.	365.92 Sq.Km.	145.49 Sq.Km.	Nil	Nil	--

- 2.** No special management programme carried out and animals were also not translocated due to absence of RRE in the P.A. No. culling were carried out.

3. Census Report is enclosed on Page No 3 to 5 of APO.

4. No wild animal was killed during the year.

5. Nil

6. Budget utilization for the year 2006– 2007:

S. No.	Name of Scheme	Amount (Rs. In lac)	Actual Expenditure (Rs. In lac)
1.	Raj. Forestry & Bio. Project: New WorksPEO (450 Hac) Committed Works PEO (150 Hac) Committed Works Plantation (100 Hac) Committed Works Maintenance (250 Hac) SMC Structures (6 Nos) Infra Structure Dev. (1 Nos.) Twelfth Finance Commission (Boundary Pillar construction )	40.285 0.922 5.884 3.90 2.045 1.50 2.293	40.285 0.922 5.884 3.90 2.045 1.50 2.293
2.	World Food Programme	2.05	0.00
3.	Central Sponsored Scheme (Annexure: F)	14.00	13.98
4.	National Rural Employment Guarantee Programme	107.00	106.14

7. Measures taken to strengthen Wildlife Wing :

Patrolling in sanctuary area is made effective. Wireless setts are provided at every strategic point of sanctuary. Flying Squad is regularly visiting the area to check and prevent Wild Life and Forest Offence cases.

- 8. No. of officers trained in Wildlife management :**  
Nil
- 9. Officers posted out and in the P.A.**  
Nil
- 10. Wildlife Education Campaign organized :**  
Nature & Education Camps for school children of rural and urban area were organised in the Sanctuary to develop awareness about natural resources that is forest and Wildlife. Besides these, awareness among people living around the sanctuary area has also been developed by organising regular meetings with the villagers living in and around Sanctuary.
- 11. Cases of crop raiding :**  
NIL
- 12. Outstanding contribution made towards Wildlife Conservation:**  
Awareness drive through two “Student’s environmental camps” & “Pad Yatras” across the sanctuary of inhabitants from rural area were organised during the year, which has received overwhelming response from all segments of society. School children from rural areas were imparted knowledge pertaining to wildlife identification and management.

Dy. Chief Wildlife Warden  
Udaipur (Raj.)



