

Report on Disappearance of Tigers from Panna Tiger Reserve




Special Investigation Team

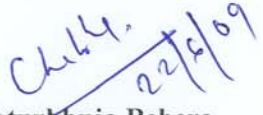
2009


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Contents

| | |
|--|----|
| List of Tables and Figures | i |
| Abstract | 3 |
| Introduction | 4 |
| Genesis | 4 |
| Description of Panna Tiger Reserve | 5 |
| Approach | 7 |
| Summary of Information provided to SIT | 8 |
| Management | 9 |
| Evaluation | 10 |
| Are there natural cases of decline? | 11 |
| Is poaching a causes of decline? | 12 |
| Organized crime | 16 |
| Recorded poaching and mortality cases | 17 |
| Factors facilitating poaching | 17 |
| Monitoring | 20 |
| Observation and findings | 21 |
| Conclusion | 24 |
| Periods when tiger started facing crises | 23 |
| References | 25 |

List of Tables and Figures

| | |
|---|----|
| Table 1. Abundance estimates of major tiger prey species in 2003, 2006 and 2009. (Source: Chundawat et al 2005, Jhala et al 2008 and Wildlife Institute of India 2009) | 12 |
| Table 2. Tiger poaching and disappearance records in (1996 to 2009) Panna and Chatarpur Districts. (Source Field director Panna TR, Dr. Raghu Chundawat, WPSI and Crime Control Bureau) | 14 |
| Table 3 The sanctioned and working strength of staff of Panna Tiger Reserve. (Source Field Director Panna TR) | 15 |
| Figure 1 Panna Tiger Reserve and surrounding village locations | 6 |
| Figure 2 Tiger population trend in Panna Tiger Reserve from 1982 to 2009 (the straight line represents the mean value derived from the reported years) (Wildlife Institute of India, 2009) | 11 |
| Figure 3 The tigress:tiger ratio based on sighting records data provided by Panna Tiger Reserve | 13 |
| Figure 4 The cubs : all tiger ratio based on sighting records data provided by Panna Tiger Reserve. Only sightings of cubs with tigress is considered. (based on Data provided by Panna TR) | 13 |
| Figure 5 The poaching cases of wild animals recorded in Panna and Chatarpur Districts. (Data Source Crime Control Bureau and Panna TR) | 15 |
| Figure 6 The poaching cases recorded in Satna (a), Chhatarpur (b) , Katni (c) and Panna (d) districts (Source Crime Control Bureau and Panna TR) (Note :Dark bars = total cases and light bars = tiger poaching cases) | 19 |
| Figure 7 The pugmark encounter rate (pugmark/day) based on daily data collection by forest staff. (Data Source Field Director Panna TR) | 20 |
| Figure 8 The overall pugmark encounter in relation with declining tiger density and cub ratio per individual. (Data Source Field Director Panna TR) | 20 |

Abstract

From 2001 April to March 2009 different Field Directors have given priority to different things forgetting the basics of management of tiger reserve that security was the most important item as Panna Tiger Reserve is surrounded by large number of villages indulging in poaching. Monitoring of movement of Pardhis and bahelias who thrive basically on poaching has not been properly done. The hunting communities coming from outside have not been tracked. The middle men were main drivers of trade in tiger body parts. They supplied tiger products to big traders located in Nagpur, Allahabad and Delhi. The Field Directors at their own level have practiced anti-poaching measures by creating patrolling camps, towers, patrolling on foot and vehicles but it was person specific and the outcome was not supervised as expected. In one sentence it can be summarized that intelligence gathering was never considered to be important. Perhaps the Forest Department has not developed any intelligence gathering system; the team felt that Panna was a very special case because the management received so many cautions and warning letter from different agencies. It has been observed by the team that Government of Madhya Pradesh was always in a denial mode that there was crisis in Panna till the Minister of Forest Government of Madhya Pradesh admitted in an interview to a national daily that no tiger was present in Panna in the second week of June. During field visit the team recorded excellent herbivore population and other ecological factors that are conducive for survival of tiger. The data also support that there is no ecological reason to believe that tigers should disappear. The park authorities or their superiors though visited several times have never accepted absence of females and cubs and did not recognize skewed population ratio. It is very clear that in a low tiger population area if the female goes the tigers will finally disappear. While comparing the situation the team felt that though tigers have not been seen in the tiger reserve but it cannot be compared with Sariska because warning bells were sounded regularly for the last 8 years. Unfortunately the management never accepted the truth and denied the severity of the problem. They were complacent that there was tigers insufficient number thus ignoring the advice of Wildlife Institute of India in 2006 when they suggested skewed male female ratio causing imbalance. This resulted finally in disappearance of females due to the fact that females are more vulnerable to poaching because of their smaller home range, particularly when they are with cubs.

Introduction

The **Special Investigation Team (SIT)** was constituted to investigate the disappearance of tigers for Panna tiger Reserve vide OM number 4-1(9)/2007-PT dated 23 March 2009 (Annexure 1). The terms of reference for SIT was as follows :

- 1) To ascertain the causative factors responsible for disappearance of tigers in the Panna Tiger Reserve.
- 2) Ascertaining the role of poachers and the possible connivance of local staff/people in the tiger depletion in the said reserve.

The SIT is composed of

- 1) Shri P.K. Sen, Retd. Director (Project Tiger), Member
- 2) Shri Qamar Qureshi, Scientist Wildlife Institute of India, Dehradun, Member
- 3) Shri Chaturbhuj Behera, Regional Deputy Director, Wildlife Crime Control Bureau, Jabalpur, Member
- 4) Shri S. P. Yadav, DIG, National Tiger Conservation Authority, Member Convener.

Genesis

Several advisories have been sent by MoEF, Govt. of India time and again. The State has also been advised to handover poaching cases to the CBI, considering its countrywide ramification (Annexure 2). The Central Empowered Committee of the Honøble Apex Court visited Panna twice in application No. 376 filed by Ms. Belinda Wright on issues relating to Panna. The said Committee has issued directions to the State for stepping up protection, while observing that Panna is showing signs like Sariska (February, 2005). The State Government did not agree with these observations. An independent Committee comprising of Shri Ravi Singh and Sh. P.K. Sen was sent for an appraisal. The Committee reported tiger evidence in the area after field visit in January, 2008, but suggested, interalia, verification by WII using camera traps to ascertain status and skewed sex ratio in population (Annexure 3). The State Authorities have been reluctant in accepting the problem. The Memeber Secretary (NTCA) visited the area in November, 2008, and found evidences of only one tiger. Concerns have also

been raised by Honøble MPs in a recent meeting of the Parliamentary Consultative Committee, for fixing accountability on field officers.

A letter has been written to the Secretary (E&F) jointly by Shri Brijendra Singh, Valmik Thapar (Members, NBWL), Dr. Ullas Karanth, Dr. R.S. Chundawat, Ms. Belinda Wright, Shri P.K. Sen, Shri Bittu Sahgal and Shri Fateh Singh Rathore, expressing concern over Panna. An enclosure to the said letter contains a set of recommendations asking for high level inquiry into disappearance of tigers in Panna. In particular, the enquiry should address the issues of ineffective protection, departmental cover-ups, and accountability, and action should be taken against any responsible officers including those who continued to deny the loss of tigers in Panna.

The NTCA has asked for independent investigating for investigating into the disappearance of tigers from Panna through a Special Investigating Team (SIT), as done in the case of Sariska. The said team should include at least one tiger expert and a representative of the NTCA. The gamut of investigation should cover the possible role of poachers and the possible connivance of local staff and people. The SIT was asked to furnish its report within three months.

Description of Panna Tiger Reserve

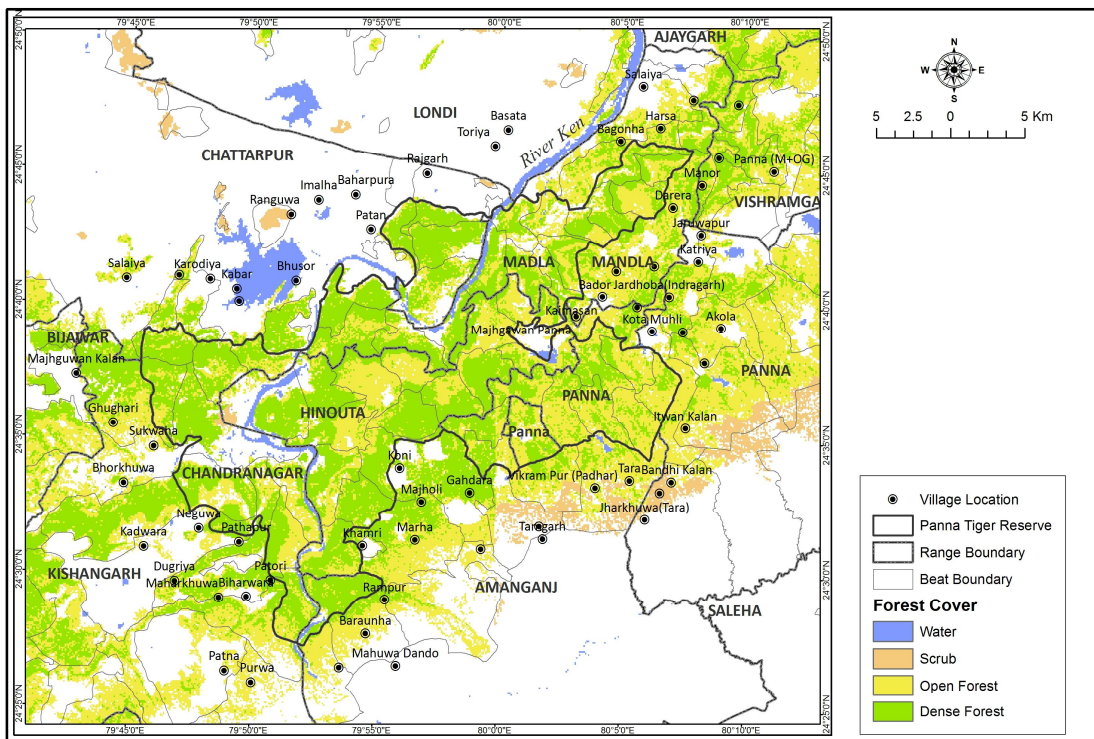
Panna National park has been constituted vide Govt. of Madhya Pradesh, Forest Department notification no 15-8-80-11, dated 17-10-1981. There are 5 Ranges, 10 supervisor circles (Sub-Ranges) and fifty one beats in the park. There are 47 villages within a 5 km belt. Total area covered by this belt is 700 km² of which about 450 km² (60 %) is forest area (Gangau Sanctuary included). Panna Tiger Reserve is situated in the northern part of central Indian state of Madhya Pradesh and spreads over Panna (373.55 km²) and Chatarpur (169.12 km²) districts. Panna TR is situated at lon-79⁰ 45ø E to 80⁰ 09ø E and lat-24⁰ 27ø N to 24⁰ 46ø N; covering an area of 542.66 sq. km. It ranges in altitude between 330 to 540m with an average annual precipitation of 1100mm and temperature ranging from 5⁰ C to 45⁰ C. Besides rich wildlife values the Reserve is dotted with ancient rock paintings, which are believe to be around two thousand years old. Old relics of the Gondwana period are scattered all over the

Reserve. Panna TR is situated in the vindhyan hill range and is a part of a contiguous forested landscape of about 3,000 km² (Qureshi et al 2006).

One of the most significant ecological aspects of the reserve is that the district of Panna marks the northernmost boundary of natural distribution of teak and the eastern limits of teak-kardhai (*Anogeissus pendula*) mixed forest. The ken River, which flows through the Reserve from south to north, is the home for Gharial and Muggar and other aquatic fauna. Ken is one of the sixteen perennial rivers of M.P. and is truly the life line of the reserve. It offers some of the most spectacular scenery while meandering for about 55 km through the reserve.

The terrain of the reserve is characterized by extensive plateaux and gorges. The topography in the Panna district part of the Reserve can broadly be divided into three distinct tablelands ó the upper Talgaon plateau, the middle Hinauta plateau and the ken valley. There are also a series of undulating hills and plateaux on the other side of the Ken river in the Chhatarpur district.

Figure 1. Panna Tiger Reserve and surrounding village locations.



The Reserve's most undisturbed habitat of about 70-80 km² lies on the Hinauta plateau. This is due to relocation of three villages from this area in the 1980s. Dry and short grass habitat with open woodland is quite extensive. It supports Nilgai and chinkara.

The tall grass habitat associated with woodland, support good densities of sambar and chital. Mesic areas are distributed along the major seasonal streams and in Ken river valley. Steep slopes of plateaus are drier and are dominated by *Acacia catechu*. Distribution of these habitats creates a heterogeneous landscape, where ecological conditions vary seasonally. The area had been the traditional hunting reserve of the princely state of the Panna and was historically renowned for its tigers.

Approach

After the constitution of the Committee, Members of SIT communicated electronically and telephonically to develop modalities for investigation. The Committee decided to issue a public notice in the local newspapers requesting people and organizations willing to give information in context of disappearance of tigers from Panna Tiger Reserve. This public notice has been published in local newspapers of Jabalpur, Bhopal, Satna and Allahabad (Annexure 4). In the public notice it was also stated that the name and other details of persons/organizations giving evidence of their information regarding disappearance of tigers from Panna will be kept secret, if desired.

The Committee received information from Shri Srikant Dubey, MLA, Panna, International Wildlife and Tiger Conservation (represented by Manish Kulshresth), Dr. Raghu Chundawat, Shri Lokendra Singh and Shri Rajesh Dixit, Advocate, r High Court of Madhya Pradesh, Jabalpu, to appear in person before the SIT. The SIT also decided to invite all the former Field Directors of Panna Tiger Reserve posted from 2002 to 2009, two Deputy Directors, all the present Range Officers and willing subordinate staff for their submission.

Further, all relevant information viz., name of Field Directors, name of Ranges, Beats, notes on anti-poaching operations, map showing tiger reserves/range/beats/adjoining areas, year wise sanctions/working strength of ROs, Deputy ROs and Forest Guards, name wise period of stay of subordinate staff, beat wise monthly report on tiger mortality, report on cattle kill and human death, amount of compensation paid, reports on tiger poaching/ tiger mortality, reports on tigers straying, cattle kill and human deaths in adjoining areas, tiger mortality and poaching cases in adjoining areas, reports on tiger presence in adjoining areas, reports on tiger sighting by tourists and staff,

report on prey base in the tiger reserve, report on sighting female with cubs etc. were called for from the Field Director, Panna Tiger Reserve.

On 29th & 30th April and 1st May, 2009, three members of SIT namely Shri P.K.Sen, Shri Qamar Qureshi and Shri S.P. Yadav visited Panna. The Regional Dy. Director, WCCB, Jabalpur (fourth member of SIT) could not visit Panna for the scheduled investigation. On 29th April, 2009 the team visited Panna Tiger Reserve and discussed various aspects of tiger disappearance with the Field Director (F.D.) & other staff. On 30th April the team interacted with several staff/public on possible causes of decline in the population of tigers from Panna TR and also requested the F.D. to furnish information on tiger poaching/ mortality cases and other related information from Panna TR & adjoining areas. On 1st May, 2009 the team interacted with former Field Directors of the T.R. namely Mr. Shahbaz Ahmad, Shri G. Krishnamurthy and Shri Sanjay Mukharya.

The SIT comprising of Shri P.K. Sen, Shri S.P. Yadav and Shri C. Behera visited Panna on 10, 11 and 12th June, 2009. Dr. Raghu Chundawat appeared before the SIT on 10th June, 2009 and submitted a comprehensive documentation on the causes of disappearance of tigers from Panna Tiger Reserve apart from certain oral submissions. On 11th June, 2009, Shri Rajesh Dixit, Advocate, High Court of Madhya Pradesh, Jabalpur appeared before the Committee and submitted a detailed document with a CD in relation to causes of disappearance of tigers from Panna Tiger Reserve. The SIT also interacted with Shri P.K. Choudhary, former Field Director of Panna Tiger Reserve and Shri Nagar on 11th June, 2009. On 12th June, 2009, the SIT discussed various aspects of protection patrolling and tourism with Shri V.N. Ambadey, the former Deputy Director of Panna Tiger Reserve.

Summary of Information provided to SIT

Tiger:

All the officers and staff denied any organized poaching of tigers within the Tiger Reserve but at the same time they accepted the prevalence of poaching of wild herbivores. All the officers and staff accepted the frequent straying of tigers from Tiger Reserves. Shri Mukharya reported death of a tigress which was snared and fate of her two cubs were not known. He also reported death of one male tiger due to drowning in a well. Mr. Shahbaz Ahmad admitted mortality of one tigress and a cub due to

poisoning during his tenure. He also stated that offenders related to the said offence were arrested and prosecuted. Shri A. K. Nagar, Deputy Director reported that one tiger body was seen floating in Ken River during August, 2005 when Ken river was in spate but the body was not recovered. Shri G. Krishnamurthy in his report submitted regarding disproportionate male / female ratio. Dr. Raghu Chundawat however was of different opinion. He clearly stated that majority of animals were poached particularly females with cubs. (Dr. Raghu Chundawat's deliberations will be further elaborated in analysis chapter). Shri V. N. Ambadey Deputy Director has mentioned about the disappearance of three tigers during his tenure. Shri L. K. Choudhry has submitted a report regarding low population of tiger, and possibility of dispersal of tiger (Annexure 5).

Management:

Panna is a conflict ridden landscape with frequent incidences of fire, drought, biotic pressure, large population of feral cattle, competing with herbivore, trigger happy fringe villages and poaching by local communities. Different managers have dealt with the problems by adopting different management strategies.

Shri P.K. Choudhary strengthened the wireless communication system, supported research project of Wildlife Institute of India, large number of cattle impounding and foot patrolling were initiated besides the fire and water management. During his tenure park was better managed resulting in significant increase in population of tigers, sloth bear, wolves etc.. During 1995-96, the Panna Tiger Reserve was awarded with the best protected park from fire.

During the period of **Shri Sanjay Mukharia**, considerable emphasis was given to tourism. Tiger shows started in Hinauta and Madla ranges. During Mr. V.N. Ambadey's tenure large scale problem of forest fire was managed by control burning practice. However for better sighting of animals, view strips were created all along the main roads. They were burnt with two objectives of controlling fire and growth of palatable grasses.

Shri Shahbaz Ahmad has started intensive patrolling and monitoring of large number of *chowkis*, patrol camps and watch towers in sensitive areas of the park. During this

period, large number of complicated formats for day-to-day monitoring of tiger and prey base; and patrolling were developed for the field staff.

During the period of **Shri G. Krishnamurthy** considerable emphasis was given for rehabilitation of children of Pardhis and Behelias. He started the relocation of villages and removal of feral cattles to distant places. He initiated patrolling by staff in Forest Divisions surrounding Panna Tiger Reserve. He also initiated intelligence gathering network in pardhi habitations.

Shri Lallan Choudhary initiated the process of reintroduction of tigers. Two tigress were introduced, one from Bandhavgarh and other one from Kanha. He continued intensive monitoring program and support to pardhi school and pardhi employment schemes.

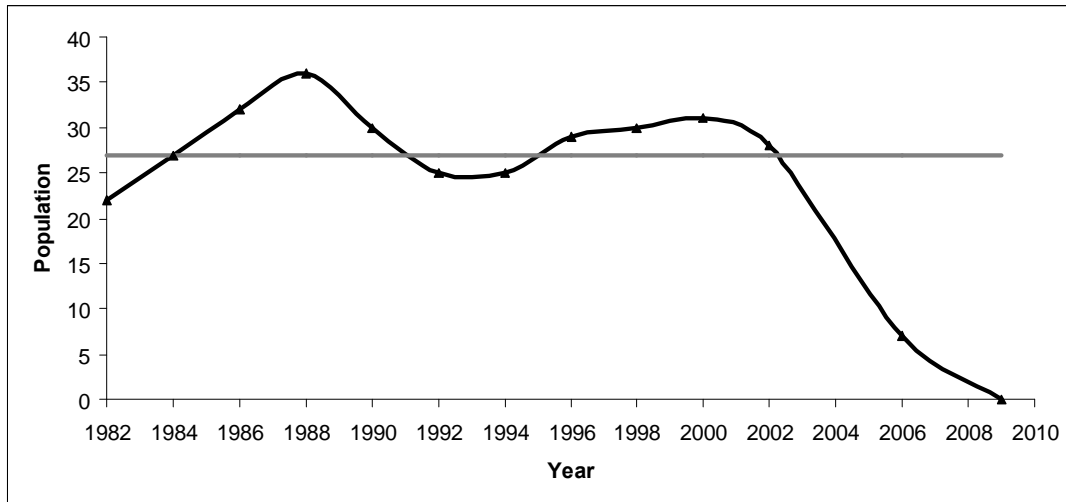
Dacoit problems: It is reported that three gangs of miscreants / dacoits were operating and taking shelter in forests of Tiger Reserves since April, 2006 to July, 2008. During the said period a large number of police force along with vehicles were moving in and out of the Tiger Reserve in order to flush out the miscreants from the forest areas. These dacoits either surrendered or were eliminated by July 2008.

Evaluation

Tiger population was reportedly 22 in the year 1982 (Dwivedi 2003) and remained largely between 25 and 30 (Figure 2), until it crashed in 2009 (Wildlife Institute of India, 2009). While previous estimates were based on conventional pugmark method, robust camera trap techniques were used for obtaining estimates in 2002 (Karanth et al. 2004) and 2006 (Jhala et al. 2008). Tiger population estimates prior to 2002 were best to be taken as indicative of trend. The 2002 study sampled larger areas of 418-km² and estimated population density of 6.92 tigers/100 km² (Standard Error of 3.23), while in 2006 density was 4.9 tigers /100 km² (0.96 SE) in effectively sampled area of 185-km² (Annexure 6 and 7). The population estimate of 24 (15 - 32 95% CI) provided by All India Tiger Population Estimation and Monitoring Project carried out by National Tiger Conservation Authority and Wildlife Institute of India is an extrapolated value including adjoining areas in Chattarpur and Panna Forest Division (Jhala et al. 2008), and is not an estimate for Panna Tiger Reserve only. The report also indicated this is likely to be an overestimate. In 2009 Wildlife Institute of India report states *δThe*

empirical evidence was conclusive that Panna TR lost its last tiger in January 2009ö (Annexure 8).

Figure 2. Tiger population trend in Panna Tiger Reserve from 1982 to 2009 (the straight line represents the mean value derived from the reported years) (Wildlife Institute of India, 2009).



The camera trap area in 2006 was a smaller subset of that sampled in 2002 (418.14 km²) by Karanth *et al.* (2004) and covered all the beats with high to medium density of tiger signs yet the density estimate of 2006 (4.9 (SE 0.96) tigers /100 km²) was lower than that reported for 2002 (6.94 (SE 3.23) tigers per 100 km²) suggestive of a drastic decline in tiger density in the best part of the tiger reserve.

The tiger occupancy estimate (i.e. number of beats with sign/total number of beats) in Panna T.R. for year 2006 was 67.9% (SE 6.5) (Jhala et al 2008). The range wise occupancy was highest in Hinauta and Panna range. The occupancy estimate in 2009 for the entire Panna TR was reduced to 30%.

Are there natural cases of decline?

The population decline of large felid like tiger can naturally caused by disease, natural catastrophe or loss of prey. No evidence of epidemic disease or natural catastrophe has been recorded to cause large scale mortality in tigers of Panna. Ungulate densities in Panna TR were comparable to those observed in other protected areas of India where large carnivores including tigers continue to survive (Johnsingh, 1983; Karanth &

Nichols, 1998; Varman & Sukumar, 1995, Ramesh et al 2009). Past records of ungulate densities does not indicate prey population decline. The major prey species of tiger had comparable density from 2003 to 2009 (Chundawat et al 2005, Jhala et al 2008 and Wildlife Institute of India 2009) (Table 1).

Table 1. Abundance estimates of major tiger prey species in 2003, 2006 and 2009. (Source: Chundawat et al 2005, Jhala et al 2008 and Wildlife Institute of India 2009)

| Species | Density 2003 | Cluster Density 2003 | Encounter Rate 2003 | Density 2006 | Cluster Density 2006 | Encounter Rate 2006 | Density 2009 | Cluster Density 2009 | Encounter Rate 2009 |
|---------|--------------|----------------------|---------------------|--------------|----------------------|---------------------|--------------|----------------------|---------------------|
| Sambar | 10.35 | 3.95 | 2.62 | 11.89 | 4.79 | 0.413 | 12 | 3.8 | 0.64 |
| Chital | 16.67 | 2.78 | 0.49 | 16.31 | 6.3 | 0.6 | 13.9 | 2.5 | 0.33 |
| Nilgai | 13.11 | 4.39 | 0.68 | 16.13 | 7.08 | 0.37 | 17.6 | 5.2 | 0.99 |
| Total | 40.13 | 11.12 | 3.79 | 44.33 | 18.17 | 1.383 | 43.5 | 11.5 | 1.96 |

Is poaching a causes of decline?

We evaluated the role of poaching as cause of tiger extinction in Panna by estimating what density Panna Ungulates can sustain in 2002, 2006 and 2009. According to the predictive equations of Carbone & Gittleman (2002), Karanth *et al.* (2004) and Jhala *et al* (Unpublished, 2009) relating prey to tiger densities, Panna had sufficient prey biomass in 2002, 2006 and 2009 to support 7 tigers per 100 km². The prey based estimate of tiger density was equivalent to 2002 estimate of Karanth et al (2004). **The tiger populations has shown decline with no ecological reasons supporting the notion that poaching was a major cause of local tiger extinction in Panna TR.** We used the sighting records furnished by Panna Tiger Reserve to evaluate demographic parameters for a period of 2002 to 2008. The indicators of population well being like sex ratio and ratio of young tigers indicated negative trend (Fig. 3 and 4). The sex ratio of tigers in Panna TR in the year 2002 was 2.67 tigresses/tiger (Karanth et al. 2004) which was reduced to 0.5 tigress/tiger in the year 2006 (Jhala et al. 2008). The tigress : tiger ratio indicated steady decline of female since 2003 and in the end only male tiger was left(2009) (Fig 3).

The female with cubs : all tigers also indicate similar declining trend (Fig. 4) since 2003. **The maximum decline took place from 2003 to 2005 which continued till 2007-08.** The females were poached more and were extinct before male tigers as they have smaller home ranges (Panna TR female home range = 42.16 km² and male home

range = 184 km²) and are more vulnerable to poaching. Similar trend of preponderance of males and absence of females with cubs was observed in Sariska tiger population extinction.

The poisoning, snaring and disappearance cases (Table 2,) indicate that tigers were lost due to unnatural causes regularly through 2003 to 2008. Poaching was a major cause of tiger extinction in Panna TR.

Figure 3. The tigress:tiger ratio based on sighting records data provided by Panna Tiger Reserve.

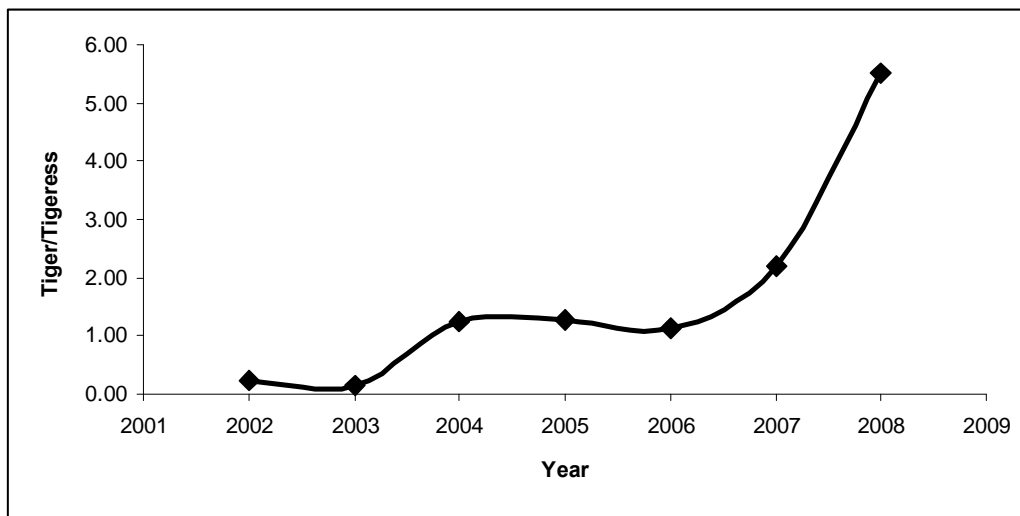


Figure 4. The cubs : all tiger ratio based on sighting records data provided by Panna Tiger Reserve. Only sightings of cubs with tigress is considered. (based on Data provided by Panna TR)

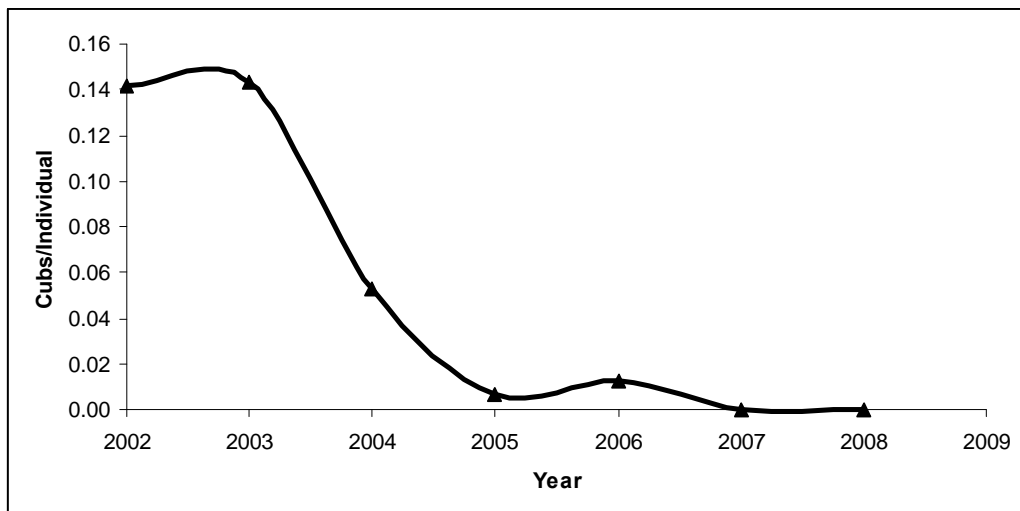


Table 2. Tiger poaching and disappearance records in (1996 to 2009) Panna and Chatarpur Districts. (Source Field director Panna TR, Dr. Raghu Chundawat, WPSI and Crime Control Bureau)

| Year | Location | Tiger | Tigress | Cub | Gender UK | Body Parts | Other | Cause | Report |
|---------|-----------|-------|---------|-----|-----------|---------------|------------|---------------|--------------------------------------|
| 1995 | Panna TR | | | | 1 | Skin | | Poaching | Wildlife Protection Society of India |
| 1996 | UnKnown | | | | 3 | Bones | | Poaching | Confession of Offender to Police |
| 1997 | UnKnown | | | | 2 | Bones | | Poaching | Confession of Offender to Police |
| 2000 | UnKnown | | | | 3 | Bones | | Poaching | Confession of Offender to Police |
| 2001 | Chatarpur | | | | 1 | Skin | | Poaching | Police |
| 2002 | Panna TR | | 1 | | | | | Disappeared | Dr. Raghu Chundawat |
| 2002 | Panna TR | | 1 | | | | | Snared | Panna TR |
| 2002 | Katni | | | | 1 | Skin | | Poaching | Forest Deptt |
| 2003 | Panna TR | 1 | | | | | | Found in well | Panna TR |
| 2004 | Panna TR | | 4 | | | | | Disappeared | Dr. Raghu Chundawat |
| 2004-05 | Panna TR | | | | 6 | | | Poaching | Wildlife Protection Society of India |
| 2005 | Panna TR | 3 | 3 | 1 | | | | Disappeared | Dr. Raghu Chundawat |
| 2005 | Panna TR | | | | | | Tiger Trap | | Panna TR |
| 2006 | Panna TR | 1 | 1 | | | | | Poaching | Wildlife Protection Society of India |
| 2006 | Panna TR | | 1 | 1 | | | | Poisoning | Panna TR |
| 2007 | Panna TR | 2 | 2 | | | | | Poaching | Wildlife Protection Society of India |
| 2007 | Satna | | | | 1 | Bones & Flesh | | Poaching | Forest Deptt |
| 2008 | Satna | 1 | | | | | | Bullet Injury | Forest Deptt |
| 2009 | Panna TR | 1 | | | | | | Disappeared | Wildlife Institute of India |

Figure 5. The poaching cases of wild animals recorded in Panna and Chatarpur Districts. (Data Source Crime Control Bureau and Panna TR)

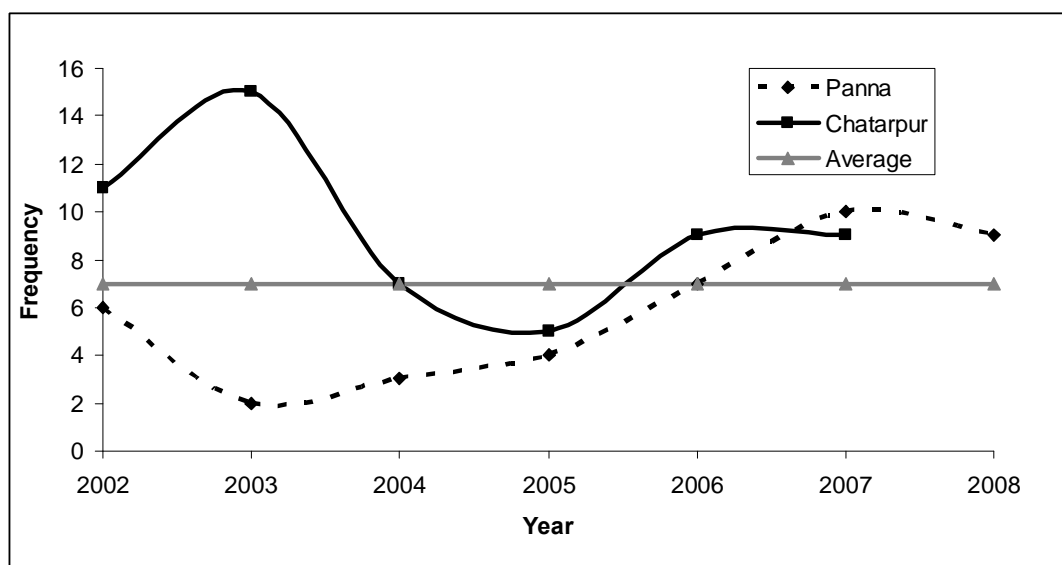


Table 3. The sanctioned and working strength of staff of Panna Tiger Reserve. (Source Field Director Panna TR)

| S. No | Year | Sanctioned | | | | Working | | | | | |
|-------|-----------|---------------|------------|----------|--------------|---------------|------------|----------|--------------|---------------|-------|
| | | Range Officer | Dy. Ranger | Forester | Forest guard | Range Officer | Dy. Ranger | Forester | Forest guard | Casual labour | Total |
| 1 | 2002 - 03 | 6 | 5 | 11 | 87 | 7 | 5 | 11 | 69 | 262 | 354 |
| 2 | 2003 - 04 | 12 | 7 | 18 | 95 | 7 | 10 | 15 | 92 | 167 | 291 |
| 3 | 2004 - 05 | 12 | 7 | 23 | 94 | 5 | 7 | 16 | 85 | 153 | 266 |
| 4 | 2005 - 06 | 12 | 7 | 27 | 94 | 6 | 5 | 21 | 90 | 355 | 477 |
| 5 | 2006 - 07 | 11 | 7 | 23 | 94 | 8 | 8 | 24 | 83 | 355 | 478 |
| 6 | 2007 - 08 | 11 | 7 | 23 | 85 | 7 | 9 | 19 | 76 | 270 | 381 |
| 7 | 2008 - 09 | 11 | 7 | 23 | 95 | 8 | 4 | 24 | 84 | 331 | 451 |

The Panna tiger reserve have thirteen revenue villages which are mostly inhabited by the tribals. Major ethnic groups are Gond (Rajgond, Nandgond and Saurgond) and Khairuas among the tribes. They participate in the part-time hunting of wildboar, Chittal, Sambar for meat. Some times they also carry out hunting of tiger and leopard. Many of the tribals are accused in various cases.

Organized crime

The major cause of depletion in tiger population is the organized crime. Panna is surrounded by the Pardhi/Bahelia settlements in all directions. North-east of Panna TR lies Gandhigram-Janakpur, Janwar and Badegaon, in north Pantha near Ajaygarh, in the south there are some settlements near Pawai and on the southern border lies the Mahuakhera-Kupna village. Seventeen accused in the Gir-lion poaching cases are from Mahua Khera village. Three to four years back due to conflict with the locals in Sugma-Budha (Katni) one group has migrated to Mahua Khera. The notorious gangs of Birhouli, Budha, Sugma and Lalitpur are well-known for poaching in various parts of the country. Bhadanpur in Satna has a sizable population of the group. Various groups of middle-man have operated from the Districts of Panna, Chhatarpur, Satna and Katni. The complete link of traditional tiger poachers, middle-man and traders has been unearthed by the Chhatarpur Police in a seizure case in July-05.

Mohd. Rayees r/o Nayabasti, Chhatarpur was carrying out trading in wildlife parts especially tiger and leopard. He had links with Nawab Shabir of Satna. Later he developed links with notorious trader like Sansar Chand and traders of Kanpur, Allahabad, Fatehpur (UP). Mohd. Yusuf, an associate of Mohd. Rayees had confessed killing 5 tigers and 28 leopard from 1998 to 2005. Mohd. Rayees had also revealed the names of ten Pardhis. Confessional statement of Mohd. Rayees to Chhatarpur police is enclosed in Annexure 9. It is unfortunate that the Forest Department has not made any efforts to identify and keep a watch on their activities. House of Haji Nawab Ali of Satna was raided in 5/2007 and three persons were arrested. Tiger bones and flesh was recovered from their house.

• In an attempt to hunt case (P.O.R. No.-309/08 dtd 7/8/05) seven Pardhis were arrested. One of them is Lipustan alias Barf Singh r/o Jamalpur Kheda, Dist: Vidisha. The same person has been named in the confessional statement of Mohd. Rayees. The family of Baraf Singh was caught with two tiger traps and snares from Motigarh, Chandranagar Range of Panna TR. The incidents establish that the Pardhi gangs of Panna, Katni and other Districts like Vidisha have been active in the park for poaching and had supplied the tiger parts to the wildlife traders. The staff had been less attentive towards the wildlife cases and was not able to assess the magnitude of the vicious

network operating in the park in spite of seizures made by them. The wildlife crime was never got focus in the park.

Recorded poaching and mortality cases

Since 2002 there are four recorded case of tiger death in the park out of which three were poaching (two tigresses and one cub) cases and one case were of accident (one female cub). All the four mortalities were reported from Hinouta range.

The female tiger of around 6 years was found dead in comptt. No.-510 (Jhalar, Hinouta Range) without skin, muscle and internal organs. In Poaching case No.-1485 dated 20.12.2002 and nine persons were apprehended from village Majouli. They have been acquitted due to insufficient proof. On the same day one Sambar was found dead, post-mortem of which revealed death due to strangulation by snare.

One tigress, about 8 years old, was poached in Comptt. No-542, Hinouta Range by Organo-Chloro insectide (Endosulfan). The carcass was found on 23rd, May, 06 after two days of death. The Forensic report of viscera revealed death due to lethal dose of insecticide. A one year old female cub was poached by four persons of village Madeyan in Hinouta range. The body was found on 5th May, 05 in Comptt. No-540, Chandranala after 3-4 days of death. P.O.R. was registered on 29/6/06 against the four accused. A male tiger, about 12 years old died in Compt. No.-534, Hinouta Range on 24th June, 2003 due to drowning in kuchha well. The body was found almost one week after death.

Factors facilitating poaching

The park borders are highly porous. Foot patrolling and surveillance particularly at night is not satisfactory which gave opportunity to the criminals to poach animals. The protection mechanism was not strong enough to protect against the nexus of the poachers, middle-men and the traders.

There was no intelligence gathering of organized poachers and Pardhis in and around Panna TR. The Forest Department had tried to assimilate the Pardhis in the mainstream of the civilized society by various social welfare measures. They failed to understand that Pardhis were still very active in the Park in spite of various direct and indirect proofs of their nefarious activities.

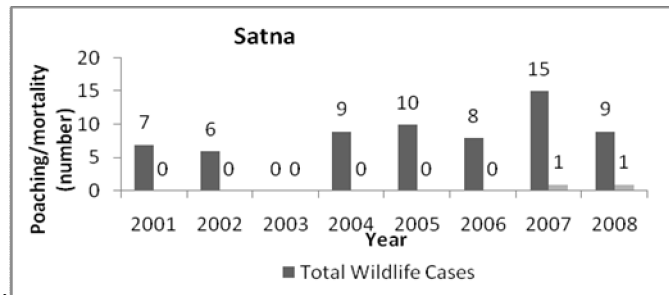
The existing administrative setup of the park is insufficient to meet the responsibilities (Table 3). There was wide difference in working with the adjacent territorial Divisions of Panna North and South. These Divisions need to be brought under Panna Field Director so that common concern of park protection is attended in concerted manner.

The conviction rate is very poor, out of 24 cases decided, the conviction has been awarded in 2 (8 %) cases only. Poor conviction rate gives great advantage to the poachers to commit the crime frequently. The enforcement agency needs strengthening and proper investigation to be made to ensure deterrent punishment to the poachers.

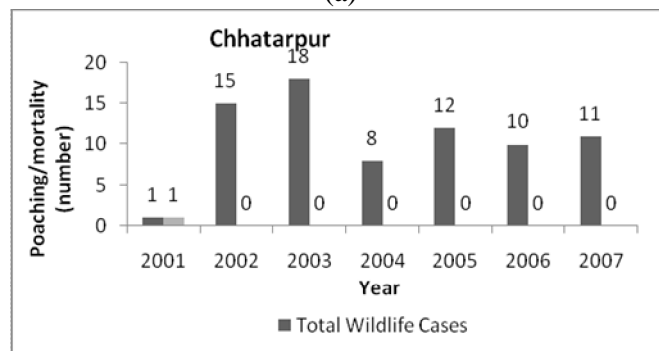
In case of Panna TR, poaching is now beyond livelihood needs and has become an organized crime (Kumar & Wright, 1999). Most poachers apprehended across India, originate largely from this region around Panna TR. Therefore, the authorities need to combat this organized crime with modern day approaches (Kumar & Wright, 1999). A major shortfall in implementing conservation measures has been the attitude of local authorities of not acknowledging poaching as a problem and therefore failing to respond in time while mitigation was still possible (Figure 5, 7 and 8).

The Panna TR is relatively a small protected area in a reasonably large tiger habitat (Jhala, *et al.*, 2008). Even home ranges of tigers from Panna TR have a substantial portion outside the reserve (Chundawat *et al.*, 1999), under this situation a strategy of protection and enforcement only within the core of the tiger reserve is unlikely to be successful. Many, tiger reserves including Panna, lack a viable buffer or a multiple use area, where land uses conducive to conservation objectives are permitted with appropriate incentives, compensation and legislation (Karanth & Gopal, 2005; Gopal *et al.*, 2007). Without a good buffer and connecting corridors to other source tiger populations the survival of small tiger population, even under moderate poaching pressure is difficult (Chapron *et al.*, 2008; Kenney, 1995). A landscape level plan addressing strategies for protection, prey enhancement outside the Panna TR and livelihood issues of local communities is needed for conserving the reintroduced tigers in Panna.

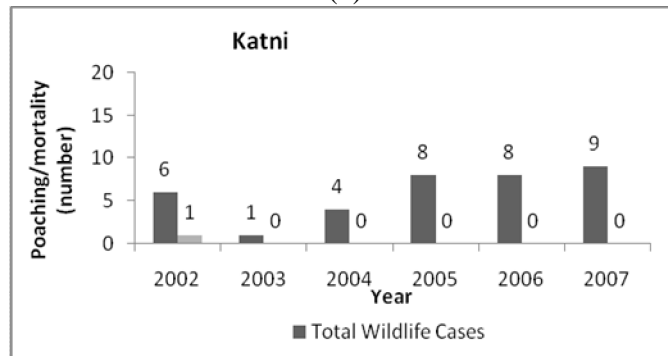
Figure 6. The poaching cases recorded in Satna (a), Chhatarpur (b) , Katni (c) and Panna (d) districts (Source Crime Control Bureau and Panna TR) (Note :Dark bars = total cases and light bars = tiger poaching cases).



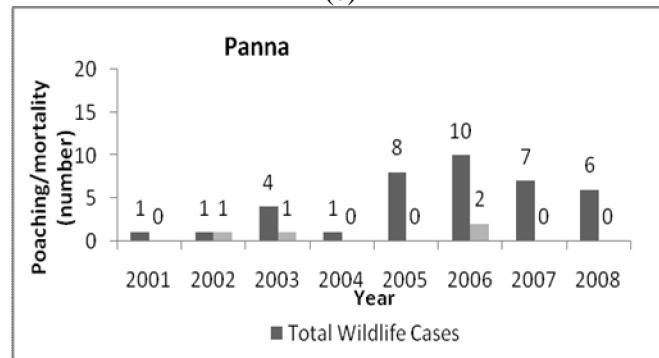
(a)



(b)



(c)



(d)

Monitoring

The monitoring of tiger and its prey was inappropriate as the pugmark based tiger population estimates were unreliable (Karanth et al 2003, Narain et al 2005, Jhala et al 2005 a,b and Jhala et al 2008). The information in Fig. 5 indicate the average encounter remains consistent since 2002 except in the year 2005 when exceptionally high number has been encountered. The pugmark encounter rate has not given any reliable information and is prone to manipulation. The population has continuously declined from year 2002 onward but pugmark encounter remain consistent (Fig 6) indicating failure of a system or the data has been manipulated. The ungulate population estimates based on total count has not yielded any useful information.

Figure 7. The pugmark encounter rate (pugmark/day) based on daily data collection by forest staff. (Data Source Field Director Panna TR)

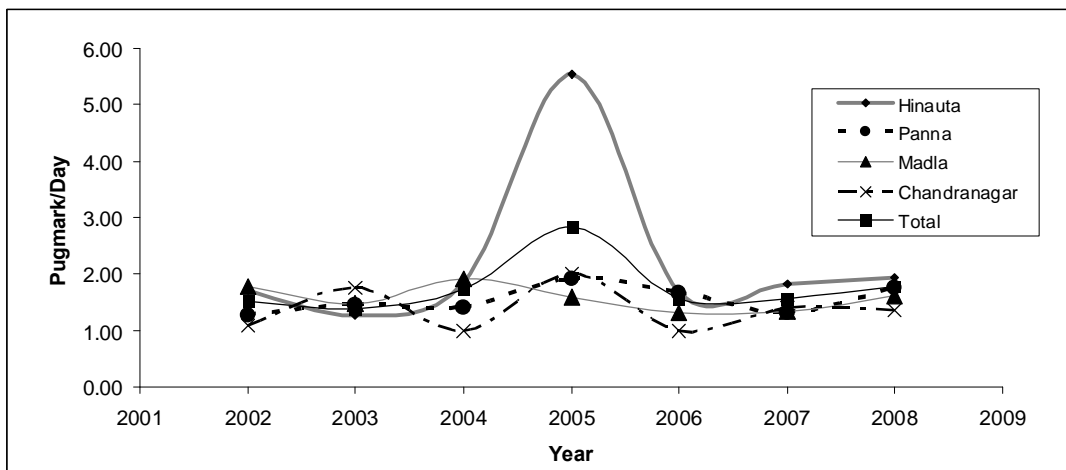
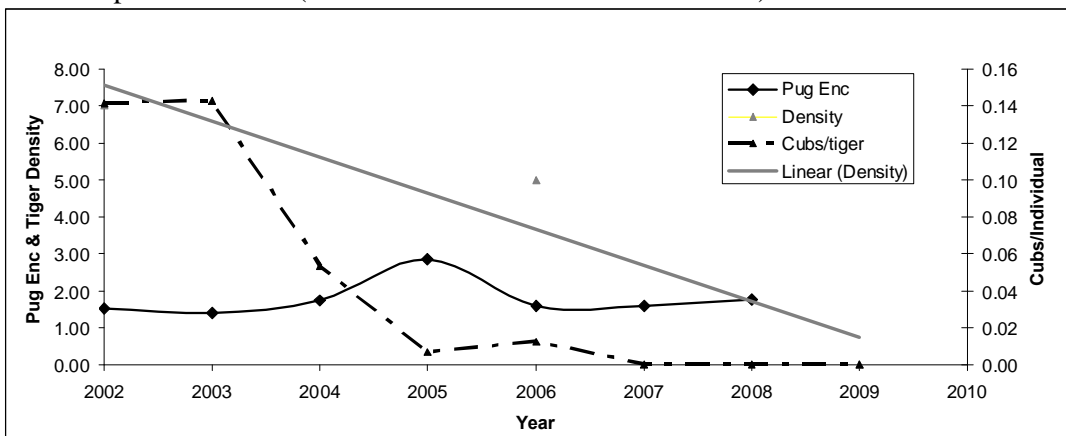


Figure 8. The overall pugmark encounter in relation with declining tiger density and cub ratio per individual. (Data Source Field Director Panna TR)



After compiling data and information from April, 2001 to March 2009, the SIT has come to following findings which are being documented chronologically.

Observation and findings:-

1. Different Field Directors have tried to manage Panna in different manners. During the **1994 to 2000** which was the prime time of Panna Tiger Reserve, the tiger bred very well, ungulate population was very satisfactory, patrolling was conducted generally on foot (vehicles were very limited in numbers). However, priority was given to augmenting water facilities in the drier areas. He left Panna in mid 2001. During his tenure no major poaching incidences came into light.

During this period shortage of vehicles, shortage of staff for protection, scarcity of rain was mainly observed. Poaching was not a major threat though one tiger skin and tiger bones were recovered.

During **January 2001 to June 2005** which was the most critical period because large numbers of complaints were lodged regarding poaching of tigers in particular. During this period cases were filed in the Apex Court and the Central Empowered Committee members visited the reserve twice. Letters written by Chairman Central Empowered Committee to the Chief Secretary Madhya Pradesh Government, Member Secretary Central Empowered Committee to Principle Secretary Forests, Government of Madhya Pradesh were not taken into account. Large number of NGOs scientists and individuals wrote to different agencies of the Madhya Pradesh Government but all were side tracked stating that these were only media hypes. It is necessary to mention that Dr Raghunandan Singh Chundawat who was faculty member of Wild Life Institute of India, Dehradun started a Research Project on tigers in Panna in the year 1996. As a scientist of Wildlife Institute of India and as a tiger biologist he wrote number of letters to Field Director, Chief Wildlife Warden, Madhya Pradesh Government, stating that tigers are being poached and therefore there was urgency to gear up protection mechanism.

During this period tourism got priority. Tiger shows were organized in Hinauta, Panna and Madla Ranges. As reported whichever tiger was sighted in these three ranges, tourists were brought on elephant back for tiger show. The tiger sighting has been

recorded in the register maintained for tourists. Number of tourists seeing a tiger in the show was not an indicator of tiger abundance though it has provided interesting insight in demographic parameters (Fig. 3 and 4).

All along the forest roads view strips were cut ranging between 25-30 meters and debris were removed in truck loads. Complain of removal of trees, saplings and poles have been lodged. The reply given by the management was that this was done to clear fire lines. It is pertinent to suggest that view strips are cut after monsoon and fire lines are cleared before fire season. Therefore the explanation was not tenable.

The poaching cases recorded by the Forest Department indicate that poaching of ungulates and tigers along with co-predators was rising. Dr. Raghu Chundawat sent a letter of caution to the management in the regard. However, the reaction of the Forests Department was expressed in their action against Dr. Chundawat. The committee feels it necessary to record that after resignation from Wildlife Institute of India in 2002, Dr. Chundawat was granted permission to carry out research on tiger in Panna by the competent authority of Madhya Pradesh Government. Ire of the forest department over Dr. Chundawat's letter to the higher authorities of the forests department of Madhya Pradesh Government ended up in seizure of his vehicle and cancellation of his research permit.

Monsoon has always been indifferent in this part of the country and therefore availability of water for wildlife was mainly limited to Ken River which flows through the Tiger Reserve. Poaching was reported but documents do not suggest any patrolling in the fringe areas of the tiger reserve. Grazing by village cattle was rampant. The data provided by Forest Department, Madhya Pradesh show that cases of poaching of tigers and its prey was not uncommon. Control of poaching was an issue known to the field authorities therefore, large number of guidelines were issued and complicated formats were sent to the lower level staff like, sign of predators with separate male female and female with cubs number present in a particular beat, abundance of prey base timing of patrolling either on foot or by vehicle and subsequent reporting was sent in bulk but it is not clear whether the information recorded by the beat guards and foresters were monitored at higher level.

From June 2005 to March 2007, Procedure of reporting from ground level continued to be the same. Number of forests chowkies were created for day and night patrolling. Efficacy of such patrolling was not measured by any superior authority. It has been reported by some Non Governmental Organization that the chowkies were marked by poachers and movement of patrolling parties was known to them therefore, they planted traps whenever a patrolling party was in the camp that is the morning hours (see WPSI report, Annexure 10). Numbers of new towers were constructed in vintage locations.

Unlawful activities had started inside the park as 3 groups of miscreants and outlaws took shelter inside the park during the later part of this period. Grazing continued unabated and cattle killed by tiger created conflict. Poisoning of carcasses was not uncommon. Documents suggest that poaching was never controlled since 2002 and the park authorities never agreed to warnings given by different agencies. It is claimed by poachers in their confessional statement that number of tigers and leopards were killed during 2004-2005 either by poisoning the carcasses, laying traps in tiger paths and subsequently bludgeoned them to death. The sighting of tigers moving freely particularly tigress with cubs reduced, other adverse factors remaining the same.

The park has been supervised at very high level of the forest department but there is no document to prove that anyone ever considered that Panna was developing crisis.

During March 2007 to August 2008 rehabilitation of Pardhis and Bahelias were supported and their children's education program was initiated. The perception was that if the children were educated the parents will remain obliged and will not kill wild animals, however information collected by WPSI (Annexure 10) suggest contrary to the claim, that once these families were relieved of responsibilities of their children they were free to indulge in poaching.

During this period feral cattle (more than 4,000 in number inside Panna Tiger Reserve) were relocated to Go-Sadan in Panna and far away Katni. This programme achieved considerable success as the villagers from the nearby areas stopped releasing their cattle inside park during pinch period.

During this period relocation of villages from inside the core critical habitat was started under the new scheme of paying Rs. 10 lakh per family, funded by NTCA. This created some hiccup as those villagers shifted prior to implementation of the scheme

wanted to avail the same facility and also threatened to come back to their original habitation. The management continued with anti-poaching camps, patrolling camps, day night foot and vehicles patrolling. The park was invaded by large number of anti-social elements. Principle Secretary Forest, Govt. of Madhya Pradesh convened a meeting of senior administrative, police, and forest officials on 13th February 2007. During the meeting numbers of suggestions were made pertaining to co-ordination between police and forest officials including strengthening and capacity building of forest officials and staff. Unfortunately, after elimination of outlaws from the park no follow up action was taken nor was monitored (Annexure 15). Police force of 200-300 strength was present from late 2006 to the beginning of 2008. The police continuously moved from one area to another in search of anti- social elements who were operating in three groups. The police force was able to kill two and one gang surrendered, however the impact of their presence on wildlife was difficult to evaluate. It was claimed that this action did not disturb the forest department activities nor it affected wildlife but subordinate officer expressed contrary to this opinion.

From August 2008 to May 2009 beside other inherent problems recorded above management had to prove presence of tigers within the tiger reserve as it was obvious that the number of tigers had depleted, whatever tigers were present were with skewed male female ratio and cubs were absent. From the documents it is revealed that tigers present during 2007 till beginning of 2008 were all males. However the last tiger sighted in January 2009, a huge male, photographed by WII was missing. It was claimed that the tiger was alive and moving outside tiger reserve, but could not substantiate the same.

Panna TR faced with acute fire problem in the beginning of 2009 which was though not uncommon. Poaching of ungulates were also recorded.

Tenure of Field Directors (Annexure 11) and Range Officers (Annexure 11) is enclosed.

Conclusion:

The tiger populations has shown decline without any ecological reason. Poaching, snaring and disappearance of tigers further support the findings that poaching was a

major cause of tiger extinction in Panna TR. The maximum decline took place between 2003 to 2005 which continued till 2008.

1. The management completely ignored warnings given by the scientist, individuals, Non Government Organizations and even Central Empowered Committee regarding poaching.
2. Documents prove that the Department did not have any intelligence network in place to keep watch on the poachers.
3. Large numbers of traps to catch ungulates were recovered from inside the reserve starting from Mr. P K Chowdhry's tenure.
4. The disturbance caused by presence of special strike force particularly during 2006 was ignored.
5. The disturbance caused by intensive monitoring and creation of anti-poaching camps near tigers' den was never evaluated.
6. Foot patrolling and its impacts on tigers was not monitored properly.
7. Rehabilitation of children of hunter gatherers would help in shift of the attitude of their parents, which was not proved to be true (Report in Annexure 10 given by WPSI).
8. WPSI have been able to collect photographs of tiger poachers. Government agencies did not care to monitor that information.
9. The comparison of 2002 report after estimating tiger population in Panna and subsequent 2006 report of Wildlife Institute of India were showing not only decline in population but also indicated serious skewed population. The management did not give any credence to these reports.
10. In the year 2009 Wildlife Institute of India has come up with a report which indicates the population of tiger in April 2009.

Periods when tiger started facing crises:-

2002-05:- The management shifted focus towards tourism and during this period even the forest department in their document have accepted maximum number of poaching but no special effort was made to improve intelligence network. Patrolling was done but not monitored in spite of warnings.

2002 to 2008:- The denial mode of the forest department continued at all level without verifying the warnings (Annexure 13).

2006-07:- Priority shifted from protection activity to welfare activity.

2007- March 09:- In spite of rigorous patrolling without monitoring its effect continued and the last tiger vanished.

In totality the warnings and cautions given to the management time and again were taken as criticism without verifying the contents. Even the news paper alarms were ignored. Disturbances due to foot patrolling, camping sites in vintage places causing disturbance to tigers were not given importance. The management relied more on Mr. Asim Shrivastav committee report based on old pug mark method where they evaluated a small patch to show tiger abundance. The higher authorities during their field visits failed to provide guidance to the field staff regarding monitoring, patrolling, places of selection of watch towers, patrolling towers and camps. Presence of 200-300 police personnel and their day and night patrolling failed to recognize disturbance in tiger population.

Monitoring of tigers in the fringes of the reserve was started late during Mr. Krishnamurthy's time. The co-ordination between the officials of Panna Tiger Reserve and the adjoining territorial forest divisions were not adequate. From the report, evidences, documents it is concluded that more tigers have been poached/killed in the adjoining fringe areas therefore, it was essential to have a buffer of Panna Tiger Reserve under the Field Director so that monitoring of movement of tigers could be kept under watch. In the matter of co-ordination with the police and Civil Administration, co-ordination was lacking particularly in the field of intelligence gathering.

There has been failure on the part of Administration in posting sufficient number of ROs in place, particularly during 2004 to 2006, when most of the tigers disappeared. During this period the Park worked with almost 50% strength of sanctioned posts of ROs. The administration failed in containing poaching, particularly outside the Park. Not declaring the buffer of the TR and not mainstreaming the concern of tiger conservation in the adjoining territorial Forest Divisions, aggravated the problem. The advisories/guidelines and red alerts on protection and monitoring protocols issued by the NTCA, time and again, were not followed in action and spirit. Details of guideline/ advisories/red alerts enclosed in Annexure 2.

Most of the Range Officers are working in the park for more than 10 years and therefore it is nothing unusual that some of them must have developed personal interest over and above their duties.

The NTCA has given sufficient fund to Panna TR for different activities (Annexure 14) under Centrally Sponsored Scheme of Project Tiger. However proper utilization of fund for monitoring tiger and improvement in the management practices is not very transparent.

From the documents it reveals that senior officers of the rank of PCCF and Chief Wildlife Warden and Additional PCCF Wildlife visited the reserve number of times. Nowhere in their tour report has it been mentioned that the reserve was facing problems which could be a cause of disappearance of tiger. The Principal Secretary Forest was least concerned about tigers in the reserve. The entire department in Bhopal was busy corresponding with scientist, individuals, NGOs and even Members of the CEC in denying facts even without verification therefore, the responsibility can not be fixed on junior officers like Field Directors. When the SIT members interviewed field staff, junior officials, ex-field directors and the current Field Director, all spoke in one language. Poaching have occurred mainly in the fringe areas but the senior officials failed to recognize the problem which resulted in extinction of tiger population.

No tiger, even male has been sighted by any one within the reserve after January 2009. Claim of official of the park couldn't be substantiated by anyone; therefore it is certain that there is no tiger left in the park.

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