



**A STUDY OF WILDLIFE MANAGEMENT AND TOURISM
DEVELOPMENT IN TADOBA ANDHARI TIGER RESERVE IN
MAHARASHTRA, INDIA**

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ABSTRACT

Forest and wildlife in India are considered very vast and rich as there is very significant biodiversity in just 2.5 percent geographical area of the world. India has already registered about 91000 animal species along with 45000 plant species. National parks and sanctuaries in India are not only conserving forest and wildlife but catering to tourist facilities and help the local people to achieve economic development. The first priority of the national parks and sanctuaries is to conserve forest and wildlife, but the same are also attracting the domestic as well as international tourists and helping the local economy to grow. Tourism has dual nature in the area of wildlife management. It can enhance the wildlife management, conserve and make healthy the local economy on one side but on the other hand it can hamper the primary objectives of establishment of national park and sanctuaries, if there is high load of tourism beyond its actual carrying capacity. So, it is essential to examine the equilibrium between tourism and wildlife conservation.

Keywords

Tiger tourism, wildlife management, boosting of local economy.

INTRODUCTION :

Wildlife management and its conservation is very big environmental as well as managerial challenge as much of the forest and biodiversity of the world is losing every year. India is one of the twelve mega biodiversities in the world and very rich in flora and fauna. India has just 2.4 % of the world area and it has about 8 percent of the world biodiversity. Today India has about 661 protected areas, 100 National Parks, 514 wildlife sanctuaries and 38 tiger projects and 43 conservation reserves which are conserving many endangered flora and fauna. Despite drastic decline in





habitat, Indian subcontinent remains the stronghold for long-term tiger persistence nearly 60% of the global population of wild tigers. Tadoba Andhari Tiger Reserve (TATR) in Maharashtra is considered as a very successful tiger reserve in the area of wildlife management as well as in eco-tourism. It provides the in-situ conservation to many endangered species along with the Royal Bengal tiger (*Panthera tigris tigris*). It is the most important tiger sanctuary in Maharashtra state in both concern i.e. tiger population and wild tourism; it became more notorious in recent years for man-animal conflict, as many tiger attack are seen in its buffer zone. So far, it is crucial to study the wildlife management in view of tourism pressure. It was established in 1994- 95 as a second tiger reserve in state of Maharashtra. It becomes very prominent destination for tourist in recent years; about 1 lakh tourist visits TATR every year. The flow of tourist is expected to increase in future as the urban environment pushes citizens in pure atmosphere and forests. Consequently it is obligatory to appoint managers to make a particular limit of the tourist as there will not be much noise and disturbance in the protected areas. Simultaneously it is also important to make strict rules for tourist for behaving eco-friendly in the forest areas. This paper will examine the impact of tourism on local villages, wildlife management and suggest best practices for effective management.

MATERIAL AND METHOD :

Study area: The Tadoba Andhari Tiger Reserve (TATR) lies in Chandrapur district in the state of Maharashtra. It is located on 79° 13'13" to 79° 33' 34" East longitudes and 20° 4' 53" to 20° 25' 51" North Latitude. Average altitude of the park area is 284.07 meter from MSL. The area of tiger reserve is 625 square kilometer. The area comprises 116.55 sq. km area of Tadoba National Park and 508.85 sq. km area of Andhari wildlife sanctuary. Rainfall in the park area is 1175 mm





annually. TATR is mega-bio-diversity site in the 6-B central plateau biotic province in the 6-Deccan peninsula bio-geographic zone. Scientifically these forests belong to southern tropical dry deciduous forest as per Champion's classification & . It is notified as a tiger reserve in 1995 but conservation history of Tadoba is very old. The whole tiger sanctuary falls in the district of Chandrapur and it is located about 45 kilometers north from the city. Chandrapur is a district place having all tourist facilities, headquarter of Tadoba Andhari Tiger Reserve, main office of Chandrapur forest circle, and buffer forest of TATR, safari booking facilities. The TATR forest is well connected by road and railway network to the country. The name Tadoba is derived from the Gond tribal God Taru while Andhari is derived from Andhari River streaming through the middle part of forest of this reserve. This tiger reserve has a forest of deciduous trees mainly bamboo (*Bambusa indica*) and teak (*Tectona grandis*) which shade their leaves during summer, this period is of scorching heat also as all the sources of water dries in forest area which leads the tigers to come to artificial water sources made by Tadoba administration. Variety of meadow family developed in the forest is responsible to develop the herbivore population in this forest. Objectives: Objectives of this paper are related with managerial practices regarding wildlife conservation in TATR and the present status of tourism in this protected area, main objectives and aims of this paper are as following.

1. To examine the present and past wildlife managerial practices, in TATR.
2. The prime objective of this paper is to understand the present pressure of tourism activities on the protected area and its impact on wildlife management.
3. This paper will study the relation between tourism activities in TATR and its benefit to the surrounding village economy.
4. To provide the broader policy suggestions to the national tiger conservation authority and state forest department in the concern of tourism and wildlife management.

Database and methodology: The





present study is based on secondary data received from Tadoba administration as well as from forest department's websites related. Information regarding tourist vehicles, tourism, number of gates to TATR, number of resorts, number of tourist guides etc is received from Tadoba administration. Tourism policy of government of Maharashtra and eco tourism plan as well as tiger conservation plan of TATR is considered as a tool to understand the tourism policies of state government. Interviews with forest manager and field director of TATR were carried out along with the range officer, round officer and wildlife warden of Chandrapur to understand the tourism pressure. Visit to the various tourist resorts is also carried out to understand the role of resorts and tourism in the development of villages. News regarding tourist behavior, complaint against the tourist operators and taxi drivers registered with TATR, incidences of man animal conflict in Tadoba and its buffer zone etc. are used to understand the impact of tourism on wildlife management. History of wildlife management and New Initiatives in Tadoba Andhari Tiger Reserve: TATR was announced in 1995, but much before the systematic fire protection of the area was started in 1873 and the areas have been declared as a reserve forest in 1879. In 1905, Tadoba was closed as a shooting block for Tigers except under special permits. The area of Tadoba National park was excluded from the prescriptions of working plan in the year 1927, and then it was closed for shooting of all animals in 1931. First time; detail stock map of the areas were prepared for planning purpose in 1925-26. In 1935 about 45 square miles around Tadoba Lake constituted as a sanctuary for all the animals except wild boar and in 1955 the Tadoba national park was declared. The population of herbivore increased till 1942 including Chital (*Axix axis*) and Sambers (*Rusa unicolor*) but this year the area converted into a game reserve. Tadoba sanctuary and its adjoining areas were assigned to four shooting blocks i.e. the blocks were Moharli, Kolsa, Mul





and one special permit given by the government to hunt even tigers in Karwa and Kolsa block. The permit of this shooting was assigned till 1973-74 i.e. announcement of project tiger. This year Moharli, Karwa, Kolsa, Mul blocks were closed for hunting. In 1972 two villages from the core area of Tadoba i.e. Khatoda and Pandharpauni was shifted to another location, for the conservation of wildlife. The Pandharpauni village was renamed as a Navegaon (Ramdegi) and now in the year 2013; as per High court order of Bombay high court; Nagpur Bench this village again relocated to another location (Khadsangi) to increase the core area. Jamni village is also on a way to rehabilitate, and now only two villages i.e. Palasgaon and Rantalodhi remain to rehabilitate which will soon to be initiated. In 1995 the notification of Tadoba Andhari Tiger Reserve (TATR) was declared. After announcement of Tadoba Andhari Tiger Reserve in 1995; first management plan of this project was approved in 1997. In the year 2006, two villages i.e. Kolsa and Botezari from the core area was shifted and rehabilitated at Bhagwanpur site; facilities and amenities are provided to the rehabilitated villagers as per government norms. The good management practices of wildlife have increased the faunal population in the park in last couple of decade. This practice includes participation from villages dwelling in the core area as well as in the buffer zone too. Following are the initiatives taken by this project for wildlife management.

A. Administrative setup: Administrative management of this tiger project is extremely important to execute the governmental schemes in the park. For this the special Working Plan is prepared for TATR project and it is excluded from earlier working plans. For wildlife concern the special 'Tiger Conservation Plan' is also prepared by the field director.

B. Internal roads in the park have been constructed to manage the park; about 125 km internal roads are newly constructed along with upgradation of old roads. Fire towers are built to keep watch in summer days. Wireless instruments were installed in the park area





with the high frequency setup; all the beat guards, check nakas and vehicles of park were equipped with these wireless instruments. Highly sophisticated cameras are used to study the movement of wilds in core as well as in buffer area of Tadoba tiger reserve. Arms and ammunition, training to staff and their study tours, field training to guards, antipoaching measures, patrolling in the forest, rewards to informer regarding poaching, legal supports in poaching cases, Waterhole managements, supply of water by tanker in the dry areas in summers are the recent initiatives undertaken by Tadoba administration for the wildlife conservation. The annual financial budget for this work is 671 lakh rupees for the year 2013-14. Saltlick and wallows identification, management of wetland, crocodile breeding, and vaccination to cattle's around the park are carried out. C. Fire fighting works are handed over to FDCM i.e. the sister organization of FD and it became successful in last two years. FDCM makes the fire lines in the forest and burn the chopped foliage before 15 February every year. The annual budget for firefighting is 57 lakh rupees for the year 2013-14. Fire lines of various widths i.e. 20 m, 10 m and 5 m are created and maintained continuously. They have divided the compartment too but mostly they run through the roads. The length of 20 m width is 472.840 km within core area. D. Along with the forest fighting job FD is also engaged in vigilance regarding forest crime. The wildlife wing has supplied the toll free telephone numbers to the people along with the smart reward to the person who will share information. The department also has supplied the Gas Cylinders to the villages who have declared that they will not go into forest for fuels. Along with cylinders Gobar Gas plants, solar lamps, Solar Fencing etc are the efforts which have initiated in last few years. Various committees in the villages are also helping to forest to grow including Joint Forest Management (JFM) committees, Forest Protection Committees etc. Announcement of Buffer Zone of TATR is announced by





government of Maharashtra. This buffer zone will make healthy the core zone of TATR. The core area of TATR is 625.40 sq km while buffer zone around the core is 1101.77 sq. km. this buffer zone has brought strict rules in the notified area having 79 villages; which helps to wildlife in and around TATR. Rapid Response Unit of the fully trained and instrumented youth is protecting the forest from poachers. E. Meadow development plan has been initiated in the core area earlier rehabilitated villages i.e. Pandharpauni and Khatoda, even the newly rehabilitated village Navegaon converted in good meadows and attracts healthy herbivores. These meadows need continuous intervention in the form of cutting, uprooting, shrubs etc which is being done. Efforts are taken to enrich the palatable grasses by closing some areas as exclusion plots. This year FD has initiated meadow development in earlier habitat site Ramdegi, Jamni, Khatoda & Botezari F. Minor Forest Products, cutting of Bamboo and Tendu leaves collection is also banned in the core area; had it not been banned, it would have yielded good revenue for the forest department. The Tendu fadis are allowed to be set up within 3 kms of the boundary of protected area. Grazing is also fully banned in TATR, even the cattle from the core villages are banned to graze in core and allowed to graze only in the adjoining areas of core. G. Regular maintenance of the water in core area is being done through tanks, anicuts, waterholes and tankers. There is medium to big lakes in the core area i.e. Tadoba Lake, Jamni Lake, Pangdi Lake, Karwa lake, Piparheti Lake, Botezari lake, Kolsa Lake, Pipri Lake, Irai Dam, Moharli lake, Telia Lake and Mahalgaon Lake along with some seasonal lakes i.e. Pandharpauni 1 &2, Kumbi, Rantalodhi, Palasgaon, Bamangaon, Pahami. Some Anicuts also play important role to fill the thrust of wilds includes Panchdhara, Vasant Bandhara, Wagh, Chichghat, Kosekanar, Shivanzari etc. Tadoba administration also serves the water through the tanker in the scorching summers in various artificial water holes. H. Some other administrative





measures have taken up with Ministry of Environment and Forest, National Tiger Conservation Authority, Botanical Society of India, Zoological Society of India, FSI, WII, MTDC, FDCM, WPSI along with some National as well as local NGOs. Various International organizations like IUCN, WWF, National Geographic Society, and Traffic are also directly associated with the tiger conservation program. All these efforts have resulted that the flora and fauna in various sanctuaries including TATR are grown. I. Local NGOs also have helped the Tadoba administration in many ways. These NGOs are in continuous touch with Tadoba Administration and assist on various issues including fire fighting, sharing of intelligence, information of trespassers in and along core area, vigilance on forest crime, making water holes in the forest, supplying the water through tankers, water hole census of the wilds and relocation of villages. All these joint efforts of FD and NGOs have helped to grow the fauna in Tadoba.

RESULT AND DISCUSSION :

All the above efforts made by the forest department to enrich the forest as well as the wildlife in the Tadoba National Park have yielded the fruits as there is continuous increasing population of wild animals. There are 43 or more tigers in the TATR today and it is regularly monitored with annual tiger census. The population of many wild animals is continuously increasing with slower rate in the core area of TATR and the population indicates the marginal success of this project. Examination of the project tiger in case of TATR: The prime vision and objectives of TATR are to conserve the forest as well as wildlife. The main objective of project Tiger is to ensure a viable population of tiger in India for scientific, economic, aesthetic, cultural and ecological values and to preserve for all time, areas of biological importance as a natural heritage





for the benefit, education and enjoyment of the people. Other objectives of these projects are wildlife management, protection measures and site specific eco development to reduce the dependency of local communities on tiger reserve resources. The vision of this project is to ensure the conservation of tiger population in the reserve in perpetuity along with to conserve the co-predators of tiger and prey species of the area. So, we can summaries after analyze the predator as well as pray data that the TATR has partially succeeded in its goals as some animals are reduced. The park is succeeded in its goal i.e. 'to reduce dependence of the people on the protected area' as villages are shifting to the outside of core. Tourism in TATR, Pressure on wildlife and its Management: Tourism has a last priority in the wildlife management in the TATR but it is important activity in the reserve. Tourism benefiting financially to the tiger project along with villages surrounding of Tadoba; but the tourism has twin character, it can boost development on one side and can hamper wildlife so far. It is essential to regulate the tourism with strict rules. The supreme court of India has directed to states to draft the Eco-Tourism plan in each tiger reserve in India; according to NTCA directions. After year, the NTCA has notified its directions regarding tiger conservation along with the tourism development entitled 'comprehensive guidelines for tiger conservation and tourism as provided under section 380(1) (c) of the wildlife protection act, 1972. Similarly the government of Maharashtra has designed its Eco-Tourism policy in 2013. According to all these policies the tourism in the sanctuaries should not hamper the wildlife activities and first priority should give to the conservation. Today the tourism in TATR is governing with the direction of these policies and rules. There is a local tourism committee in each tiger project in a state which make rules for the better and eco-friendly tourism. The local tourism advisory committee includes regional commissioner, local MLA, collector, field director of PA, Divisional Forest Officer, and district





wildlife warden, tourism officer of district, district tribal officer, block development officer, member of concerning local grampanchayat, wildlife and social researchers, environmental expert and member of NGOs. This committee is a media to handle and mitigate with various issues arises with tourism and wildlife conservation it is also draft the tourism plan for TATR and then it finalize from MoEF. This committee has suggested following measures and initials keeping in mind that there should not more pressure of tourism on the wildlife movement. A. Area under tourism activities: The total area of the park should not access for the tourism activities and only 20 percent of the protected area should be open for the tourist. Similar guidelines already ordered by the supreme court of India. So far, the committee has decided to keep open only few roads of TATR. The width of road is 5 m and sighting distance in both sides is 20 m, which becomes 45 m of impact zone. This calculation brings 11.61 Sq. km of impact zone out of 625.40 Sq. Km., about 1.85% of the core area. B. Tourism Blocks: The whole TATR is divided into 3 blocks of tourism i.e. Tadoba, Moharli and Kolsa and maximum carrying capacity of tourism vehicles also decided on the basis of road length available in concerning blocks, it is 40 in Kolsa block, 48 in Moharli block & 35 in Tadoba block. 20 percent of the total safari capacity is reserved with field director TATR. C. Safari Booking: The safari booking facility will be done on internet; 70 percent of the total seats will be online booked, 15 percent will be on gate on same day for each shift and 15 percent will be reserved with FD. D. Identifying of ecological sensitive areas: The local advisory committee has also identified the ecologically sensitive area around the TATR. Tourist activities will not allow in this area as there is a danger of wildlife disturbance. The areas are Thanegaon, Junona, Dewada, Adegaon, Agarzari, Chorgaon, Nimbala, Pahami, Haldi, Zari, Doni, Pangdi, Piparheti, Karwa, Pndharwani, Chichghat, Khutwanda, Ambezari, Sitarpeth, Moharli, Mamlamla, Fulzari





and Ghosri. The surrounding areas of these villages are considered as a sensitive areas and “Non Agriculture” process is halted around this sensitive areas to stop the further commercialization of this villages and its agriculture. E. Gates to TATR: There are only six gates to TATR on important route which approaches to various big towns i.e. Nagpur, Chandrpaur, Wardha, Gondia etc. The gates are installed to Moharli, Khutwanda, Navegaon, Kolara, Zari and Pangadi. Vehicles registered Tadoba Foundation will give its services to the tourists and priority will be given to the project affected unemployed youth who are living within or surrounding villages of this tiger project. The Eco-Development Committees (EDC) is established in the surrounding villages and priority is given to EDC members. F. Do’s and Don’ts for the tourists: Do’s and Don’ts activities for the tourists are being implemented in the park; according to these activities tourist guide is compulsory with the safari vehicles; minimum 50 m distance is also mandatory between two vehicles; garbage and littering is not allowed in the park; even stepping down is also is not allowed. The speed of safari vehicle is limited to 25 kmph; overtaking to other vehicles is also banned. To avoid disturbance and playing of radio or tape recorder is also forbidden in core area. Park management has tried the tourism in TATR as Eco-Friendly and sustainable; the positive impact of all these efforts have resulted in the growth of tourist population in last some years. This sanctuary is became a tourist hot-spot for the wild life lovers. Sanctuary managers have continuously increased the entry fee for vehicles, but even then there is not a negative growth in tourist arrivals. Following figures of the tourist are indicating the success of TATR as a tourist hub. Above figures of tourist and vehicles are indicating that there is continuous growth in the visitors and inflow of money coming from the visitors is also helping surrounding villages. The figure of tourist crossed 1 lakh figure in last year. There are 79 villages in the buffer zone of Tadoba forest and all





these villages are taking the benefit of various government schemes planned by forest department. According to governmental plan; the villages in buffer zone have to form the eco development committees EDCs in the villages through which various plan may be implemented for the development of villages. Tadoba foundation is giving the financial support to these villages from tourism receipts. No doubt that TATR is helping to the villages to economically self reliant. In last three years TATRCF (Conservation Foundation) has distributed over 1.5 crore rupees to the EDCs of surrounding villages for Individual and community development. In 2011-12, 52 EDCs were beneficiaries and 26.52 lakh rupees were distributed. In 2012-13, 12 EDCs have benefited by 14.72 lakh rupees, even the EDC from core village also have benefited for LPG distribution scheme. 20 lakh rupees are spent for solar fencing and 5 lakh are spent for eco-friendly chulhas. Out of 79 villages in the buffer, 66 villages have the EDC which take efforts to develop village sustainably. These villages are getting the money for CAMPA funds too. The tourism boosts local economy, also trying to reduce the man-animal conflict in the surrounding villages as the money is being spent on eco-friendly chulhas, toilets, solar fencing to the agriculture etc. but it is essential to maintain the tourist figure according to carrying capacity of the park.

CONCLUSION :

Conclusions & Suggestions: Tadoba Andhari Tiger Reserve (TATR) is became a major wildlife tourist center in the state of Maharashtra. Wildlife Management Practices in this tiger project is very old, but their strictness was much flexible as compare to present management system. Even it has given the permission for the game in the core area of this sanctuary. But in recent years the sanctuary is following the strict rules and regulation along with forest act. People were visiting by any means to





the park earlier, even by cycle and motorcycle but today it is banned fully and only closed eco-friendly vehicles are allowed. Intake capacity of each gate is calculated and reservation of the tourist is online. Villages are being relocated from the core area to avoid human disturbance to wilds with smart financial packages. The money from tourism is being distributed among the buffer villages and number of vehicles is also maintained with transparent system. There is a need to eco-friendly behavior of the tourist in the park areas as they come to very close to the wilds. The management of sanctuary can punish the concerning guide or vehicle owner for this act. Do's and Don'ts should strictly followed. Other areas of tourism should open to minimize the present pressure of tourist only on core area; the tourism potential of TATR should also exploit.

REFERENCE :

National Biodiversity Action Plan, Ministry of Environment and Forest, Govt. of India, 2008, p 1

Ghate Rucha & Ghate Suresh, A story of conservation refugee: Vulnerability and coping strategies, 2011, p 4

Connectivity of Tigers (*Panthera tigris*) Population in the Human-Influenced forest Mosaic of Central India, Aditya Joshi, Open Access, 2013, p 1

Travel guide leaflet of TATR

<http://projecttiger.nic.in/tadoba.htm#management> as seen on dated 8th March 2014

Eco-tourism plan, TATR 2013, p1 Working plan for Chandrapur forest, North Chandrapur Circle, Vol I, 2003-04, p V

Gazetter of India, Maharashtra State, Chandrapur District, 1973, p 43





Patil S H, Tiger conservation plan, TATR, 2008, p35-36 ibid, p36

Management plan for TATR, Desk-23(A)(3)CN/1981 of 1997-98, Dated
06/10/1997

'Project tiger' administrative approval, for TATR-2013-14 from NTCA.
Government of Maharashtra Gazette, No. 73, 5th May 2010

Letter No. Desk-20/2/Tendu/16/2000/975/ PCCF/ Nagpur, Dated 30th
August 2000

<http://projecttiger.nic.in/introduction.html>, as seen on Dated 11th
March 2014 ibid. Tiger Conservation Plan, TATR, 2007 p 65

Order of supreme court of India, to civil appeal no. 21339/2011, dated
16/10/2011 Letter No. F. No. 15-13/2012-NTCA, Dated, 15th
October, 2012

Eco-Tourism Policy, govt. of Maharashtra, 21 January, 2013 GR, Govt. of
Maharashtra, No. WLP/2012/PN309/F1Dated, 9th November 2012
[http://www.one.in.timesofindia-nagpur/tigers-bring-money-to-
tdobabuffer-village-1188030.html](http://www.one.in.timesofindia-nagpur/tigers-bring-money-to-todobabuffer-village-1188030.html) as seen on 17th March 2014

Year wise population of some major animals in TATR:

Year/Animals	1994	1996	1998	2000	2002	2004	2006
Tiger	36	40	43	38	38	44	41
Leopard	29	30	15	22	22	22	21
Spotted Deer	2539	3231	2039	--	2008	2700	1795
Sambar	516	673	669	--	516	1150	1052
Indian Gaur	619	746	1052	--	853	1350	878
Barking Deer	413	633	512	--	283	425	401
Blue Bull	146	234	228	--	102	325	208

Year wise tourist inflow in TATR

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Tourist	44029	41044	35917	39452	33632	36945	37215	34361	40626	57169	62444
No. of Vehicles	4495	4678	5245	4217	4975	5741	5951	5578	5976	8903	9788

Source: Tiger conservation plan, TATR, 2009

