

Geospatial Aspect of Sariska Tiger Reserve and Relocation of Inhabitants of Villages

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Abstract

The paper attempts to examine geospatial aspect of Sariska Tiger Reserve and relocation of villages. The Sariska tiger reserve in Aravallis has significant importance and specific characteristics. The dwindling tiger populations and their habitats has been threatened by anthropogenic intervention. Once inhabited by plenty tigers, Sariska Tiger Reserve was globally defamed due to the total vanishing of tigers during 2004-05 on the account of commercial poaching. Sariska Tiger Reserve still continues to suffer the effects of the 'Sariska syndrome', now become world famous example of extinction India. Despite, the tremendous achievement of the Sariska Tiger Reserve to carry out the translocation of tigers, keeping in view the issue of survival of Tigers in the Sariska National Park, rehabilitation of human population has become necessary. According to officials of the tiger reserve, there 29 villages in the Sariska Tiger Reserve core and 246 in the buffer zone, inhabitants of six in the core areas have been completely relocated to Bardod ki Rundh, Maujpur, Kanpura and Tijara areas. Other villagers are in the process of relocation. Main hindrances are lack of effective implementation of rehabilitation policy, the less attractive rehabilitation package not involving locals and noncommittal of government.

Keywords: Sariska tiger reserve, core area, buffer zone, domestic animal, grazing, inhabitants, relocation of villages.

Introduction

Sariska is a tiger habitat spread over the oldest mountain ranges the Aravallis. It had rare habitat of wild cats and excellent forests. But due to the increasing anthropogenic pressures and other environmental factors, Sariska suffered major setbacks to its bio-diversity. The biggest setback was the disappearance of tiger from the reserve by 2005. Despite the setbacks, Sariska remains housing over 404 plant species, 211 bird species in an area of 881.11 sq.kms. The Sariska tiger reserve is spread over about 881 sq km, and plateaus and the wide valleys of the Aravalli. Sariska core area is divided into three

Core zones and a buffer zone. For administration purposes, the entire reserve is divided into four Ranges (Sariska – 205 km²; Tehla – 341 km²; Akbarpur – 219 km; Talvriksh – 101 km²), which are then divided into 75 beats; generally recognized for monitoring of wildlife. The largest of the core areas identified within STR was proposed as a National Park in 1982, where resource exploitation is banned. The approximately 400-sq km², Core-I" is the key tiger habitat. But it is also home to 11 villages, earmarked for relocation since long. Core-I also includes pilgrimage sites and is the tourist zone. There are two state highways: Alwar-Thangazhi-Jaipur and the Sariska-Kalighati-Tehla, which are over 44 km in length and traverse the heart of the notified national park. One hundred thousand villagers now surround Sariska National Park, for wood or trees or fuel, women enter the park each day and return "with freshly cut branches atop their head" while herders drive their goats into the park to forage. The temples of BhartiHari, Pandupole and Narayani Mata are also situated in Sariska Tiger Reserve (Govt. of Rajasthan, 2004). There are 17 revenue villages located inside the Sariska Tiger Reserve, of which 13 are located in and around the out-skirts of the Buffer zone and three villages Deori, Dabli and Kiraska are situated in the Core I. Twelve villages are due for relocation since 1984 in the notified National Park of the reserve. Besides this, there are six grazing camps or Guadas namely Kankwari, Umri,

Haripura, Lilunda, Sukola and Rotkala in Core I. In the revenue villages the occupation of the people is based on agriculture but in the grazing camps it is animal husbandry. A large number of buffaloes and goats, a few cattle and camel are kept in the villages. Thousands of migratory sheep pass through the buffer zone during July to October.

Objective of the Study

To examine, geospatial aspect of Sariska Tiger Reserve and relocation of inhabitants of villages.

Data Base

The principal methods of research used were internet and literary searches, during which the Author highlighted specific areas of interest and extracted information in order to gain additional, first hand information.

Secondary Data Sources

1. Census of India: District Census Handbook Alwar: 1981, 1991, 2001 and 2011
2. District Statistical Abstract of Alwar (2006), Directorate of Economics and Statistics, Jaipur.
3. The topographical sheets number - 54A/1, A/2, A/3, A/4, A/5, A/6, A/7 to 54A/8, Survey of India, New Delhi.

Primary Data Sources

Primary data is necessary for the confirmation of the ground realities and other analysis for the study. Selection of villages will be made from the entire group of core and buffer zone villages accordingly with purposive method of sampling for the ground truth certification.

Methodology

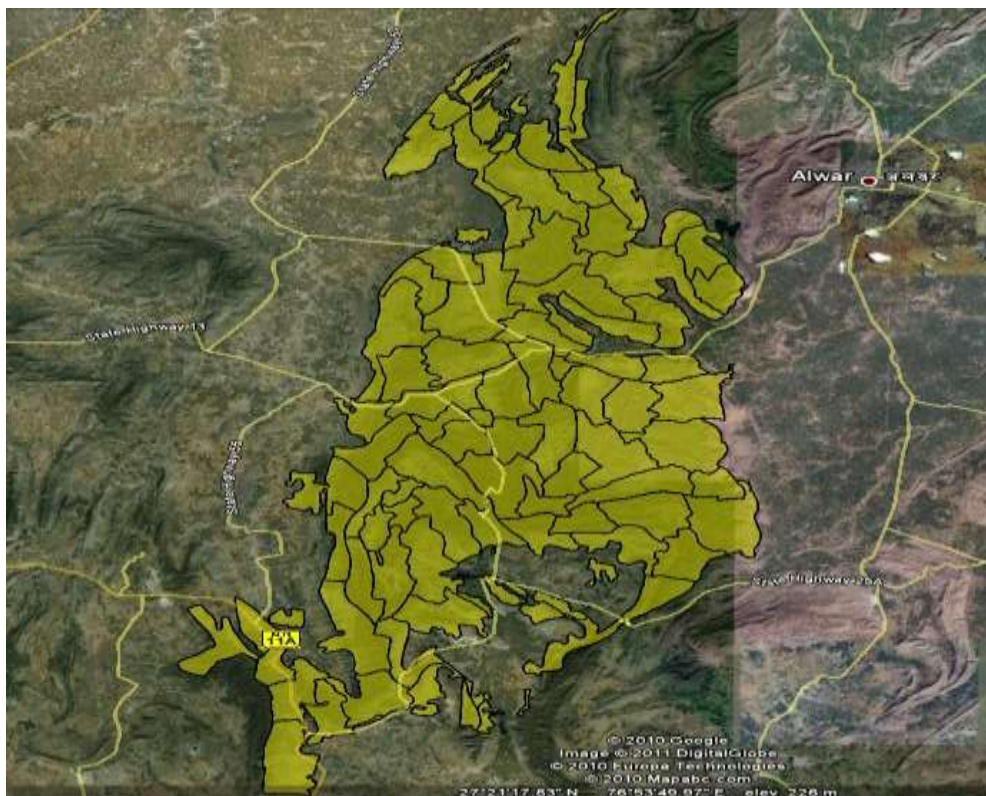
The study area selected for present research covers in parts of eight Survey of India toposheets (54

A/1, A/2, A/3, A/4, A/5, A/6, A/7 and 54 A/8). To prepare single base map these toposheets have been georeferenced and mosaiced. The study area is cropped from georeferenced and mosaiced Survey of India toposheets from the Sariska Tiger Reserve boundary.

Geographical Background

The Sariska Tiger Reserve (STR) lies between 74°17 E to 76°34E and 25°5 to 27°33 N in the Aravalli Hill Range and lies in the semi arid part of Rajasthan (Rodgers and Panwar 1988).

The erstwhile hunting grounds of the royalty in Alwar state pre -independence, it was declared a Wildlife Reserve in 1955, a Sanctuary in 1958 and in 1978 was given the status of a Tiger Reserve (TR) making it the eleventh TR under India's Project Tiger scheme. In 1979, the reserve was applauded as 'National Park of the Year'. Despite this, by 2005, STR had still not completed what is a prerequisite for declaring an area a Sanctuary or National Park. As per the new guidelines of the NTCA, the Government of Rajasthan vide Order No 3(34) Forest/2007 dated 28th December, 2007. has notified 881.11 sq. km area as critical Tiger habitat. According to Forest Survey of India Report 2003, 14 sq.kms of very dense forests in Rajasthan has been ascertained only in Sariska. The total area of the Tiger Reserve is 886km². Sariska core zone is distributed in three isolated pockets: the core I (273.8 km²), core II (126 km²) and core III (97.5 km²). Kiraska and Kankwari are the two large Plateaus in Sariska, and there are two large lakes - Mansarovar and Somasagar. Siliser Lake is situated along the north-eastern boundary of the reserve. The altitude of Sariska varies from 540 to 777 m.



Sariska terrain is undulating to hilly in nature and has numerous narrow valleys. The district is part of Aravali hill system which geologically made of Delhi system and Aravalli systems. The major rocks types are quartzite, limestone, grit, conglomerates, phyllites, granites and schists. Soil differs depending on the underlying rocks. They are comparatively rich, fertile and dark coloured soil in plain and river valleys.

The climate of this tract is subtropical, characterized by a distinct summer, monsoon, post monsoon and winter. Summer commences from mid March and continues till end of June. The monsoon season extends from July to August when the bulk of the rainfall from southwest monsoon occurs. The annual rainfall is 650 mm. The study area also receives occasional winter and summer rains. In winter the temperature has been observed to drop to 3°C.

The vegetation of Sariska falls under Northern Tropical Dry Deciduous Forests (subgroups 5 B: 5/E1 and 5/E2) and Northern Tropical Thorn Forest (sub group 6B) (Champion and Seth 1968). The vegetation of Sariska constitutes an ideal habitat for the Tiger with a good prey base, especially sambar and spotted deer. Dhok is the dominant species in the undulating area and on the hills, forming more than 90% of the total forest composition. On the rocky slopes of Sariska reserve many local varieties of Salai Guggul and Gurjan are found whereas at undulating valleys Khair, Ber and Palash are observed in plenty. Bamboo distribution is limited to lower parts of seasonal streams and at moist parts of valleys.

Apart from reintroduced tigers, other present are leopard, striped hyena, jackal, jungle cat, common mongoose, small Indian mongoose, ruddy mongoose, common langur, porcupine, tailed hare, palm civet, small Indian civet, and ratel, Chital, Sambar, Nilgai, Chowsingha, Chinkara and Indian Peafowl and Wild Pig are found in Sariska.

Status of Wild Cats and Relocation of Inhabitants

The forest of Sariska was the hunting reserve during the reign of the Maharaja of Alwar and in 1926 massive killing of tigers was persuaded to please the British guests. There were many Shikharkhana and Shikarpaltan were raised to protect and control the area from poaching also. But after 1955 with the introduction of Sariska as reserved area, the shooting of wild life was completely banned. Sariska was included in the list of the tiger reserves by Government of India in 1978 as the 11th Tiger Reserve. In 1982, 400.14 sq. kms of the reserve has been notified as Sariska National Park.

However, despite the setbacks, Sariska remains nature's grandeur housing over 404 plant species, 211 bird species in an area of 881.11 sq.kms., which is administratively divided into 4 ranges-Sariska, Tehla, Akbarpur and Talvriksh covering 75 beats, generally recognized for monitoring of wildlife. There are 17 revenue villages located inside the Sariska Tiger Reserve, of which 13 are located in and around the out-skirts of the Buffer zone and three villages Deori, Dabli and Kiraska are situated in the Core I. Twelve villages are due for relocation since 1984 in the notified National Park of

the reserve. A large number of cattle pressure deprives the herbivores from forage competing with chitals and sambers. In Sariska range Kankwari, Duharmala, Kushalgarh, Lilunda, Naldeshwar, Udainath and, Bandipul, in Tehla range Dabkan, Rajor, Garh and Ghat, in Akbarpur range Beenak, Dehlawas, Madhogarh and Raika in Talvriksh range and Digota range entire villages have major grazing ground of buffaloes, goats, sheep and other cattle.

According to Forest Survey of India Report 2013, only 14sq.kms of very dense forests in Rajasthan has been ascertained in Sariska. The vegetation of Sariska constitutes an ideal habitat for the Tiger with a good prey base, especially sambar and spotted deer. It had a vibrant tiger population and excellent forests. However, over the years, the increasing pressures from the population and other factors, some of which are still shrouded in mystery, Sariska suffered major setbacks to its bio-diversity. This reserve is open from all sides and the vulnerability is greater than any other reserves in the country. Therefore, in this phase of rejuvenation, Sariska qualifies to be accorded a special status.

According to census 2011, there are more than 19,132 people residing inside the Sariska reserve alongwith livestock population more than 20233. Importantly, Core-I is also having 11 villages within its territory; is basically good habitat for tigers nurturing.

Conclusion

The process of village relocation was initiated in 1966-67 as Guwadas Kalighati and Sloпка were relocated. In 1976-77 village Karna-ka-bas was relocated. Because of these relocations the entire area on both sides of the Sariska-Kalighati road has shown remarkable improvement in wildlife. In 1976 villages like Kiraska and Kundalkha were relocated but the attempt failed and people came back and reoccupied the area vacated by them. In 2007 village Bhagani was relocated. Umri village has been completely relocated in year 2012. Today it has become an important tiger habitat occupied by relocated tigers ST3 (female) and ST5 (female). 7 villages namely Kakanwari, Devri, Dabli, Rautkela, Sukola, Kraska, Haripura are in process of relocation. Presently, 26 villages of Sariska have to be relocated. Amongst these villages; 10 villages are selected for phase I and rest 16 are for phase II. Fortunately with great efforts Kakanwari, Rotkala and Dabli villages have been relocated whereas Rekamala, Lilunda, Kundalaka and Kanyawas villages have to be relocated in coming phase on priority. Interestingly, villagers of Madhogarh and Indok have also shown their willingness in relocation. The majority of the population (87%) inhabiting the villages in Sariska belongs to the *Gujjar* community who are traditionally pastoralists and practice animal husbandry. The estimated livestock population for the entire tiger reserve was individuals with 12,098 goats, 5,079 buffaloes, 1,528 cattle and 1,528 sheep.

The relocation of many villagers has resulted in better visibility of tigers as well as increasing in their count. Now sighting of tigers has increased and can be spotted every day. Out of 29 villages in the Sariska

tiger reserve of which ,inhabitants of six in the core areas have been relocated to Barodod ki Rundh, Maujpur, Kanpura and Tijara areas. The other villages are in process of relocation. The major reason for slow pace of relocation is less attractive package.

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