

## Study of Natural Crop Produce and Tribal of Melghat Tiger Reserve Area

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### ABSTRACT

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The melghat tiger reserve have both the impact of the local population on the protected areas and possibility to improve the capacity of the protected area management to effectively conserve biodiversity and support collaboration between the forest property and local communities in and around ecologically rich areas. Melghat tiger reserve, is the protected area in the state of Maharashtra with the potential to hold accountable presence of tiger. It is located in the central high land biotic province of the deccan bio-geographic zone, a largest and oldest tiger reserve in the state supports typical dry teak forest of the central India. All the forest protected areas in the region are subject to anthropogenic limitations of various types. The present paper is based on the groundwork of melghat tiger project reserve and secondary data collection with objectives, need for monitoring tiger and its tribal population for examining the impacts of management and human interventions of protected areas as an effective tool for biodiversity conservation.

**Keywords:** Conservation, bio-geographic, management, Melghat Tiger Reserve, Tree density, Disturbance scores, Grazing

### I. INTRODUCTION

In the state of Maharashtra, India there is protected area Melghat tiger reserves which effectively conserve biodiversity and the local community with protection of tigers and other forest habitates. In central India in the state of mahrashtra have the dry teak wood dense forest. The Project Tiger was not solely concerned with the conservation of a single species, but is concerned with the conservation of natural ecosystem in their entirety. Tiger is the part of

the unavoidable part of life which is the most important performer of the natural forest area and the ecosystem. In the biological pyramid Tiger is at the top along with the soil, water, living and micro organism, acting as the base and the humus, floral, reptiles, lesser animals, and the birds constituting. Biological pyramids every component such vitally interactively dependant on one another, it must be preserved with absolute extent to nature, to make sure the entire survival of all preservation of the tiger necesseciate the preservation of its subordinate

species, which needs the preservation of the entire environment. More importance may be given to the variety of species in the area. Conservation of biogeographical status because of the Melghat Tiger Reserve (MTR) in Maharashtra and critical existence and endangerment species of flora and fauna, and the role of this area, it is important to be conserved and preserved these species at regional, national and global level.

## II. GEOLOGICAL STATUS

The Melghat Tiger Reserve area geologically is the deccan trap and lying under the rock of basalt in various forms. The common form is a hard dark colored rock, strong grained. This rock usually occurs in thick layers give rise to the extensive scarps on the hill side. Joints are well developed and at many places of columnar structure may be observed, mostly in the beds of rivers and streams. When the hard extent undergoes changes in weather, it will be get converted into soft earthy brown rocks along with rows, and columns of roughly spherical bodies. Also there are the thick layers of basalt tuft, dull fine grained rock that occurs occasionally.

### 1. Soil structure:

Considerably various type of soil occurs due to the exposed to different weather conditions of and remarkable variation in rainfall in the area. Soil formation varies with rocky, clayey with porous, pitted, clayey to black cotton soil covering almost complete area. Soil so prepared from the variation in weather and fragmentation of underlying rock is fertile all though it is stony. In upper slopes along the steep soil is very shallow. Basically three categories have been observed.

i) **Bouldery Soils:** Maximum part of the reserve covered by this type of soil. That is dark brown in color, clay like in texture and hard in structure. Along the slopes is well drained, this soil is rich

with nutrients. It is in the valleys occurs actually clay on top but sandy loam-sandy at lower levels. The soil composition may be neutral to slightly acidic which is suitable to most species.

ii) **Lateritic Loam:** On the hill tops and plateau and around Chikhaldara, Vairat and other parts of the reserve generally occurs lateritic loam. Very shallow and dry and characteristic red brown in colour. It is poor in nutrient, very low in organic content and has very poor water retentive capabilities. In this soil tree growth is stunted and sparse.

iii) **Clay Soils:** In depression and on level areas occurs this type of soil. This is soils very fertile but have poor drainage status. Such soils in general is rich in calcium and its ph is near neutral obtains in open areas.

### 2. Climatic Condition:

Tropical climate can be observed, coldest month is the December, having the night temperature may go up to 5° C and hottest month is May 47° C. Because of the variation in altitude and aspect, the climate in Melghat is varying and distinct seasons are experienced throughout the year. Only in monsoon season, the air is generally dry. During monsoon good rainfall is received. The rainfall in this area varies from 2250 mm to 1000 mm. Rainy days may be experienced around 65 to 90.

### 3. Temperature:

With the altitude temperature variation occurs consistently. The North of the gavilgarh ridges the higher hill plateaus and valleys to be very much cooler in summer than the southern foot hills. Almost enjoyable and pleasant climate throughout the year on the plateau and the higher hills. Whereas valleys becomes cold during winter. These valleys observed with some-times heavy dew and occasional frost. Average mean maximum annual temperature is

46° C and the average mean minimum annual temperature is 4° C.

#### 4. Winds:

No record of storm and cyclone of any consequence in this area. Generally winds are light to moderate. The forest in exposed to the stunted nature of situation at high elevation is due to strong winds, sometimes occur in the hot and rainy season.

### III. INDIGENOUS TRIBAL

Melghat forests are predominately inhabited by Korku tribes who introduce the best example of life style in a sustainable living in the proximity of forests. These tribal have a realization of belongings to these forests and that is why, they are living peacefully, on the other hand adjoining forest areas are fast losing their days of beauty of nature. The various living communities like korkus, nihals and gaolis have their own indigenous critical botanical knowledge, which can be challenges to upcoming scientists. Melghat tribal population inhabiting have very diverse and high cultural heritage values which has its coexistence with the flora and fauna of the surrounding forests. Importantly gotras of korkus are seen to have been named after a tree, which shows the integration of their culture with nature.

Earlier korku tribe were dependant for their living on forest natural crops and forest products like tendupattam hirda, sal, moha, bamboo, river fish and honey etc. Korkus in the melghat region are very poor for their livelihood. Korkus are also engaged in hunting, and collecting and selling of forest products for their both ends meet. Now their dependency has significantly changed because of restrictions imposed by forest department. Then they involved themselves in agricultural activities, agriculture labour. The activities of agricultural in the region are having the effect by the lack of, medicines, water and human animal conflict. And agriculture activities highly

dependent on natural monsoon since not adopting the modern technology in agriculture. A minuscule proportion of the families are engaged in fishing, which is a source of income to these families. The many villages of this region are not even connected by road and regular transportation facilities. Since this region is a seasonal tourist destination, the people using as the opportunity of source of income through tourist guide. Giving assistance to tourist to for trekking, providing food, and lodging. Also creating handicrafts from bamboo and some forest products which give scope to increase the earnings. Recently they manage to get temporary employment in the forest labour wage to by rendering the services to the government schemes by the forest department.

### IV. ETHNO BOTANICAL AND MEDICINAL WEALTH OF FOREST

The Nagpur based trust running the campaign 'nutrition farming' and inspiring these tribal to grow various agriculture produce for their day to day needs. Earlier, the tribal's used to grow rice. Now they are growing various produce like jawar, soybean, vegetables like okra, carrot, radish, methi, palak, tomato, chilli, different types beans and peanuts. The trust has taught them scientific selection of crops having nutritional values which include cereals, pulses, and vegetables, vegetables with vitamins and minerals and oilseeds. Some integrated agricultural produce included crops like gram, rajgira, turmeric, chilli, sweet potato, linseed fruits like papaya, amla, banana, chikoo.

Apart from all conventional product natural products of the forest having medicinal and nutritional values used by tribal for health issues or taste improvement. Some are used as a fruits, leaves, seeds, flowers, pulp ingredient, tasty vegetables as salad, which is having nutritious, tasty and with high calorie value, since handful of roasted seeds are sufficient for person for a day. These may showcase a dining table for city people. Important aspect of these vegetables is that

have medicinal properties also. Some ethnobotanical and medicinal plants used by korku as a monocots drug is not that common. The Plants mostly used by the tribal as a medicinal value are as the following Ritha, Bakan Limbdo, Alsi, Nagod, Shikakai, Brahmi, Bhangro, Jasud (Jaswand) Flower, Amla, Dadhie, Karanj, Seetaphla, Sarsav, Kanda, Neem, Arandi, Bajro, Chana, Til, Mango, Heena (Mehendi).

## V. DISCUSSION AND RECOMMENDATIONS

In protected area of melghat forest reserve, efforts may be taken to sustain natural environmental resources for the development of tribal of this region. For this sustainable mechanism can be implemented of its resources, potentials, and prospects, must continue with its resource based development. Since melghat region has the natural botanical and nutritional wealth can also be explored for healthy survival of locals. As the geographical location and physical features of this region lonely tribes people in this region are dependent on limited agricultural produce and local forest produce. This study shows that there is much information still to be explored to biodiversity of melghat region. The melghat tiger reserve have the numerous plants having the rich nutritional and medicinal values. It is needed to elaborate the knowledge about the physiochemical and pharmacological actions of chemical components amongst the local tribal villagers. This will gives the opportunities use of locally available plants as medicines to fight against the diseases, to live the healthy life without immediate unavailability of medical facilities.

The different socio cultural and economic environment changing the life style of korkus. Due to the malnutrition and health issues making them one of the spotted communities in the country poverty and hunger. To change the present status by educating and earning sources is challenging along with child care. More attention may be given by the government policy deciders and other stakeholders to

make them self dependant and saving the forest property. The modern technical training for the youth and women needs to be strengthened. The collaboration with the existing government development schemes would be very useful in this regard.

## VI. REFERENCES

- [1]. Ballabh, V., Batra, P. (2015). Socio-economic transformations of the tribals in central India: Lessons and experiences. *Indian Journal of Agricultural Economics*, 70(902-2016-68397), 272.
- [2]. Bhogaonkar and Devarkar (1999) Additions to the Flora of Melghat: Some rare and uncommon plants. *Tech Bull VII Project Tiger Melghat, Amravati*.
- [3]. Birdi, T. J., Joshi, S., Kotian, S., Shah, S. (2014). Possible causes of malnutrition in Melghat: A tribal region of Maharashtra, India. *Global Journal of Health Science*, 6(5), 164.
- [4]. Datta, S. S., Mail, I. D. (2013). A study to explore the determinants of child health in Melghat, Maharashtra. *Health*, 1(2), 36–41.
- [5]. Deogaonkar, S. G., Deogaonkar, S. S. (1990). *The Korku tribals*. New Delhi, India: Concept Publications.
- [6]. Deshmukh VR and Rothe SP (2003) Ethnomedicinal study from Melghat tribal region of Amravati District, Maharashtra. *Jour. Eco. Tax. Bot.*, 27(3);582-84.
- [7]. Jagtap, S. D., Deokule, S. S., Bhosle, S. V. (2006). Some unique ethnomedicinal uses of plants used by the Korku tribe of Amravati district of Maharashtra, India. *Journal of Ethnopharmacology*, 107(3), 463–469.
- [8]. Kazi, N. M. (2013) Melghat Forest: Environment and Ethnobotanics, a Sustainability Mechanism as Protected Area, *Intl J.E. E. & M.* 4, pp. 315-322

- [9]. Padhye, M. D., Deshmukh, V. K., Tiwari, V. J. (1992). Ethnobotanical study of the Korku tribe of Amravati district, Maharashtra state, India. *International Journal of Pharmacognosy*, 30(1), 17–20.
- [10]. Singh, R., Singh, P. (2008). A study on high mortality of children in Melghat region of Amravati (Maharashtra). *Studies of Tribes and Tribals*, 6(1), 35–43.