

Significance of the Area for Tiger Conservation

Melghat Tiger Reserve is a typical representative of Central Indian Highland forming a part of the Biogeographic zone '6 E-Deccan Peninsula'– Central Highlands (Rodgers and Panwar, 1988). This area constitutes forests which are part of world's fifth biologically richest heritage country. The Reserve forms an important corridor between forest areas of Madhya Pradesh and Maharashtra ensuring contiguity of forests in Satpuras. It beholds one of the viable populations of tigers.

Ambabarwa Sanctuary

Ambabarwa Sanctuary nestles at the foothills of the Satpuda ranges and has all the flora and fauna typical of the central highlands. It can serve as an important corridor between forests of Maharashtra and M.P. It has a rich repository of biodiversity with endangered mammals like Tiger, leopard, wild dog, chausinga, ratel etc. It is equally rich in birds, reptiles, insects and other invertebrates. The floral composition is also extremely varied with representatives of Southern Tropical Dry deciduous forests under the sub group 5 A-C 16 of the Champion and Seth classification. Most of the species found in Melghat are also seen in Ambabarwa with the only difference being in their abundance. The main species is teak and its associates. Bamboo forms the understory and the ground is covered by a large number of herbs & shrubs. A large number of plants have important medicinal values & thus the area needs to be preserved for its valuable gene pool.

The area is very sensitive from the protection point of view owing to its proximity to the Madhya Pradesh. Also, the large number of villages on the southern side results in very high biotic pressure on the Sanctuary.

Wan Sanctuary

Wan Sanctuary includes outer slopes of Satpura with all its floral and faunal attributes. It comes under the 6 E Satpura Maikal range of the Deccan peninsula biogeography zone. It is an extension of the Melghat Tiger Reserve and provides an important corridor between Akola, Amravati and Buldhana districts. It connects the Melghat sanctuary with Narnala Sanctuary and Ambabarwa Sanctuary, providing a large contiguous stretch of protected areas. It has a rich repository of biodiversity with all the major animals of central highlands being found here. Some

of the rare and endangered carnivores seen in Wan Sanctuary are Tiger, leopard, wild dogs, sloth bear, leopard cat, rusty spotted cat, desert cat, ratel etc. The common herbivores include chowsinga, sambar, chital, nilgai, wild pigs and barking deer. Some Gaur also stray from the adjoining Melghat Sanctuary thus emphasizing the importance of Wan as an extended buffer of Melghat Tiger Reserve now included as in core area of Melghat Tiger Reserve. The list of birds, reptiles, insects and other invertebrates is equally long and impressive. There has been a significant increase in the aquatic life forms after the commissioning of the Wan Dam. The list of aquatic avifauna has also gone up considerably in and around the Wan reservoir, especially in winters when flocks of migratory waterfowl arrive, thus making the area a paradise for bird watchers. The common birds seen in the reservoir area are Brahminy ducks, White necked storks, White ibis, Spotbills, Common teals, etc.

The floral composition is also extremely varied with representatives of Southern Tropical Dry deciduous forests under the sub group 5 A (Southern Tropical Dry Deciduous Forests) of the Champion and Seth classification. Most of the species found in Melghat are also seen in Wan with the only difference being in their abundance. A large number of plants have medicinal importance, thus making the area important from medicinal plant conservation point of view. The *Rosha* grass occurs in abundance in the area.

The area has a large number of unique geological and religious features. The *Mahadev* cave temple at Dhargad is a unique geological structure that has assumed religious importance over the years. It is the scene of a massive pilgrimage during the *Shrawan mas*. The area forms a major catchment of Wan river and has assumed greater significance since the construction of Wan Dam at Wari.

Narnala Sanctuary

Narnala Sanctuary is a continuation of Gawilgarh range of Satpuda hills as a corridor between the Melghat Sanctuary and Wan Sanctuary. In fact, it acts as a gateway of Melghat from the southern side. The hill of Narnala situated at about 1000 meter above MSL the Narnala fort consists of 3 separate forts of Jaffrabad in the East, Narnala in the centre and Telyagarh in the

west. The fort covers 392 acres of land with a wall perimeter of 24 miles (36Kms). It is said to have 22 gates and 36 buruj towers or bastions. The area has an excellent rain water harvesting and drainage system built on the fort plateau which is worth admiration. A total of 22 large tank and numerous smaller tanks are connected in such a manner that the overflow of water from tanks situated at a higher elevation goes into tanks at lower elevation and so on, thus ensuring that no drop of rain water is allowed to go waste. The area is having valuable endemic species like Sandal and the Medicinal plants like safed Musli, Shatawari. Most of the major mammals which are sighted in Narnala include Tiger, Leopard, Sloth Bear, Sambar, Chital etc. The bird life is also very rich with a large number of migratory waterfowl seen in the perennial water bodies situated on the Narnala plateau. A large number of raptors are also seen on the crags and cliffs.

Catchments to 'Tapi' and 'Purna' Rivers

The Reserve forms a very important catchment to Tapi and Purna river systems with important tributaries like Dolar, Khandu, Sipna, Gadga, Khapra and Wan Rivers. The Chandrabhaga river which originates from Chikhaldara has its watershed in the reserve. The basic life support systems that the area beholds in terms of conserving soil, water and clean air, it serves as life-line for the people of Amravati and Akola districts.

Recreational Values

Forest of this Reserve hold tremendous scope in recreation as well as education in its lush green vegetation, diverse fauna and hilly and rugged terrain. The area is visited by a number of tourists from all walks of life who try to fathom the enticing realms of these pristine forests. They try to quench their thirst of knowledge in ethno botany, birds and butterfly identification, nature photography, wilderness experience and nature awareness. They also get attracted towards trekking, nature trails, scenic landscapes, culture of tribal people etc. However, the tourist inflow is low in comparison to its tourism potential owing to various reasons, main being poor sighting of wildlife.

Historical Vairat, Gavilgarh and Narnala Forts

The Gavilgarh fort and Vairat points in the Vicinity of Chikhaldara hill station, which is on the fringe of Tiger Reserve boundary, have important historical significance. The Narnala fort situated in Narnala Sanctuary is an ancient fortress in hills in north of Akot taluka. People from all over the state of Maharashtra visit the Narnala fort. The fort is easily accessible throughout the year. The area has an excellent rain water harvesting and drainage system built on the fort plateau which is worth admiring. Crevices in valleys and forts offer good hiding spaces for wildlife.

Gugamal National Park – A Large Inviolable Area

Vast track of Gugamal National Park has no villages and is completely free from any kind of human disturbance. As a result, this area has become a true representative of a ‘nature reserve’ where nature is at its best. Unlike other Reserves entry is strictly restricted for humans here. Contiguity of forests provides great importance to this area for the long-term conservation goals at landscape level.

Unique Habitats Harbours Rare and Endangered Wildlife

The Tiger Reserve forms an important extension of the Satpura hills into the West with its typical geological formations. It harbours a viable population of Tiger (*Panthera tigris*) and of the endangered Gaur (*Bos gaurus*). It also harbours a number of other faunal species some of which figure in the IUCN Red Data List. These are Wild dogs (*Cuon alpinus*), Jackal, (*Vulpes bengalensis*), Sloth bear (*Melurus ursinus*), Leopard (*Panthera pardus*), Caracal (*Felis caracal*) and Ratel (*Mellivora capensis*) There are 37 species of mammals and several species of reptiles, butterflies and insects. The reserve is also very rich in avifauna with 265 species of birds including the recently rediscovered Forest Spotted Owlet (*Athene blewitii*).

Flora

More than 769 naturalised species are listed in the flora of Melghat belonging to about 400 genera representing 97 families. It includes 90 tree species, 66 shrub species, 316 herb species, 56 climbers, 23 sedges and 99 grass species. The flora shows a combination of floristic elements from Western Ghat and Satpura, with many endemic species. Some of the Himalayan plant species like *Preistylus constrictus* are also reported here. The rare plants include *Convolvulus flavus*, *Utricularia striatula*, *Drosera indica* and many species of orchids like *Vanda tessellata* and *Aerides maculosum*.

Indigenous 'Korku'

The forests of Melghats are predominately inhabited by *Korku* tribes who pose the best example of how to live a sustainable living in the vicinity of forests. They have a sense of belongingness to these forests and that is why, it has still retained its serenity, whereas other adjoining forest areas are fast losing their days of glory.

The *Korkus*, *Nihals* and *Gaolis* have their own indigenous ethno botanical knowledge, which can teach a few things to the modern scientists. The tribal population inhabiting Melghat have very diverse and rich cultural heritage which has its coexistence with the flora and fauna of the surrounding forests. The Gotras of *Korkus* are seen to have been named after trees e.g. Jamunkar, Semalkar etc. which goes to prove the integration of their culture with nature.

Rich in Avifauna

The area has a diverse population of bird life with 265 species. Because of the role it plays in its conservation, it is categorized prominently under Global Important Bird Area (IBA). Species like Lesser kestrel, Forest owl, Green munia, White Backed Vulture and Long Billed Vulture are reported from here. The congregative bird species include Blossom Headed Parakeet, Rose Ringed Parakeet, Biome Restricted species conforming to Biome 10:B24 Indian Peninsula Tropical Moist Forest include Crimson Fronted Barbet and Malabar whistling thrush whereas the Biome 11: Indo Malayan Dry Zone includes 39 bird species.

Home for Flying Squirrel, Hornbills, Forest Owlet and Others

There are many species of reptiles, butterflies, insects, fishes inhabiting this Reserve. Ecologically sensitive animals like Flying Squirrel is abundantly seen here which is an example of close canopied and dense forest of old growth. Inhabitation by Grey Hornbills also supports this authentication. Pied hornbill is also reported in the area. Forest owlet, once thought to be extinct, has reappeared here in one of the prominent forests of the reserve, where it was rediscovered after a significant gap of many years. Long billed and White Backed Vultures which are fast disappearing, probably, because of some mysterious microbial disease or indiscriminate use of pesticides and insecticides is noticed in Panchbol and Bhimkund areas, though rarely. The embankments of Tapi, Khapra and some '*doh*' in 'Koktu' valley are also reported to harbour Crocodiles and Otter.

Spiders

As many as 1451 species of Spider species, out of a total 39882 Spider from the world are reported in India. At present 204 Spider species have been recorded in Melghat.