

## **PERIYAR TIGER RESERVE**

Periyar Tiger Reserve (PTR) along with adjoining protected areas form the largest tiger conservation landscape in Southern most Western Ghats, extending over an extent of 4078 sq kms in Tamil Nadu and Kerala. It has a long history of conservation since 1934. The Periyar Tiger Reserve is managed under two Divisions, namely, Periyar East and West Divisions. The visitors point is at Thekkady in the East Division. It spreads across three Revenue Districts viz; Idukki, Pathanamthitta and Kottayam in the State of Kerala. The Protected area comprises of Periyar Lake Reserve, Mount Plateau RF, Rattendon Valley RF, Ranni RF and Gudrikkal RF.

### **Area of the Tiger Reserve**

Core/Critical Tiger Habitat : 881 sq km

Buffer : 44 sq km

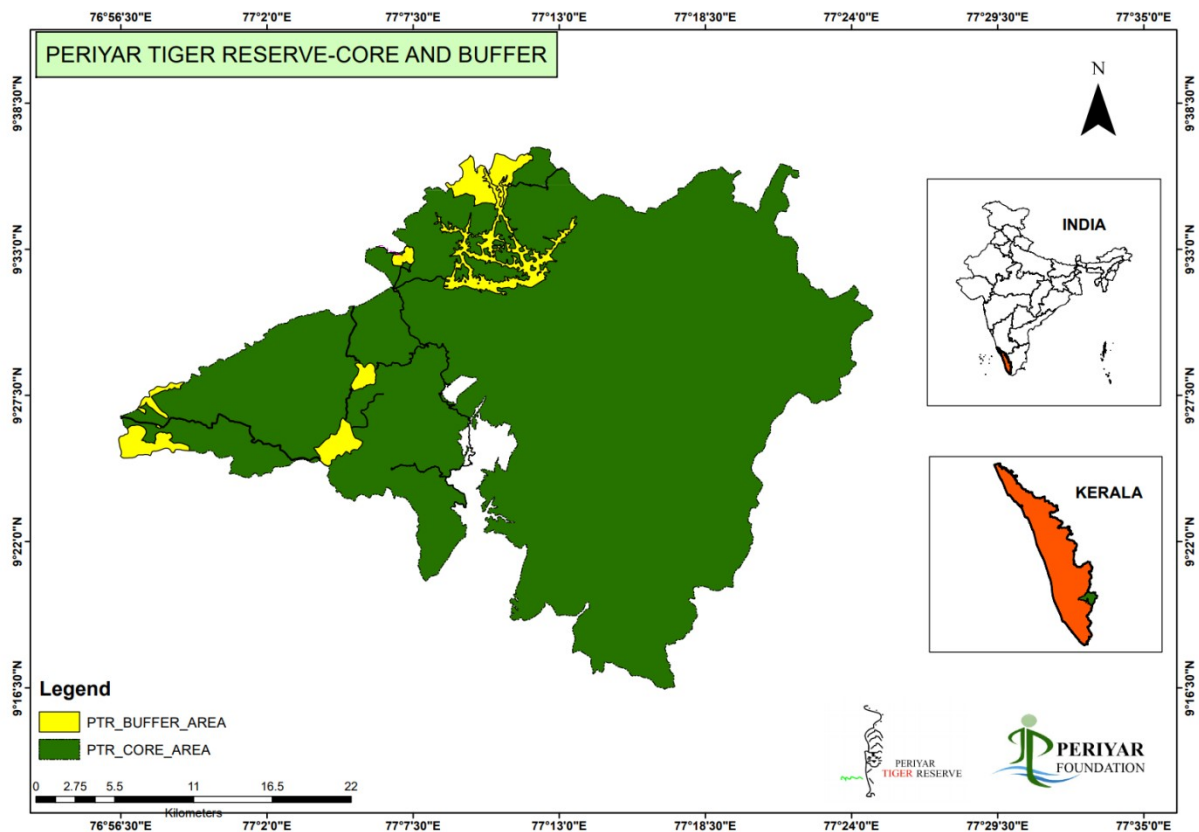
Total : 925 sq km

### **Location**

Latitudes : 9 0 17' 56.04" and 9 0 37" 10.2" N

Longitudes : 76 0 56' 12.12" and 77 0 25' 5.52" E

### **Map**



## Habitat Attributes

The terrain is Hilly and undulating with a maximum altitude of 2016 m. Two major rivers namely Periyar and Pamba drain the area. Mullaperiyar Dam is located within the PTR. The vegetation comprises of Tropical evergreen forests, semi- evergreen forests, Moist deciduous Forests, Transitional fringe ever green forests, grass lands and eucalyptus plantations. Tropical evergreen forest is the dominant vegetation spread over 337 sq km (38.2%). Semi-ever green forests and grass land are more or less equal in extent (each more than 25%). Relic Eucalyptus plantation (that was earlier part of former Grassland Afforestation Division), beyond the third rotation age exists along with grass lands and natural forest over 30 sq kms area.

## Flora

PTR is an epitome of the rich floral diversity of South Western Ghats. Out of the 1985 species of flowering plants recorded, 519 (26%) are South western Ghats endemics and 149 are under various threat categories. Four species of gymnosperms and 150 species of Pteridophytes are also represented. In addition 59 taxa of phytoplankton are reported from the water bodies of PTR. **There are 3 endemic flora exclusively found in PTR ,*Syzigium periyarensis*, *Mucuna pruriens thekkadiensis*, and *Habenaria periyarensis***

## **Fauna**

Faunal diversity of PTR is significant with 66 species of mammals under 50 genera and 25 families, of which 7 are Western Ghats endemic. In addition to Tiger, Periyar is an important elephant habitat in the country. Gaur, sambar deer, leopard, sloth bear, wild dog, Lion tailed monkey, Nilgiri langur, barking deer and Nilgiri tahr are other noted mammalian species. In addition, more than 342 species of birds, 68 reptiles, 64 species of amphibians and 45 fishes are recorded, of which, 13 birds, 17 reptiles 12 amphibians and 16 fish species are endemic to Western Ghats, with 7 species of fish being endemic to PTR. Invertebrate fauna is equally diverse with 262 species of butterflies and 80 species of odonates.

## **Tiger Status**

Periyar is one of the best protected tiger habitats in the country and is the source population for the adjoining vast landscape. Tiger population estimation and monitoring has been continuously undertaken. The population assessment of 2010, estimated the tiger population in the Periyar region as 38. Population assessment using camera trap method could identify 46 tigers in Periyar Tiger reserve alone. Gaur, sambar deer and wild boar form the major prey species. In spite of the dominance of dense evergreen vegetation in the habitat, frequent direct sighting of tigers along with cubs is an indication of its abundance and health. Continuous Tiger monitoring and recording is an integral part of daily patrolling in PTR along with monitoring as per NTCA protocol.

## **Core**

Of the 925 sq km of PTR 881 sq km constitutes Core or Critical tiger habitat. The core is totally free from human settlements and is contiguous with the forest areas of Tamilnadu and Kerala.

## **Buffer**

PTR has a small buffer of extent 44 sq km, the Government of Kerala, choosing to have a large inviolate core. Activities like Eco development, Ecotourism, awareness creation and pilgrimage are limited to the buffer. The Periyar Lake with an area of 26 sq. km, a major visitor attraction and the famous Sabarimala shrine are located in the buffer. The buffer also includes leased areas and trek paths. Thus, the buffer contains and limits the anthropogenic disturbances from affecting the core tiger habitat.

## **Corridor**

Connectivity between Periyar Tiger Reserve and the Protected Areas south of Periyar, extending to the forest areas of Kalakkad-Mundanthurai Tiger Reserve in the Agasthyamala landscape, is essential for long term persistence of tiger within the landscape complex. The adjoining areas identified to be included in the Corridor of PTR are contiguous to the core and buffer of PTR and are known habitats of wild animals, falling within territorial forest divisions south of PTR forming part of Ranni, Konni, Achencovil, Thenmala and Punalur constituting about 957 sq km . The proposed corridor has the best potential connectivity for long term tiger conservation due to its vastness, contiguity of forests in Kerala and Tamil Nadu.

### **Managerial issues**

Lengthy inter-state boundary with many entry points is a persistent protection problem. Fringe area cattle population and wild fires are other threats. Presence of a private estate ( Downton Estate/ Pachakkanam Estate) in the middle of the core is also a threat. Management of the growing trend of visitors to the sanctuary and Sabarimala Shrine are challenges. **The weed invasion is a major challenge for the Park which may reduce the habitat quality.**

### **Good Practices**

Periyar has a history of successful involvement of communities in protected area management. The conversion of poachers to protectors is a well lauded achievement. The “Periyar model” in community participation has been widely acclaimed, the reserve is acknowledged as one of the Field Learning Centres under the World Bank aided BCRLI Project. PTR is the first tiger reserve in the country which has registered Tiger Conservation Foundation and the model has been emulated by others. The SAPP EDCs formulated for the management of the Pilgrims route is another success in the community participation and community control on damages due to visitation.

PTR has developed its own protocol for the monitoring of tigers with the support of the PTCF and has successfully documented the Tiger population through Camera Trap technology. The field officers are self contained in the method and directly involved in the tiger population monitoring. **The implementation of Real Time Monitoring, in house technical ability that was deployed for protection 24x7 protection and wildlife monitoring. The wildlife monitoring is done 24x7 at prime location identified such as vayal (Marshy grassland) which helps understand wildlife behaviour.**