

Conservation Values of Protected area i.e. Koyna Wildlife Sanctuary

The Koyna Wild Life Sanctuary (KWLS) as a part of Sahyadri Tiger Reserve (STR) is located in the Maharashtra state and gets its name from the river Koyna originating from the Western Ghat. Sahyadri Tiger Reserve is the first and the only Tiger Reserve of Western Maharashtra & Northern Western Ghat. It is the only tiger reserve in western Maharashtra. The Koyna Wild Life Sanctuary and The Chandoli National Park, as well as surrounding landscape complex, make up the total area of 1166 sq.km. The buffer region is 564.44 sq.km. and the core region is 600.12 sq.km. of which Koyna Wild Life Sanctuary having the buffer 123.27 sq.km. & the core 286.28 sq.km. In terms of political administrative boundary, it spreads across Satara district (Patan & Jawali tehsils)

Koyna Wild Life Sanctuary(KWLS) is a unique landscape situated in northern western ghats of India and is northern most tiger habitat in western ghats protected by declaring it as a part of Tiger Reserve on 5th Jan, 2010. The region is provides water security to Western Maharashtra and holds substantial historical significance. It is one of the World Natural Heritage Serial Site from Western Ghat declared by UNESCO in the year 2012 for its rich environment and species assemblage, as well as its exceptional universal values.

There are seven forest land use types in KWLS (Ramesh et al. 2018; Jelil et al. 2020) The topography in KWLS is hilly and uneven, with an elevation range of 350-1250 meters. The rainfall received is between 2000 to 2500 mm annually. small water flows, runoffs and flow lines are all influenced by such topography. As a result, the landscape has a complex stream network, earning Sahyadri a reputation of water security.


Koyna Wildlife Sanctuary falls in Biogeographic Zone 5B of Western Ghats. The entire Koyna Wildlife Sanctuary is mountainous, with very steep precipitous slopes, deep valleys and long stretching lateritic plateaus. The soil is made up of a basaltic trap that is covered by a thick lateritic cap, especially on flat plateau tops that are devoid of trees but feature of plethora of endemic and rare species. The central portion of Koyna Wildlife Sanctuary is occupied by "Shivsagar" reservoir of Koyana River. Floristic compositions of the Koyna Wildlife Sanctuary Srepresents West coast Semi evergreen Forests, Western (Montane) Subtropical Hill Forests and Southern Moist Deciduous Forests. Most of the area prevails dense Semi-evergreen forests having a remarkably wide range of flora and a great variety of fauna. The most common floral species found here in this Protected Area are Anjani (*Memecylon umbellatum*), Jambhul (*Syzygium cumini*) Pisa (*Actinodaphaone Angustifolia*) etc. The cultivated areas of rehabilitated villages turned to grassy meadows/Grasslands.

From the previous research records on various wildlife species, Koyna Wildlife Sanctuary is having 33 species of mammals, 244 Species of Birds, 120 Species of Butterfly, 22 Species of Amphibians, 44 Species of Reptiles, 50 Species of Freshwater fishes, 1452 Trees and 400 Medicinal Plants. It is also important to that several new species have been discovered from the landscape and includes *Indotyphlus maharashtraensis*, *Cyrtodactylus deccanensis*, *Hemidactylus satarensis*, *Cnemaspis kolhapurensis*, *Indirana chiravasi*, *Cnemaspis girii*, *Sarada darwininetc*. It is home for four Hornbill species and many other endemic Birds. The breeding grounds of Indian River Tern are found in Koyna WLS. A total of 39 species of flowering plants find mention in the RED DATA book of the total 624, which make it approximately 6% of the Red data species. The orchids, lichens, ferns, mosses are indicators of purity of environment. The genus *Ceropegia* is represented in the region by about 24 species of, which about 10 are endemic to the sanctuaries. *Vigna khandalensis*, *Atylosia lineata*, *A. scabrioides*, *Cucumis setosus* and number of other such wild relatives of cultivated plants are endemic to the protected area.

Koyna Wildlife Sanctuary is highly important for conservation due to its unparallel biodiversity & endemism of species of flora & fauna. The inaccessibility and undulating terrain support

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some of the few remaining undisturbed tall evergreen forests, as well as large mammals like the Common leopard (*Panthera pardus*), Dhol (*Cuon alpinus*), sloth bear (*Melursus ursinus*), Indian Gaur (*Bos gaurus*) and Sambar (*Rusa unicolor*). Hence Koyna Wildlife Sanctuary is part of one of the Biodiversity Hotspot. Koyna Wildlife Sanctuary is declared as "Important Bird Area" by Birdlife International. Forest area near Navja village is declared as "Medicinal Plant Conservation Area" (MPCA) by Foundation for Revitalisation of Local Health Traditions (FRLHT), Bangalore.

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