

Chapter 1

Introduction

Karnataka has 36,421 square kilometers (sq km) of recorded forest area which is 18.99 *per cent* of its geographical area (1,91,791 sq km)¹. The Western Ghats which includes Nilgiri Biosphere Reserve adds up to 84 *per cent* of forest cover of the State. Western Ghats (WG) is a chain of forested mountains running along the western coast of the Peninsular India from Tapti river in Gujarat to the Southern tip of India at Kanyakumari in Tamil Nadu passing through six² States and covering an area of 1,60,000 sq km. Being close to the Arabian Sea and with varying altitudes between 900m and 2,400m above sea level, they receive heavy South-West monsoons with an average rainfall of 1,000-6,000 mm a year. While the western slopes and the ridges contain primarily tropical evergreen rain forests, the eastern slopes, which are in the rain shadow area, contain deciduous and scrub forests. This unique matrix of landscapes with wide array of vegetation types and microhabitats available in the hill system harbour a high diversity of flora and fauna.

The mountain chain of the WGs represents geomorphic features of immense importance with unique biophysical and ecological processes and is identified as one of the 35³ biodiversity rich hotspot regions of the world and has been inscribed as a World Heritage Site by United Nations Educational, Scientific and Cultural Organisation (UNESCO) since October 2012. Karnataka is home to 4,500 species of flowering plants, 650 species of trees, 508 species of birds, 150 species of mammals, 156 species of reptiles, 135 species of amphibians, 694 species of fish, 330 species of butterflies and 1,493 species of medicinal plants⁴. The State has 406⁵ tigers and 6,500⁶ elephants in the wild which is the highest for the country.

The WGs contain exceptional levels of plant and animal diversity and endemism for a continental area. The level of endemism of 4,000-5,000 plant species recorded in WG is very high. Of the 650 tree species found, 352 are endemic. The region also has a very high degree of animal diversity; 85 *per cent* of amphibians, 62 *per cent* of reptiles, 41 *per cent* of fishes and 12 *per cent* of mammals⁷ found in the region are endemic. The WG region is also home to globally threatened flagship mammals like Asian Elephant, Indian Gaur, Tiger, along with the endangered and endemic species like Lion-tailed Macaque, Nilgiri Thar and Nilgiri Langur.

¹ State of Forest Report 2015, Forest Survey of India

² Gujarat, Goa, Karnataka, Kerala, Maharashtra and Tamil Nadu

³ http://www.bsienviis.nic.in/Database/Biodiversity-Hotspots-in-India_20500.aspx

⁴ Exploring biodiversity & ecology of central Western Ghat, Sahyadri Conservation Series 13

⁵ 2014 Tiger Census

⁶ 2012 Elephant census

⁷ Exploring biodiversity & ecology of central Western Ghat, Sahyadri Conservation Series 13



Fig 1.1: A pristine patch of Western Ghats in Dandeli-Anshi Tiger Reserve
Source: Image taken during audit field visit

In 2012, the UNESCO inscribed WGs on the World Heritage list and adopted the statement of outstanding Universal Value on the basis of the facts that “The Western Ghats is an Evolutionary Ecotone illustrating ‘Out of Africa’ and ‘Out of Asia’ hypothesis on species dispersal and variance”. The property recognised as a World Heritage Property has 39 sites spread across four States, of which 10⁸ are in Karnataka. The sites in Karnataka include five Protected Areas⁹ *i.e.*, Pushpagiri Wildlife Sanctuary (WLS), Brahmagiri WLS, Talacauvery WLS, Someshwara WLS and Kudremukh National Park (NP). Interspersed along with this is the "Nilgiri Biosphere Reserve" (NBR), which covers an area of about 5,520 Sq km in the states of Karnataka, Tamil Nadu and Kerala. NBR is the first and the largest biosphere reserve in the country and was recognised as one of the Heritage sites by UNSECO in 1986.

In Karnataka, the WGs pass through 11 districts¹⁰ which contribute a forest cover of 30,573 sq km out of the geographical area of 62,795 sq km covered by these districts. Against the total area of 9,576.88 sq km covered by the 35 National Parks and Wildlife Sanctuaries in the State, 16 are located in the WG-NBR region cover an area of 8,485 sq km constituting 88 *per cent* of area under Protected Areas in the State.

Once a contiguous forest, the WG-NBR region has fragmented over a period of time to fulfill the needs of ever growing human population in the premise of agriculture, tea and coffee estates, construction of hydro projects, deforestation, encroachments, forest fires, *etc.* These intrusive anthropogenic activities have threatened the very existence of this fragile ecosystem which needs utmost importance in conservation and protection.

⁸ Agumbe Reserve Forest (RF), Balahalli RF, Brahmagiri WLS, Kerti RF, Kudremukh NP, Padinalkad RF, Pushpagiri WLS, Someshwara RF, Someshwara WLS, Talacauvery WLS

⁹ Any area notified as a National Park or Wildlife Sanctuary or a conservation / community reserve is generally termed as a Protected Area

¹⁰ Belagavi, Chamarajanagar, Chikkamagalur, Dakshina Kannada, Dharwad, Hassan, Madikeri, Mysuru, Shivamogga, Udupi and Uttara Kannada

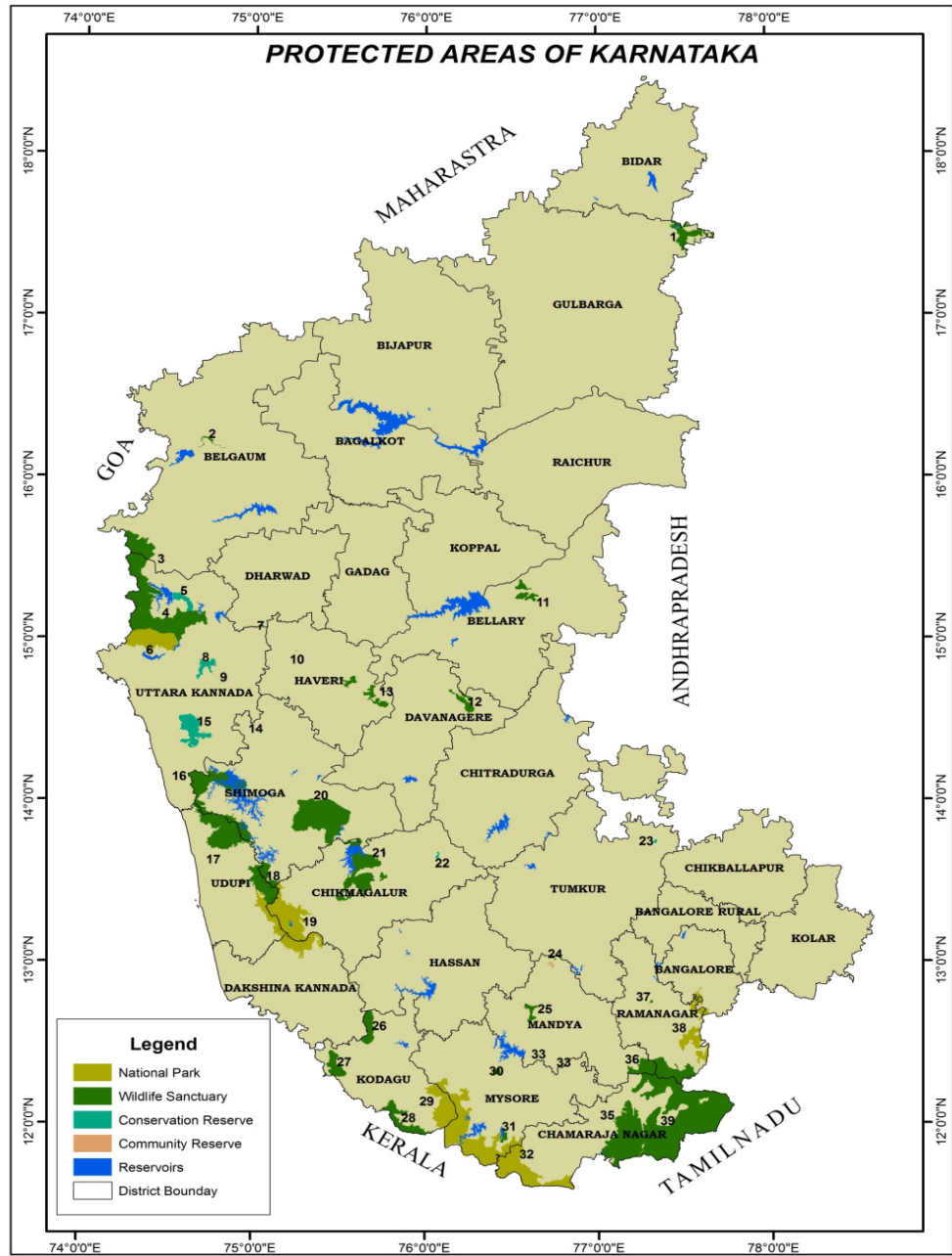


Fig 1.2: Malai Mahadeswara Hill ranges which forms part of Nilgiri Biosphere Reserve
Source: Image taken during audit field visit

The Wildlife (Protection) Act, 1972 was enacted with the objective of effectively protecting the wildlife and for matters connected therewith or ancillary or incidental thereto. In pursuance of this objective, the State Government, under this Act, can declare any area of adequate ecological, faunal, floral, geo-morphological, natural or zoological significance, as a National Park, Wildlife Sanctuary, Conservation Reserve or Community Reserve for protecting, propagation or developing wildlife or its environment. Further, an area with significant number of tigers would be declared as a Tiger Reserve (TR) with the approval of National Tiger Conservation Authority. There are five National Parks, 30 Wildlife Sanctuaries, 13 Conservation Reserves and one Community Reserve in the State spread across an area of 10,222.19 sq km, out of which, five¹¹ NPs / WLSs have been declared as Tiger Reserves. In view of the rich biodiversity found in the region, the Performance Audit has focused on the Administration of the National Parks and Wildlife Sanctuaries of WG-NBR region in an attempt to assess the impact of such intrusive activities and study the role and efforts of the Karnataka Forest Department (Department) in minimising the same. The map of Protected Areas of the State is given at **Fig 1.3** below:

¹¹Bandipur NP, Bhadra WLS, Biligiri Ranganathaswamy Temple WLS , Dandeli-Anshi and Rajiv Gandhi (Nagarahole) NP

Fig 1.3: Map indicating Protected Areas in Karnataka



Map Id	Name of the Protected Area
1	Chincholi (WS)
2	Ghataprabha (WS)
3	Bhimghad (WS)
4	Dandeli (WS and TR)
5	Hombill (CR)
6	Anshi (NP and TR)
7	Attiveri (WS)
8	Bedthi (CR)
9	Shalmala (CR)
10	Bankapura (CR)
11	Daroji (WS)
12	Rangayyanadurga (WS)
13	Ranebennur (WS)
14	Gudavi (WS)
15	Aghanashini (CR)
16	Sharavathi (WS)
17	Mookambika (WS)
18	Someshwara (WS)
19	Kudremukh (WS)
20	Shettihalli (WS)
21	Bhadra (WS and TR)
22	Basur Amruth Mahal Kaval (CR)
23	Jayamangali (CR)
24	Adichunchangiri (WS)
25	Melkote (WS)
26	Pushpagiri (WS)
27	Talacauvery (WS)
28	Bramhagiri (WS)
29	Nagarahole (NP and TR)
30	Arabithittu (WS)
31	Nugu (WS)
32	Bandipur (NP and TR)
33	Ranganathittu (WS)
34	Kokkare Bellur (Com. R)
35	Biligirirangaswamy Temple (WS and TR)
36	Cauvery (WS)
37	Ramadevarabetta (WS)
38	Bannerghatta (NP)
39	Malai Madeshwara Wildlife Sanctuary

Source: Karnataka Forest Department