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WESTERN GHATS A TREASURE OF ENDEMIC FAUNA

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ABSTRACT

The Western Ghats are a chain of mountains traversing Kerala, Tamil Nadu, Karnataka, Goa, Maharashtra and Gujarat spread over 140,000 sq km and its forests include some of the best representatives of non-equatorial tropical evergreen forest. The Western Ghats contain more than 30% of all plant, fish, reptiles, bird and mammal species found in India. It is a UNESCO World Heritage Site and is one of the eight "Hottest biodiversity hotspots". This region has over 5000 species of flowering plants, 139 mammal species, 508 bird species and 179 amphibian species, it is likely that many undiscovered species live in the Western Ghats. Many species, in fact 50% of India's amphibians and 67% of fish species are endemic to this region. It is home to at least 325 globally threatened flora and fauna.

INTRODUCTION

Western Ghats or **Sahyadri** Mountains is a mountain range that runs parallel to the western coast of the peninsular India, located entirely in India. It is a UNESCO World heritage site and is one of the eight "hottest hot-spots" of biological diversity in the world (1, 2). It is sometimes called the Great Escarpment of India (3). The range runs north to south along the western edge of the Deccan Plateau and separates the plateau from a narrow coastal plain, called Konkan, along the Arabian Sea. The range starts from the border of Gujarat south of the Tapti river, and runs approximately 1,600 km through the states of Maharashtra, Goa, Karnataka, Kerala, and Tamilnadu, ending near Kanyakumari at the southern tip of India. Major gaps in the range are the Goa Gap, between the Maharashtra and Karnataka sections and the Palghat Gap on the Tamil Nadu and Kerala border between the Nilgiri Hills and the Anaimalai Hills. The Western Ghats form one of the four watersheds of India, feeding the perennial rivers of India. Important rivers include the Godavari, Krishna, Cauvery, Mandovi and Zuari. These hills cover 160,000 km^2 (62,000 sq mi) and form the catchment area for complex riverine drainage systems that drain almost 40% of India. The Western Ghats block southwest monsoon winds from reaching the Deccan Plateau (4). The average elevation is around 1,200 m (5).

The Western Ghats contain more than 30% of all plant, fish, reptiles, bird and mammal species found in India. It is a UNESCO World Heritage Site and is one of the eight "Hottest biodiversity hotspots". This region has over 5000 species of flowering plants, 139 mammal species, 508 bird species and 179 amphibian species, it is likely that many undiscovered species live in the Western Ghats. Many species, in fact 50% of India's amphibians and 67% of fish species are endemic to this region. At least 325 globally threatened species occur in the Western Ghats (6, 7, 8). It is world most populated biodiversity, is going to support and provide 400 million people drinking water, transport, irrigation , hydroelectricity and resources to sustain livelihoods.

WESTERN GHATS – THREATENED FAUNA OF VERTEBRATES

The Western Ghats are home to thousands of animal species including at least 325 globally threatened species. Many are endemic species, especially in the amphibian and reptilian classes. Thirty two (9) threatened species of mammals live in the Western Ghats among which 16 endemic mammals, 13 are threatened.

FISHES

189 Endemic species of fish are listed in Western Ghats water bodies. 13 genera entirely restricted to this region (10). 97 fresh water fish species of Western Ghats considered as threatened by the IUCN Red data in 2011, of which 12 criti-

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cally endangered, 54 endangered, and 31 are vulnerable (11). Western Ghats streams are home to several brilliantly coloured ornamental fishes like Red line torpedo barb, Red-tailed barb, Osteobramabakeri, Günther's catfish and freshwater puffer fish Tetraodontravancoricus, Carinotetraodon imitator and marine forms like Chelonodonpatoca, mahseers such as Malabar mahseer.

AMPHIBIANS

The amphibians of this Ghats are diverse and unique, with more than 80% of the 179 amphibian species being endemic to the region. Most of the endemic species have their distribution in the rainforests of these mountains (12). The endangered Purple frog was discovered in 2003 to be a living fossil (13). Four new species of Anurans belonging to the genus Rhacophorus, Polypedates, Philautus and Bufo have been described in this region in 2005(14). The region is also home to many Caecilians.

REPTILES

The snake family Uropeltidae of the reptile class is almost entirely restricted to this region (15). Some of venomous snakes such as the king cobra, the striped coral snake, the Malabar Pit viper, the Large-scaled Pit viper and the Horseshoe Pit viper are endemic to this region (16). The region has significant population of vulnerable Mugger Crocodiles (17).

BIRDS

There are at least 508 bird species. There are at least 19 species of birds endemic to this region including the endangered Rufous-Breasted Laughing thrush, the vulnerable Nilgiri Wood-Pigeon, White-Bellied Short wing and Broad-Tailed Grass bird, the near threatened Grey-breasted Laughing thrush, Black-and- Irufous Flycatcher, Nilgiri Flycatcher, and Nilgiri Pipit and the least concern Malabar Parakeet, Malabar Grey Hornbill, White-bellied Treepie, Grey-headed Bulbul, Rufous Babbler, Wynaad Laughing thrush, White-bellied Blue-flycatchers and the Crimson-backed Sunbird (18).

MAMMALS

There are at least 139 mammal species, of which 16 are endemic mammals. The critically endangered mammals include nocturnal Malabar large-spotted Civet Cat, Nilgiri Tahr, arboreal Lion-tailed macaque, Indian Elephants, Bengal Tiger, Nilgiri langur, Leopard, vulnerable Sloth bears, Wroughton's free tailed bat, Theobald's tomb bat, Lesser False Vampire bats etc (19, 20, 21). These Ghats serve as important wildlife corridors and forms an important part of Project Elephant and Project Tiger reserves. The largest population of tigers outside the Sunderbans is in the Western Ghats (22). This eco-region has the largest Indian elephant population in the wild (23, 24). The endemic Nilgiri Thar which was on the brink of extinction has recovered in the wild (25). The critically endangered Malabar large Civet Cat has also recovered in this region (26). The Lion tailed Macaques are also safely distributed in this Ghats (27). It also contain large populations of the flagship animals which are key indicator species in monitoring states of conservation such as Endangered Asian elephant Elephas maximus, Tiger Panthera tigris tigris, endemic Lion-tailed macaque Macaca silenus, endemic Nilgiri tahr Nilgiritragus hylocrius and Vulnerable species Gaur Bos gaurus and Nilgiri langur Trachypithecus johnii (28).

PROBLEMS OF CONSERVATION

Western Ghats is a significant ecosystem with a large expanse through several state boundaries, so its management as such is guided by the state policies and economic gains that the states might earn through various projects. Being a very significant ecosystem, the Western Ghats is shadowed by two proximate threats which are localized threats and landscape level threats. The main problems of the Western Ghats region are the pressure of increasing population on land and vegetation, undesirable agricultural practices, habitat loss, fragmentation of habitat, pollution etc. These factors have contributed to ecological and environmental problems in the region. The fragile ecosystem of the hills has come under severe pressure because of submersion of large areas under river valley projects, damage to areas due to mining, denudation of forest, clear felling of natural forests for raising commercial plantation, soil erosion leading to silting of reservoirs and reduction in their life span and the adverse effects of floods and landslides, encroachment of forest land and poaching of wild life etc.

PROTECTION AND PRESERVATION

The Western Ghats were well-covered in dense forests that provided wild foods and natural habitats for native tribal people native. Its inaccessibility made it difficult for people from the plains to cultivate the land and build settlements. The area is ecologically sensitive to development and was declared an *Ecological Hotspot* in 1988 with the efforts of ecologist Norman Myers. The area covers five percent of India's land with 27% of all species of higher plants in India (4,000 of 15,000 species) are found here and 1,800 of these are endemic to the region. The range is home to at least 84 amphibian species, 16 bird species, seven mammals, and 1,600 flowering plants which are not found elsewhere in the world. The Government of India established many protected areas including 2 Biosphere reserves Nilgiri Biosphere Reserve in 1986 and Agasthyamalai Biosphere Reserve in 2001. 13 National Parks to restrict human access, several Wildlife Sanctuaries to protect specific endangered species and many Reserve Forests, which are all managed by the forest departments of their respective state to preserve some of the ecoregions still undeveloped. Nilgiri Biosphere Reserve comprising 5,500 square kilometres (2,100 sq mi) of the evergreen forests of Nagarhole and deciduous forests of Bandipur in Karnataka, adjoining regions of Wayanad –Mukurti in Kerala and Mudumulai National Park – Satyamangalam in Tamil Nadu forms the largest contiguous protected area in the Western Ghats (29). Silent Valley in Kerala is among the last tracts of virgin tropical evergreen forest in India (30, 31).

CONCLUSION

It is clearly show that there is close linkages between the environment and the enjoyment of human rights, and justify an integrated approach to environment and human rights. The good practices were collected at the international, national and regional levels in collaboration through regional/ sub-regional consultations as well as questionnaires and surveys. Man is the only species on this land causing environmental pollution. He goes on exploiting natural resources for his need and greed's. Every organism has the right to live on this earth, but we can-

not deny their right to live. So man has to rethink his attitude towards the nature. He must look at the natural resources as needy, but not greedy. Nature existence depends upon us but at the same time our existence depends on it. It is prime responsibility of human to protect, preserve and to sustain nature for the well being of every organism on this earth.

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