

Block-1

Flora & Fauna, National Parks and Wildlife Sanctuaries

Unit-1

Jammu and Kashmir and Himachal Pradesh

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1.1 OBJECTIVES:

The main objectives of the unit is to

- Give an overview of the biodiversity in Himachal Pradesh and Jammu & Kashmir.
- Give a detail of the wildlife sanctuaries, national parks & biosphere reserves in Himachal & J&K.
- To know about protected /Restricted area permits in the two states.
- To know about the wildlife conservation & protection.

1.2 INTRODUCTION:

The northern region of India has many wildlife sanctuaries and national parks known for diverse rich flora and fauna. Wildlife lovers, wildlife adventure enthusiasts and nature lovers from all over the world come to enjoy the charisma of wildlife tourism in northern India. The most sought after destinations for wildlife viewing and jungle tourism in this region is certainly **Great Himalayan National Park** in Himachal Pradesh. It is not only a destination for wildlife viewing or birding but also for eco-tourism also called nature tourism. Endowed with superb natural beauty and scenic surrounding this famous park is **India's first national park**. It enjoys rich flora and fauna. The secluded Sainj and Tirthan valleys are home to a plethora of fauna - wild mountain goats like the bharal, goral and serow; musk deer; the brown bear and predators like the leopard and the elusive snow leopard. Different varieties of pheasants - monal, khalij cheer, tragopan and other exotic Himalayan birds can be found in the region.

Hemis National Park is also a popular destination on North India Wildlife Tour. It is the only national park in India north of the Himalayas, the largest notified protected area in India (**and thus the largest national park of India**), and is the second largest contiguous protected area after the Nanda Devi Biosphere Reserve and surrounding protected areas.

1.3 FLORA & FAUNA:

Flora & fauna represents the catalogue of plants & animals of a particular region. "Fauna" comes from the Latin names of Fauna, a Roman goddess of earth and fertility, the Roman god Faunus, and the related forest spirits called Fauns. The term was first used by Linnaeus in the title of his 1745 work *Fauna Suecica*. Zoologists and paleontologists use fauna to refer to a typical collection of animals found in a specific time or place, e.g. the "Ladakh Desert fauna" or the "Shimla

Shale fauna". **Flora** is the plant life occurring in a particular region or time, generally the naturally occurring or indigenous—native plant life. "Flora" comes from the Latin name of Flora, the goddess of plants, flowers, and fertility in Roman mythology. Plants are grouped into floras based on region, period, special environment, or climate. Flora, fauna and other forms of life such as fungi are collectively referred to as **biota**.

1.3.1 HIMACHAL PRADESH:

Himachal is a land of green forests and fresh air. As much as 68% of the land area is covered with jungles. While the foothills and valleys are a refreshing green, the areas above the snow line are almost bare.

The southernmost tracts are dominated by sal (Shorea robusta), shisham, chir pine, dry deciduous and moist broad-leaved forests. The temperate region above this grows oaks, deodar, blue pine, fir and spruce. In the uppermost climes, trees are sturdy with a vast network of roots, such as alders, birches, rhododendrons and moist alpine scrubs in the name of vegetation. Himachal is the fruit bowl of the country with orchards scattered all over the place.

Himachal Pradesh forms the catchment of various main rivers of Northern India, namely the Ravi, Chenab, Beas, Sutlej, Jhelum and Yamuna. Himachal Pradesh has diverse forms of rich flora because of the varied physico-climate. Out of a total of 45,000 species of plants found in the country, some 3,295 species or 7.32 percent are reported in Himachal Pradesh. There are six main forest – Moist Tropical, Montane Temperate, Sub-Alpine and Alpine Scrub. The conifers consist of Chil (Pine) Fir, Spruce, Deodar, Juniperus, Taxas and Neora. etc. The broad-leaved varieties comprise Khair, Siris, Semul, Sal, Tun, Bahera, Kimish, Shisham, Khirik, Ash, Bhoj-Patra, Horse-chestnut, Poplar, Robinla, Walnut, Maple, etc. The flowering species include orchids.

Himachal is also home to a wide variety of animals such as leopard, bear, musk deer, ghoral (goat-like stout animal), monal, snow leopard, which is the state animal and Jujrana, the state bird.

There are 2 National Parks and 32 wildlife sanctuaries in the State. Total area under wildlife sanctuaries is 5562 km, area under National Parks is 1440 km, and total area of Protected Area Network is 7002 km.



Source - www.mapsofindia.com

The Wildlife species in Himachal Pradesh consist of Mammals 64 species, Birds 463 species, Reptiles 44 species and Aquatic Fauna 316 species.

1.3.2 JAMMU & KASHMIR:

Kashmir is rich in the cultural diversity of the people, as well as diversity of flora and fauna in the forest areas, and domesticated species outside the forest. Plants are also an integral part of the social fabric of the state. On the other hand, the faunal component of the bio-diversity of the state is rich, with interesting and unique forms both in the forest zones and above the forest-line. The flora of Himalayan Kashmir comprises about 3,054 species. About 880 species are found in Ladakh. The flora of the Jammu district comprises 506 species. These figures include only the angiosperms, gymnosperms and pteridophytes. The plants of the western Himalayas are well known for their medicinal properties. This area is a storehouse of medicinal and aromatic plants, which are used in pharmaceutical and perfume industries.



Source - www.mapsofindia.com

The list includes 55 species of important medicinal and aromatic plants. Some native medicinal plants have been taken up for cultivation, e.g. *Dioscorea deltoidea* (baniatakari or shingli-mingli) is now cultivated for its tubers which are rich in diosgenin and yield cortisone, a steroid hormone. Locally called "The Booune" in the Kashmiri language, Chinar tree holds a special place in Kashmiri civilization. The tree presents itself in various enchanting colours through the cycle of the seasons among which its autumnal look is breath-taking. Mountain ranges in the Valley have dense deodar, pine and fir. Walnut, willow, almond and cedar also add to the rich flora of Kashmir.

The fauna of Jammu and Kashmir is diverse due to its unique location and climatic condition. About 16% of the Indian mammals, birds, reptiles, amphibians and butterflies are presented in the state. Birds contribute much to the chordate diversity following by mammals, reptiles, fishes and amphibians. Jammu and Kashmir is home to number of species that are listed as endangered like the Kashmiri stag called 'Hangul' and snow leopard that has survived here from times unknown. The winged game includes ducks, goose, partridge, chakor, pheasant, wagtails, herons, water pigeons, warblers, and doves. In otherwise arid desert of Ladakh some 240 species of local and migratory birds have been

identified including black-necked crane. The Ladakh fauna includes yak, Himalayan Ibex, Tibetan antelope, snow leopard, wild ass, red bear and gazelle.

1.4 NATIONAL PARKS & SANCTUARIES:

India is unique in the richness and diversity of its vegetation and wildlife. Wildlife sanctuaries & National parks in India attract people from all over the world as the rarest of rare species are found here.

Do you know what a sanctuary is? What is a national park? And what is the difference between National Parks & Sanctuaries?

Both are meant for preserving the rich biodiversity at a place but still there are some differences & similarities. National parks and wildlife sanctuaries are protected natural habitats, declared by the government of a country according to the regulations from the **IUCN** (The World Conservation Union) to preserve the wildlife through conservation of ecosystems. The restriction levels vary within these two categories but, the principal objective of declaring protected areas is the conservation of nature. Thus, it is important for people to understand the differences and similarities between a national park and a wildlife sanctuary.

A **wildlife sanctuary** is a declared protected area, where very limited human activity is allowed. The ownership of this type of protected area could lie in the hands of either a government or in any private organization or person, provided the regulations are governed by the government. Inside a wildlife sanctuary, the hunting of animals is completely prohibited. Additionally, the trees cannot be cut down for any purpose; especially the clearing of the forest for agriculture is completely banned. However, it is not physically fenced to restrict the public from entering and roaming inside a wildlife sanctuary for research, educational, inspirational, and recreational purposes. The general public could use it up to a certain extent so that the sanctuary is useful for them also. People can collect firewood, fruits, medicinal plants...etc in small scale from a wildlife sanctuary.

A **National park** has a defined boundary, through which no person can get into the park without an approval. Only an approved person can enter into a national park, either via paying a visitor ticket or an approved letter from the governing body (mostly the government). The visitors can only observe the park inside a vehicle that routes through defined trails and they cannot get out the vehicle for any reason unless there is an approved place for visitors. Photographs are allowed but research and educational work can only be done with a prior permission. The park cannot be used for any reason viz. firewood, timber,

fruits...etc. With all these regulations, the national parks are established to conserve the natural habitats of the wild fauna and flora with a minimum human interference.

There is also another category of protected area known as Biosphere Reserve. A **biosphere reserve** is a specified protected area of land and or coastal environment in which multiple use of the land is permitted by dividing it into zones, each for a particular activity. A biosphere reserve is divided into three zones core, buffer and manipulation.

1.4.1 HIMACHAL PRADESH:

Out of total geographical area of Himachal Pradesh, which is around 55, 670 sq km, a majority of 37, 691 sq km is covered by forests.

The National Parks are established under section 35 (4) of the **Wildlife (Protection) Act, 1972** & Wildlife Sanctuaries have been established under sections 18-26 of the Wildlife (Protection) Act, 1972.

S.No.	Sanctuary/ National Park	District	Area (Km ²)
1	Govind Sagar	Bilaspur	100
2	Shri Nainadevi	Bilaspur	123
3	Sach-Tuan Nala	Chamba	103
4	Gamgul-Siyabehi	Chamba	109
5	Tundah	Chamba	64
6	Kugti	Chamba	379
7	Kalatop-Khajjiar	Chamba	69
8	Pongdam Lake	Kangra	307
9	Dhauladhar	Kangra	944
10	Rakchham-Chhitkul	Kinnaur	304
11	Lipa Asrang	Kinnaur	31
12	Rupi-Bhaba	Kinnaur	503
13	Sainj	Kullu	90
14	Tirthan	Kullu	61
15	Kias	Kullu	14
16	Khokhan	Kullu	14
17	Kanawar	Kullu	61
18	Manali	Kullu	32
19	Kibber	Lahaul & Spiti	1400
20	Bandli	Mandi	41
21	Nargu	Mandi	278
22	Shikari Devi	Mandi	72
23	Daranghat I & II	Shimla	167
24	Talra	Shimla	40
25	Water Supply Catchment	Shimla	10
26	Churdhar	Sirmour	66
27	Simbalbara	Sirmour	19
28	Renuka	Sirmour	4
29	Chail	Solan	109
30	Shilli	Solan	2
31	Majathal	Solan	40
32	Darlaghat	Solan	6
Total Area Wildlife Sanctuary			5562
33	Great Himalayan National Park	Kullu	765
34	PIN Valley National Park	Lahaul & Spiti	675
Total Area National Parks			1440
Total Area Of Protected Area Network			7002

Source - www.hpförst.nic.in.

The Great Himalayan National Park is situated in the Seraj Tehsil of Kullu district at an altitude of 1300 to 6100 m in Himachal Pradesh. The park is located

around 50 km from the Kullu town & covers an area of 754 sq. km. The best time to visit the park is during the summers (April to June) and autumn (September to November) as the weather is pleasant & also the snow melts away. This park was established in 1984.

The park also has three other wildlife destinations sharing their boundaries with it - **the Pin Valley National Park, the Rupi Bhabha Wildlife Sanctuary and the Kanawar Wildlife Sanctuary**. The area under the park includes the upper catchment area of Tirthan, Sainj, Parvati and the Jiwa Nalas. All these flow from east to west and finally merge with the Beas river. A considerable portion of the park, especially the eastern part remains covered with snow throughout the year.

There are four entry points to the park which is officially known as the Jawahar Lal Nehru Park. These are Guishaini (34 km from Aut), Neuli (40 km from Aut) Siund village (30 km from Aut) and Barshaini (to the north east of the park). For tourist visiting the park, a permit is essential. The permit can be obtained easily at a low cost from the office of the Park Director at Shamsi or the range officers at Larji, Sairopa and Sainj. The park authorities also provide guides (compulsory) & the timings to visit the park is between sun rise and sun set.

Medicinal plants, trees, herbs and shrubs are found in plenty in the Park. The star animal attractions of the park includes the Snow Leopard, Blue Sheep, Himalayan Brown Bear, Himalayan Tahr and Musk Deer. Other animals of the park are Serow, Rhesus Macaque, Barking Deer, Goral, Red Fox, Langur, Gray Shrew, Giant Indian Flying Squirrel, Porcupine, Himalayan Palm Civet, Himalayan Weasel and Yellow-throated Marten. There are around 180 species of birds in the park out of which the most prominent ones are Western Tragopan, Monal Pheasant, Koklas, White-crested Kaleej and Cheer Pheasant. Other birds spotted in the park include Raptors, Shorebirds, Pigeons, Parakeets, Cuckoos, Owls, Gray Nightjar, Himalayan Swiftlets, Fork-tailed Swifts, White-throated Needletail, Eurasian Hoopoe, Brown-fronted Woodpecker etc.

Pin Valley National Park: The Pin Valley National Park spreads over an area of 675 square Km in the trans-Himalayan cold desert region of Spiti valley and falls in the catchment of the Pin river and its major tributary, Parahio. Altitude of the National Park ranges from about 3,500 metres near Ka dogri to more than 6,000 metres at its highest point.

With its snow laden higher reaches and scree slopes covered with scanty tufted vegetation, Pin Valley National Park forms the natural habitat of a number of

endangered animals including Himalayan Ibex, Snow Leopard, Bharal, Wooly Hare, Tibetan Wolf, and Monal Pheasant.

The apparently scanty vegetation in the Park contains many plant species of high conservation value. Prominent amongst these species are Ratanjot (Arnebia euchroma & A. benthamii), Salampanja (Dactylorhiza hatageria), Somlata (Ephedra gerardiana), Seabuckthorn (Hippophae rhamnoides) and Ateesh (Aconitum heterophyllum). Wild rose (Rosa webbiana), with its gorgeous pink flowers and bright red fruit, provides a striking contrast to the otherwise dry surrounds.

The National Park, which remains open from May to October every year, can be approached only on foot from the nearest road terminus at Mikkim in Pin Valley. Visitors need to carry sleeping bags and food and can stay in bunkers constructed by the Department in the Park.

Other Wildlife Destinations:

Simbalbara Sanctuary: Located in the Paonta Valley of Sirmour district, the Simbalbara sanctuary is home to Goral, Sambhar and Chittal. The sanctuary can be visited in the winter months to get the best view of the beautiful Sal forest with grassy glades.

Renuka Sanctuary: Located near Nahan in the Sirmour district of Himachal Pradesh, the Renuka Wildlife sanctuary spreads over an area of 400 hectares. The sacred Renuka Lake, along with the temple is a huge attraction here. People from all over flock in large number come to pay a visit to these two. The animal and bird attraction of the park include Asiatic lions, Spotted Deer, Lion tailed Macaques, Peacocks, Nilgai or large Grey Indian Antelope, Barking Deer, Himalayan Black Bears, Red Jungle Fowl and Black Pheasant. There are also a large number of butterflies that add more colour and life in the sanctuary. Added attraction here is a chance to view the lions from pretty close range - from an armoured van which makes an entry into the enclosures of the lions.

Chail Wildlife Sanctuary: This one is located in the district of Shimla and covers an area of 10,854.36 hectares. The park was notified in the year 1976 and is an abode of a variety of animals and birds like Sambar, Goral, Himalayan Black Bear, Red Deer, Silver-White Oak, Barking Deer, Indian Hare Common Langur, Leopard, Rhesus Macaque, Himalayan Yellow Throated Marten, Indian

Porcupine, Common Giant and Kashmiri Flying Squirrel and Chir Pheasants at Blossom and Jhajja.

Churdhar Sanctuary: The Churdhar Sanctuary is located in the Solan valley of the Shimla district at a height of 3647 m. The sanctuary, which spreads in an area of 5616 hectares gets its name from the Churu peak. The top of the peak is occupied by a huge statue of Shiva. Coming back to the sanctuary, it was notified in the year 1985 and is perhaps one of the most recent of the sanctuaries in the country. The attraction of the park include multi coloured Monals Himalayan Black Bear, Barking Deer, Musk Deer, Common Langur and Leopards. For adventure enthusiasts, trekking is a brilliant option in this sanctuary.

Daranghati Sanctuary: The Daranghati sanctuary is located near Rampur Bushahr in the Shimla District of Himachal Pradesh. The area was declared a sanctuary in the year 1974 and covers an area of 16740 hectares. The wild attractions of the park include Himalayan Black Bear, Brown Bear, Himalayan Palm Civet, Barking Deer, Musk Deer, Flying Fox, Goral, Indian Hare, Stripped Hyena, Himalayan Ibex, Leopard, Himalayan yellow throated Marten, Serow, Blue Sheep, Common giant flying Squirrel and Himalayan Weasel. Trekking can be highly enjoyable option for the lovers of adventure here.

Govind Sagar Sanctuary: Situated in the Bilaspur district of the state, the Govind Sagar Sanctuary was first notified in the year 1962 and then again in 1974. The sanctuary covers an area of 10, 034 hectares and is managed by Bhakra Management Board. Animals that will catch your attention in this sanctuary include Singhara, Chilwa, Catla, Jhalli, Mrigal, Grass crap, Misror crap, Topra, Silver Crap and Gid. And, the best time to visit the park is between the month of July to September.

Kalatope Wildlife Sanctuary: This sanctuary, located in Khajjar of Chamba district, is a hot favourite with the tourists. The sanctuary is best visited during the month of April to June and then from October to November. There are thick deodar and fir forest to greet you. Well laid out trekking routes will take you deep inside the sanctuary and increase your chances of sighting Ibex, Deer, Bears and Leopards. More visible in the sanctuary are the Pheasants.

Pong Lake Sanctuary: Around 65 km from Dharamshala in the Kangra district, the Pong Lake Sanctuary makes for a good visit if you are interested in seeing

animals like Nilgai, Sambar, Barking Deer, Wild Buar, Clawless Otter and Leopard. The lake is a huge drawer of Siberian Ducks during the winter season. The sanctuary covers an area of 9675 sq km and is best visited during the period of October to February.

Nature Parks of Himachal Pradesh:

In addition to the National Parks and Wildlife Sanctuaries, there are Nature Parks in Himachal Pradesh as well.

Nature Park of Kufri- Located very close to Shimla, the Nature Park at Kufri is a huge crowd puller. The denizens of this park include Hangal, Barking Deer, Musk Deer, Brown Bear and rare species of Monal.

Nature Park at Manali- This one is located in the Kullu district of the state and is meant to arise a feeling of love and concern for the nature and wildlife of the region.

Nature Park at Gopalpur- Gopalpur is frequently visited by tourists. Hence, an effort has been made to expose tourists to the importance of nature in this nature park. Animals are kept in enclosures here.

1.4.2 Jammu & Kashmir:

The state of Jammu and Kashmir with the variety of geographical regions, weather, flora and fauna has many delights to offer to the wildlife enthusiast and bird watchers. A number of famous animals found in the region are the snow leopard, common leopard, brown bear, Himalayan black bear, hangul or Kashmir stag, Bharal, red fox, markhor, musk deer, yellow-throated marten, shapu and langurs. Some birds which are also present in Kashmir are golden eagles, lammergeiers, black eagles, kestrels, hobbies, griffon vultures, Cinnamon sparrows, the black and yellow grosbeak, black bulbul and monal pheasants. Several national parks and wildlife sanctuaries well known in the state of Jammu and Kashmir like Ramnagar Wildlife Sanctuary, Kishtwar High Altitude National Park, Nandni Wildlife Sanctuary, Surinsar Mansar Wildlife Sanctuary, Jasrota Wildlife Sanctuary, Dachigam National Park, Overa Wildlife Sanctuary and Gulmarg Biosphere Reserve.

WILDLIFE AREAS OF JAMMU AND KASHMIR:

Jammu Region:

- Kishtwar High Altitude National Park- 425.00 sq.kms, Kishtwar
- Ramnagar Wildlife Sanctuary - 31.50 sq.kms, Kathua.
- Nandni wildlife Sanctuary 44.25 sq.kms -Kathua.
- Jasrota Wildlife Sanctuary 25.75 sq. - Kathua.
- Surinsar Mansar Wildlife -Sanctuary 55.50 sq.kms - Kathua.
- Trikuta Wildlife Sanctuary 27.75 sq.kms - Jammu

Wildlife Conservation Reserves:

- Sudhmahadev 142.25 sq.kms- Jammu East Kathua
- Jawahar Tunnel Chakore Reserve -18.00sq.kms, Kishtwar
- Gharana -0.75 sq.kms, Kathua
- Pargwal -49.25 sq.kms, Kathua
- Kukarian -24.25 sq.kms, Kathua
- Nanga -15.25 sq.kms, Kathua
- Asa Chak-Sangral -7.00 sq.kms -, Kathua
- Thein Conservation Reserve -19.00 sq, kms (over three state J&K, Punjab and HP)
- Bahu Conservation Reserve -19.75sq.km, Kathua

Kashmir Region:

National Parks & Sanctuaries

- Dachigam National Park -171.25 sq.kms, Central Kashmir.
- City Forest (Salim Ali) National Park - 9.00 sq.kms, Central Kashmir
- Rajparian (Daksum) Wildlife Sanctuary- 20.00 sq.kms, South Kashmir.
- Overa-Aru Wildlife Sanctuary -511.00 sq.kms South Kashmir.
- Hirpora Wildlife Sanctuary -114.50 sq.kms South Kashmir.
- Baltal (Thajwas) Wildlife Sanctuary - 210.50 sq.kms, Central Kashmir.
- Gulmarg Wildlife Sanctuary- 139.25 sq.kms North Kashmir.
- Limber Wildlife Sanctuary 43.75 sq.kms north Kashmir.
- Lachipora Wildlife Sanctuary 93.50 sq.kms North Kashmir.

Conservation Reserves:

Khiram Conservation Reserve, Panyar, Khanagund, Shikargah, Khrew, Khonmoh, Brain-Nishat, Sharazbal, Khimber / Dara / Sharazbal, Wangat / Chatergul, Ajas, Naganari, Zaloora, Harwan.

Wetland Reserves:

Hokera, Malgam, Chatlam, Pampore, Manibugh, Mirgund, Shallabugh, Ajaz Jheel and Hygam.

Ladakh Region:

- Hemis High Altitude National Park -4100.00 sq.kms, Leh.
- Changthang Cold Desert Wildlife Sanctuary -4000.00 sq.km Leh
- Karakoram (Nubra-Shyok) Wildlife Sanctuary 5000.00 sq.km Leh
- Kanji Wildlife Sanctuary -100.00 sq.km Kargil
- Budhkharbo Wildlife Sanctuary -12.00 sq.kms
- Noorichan Conservation Reserve-2.00 sq.km
- Tsomoriri Wetland-(The Wetland has been declared as Ramsar Site under Ramsar Convention), Leh. The area of this Wetland falls in Changthang Wildlife Sanctuary.
- Pangong Tso Wetland- Leh .This area comes under Changthang Wildlife Sanctuary.
- Chushul Marshes (Wetland). This area comes under Changthang Wildlife Sanctuary.
- Tsokar Basin (Wetland). This area comes under Changthang Wildlife Sanctuary.
- Hanley Marshes (Wetland). This area comes under Changthang Wildlife Sanctuary.

SOURCE- http://jkforest.com/jkforest/act_pdf/wildlife_areas.pdf

Ramnagar Wildlife Sanctuary: Ramnagar Wildlife Sanctuary is situated only 6 km. away from Jammu city. This sanctuary occupies an area of 31 square km and has an altitudinal range of 430 to 611 meters above sea level. About 8 mammal species of animals including nilgai and barking deer, wild boar, rhesus monkey can be seen in this sanctuary. About 15 species of birds can also be seen in this sanctuary like Indian Mynah, blue rock pigeon, peafowl, red jungle fowl, jungle crow, golden oriole, white cheeked bulbul. The best time to view the mammals is from September to March and for birds is March to May.

Kishtwar High Altitude National Park: Kishtwar High Altitude National Park is situated only 248 kms away from Jammu city. This national park occupies an area of 400 square km and has an altitudinal range of 1,700 to 4,800 meters above sea level. The area is characterized by marked variations in topography, climate and altitude as a result of which different types of forest vegetation occur. The

principal tree species are *Cedrus deodara*, *Pinus gerardiana*, *Pinus wallichiana*, *Quercus* spp., *Juglans regia*, *Ulmus* spp., etc. The major herbs include *Primula* spp., *Brachypodium* spp., *Anemone* spp., *Dipsacus* *mitis*, *Artemisia vulgaris*, etc. The park contains 15 species of mammals including the musk deer, Himalayan black and brown bear, hangul, markhor, goral, langur, leopard, etc.

Kishtawar High Altitude National Park, Kashmir

There are about 50 species of birds like the Himalayan jungle crow, bearded vulture, griffon vulture, flycatcher, golden oriole, white cheeked bulbul and Indian Mynah. The best season to view the birds is from March to May and for animals is September to March.

Surinsar Mansar Wildlife Sanctuary: Surinsar Mansar Wildlife Sanctuary has been named after the two lakes located on each corner of the sanctuary. This sanctuary comprises an area of 98 square km. and located about 56 kms away from the Jammu city. The vegetation consists of the mixed scrub forest with broad leaved species mixed with stands of *Pinus gerardiana*. The common broad leaved species are *Acacia* spp., *Mallotus phillipensis*, *dalbergia sissii*, *ficus religiosa*, *bahunia variegata*. This wildlife sanctuary supports 8 species of mammals and 15 species of birds. The mammals found in the sanctuary are Goral, wild boar, barking deer, leopard. There is multitude of birds like black partridge, red jungle fowl, peafowl, grey partridge, green pigeon, blue rock pigeon, rufus turtle dove. The best season to view the mammals is from September to March and for birds is March to May.

Dachigam National Park: Dachigam National Park is situated about 22 kms. from Srinagar. Dachigam National Park forms almost half of the Dal Lake's catchment area and is one of the famous natural reserves in India. This park covers an area of 141 square kms. and situated at an altitude of 1700 to 4000 meters above sea level. The dense forests of Dachigam offers a brilliant view along with a Glacier fed rivulet flowing right through the middle. There are over fifty species of trees, twenty of shrubs and five hundred species of herbs. The principal tree species are *Pinus griffithii*, *Abies pindrow*, *Juglans regia*, *Morus alba*, *Betula utilis*, *Salix* spp., *Populus* spp., *Prunus armeniaca*, *Corylus colurna*, *Quercus robur*, *Ulmus wallichiana*, *Aesculus indica*, etc. This park is the home of the endangered Hangul Stag, the species of the red deer in the country. The various other mammals include Himalayan brown bear, Himalayan black bear, musk deer, langur, Himalayan marmot, leopard etc. There are over 150 species of birds. The principal species are monal, koklas, bearded vulture, griffon vulture, golden eagle, grey

heron, starling, golden oriole, paradise flycatcher, western yellow-billed blue magpie, kestrel, peregrine falcon, black bulbul, etc.

Gulmarg Biosphere Reserve: Gulmarg Biosphere Reserve is located about 48 kms to its south-west of Srinagar. This reserve covers an area of 180 square kms and situated at an altitude of 2400 to 4300 meters above sea level. The anctuary is of particular interest to ornithologists. The area holds a rich cover of vegetation and consists of conifers which account for over 90% of area. The principal species are *Cedrus deodara*, *Pinus griffithii*, *Abies pindrow*, *Aesculus indica* etc. The ground cover is very rich and dicotyledonus herbs dominate that comprises of *Rumex patientia*, *Primula spp.*, *anemone spp.*, etc. It is famous for retaining several rare and endangered species of animals like the musk deer, hangul, serow, brown bear, Leopard, black bear and red fox etc. The reserve also houses a good population of pheasants and resident and migratory birds.

Hemis National Park (or Hemis High Altitude National Park) is a high altitude national park in the eastern Ladakh region of the state of Jammu and Kashmir in India. It is the only national park in India north of the Himalayas, the largest notified protected area in India (and thus the largest national park of India), and is the second largest contiguous protected area after the Nanda Devi Biosphere Reserve and surrounding protected areas. The park is home to a number of species of endangered mammals including the snow leopard. The park is home to a viable breeding population of about 200 snow leopards, especially in the Rumbak catchment area. The prey base for the apex predator in the Central Asian Highlands is primarily supported in Hemis by Argali (Great Tibetan Sheep), Bharal (Blue Sheep), Shapu (Ladakhi Urial), and livestock. A small population of the Asiatic Ibex is also present in Hemis. Hemis is the only refuge in India containing the Shapu. The park is a good place to study Himalayan and Trans-Himalayan birds of prey. Among birds of prey noted here are the Golden Eagle, the Lammergeier vulture, and the Himalayan Griffon vulture.

The Rumbak Valley offers good opportunities for bird watching, including several Tibetan species not common in other parts of India. This region is in the rain shadow of the Himalayas, and does not receive much precipitation. Hence, dry forests of juniper, *Populus* - *Salix* forests, subalpine dry birch - fir are present at lower altitudes.

Salim Ali National Park: Salim Ali National Park (formerly the City Forest National Park) is a national park in Jammu and Kashmir in India. It covers 9.07 km² and is located in the proximity of the capital city of Srinagar. The Srinagar airport is 12 km from the park. The name of the park commemorates the Indian ornithologist Salim Ali.

1.5 PROTECTED / RESTRICTED AREA PERMITS:

The Foreigner (Protected Areas) Act, 1958 requires Foreigners to obtain a Protected Area Permit (PAP) to visit certain areas in India. This is an additional requirement, apart from having Indian visa. For Indian citizens ,who do not belong to protected areas require an Inner Line Permit ,on the other hand the NRIs, PIO card holders and OCI holders are not eligible for an Inner line Permit. They need to have a Protected or Restricted Area Permit like Foreigners. The basic purpose of these permits is to ensure protection of these areas as well as security of tourist.

The requirements for permit are that tourists are required to travel in group of two or four or more; however they are required to pay no fees for these permits. A Protected Area Permit is normally issued for 10 days and has a option of 1 week (7 day) extension. These permits are issued by concerned Indian states, FRRO's & Indian Mission Abroad. However, the citizens of Pakistan, Bangladesh, China & Myanmar can get these permits only with the approval of the Ministry of Home Affairs.

Everyone who is entering these areas with a valid Inner Line Permit, Protected Area Permit (PAP) or Restricted Area Permit (RAP) should adhere to the following guidelines issued by the Ministry of Home Affairs.

- Permit is valid for group tourists with more than two persons.
- Tourists are to travel through the specific routes and use the specific entry and exit points
- Copy of permit must be deposited at each entry and exit points
- The permit holder shall not stay back in the protected or restricted area
- Foreigners are allowed to travel to the above places by air only
- While traveling, the permit holders are allowed to travel only on the National Highways unless permitted to use other roads.

Himachal Pradesh:

Following areas in Himachal Pradesh require protected areas permits Khab, Samdo, Dhankar, Tabo, Gompa, Kaza, Morang and Dubling (Lahaul & Spiti). Diplomatic & Officials Passport holders who wish to visit, stay or pass through the above mentioned areas and required to obtain necessary protected areas permits from Ministry of External Affairs. Application (in triplicate) should be submitted to the Northern Division, MDA, South Block, Room No. 235, New Delhi giving a minimum of 8 (eight) weeks notice to process the relevant case. However, application does not imply automatic issue of permits.

Such permits for the foreigners who want to visit such places in connection with their engagement with some U.N. Aided or World Bank Project are required to submit their applications to the Resident Commissioner, Himachal Govt., Himachal Bhavan, Sikandra Road, New Delhi. This Officer issues such permits to foreigners required to visit such places in connection with the World Bank or U.N. Aided projects and the Projects sponsored by the Govt. of India or any State Govt. or U.T. Administration. In such cases Resident Commissioner would insist upon a letter of requisition from the sponsoring authority i.e. World Bank or U.N. Agency or a concerned Union Ministry or State Govt. or U.T. Administration under whose aegis the project is being implemented.

Foreigners intending to visit protected areas which are now open for tourism, as tourists in group consisting of four or more foreigners, sponsored by the recognized travel agencies in India with predrawn itinerary can get protected area permits from the State Govt. The H.P. State Govt. has further delegated these powers to District Magistrates in their Jurisdictions.

Jammu & Kashmir

Tourists can visit the following areas provided they obtain special permits in Jammu & Kashmir. **Ministry of Home Affairs** and **District Magistrates** of concerned districts issue the special permits.

- **Khaltse Sub-Division (Drokahpa Area)**
 - Khaltse-Dunkhar-Sroducthan
 - Hanudo-Biana-Dha
- **Nubra Sub Division**
 - Leh-Khardung La-Khalsar-Tirit up to Panasik
 - Leh-Khardung La-Khalsar up to Hunder
 - Leh-Sabo-Digar La-Digar-Labab-Khungru Gampa-Tangar

- **Note:** Only for trekking conducted by approved tour operators and accompanied by State Police personnel
- **Nyona Sub Division**
 - Leh-Upshi-Chusathang-Mahe-Puga-Tso-Moari Lake/Kozok
 - Leh-Upshi-Debring-Puga-Tso-Moari Lake/Korzok
 - Leh-Karu-Chang La-Durbuk-Tangtse-Lukung-Spanksik.
 - Pangong Lake up to Spanksik

Individual tourists are not permitted. Tourist groups are to travel on the identified tour circuits only. Groups should consist of 4 to 20 persons and should be accompanied by a liaison officer. A period of 7 days is permitted.

1.6 CHECK YOUR PROGRESS:

1. What do you mean by Flora & Fauna of a Place?

2. What do you mean by a national park?

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3. What do you mean by a sanctuary?

4. What is the difference between National Park & Wildlife Sanctuary?

5. What is a Biosphere Reserve?

6. Name any five wildlife national park & sanctuaries present in Himachal Pradesh?

7. Name any five wildlife national park & sanctuaries present in Jammu & Kashmir?

8. Dachigam National Park is Famous for Which Animal?

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9. What are protected & restricted areas?

10. What are the protected areas present in Himachal Pradesh?

11. What are the protected areas present in Jammu & Kashmir?

12. What are the Guidelines for tourists entering the protected areas by the Ministry of Home Affairs?

1.7 SUMMARY:

The northern region of India has many wildlife sanctuaries and national parks known for diverse rich flora and fauna. Wildlife lovers, wildlife adventure enthusiasts and nature lovers from all over the world come to enjoy the charisma of wildlife tourism especially in Jammu & Kashmir and Himachal Pradesh.

Flora & fauna represents the catalogue of plants & animals of a particular region. National parks and wildlife sanctuaries are protected natural habitats, declared by the government of a country according to the regulations from the **IUCN** (The World Conservation Union) to preserve the wildlife through conservation of ecosystems.

Himachal Pradesh has 32 Wildlife Sanctuaries, 2 National Parks and 3 Game Reserves which cover an area of about 5940 square kilometers, to preserve its exceptional natural wealth. Also, the state of Jammu and Kashmir has a fairly rich diversity of plant & animal life. The flora of Himalayan Kashmir comprises about 3,054 species besides being home to about 75 species of mammals. About 16% of the Indian mammals, birds, reptiles, amphibians and butterflies are presented in the state.

The Foreigner (Protected Areas) Act, 1958 requires Foreigners to obtain a Protected Area Permit (PAP) to visit certain areas in India. This is an additional requirement, apart from having Indian visa. The basic purpose of these permits is to ensure protection of these areas as well as security of tourist. A Protected Area Permit is normally issued for 10 days and has a option of 1 week (7 day) extension. These permits are issued by concerned Indian states, FRRO's & Indian Mission Abroad. The protected areas present in two states comprise Khab, Samdo, Dhankar, Tabo, Gompa, Kaza, Morang and Dubling (Lahaul & Spiti) in Himachal Pradesh & some areas in Nyona, Nubra, and Khaltse Sub-Division in Jammu & Kashmir.

1.8 CLUES TO ANSWER (CHECK YOUR PROGRESS):

- Refer section 4.3
- Refer section 4.4
- Refer section 4.5
- Refer section 4.5
- Refer section 4.5
- Refer section 4.5

1.9 GLOSSARY:

- **Fauna** is the animal life occurring in a particular region or time, generally the naturally occurring or indigenous – native animal life.
- **Flora** is the plant life occurring in a particular region or time, generally the naturally occurring or indigenous – native plant life.
- **Wildlife sanctuary** is a protected area where wild animals are protected in natural habitat & very limited human activity is allowed.
- **National Park** is a area protected to preserve flora & fauna as a whole & no human activity is allowed inside it.
- **Wildlife (Protection) Act, 1972**- Government of India enacted a comprehensive legislation "**Wild Life (Protection) Act, 1972**" with the objective of effectively

controlling poaching and illegal trade in wildlife and its derivatives. This has been amended recently (January, 2003) and punishment and penalty for offences under the Act have been made more stringent.

- **Man and Biosphere Programme (MABP)** - The **Man and the Biosphere Programme** (MAB) of UNESCO was established in 1971 to promote interdisciplinary approaches to management, research and education in ecosystem conservation and sustainable use of natural resources. Sub-programmes and activities focus on specific ecosystems: mountains; drylands; tropical forests; urban systems; wetlands; and marine, island and coastal ecosystems.
- **UNESCO**-United Nations Educational Scientific and Cultural Organization was made on 16 November 1945 to create the conditions for dialogue among civilizations, cultures and peoples, based upon respect for commonly shared values.
- **IUCN** (The World Conservation Union)- Founded in 1948 as the world's first global environmental organization and largest global environmental organization.
- **The Foreigner (Protected Areas) Act, 1958** requires Foreigners to obtain a Protected Area Permit (PAP) to visit certain areas in India.

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Unit-02

Uttar Pradesh, Madhya Pradesh and Maharashtra

Structure:

2.1 Introduction

2.2 Objectives

2.3 National Parks, Wildlife Sanctuaries and Other Unique Natural Heritage

2.3.1 Uttar Pradesh

2.3.2 Madhya Pradesh

2.3.3 Chhattisgarh

2.4 Role of National Parks, Wildlife Sanctuaries and Other Unique Natural Heritage in Tourism Promotion

2.5 Summary

2.6 Glossary

2.7 Answer to Check Your Progress

2.8 References

2.9 Suggested Readings

2.10 Terminal and Model Questions

2.1 INTRODUCTION:

The World Heritage Sites in India are recognized by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as on 29, as of 2012. These are places of importance of cultural or natural heritage as described in the UNESCO World Heritage Convention, established in 1972. The Convention concerning the protection of the World Cultural and Natural Heritage was adopted on 17 November 1997 following the General Conference of the UNESCO held from 17 October 1972 to 21 November 1972. The Convention is defined under 28 Articles. Broadly, the Cultural Heritage Sites are defined in Article 1 as monuments, groups of buildings and sites, while the natural sites defined under Article 2 refer to natural features, geological and physiographical formations and natural sites. As of date, there are 911 properties under the World Heritage List, which cover 711 cultural sites, 180 natural sites and 27 mixed properties encompassing 152

countries, including India. Countries who have signed the Convention are 187 States, including India, which signed the Convention on November 14, 1977.

India is an incredible country where visitors can relish all from vibrant culture, traditions to rich bio-diversity. India is the only country where you will find 441 wildlife sanctuaries, 80 National Parks and 28 Tiger Reserves. These sanctuaries are referred as "Wildlife Sanctuaries" (IUCN Category IV Protected Area). Among these, the 28 Tiger Reserves are governed by Project Tiger and are of special significance in the conservation of the tiger. Some wildlife sanctuaries are specifically named "Bird Sanctuary", eg. Keoladeo Ghana National Park (Rajasthan) before attained National Park status. Many National Parks were initially Wildlife Sanctuaries.

2.2 OBJECTIVES:

After reading carefully this unit you will be able to:

- Know the importance of National Parks, Wildlife Sanctuaries and Other Unique Natural Heritage
- Know in details about the various natural sites and unique natural heritage.
- Enrich your knowledge of various wildlife sanctuaries and national parks of different states of India.

2.3 National Parks, Wildlife Sanctuaries and Other Unique Natural Heritage:

2.3.1 Uttar Pradesh:

Dudhwa National Park: Dudhwa National Park is a national park which is a major part of the Dudhwa Tiger Reserve. It is located in the Terai region of U.P, India. It covers an area of 680 km square (260sq miles). Out of this total area there is a buffer zone of almost 190 km square (73 sq miles). It was established in 1958 as a wildlife sanctuary mainly for swamp deers. It was notified as a national park in January 1977 mainly due to the efforts of Billy Arjan Singh. In year 1988 it was declared as Tiger reserve along with Kishanpur Wildlife Sanctuary and Katarniaghata Wildlife Sanctuary.

Kishanpur Wildlife Sanctuary: The Kishanpur Wildlife Sanctuary is also a part of the Dudhwa Tiger Reserve which is situated near Mailani in Uttar Pradesh, India. It covers approximately an area of 227 km (141 mi) and it was founded in the year 1972.

Katarniaghata Wildlife Sanctuary: Katarniaghata Wildlife Sanctuary is also a part of the Dudhwa Tiger Reserve, located in Uttar Pradesh near the India-Nepal border, in the Terai area of Bahraich district. It spreads in an area of 400 km² (150 sq mi) and was established

in 1976. This sanctuary is now being managed along with the Dudhwa National Park and Kishanpur Wildlife Sanctuary, as part of the Dudhwa Tiger Reserve under Project Tiger of the Government of India. The Forests of Katarniaghata provide strategic connectivity between tiger habitats of Dudhwa and Kishanpur in India and the Bardia National Park in Nepal. It is a safe place for endangered and critically endangered species, which occurs here and include the gharial, tiger, rhino, Gangetic dolphin, Swamp Deer, Hispid hare, Bengal florican, the White-backed and Long-billed vultures.

Pilibhit Tiger Reserve: Pilibhit Tiger Reserve, located in Pilibhit district, Lakhimpur Kheri District and Bahraich District of Uttar Pradesh state in India. It lies along the India-Nepal border in the foothills of the Himalayas and the plains of the 'terai' of Uttar Pradesh. It is amongst one of India's 41 Project Tiger reserves. Pilibhit is one of the few well forested districts in Uttar Pradesh.

Nawabganj Bird Sanctuary: This sanctuary is mainly a bird sanctuary, situated on the Kanpur-Lucknow road in Uttar Pradesh, India consisting of a lake and the surrounding environs. The sanctuary provides protection for 250 species of migratory birds mostly from CIS (or formerly USSR) countries, but the numbers have been declining since the 1990s, most of them relocated to newer areas in Himachal and Rajasthan.

Hastinapur Sanctuary: It was established in 1986, in Meerut, Ghaziabad, Bijnore and Jyotiba Phule Nagar. The Hastinapur Sanctuary spreading in an area of 2073 km². Mainly the wild animals in this sanctuary include various species of animals including antelope, sambhar, cheetal, blue bull, leopard, hyena, wild cat, and different types of birds. It is also the house of alligators.

National Chambal Sanctuary: It is a 5,400 km² (2,100 sq mi) protected area for critically endangered Gharial Crocodiles and the Red-crowned roof turtle and the endangered Ganges River Dolphin. It is Located near Etawah in Uttar Pradesh, in North India. It was declared in 1978 and constitutes a long narrow tri-state eco-reserve co-administered by the states of Rajasthan, MP and UP.

Mahavir Swami Sanctuary: Mahavir Swami Sanctuary is one of many wildlife sanctuaries in Uttar Pradesh. It is 125 km from Jhansi. The sanctuary is spreads over an area of 5.4 km². Jhansi provides for a wonderful gateway to the Bundelkhand region and has been rendered famous by the legendary Rani Laxmi Bai. In addition to a variety of birds, the residents include leopard, nilgai, wild boar, sambhar, black buck, blue bull, bear, jackals, langur and monkeys. The best time to visit here is from November to April. There is a forest rest house to provide accommodation facilities.

Ranipur Sanctuary: Ranipur Wildlife Sanctuary, founded in 1977, is one of the attractions of Banda district in Uttar Pradesh. It spreads over 230 km² and it is noted for its

diverse wildlife. It is the natural habitat of various animals including the tiger, leopard, sloth bear, sambar, blackbuck, peafowl, spur fowl, jungle fowl, painted partridge, fishing cat and chinkara.

Chandra Prabha Sanctuary: Chandraprabha sanctuary is situated in the eastern region of Uttar Pradesh. It is well endowed with beautiful picnic spots, dense forests, and scenic waterfalls like Rajdari and Devdari which attract tourists all over the world. Chandra Prabha Wildlife Sanctuary is situated about 70 kilometres from the historic city Varanasi.

Kaimoor Sanctuary: This sanctuary set up in 1982. It is located on the border area of Uttar Pradesh and Bihar. The vegetation of this sanctuary consists of 500 square kilometers of verdant land. The topography of the region is as varied as the types of animals that it posses.

Lakh Bahosi Sanctuary: It is also a bird sanctuary spreading over two jheels (shallow lakes) near the villages of Lakh and Bahosi (abt 4km apart) in Kannauj district, Uttar Pradesh. It is about a distance of 40 km from Kannauj. Primarily a bird sanctuary, species from 49 genera (of the 97 inhabiting India) can be seen at the sanctuary. It is one of India's largest bird sanctuary, covering 80 km² including a stretch of the Upper Ganges canal.

Samaspur Sanctuary: Samaspur Sanctuary is situated near Salon in Rae Bareli District. Samaspur Bird Sanctuary lies at about 122 km from Lucknow on Lucknow-Varanasi highway. It was established in 1987 in 780 hectare.

Suhelva Sanctuary: Suhelva Sanctuary is 60 KM from Balrampur in Uttar Pradesh. It is famous for its Tiger, Cheetal, Leopard, Bear, Boar, Wild cat & Birds.

Sandi Bird Sanctuary: Sandi Bird Sanctuary is a bird sanctuary in Hardoi district of Uttar Pradesh, India. The sanctuary is located at a distance of 19 km on Hardoi-Sandi Road in Hardoi district of Uttar Pradesh. Sandi Bird Sanctuary is 1 km from Sandi town on Main Road, Nawabganj, near Sandi Police Station Hardoi. Sandi Bird sanctuary was created in the year 1990 in order to protect the natural habitats and aquatic vegetation for the local residents and migratory birds. The Sandi Bird sanctuary is also known by its ancient name as "Dahar Jheel" (Jheel = Lake). The lake's area is 309 ha (3.09 km²). River Garra, formerly known as Garun Ganga, passes near the sanctuary.

Bakhira Sanctuary: The Bakhira Bird Sanctuary is the largest natural flood plain wetland in Sant Kabir Nagar district of Eastern Uttar Pradesh. This sanctuary was established in 1980. It is situated 44 km west of Gorakhpur city. It is a vast stretch of water body expanding over an area of 29 km². This is an important lake of eastern UP, which provides a wintering and staging ground for a number of migratory waterfowls and a breeding ground for resident birds.

Patna Bird Sanctuary: Patna Vihar Bird Sanctuary is a protected sanctuary in the Jalesar sub division of Etah district in Uttar Pradesh. It was founded in 1991. It is the smallest Bird Sanctuary in Uttar Pradesh, with a wetland area of only 1 km². About 200,000 birds of 300 different species of birds visit the sanctuary. Pied Mynas, herons, cormorants & ducks and geese of all descriptions also frequent the Sanctuary.

Keetham Lake: Keetham Lake is a scenic lake located just outside Agra on the Agra - Delhi highway (NH 2). It is also known as the Sur Sarovar. It is a tranquil spot, ideal for a relaxed outing. A wide variety of fish and water-birds add to the lake's natural charm and beauty.

Vijai Sagar Sanctuary: Vijai Sagar Sanctuary is located in Mahoba District of Uttar Pradesh. This Wildlife Sanctuary was founded in 1990. Jackal, mongoose, wildcat and various local and migratory birds occupy the 3 km² of area.

Saman Sanctuary: This Bird Sanctuary is in Mainpuri district, in western Uttar Pradesh. It was established in the year 1990. The sanctuary is spread over an area of 5 km². There are many birds which can be seen here and it is best suited for Bird safari. In this there are different animals such as Jackal, Mongoose, Hare and various local and migratory birds.

Okhla Sanctuary: The Okhla barrage bird sanctuary in Okhla, near Delhi is a heaven for water birds. In 1990, an area of 3.5 square kilometres (1.4 sq mi) on the river Yamuna was notified as a bird sanctuary under the Wildlife Protection Act of India. The site is located at the point where the river leaves for Uttar Pradesh. The most prominent feature of the sanctuary is the large lake created by damming the river, which lies sandwiched between Okhla village towards the west and Gautam Budh Nagar towards the east.

Sohagi Barwa Sanctuary: Sohagi Barwa Sanctuary is in Maharajganj district in Uttar Pradesh. Sohagi Barwa is one of the prominent habitats of Tiger in Uttar Pradesh. . There are other animal also such as Leopard, Cheetal, Bear, Wild cat, Wild boar & Python.

Kachhua Sanctuary: Kachhua Sanctuary is in Varanasi District in Uttar Pradesh, India. There are different species of tortoise, Ganges dolphin and other water animals, which can be found here.

CHECK YOUR PROGRESS - 1:

1. Dudhwa National Park is a part of which Tiger Reserve?

2. Mentioned name one main Bird Sanctuary.

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3. In which year Hastinapur Sanctuary was established?

4. Which Sanctuary is situated in Hardoi district of U.P? Write a note on it.

2.3.2 MADHYA PRADESH:

Bandhavgarh National Park: This is one of the most popular national parks in India located in the Umaria district of Madhya Pradesh. Bandhavgarh was declared a national park in 1968, with an area of 105 km². This park has a large biodiversity. The density of the tiger population at Bandhavgarh is one of the highest known in India. The park has a large breeding population of Leopards, and various species of deer.

Kanha National Park: Kanha National Park is a national park and a Tiger Reserve in the Mandla and Balaghat districts of Madhya Pradesh, India. It was divided into 2 sanctuaries till 1933 named as Hallon and Banjara of 250 and 300 square miles respectively. Created on June 1 1955, it stretches over an area of approximately 940 km² combinedly in the two districts of Mandla and Balaghat. With its buffer zone of 1067 km² and 110 km² of Phen sanctuary, it forms the Kanha tiger reserve in the year 1974. It is the largest national park in the central India. The popular name of this park is WILD MAGIC. This park project is running with the help of World Bank. This park is having a large population of Royal Bengal tiger's alongwith the leopards, the sloth bear, barasingha, and the Indian wild Dog.

Satpura National: Satpura National Park is located in the Hoshangabad district of Madhya Pradesh in India. It is named after the Satpura hill ranges (Mahadeo hills). Satpura National Park, an unique ecosystem, is very rich in biodiversity. The fauna comprises of tiger, leopard, sambar, chital, Bhedki, nilgai, four-horned antelope, chinkara, bison (gaur), wild boar, wild dog, bear, black buck, fox, porcupine, flying squirrel, mouse deer, Indian Giant squirrel etc. There is a wide variety of birds. Hornbills and peafowl are some of them. The flora of this national park consists mainly sal, teak, tendu, *Phyllanthus emblica*, mahua, bel, bamboo, and a wide variety of grasses and medicinal plants.

Sanjay National Park: It is located in the Sidhi District of Madhya Pradesh, in India. It is a part of the Sanjay-Dubri Tiger Reserve. It covers an area of 466.7 km². The national park consists mainly of sal forests .It also consists of Tiger, leopard, spotted deer, sambar deer, wild boar, Neelgai, Chinkara, Civet, Porcupine, Monitor Lizard, and three hundred nine species of birds. Most attractive birds in this national park are Golden Hooded Oriole, Racket-tailed drongos, Indian Pitta Rufus-Treepie, Lesser Adjutant, Red-headed vulture, cenereous vulture, Indian white-rumped vulture, Ezyption vulture, Nightjars and many other species.

Madhav National Park: Madhav National Park is located in Shivpuri District of Gwalior region in northwest Madhya Pradesh, India. It considered as the ancestral home of the line of Ali Khan, a region based in Punjab, and most famous for the laws of commonly credited with defining modern day jurisprudence. . Shivpuri is well known for the royal legacy of its past, when it was the summer capital of the Scindia rulers of Gwalior.

Van Vihar National Park: Van Vihar National Park is a national park in India located in the heart of Bhopal, which is the capital city of Madhya Pradesh. In 1983 it was declared a national park. It covers an area of about 4.45 km². Inspite of his status as a national park, Van Vihar is developed and managed as a modern zoological park, followed by the guidelines of the Central Zoo Authority. The animals here are kept in their natural habitat. Most of the animals here kept are either orphaned which are brought from various parts of the state or are those which are exchanged from other zoos.

Mandla Plant Fossils National Park: National Fossils Park is situated in Dindori district of Madhya Pradesh in India. This national park has plants in fossil form that existed in India anywhere between 40 million and 150 million years ago. It spreads over seven villages of Mandla District which are Ghuguwa, Umaria, Deorakhurd, Barbaspur, Chanti-hills, Chargaon and Deori Kohani. The Mandla Plant Fossils National Park extends in an area that spreads over 274,100 square metres. Such fossils are found in three other villages but they are outside the national park.

Panna National Park: Panna National Park is a national park located in Panna and Chhatarpur districts of Madhya Pradesh in India. It has an area of

approximately 542.67 km² (209.53 sq mi). In 1994 it was declared as the twenty second Tiger reserve of India and the fifth in Madhya Pradesh. In 2007 it was rewarded with the *Award of Excellence* as the best maintained national park of India by the Ministry of Tourism of India. It is a notable fact that by 2009, the entire tiger population had been eliminated by poaching with the collusion of forest department officials.

Pench National Park, Madhya Pradesh: Pench National Park is situated in Chhindwara and Seoni districts of Madhya Pradesh, India. It derives its name from the Pench River that flows through the National park from north to south dividing the park into almost equal

Western and eastern halves- the well forested areas of Chhindwara and Seoni districts respectively. In 1977 it was declared a sanctuary but it raised to the status of National park in 1983. Later on it was established as Tiger Reserve area in 1992. It is the only national park famous for water rafting.

Nature reserves:

There are a number of nature reserves, including:

Amarkantak: Amarkantak is a pilgrim town located in Anuppur District in the state of Madhya Pradesh, India. It is also known as "Teerthraj" (the king of pilgrimages). Amarkantak region is a unique natural heritage area .Also it is the meeting point of the Vindhya and the Satpuras, with the Maikal Hills being the fulcrum. This is where the Narmada River, the Sone River and Johila River emerge.

Bagh Caves: The Bagh Caves are a group of nine rock-cut monuments which are situated among the southern slopes of the Vindhya in Kukshi tehsil of Dhar district in Madhya Pradesh state, India. These monuments are located at a distance of 97 km from Dhar town. These caves are renowned for mural paintings by master painters of ancient India.

Bhedaghat: Bhedaghat is a town in Jabalpur district of Madhya Pradesh, India. It is situated by the side of river Narmada and is approximately 20 km from Jabalpur city. It's most famous sights are the Dhuandhar Fall, Marble Rocks, and the Chausath Yogini temple. The temple is one of the four major extant temples

containing carvings of sixty four yogini, which are female yoga mystics. It was built in the 10th century under the Kalachuri Empire.

Chambal River: The Chambal River is a tributary of the Yamuna River in central India, and it forms a part of the greater Gangetic drainage system. The river flows north-northeast through Madhya Pradesh, running for a time through Rajasthan, then forming the boundary between Rajasthan and Madhya Pradesh before turning southeast to join the Yamuna in Uttar Pradesh state. It is a legendary river and we find mention in ancient scriptures. The perennial Chambal originates at Manpura which is south of Mhow town, near Indore, on the south slope of the Vindhya Range in Madhya Pradesh. The Chambal and its tributaries drain the Malwa region of northwestern Madhya Pradesh, while its tributary, the Banas, drains southeastern Rajasthan. It ends a confluence of five rivers, including the Chambal, Kaweri, Yamuna, Sind, Pahuj, at Pachnada near Bhareh in Uttar Pradesh state, at the border of Bhind and Etawah districts.

Narwar: Narwar is a town in Shivpuri district in Madhya Pradesh in India. Narwar is a historic town and the Narwar Fort is just east of the Kali Sindh River and it is situated at a distance of 42 km from Shivpuri. Narwar was known as Narwar District during the times

of Gwalior State. It is also known as Nalpura (Nala's town) in many medieval Sanskrit inscriptions. The Narwar Fort is renowned for its architecture and it is also very ancient. The fort is surrounded by the Kali Sindh River. There are 3 dams namely as Harsi Dam, Mohini Sagar and Atal Sagar. The Narwar is a very good tourist place due to its surroundings by river Kali Sindh and archaeological importance of Narwar Fort. Presently the Fort is being renovated by the Archaeological Survey of India.

Pachmarhi: Pachmarhi is a hill station in Madhya Pradesh state of central India. It is known as "Satpura ki Rani" (Queen of Satpura), situated at a height of 1100 m in a valley of the Satpura Range in Hoshangabad district. It is the highest point in the central India region and the Vindhya and Satpura range.

CHECK YOUR PROGRESS-2:

1. Kanha National Park is divided into two sanctuaries namely.

2. Which park is popularly known as Wild Magic?

3. Which National Park mainly consists of Sal forests?

4. Which National Park is declared as the 22nd Tiger Reserve?

2.3.3 CHHATISGARH:

Chhattisgarh is a new state but it was an ancient civilization, which can be felt by visiting the historical remains in the state. The state is blessed by nature with magnificent waterfalls, mountains, forests and wildlife. The Green State of Chhattisgarh has 41.33% of its area under forests, and it is one of the richest bio-diversity areas in the country. There are many tourist attractions which are worth seeing.

Water Falls:

Chitrakote Falls: Chitrakote Falls are regarded as the Niagara Falls of India and they got the distinction of being the broadest waterfall in India. Chitrakote Falls are listed amongst the most popular waterfalls in Chhattisgarh. The strikingly beautiful falls shows immense natural beauty .The waters of the river flowing through dense vegetation and cascades from a height of about 95 feet is a treat to watch and attracts thousands of tourists all around the world. The breadth of the waterfall varies according to the season and goes down drastically in the summers. The most spectacular views of Chitrakote Falls are during the monsoon season when the river flows in its full fury and touches both the banks and is filled with silt.

Tirathgarh Waterfalls: Tirathgarh Waterfalls are also known as "Milky Fall" because of the white colour of the water. It gives us the impression that milk is falling from the rocky slope as it decends down . The lush green forests give a very beautiful look to the water fall. The water flows through the various streams and cross numerous paths along the way in a zigzag manner and finally ending up in the fall. It is a treat to watch.

Chitradhara Waterfalls: The beautiful Chitradhara Waterfalls is located just 19 km form Jagdalpur in Chhattisgarh on the way to Chitrakoot Falls. It is one of the best sightseeing and weekend vacation destinations of Chhattisgarh. The scenic beauty associated with this place ranks it amongst the most popular outdoor destinations in Bastar District. It lies near a small and serene village called Potanar and attracts thousands of tourists from within the state and rest of the country. It has become one of the best picnic spots where families and friends come to enjoy the outdoors and watch the gushing waters cascading down the hill at high speed.

River Indravati is the main source of Chitradhara Waterfalls. The river passes through dense forested lands in a zigzag manner, cutting through uneven rocky terrains and finally descending from the top of the hills. The sound of water flowing through the river and splashing into the air after hitting the ground provides a delightful experience especially during the monsoon season. The natural beauty of this place along with the dense forests and pristine waters of the lake ranks this place amongst the top Eco Tourism Sites in Chhattisgarh.

Tamra Ghoomar Waterfalls: Tamra Ghoomar Falls is located at around 45 km from Jagdalpur. It is very close to the Chitrakoot waterfall. This is a recently discovered waterfall with a height of more than 100 feet and is generally formed in the rainy season. There are green fields on either side of this waterfall. Just like Chitrakoot and Tirathgarh Waterfalls, the stunning beautiful Tamra Ghoomar Falls is another natural wonder and a scenic spot near Chitrakoot. The natural beauty of the area featuring lush forested lands, deep valleys and magnificent hills add to the beauty of this place and attracts tourists towards it. It is indeed one of the best Eco Tourism destinations in Chhattisgarh. The area surrounding the falls is rich in natural attractions and the best way of exploring this place is to trek or take a scenic drive.

It has become an important picnic spot in Chhattisgarh where numerous tourists make it a point to visit and free them from the stress of busy city life. It is the best place to relax and rest amidst the tranquil quietude of picture perfect scenery. Tourists are greeted with scenic views of flowing waters, passing along the trees on both sides, cutting its way through the rocks and finally cascading at high speed from the top of the hill.

Mandawa Waterfalls: Mandawa waterfall is located in a place called Mandawa around 31 km away from Jagdalpur. At Mandawa, the stream of water flows step-wise and falls from a height of 70 ft to make a beautiful cascade called Mandawa Waterfall. The water from this waterfall collects there in a small reservoir called jalkto and flows downstream meeting Kanger River forming two other waterfalls namely Tirathgarh and Kanger-dhara. Due to its flat top and adjacent horizontal rocks, it offers a good view.

Kanger Dhara: Kanger Dhara is located inside the Kanger Valley National Park, 36 km from Jagdalpur. For reaching Kanger Dhara, one should get the applicable permission and tickets from the District Forest Office located at the entry to the park. The best season for visiting the park is from winters up to summers, after which the park closes for the tourist from the beginning of Monsoons in the month of July.

Akuri Nala: It is a small waterfall in Koriya district about 65 km from Baikunthpur, near Bansipur village, in an area surrounded by rocks and forests. Even in summer, the area is cold, giving it the name of "the natural air conditioner of Koriya".

Amrit Dhara Waterfall: This beautiful natural waterfall in Koriya district on the Hasdo River is about seven km from Nagpur on the Manendragarh-Baikunthpur

Road. In 1936, Ramanuj Pratap Singh Judeo, the King of Koriya State, started a mela (fair) here on Mahashivratri, and the practice is followed till today.

Gavar Ghat Waterfall: This beautiful natural waterfall is in Koriya district on the Hasdo River and it is about 40 km from Baikunthpur.

Mainpat: Mainpat is a hill station and it is known for its Tiger Point waterfall and woolen fabric. Mainpat is about 45 km by road from Ambikapur in Sarguja district.

Ramdaha Waterfall: 'Ramdaha Waterfall' is a natural waterfall in Koriya district on the river Banas, near Bhavarkhoh village, it is about 160 km from Baikunthpur. About 100-120 feet high and 20-25 feet wide, it is surrounded by forests and rocks.

Jatmai-Ghatarani Waterfalls: Jatmai is Located in the South East Highlands of Chhattisgarh situated around 85 km from Raipur in Mahasamund district towards Gariaband. There is a temple called Jatmai Dham. Ghatarani waterfall is 25 km from Jatmai. It is bigger than Jatmai falls. It is not easily accessible and takes a bit of trekking skills to reach. The natural beauty is awesome.

Caves:

Kotumsar Caves: Kotumsar Caves are situated at a distance of about 40 km (25 mi) from Jagdalpur. Kotumsar Caves are about 35 meters below ground level and around 1371 meters long. Kotumsar Cave is a subterranean limestone cave located near the banks of Kanger River in the western portion of National park. It was discovered by the local tribals around year 1900 and explored by a renowned Geographer Shri Sankar Tiwari in the year 1951 and it is one of the best known caves in Chhattisgarh as well as in India.

These caves have got the distinction of being India's first and world's second longest natural caves. As they are underground, there is pitch-darkness inside. It features Stalactites and Stalagmites formations. The caves feature five chambers having several blind wells. Kotumsar cave harbours a variety of fauna like bats, frogs, snakes, crickets, spiders, fishes, millipedes etc. Fishes and frogs are found in the ditches of the cave whereas bats, spiders, crickets are found on the ceilings and walls of the cave.

Kailash Caves: Kailash Caves are located in the Kanger Valley National Park area near Mikulwada. The caves are located around 40 km from Jagdalpur.

Discovered in 1993, the caves are around 250 meters long and are situated at an altitude of 40 meters above the ground level. It features stalactite and stalagmite formations that offer stunning sight. The hollow walls of the cave, when struck by hand, make incredible musical sounds.

Gadiya Mountain: Gadiya Mountain in Kanker district has a natural form of a fort. This mountain has a tank that never dries. The tank is named Sonai-Rupai after the daughters of the Kandra king, Dharma Dev, who established his capital on the mountain. To the south of the tank is a cave, Churi Pagar, which provided safe refuge to the King, his family and 500 people in case of attack. Towards the southeast part of the mountain is a 50 meter long cave, Jogi Cave, where monks used to meditate. A small pond in this cave flows over the rocks like a waterfall. The Doodh River flows at the bottom of the mountain. Thousands of devotees celebrate Mahashivratri by climbing this mountain.

Ramgarh and Sita Bengra: Ramgarh and Sita Bengra are situated in Surguja district. Lord Rama, central character of the epic Ramayana, and his wife Sita, are believed to have stayed in these caves during their 14 years of exile. The locals know many stories about the caves, handed down through generations.

Singhanpur cave: "Singhanpur cave" in Raigarh district with pre-historic paintings is very famous.

National Parks and Wildlife Sanctuary:

Indravati National Park: Indravati National Park is situated on the banks of river Indravati and comprises vegetation of Tropical Mixed Deciduous Forest interspersed with grasslands. The park is spread over a total area of approximately 2799.08 km². The Park is famous for its unique and diverse wildlife, which includes Tiger, Panther, Spotted deer, Sambhar, Chinkara, Black buck, Barking deer, Swamp deer, Gaur, Hog Deer, Blue bull, Chousingha, Wild Buffalo, Sloth bear, Wild bear, Wolf, Jackal, Hayna, etc.

Kanger Valley National Park: Kanger Valley National Park is located at a distance of 27 km from Jagdalpur in Bastar district of Chhattisgarh. The valley runs from West to East almost bisecting the park into two halves.

Achanakmar Wildlife Sanctuary: Achanakmar Wildlife Sanctuary is a wildlife park in Chhattisgarh, India. The sanctuary houses a number of endangered animal species, including leopards, Bengal tigers, and wild bison. Two of the sanctuary's c.35 tigers, Bison, an endangered species, wild Boar, Chital, barking deer can be seen in fields close to Achanakmar. It comprises 557.55 km² of forest and is linked by the hilly Kanha - Achanakmar Corridor to the tiger reserve in Kanha in Madhya Pradesh. The park is part of Bilaspur Forest Division in northwest Chhattisgarh, around 55 km north-west of Bilaspur. The sanctuary is close to Amarkantak, which is the origin of the Narmada River.

Barnawapara Wildlife Sanctuary: Located in northern part of Mahasamund district of Chhattisgarh, Barnawapara Wildlife Sanctuary is one of the finest and important wildlife sanctuaries in the region. The Barnawapara Wildlife Sanctuary is known for its lush green vegetations and unique wildlife. The major wildlife of the Barnawapara Sanctuary include Tigers, Sloth Bear, Flying Squirrels, Jackals, Four-horned Antelopes, Leopards, Chinkara, Black Buck, Jungle Cat, Barking Deer, Porcupine, Monkey, Bison, Striped Hyena, Wild Dogs, Chital, Sambar, Nilgai, Gaur, Muntjac, Wild Boar, Cobra, Python to name a few.

Gomarda Reserve Forest: Gomarda reserve forest is situated in Sarangarh Tehsil of Raigarh district. It is spread over 278 km². It is a natural home for many rare wild animals like tigers, bears etc. It is about 60 km by road from Raigarh.

CHECK YOUR PROGRESS – 3:

1. Which fall is regarded as the Niagara Fall of India?

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2. Which fall is known as Milky Fall?

3. Which mountain is in natural form of a fort?

4. Which sanctuary is close to Amarkantak?

2.4 Role of National Parks, Wildlife Sanctuaries and Other Unique Natural Heritage in Tourism Promotion

Natural tourism is entirely a new approach in tourism. Natural tourism is a preserving travel to natural areas to appreciate the cultural and natural history of the environment, taking care not to disturb the integrity of the ecosystem, while creating economic opportunities that make conservation and protection of natural resources advantageous to the local people.

In short, natural tourism can be categorized as a tourism programme that is - "Nature based, ecologically sustainable, where education and interpretation is a major constituent and where local people are benefited."

All this together can be called natural tourism. If a travel does not satisfy any one of these constituents, then it is not called a real natural tourism venture.

2.5 GLOSSARY:

1. **Preserving**- Maintain (something) in its original or existing state.
2. **Conservation**- Preservation, protection, or restoration of the natural environment, natural ecosystems, vegetation, and wildlife
3. **Wildlife**- Wild animals collectively; the native fauna (and sometimes flora) of a region
4. **Integrity**- The quality of being honest and having strong moral principles; moral uprightness.
5. **Categorized**- Place in a particular class or group.

2.6 ANSWERS TO 'CHECK YOUR PROGRESS':

Check Your Progress - 1:

1. Dudhwa Tiger Reserve
2. Nawabganj Bird Sanctuary

3. 1986

4. Sandai Bird Sanctuary

Check Your Progress - 2

1. Hallon and Banjara

2. Kanha National Park

3. Sanjay National Park

4. Panna National Park

Check Your Progress - 3

1. Chitrakote Water Fall

2. Tirathgarh Water Fall

3. Gadiya Mountain

4. Achanakmar Wildlife Sanctuary

2.7 REFERENCES BOOKS:

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2.9 TERMINAL AND MODAL QUESTIONS:

Short Answer Type:

- Write a short note on Hastinapur Sanctuary.
- Describe in brief the importance of Kanha Tiger Reserve.

- Briefly describe any two Bird Sancturies.
- Write the name of animals found in Satpura National Park.
- What is the significance of Amarkantak?
- Describe the location of Madhav National Park.
- Write about the vegetation of Barnawapra Sanctury.
- Write a short note on Gomarda Reserve forest.

Long Answer Type:

- What is the importance of Sancturies in relation of wild life?
- Describe about "Teerth Raj".
- Discuss the importance Gadiya Mountains.

Unit-3

Tamil Nadu and Andaman and Nicobar Islands

Structure:

3.1 Objectives

3.2 Introduction

3.3 Beaches & Backwaters

3.4 Natural Manifestations of Touristic Significance

3.5 Check Your Progress

3.6 Summary

3.7 Clues to Answer

3.1 Objectives:

After going through the Unit-12 on **Beaches & Other Natural Manifestations' of Touristic Significance** with a special reference to **Tamil Nadu and Andaman & Nicobar Islands**, you would be able to:

- Know about the popular beaches in Tamil Nadu and Andaman & Nicobar Islands.
- Know about the natural attractions in Tamil Nadu and Andaman & Nicobar Islands.
- Understand the role of Natural attractions in attracting tourists.
- Understand the various forms of nature tourism at these places.
- Understand the tourism in Tamil Nadu and Andaman & Nicobar Islands.

3.2 Introduction

Unit 12 gives detailed information about Beaches & Other Natural Manifestations' of Touristic Significance in India with special reference to Tamil Nadu and Andaman & Nicobar Islands. These states have got immense potential with regard to nature & nature tourism. And provide a number of opportunities for tourists. Most of India's finest beaches are in Tamil Nadu and Andaman & Nicobar. Virtually its entire 900 km length coastline is lined with sandy beaches, rocky promontories and coconut palms. Each year, a great number of visitors arrive here in search of tranquil, palm-fringed beaches. Tamil Nadu is full of surprises! The intrepid tourist, who has heard and read about Tamil Nadu, expects to see Lots of Temples. Several Monuments perhaps. Then the surprises begin, 1000 km sun kissed beaches, magnificent historical monuments, eternal rhythm of the gurgling waterfalls, wondrous wildlife & bird sanctuaries, emerald green natural habitats, artefacts, paintings, dance forms, the colour and pageantry of festive days with good network of road, rail and air linking all the destinations in the country. Often described as a sleepy French provincial town, Pondicherry retains a distinct Gallic flavour. French is still spoken among the older residents, while stately colonial mansions stand in tree-lined streets that are still known by their colonial names. Even the policemen continue to wear the military-style caps, known as kepis. Andaman and Nicobar Islands ($6^{\circ}30' - 9^{\circ}30'N$; $93-94^{\circ}E$) are high islands forming the southward extension of this mountain chain. Floating in splendid isolation, east of the Indian mainland, is the archipelago of 572 emerald islands, islets and rocks known as the Andaman and Nicobar Islands. This Union

Territory is spread over a distance nearly 800 Kms. from North to South with 38 inhabited islands. A hill range extending from Burma (Myanmar) to Indonesia, these undulating islands are covered with dense forests and an endless variety of exotic flora & fauna. Andaman & Nicobar Island offers beautiful island vacations and beach tours. Each island in Andaman's has its own uniqueness and beauty. The beaches in Andaman's are very clean & crystal clear. In no place, we can find both island vacations and beach tours in a same place. All these states of Tamil Nadu and Andaman & Nicobar Islands provide great opportunities to natives, tourist & Tourism.

3.3 Beaches:

Tamil Nadu:

Tamil Nadu beach destination is famous among the tourists. The long golden sand, the bountiful sea ends his journey and meets the land. The state of Tamil Nadu faces Bay of Bengal and Indian Ocean and these water bodies give rise to various beach destination of India which are very much popular among the international tourist as well as to the domestic travelers. All the beaches of Tamil Nadu lies on the southern tip of the country, Tamil Nadu enjoy a wonderful coastline. The sights on rising as well as setting sun can be seen from this coastal area.

Covelong Beach: Covelong beach of Tamil Nadu lies in a picturesque village on the State Highway that joins Chennai to the temple town of Mahabalipuram. This beach of Tamil Nadu is one of the most beautiful and virgin beaches of India and adjoins a small but charming fishing village and is on the coast of the Bay of Bengal. This Tamil Nadu Beach is located at a distance of 40 km from Chennai. The beach is located on the site that was developed originally as a port by Saadat Ali, Nawab of Carnatic.

Ellot's Beach: This Beach of Tamil Nadu is one of the cleanest beaches of India and is in the city of Chennai. This Beach of Tamil Nadu is located towards the south of Marina Beach and is an extremely calm and tranquil place. The beach of Tamil Nadu is known as 'Bessei' amongst the locals. As the Tamil Nadu beach does not offer much activity, it is ideal for long walks. Elliot's Beach of Tamil Nadu is quite a hit amongst both tourists and the natives of Tamil Nadu.

Kanyakumari Beach: This beach of Tamil Nadu is in the southernmost tip of India, Cape Comorin or Kanyakumari the place where tourists love to see Sangam (the confluence point) of the three seas - Bay of Bengal, Arabian Sea and Indian Ocean it is also a lagoon where steps lead you into the waters to bathe at once, all merging into blue waters of a huge water body surrounding this important pilgrim center on three sides.



Source: (Marina Beach from air)

Marina Beach: Marina Beach of Tamil Nadu is the longest beach of India. Marina Beach, comprising of golden sand, good surf and a shimmering clean blue sea. This Beach of Tamil Nadu is counted among one of the longest beaches in Asia. Marina beach is located on the eastern side of Chennai, adjoining the Bay of Bengal. Watching the sun set and Sun rise from the beach is a fascinating experience.

Mahabalipuram Beach: Mahabalipuram Beach of Tamil Nadu is also known as Mamallapuram Beach and is on the shores of the Bay of Bengal has a coastline spanning a distance of over 20 km with beautiful beaches. This Tamil Nadu Beach is located 58km from Chennai on the Mahabalipuram road, the golden sandy beach is a picturesque place bounded by the shimmering sea and rolling hills.

Rameshwaram Beach: Rameshwaram Beach of Tamil Nadu is one of the most popular pilgrimage centers of South India. The sea here is also a home to rare sea species and coral reefs. Remarkable variety of marine life-algae, starfish, sea cucumber, crabs, sponges and the sea cow are found here. One may also sight some dolphins playing in the serene waters of Rameshwaram. The serene beach with shallow waters makes an ideal site for swimming and sunbathing.



Source: www.mytripolog.com (**Rameshwaram Beach**)

Muttukkadu Beach: The “Muttukkadu” Beach of Tamil Nadu is one of the most exciting and thrilling tourist destination of India. Amidst the picturesque landscape of the place, the Muttukkadu beach is known for the calm and serene backwater of the sea and the natural estuary which adds to the beauty of the place. The natural scenic beauty of the place captures the imagination of a poet. The backwaters provide an excellent view of the sunrise and sunset which attracts many local tourists as well.

Poompuhar Beach: This Tamil Nadu Beach is also known as Kaveri poompattinam and is about 40 km from Chidambaram in Tamil Nadu. The Cauvery River drains into the Bay of Bengal at Poompuhar. Poompuhar is an ancient historic town situated in Sirkali Taluk of Nagapattinam district, Tamil Nadu. An archaeologist delight, Poompuhar is a town for those who like to wander amidst history and take a stroll through time. It was once a major port during the reign of Cholas.

Tiruchendur Beach: This Beach of Tamil Nadu is 85km from Kanyakumari and the temple which lies on the shores of the sea is an inspiring sight. The surging fresh tide of the sea washing the feet of the temple is a lovely sight to behold. The sea is believed to have miraculous benefits for those who dip in it before praying at the temple.



Source: ligysspace.blogspot.com (**Velankanni Beach**)

Velankanni Beach: This beach of Tamil Nadu is located at Tamil Nadu. Velankanni beach is 350 kilometers away from Chennai. Sobriquet name of this Tamil Nadu beach is Lourdes of the East as both the places experience a large number of pilgrims on an annual basis. There are a couple of festivals that go on in the months of August and September. These are major tourist attractions as well. A major tourist attraction of Velankanni beach is the Church of our Lady of Health.

Vattakottai Beach: This Tamil Nadu Beach is a solitary beach destination located in Tamil Nadu. Specially known for the 18th century citadel, the place is also called as the Vattakottai Fort. Bearing the imprints of past rulers, the granite Fort is the prime attraction of the place. Vattakottai Fort was once the dwelling ground of the Pandya rulers. With the fading streamline of a small river flowing by the side of the Fort, there are visible evidences of the existence of a canon in the ancient times. Protected by the 25-26 feet high surrounding walls, the Fort has an extension that touches the waters of the sea.

Andaman & Nicobar Islands

India has almost a 6000 km long coastline, which is home to some of the finest beaches in the world. Andaman & Nicobar Islands has many beautiful, crystal clear and fine eco-friendly beaches. Andaman & Nicobar Islands have also recently been recognized as a world-class eco-tourist destination to discover the under-water treasures of marine life. Andaman & Nicobar Islands has many sandy crystal clear beaches and it's an eco-friendly tourist destination. Despite the tropical climate of the region, beaches of Andaman and Nicobar Islands offer a calm and cool environment that add to the beauty of the turquoise blue waters.

The beaches at Andaman and Nicobar Islands also support a diverse range of marine life and water sports. Some of the popular types of the water sports that the beaches in this region offer include swimming, scuba diving, water-skiing, windsurfing etc. The most amazing feature of the beaches in Andaman and Nicobar Islands is that they do not have any such major man made developments such as beach side cafes or parks, etc., but they are still one of the star attractions for tourists. The reason is their all pervasive beauty which is nature's gift. Once you are at the Andaman and Nicobar Islands beaches, you are sure to soak yourself in the eternal beauty of the place.



Source: pritskulkarni.blogspot.com (**Corbyn's Cove Beach**)

Carbyn's Cove Beach: Carbyn's cove beach, the coconut-palm-fringed beach, ideal for sun basking is 6 km away from Port Blair town. Historical remains like Japanese bunkers can be seen on the way. The Snake Island, situated just across the beach is famous for Scuba Diving.

North Bay Beach: North Bay beach is just north of Port Blair. The beach and the snorkelling opportunities in its fringing coral reefs are the closest ones you will find to Port Blair, and therefore, it gets quite crowded.

Munda Pahar Beach, Chidiya Tapu: Before the sunset, enjoy a swim at Munda Pahar Beach, which is 1 km ahead of the bus stand at Chidiya Tapu.

Wandoor Beach: Twenty Five Kms. from west of Port Blair is Wandoor Beach famous for swimming & for Coral Viewing. One can also go to Mahatma Gandhi Marine National Park from Wandoor by boat. Situated near Tirur, this place has

a beautiful sandy beach with shallow water. It is suitable for swimming, sun basking and sunset viewing.

Radhanagar Beach: is one of the two popular beaches located at Havelock Island in Andaman and Nicobar Islands. The other one is Vijaynagar Island. The serene beach which is far away from the polluted cities and towns has a majestic spell that attracts tourists to its beauty. Radhanagar Beach of Andaman and Nicobar Islands is situated at a place which is 7 kilometers away from Dolphin Yatri Niwas at Havelock Island. The beach is the favourite among all nature lovers who love to explore the nature of different places.

Harminder Bay Beach: is counted amongst one of the most exquisite beaches of Andaman and Nicobar Islands. The beach is sited 100 kilometers away from Port Blair at Hut Bay Island. You can travel to the pristine beach through ships run by Inter Islands shipping services from Port Blair.

Ramnagar Beach: is situated in the northern region at the Diglipur Island and is accessible through water and road. The sandy beach is only 15 kilometers away from Kalighat. The beach is surrounded by palm and coconut trees and other coastal shrubs.

Other Beaches to explore in Andaman's are Sylvan Sands, Chidyatapu, South Andaman; Cinque Island, South Andaman; North Bay, South Andaman; Collinpur, North Passage Island; Merk Bay, Neil Island etc.¹

3.4 Natural Manifestations of Touristic Significance

Tamil nadu

The perfect blend of cultural significance and majestic natural beauty makes Tamil nadu one of the most visited Indian tourist destinations. The state also has popular hill stations like Ooty and Kodaikanal that are milestone destinations of Tamil nadu tourism. Wildlife sanctuaries & National parks of the state are other attractions.

Backwaters in Tamil nadu

Pichavaram: Pichavaram the second largest Mangrove forest in the world, near the temple town of Chidambaram, is one of the unique Eco-tourism spots in South India. The backwaters, inter connected by the Vellar and Coleroon river systems,

offer abundant scope for water sports, rowing, Kayak and canoeing. The Pichavaram forest not only offers waterscape and back water cruises, but combines another very rare occurrence - the mangrove forest trees permanently rooted in a few feet of water. The Pichavaram mangroves are considered among the healthiest mangrove occurrence in the world. Pichavaram consists of a number of islands interspersing a vast expanse of water covered with green trees. The area is about 2800 acres and is separated from the sea by a sand bar which is a patch of extraordinary loveliness. The Pichavaram mangrove biotope, with its peculiar topography and environmental condition, supports the existence of many rare varieties of economically important shell and fin fishes. The Pichavaram mangroves attract an appreciable bird population of residents, local migrants and true migrants. At the mangroves, so far, 177 species of birds belonging to 15 orders and 41 families have been recorded. The season for birds is from September to April every year. Peak population of birds could be seen from November to January. This is due to high productive nature (in terms of prey organisms) of the ecosystem and coincidence of the time of arrival of true migrants from foreign countries and local migrants from their breeding grounds across India. The availability of different habitat types such as channels, creeks, gullies, mud flats and sand flats and adjacent sea shore offers ideal habitat for difference species of birds.

Backwaters of Muttukkadu: Muttukkadu, located at a distance of 36 km from Chennai, is a small town which serves as the most preferred picnic spot along with backwaters and water activities. Muttukkadu is adorned with greenery, including coconut trees and lush grassland to provide ample shade and to give relaxation to the visitors, making the environment pollution free and breezy. Helped by the fact that the backwaters and the facility of boat house have been developed by the Tamil Nadu Tourism Development Corporation for the visitors to stay and enjoy, the place is visited by hordes every year who come here to enjoy their holidays. The main attraction of this place is windsurfing regatta which is organized every year in the month of February, plus many other water games such as kayaking, boating, canoeing, etc are organized here. Those who are adventurous and fun loving, they can also join the training programs which are held in Muttukkadu. No wonder it is visited by thrill seekers as well as peace lovers from India and abroad. Prawns and Jellyfishes are well-known in this place and due to these reasons, it is also known as 'the land of flora and fauna'. It is just the

perfect destination for spending holidays with beguilingly exquisite backwaters, peaceful surroundings and a charismatic blend of greenery and gleaming blue.

National parks & sanctuaries

The topography of Tamil Nadu is delightfully varied and diverse. Of the 1,30,058 sq km land area, 17.6% is covered with forest area. These spreads over the plain and on mountain slopes. Dry lands are bestowed with dry-deciduous forests, thorn forests, scrubs and mangroves. The Western Ghats and a few cooler regions are endowed with moist deciduous, wet evergreen forests, sholas and grasslands. There are 5 National Parks and 17 Wildlife Sanctuaries in Tamil Nadu. The famous ones are:

Indira Gandhi Wildlife Sanctuary and National Park: Spread over 958 sq kms, this sanctuary can be reached through Top slip in Anamalai Hills on the Western Ghats. An ecological Paradise, this sanctuary encompasses a National Park with an area of 108 sq kms. About 800 species out of 2000 South Indian Flora are distributed here. This sanctuary nurtures Arboreal animals like lion tailed macaque, bonnet macaque, Common Langur, nilgiris langur, Malabar Giant squirrel and Grizzled Giant Squirrel. The ground animals listed are: Tiger, Panther, Elephant, Gaur, Pangolin, Sambar, Spotted Deer, Barking Deer, Mouse Deer, Wild boar, Dhole, Sloth Bear, Porcupine, Nilgiris Tahr, Civet Cat and Taddy Cat. The Avifauna includes Racket Tailed Drongo, Black Headed Oriole, Paradise Fly-catche, Whistling Thrush, Emerald Dove, Green pigeon, Tickell's Flower Pecker, Rufus Wood Pecker, Rose Ringed Parakeet, Black Eagle, Great Indian, Malabar pied HornBill, Fiary Blue Bird and green billed malkhoha etc.



Source: homestay360.com (**Mudumalai Wildlife Sanctuary**)

Mudumalai Wildlife Sanctuary: Located in Nilgiri Hills, the offshoot of the Western ghats meet the eastern ghats. This 321 sq km wide sanctuary encompasses a National Park measuring an area of 103 sq kms.

Mukkurthi National Park: Located on the high altitudes of the Nilgiris, 40 kms from Udhagamandalam. It contains a viable population of Nigiri Tahr (*Hamitrgus-hilocrius*), Sambar, Nilgiri Marten, Barking deer

Kalakkadu Wildlife Sanctuary: Situated in an area of 223 sq kms in the Tirunelveli District. Wildlife seen in the sanctuary includes Lion Tailed Macaque, Nilgiri Langur, Bonnet Macaque and common Langur, Nilgiri Tahr.

Mundanthurai Wildlife Sanctuary: Situated in an area of 567 sq kms in the Tirunelveli District. Animal wealth includes Tiger, Bonnet Macaque, Langurs, Slender Loris.



Source: animaladventurer.blogspot.com (**Blackbucks in Point Calimere Wildlife Sanctuary**)

Point Calimere Wild Life Sanctuary: Sprawling on 17.26 sq km surrounded by sea and shore, comprising forests of tidal swamps, this sanctuary is situated in Nagapattinam district. It is bestowed with populations of varied wild life such as Chittal, Wild Boar.

Srivilliputhur Grizzled Squirrel Wild Life Sanctuary: Located in Virudhunagar District, 45 kms off Virudhanagar Town. Interesting species are Flying Squirrel, Tree Shrew, Elephant , Lion-Tailed Macaque, many species of birds.



Source: ebharatdarshan.blogspot.com (**Guindy National Park**)

Guindy National Park: Situated in Chennai. Compositions of animals Black Buck, Chital, Jackal, Pangolin and a variety of Avi fauna.

Vallanadu Black Buck Sanctuary: A scrub forest area spread over to 16.41 sq km this sanctuary is situated in Thuthukudi (Tuticorn) District. Blackbuck, Spotted Deer, Macaques, Jungle cat, Mongoose and hares are plenty. This sanctuary can be visited through out the year.

Vedanthangal And Karikili Bird Sanctuaries: Situated in the Kanchipuram district. In all 115 species of birds have been recorded in this sanctuary.

Arignar Ann Zoological Park - Chennai

Situated in the outkirts of Chennai. More than 170 species of Mammals, Aviaries & reptiles are exhibited.

The Madras Crocodile Bank Trust – Nemmeli: This Crocodile Bank has been established with an aim to protectand conserve the endangered reptiles such as crocodiles, Alligators etc. Situated 14 kms from Mamallapuram, this trust now houses more than 6 species of crocodiles.

Viralimalai: This small town is situated south of tiruchirapalli, is bestowed with a large number of wild Peacocks, which roam around the Murugan Temple situated here.

Gulf Of Mannar Marine National Park: This a marine Bio Sphere, running along with coasts of Ramanathapuram and Tuthukudi (Tuticorin) Districts. This national Park is full of coral reefs, Dolphins, Turtles.

Waterfalls:

The eternal rhythm of the gurgling, cascading waterfalls in many parts of Tamil Nadu. Ecology is well preserved in the waterfalls around Tamil Nadu.



Source: jamesxyz.wordpress.com (**Courtallam Waterfalls, Tamil Nadu**)

Courtallam Waterfalls: The 'Spa of South' is situated at an elevation of 167mts in the Western Ghats. This is a popular health resort. Its waterfalls are known for their curative and recuperative properties. It is situated about 160 kms. south of Madurai. A shower in the cascading waters is a great experience. There are nine waterfalls here, Main falls, Chitraruvi, Shenbagadevi falls, Honey falls, Five falls, Tiger falls, Old falls, Fruit farm falls and the New falls. Its bracing season extends particularly from June to September. Excursions : Tiruchendur Murugan Temple(99kms), Tirunelveli(58kms), Krishnapuram(68kms), Tenkasi(5kms) and the Mundanthurai Tiger Sanctuary(75kms). Hogenakkal means " Smoking Rock" has got the name because of the smoke like appearance created by the spray of the plunging waters of River Kaveri at this spot. The falls, the rugged scenery and the enchanting natural attractions have made it an ideal holiday spot. It is a health resort known for its waterfalls with medicinal properties, set amidst lush green woods. 'Parisal' (a boat made of palm fibre) ride through River Cauvery will be a

pleasant experience. Hogenakkal is famed for the curative power of its waters. Surrounded by mountains, this place now offers a quiet holiday in comfort. It is 65 kms. from Salem.



Source: commons.wikimedia.org (**Hogenakkal Waterfalls**)

Hogenakkal Waterfalls: Attaru" river passes through the Elagiri hills and falls from 30 mtr. height at Jadaiyanur on the other side of the hills. This could either be reached from Tiruppthur(15 kms.) or by an hour's trek from the hills. Adjacent to the Jalagambarai falls, there is a Murugan temple located within a building constructed in the shape of a lingam. **Kumbakkarai Falls:** An amazing feat of Nature, the Kumbakkarai Falls is yet another jewel in the crown of Tamil Nadu's tourist attractions. Comparatively less known, these falls offer a breath taking view of the fascinating interaction between gushing water and solid rocks. Add a verdant and wild backdrop and you have an exquisite sight. Situated on the foothills of the Kodaikanal hills, the falls are located 8 kms from Periyakulam. The water from these falls is full of the goodness of minerals and herbs. There are two stages in these falls. At the first stage water gathers in huge rocks recesses which are variously named after wild animals such as tiger, elephant, snake etc., before falling as the main fall. **Suruli falls:** The Suruli falls which falls from a height of 150 feet gathers into a pool, flows for a short distance and again plummets to a depth of 40 feet , offering a spectacular sight of nature's raw and wild beauty. The dense forests that surround it provide an awesome backdrop. Facilities are available for men and women to bathe separately in these falls. The special feature of the fall is that it is a "round the year" falls. However the best season to visit is June - October, when the thickness of the water column is astounding. The beauty

of this fall finds mention in Tamil Epic, Silappathikaram written by poet Ilango. Cloud Land Falls popularly known as Chinna Suruli is situated 54 kms from Theni near Kombaithozhu village. These falls originate in the Megamalai. Tiger Falls is a dainty fall on the route to Munnar between Bodi and Bodimettu from Theni. *Killiur Falls*: Killiur Falls is a 90-foot high waterfalls is situated amidst picturesque surroundings in Yercaud. Akasagangai waterfalls is on Kolli hills which is known for medical herbs and plants. *Kalhatty Water Falls*: Kalhatty Water Falls, is located on the Kalhatty slopes and about 13 kms. from Ooty. Law's falls(7kms.) is situated in the Ghat RF of Coonoor forest range. the height of the falls is about 180 feet. St.Catherine Falls, located at 8 kms, the enoviron of the falls has beautiful scenery. *Fairy Falls*: Fairy Falls, is a delightful picnic spot just 5kms away from Kodai Lake. It is a wondrous waterfall. Silver Cascade is 8kms from Kodai lake. The overflow of Kodai Lake comes down here as a 180 foot high waterfall. Thalaiyar falls also known as Rat Tail falls, is one of the higest waterfalls in the world(975 foot high). It can be seen while climbing the Ghat Road to Kodaikanal from Kodai Road. It is not possible to visit this spectacular waterfall, as there is no approach route to this site.

Hill stations:

Tamil Nadu offers some of the most beautiful hill stations. Trekking, Hang-gliding, fishing and golf are just some of the activities you can take part in on these hill stations. *Kodaikanal* referred to as 'The Princess of Hill Stations', is situated amidst the folds of the verdant Palani hills in the Western Ghats at an altitude of about 2133 m. Kodaikanal is one of the most frequented hill resorts in India. With its spectacular rocks, tranquil woods, lovely lake and intoxicating air, Kodaikanal is an ideal hill resort for the tourists from all over. The pride of Kodaikanal is the 'Kurinji-flower', which blossoms once in 12 years. The hill-plantain fruits and plums are known for their freshness and taste. Kodaikanal lies pretty in the Palani Hills of Tamil Nadu. The summer retreat of Kodaikanal literally means 'gift of the forest'.



Source: hearty-india.com (**Kodaikanal**)

Coonoor is the second largest hill station in the Nilgiris, surrounded by tea plantations. It stands at an altitude of 1839 metres. It is essentially a small tea garden town where the weather is pleasantly cool through the year. It falls on the toy-train line between Mettupalayam (28 km) and Ooty. A popular pastime here is birdwatching as it is home to an extensive array of birds. The main attraction of course is Sim's Park, a small botanical garden that boasts of a wide variety of plants. It offers panoramic views of the Nilgiris, its hills and valleys lush with tea shrubs and eucalyptus trees. There is a quaint hill market which peddles leaf tea and essential oils. Although the height of summer is peak season, winter too is enjoyable in its own special way. Sports and honey moon travel.



Source: commons.wikimedia.org (**Botanical garden in Ooty**)

Ooty (Ootacamund) the Queen of the Hill Stations, also known as Blue Mountains is one of the most beautiful hill stations in India. This hill station has splendid green downs and lofty hills of extraordinary scenic beauty and is endowed with a salubrious climate similar to the English summer. Located in the Western Ghats at a height of 7,500ft. Ooty nestles in an amphitheater created by four majestic

hills-Doddabetta, Snowdon, Elk Hill and Club Hill. These hills are part of the Nilgiri ranges that are really the meeting point for the Western and the Eastern Ghats. **Kotagiri**: Kotagiri is a pristine little town, situated about 16 km from Ooty. Situated at an altitude of 1,950 mts, it was developed as a summer retreat for the British during the colonial days. **Yercaud** is a hill station in Salem District, in Tamil Nadu, India. It located in the Shevaroys range of hills in the Eastern Ghats; the Yercaud hill area is called the Shevaroy Hills. It is situated at an altitude of 1515 metres (4970 ft) above sea level, and the highest point in Yercaud is the Servarayan temple, at 5,326 feet (1,623 m). It is so named owing to the abundance of trees categorised as a forest near the lake, the name signifying Lake Forest. As a popular tourist destination, Yercaud is also called as Jewel of the South. Yercaud is connected to city of Salem, Tamil Nadu through Highway of 28 km.

Andaman & Nicobar Islands

The Andaman and Nicobar Islands, located in the Bay of Bengal (east of the Indian mainland geographically), is a splendid tropical island outpost, belonging to India but closer to south east Asia. From being known as 'Kalapani' (Black waters) due to the atrocious history of the British Regime in India, to being known as one of the best tourist destinations of India, Andaman Islands have come a long way. They are no more being called by that name. These islands were once a hill range extending from Myanmar to Indonesia, but are now a group of 572 near deserted islets (small islands), covered with lush forests and endless varieties of exotic flora and fauna. Incredible corals and marine life, crystal clear water and mangrove-lined creeks lure travellers to these picturesque islands. While the sandy beaches form as nesting homes to turtles, animals such as spotted deer, wild boar, gecko, crab-eating macaque and python can be spotted in the 86% area still covered by dense forests. These islands were populated mainly by indigenous tribes until the beginning of the colonial rule, but the majority of the population now, comprise of mainland settlers who live in and around Port Blair, the capital of South Andaman. Even with tourist infrastructure developments, these islands still remain virgin in the sense of unpolluted natural beauty and unexplored marine life. There if you wish to visit these islands, you would have a good time there.

Islands

The islands of Andaman and Nicobar are truly spectacular as the qualities possessed by them deserves some sincere appreciation. Eager holiday-makers assemble here from all over the world to experience the grandeur of mother natural at her very finest. As a matter of fact, the islands of Andaman and Nicobar actually are the chief tourist attractions. The most frequently visited islands in Andaman and Nicobar are mentioned in the list below:-

The Jolly Island: Being situated in the Mahatma Gandhi Marine National Park, this island allows its visitors to witness the gorgeous corals and experience recreational activities like snorkeling.

Chatham Island: Previously, this was one of the islands of Andaman and Nicobar that has the reputation of housing the hugest and most veteran saw mill found across the entire continent of Asia. In fact, the dilapidated saw mill can be approached by virtue of a bridge.

Barren Island: This is also counted amongst the many islands at Andaman and Nicobar and is home to the solitary volcano in India that is active.

Ross Island: This Island is blessed with a rich British heritage and houses a museum that displays snaps along with other crucial artifacts belonging to the British era. The name of the museum is 'Smritika'.

Viper Island: The maiden jail was erected in this eventful island that has seen the ends of numerous convicts including Sher Ali who assassinated Lord Mayo, the Viceroy of India.¹



Source: greenogreindia.org (**Volcano in Barren Island, Andaman**)

Wildlife:

When everything in Andaman and Nicobar is unique, how could wildlife remain behind? Andaman and Nicobar is home to some exclusive flora and fauna that stays hidden in the deep jungles of these islands or in the lagoons surrounding the islands. Andaman and Nicobar Islands are also a great place for all the enthusiastic bird watchers. The main attraction among birds definitely is the Nicobari Pigeon.

Great Nicobar Biosphere Reserve: Situated in The Great Nicobar Island, the biggest island of Nicobar group, the reserve covers an area of 885 sq. km, nearly 85% of the total land area of Great Nicobar Island. It was declared as a Reserve in January of 1989. It incorporates two National parks of India namely *Cambell Bay National Park* on the northern part of the island and *Galathea National Park* on the southern part. The main attraction of the reserve are Nicobar scrubfowl, the Edible-nest Swiftlet, the Nicobar Long-tailed Macaque, saltwater crocodile, giant Leatherback Sea Turtle, Malayan box turtle, Nicobar tree shrew, reticulated python and the giant robber crab.

Saddle Peak National Park: Saddle Peak National Park was started in Andaman district in the year 1979. It spreads on an area of 33sq.km. Situated just 5km from Diglipur, it is nearly 200km from Port Blair which is the administrative centre of Andaman and Nicobar Islands and also the nearest airport. The forest area of the islands is covered by thick tropical rain forests. The main vegetation is generally conducive to humid, warm and wet tropical climate. The main animal species in the park comprises Andaman wild pig, water monitor lizard, and salt water crocodile. The important birds found here are Andaman hill mynah and imperial pigeon. The best time to visit the park is between November and March. For accommodation, there are two rest houses inside the park.

Mahatma Gandhi Marine National Park: Covering an area of 281sq.km, Marine National Park is just 20 km from the capital of Andaman and Nicobar Island, Port Blair. The park is spread over 15 islands of Labyrinth group of Islands towards the West Coast of south Andaman. Each Island has diverse flora and that comprises of moist deciduous evergreen forests and mangroves in small numbers. The island shores are nesting grounds for 5 different types of tropical sea turtles. The main attraction for most tourists to this park is the living coral reefs and colorful marine life. Water-monitor, lizard, wild boar, sea snakes are other animal species that are found here. December to April is the best months for visiting the park.

3.5 Check Your Progress

- Name any three popular beaches of Karnataka?

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- Which Island in Karnataka is known as National Geological Monument?

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- Name any two beaches in Goa?

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- Name any three beaches in Andhra Pradesh?

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- Name two sanctuaries in Karnataka?

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- Name two sanctuaries/ National Parks in Andhra Pradesh?

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- Name two waterfalls in Karnataka?

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3.6 Summary

In this unit we learned about natural fabric & beauty of the states of Tamil Nadu & Andaman & Nicobar Islands. We learned that apart from the heritage, these places, are also blessed with bounties of nature such as beaches, backwaters, sanctuaries, national parks, forests, flora, fauna, waterfalls, eco-places and a lot of opportunities for nature, ecotourism & adventure tourism. A blend of ancient and modern world, Tamil Nadu offers you myriad of breathtaking sights including the natural beauty. Once known as Kalapani – Black Waters – for their role as a feared penal settlement, the Andaman and Nicobar Islands are now a relaxed tropical island outpost that belongs to India but is geographically closer to Southeast Asia. Superb, near-deserted beaches, incredible corals and marine life, an intriguing colonial past and the remnants of a Stone Age culture lure travellers to these mysterious islands, 1000km off the east coast of India in the Bay of Bengal. All these states provide enormous opportunities to tourists to experience beaches & nature.

3.7 Clues to Answer:

Check Your Progress

- Refer 8.3
- Refer 8.3
- Refer 8.3
- Refer 8.3
- Refer 8.4
- Refer 8.4
- Refer 8.4

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Block-2

Important Sea Beaches and Backwaters

Unit-5

Karnataka and Andhra Pradesh

STRUCTURE

5.1 Objectives

5.2 Introduction

5.3 Beaches

5.4 Natural Manifestations of Touristic Significance

5.5 Check Your Progress

5.6 Summary

5.7 Clues to Answer

5.8 Glossary

5.1 Objectives

After going through the Unit 8 on **Beaches & Other Natural Manifestations' of Touristic Significance** with a special reference to **Karnataka & Andhra Pradesh**, you would be able to:

- Know about the popular beaches in Karnataka & Andhra Pradesh.
- Know about the natural attractions in Karnataka & Andhra Pradesh.
- Understand the role of Natural attractions in attracting tourists.
- Understand the various forms of nature tourism at these places.
- Understand the tourism in Karnataka & Andhra Pradesh.

5.2 Introduction

Unit 8 gives detailed information about Beaches & Other Natural Manifestations' of Touristic Significance in India with special reference to Karnataka & Andhra Pradesh. These states have got immense potential with regard to nature & nature tourism. And provide a number of opportunities for tourists.

Karnataka rich with scenic beauty is located at the southern part of India. Resourceful with all kind of varieties including temples, wild life sanctuaries, waterfalls, cosmopolitan cities, valleys, hill resorts, beaches etc..., Karnataka is a must visit state in India for all tourist enthusiasts and will not get disappointed. The weather is very moderate at southern districts. The temperature remains ideal throughout the year. Most part of the Karnataka state are agricultural lands as the state is rich in rivers. The western part has Arabian sea and then the range of Western Ghats follows. This is the eighth largest state in India both in area and population. This state is famous for its natural beauty, rich culture and pleasant climate.

Andhra Pradesh or popularly known as AP is the fifth largest state in India both in population and area. This state is located at southern part of India. One of the developed state of India is popular for its agriculture, trade & industry and now Hyderabad is a premium destination for all IT companies of the world. Different areas of Andhra Pradesh are famous for different reasons. Krishna Godavari delta is famous for its rich fertile lands with lashing greenery. Vijayawada city located by the side of Krishna river is famous for its trade and commerce. Visakhapatnam is costal city is popular for its

natural beaches and tourist places. The coastal line is 970 Kms which is the second longest in India.

5.3 Beaches

Along its 7000 km of coastline, India boasts of a number of beautiful beaches. The tranquil environment with abundant greenery around is just perfect to relax and refresh the drained mind and body. Lie on the smooth sandy beaches and soak the warmth of the sun or simply take a quiet walk barefooted on these beaches. The calming effect will easily penetrate deep into your body. The vast stretches of sea water have a unique ability to carry away all your worries and heartaches along with its waves. You can also watch the sun rise and set far in the horizon and appreciate the beauty that is reflected as a reflection in the water.

And for all those who are more venturesome and yearn for a lot of challenging activities, the beaches have plethora of options to choose from. Swim along with the waves of the ocean water or dive deep into the water to discover a magnificent and colourful marine world. Also, catch the good waves and duck dive the bigger ones while surfing. Cruising in the ocean water is for those who wish to explore the vastness and deepness of the water body without getting wet.¹

Karnataka & Andhra Pradesh also have a coastline containing beautiful beaches & provides a number of adventure activities to the tourists.

Karnataka

Karnataka has a 320 kms long coastline which is bordered by beautiful palm trees. It has the Western Ghats in the east and is blessed with the blue waters of the Arabian Sea in the West. The coastline of Karnataka offers a picture-perfect world of beaches.

The scenic beauty and untouched charm of the beach areas make Karnataka beaches a must visit beach holiday destinations. Beautiful beaches with mesmerizing charm and serenity pulls innumerable tourists from all over the world.

Gokarna: A sleepy Brahmin town, lodged somewhere between a conservative society and a faithful hippy fan following, Gokarna is a dream destination for so many different reasons. Its refusal to fall into a certain type-casted slot is just one of them.



Source: www.karnatakaturism.org (**Gokarna Beach**)

Open beaches, undiscovered coves, epiphanic sunsets, jagged cliffs, quaint temples and an evasive culture that makes Gokarna whatever you want it to be. Sun, sand and surf is what you go to Gokarna for, and the solitude it offers is like a bonus track on a great music album. The Om Beach, with its Om-shaped shoreline is a scramble down a rocky cliff - just like every other beach in Gokarna. Cliffs separate each of Gokarna's five beaches from the others and offer spectacular views far out into the Arabian Sea. You can either take a boat ride to other beaches or walk it down. But either way the Kudle Beach, the Paradise Beach, the Half-moon Beach and the Gokarna Beach are worth a visit. Gokarna is 58 kilometres away from Karwar.



Source: www.karnatakaturism.org (**Kaup Beach**)

Kaup

Kaup is situated 12 kms. South of Udupi, on the coastal belt that passes through the West Coast National Highway. Kaup has a lovely beach, a ruined fort and an old 100ft. high lighthouse. There are two famous temples of Goddess Mariamma in Kaup. The Jain basadis here are in ruins, but are worth a visit.

Suratkal

15km north of Ullal, this beach is near the promontory on which the new lighthouse stands. A steep path connects the lighthouse to the Sadashiva Temple.



Source: www.karnatakaturism.org (**Suratkal Beach**)

Karwar

With gentle waves, miles of golden sand, a tranquil ambience, and acres of emerald foliage, Karwar has all the makings of a perfect holiday destination. The captivating landscape is ringed with rugged hill ranges, thick woods, and mysteriously deep valleys. This paradise inspired the great Indian muse Rabindranath Tagore to pen his first play. Since then, this little town has continued to inspire all its visitors. The Sadashivgad Hill Fort with a Durga Temple, the unique octagonal church, the 300-year old Venkatrama Temple with ochre paintings, and the Naganatha Temple, where an ant hill is worshipped, are sure to make a lasting impression. Devbagh is the most enchanting of the five islands along the Karwar coast. Visits to Anjidev Island are restricted. Karwar is a beautiful beach with gentle waves, palm-laced beaches, silver sand, and calm, peaceful valleys.



Source: www.karnatakaturism.org (**Karwar Beach**)

Malpe Beach

About 6 kms from Udupi, is the natural harbour of Malpe, situated at mouth of river Malpe. It is an important fishing centre on Karnataka's coastline and is famous for its scenic beauty. Other attractions at this enchanting beach are the island of Darya Bahadurgarh across the bay, the Balarama Temple and Malpe's oldest tile factory, set up by the Basel Mission. Just a boat ride away, the St Mary's Island is another admirable holiday destination from Malpe Beach. Best season to visit Malpe is from August to March.

The endless stretch of golden sand, graciously swaying palm trees, clear blue sky, and the gentle murmur of the sea set the perfect mood for an idyllic holiday.



Source: www.karnatakaturism.org (**Malpe Beach**)

Marawanthe Beach

Take in the spectacular views at Marawanthe, a seaside town where the West Coast Highway cruises alongside the Arabian Sea on one side, with the picturesque Kodachadri Hills forming a backdrop to the Sauparnika River on the other.



Source: www.karnatakaturism.org (**Marawanthe Beach**)

It is 52 km from Udupi. Marawanthe wears the look of a fairyland at sunset when the sky turns crimson and the golden rays of the sun are reflected in the sea as well as the river. Water sports promise an action-filled holiday. Visit Bairdur, a hamlet 45km from

Marawanthe with a lovely beach close by. Near Bairdur is the scenic Ottinane with its overhanging cliffs, an ideal place for viewing the sunset. A further drive will take you to the Belaka Theertha Falls near Bairdur.



Source: www.karnatakaturism.org (**Murudeshwar Beach**)

Murudeshwar Beach

Located 16 kms from Bhatkal, Murudeshwar beach is believed to have been consecrated by a piece of the Pranalinga of Mahabaleshvara thrown by Ravana and has some beautiful carvings and statues. It is a popular picnic spot, having beautiful blue waters of the sea and the majestic mountains. Other attractions around this beach are the Murudeshwar temple, the Kanduka Giri and the fort of Tipu Sultan. This lovely destination can be visited throughout the year.

Murudeshwar will woo you with its beaches, Shiva Temple and the tallest Shiva statue in India.

Murudeshwar beach is 50 kilometres away from Udupi.



Source: www.karnatakaturism.org (St. Mary's Island)

St. Mary's Island

About 6km from the Malpe coast into the Arabian Sea, one gets to see the palm-fringed St. Mary's Island which bears the cross that Vasco Da Gama placed when he landed in 1498. The island is 300m long and 100m wide. It is famous for its unique salt rock formations. Due to this geological importance, St. Mary's Island is declared as a National Geological Monument. It is also rated among India's top 7 Natural Wonders by Jet Wings Magazine. This beach is 11 km from Udupi.

Andhra Pradesh

The South Indian state of Andhra Pradesh has many exotic “Beaches” within its area that overwhelms the tourist with its captivating and enchanting beauty. Many tourists visit the state to experience the rich gift of nature. All the beaches of Andhra Pradesh are unique in its own ways.¹

The state can boast of housing numerous beaches within its area. Some of the important beaches of Andhra Pradesh are:

Bheemunipatnam Beach - Situated at a distance of 24 kilometers from the “port city” of Visakhapatnam, the Bheemunipatnam Beach enthralls the tourist with its beautiful landscape.

The "Bheemunipatnam Beach" of Andhra Pradesh offers one with an incredible view of nature. The golden sandy beach and the deep blue sea water captures the imagination of the poets. The Beach is blessed with the best gift of nature. The long unending coastline of the sea is bordered by the tall coconut tree that adds to the beauty of the place.

One can experience the divine presence in the beach of Bheemunipatnam. Amidst the picturesque landscape, the Bheemunipatnam beach bears relics of the rich architectural tradition of the Dutch rulers. Once an important settlement of the Dutch rulers, the Bheemunipatnam Beach has many dilapidated forts and monuments that add to the exotic nature of the place.

Situated at a distance of 24 kilometers from the "port city" of Vishakhapatnam, the Bheemunipatnam beach lies at the opening of the River Gosthani. The Bheemunipatnam beach is always full of tourist. Attracted by the natural and scenic beauty of the place, most of the tourist visit the Bheemunipatnam beach to spend the weekends. The beach offers the tourist with an excellent opportunity to explore and experience the bountiful gifts of nature. While some tourist can enjoy sun bath on the beach, others can swim in the deep blue sea. For those who want to add a little adventure to their holidays, the beach provides for many adventurous sporting events where one can explore his or her sporting skills.

Ramakrishna Beach- The "Ramakrishna Beach" of Andhra Pradesh provides the tourist with the most exhilarating and thrilling experience. The exquisite natural and scenic beauty of the place attracts Indian and foreign tourist. The serene environment accompanied by the picturesque landscape of the region, spells magic on the tourist who are bewitched by the captivating beauty of the Ramakrishna Beach. Far from the hustle bustle of the busy city life, the beach of Ramakrishna, fills the tourist with a sense of pleasure.

The attractive Ramakrishna Beach is one of the favorite holiday destinations for the young and old alike who wants to spend some time in solitude. Located near to the "port city" of Vishakapatnam, the Ramakrishna Beach offers with an wonderful experience of staying close to nature. The charming Ramakrishna Beach and the

Lawson's Bay enchants the tourist with its fascinating beauty. Manginapudi Beach- Popularly known as the “Machilipatanam Beach”, the Manginapudi Beach is a favorite destination for those tourist who love to eat “fish”.

Mypad Beach- The picturesque beauty of the Mypad Beach captures the imagination of the poet. Mypad Beach is popular for its wonderful coastline. The long stretch of greenery near the sea makes the place different from most of the other beaches of the state. The clear water and the golden sand together has made the Mypad Beach a luring site for all the beach lovers. The greenish water is also unique to this beach. The color of the water makes the view very refreshing. The golden sand here is the perfect spot for sunbaths.

The Mypad Beach of Andhra Pradesh is located at a distance of about 25 km from Nellore. The picturesque beauty of the beach attracts many tourists to this place every year.

Rishikonda Beach- The Rishikonda Beach offers the tourist with an aesthetic appeal that fills them with a sense of delight. It is one of the most beautiful beaches of Andhra Pradesh. The scenic beauty of the beach attracts many tourists all the year round. This beach is more suitable for those who enjoy water sports. It is the right place for water skiers and wind surfers. The golden sand of Rishikonda Beach makes it a perfect destination for those who love bathing in the sun.

Rishikonda Beach is situated about 8 km away from the Vishakhapatnam city. Ramakrishna Beach is also very close to this place. It offers a magnificent sight of the tranquil water and the azure sky.

Kakinada- Uppada Road Beach- is located on Uppada Road which is 5 km away from the town of Kakinada. The wide shore is a major attraction of this beach. The clear water, the silver sand and the golden sun gifts the beach with a majestic beauty. The charm that is woven by the azure sky makes the Kakinada-Uppada Road Beach a unique place to visit. There is also a beautiful and well maintained park that adds to the attractiveness of the beach.

Kalingapatnam Beach- Kalingapatnam Beach is among the most popular tourist destinations of Andhra Pradesh. It is located in Kalingapatnam of the Srikakulam District in Andhra Pradesh. A light house and the Buddhist Stupa are the main attraction of this beach. The scenic beauty of the beach attracts many international as well as Indian tourist to this spot every year. The Kalingapatnam Beach was also an important sea port in the ancient times and was frequented by many European traders and merchants.

Kothapatnam Beach- Kottapatnam Beach is the closest beach to the town of Ongole. It is located about 18 km away from Ongole of Andhra Pradesh. The clean and picturesque Kottapatnam Beach serves as a recreational spot for the local village people. It is famous for its natural beauty. This beach is a very favorite among the international tourists mainly because of its untouched beauty.

Motupalle Beach- One of the most attractive tourist destination, the Motupalle Beach is endowed with the best gift of nature. The Motupalle Beach is located in the Motupalle Village of Andhra Pradesh. The rows of Casuarina Plantations that line the sea attract many tourists to this beach. The lush greenery around the sea makes the beach appealing and a good spot for relaxation. The Motupalle Beach is also a fantastic place for sunbathing. The sun kissed warm sand is the perfect place for all the beach lovers.

Motupalle Beach is about 12 km away from Chinaganjam and is about 45 km from Ongole. The Kottapatnam Beach is thus very close to this spot. So on a trip to Motupalle Beach you can also plan a visit to the wonderful Kottapatnam Beach.

Perupalem Beach- The Perupalem Beach is located at a distance of 20 kilometers from the town of Narasapur situated in the West Godavari district of the state of Andhra Pradesh. The beach is famous for its scenic beauty and the coastline that offers a pleasurable retreat to its visitors.

The town of Narasapur is well known for its historic background and the old buildings of the British era that still lay erected in the town. The town is a part of the West Godavari district of Andhra Pradesh. The town has other tourist attractions like the temple dedicated to Sri Adikesava Embarmannar Swamy and the Lakshmi Narayana

Temple at Antarvadi situated at a distance of 3 kilometers from the town which are famous pilgrim sites for the followers of Vaishnavism.

Suryalanka Beach- The Suryalanka Beach with its enchanting beauty draws tourist from all over the India. The Suryalanka Beach is situated at a distance of 9 kilometers from the historical town of Bapatla, in the Guntur district of the state of Andhra Pradesh. The natural beauty of the beach and its closeness to the town attracts tourists who often return to the quietude of the sea beach for the weekend.

The nearest coastline to the Bapatla town is the Suryalanka Beach. The beach is endowed with geographical features that are well suited for the visitors. The beach prevalently has a flat terrain. The slope of the Suryalanka Beach declines gradually into the sea which is convenient for those who prefer to engage in a casual stroll down the sea beach. The shore of the beach is wide and spacious. The Suryalanka Beach overlooks the crystal blue waters of the Bay of Bengal.

For those who want to spend some valuable time in solitude can visit the vibrant and dynamic beaches of Andhra Pradesh.¹

5.4 Natural Manifestations of Touristic Significance:

In its broadest sense, nature in tourism involves experiencing natural places, typically through outdoor activities that are sustainable in terms of their impact on the environment. These can range from active to passive and include everything from bushwalking and adventure tourism experiences to sightseeing, scenic driving, beach experiences and wildlife viewing. Nature-based experiences are intimately linked to all other aspects of the visitor's total experience of a destination, such as food, culture, relaxation, health, escape, family needs, accommodation, transport, etc. All serve to complement each other and together form the basis of a visitor's overall satisfaction with their holiday. Conserved and protected areas (including Marine and National Parks), the Earth's biodiversity, and respect for local culture and those who have been traditional guardians of our natural environments, can be central to their interests.¹

Karnataka:

Picturesque Places

Coorg: A hedonist's paradise by all means, Coorg is a dream you'll never forget. Hills, old-world charm, coffee, amazing food, vivid cultures and warm hospitality -



Source: www.karnatakaturism.org (**COORG**)

there's something in the air in Coorg that makes all things beautiful. Its people are tall and fair. Its hills, scenic and unforgettable. Its food, wholesome and tantalizing. Its pools, pristine and clear. Its cultures, vibrant and exclusive. Coorg is an aristocrat, through and through. The stronghold of the Kodava community, who are believed to be descendants of the Aryans.

Kemmanagundi



Source: www.karnatakaturism.org (**Kemmanagundi**)

Located in Chikmagalur district, the picturesque hill station of Kemmanagundi is located at a height of 1434m above sea level. This was the summer retreat of Krishna raja Wadiyar IV. Ringed by the Baba Budan Giri Range and blessed with silver cascades, mountain streams and lush vegetation, Kemmanagundi's beautifully laid-out ornamental gardens, enchanting mountains and valleys views are a treat for the eye. The spectacular sunset view from the Raj Bhavan is a photographer's delight. For the adventurous at heart, Kemmanagundi offers many peaks to scale and intricate jungle paths to explore.

Kudremukh



Source: www.karnatakaturism.org (**Kudremukh**)

The Kudremukh (Horse Face) Range gets its name from the unique shape of its main peak. The broad hills, 95km south-west of Chikmagalur town, overlook the Arabian Sea and are chained to one another by deep valleys and steep precipices. As yet undiscovered by tourists, Kudremukh is a trekker's paradise. The best time to visit is after the monsoon when everything is lush green and the rivers, streams and waterfalls are at their best. Ganga Moola is a scenic place located in the Bhagawathi forest where the three rivers Tunga, Bhadra and Netravati originate. A shrine to Goddess Bhagawathi and a 1.8m high Varaha image inside a cave are the chief attractions here.

Kundadri

Source: www.karnatakaturism.org (**Kundadri**)

Located on Theerthahalli-Agumbe road, about 12km from Theerthahalli, Kundadri Hill is a gigantic monolithic rock formation. Surrounded by dense evergreen forests, it is a lovely place for trekking. A rough, stone-paved path leads to a Jain temple perched atop the hill. Camping in the open at Kundadri Hills on a full moon night is an exhilarating experience.

Jog Falls:

Bear witness to nature's headlong tumble as the Sharavati River makes a spectacular drop of 253m in four distinct cascades - known locally as Raja, Rani, Rover, and Rocket - to create the highest falls in Asia. The falls are at their best during the monsoon, with arching rainbows colouring the mist.



Source: www.karnatakaturism.org (**Jog falls**)

When the sluice gates of the upstream Linganamakki Dam are closed, it is worth taking a walk right down to the bottom of the gorge.

Iruppu Falls:



Source: www.karnatakaturism.org (**Iruppu falls**)

Nestling beside the Rajiv Gandhi National Park (Nagarahole), Iruppu Falls presents a stunning sight during the monsoon. From their humble origins in the Brahmagiri Range, the falls plunge 170ft. in two distinct stages. They come down to earth to flow as Lakshmana Theertha (Sacred River of Lakshmana). The ceaseless music of the falls and the hush of the densely wooded forest surrounding them make this a great picnic spot. A forest trail leads from these falls to the Brahmagiri Peak in Southern Kodagu.

En route to the falls, the Rameshwara Temple attracts a large number of pilgrims during the festival of Shivaratri.

Agumbe



Source: [www.karnatakaturism.org \(Agumbe\)](http://www.karnatakaturism.org)

If you enjoy spectacular sunsets, sparkling streams, verdant village vistas, and an untouched rustic ambience, Agumbe is the place for you. Situated at an elevation of 826m in Shimoga district, Agumbe provided the perfect setting for R. K. Narayan to film his novel *Malgudi Days*. Agumbe and its environs are full of exciting trekking routes. Forested trails lead from here to a jungle pond called Emkal Kere, a hillock called Nishani Gudda, and to Barkana Falls. Agumbe is also known as the Cherrapunji of South India.

BR Hills



Source: [www.karnatakaturism.org \(BR Hills\)](http://www.karnatakaturism.org)

Lose yourself in these ancient hills, which take their name from the Ranganatha Swamy Temple that sits at the edge of a granite precipice with a drop of more than 1000ft. into a dense forest. It is 86 km from Mysore.

Shivanasamudra Falls

Discover nature's handiwork in the form of this tiny island-town, 65km east of Mysore. Forested

hills and lush green valleys cradle a small hamlet and two fine temples.



Source: www.karnatakaturism.org (**Shivanasamudra Falls**)

Magod Falls

The mesmerising Magod Falls are located 80km from Karwar. Here, the Bedthi River takes two distinct leaps to hurtle from a height of 650ft. into a rocky ravine. The thickly wooded countryside, the roar of gushing water, and a beautiful view combine to make this spot an ideal choice for outings.

Kalhatti Falls

Water cascades from the top of the Chandra Drona Hill plunge down from a height of 45m to flow before the Veerabhadreshwara Temple, dedicated to Lord Shiva.

Kodachadri

Situated 100km from Shimoga and 36km from Hosanagara is this enchanting mountain which overlooks the vast Western Ghats. Kodachadri is famed for its glorious sunrises and sunsets. These hills (4411ft.) constitute one of the largest forest areas in Karnataka, and part of this region forms the Mookambika Nature Reserve. Kollur is an ideal base to explore the hills. The Mookambika Nature Camp is 4km south of Kollur.

Hebbe Falls

Hebbe Falls is located at a distance of 8km from Kemmanagundi. An exhilarating trek along a steep and narrow path leads you to these sprightly falls.

Nandi Hills

SOURCE: www.karnatakaturism.org (**Nandi Hills**)

This popular weekend getaway is just 60km from Bangalore. The bracing air and serene environs of Nandi Hills, perched at a height of 1455m above sea level, provided Tipu Sultan and the British with an idyllic summer retreat.

Mulliyana Giri -Baba Budan Giri

The highest peak between the Himalayas and the Nilgiris, Mulliyanagiri stands at a height of 1,930 metres (6,330ft). With two temples, one at the peak and one exactly half-way up which legend attributes to a completed penance and half-complete one, a car-drive and a small trek is all it takes to get to the very top.



SOURCE: www.karnatakaturism.org (**Mulliyana Giri -Baba Budan Giri**)

Chikmagalur

Chikmagalur has played host to an event, thanks to which, countless Indians wake up to brighter mornings. Centuries ago, when the Sufi mystic Baba Budan smuggled seven coffee beans from Yemen into India, he probably didn't bargain for millions of coffee junkies unwittingly blessing his soul everyday, with every sip of their coffee. Chikmagalur, whose hills nurtured the coffee culture at its bosom, is a green slice of heaven on a permanent coffee high.



SOURCE: www.karnatakaturism.org (**Chikmagalur**)

Gokak Falls:

Located 65 kms from Belgaum, Gokak gets its name due to the Goki trees found in abundance in these areas. Close to the town is the Gokak Falls. Here, river Ghataprabha takes a leap over a rocky bed 170ft down which makes a beautiful sight. The Gokak Falls is also known as the Northern Mysore Falls.

Sanctuaries & National Parks:

Karnataka wildlife tour stretches from the evergreen forests of the Western Ghats to the scrub jungle of the plains. Set amidst this picturesque setting, the Karnataka reserve forests and wildlife sanctuaries largely attract the tourists and these heavily contribute towards Karnataka wildlife tours.

Some of the wildlife destinations that form an integral part of Karnataka wildlife tour are:

Rajiv Gandhi National Park



Source: www.karnatakaturism.org (**Rajiv Gandhi National Park**)

The Rajiv Gandhi National Park is popularly known as the Nagarhole National Park. The Rajiv Gandhi National Park is connected to the Bandipur National Park in the south eastern part.

The Rajiv Gandhi National Park of Karnataka is spread over an area of 247 square miles and is the home to an abundance of wildlife. The Rajiv Gandhi National Park is considered to be one of the best wildlife parks of India. You will be surprised to see the large elephant and bison population in the Rajiv Gandhi National Park of Karnataka.

The landscape around the Rajiv Gandhi National Park in Karnataka is very beautiful with gentle slopes and shallow valleys. The reserve forest is scattered with the dry and mixed deciduous forest trees, grassy swamps and green grasses. The predominant vegetation of the Rajiv Gandhi National Park comprises of the following species of plants are *Dalbergia latifolia*, *Anogeissus latifolia*, *Pterocarpus marsupium*, *Emblica officinalis*, *Lagerstroemia lanceolata*, *Boabax malabaricum*, *Adina cordifolia*, *Gmelina arborea*, *Eupatorium*, *Solanum*, *Helicteres*, *Lantana*, The Rajiv Gandhi National Park in Karnataka is the home to various species of mammals and wild animals. They are Tiger, Leopard, Elephant, Barking deer, Porcupine, Gaur, Chital, Sambar, Wild boar, Jackals, Four-horned antelope, Leopard-cat, Sloth bear, Hyena, Mongoose, Civet & Otter.

The Rajiv Gandhi National Park at Karnataka hosts more than 250 species of birds. While strolling about in the park you will catch a view of the birds like Grey jungle

fowl, Great black woodpecker, Red spur fowl, Malabar trogon, Malabar pied hornbill, Scarlet minivets, Indian pitta, Oospreys, Herons & Ducks.

You will find an abundance of reptiles in the Rajiv Gandhi National Park at Karnataka. They are marsh crocodile, monitor lizard, tortoises, rattle snakes, frogs, rock python, and vipers to name a few.¹

Ranganathittu Bird Sanctuary



Source: www.karnatakaturism.org (**Ranganathittu Bird Sanctuary**)

The Ranganathittu Bird Sanctuary is an important tourist destination of Mysore and is located about 20 kilometers from the Vrindavan gardens of Mysore, Karnataka.

The Ranganathittu Bird Sanctuary of Karnataka has become a paradise for wildlife enthusiasts, nature lovers and bird watchers. The Ranganathittu Bird Sanctuary of Karnataka lies on the Kaveri river banks and the area has a group of six islets. These isolated islets of the Ranganathittu Bird Sanctuary are a favorite boarding ground for the varied species of birds that come in this place. The Ranganathittu Bird Sanctuary in Karnataka got the status of a bird sanctuary in 1940. The officials of the

Ranganathittu Bird Sanctuary recorded 2,080 foreign tourists and 2, 02,417 domestic tourists that visited the sanctuary in the year 2000.

The Ranganathittu Wildlife Sanctuary in Karnataka receives a heavy rainfall in the monsoon months and the temperature fluctuates between the 23 to 299°C throughout the year.

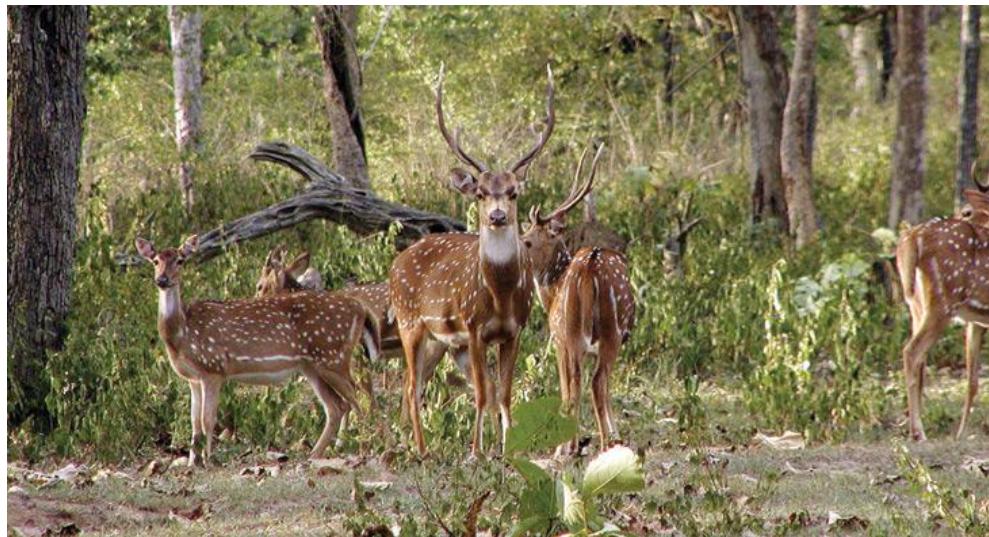
The Ranganathittu Wildlife Sanctuary of Karnataka is a delightful breeding ground for the migratory birds from all over the world. Here is a list of some of the avian species that reside in the Ranganathittu Wildlife Sanctuary at Karnataka such as Spoonbills, Snake bird, Egret, Heron, White Ibis, River tern, Partridge, Open bill storks, Darters, Peacocks, Stone plougher, Kingfishers, Little cormorants etc.

The Ranganathittu Wildlife Sanctuary spotted bird species from Siberia, Australia and even North America. These migratory birds come here in December and lay their eggs on islets in the river. Then they fly away with their little ones in the month of August.

You will get boating facilities in the Ranganathittu Wildlife Sanctuary at Karnataka and can see the trees near the river banks full of beautiful birds of myriad varieties.¹

Ranibennur Blackbuck Sanctuary

This unique sanctuary 88 Km away from Shimoga was a bid to save the endangered blackbuck. All of 119 sq.km. in area, with a 15 km radius marked out-of-bounds to visitors, this sanctuary is a serious attempt at protecting the natural habitat of this threatened species. Covered in shrubs forest and eucalyptus plantations, you might also spot wolves, fox, pangolin, hyena, wild boar, the rare Great Indian Bustard and many other bird species including bay-backed shrikes, large grey babblers and sand grouse.



Source: www.karnatakaturism.org (**Ranganathittu Bird Sanctuary**)

Dubare Elephant Camp, Coorg

The Dubare Elephant Camp is a famous training camp of Coorg, Mysore. The Dubare Elephant Camp of Karnataka attracts a number of tourists who come here simply to observe the various activities of these gigantic creatures.

The wildlife enthusiasts and the tourists spend hours in the Dubare Elephant Camp of Karnataka by watching the habits of the elephants and participating in the daily activities of these animals like feeding and bathing.

You will find a number of trained Naturalists in the Dubare Elephant Camp in Karnataka who will tell you the diverse aspects of the history and ecology of the elephants. The Dubare Elephant Camp is an unique eco-tourism destination in South India.



Source: www.karnatakaturism.org (**Dubare Elephant Camp**)

The Dubare Elephant Camp in Karnataka is run by the Karnataka Forest department and is the home to more than 150 elephants. Dubare Elephant Camp in Coorg is of historical importance. In the ancient times a number of elephants were brought here for their initial training. Today the Dubare Elephant Camp at Karnataka in Coorg gives excellent accommodation services to the tourists on the banks of river Cauvery. It is really thrilling to see the elephants feeding on sugarcane, coconuts or bananas.

The trained elephants of the Dubare Elephant Camp at Karnataka are very obedient and follow every command delivered by their mahouts.

The elephants of the Dubare Elephant Camp are trained to carry heavy logs, lift them and stacking logs in a symmetrical pile. The Dubare Elephant Camp of Karnataka is a project taken

in charge by forest department of the Karnataka state together with jungle lodges and resorts.

Dandeli Wildlife Sanctuary

The Dandeli Wildlife Sanctuary of Karnataka is located about 485 kilometres from Bangalore and occupies an area of 5729.07 square kilometres. The Dandeli Wildlife Sanctuary is set in a calm and peaceful ambiance. The Dandeli Wildlife Sanctuary is well known for being the second largest wildlife sanctuary of the Karnataka state.



Source: www.karnatakaturism.org (**Dandeli Wildlife Sanctuary**)

The Dandeli Wildlife Sanctuary of Karnataka comprises of steep slopes, deep river valleys and the enchantingly rich hilly forest terrain. The forest of the Dandeli Wildlife Sanctuary is a mixture of typical moist deciduous and semi evergreen forest. The riffling streams and the tributaries of the Kali, Kaneri and Nagajhari weave through the forests of Dandeli Wildlife Sanctuary of Karnataka. The Dandeli Wildlife Sanctuary is rich in diverse flora and fauna.

Sighting the wild animals through the dense forest of the Dandeli Wildlife Sanctuary in Karnataka is quite difficult and considered as an element of luck. The Dandeli Wildlife Sanctuary is home to a large variety of wild animals like Deer, Sloth bear, Elephant, Panther, Tiger, Wild dog, Gaur, Langur, Bison, Jackal, Giant flying squirrel.

You will see a number of reptilian and amphibian species in and around the Dandeli Wildlife Sanctuary at Karnataka. The major wildlife attraction of the Dandeli Wildlife Sanctuary at Karnataka is the crocodiles. The forest authority of the Dandeli National Park offers wildlife safaris in jeeps to the tourists visiting here. You can even walk through the undulating hills of the forest area and do various activities like bird watching through your powerful binoculars, see the crocodiles in the crystal clear water, do fishing. There are facilities for coracle boat rides and trekking in the jungles of Dandeli Wildlife Sanctuary of Karnataka.¹

Kokkarebellur Pelicanry

Every year, hundreds of winged visitors come together to set up a unique orchestra at Kokkarebellur with their shrill cries and cacophonous calls. You can watch the performances of painted storks and pelicans resplendent in their breeding plumage, as well as the seemingly frail but gregarious fledglings perched atop the tamarind, peepal, and portia trees dotting the village. These birds have become an integral part of this tiny hamlet in the sugarcane-rich Mandy district. It is believed that the villagers look after them like family members.



Source: www.karnatakaturism.org (**Kokkarebellur Pelicanry**)

Bandipur National Park

The Bandipur National Park of Karnataka is a beautiful forest reserve of southern India. The Bandipur National Park was established with the aim of conserving the nature and its resource. In 1930, the present Bandipur National Park was the Maharaja Voodiyar's hunting land which was converted into Venugopal Wildlife Park. Later in the year 1941, the park was expanded to the nearby Nagarhole National Park and named as the Bandipur National Park.

Now the Bandipur National Park of Karnataka is a part of the vast Nilgiri Biosphere Reserve which is considered as the extensive tracts of protected forest in India. In the

year 1973, the Bandipur National Park in Karnataka was declared as the tiger reserve of India. Now it is the best managed tiger reserve of India.¹



Source: www.karnatakaturism.org (**Bandipur National Park**)

Bannerghata National Park

The Bannerghata National Park is located at the southern outskirts of Bangalore city about 22 kilometres from the garden city. The Bannerghata National Park in Karnataka is spread over 25,000 acres of land and is well known for rich flora and fauna.

The Bannerghata National Park comprises of dry deciduous forests, thorny shrubs as well as moist deciduous forests. The Bannerghata National Park in Bangalore was established in 1971 with the sole aim of conserving the rare species of wildlife of the southern region of India. The Bannerghata National Park of Karnataka is a part of ten reserve forests of Anekal Range of the Bangalore Forest Division. The Bannerghata National Park at Karnataka is full of sandal, zizyphus, neem, jalaria, tamarind, and chujjullu trees.

The mammal species that shelters in the Bannerghata National Park of Karnataka are Elephant, Leopard, Fox, Gaur, Jackal, Hare, Sambar, Porcupine, Wild pig, Sloth bear, Barking deer, Spotted deer, Bonnet macaque, Common langur etc.



Source: www.karnatakaturism.org (**Bannerghata National Park**)

In the northern part of the Bannerghata National Park at Bangalore, the forest authority has organized for a tourist area. Here lion and tiger safari and herbivore safari are available. There is also a mini zoo, a reptile park, a mini aviary and a museum in this portion of the Bannerghata National Park. The Suvarnamukhi stream passes through the Bannerghata National Park. There is also a picnic corner, a serpentarium, pets' corner and a crocodile farm in the park premises.

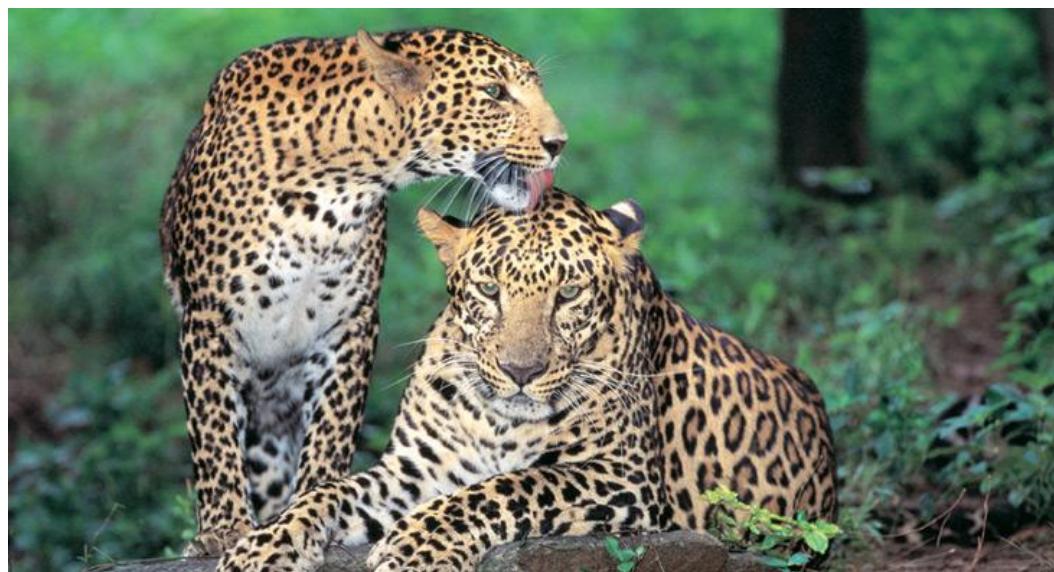
The zoo inside the Bannerghata National Park in Bangalore, Karnataka is a storehouse of amazing reptile species. You will be really amazed to see the varieties of venomous and non-venomous snakes.



Source: www.karnatakaturism.org (**Adichunchanagiri Peacock Sanctuary**)

Adichunchanagiri Peacock Sanctuary

One of the smallest sanctuaries in Karnataka, the Adichunchanagiri was established with the sole intention of providing a favourable habitat for peacocks. Over 0.84 sq.km., the sanctuary is a quick fix for bird lovers - in addition to peacocks, a broad diversity of bird species can be spotted here. The common mongoose, jungle cat, black-naped hare and the bonnet macaque can also be found here. Its proximity to the Chunchanagiri temple and the pilgrim centre has made it a popular stop in the pilgrim circuit.

Bhadra Wildlife Sanctuary

Source: www.karnatakaturism.org (**Bhadra Wildlife Sanctuary**)

The sanctuary takes its name from the Bhadra River, its lifeline. Popularly known as Muthodi Wildlife Sanctuary, after the village of its periphery, it is a great place to sight the tiger, observe the Indian bison, hear the strange calls of the striped hyena and spot the rare flying lizard. The southern part of the sanctuary is rich in birds, butterflies and reptiles. More than 250 species of birds, many of which are endemic to the Western Ghats, are spotted here.

Kudremukh National Park

The Kudremukh National Park of Karnataka is located about 130 kilometers from Mangalore. The Kudremukh National Park is encircled by the Kudremukh or the Horse Face range which overlooks the Arabian Sea.

The Kudremukh National Park of Karnataka comprises of a number of deep ravines as well as steep cliffs and is an ideal hub of animals and birds. The Kudremukh National Park occupies an area of 600.32 square kilometres and lies about 1,894.3 meters above sea level. The landscape around the Kudremukh National Park is very beautiful.



Source: www.karnatakaturism.org (**Kudremukh National Park**)

The best time to visit the Kudremukh National Park of Karnataka is between October and May. It is the period after monsoons and wildlife enthusiasts will enjoy the lush green jungle plenty of wild animals. The Kudremukh National Park in Karnataka is the home to a variety of flora and fauna. It is covered with lush green forests and high grasslands. The place is rich in the following species of trees such as Eucalyptus, Grevillea robusta, Casuarinas, Acacia auriculiformis etc.

There is a trace of tea and coffee plantation. The Kudremukh National Park at Karnataka has varied species of wild life. The following animals are available in

abundance in the Kudremukh National Park at Karnataka such as Gaur, Tiger, Sambar, Sloth bear, Wild dogs, Leopards, Jackals, Porcupine, Mongoose, Spotted bear, Barking deer, Lion tailed macaque, Giant flying squirrel, Malabar giant squirrel etc.

Kudremukh National Park of Karnataka has more than 195 rare avian species. They include Malabar whistling thrush, Imperial pigeon, Great pied hornbill, Malabar trogon etc.

Daroji Bear Sanctuary:

Located in a scrub jungle with rocky outcrops and caves, the Daroji Sloth Bear Sanctuary is devoted to the protection of the Indian Sloth Bear. It is 29 Km away from Bellary. Home to a large number of free ranging bears, the sanctuary also has hyenas, wild boars, pangolins, porcupines, jackals and leopards. Other denizen include star tortoise, monitor lizard and rock agama. A drive through the scrub jungle also provides opportunities to sight endemic species of birds such as the painted spur fowl, yellow throated bulbul, sand grouse and stone curlew, besides peafowl.

BRT Wildlife Sanctuary:

One of the hottest bio-diversity spots in the world, Biligiri Rangaswamy Temple (BRT) Wildlife Sanctuary takes its name from the ancient Ranganatha Swamy Temple that sits at the edge of a 1000 ft precipice. And is 110 Km away from Mysore. It is a haven for over 372 species of birds and wildlife such as elephants, tigers, leopards, wild dogs, four horned antelopes, black bucks



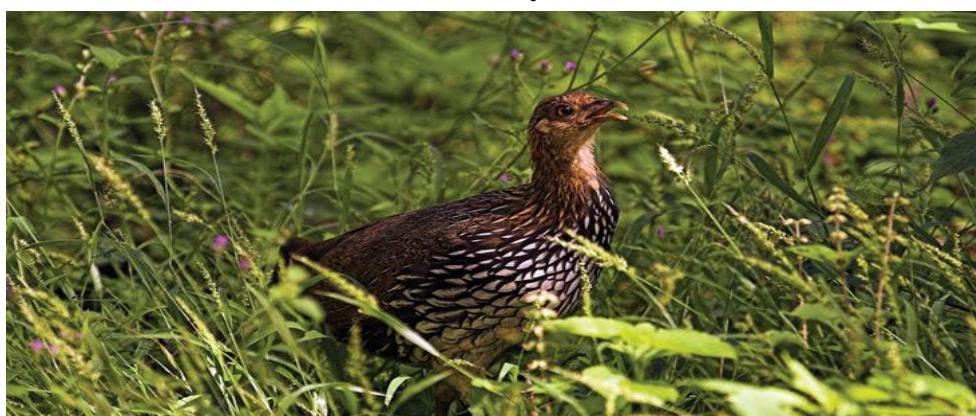
Source: www.karnatakaturism.org

(Biligiri Rangaswamy Temple (BRT) Wildlife Sanctuary)

and giant flying squirrels. Also visit the Dodda Sampige Mara (large Michelia Champaka tree) believed to be over 2000 years old and worshipped by the Soliga tribe. Vivekananda Girijana Kalyana Kendra located here displays preserved tribal information and the bio-diversity of the region. There are many trekking trails here, including one that leads up to Honnamati, the highest point of the range.

Besides, we also come across a number of other parks that contribute towards the Karnataka wildlife tours, viz.:

- **Anshi National Park- Birds Sanctuary**



Source: [www.karnatakaturism.org \(Anshi National Park\)](http://www.karnatakaturism.org (Anshi National Park))

- Someshwara Wildlife Sanctuary
- Gudavi Bird Sanctuary
- Cauvery Wildlife Sanctuary



Source: www.karnatakaturism.org (**Cauvery Wildlife Sanctuary**)

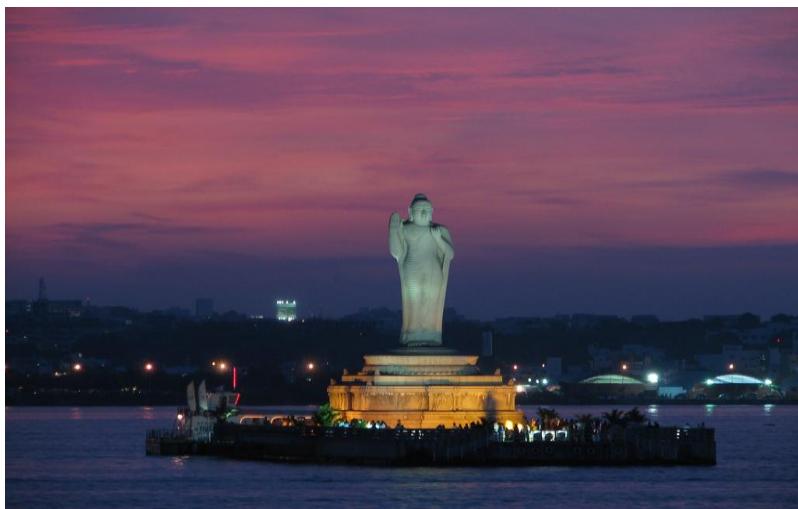
- Mandagadde Bird Sanctuary

Andhra Pradesh

Andhra Pradesh is endowed with a rich and varied Bio-diversity distributed over a mosaic of different habitats spread over the Eastern Ghats, the Deccan Plateau Region, the Coastal Mangroves, the Fresh Water bodies like Kolleru and Brackish water bodies like the Pulicat and the grasslands of Rollapadu. These varied habitats have been supporting a variety of animal and plant species ranging from the Tiger, Gaur, Elephant, Black Buck and a variety of Deers and Antelopes, besides a variety of birds, including the Great Indian Bustard, the Spot bill Pelican, the Lesser Florican and the near extinct Jerdon's Courser. In addition to the above faunal species, the forests of Andhra Pradesh support about 5000 plant species consisting of species like Teak, Rosewood, Sandal Wood, and the endemic Red Sanders and Cycas beddomeii, etc.¹

Scenic locations:

Hussain Sagar -Set in between the twin-cities, with one of the world's tallest monolithic statues of Buddha in the middle, the Hussainsagar is a picturesque man-made lake. Created by Hussain Shah Wali, during the reign of Ibrahim Quli Qutub Shah in 1562, the lake has facilities for speed boats, a huge 48 seated launch with starlit onboard dining and provision for private parties maintained by APTDC. Bhageeratha & Bhagmati, Khair-un-Nissan are the main Cruises present here. The access to the Buddha Statue and the boating is through the Lumbini Park.



Source: www.cityhyd.info (**Hussain Sagar Lake, Hyderabad**)

Horsley Hills - is the famous hill resort of Andhra Pradesh. Horsley Hills is an enthralling, charming little hill station. It is a beautiful summer resort with luxurious vegetation and rich fauna. These hills are situated at an altitude of 1,265m from the sea-level.

The climate at Horsley Hills is relaxing with temperature ranging from 20 deg C to 32 deg C maximum, even in summers. This is one of the major assets that draw number of tourists to Horsley Hills in summers. Even the surrounding comprising of the lush green plains spread all over, the forest, though not dense, adds to its beauty. On the hills that are lush with dense forest and thick greenness, you can see various species of plants stretching along the narrow roads.



Source: horsleyhillsholidays.com (**Horsley Hills, Andhra Pradesh**)

There are trees like Eucalyptus, Jacaranda, Allamanda, Gulmohar and flowering plants like Reeta, Shikakai, Amla, Beedi leaves, Bay leaves, Red Sanders and Blue gum found in the forest.

There are sandalwood trees found all over Horsley Hills. The Horsley hill does not lag behind in the species of fauna found here. In the dense forests of the shady slope hills, wooded with luxurious vegetation, you can find animals like Bears, wild dogs, jungle fowls, Sambar and Panther.

The Chenchu tribes dwell in the forest of Horsley Hills. They rear their famous Pungannur cows, which eat less food and yield more milk. There is also a 150-year old Eucalyptus tree.¹

Araku Valley- is one of the most important tourist destinations in Andhra Pradesh. A pleasant hill station famous for its scenic gardens with lush green nature, valleys, waterfalls and streams. It is situated at a distance of 112 km from Visakhapatnam. The journey to Araku valley on the Eastern Ghats with thick forest on either sides is itself highly interesting and pleasant.



Source: www.trekearth.com - (Araku Valley, Andhra Pradesh)

The place is over 3200ft. high with a bracing climate. The Botanical Garden at Padmapuram, Government Silk Farm with Mulberry gardens are the live examples to know the socio-economic conditions of the area. Tribal Museum is a big attraction of the Araku. Chaaparai, a picturesque place about 15 km from Araku is another picnic spot in this region. One must experience the climatic conditions and the natural beauty of this Valley. The natural beauty of this valley comes alive with the aboriginal tribes who dwell here and who have to this day kept their tradition and culture alive. About 19 tribes inhabit this area. The Dhimsa dance, an age-old folk dance normally performed during 'Itikala Pongal' is now offered in tourist's packages everyday.

Nagarjunakonda - is a historical Buddhist town (About 1700 years ago), now an island located near Nagarjuna Sagar in Guntur district/Nalgonda district in the Indian state of Andhra Pradesh. It is 150 km south east of the capital, Hyderabad.



Source: travel.tejasri.in (**Nagarjunakonda**)

It was formed when a hill was submerged in the waters of the Nagarjuna Sagar Dam, constructed in the 1960s. It is one of India's richest Buddhist sites, known in the ancient times as Sri Parvata. Nagarjunakonda, meaning the hill of Nagarjuna, was named after the Buddhist scholar and savant Acharya Nagarjuna who lived around the turn of the 2nd century AD. A Buddhist museum is situated on the entire island in the Nagarjunasagar dam. A.R. Saraswathi, in 1926, discovered this glorious place who was a researcher in the Archaeological Survey of India (ASI).



Source: travelinformationindia.blogspot.com (**Anantagiri, a Hill Resort in Andhra Pradesh**)

Anantagiri - a mesmerizing hill resort, is cocooned in the green hills of Andhra Pradesh & 3 km away from Srikakulam. It is blessed with some of the most strikingly beautiful view-points on the rolling hills of the Eastern Ghats. Thick woodlands, plush orchards, gorgeous waterfalls, a variety of flora and miles of coffee plantations await you in Anantagiri Hills. Anantagiri Hills is reputed as a health station as some of the flora here has medicinal properties, and the pleasant weather never fails to replenish the body and soul. Musi or Muchkunda river originates from Anantagiri. The Bhavanasi Lake, situated here, is referred to as the Badrinath of the South attracting pilgrims from far and away. The nearby Borra Caves are a treasure house in itself and date back to at least a million year. The natural formation of the stalactites and stalagmites in the Borra Caves is unique and attracts the adventurous and curious tourists from all over the world. Araku Valley also offers a favorite getaway from the Anantagiri Hills.

Sanctuaries & National Parks:

Kawal Wildlife Sanctuary -is the perfect destination to look for multiplicity of flora and fauna in India. Located in Adilabad district of Andhra Pradesh, the sanctuary lies at a distance of 50 km from Mancherila and 260 km from Hyderabad. It was established

in 1964 with the purpose of safeguarding the endangered species in their natural habitat. Owing to its bio-diversity, the haven was declared as a wildlife sanctuary later. Kawal Wildlife Sanctuary is visited by number of tourists every year. It has two watch towers, which offer stunning view of the surroundings. Sprawled across an area of 893 sq kms, the sanctuary boasts of a dry deciduous forest where teak, bamboo and numerous varieties of trees, shrubs and herbs can be seen. It houses various animals, including Sambar, Cheetal, Nilgai, Barking Deer, Indian Bison, Sloth Bear, Panther and Tiger.¹

Shivaram Wildlife Sanctuary - of Andhra Pradesh is a total delight for nature lovers. It was established in 1987. Sited on the banks of River Godavari, the sanctuary is known for its population of fresh water crocodiles. This haven truly appears to be immersed in nature's beauty and splendor. Sprawled in an area of 36.29 sq km, the wildlife asylum lies at a distance of about 10 km, 50 km and 80 km from Manthani, Mancherial and Karimnagar, respectively.



Source: globetrottingtips.com (**Kawal Wildlife Sanctuary in Andhra Pradesh**)

Sri Venkateswara National Park- is another attraction amidst the range of sanctuaries in India. Sited at a distance of 10 km from Tirupati, the park sprawls in an area of 353 sq km, over the Kadapa and Chittoor districts of Andhra Pradesh. It boasts of many mesmerizing waterfalls, like Talakona, Gundalakona and Gunjana. Sri Venkateswara Wildlife Sanctuary makes an interesting excursion from the divine land of Tirupati.



Source: indiantourist-spots.blogspot.com (Sri Venkateswara National Park, Andhra)

For a nature lover, the park is no less than a veritable heaven, where precipitous gorges, sheer ridges, unfathomable valleys and striking waterfalls find their place in a lush green countryside, surrounded by Seshachalam and Tirumala hills. Over and above, a plethora of wild animals and birds make the affable community in this indigenous land. Established in 1989, Sri Venkateswara National Park was named after Lord Venkateswara - the 'Lord of Seven Hills'. The wide range of fauna found here includes wild animals and mammals like Tiger, Civet, Jackal, Black Buck, Panther, Spotted Deer, Ibex, Sloth Bear, Pig, Bear, Bonnet Monkey, Wild Dogs, Bison, Jackal, Fox, Rare Golden Gecko, Jungle Fowl, Indian Giant Squirrel, Tree Shrew, Flying Lizards, Nilgai, Wildboar, Occasional Leopard and Hyena. Avifauna comprises of more than 100 species of birds, including Crested Serpent Eagle, Ashy Crowned Finch Lark, Indian Roller, Kingfishers, White bellied Woodpecker, etc.



Source: indiaturismtravel.wordpress.com (Mahavir Harina Vanasthali National Park)

Mahavir Harina Vanasthali National Park

In Andhra Pradesh, Mahavir Harina Vanasthali National Park is a popular destination amongst the lovers of wildlife. Situated in Vanasthalipuram, at a distance of 15 kms from Hyderabad, the park was established in 1975 and named after 'Lord Mahavira', to commemorate the 2500th birth anniversary of the prodigy. Once the hunting ground of the 'Nizams', Mahavir Harina Vanasthali National Park was later developed into a full-fledged sanctuary by the Government of India.

During monsoons, Vanasthali National Park appears mesmerizing with different colorful flowers blooming all around. The endangered Black Buck deer is found here in plenty. In fact, the park has estimated 400 deer in its expanse. Apart from the Black Bucks, there are many other species of animals here, including Cheetahs, Wild Boar, Monitor Lizards, Mongooses and Porcupines. Regarding avifauna, there are different varieties of Partridges, Quails, Peacocks, Doves, Pond Herons, Egrets, Kites, Vultures, Eagle, Kingfishers and Cormorants. More than 80 species of migratory birds can be seen here.

Manjira Wildlife and Bird Sanctuary- is a renowned haven that domiciles large number of local as well as migratory birds in Andhra Pradesh. Lying near Sangareddy in Medak district, this wildlife refuge is located alongside Manjira River. Snuggled between Manjeera and Singur barrages, the harbor formed by nine small islands extends over an area of 20 sq km.

Nehru Zoological Park - is credited with being the largest zoo in India. It is located at a distance of 16 km from Hyderabad and comes under the Bahadupur region. The park was named after Jawaharlal Nehru, the first Prime Minister of India. For wildlife lovers, Nehru Zoological Park is the best place to explore the rich flora and fauna in its natural habitat. Sprawled over an area of approximately 300 acres, the zoo has a wide array of animals, birds and reptiles.

Indian Rhino, Asiatic Lions, Royal Bengal Tiger, White Tiger, Black Panther, Giraffes and Black Bears are some amongst the animals' treasure of the zoo. In case you are hunting for adventure and buzz, then you can take jeep safari of the Lion Park, a place with exclusive charm throughout the continent. Nehru Zoological Park is an abode to

both, African and Indian Lions. If lucky enough, you may come across the Big Cats devouring their kill just a few feet away.

Apart from the animals, there are also reptiles, including Giant/Star Tortoises, Water Turtles, Chameleons, Hooded Indian Cobra, Monitor Lizards, Russell's Viper, Giant Rock-Python, Tree Snakes, Estuarine Crocodiles, etc. Amongst the herbivores, Nehru Zoological Park also boasts of Elephants, Rhinoceros, Hippopotamus, Zebras, Chousingha, American Bison, Chinkara, Antelopes, Black Buck, Deer, Sambar, Brow Antler Deer, etc.

Indira Gandhi Zoological Park -is one amongst the largest zoos of India, sited in the natural surroundings of a reserve forest. Sprawled in an area of 625 acres, the park was named after Indira Gandhi - the former Prime Minister of India. It was opened to the public in the year 1977. Located amidst Kambalakonda Reserve Forest in Visakhapatnam, the zoological park is surrounded by the Eastern Ghats on three sides and the Bay of Bengal on the fourth.



Source: commons.wikimedia.org (**Gharial at Indira Gandhi Zoological Park**)

The Park houses almost eighty species, numbering to eight hundred animals, in its expanse. Infact, it has special sections for primates, carnivores, lesser carnivores, small mammals, ungulates, reptiles and birds in their natural replicated enclosures. Amongst the primates, the extra attention is gained by Rhesus monkey, Bonnet monkey, Mandrills, Olive and Sacred baboons, whereas Panthers, Tigers, Lions, Pumas, Jaguars, Wolves, Jackals, Hyena, Ratel, etc are the major ones in Carnivores. The section of

Reptiles has Pythons, Tortoise, Terrapins, Monitor lizards, Snakes and Water Monitor Lizards. In the range of Herbivores, the park embraces Elephant, Bison, Sambar, Spotted deer and Thamin deer. Regarding Avifauna, there are Grey/ Rosy pelicans, Pied hornbills, Painted storks, Peacocks, Ducks, Love birds, Cockatiels, Macaws and various other ground birds. You can also walk beside the aviaries, which comprise a diverse collection of birds from the Eastern Ghats.

The animals like Himalayan Black Bear and Sloth Bear are kept in separate huge enclosures. Apart from other animals and birds, the special attraction at the park is made by the Hippopotamus and the Crocodiles, which can be seen basking in the sun.¹

Nellapattu Sanctuary and Pulicat Lake

This bird Sanctuary is located in Nelapattu village. It is located on the East Coast about 20-km north of the Pulicat Bird Sanctuary in the Nellore district. With a total area of 404-kms the Nelapattu Bird Sanctuary is one of the largest pelican habitats in Southeast Asia. Near this sanctuary is the Pulicat Lake, the second largest salt water lake in India. On a holidaya trip one can also sight the migratory birds which are another source of attraction at Pulicat lake in Andhra Pradesh.



Source: www.loveinfographics.com (**Flamingos at Pulicat Lake**)

Coringa Sanctuary: The Coringa sanctuary is situated around 20 Kms from Kakinada and 70 Kms from Rajahmundry. This sanctuary is a part of river Godavari and owns a heavy growth of Mangrove plantation. The highlight of the sanctuary is that it is situated on the backwaters of the sea. One can spot estuarine crocodiles, sea turtles, fishing cats, otters and large variety of birds here.

Kolleru Lake Bird Sanctuary: The Kolleru Lake Bird Sanctuary at Kolleru has the largest fresh water lake in Asia. It is 65 Km away from Vijaywada. The Kolleru lake attracts many nature lovers.



Source: www.team-bhp.com (**Kolleru Lake, Godavari, India**)

8.5 Check Your Progress

- 1) Name any three popular beaches of Karnataka?

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2) Which Island in Karnataka is known as National Geological Monument?

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3) Name any two beaches in Goa?

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4) Name any three beaches in Andhra Pradesh?

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5) Name two sanctuaries in Karnataka?

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6) Name two sanctuaries/ National Parks in Andhra Pradesh?

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7) Name two waterfalls in Karnataka?

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5.6 Summary

Well readers, after going through this unit of Karnataka & Andhra Pradesh, you must have got knowledge about the immense potential of these states with regard to beach & nature tourism. Karnataka has got great scenic beauty & having a concentration of beaches, lakes, rivers, waterfalls, sanctuaries, national parks, sanctuaries etc. Karnataka is blessed with over 300 km of pristine coastal stretch & sunny beaches at places like Malpe, Murdeshwara, Maravanthe, Gokarna, Kumta etc. Kudremukh, Kemmanagundi, Agumbe, Horanadu, Nandi Hills are some of the better known hill stations of Karnataka. Also Karnataka is known for its wildlife sanctuaries & National parks. Andhra Pradesh has a variety of attractions including beaches, hills, wildlife, forests and temples. Dominated by a regal past, the state of Andhra Pradesh is a live manifestation of a multi-dimensional scenic pleasure. Andhra Pradesh tourism is known as Koh-i-Noor of India. The South Indian state of Andhra Pradesh has many exotic “Beaches” within its area that overwhelms the tourist with its captivating and enchanting beauty such as Bheemunipatnam Beach, Ramakrishna Beach, Manginapudi Beach, Kakinada, and Kalingapatnam Beach etc. It also has a number of sanctuaries & national parks. After going through this block, surely you would have got a fair idea about the rich culture & natural manifestations which attract tourist in the states of Karnataka & Andhra Pradesh.

5.7 Clues to Answer

Check your Progress

1. Refer 8.3
2. Refer 8.3
3. Refer 8.3
4. Refer 8.3
5. Refer 8.4
6. Refer 8.4
7. Refer 8.4

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Unit-06

Kerala, Tamilnadu, Pondicherry and Andaman & Nicobar Islands

STRUCTURE

6.1 Objectives

6.2 Introduction

6.3 Beaches & Backwaters

6.4 Natural Manifestations of Touristic Significance

6.5 Check Your Progress

6.6 Summary

6.7 Clues to Answer

6.1 Objectives

After going through the Unit 12 on **Beaches & Other Natural Manifestations' of Touristic Significance** with a special reference to **Kerala, Tamil Nadu, Pondicherry and Andaman & Nicobar Islands**, you would be able to:

- Know about the popular beaches in Kerala, Tamil Nadu, Pondicherry and Andaman & Nicobar Islands.
- Know about the natural attractions in Kerala, Tamil Nadu, Pondicherry and Andaman & Nicobar Islands.
- Understand the role of Natural attractions in attracting tourists.
- Understand the various forms of nature tourism at these places.
- Understand the tourism in Kerala, Tamil Nadu, Pondicherry and Andaman & Nicobar Islands.

6.2 Introduction

Unit 12 gives detailed information about Beaches & Other Natural Manifestations' of Touristic Significance in India with special reference to Kerala, Tamil Nadu, Pondicherry and Andaman & Nicobar Islands. These states have got immense potential with regard to nature & nature tourism. And provide a number of opportunities for tourists. Most of India's finest beaches are in Kerala. Virtually its entire 900 km length coastline is lined with sandy beaches, rocky promontories and coconut palms. Each year, a great number of visitors arrive here in search of tranquil, palm-fringed beaches. Tamil Nadu is full of surprises! The intrepid tourist, who has heard and read about Tamil Nadu, expects to see Lots of Temples. Several Monuments perhaps. Then the surprises begin, 1000 km sun kissed beaches, magnificent historical monuments, eternal rhythm of the gurgling waterfalls, wondrous wildlife & bird sanctuaries, emerald green natural habitats, artefacts, paintings, dance forms, the colour and pageantry of festive days with good network of road, rail and air linking all the destinations in the country. Often described as a sleepy French provincial town, Pondicherry retains a distinct Gallic flavour. French is still spoken among the older residents, while stately colonial mansions stand in tree-lined streets that are still known by their colonial names. Even the policemen continue to wear the military-style caps,

known as kepis. Today, Pondicherry, has been renamed Puduchcheri. Located on the east coast of Tamil nadu, it is the administrative capital of a Union Territory that includes the former French enclaves of Mahe in Kerala, Yanam in Andhra Pradesh and Karaikkal in Tamil nadu. On the way to Pondicherry, one can view the natural beauty of the scenic Deccan plateau. Andaman and Nicobar Islands (6°30'-9°30'N; 93-94°E) are high islands forming the southward extension of this mountain chain. Floating in splendid isolation, east of the Indian mainland, is the archipelago of 572 emerald islands, islets and rocks known as the Andaman and Nicobar Islands. This Union Territory is spread over a distance nearly 800 Kms. from North to South with 38 inhabited islands. A hill range extending from Burma (Myanmar) to Indonesia, these undulating islands are covered with dense forests and an endless variety of exotic flora & fauna. Andaman & Nicobar Island offers beautiful island vacations and beach tours. Each island in Andaman's has its own uniqueness and beauty. The beaches in Andaman's are very clean & crystal clear. In no place, we can find both island vacations and beach tours in a same place. All these states of Kerala, Tamil Nadu, Pondicherry and Andaman & Nicobar Islands provide great opportunities to natives, tourist & Tourism.

6.3 Beaches & Backwaters

Kerala

Beaches in the Indian state of Kerala are spread along the 550-km Arabian Sea coastline. Kerala is an Indian state occupying the south-west corner of the subcontinent. The topography of the coastline is distinctive and changes abruptly as one proceeds from north to south. In the northern parts of Kerala, in places such as Bekal, Thalassery and Kannur, the headlands rise above the shore from the fringe of the beaches. The highlands are dotted with forts built by the colonial powers – the Portuguese, the Dutch and the British. The view of the surrounding area is exquisite. From Kozhikode, once the hub of the Malabar coast, the view changes to flat lands with rocky outcroppings jutting out.

Kerala enjoys an extraordinary kinship with the sea. Mythically born from it, Kerala's bond with the sea is that of a child and mother. By the virtue of having most of India's finest beaches, Kerala offers you surf, spice and sand like no other place. Though

extremely popular worldwide, the beaches remain strangely unspoilt and bewitching. The cool breeze that blows on the beaches will work like a balm to your soul.

Beaches

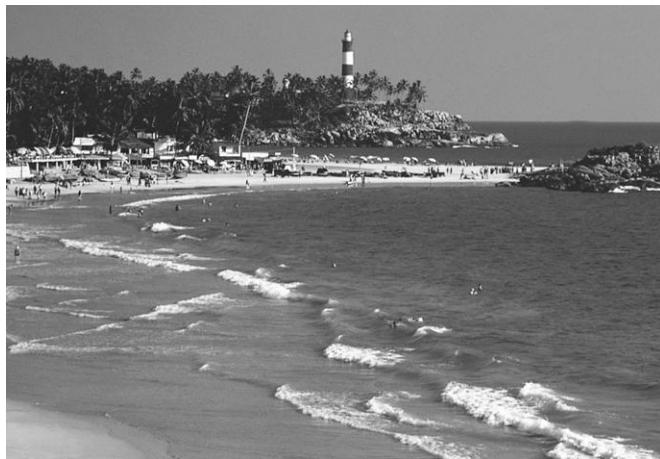
Alappuzha Beach, South Kerala: Referred to as the *Venice of the East*, Alappuzha has always enjoyed an important place in the maritime history of Kerala. Today, it is famous for its boat races, backwater holidays, beaches, marine products and coir industry. Alappuzha beach is a popular picnic spot. The pier, which extends into the sea here, is over 137 years old. Entertainment facilities at the Vijaya Beach Park add to the attraction of the beach. There is also an old lighthouse nearby which is greatly fascinating to visitors. Another delightful experience while in Alappuzha is a houseboat cruise.

Valiathura Beach: Valiathura Beach is located 10 km from Thiruvananthapuram. This was once the only port along the South Kerala coast. During monsoons, fishermen carry their catamarans to the edge of the Valiathura Pier which is 703 ft long, throw them into the sea, then jump in and swim to it.

Shankhumugham beach: Just 7 km from the city of Thiruvananthapuram, the Shankhumugham beach is a favourite haunt for people coming to watch sunsets. The beach is adjacent to the Thiruvananthapuram International Airport and Veli Tourist Village. An indoor recreation club, the matsya kanyaka (a gigantic, 35 m long sculpture of a mermaid) and a restaurant shaped like a starfish are some of the attractions at the Shankhumugham beach.¹

Thirumullavaram Beach: It is located 6 Km away from Kollam. Thirumullavaram Beach, is secluded beach and a beautiful picnic centre. About one and a half kilometre into the sea is the Nyarazhcha Para, literally Sunday Rock that can be seen from the shore at low tide. And near the beach is a Mahavishnu Temple.¹

Kovalam Beach: Kovalam is an internationally renowned beach with three adjacent crescent beaches. It has been a favourite haunt of tourists, especially Europeans, since the 1930s. A massive rocky promontory on the beach has created a beautiful bay of calm waters ideal for sea bathing.



Source: www.keralafamilytour.com (**Kovalam Beach**)

The leisure options at this beach are plenty and diverse. Sunbathing, swimming, herbal body toning massages, special cultural programmes and catamaran cruising are some of them. The tropical sun acts so fast that one can see the faint blush of coppery tan on the skin in a matter of minutes. Life on the beach begins late in the day and carries on well into the night. The beach complex includes a string of budget cottages, Ayurvedic health resorts, and convention facilities, shopping zones, swimming pools, Yoga and Ayurvedic massage centres. Thiruvananthapuram, the capital city of Kerala, is just 16 km away from Kovalam and getting there is no hassle. But if you are on holiday it is better to stay in Kovalam and visit the city.¹

Thiruvambady Beach: It is 1 km from Thiruvambady Road in Varkala. Calm and serene, this solitary beach is adjacent to the North Cliff in Varkala. Thiruvambady or the Black Sand Beach is an ideal place for those seeking peace and solitude and can be easily reached by climbing down the cliff or driving down a kilometre.¹

Samudra Beach: Lying to the north of the Ashok Beach, this beach can be accessed only by taking a detour past Kovalam Junction. It is an awesome sight to watch the waves crash on the rocks below as you walk along the stretch of sea wall here.

Neendakara Beach: It is located 8 km from Kollam. A famous fishing harbour, you can see the Ashthamudi Lake joining the sea from the Neendakara Bridge and also the Chinese fishing nets silhouetted against the sky.¹

Kollam Beach: Location: 3 km south of Kollam, An array of beach activities attract thousands of tourists throughout the year to this perfect beach setting offering panoramic views of the Arabian Sea. A port city and one time active harbour for Chinese ships and trade, Kollam is home to Chinese fishing nets, Chinese water pots and sampan-like boats seen even today.



Source: www.skyscrapercity.com (**Kollam beach**)

Varkala Beach: Location: 51 km north of Thiruvananthapuram city in Thiruvananthapuram district and 37 km south of Kollam, south Kerala. Varkala, a calm and quiet hamlet, lies on the outskirts of Thiruvananthapuram district. It has several places of tourist interests like a beautiful beach, a 2000-year-old Vishnu Temple and the Ashramam - Sivagiri Mutt a little distance from the beach. The Papanasam beach (also called as Varkala beach), which is ten kilometers away from Varkala, is renowned for the natural spring. It is considered to have medicinal and curative properties. A dip in the holy waters at this beach is believed to purge the body of impurities and the soul of all sins; hence the name 'Papanasam beach'.

Vallikunnu Beach, Malappuram: Serene, secluded and spellbinding, Kerala has some of the best beaches in the world. Ride the surf, get a tan, build sandcastles or simply sift sand through your toes at the Vallikunnu beach in Malappuram district. Anything you do here will relax you and help you unwind. A beach resort set in the middle of a coconut grove is the main attraction here, along with the Kadalundi Bird Sanctuary just a short distance away.

Vadakara Sand Banks, Kozhikode: Vadakara Sand Banks is an attractive beach stretch that supplements the seaside beauty of Vadakara in the Kozhikode district, situated in north Kerala. This beach where the Kottakkal River meets the Arabian Sea is a stunningly beautiful beach. It is a great spot to enjoy beautiful sunsets, frequented by locals as well as tourists. Vadakara is famous as the birth place of Thacholi Othenan, the legendary hero of the Vadakkappattu (ballads of North Malabar). Lokanarkavu is one of the famous temples in the and there is also a temple in memory of the legendary Thacholi Othenan, known as Thacholi Manikkothu Kavu temple. The martial art form of Kalaripayuttu has the largest number of exponents in Vadakara.

Tamil nadu

Tamil Nadu beach destination is famous among the tourists. The long golden sand, the bountiful sea ends his journey and meets the land. The state of Tamil Nadu faces Bay of Bengal and Indian Ocean and these water bodies give rise to various beach destination of India which are very much popular among the international tourist as well as to the domestic travelers. All the beaches of Tamil Nadu lies on the southern tip of the country, Tamil Nadu enjoy a wonderful coastline. The sights on rising as well as setting sun can be seen from this coastal area.

Covelong Beach: Covelong beach of Tamil Nadu lies in a picturesque village on the State Highway that joins Chennai to the temple town of Mahabalipuram. This beach of Tamil Nadu is one of the most beautiful and virgin beaches of India and adjoins a small but charming fishing village and is on the coast of the Bay of Bengal. This Tamil Nadu Beach is located at a distance of 40 km from Chennai. The beach is located on the site that was developed originally as a port by Saadat Ali, Nawab of Carnatic.

Ellot's Beach: This Beach of Tamil Nadu is one of the cleanest beaches of India and is in the city of Chennai. This Beach of Tamil Nadu is located towards the south of Marina Beach and is an extremely calm and tranquil place. The beach of Tamil Nadu is known as 'Bessei' amongst the locals. As the Tamil Nadu beach does not offer much activity, it is ideal for long walks. Elliot's Beach of Tamil Nadu is quite a hit amongst both the tourists as well as the natives of Tamil Nadu.

Kanyakumari Beach: This beach of Tamil Nadu is in the southernmost tip of India, Cape Comorin or Kanyakumari the place where tourists love to see Sangam (the

confluence point) of the three seas - Bay of Bengal, Arabian Sea and Indian Ocean it is also a lagoon where steps lead you into the waters to bathe at once, all merging into blue waters of a huge water body surrounding this important pilgrim center on three sides.



Source: (Marina Beach from air)

Marina Beach: Marina Beach of Tamil Nadu is the longest beach of India. Marina Beach, comprising of golden sand, good surf and a shimmering clean blue sea. This Beach of Tamil Nadu is counted among one of the longest beaches in Asia. Marina beach is located on the eastern side of Chennai, adjoining the Bay of Bengal. Watching the sun set and Sun rise from the beach is a fascinating experience.

Mahabalipuram Beach: Mahabalipuram Beach of Tamil Nadu is also known as Mamallapuram Beach and is on the shores of the Bay of Bengal has a coastline spanning a distance of over 20 km with beautiful beaches. This Tamil Nadu Beach is located 58km from Chennai on the Mahabalipuram road, the golden sandy beach is a picturesque place bounded by the shimmering sea and rolling hills.

Rameshwaram Beach: Rameshwaram Beach of Tamil Nadu is one of the most popular pilgrimage centers of South India. The sea here is also a home to rare sea species and coral reefs. Remarkable variety of marine life-algae, starfish, sea cucumber, crabs, sponges and the sea cow are found here. One may also sight some dolphins playing in the serene waters of Rameshwaram. The serene beach with shallow waters makes an ideal site for swimming and sunbathing.



Source: www.mytripolog.com (**Rameshwaram Beach**)

Muttukkadu Beach: The “Muttukkadu” Beach of Tamil Nadu is one of the most exciting and thrilling tourist destination of India. Amidst the picturesque landscape of the place, the Muttukkadu beach is known for the calm and serene backwater of the sea and the natural estuary which adds to the beauty of the place. The natural scenic beauty of the place captures the imagination of a poet. The backwaters provide an excellent view of the sunrise and sunset which attracts many local tourists as well.

Poompuhar Beach: This Tamil Nadu Beach is also known as Kaveri poompattinam and is about 40 km from Chidambaram in Tamil Nadu. The Cauvery River drains into the Bay of Bengal at Poompuhar. Poompuhar is an ancient historic town situated in Sirkali Taluk of Nagapattinam district, Tamil Nadu. An archaeologist delight, Poompuhar is a town for those who like to wander amidst history and take a stroll through time. It was once a major port during the reign of Cholas.

Tiruchendur Beach: This Beach of Tamil Nadu is 85km from Kanyakumari and the temple which lies on the shores of the sea is an inspiring sight. The surging fresh tide of the sea washing the feet of the temple is a lovely sight to behold. The sea is believed to have miraculous benefits for those who dip in it before praying at the temple.



Source: ligysspace.blogspot.com (**Velankanni Beach**)

Velankanni Beach: This beach of Tamil Nadu is located at Tamil Nadu. Velankanni beach is 350 kilometers away from Chennai. Sobriquet name of this Tamil Nadu beach is Lourdes of the East as both the places experience a large number of pilgrims on an annual basis. There are a couple of festivals that go on in the months of August and September. These are major tourist attractions as well. A major tourist attraction of Velankanni beach is the Church of our Lady of Health.

Vattakottai Beach: This Tamil Nadu Beach is a solitary beach destination located in Tamil Nadu. Specially known for the 18th century citadel, the place is also called as the Vattakottai Fort. Bearing the imprints of past rulers, the granite Fort is the prime attraction of the place. Vattakottai Fort was once the dwelling ground of the Pandya rulers. With the fading streamline of a small river flowing by the side of the Fort, there are visible evidences of the existence of a canon in the ancient times. Protected by the 25-26 feet high surrounding walls, the Fort has an extension that touches the waters of the sea.

Pondicherry

Puducherry, the capital of the union territory of Puducherry (which includes Pudhucherry, Karaikal, Mahe and Yanam) and is located in the Coromandel coast of the Bay of Bengal. While Karaikal lies 150 km south of Pudhucherry on the east coast, Mahe is on the Malabar Coast and Yanam in the East Godavari district of Andhra Pradesh. Besides being a nesting place for many poets and laurels down the ages, The union territory also been a shore of different cultures, from the Romans to the French, who ruled for 300 years. The town is almost filled with a lot of heritage buildings and monuments. The attraction of the territory includes Botanical Garden, International

yoga festival, annual French Food festival organized by The Department of Tourism of Pondicherry. The historical French connection is still evident here after a half a century of independence. Puducherry is a visual treat for tourists with its calm spirituality, soft breezing beaches, cobbled streets, elegant houses, the backwaters, temples, churches, mosques, antique furniture galleries, Cotton textile mills, handmade paper, leather aromatics and particularly pleasant shopping experience. If you want to have a memorable vacation, no doubt, Puducherry is worth spending tourist destination and wonderful place ever.¹



Source: *flashpackatforty.com (Promenade -Beach Road, Pondicherry)*

Promenade (Beach Road): The 1.5km long promenade running along the beach is the pride of Pondicherry. There one can relax or take a stroll at any time of the day. Unfortunately, it is impossible to swim in this beach because of the seawalls.

Serenity beach: This beach is a ten minutes drive to the north of the town. This virgin beach, with its serene surroundings is an ideal place to laze away your day. It is ideal for relaxation, a quick dip and sun bathing. The Serenity Beach is 1.5km long. It's a beautiful, cool and clean place.

Paradise Beach (Plage Paradisio): It is situated about 8km away from Pondicherry towards Cuddalore Main Road, in Chunnambar near the mouth of the backwater. The sand is pristine and the water, clean and clear. It's an ideal place for sun bathing and beach sports. The beach can only be accessed by boat.

Auroville Beach (Repos Beach): The Auroville Beach as the name indicates is close to Auroville. It is right opposite the road leading to Auroville. It is located around 10km

from the main Pondicherry town. Its shallow waters and small waves make it an ideal place of swimming. It is a fairly popular destination on weekends. On weekdays it is relatively less crowded.

Andaman & Nicobar Islands

India has almost a 6000 km long coastline, which is home to some of the finest beaches in the world. Andaman & Nicobar Islands has many beautiful, crystal clear and fine eco-friendly beaches. Andaman & Nicobar Islands have also recently been recognized as a world-class eco-tourist destination to discover the under-water treasures of marine life. Andaman & Nicobar Islands has many sandy crystal clear beaches and it's an eco-friendly tourist destination. Despite the tropical climate of the region, beaches of Andaman and Nicobar Islands offer a calm and cool environment that add to the beauty of the turquoise blue waters. The beaches at Andaman and Nicobar Islands also support a diverse range of marine life and water sports. Some of the popular types of the water sports that the beaches in this region offer include swimming, scuba diving, water-skiing windsurfing etc. The most amazing feature of the beaches in Andaman and Nicobar Islands is that they do not have any such major man made developments such as beach side cafes or parks, etc., but they are still one of the star attractions for tourists. The reason is their all pervasive beauty which is nature's gift. Once you are at the Andaman and Nicobar Islands beaches, you are sure to soak yourself in the eternal beauty of the place.



Source: pritskulkarni.blogspot.com (**Carbyn's Cove Beach**)

Carbyn's Cove Beach: Carbyn's cove beach, the coconut-palm-fringed beach, ideal for sun basking is 6 km away from Port Blair town. Historical remains like Japanese

bunkers can be seen on the way. The Snake Island, situated just across the beach is famous for Scuba Diving.

North Bay Beach: North Bay beach is just north of Port Blair. The beach and the snorkelling opportunities in its fringing coral reefs are the closest ones you will find to Port Blair, and therefore, it gets quite crowded.

Munda Pahar Beach, Chidiya Tapu: Before the sunset, enjoy a swim at Munda Pahar Beach, which is 1 km ahead of the bus stand at Chidiya Tapu.

Wandoor Beach: Twenty Five Kms. from west of Port Blair is Wandoor Beach famous for swimmings & for Coral Viewing. One can also go to Mahatma Gandhi Marine National Park from Wandoor by boat. Situated near Tirur, this place has a beautiful sandy beach with shallow water. It is suitable for swimming, sun basking and sunset viewing.

Radhanagar Beach: is one of the two popular beaches located at Havelock Island in Andaman and Nicobar Islands. The other one is Vijaynagar Island. The serene beach which is far away from the polluted cities and towns has a majestic spell that attracts tourists to its beauty. Radhanagar Beach of Andaman and Nicobar Islands is situated at a place which is 7 kilometers away from Dolphin Yatri Niwas at Havelock Island. The beach is the favourite among all nature lovers who love to explore the nature of different places.

Harminder Bay Beach: is counted amongst one of the most exquisite beaches of Andaman and Nicobar Islands. The beach is sited 100 kilometers away from Port Blair at Hut Bay Island. You can travel to the pristine beach through ships run by Inter Islands shipping services from Port Blair.

Ramnagar Beach: is situated in the northern region at the Diglipur Island and is accessible through water and road. The sandy beach is only 15 kilometers away from Kalighat. The beach is surrounded by palm and coconut trees and other coastal shrubs.

Other Beaches to explore in Andaman's are Sylvan Sands, Chidyatapu, South Andaman; Cinque Island, South Andaman; North Bay, South Andaman; Collinpur, North Passage Island; Merk Bay, Neil Island etc.¹

6.4 Natural Manifestations of Touristic Significance

Kerala

Kerala's green hills dotted with colonial bungalows, waterfalls and lakes, protected forests home to endangered wildlife, exotic spice plantations and panoramic views make it hard not to be tempted into some biped action. Kerala is a true paradise for tourist. Kerala has emerged as the tourism hub of India. The breathtaking backwaters, exotic hill-stations and serene beaches make Kerala a perfect tourist destination. There is no doubt why the National Geographic Traveller voted Kerala as Paradise on earth. Kerala is the home to various cultures, traditions and landscapes. The different landscapes of Kerala make it a one stop destination for tourist seeking fun, adventure and relaxation. The canals and lagoons make Kerala backwaters a must-see attraction in your visit to Kerala.¹

Backwater's of Kerala: The backwaters of Kerala are made up of over 900 km of interconnected waterways, rivers, lakes and inlets. The backwaters of Kerala are marked by a unique ecosystem wherein lagoons, lakes, canals, estuaries and deltas of several rivers meet the Arabian Sea. While hill resorts and beaches can be found in several parts of India, the backwaters are found only in Kerala. The Kerala backwater tours offer a perfect blend of scenic attractions and tranquility. One can travel on a traditional houseboat and enjoy the beauty of Kerala backwaters which make their way through a number of towns and cities.

Kerala backwaters map provides a clear picture of various backwater tour destinations in Kerala. Some of the popular destinations for Kerala Backwater tours are: Kochi is one of the most visited Kerala Backwater destinations. Many backwater cruises begin or end in Cochin. Kerala backwater tourist attractions of Cochin can be enjoyed while staying at hotel or by staying at backwater houseboats while on Kerala backwater tours.



Source: team-bhp.com (*Alappuzha backwaters*)

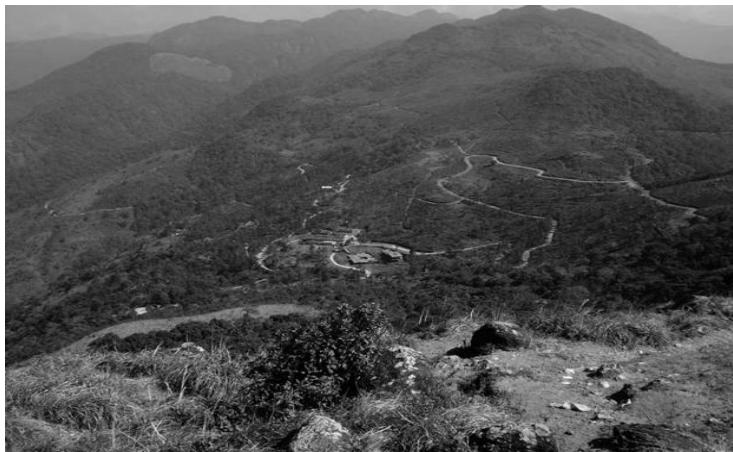
Alappuzha is a district of immense natural beauty. The best companion for exploring this place is the Kerala backwater houseboat. One can enjoy touring the attraction of Alappuzha in Kerala Backwaters India. Alappuzha is also famous for the Snake Boat Races held every year on Onam festival. The Kerala backwaters around *Kollam*, which extend from the Ashthamudi Lake, are mesmerizing. The boat rides on the sun-kissed water scores brownie points with most of the tourists visiting the Kollam backwaters. The splendid town of Kollam is renowned for being the gateway to the beautiful backwaters of Kerala. The backwater tour from Kollam to Alappuzha is the longest backwater tour in Kerala.

Kasargod backwaters in Kerala offer holiday of a lifetime. The bewitching sunset on a *Chandragiri* cruise is an edenic and idyllic experience. One of the top draws of this journey is a ride on the *Kettuvallam* or the knot-boats. Tourists can also enjoy premier facilities at the Kerala backwaters houseboat. *Kottayam* is a beautiful Kerala backwater tour destination. The famous *Vembanad Lake* makes Kottayam a popular backwater of Kerala. One can see the historic churches and temples of Kottayam during Kerala backwater tours. The unexplored backwaters of *Kozhikode* are popular for boating and water sports. Kozhikode is known for its historic buildings, beautiful green countryside, beautiful beach, hospitality and cosmopolitan culture. *Kumarakom* backwater in Kerala is an enamouring site with its exotic bionetwork. The extensive paddy fields, luxuriant mangrove forests and coconut woods, white lilies and variety of natural elements of the Kumarakom backwater is a must visit on Kerala backwater tours.

Thiruvallam is a popular Kerala backwater tour destination. It is at the confluence of the two rivers, Killi and Karamana that Thiruvallam stands and the backwaters here are

more special because of having been fed by them. The natural beauty of the region is enhanced by these river banks.¹

Hill stations in Kerala: Kerala Hill stations Tours present yet another facet of God's Own Country. The high and rugged Western Ghats endow the state with a number of Hill stations, which unlike the rest of the state have a high rate of tourist influx during the summer months. If you seek to beat the heat or enjoy the cozy comfort of Nature or wish to trek on the woody mountain trails or if you are simply answering the "call of the mountains", get away to one of these beautiful chilly places in Kerala. The undulating paths, the rich variety of flora and fauna available, the beautiful gorges and valleys and the sparkling silver streams that skip and dance through the rocks, the settling clouds that one can walk through and the fresh plucked green tea, brewed hot- this is the irresistible lure of the land. The major Hill resorts of Kerala are: Munnar, Ponmudi, Peerumade, Neliyampathy, Peruvannamuzhi, Tusharagiri, Wayanad, Pythal Mala, Ezhimala, Ranipuram, Devikulam, Wagamon etc.



Source: [bharatdarshan.info \(Ponmudi in Kerala, Hill station\)](http://bharatdarshan.info)

Waterfalls: The forests of Western Ghats are punctuated with large and small waterfalls that gurgle and splash down the mountain side. The wooded forests of Western Ghats are hidden with cascading showers. The important waterfalls in Kerala are Athirapally, Vazhachal, Palaruvi & Tusharagiri. *Athirampally and Vazhachal Waterfalls:* It is a 800 foot high waterfalls at the entrance of the Sholayar ranges and is a famous picnic spot for backpackers. The falls are very popular with tourists. Athirappally is located 78 kms from Kochi, located at the entrance to Sholayar ranges;

this waterfall is a popular picnic spot. Affording to the onlookers, one of the most bewitching sights, Athirappally Falls is about 80ft. high and located in the forest area combined with the greenery; it infuses freshness into any tired soul. The Athirapally Falls join the Chalakkudy River after plummeting a drop of 80 feet. Vazhachal is a picturesque spot just a short drive from Athirapally and is adjacent to dense green forestland. Vazhachal is part of the Chalakkudy River. Both the waterfalls, their cool, misty waters cascading down in the backdrop of thick green forest and rocky terrain, are a scintillating experience to visitors. *Palaruvi waterfalls or 'stream of milk'*: It is 75 Kms away from Kollam on the Kollam-Shenkottai road near Aryankavu, is the Palaruvi waterfalls. There are frequent buses from Kollam to Aryankavu. There you can see ruins of ancient temples. The water is said to be medicated as it flows down from the forest and is said to be a preventive for many diseases.



Source: kkasturi1.blogspot.com (**Athirampally Fall in Kerala**)

Thusharagiri Waterfalls: Snuggled cosily in the Western Ghats, are the gurgling waterfalls of Thusharagiri. Meaning the snow capped mountains; Thushargiri exhibits a unique kinship between the land and water. The three waterfalls on the backdrop of the Western Ghats provide an exhilarating and spellbinding sight to the visitor. The best roar of the waterfalls can be enjoyed from September to November. The waterfall with its gentle spray is sure to soothe every eye. The cascading waters of the waterfall slides past with surfy smiles. Two streams originating from the Western Ghats meet here to form the Chalippuzha River. The river diverges into three waterfalls creating a snowy spray, which gives the name, 'Thusharagiri'. Of the three, the highest waterfall is the Thenpara that falls from an altitude of 75 metres. Situated at Kodencherry in

Kozhikode district, the plantation destination that abounds in rubber, arecanut, pepper, ginger and spices is also a trekker's delight.¹

Village Life

Kerala - a symphony composed in the strings of beauty and a land endowed with myriad of boons and bounties that bestowed it the glory of being god's own country. The rural life in Kerala, untouched by the mighty hands of industrialization and much of the repulsive transformation of urban sophistication, offers a paradisal experience to the traveller. The serene backwaters, swaying coconut farms, soothing paddy fields everything makes the village life of Kerala a memorable experience. Far from the tumult and turmoil of the cities these villages usher us into a world where contentment and peace prevail. **Kumarakom**, a cluster of little islands in Kottayam district, is one of the favourite tourist villages in Kerala. Spread on the cold water of Vembanad Lake Kumarakom is well known for its fresh water fish species like the Karimeen (pearl spot), Chemmeen (shrimp) and prawns. **Kovalam** an internationally renowned beach town on the Arabian Sea and a favourite haunt of tourists especially Europeans. The coastal village life of Kovalam is vibrant and rich with a variety of activities like coir manufacturing, coconut leaf weaving, fish markets and the like. **Crafts village near Kozhikode**, Pioneering another novel model to promote tourism, Kerala Tourism Department has set up an exclusive crafts village where traditional artisans can showcase skills and products, and sell them at fair prices while a visiting foreigner can pick up one or two lessons of subtleties of crafts-making. This new model for the development of tourism sector, while helping the craftsmen to ensure better compensation for their toil out, has taken shape at a sprawling 20-acre land, at Iringal on the shores of enchanting river Chaliyar near Kozhikode.¹

Wildlife sanctuaries & National Parks

Kerala has a forest area of 11,125 sq km, which covers almost 29 percent of the total land area of the state. There are Five National Parks and 13 Wildlife Sanctuaries in Kerala. These parks and sanctuaries cover 2250 sq km, which is 24 percent of the total forest area and 6 percent of the total land area of the state. All these National Parks and sanctuaries are famous tourist destinations and are frequently visited by tourists to experience the enjoyment of watching wildlife in their natural habitat and to get a feel

of the scenic excellence of Kerala. The dense tropical rainforests of Kerala house a veritable treasure of exotic flora and fauna and an astounding variety of wildlife have found their habitat in the state. The Government (both central and state) has taken extreme measures to conserve the forests and preserve the fast vanishing species of animals and insects here. A number of wildlife sanctuaries and national parks have been built here and these are major attractions for tourists to the state.

Chinnar Wildlife Sanctuary: Located 50 km from Devikulam of Idukki district in Kerala, the Chinnar Wildlife Sanctuary houses a host of fierce animals found in the Indian forests such as elephants, sambar, leopards and gaurs. The sanctuary is dedicated to preserving the Grizzled Giant Squirrel and the Star Tortoise, both highly endangered species.

Eravikulam National Park: This lush expanse of flora rich national park was established to preserve the Nilgiri Tahr or the Nilgiri Ibex. Other creatures habituating this beautiful conserve are elephants, leopards, tigers, malabar civets, sambar, barking deers, nilgais, langurs and pythons.

Kumarakom Bird Sanctuary: The Kumarakom Bird Sanctuary is the winter home to a host of bright plumed visitors from cold regions such as Siberia. A birdwatcher's paradise, the sanctuary stands on the banks of the Vembanad Lake allowing the tourists to take the water path to rewarding bird watching.



Source: Flickr.com (Toucan in Periyar National Park)

Periyar National Park: Beside the Periyar River, stands the sprawling Periyar National Park (1950) and Tiger Reserve (1978). Built to protect these royal beasts from cruel poachers and to preserve the majestic Indian elephants, the Periyar National Park is a major tourist attraction. Visitors from around the globe come here to undertake a wildlife safari here.

Silent Valley National Park: Silent valley national Park or Sairandhrivanam as it is locally called houses about hundreds of species of butterflies and almost 400 species of moths. Other bird and animal life protected by this national park are the Ceylon Frogmouth, the Great Indian Hornbill, the Laughing Thrush, the Malabar squirrel, langurs, lion-tailed Macaques, elephants, tigers, leopards, wild bears, nilgais, sambars and pit viper. The langurs and Lion-tailed macaques are endangered species conserved here.



Source: bharatdarshan.info (**Idukki wildlife sanctuary**)

Idukki Wildlife Sanctuary: Idukki Wildlife Sanctuary covers an area of 77 sq km in the Thodupuzha and Udumpanchola talukas of Idukki and occupies the forested area between the Cheruthoni and Periyar rivers. Idukki Wildlife Sanctuary is located at a distance of 40 kms from Thodupuzha. The great reservoir formed by the construction of the Idukki arch dam and dams at Cheruthoni and Kulamavu is a major tourist attraction. Lying at an altitude of 450 - 748m above sea level, the pristine forests and green hills around the area provide ample scope for trekking. Besides wildlife viewing and trekking, one can enjoy boat cruises on the lake within the sanctuary, which offers

a panoramic view of the surrounding areas. Wild Population of Idukki Wildlife Sanctuary includes Elephants, Bison, Sambhar, Deer, Wild Dogs, Jungle Cats, Tiger, Wild Boar etc. The avian population includes Jungle Fowl, Myna, Laughing Thrush, Black Bulbul, Peafowl, Woodpecker, Kingfisher etc.

Parambikulam Wildlife Sanctuary: Adjacent to the Anamalai Wildlife Sanctuary of Tamil Nadu, this sanctuary sprawls across 285 sq km and offers a fascinating sight of rare wild animals. It abounds in a variety of trees, mainly teak, neem, sandalwood and rosewood. There are three dams within the Parambikulam wildlife sanctuary, , Parambikulam, Thunakadavu and Peruvanipallam. Parambikulam has the largest population of Gaurs (Indian bison). The rich fauna includes tigers, leopards, elephants, sambars, tahrs, wild dogs, Indian muntjacs, spotted deers, jungle cats, bonnet macaques, lion-tailed macaques apart from nearly 150 species of birds.



Source: [wayanad.org \(Wild Gaur in Wayanad Wildlife Sanctuary\)](http://wayanad.org)

Wayanad Wildlife Sanctuary: The Wayanad sanctuary is part of the Wayanad plateau and is home to tigers, leopards, elephants and a number of other animals. The sanctuary is an extension of the Bandipur National Park in Kerala at its southern border. Rich in bio-diversity, the sanctuary is an integral part of the Nilgiri Biosphere Reserve, which has been established with the chief objective of conserving the biological heritage of the region. The Wayanad Wildlife Sanctuary comprises of deciduous forest.

Tamil nadu

The perfect blend of cultural significance and majestic natural beauty makes Tamil Nadu one of the most visited Indian tourist destinations. The state also has popular hill

stations like Ooty and Kodaikanal that are milestone destinations of Tamil nadu tourism. Wildlife sanctuaries & National parks of the state are other attractions.

Backwaters in Tamil nadu

Pichavaram: Pichavaram the second largest Mangrove forest in the world, near the temple town of Chidambaram, is one of the unique Eco-tourism spots in South India. The backwaters, inter connected by the Vellar and Coleroon river systems, offer abundant scope for water sports, rowing, Kayak and canoeing. The Pichavaram forest not only offers waterscape and back water cruises, but combines another very rare occurrence - the mangrove forest trees permanently rooted in a few feet of water. The Pichavaram mangroves are considered among the healthiest mangrove occurrence in the world. Pichavaram consists of a number of islands interspersing a vast expanse of water covered with green trees. The area is about 2800 acres and is separated from the sea by a sand bar which is a patch of extraordinary loveliness. The Pichavaram mangrove biotope, with its peculiar topography and environmental condition, supports the existence of many rare varieties of economically important shell and fin fishes. The Pichavaram mangroves attract an appreciable bird population of residents, local migrants and true migrants. At the mangroves, so far, 177 species of birds belonging to 15 orders and 41 families have been recorded. The season for birds is from September to April every year. Peak population of birds could be seen from November to January. This is due to high productive nature (in terms of prey organisms) of the ecosystem and coincidence of the time of arrival of true migrants from foreign countries and local migrants from their breeding grounds across India. The availability of different habitat types such as channels, creeks, gullies, mud flats and sand flats and adjacent sea shore offers ideal habitat for difference species of birds.

Backwaters of Muttukkadu: Muttukkadu, located at a distance of 36 km from Chennai, is a small town which serves as the most preferred picnic spot along with backwaters and water activities. Muttukkadu is adorned with greenery, including coconut trees and lush grassland to provide ample shade and to give relaxation to the visitors, making the environment pollution free and breezy. Helped by the fact that the backwaters and the facility of boat house have been developed by the Tamil Nadu Tourism Development Corporation for the visitors to stay and enjoy, the place is visited by hordes every year who come here to enjoy their holidays. The main attraction of this place is windsurfing

regatta which is organized every year in the month of February, plus many other water games such as kayaking, boating, canoeing, etc are organized here. Those who are adventurous and fun loving, they can also join the training programs which are held in Muttukadu. No wonder it is visited by thrill seekers as well as peace lovers from India and abroad. Prawns and Jellyfishes are well-known in this place and due to these reasons, it is also known as 'the land of flora and fauna'. It is just the perfect destination for spending holidays with beguilingly exquisite backwaters, peaceful surroundings and a charismatic blend of greenery and gleaming blue.

National parks & sanctuaries

The topography of Tamil Nadu is delightfully varied and diverse. Of the 1, 30,058 sq km land area, 17.6% is covered with forest area. These spreads over the plain and on mountain slopes. Dry lands are bestowed with dry-deciduous forests, thorn forests, scrubs and mangroves. The Western Ghats and a few cooler regions are endowed with moist deciduous, wet evergreen forests, sholas and grasslands. There are 5 National Parks and 17 Wildlife Sanctuaries in Tamil Nadu. The famous ones are:

Indira Gandhi Wildlife Sanctuary and National Park: Spread over 958 sq kms, this sanctuary can be reached through Top slip in Anamalai Hills on the Western Ghats. An ecological Paradise, this sanctuary encompasses a National Park with an area of 108 sq kms. About 800 species out of 2000 South Indian Flora are distributed here. This sanctuary nurtures Arboreal animals like lion tailed macaque, bonnet macaque, Common Langur, nilgiris langur, Malabar Giant squirrel and Grizzled Giant Squirrel. The ground animals listed are: Tiger, Panther, Elephant, Gaur, Pangolin, Sambar, Spotted Deer, Barking Deer, Mouse Deer, Wild boar, Dhole, Sloth Bear, Porcupine, Nilgiris Tahr, Civet Cat and Taddy Cat. The Avifauna includes Racket Tailed Drongo, Black Headed Oriole, Paradise Fly-catche, Whistling Thrush, Emerald Dove, Green pigeon, Tickell's Flower Pecker, Rufus Wood Pecker, Rose Ringed Parakeet, Black Eagle, Great Indian, Malabar pied HornBill, Fiary Blue Bird and green billed malkhoha etc.



Source: homestay360.com (**Mudumalai Wildlife Sanctuary**)

Mudumalai Wildlife Sanctuary: Located in Nilgiri Hills, the offshoot of the Western ghats meet the eastern ghats. This 321 sq km wide sanctuary encompasses a National Park measuring an area of 103 sq kms.

Mukkurthi National Park: Located on the high altitudes of the Nilgiris, 40 kms from Udhagamandalam. It contains a viable population of Nigiri Tahr (Hamitrgus-hilocrius), Sambar, Nilgiri Marten, Barking deer

Kalakkadu Wildlife Sanctuary: Situated in an area of 223 sq kms in the Tirunelveli District. Wildlife seen in the sanctuary includes Lion Tailed Macaque, Nilgiri Langur, Bonnet Macaque and common Langur, Nilgiri Tahr.

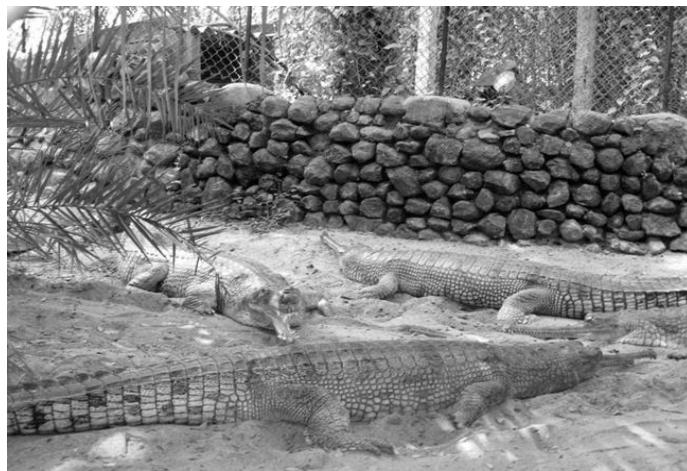
Mundanthurai Wildlife Sanctuary: Situated in an area of 567 sq kms in the Tirunelveli District. Animal wealth includes Tiger, Bonnet Macaque, Langurs, Slender Loris.



Source: animaladventurer.blogspot.com (**Blackbucks in Point Calimere Wildlife Sanctuary**)

Point Calimere Wild Life Sanctuary: Sprawling on 17.26 sq km surrounded by sea and shore, comprising forests of tidal swamps, this sanctuary is situated in Nagapattinam district. It is bestowed with populations of varied wild life such as Chittal, Wild Boar.

Srivilliputhur Grizzled Squirrel Wild Life Sanctuary: Located in Virudhunagar District, 45 kms off Virudhanagar Town. Interesting species are Flying Squirrel, Tree Shrew, Elephant , Lion-Tailed Macaque, many species of birds.



Source: ebharatdarshan.blogspot.com (**Guindy National Park**)

Guindy National Park: Situated in Chennai. Compositions of animals Black Buck, Chital, Jackal, Pangolin and a variety of Avi fauna.

Vallanadu Black Buck Sanctuary: A scrub forest area spread over to 16.41 sq km this sanctuary is situated in Thuthukudi (Tuticorin) District. Blackbuck, Spotted Deer, Macaques, Jungle cat, Mongoose and hares are plenty. This sanctuary can be visited through out the year.

Vedanthangal And Karikili Bird Sanctuaries: Situated in the Kanchipuram district. In all 115 species of birds have been recorded in this sanctuary.

Arignar Ann Zoological Park - Chennai

Situated in the outskirts of Chennai. More than 170 species of Mammals, Aviaries & reptiles are exhibited.

The Madras Crocodile Bank Trust – Nemmeli: This Crocodile Bank has been established with an aim to protect and conserve the endangered reptiles such as crocodiles, Alligators etc. Situated 14 kms from Mamallapuram, this trust now houses more than 6 species of crocodiles.

Viralimalai: This small town is situated south of tiruchirapalli, is bestowed with a large number of wild Peacocks, which roam around the Murugan Temple situated here.

Gulf Of Mannar Marine National Park: This a marine Bio Sphere, running along with coasts of Ramanathapuram and Thuthukudi (Tuticorin) Districts. This national Park is full of coral reefs, Dolphins, Turtles.

Waterfalls

The eternal rhythm of the gurgling, cascading waterfalls in many parts of Tamil Nadu. Ecology is well preserved in the waterfalls around Tamil Nadu.



Source: jamesxyz.wordpress.com (**Courtallam Waterfalls, Tamil Nadu**)

Courtallam Waterfalls: The 'Spa of South' is situated at an elevation of 167mts in the Western Ghats. This is a popular health resort. Its waterfalls are known for their curative and recuperative properties. It is situated about 160 kms. south of Madurai. A shower in the cascading waters is a great experience. There are nine waterfalls here, Main falls, Chitraruvi, Shenbagadevi falls, Honey falls, Five falls, Tiger falls, Old falls, Fruit farm falls and the New falls. Its bracing season extends particularly from June to September. Excursions : Tiruchendur Murugan Temple(99kms), Tirunelveli(58kms), Krishnapuram(68kms), Tenkasi(5kms) and the Mundanthurai Tiger Sanctuary(75kms). Hogenakkal means " Smoking Rock" has got the name because of the smoke like appearance created by the spray of the plunging waters of River Kaveri at this spot. The falls, the rugged scenery and the enchanting natural attractions have made it an ideal holiday spot. It is a health resort known for its waterfalls with medicinal properties, set amidst lush green woods. 'Parisal' (a boat made of palm fibre) ride through River Cauvery will be a pleasant experience. Hogenakkal is famed for the curative power of its waters. Surrounded by mountains, this place now offers a quiet holiday in comfort. It is 65 kms. from Salem.



Source: commons.wikimedia.org (**Hogenakkal Waterfalls**)

Hogenakkal Waterfalls: Attaru" river passes through the Elagiri hills and falls from 30 mtr. height at Jadaiyanur on the other side of the hills. This could either be reached from Tiruppthur(15 kms.) or by an hour's trek from the hills. Adjacent to the Jalagambarai falls, there is a Murugan temple located within a building constructed in the shape of a lingam. **Kumbakkarai Falls:** An amazing feat of Nature, the Kumbakkarai Falls is yet another jewel in the crown of Tamil Nadu's tourist attractions. Comparatively less known, these falls offer a breath taking view of the fascinating interaction between gushing water and solid rocks. Add a verdant and wild backdrop and you have an exquisite sight. Situated on the foothills of the Kodaikanal hills, the falls are located 8 kms from Periyakulam. The water from these falls is full of the goodness of minerals and herbs. There are two stages in these falls. At the first stage water gathers in huge rocks recesses which are variously named after wild animals such as tiger, elephant, snake etc., before falling as the main fall. **Suruli falls:** The Suruli falls which falls from a height of 150 feet gathers into a pool, flows for a short distance and again plummets to a depth of 40 feet , offering a spectacular sight of nature's raw and wild beauty. The dense forests that surround it provide an awesome backdrop. Facilities are available for men and women to bathe separately in these falls. The special feature of the fall is that it is a "round the year" falls. However the best season to visit is June - October, when the thickness of the water column is astounding. The beauty of this fall finds mention in Tamil Epic, Silappathikaram written by poet Ilango. Cloud Land Falls popularly known as Chinna Suruli is situated 54 kms from Theni near Kombaithozhu village. These falls originate in the Megamalai. Tiger Falls is a dainty

fall on the route to Munnar between Bodi and Bodimettu from Theni. **Killiur Falls:** Killiur Falls is a 90-foot high waterfalls is situated amidst picturesque surroundings in Yercaud. Akasagangai waterfalls is on Kolli hills which is known for medical herbs and plants. **Kalhatty Water Falls:** Kalhatty Water Falls, is located on the Kalhatty slopes and about 13 kms. from Ooty. Law's falls(7kms.) is situated in the Ghat RF of Coonoor forest range. the height of the falls is about 180 feet. St.Catherine Falls, located at 8 kms, the enoviron of the falls has beautiful scenery. **Fairy Falls:** Fairy Falls, is a delightful picnic spot just 5kms away from Kodai Lake. It is a wondrous waterfall. Silver Cascade is 8kms from Kodai lake. The overflow of Kodai Lake comes down here as a 180 foot high waterfall. Thalaiyar falls also known as Rat Tail falls, is one of the higest waterfalls in the world(975 foot high). It can be seen while climbing the Ghat Road to Kodaikanal from Kodai Road. It is not possible to visit this spectacular waterfall, as there is no approach route to this site.

Hill stations

Tamil Nadu offers some of the most beautiful hill stations. Trekking, Hang-gliding, fishing and golf are just some of the activities you can take part in on these hill stations. **Kodaikanal** referred to as 'The Princess of Hill Stations', is situated amidst the folds of the verdant Palani hills in the Western Ghats at an altitude of about 2133 m. Kodaikanal is one of the most frequented hill resorts in India. With its spectacular rocks, tranquil woods, lovely lake and intoxicating air, Kodaikanal is an ideal hill resort for the tourists from all over. The pride of Kodaikanal is the 'Kurinji-flower', which blossoms once in 12 years. The hill-plantain fruits and plums are known for their freshness and taste. Kodaikanal lies pretty in the Palani Hills of Tamil Nadu. The summer retreat of Kodaikanal literally means 'gift of the forest'.



Source: hearty-india.com (**Kodaikanal**)

Coonoor is the second largest hill station in the Nilgiris, surrounded by tea plantations. It stands at an altitude of 1839 metres. It is essentially a small tea garden town where the weather is pleasantly cool through the year. It falls on the toy-train line between Mettupalayam (28 km) and Ooty. A popular pastime here is birdwatching as it is home to an extensive array of birds. The main attraction of course is Sim's Park, a small botanical garden that boasts of a wide variety of plants. It offers panoramic views of the Nilgiris, its hills and valleys lush with tea shrubs and eucalyptus trees. There is a quaint hill market which peddles leaf tea and essential oils. Although the height of summer is peak season, winter too is enjoyable in its own special way. Sports and honey moon travel.



Source: commons.wikimedia.org (**Botanical garden in Ooty**)

Ooty (Ootacamund) the Queen of the Hill Stations, also known as Blue Mountains is one of the most beautiful hill stations in India. This hill station has splendid green downs and lofty hills of extraordinary scenic beauty and is endowed with a salubrious climate similar to the English summer. Located in the Western Ghats at a height of 7,500ft. Ooty nestles in an amphitheater created by four majestic hills-Doddabetta, Snowdon, Elk Hill and Club Hill. These hills are part of the Nilgiri ranges that are really the meeting point for the Western and the Eastern Ghats. **Kotagiri**: Kotagiri is a pristine little town, situated about 16 km from Ooty. Situated at an altitude of 1,950 mts, it was developed as a summer retreat for the British during the colonial days. **Yercaud** is a hill station in Salem District, in Tamil Nadu, India. It located in the Shevaroys range of hills in the Eastern Ghats; the Yercaud hill area is called the Shevaroy Hills. It is

situated at an altitude of 1515 metres (4970 ft) above sea level, and the highest point in Yercaud is the Servarayan temple, at 5,326 feet (1,623 m). It is so named owing to the abundance of trees categorised as a forest near the lake, the name signifying Lake Forest. As a popular tourist destination, Yercaud is also called as Jewel of the South. Yercaud is connected to city of Salem, Tamil Nadu through Highway of 28 km.

Pondicherry

A Tamil culture with a strong French flavor and loads of cosmopolitan tendencies make Pondicherry, a place definitely worth a visit. Blessed gracefully by nature, the entire region is dotted by pretty water bodies, stretching greens and a serene ambience. Mostly untouched and least crowded, the calm and serenity that Pondicherry affords is simply amazing. The serenity of the place drew Sri Aurobindo Ashram here which in turn attracts millions who come here in pursuit of spirituality. A famous monument here is the Aayi Mandapam at the centre of the Park. The French Consulate, Raj Nivas, the former palace of Dupleix, Botanical Gardens, Chunnambar boat house, Bharathi Park, Museum, Romain Rolland Library, Botanical Garden, Anglo-French textile mills, the 400-year old banyan tree at Keezhoor are some places worth visiting Pondicherry. The city is also a comfortable base to explore other interesting places around. Auroville, the city of unity, Kanchipuram, the temple town, Mamallapuram, the heritage town are some important places that can be visited conveniently, making Pondicherry the base.

Chunnambar Backwater: Chunnambar Boat House is situated 8km from Pondicherry, along Cuddalore Main Road. This tropical paradise is a great place for relaxation. The beach at Chunnambar also known as Plage Paradiso, is located near the mouth of the backwater. The sand is pristine and the water, clean and clear. It's an ideal place for sun bathing and beach sports. If you take a short and pleasant cruise into the sea, you will be able to see playful dolphins in natural habitat. Chunnambar Beach and Backwater Resort has backwater boat tours, trekking and picnics on Paradise Beach. The resort offers various kinds of rental boats (speed, motor, sail, row paddled and paddled boat), beach volleyball and other beach sports. Seagulls, the multicuisine restaurant-bar specialises in Chinese and Tandoori food. The restaurant too has a view of the backwaters. It also serves food in the huts just outside the restaurant. You can also order a picnic lunch to the beach.¹

Wildlife

Ousteri Wetland and National Park: Ousteri Wetland and National Park are situated approximately 10 km from the town of Pondicherry on the main Pondicherry-Villuppuram Road. The entire wetland covers an area of around 390 hectares and is geographically located in both Pondicherry and Tamil Nadu. It also has a large number of aquatic species and is essentially a bird sanctuary. There are several small herbs and huge trees present at this place that supports migratory avifauna and native birds. Ousteri Lake and Boat House are also located at this site, which are visited by several tourists. The Ousteri Lake is one of the biggest lakes in the town, which is the major source of drinking water. This site is frequented by several tourists year-round, especially by those interested in watching birds and boating.¹

Bharathi Park or Government Park (Place du Gouvernement): The Park located in the heart of Pondicherry, is one of the most beautiful public spots in town, with its lawns, flowers beds, fountains and shady trees. Around it stands many stately buildings:

Aayi Mandapam (Water Monument): Situated in the centre of the park, this is a gleaming white monument built during the reign of Napoleon III, Emperor of France. The monument, built in Greco-Roman architecture, commemorates both the provision of good drinking water for the population and the good deed of Aayi, a 16th century lady some 300 years before. The Aayi Mandapam has become the unmistakable centre from which four lanes divide the Park in four almost equal parts. Some exquisitely carved monolithic pillars, brought to Pondicherry from the Gingee Fort after its capture in 1751, adorn the place.

The Botanical Garden: The Botanical Garden is located south of the New Bus Stand. The Botanical Garden was opened in 1826. The gardens have a variety of rare and exotic plants, beautiful flowers, pruned trees, gravel lined paths, fountains and an aquarium. With over 1500 species of plants, this could actually be qualified as one of the best botanical garden in South India. The gardens also have a musical fountain which is active in the evening time during the week end.

Andaman & Nicobar Islands

The Andaman and Nicobar Islands, located in the Bay of Bengal (east of the Indian mainland geographically), is a splendid tropical island outpost, belonging to India but closer to south east Asia. From being known as 'Kalapani' (Black waters) due to the atrocious history of the British Regime in India, to being known as one of the best tourist destinations of India, Andaman Islands have come a long way. They are no more being called by that name. These islands were once a hill range extending from Myanmar to Indonesia, but are now a group of 572 near deserted islets (small islands), covered with lush forests and endless varieties of exotic flora and fauna. Incredible corals and marine life, crystal clear water and mangrove-lined creeks lure travellers to these picturesque islands. While the sandy beaches form as nesting homes to turtles, animals such as spotted deer, wild boar, gecko, crab-eating macaque and python can be spotted in the 86% area still covered by dense forests. These islands were populated mainly by indigenous tribes until the beginning of the colonial rule, but the majority of the population now, comprise of mainland settlers who live in and around Port Blair, the capital of South Andaman. Even with tourist infrastructure developments, these islands still remain virgin in the sense of unpolluted natural beauty and unexplored marine life. There if you wish to visit these islands, you would have a good time there.

Islands

The islands of Andaman and Nicobar are truly spectacular as the qualities possessed by them deserves some sincere appreciation. Eager holiday-makers assemble here from all over the world to experience the grandeur of mother nature at her very finest. As a matter of fact, the islands of Andaman and Nicobar actually are the chief tourist attractions. The most frequently visited islands in Andaman and Nicobar are mentioned in the list below:-

The Jolly Island: Being situated in the Mahatma Gandhi Marine National Park, this island allows its visitors to witness the gorgeous corals and experience recreational activities like snorkeling.

Chatham Island: Previously, this was one of the islands of Andaman and Nicobar that has the reputation of housing the hugest and most veteran saw mill found across the

entire continent of Asia. In fact, the dilapidated saw mill can be approached by virtue of a bridge.

Barren Island: This is also counted amongst the many islands at Andaman and Nicobar and is home to the solitary volcano in India that is active.

Ross Island: This Island is blessed with a rich British heritage and houses a museum that displays snaps along with other crucial artifacts belonging to the British era. The name of the museum is 'Smritika'.

Viper Island: The maiden jail was erected in this eventful island that has seen the ends of numerous convicts including Sher Ali who assassinated Lord Mayo, the Viceroy of India.¹



Source: greenogreindia.org (**Volcano in Barren Island, Andaman**)

Wildlife

When everything in Andaman and Nicobar is unique, how could wildlife remain behind? Andaman and Nicobar is home to some exclusive flora and fauna that stays hidden in the deep jungles of these islands or in the lagoons surrounding the islands.

Andaman and Nicobar Islands are also a great place for all the enthusiastic bird watchers. The main attraction among birds definitely is the Nicobari Pigeon.

Great Nicobar Biosphere Reserve: Situated in The Great Nicobar Island, the biggest island of Nicobar group, the reserve covers an area of 885 sq. km, nearly 85% of the total land area of Great Nicobar Island. It was declared as a Reserve in January of 1989. It incorporates two National parks of India namely *Cambell Bay National Park* on the northern part of the island and *Galathea National Park* on the southern part. The main attraction of the reserve are Nicobar scrubfowl, the Edible-nest Swiftlet, the Nicobar Long-tailed Macaque, saltwater crocodile, giant Leatherback Sea Turtle, Malayan box turtle, Nicobar tree shrew, reticulated python and the giant robber crab.

Saddle Peak National Park: Saddle Peak National Park was started in Andaman district in the year 1979. It spreads on an area of 33sq.km. Situated just 5km from Diglipur, it is nearly 200km from Port Blair which is the administrative centre of Andaman and Nicobar Islands and also the nearest airport. The forest area of the islands is covered by thick tropical rain forests. The main vegetation is generally conducive to humid, warm and wet tropical climate. The main animal species in the park comprises Andaman wild pig, water monitor lizard, and salt water crocodile. The important birds found here are Andaman hill mynah and imperial pigeon. The best time to visit the park is between November and March. For accommodation, there are two rest houses inside the park.

Mahatma Gandhi Marine National Park: Covering an area of 281sq.km, Marine National Park is just 20 km from the capital of Andaman and Nicobar Island, Port Blair. The park is spread over 15 islands of Labyrinth group of Islands towards the West Coast of south Andaman. Each Island has diverse flora and that comprises of moist deciduous evergreen forests and mangroves in small numbers. The island shores are nesting grounds for 5 different types of tropical sea turtles. The main attraction for most tourists to this park is the living coral reefs and colorful marine life. Water-monitor, lizard, wild boar, sea snakes are other animal species that are found here. December to April is the best months for visiting the park.

6.5 Check Your Progress

- Name any three popular beaches of Karnataka?

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- Which Island in Karnataka is known as National Geological Monument?

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- Name any two beaches in Goa?

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- Name any three beaches in Andhra Pradesh?

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- Name two sanctuaries in Karnataka?

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- Name two sanctuaries/ National Parks in Andhra Pradesh?

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- Name two waterfalls in Karnataka?

6.6 Summary

In this unit we learned about natural fabric & beauty of the states of Kerala, Tamil nadu, Pondicherry & Andaman & Nicobar Islands. We learned that apart from the heritage, these places, are also blessed with bounties of nature such as beaches, backwaters, sanctuaries, national parks, forests, flora, fauna, waterfalls, eco-places and a lot of opportunities for nature, ecotourism & adventure tourism. Kerala is a true paradise for tourist and home to various cultures, traditions and landscapes. A blend of ancient and modern world, Tamil Nadu offers you myriad of breathtaking sights including the natural beauty. A little piece of France in India, the former enclave of Pondicherry remains a pocket of Gallic charm. Once known as Kalapani – Black Waters – for their role as a feared penal settlement, the Andaman and Nicobar Islands are now a relaxed tropical island outpost that belongs to India but is geographically closer to Southeast Asia. Superb, near-deserted beaches, incredible corals and marine life, an intriguing colonial past and the remnants of a Stone Age culture lure travellers to these mysterious islands, 1000km off the east coast of India in the Bay of Bengal. All these states provide enormous opportunities to tourists to experience beaches & nature.

6.7 Clues to Answer

Check Your Progress

- Refer 8.3
- Refer 8.3
- Refer 8.3

- Refer 8.3
- Refer 8.4
- Refer 8.4
- Refer 8.4

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Unit-7

Maharashtra and Goa

Structure:**7.1 Introduction****7.2 Objectives****7.3 Beaches****7.3.1 Maharastra****7.3.2 Goa****7.3.3 Diu****7.4 Natural Manifestations of Touristic Significance****7.4.1 Maharastra****7.4.2 Goa****7.4.3 Diu****7.5 Check Your Progress****7.6 Summary****7.7 Clues to Answer**

7.1 Introduction

Unit 7 gives detailed information about Beaches & Other Natural Manifestations' of Touristic Significance in India with special reference to Maharashtra, Goa & Diu. These states have got immense potential with regard to nature & nature tourism. And provide a number of opportunities for tourists.

These can range from active to passive and include everything from bushwalking and adventure tourism experiences to sightseeing, scenic driving, beach experiences and wildlife viewing. In many instances a visitor may combine several of these in the one trip. For keen outdoor enthusiasts, and there are many, the great majority of adventure activities directly depend on nature and natural environments for their successful conduct. Fundamentally, the role of nature can vary from 'crucial to the visitor experience' to 'enhances the visitor experience' - particularly in relation to such variables as active or passive measures of the activity involved.

For passive and active visitors alike, nature in these states is also playing an increasingly important role in giving something back to people (relaxing, enriching the spirit, getting back to basics). By doing so, it is able to enhance their broader experience of a destination. And for mainstream domestic visitors, these benefits tap more accurately into nature's deeper meaning. Nature-based experiences are intimately linked to all other aspects of the visitor's total experience of a destination, such as food, culture, relaxation, health, escape, family needs, accommodation, transport, etc. All serve to complement each other and together form the basis of a visitor's overall satisfaction with their holiday.ⁱ

Maharashtra is located in central India on the west coast of the country. It is the third largest State in the country after Rajasthan and Madhya Pradesh. With a total area of 307,713 sq km, Maharashtra constitutes 9.36% of the total area of India (3,287,263 sq km). The maximum east-west length of Maharashtra is 800 km and north-south length is 700 km. Maharashtra has three types of terrains namely



Konkan coastline, Sahyadri mountain range or the Western Ghats and hilly region and the Deccan plateau.ⁱⁱ And has tremendous potential for Nature Tourism. Maharashtra offers the adventure lovers, over 45 adventures to choose from across its length and breadth. It has over 550 forts to visit including over 20 Sea Forts, 720 km of coastline, the incredible vistas of its Western Ghats that has superb wildlife and camping possibilities. From water to land to aero, there is a host of adventures to choose from Paragliding, Gliding, Rock climbing, Scuba diving, Snorkeling, Kayaking, Canoeing, Trekking, Wildlife Safari etc.ⁱⁱⁱ

Tourism and Goa are synonymous with each other. Goa is one of the most preferred places of holiday in India. It may not be the state to receive maximum number of tourists in India but the state is well known to receive international tourists on a large scale, more than probably any other state in the country. Beauty of sea beaches along with sea food has made Goa well renowned place in India for vacations. Apart from this wildlife of this place also attracts tourists towards itself. There are many wildlife sanctuaries in Goa that are natural habitat of wild animals. The area covered by national parks as well as wildlife sanctuaries is not vast but it is sufficient to offer protection to endanger species of animals and also provide them shelter from any kind of danger. People who are animal lover and are interested in watching different kind of birds in their natural surrounding can surely visit any of the four wildlife sanctuaries of Goa. Trip to these national parks will provide you completely different experience and you will remember it for your whole life. Blossoming green vegetation along with natural surroundings of these sanctuaries is not resisted by the tourist and they never miss to visit this place when touring Goa. It is estimated that forest in Goa nearly enclose 1/3 of state area and offer shelter to innumerable species. There are forty eight species of wild animal; sixty species of dangerous reptiles, more than 200 species of endanger birds along with fifteen hundred species of small plants & vegetation.^{iv}

A beautiful blend of sea, sand and sun, Diu is a God's gift to those in quest of a blessed land where the weary weight of this unintelligible world can, for a while, be lightened and the waking soul can hear the music of the nature. This tiny island of breeze, beauty and serenity situated off the southern tip of the Saurashtra (Kathiawar) peninsula of Gujarat, lapped by the Arabian Sea, is a picture of calmness with superb beaches and a fascinating history.^v

The states of Maharashtra, Goa & Diu surely are Destinations which serve as a boon to tourists not only in variety of tourist products, but also have great opportunities for Beach Tourism, Wildlife Tourism & Nature Tourism.

7.2 Objectives

After going through the Unit 4 on **Beaches & Other Natural Manifestations' of Touristic Significance** with a special reference to Maharashtra, Goa & Diu, you would be able to:

- Know about the popular beaches in Maharashtra, Goa & Diu.
- Know about the natural attractions in Maharashtra, Goa & Diu.
- Understand the role of Natural attractions in attracting tourists.
- Understand the various forms of nature tourism at these places.
- Understand the tourism in Maharashtra, Goa & Diu.

7.3 Beaches

A beach is a landform along the shoreline of an ocean, sea, lake, or river. It usually consists of loose particles, which are often composed of rock, such as sand, gravel, shingle, pebbles, or cobblestones. The particles comprising the beach are occasionally biological in origin, such as mollusc shells or coralline algae. Beaches typically occur in areas along the coast where wave or current action deposits and reworks sediments. Although the seashore is most commonly associated with the word beach, beaches are found by lakes and alongside large rivers.

Beaches are one of the most important coastal ecosystems. In addition to its biodiversity value, the beach has a primary importance for the bulk of holiday tourists. Beaches play a prominent role in Coastal tourism & Recreation. The term "coastal tourism and recreation" embraces the full range of tourism, leisure, and recreationally oriented activities that take place in the coastal zone and the offshore coastal waters.

These include coastal tourism development (hotels, resorts, restaurants, food industry, vacation homes, second homes, etc.), and the infrastructure supporting coastal development (retail businesses, marinas, fishing tackle stores, dive shops, fishing piers, recreational boating harbours, beaches, recreational fishing facilities, and the like). Also included is ecotourism and recreational activities

such as recreational boating, cruises, swimming, recreational fishing, snorkelling and diving.^{vi}

Along its 7000 km of coastline, India boasts of a number of beautiful beaches. The tranquil environment with abundant greenery around is just perfect to relax and refresh the drained mind and body. Lie on the smooth sandy beaches and soak the warmth of the sun or simply take a quiet walk barefooted on these beaches. The calming effect will easily penetrate deep into your body. The vast stretches of sea water have a unique ability to carry away all your worries and heartaches along with its waves. You can also watch the sun rise and set far in the horizon and appreciate the beauty that is reflected as a reflection in the water and for all those who are more venturesome and yearn for a lot of challenging activities, the beaches have plethora of options to choose from. Swim along with the waves of the ocean water or dive deep into the water to discover a magnificent and colourful marine world. Also, catch the good waves and duck dive the bigger ones while surfing. Cruising in the ocean water is for those who wish to explore the vastness and deepness of the water body without getting wet.

The states of Maharashtra, Goa and Diu have a lot of beaches & offer lot opportunities to tourists.^{vii}

7.3.1 Maharashtra

Beaches of Maharashtra are the apt destinations for an enriching vacation and as a matter of fact, they also make one of the best getaway spots as well. These beaches are spread across the 720 km stretch of coastline starting from Dahanu and Bordi in north and ending in Goa. Apart from exploring the wondrous sea forts, temples and churches, you can enjoy by indulging in an array of water sports and savor a quite sunbathe on the sands.

One can find not only crowded and posh beaches like Juhu and Marine Drive Chowpatty beaches but also earthy and sleepy beaches like Harnai and Bassein, which are a bit slow but provide a peaceful and pollution-free environment. There are beaches for adventure lovers as well like Velneshwar and Shriwardhan-Harihareshwar.

In Vijaydurg-Sindhudurg and Dahanu-Bordi beaches, one may went down to the memory lanes of the history. Here, one can discover the remains of ruined forts and even the existence of Portuguese culture in these areas. Murud-Janjira,

Dahanu-Bordi and Shriwardhan-Harihareshwar are the beaches, which can enjoy both the sizzles of a typical beach as well as a pilgrimage site.^{viii}

BASSEIN

Bassein is in the peaceful location, which is 77 km away from Mumbai. It is closely similar with the India's sultry beach state of Goa. But here, crowd is a bit less and those who wish to enjoy peaceful environment must visit Basssein.

This is quite of a historic place. One can see ruined forts that were built by the Portuguese inside dense forests of brushwood and palm grooves. Locals serve delicious Portuguese cuisines as well.

One can also see Buddhist relics at Nalasopara, which is 10 km from Bassein. Vajreshwari Temple, Akloli hot springs, Sadguru Nityanand Maharaj Samadhi Mandir at Ganeshpuri, Bhimeshwar Temple and other ashrams are also worth to visit. There are quite a few churches of Portuguese times as well in Bassein. The nearest airport is in Mumbai, while the nearest railway station is at Bassein Road. It is well connected by road as well.

DAHANU BORDI

Not only for its extensive and tidy beach, Dahanu is also known for its vast chikoo fruit orchids. Dahanu is 145 km away from Mumbai that comes under Thane district of Maharashtra.

Bordi is half-hours drive away from Dahanu. Here, one can find endless beaches, which are very safe and beautiful. Although, it is quite warm during summer, the gentle breeze cools down the entire beach.

Mecca of the Zoroastrians is a place, which is very popular amongst tourists as there is a magnificent temple, which houses the sacred fire of the Zoroastrians. It is believed that this fire has been kept alive for almost a thousand years. The existence of Iranian and Persian culture further makes this place more exotic.

GANPATIPULE

The waters of Ganapatipule are crystal clear and pristine. The entire stretch of beach is covered with fresh greeneries. The roadside sceneries on the way to

Ganapatipule are captivating with narrow roads, red soil, roofed houses, clean courtyards, and innumerable fruit bearing trees and casuarinas lining.

Ganapatipule is regarded as one of the most important beaches of Maharashtra. It is 375 km south of Mumbai. Fine, sifted, silver sands, a gentle lapping sea, which soothes frayed nerves, attracts large number of tourists are the features of this beautiful beach. It is regarded as a beautiful seaside resort, especially for families in Maharashtra. One can see a glimpse of the entire beach, which is covered with white sand and blue waters from the top of the hill. Ganapatipule is also known as a pilgrimage site for its 400-year-old temple of Swayambhu Ganpati (naturally formed monolithic Ganesh). Malgund and Ratnagiri are other attractions, which are worth to be visited near this beach.

HARNAI

Harnai is about 200 km away from Mumbai. Despite its quietness, it is emerging fast as a tourist destination as visitors from Pune and Mumbai are frequently visited this place to celebrate the weekends. Harnai fort is also a main tourist attraction of the area. South of Harnai fort is the palm-fringed beach of Murud, famous for its clean white sands and safe waters. Panhale Kazi, the famous rock-cut monument is 30 km from Murud-Harnai.

JUHU BEACH

Juhu is one of the most popular and posh beaches of India. This fizzing beach on the shores of Arabian Sea is the place where one can find the bungalows of Bollywood stars. This is also a favourite site for film shootings. Luxury hotels and apartments, which are on the southern end of the Juhu beach, are regarded as favourite haunts for movers and shakers of Mumbai. Juhu beach is not a very good place to swim as it is so crowded. Tourists can enjoy horse and donkey rides, dancing monkeys, acrobats, cricket matches, toy sellers etc. here. Versova, home of Mumbai's largest Koli fishing community is in the north of Juhu.

Mandwa Kihim

Kihim and Mandawa is nearly 10 km away from Mumbai. Kihim has dense coconut trees that give a pollution free green environment. This is a place for the nature lovers who want to spend some time with the beauty of the nature.

Madh Island Beach

Even though Madh Island is quite a rural sort, but it is quite enjoyable to walk down along the villages of fishermen. This can at least give some peace of mind to the hurried and exhausted life.

Marine Drive

Marine Drive is the place where Mumbaites hang out to cool down a while from the steamy hurried and busied life. The cool breeze and the calmness of the sea cool down the exhausted lot.

Marine Drive was built in 1920s and 1930s on land reclaimed from the sea. It is located at the heart of Mumbai. As street lamps orderly line up on the edge of the beach, it is also known as Queen's Necklace. It has recently named Netaji Subhashchandra Bose Road. Chowpatty Beach is at the top end of the Marine Drive. Several Hindu religious ceremonies are taking place at Chowpatty like annual thread-tying ceremony, nariel-purnima and Ganesh Chaturthi immersions. Stalls on the beach, selling Bhelpuri, Kulfi and Paan make the chowpatty zesty. Nana-Nani Park for elderly people has just opened recently near the beach. Mumbai has excellent transport and accommodation facilities

Marve Manori Gorai

Marve, also known as Borivali is a village very close to Mumbai. Now this place has become quite industrialized, but its beauty remains the same.

Murud Janjira

Murud-Janjira is located near Alibagh, which is the head-quarter of Raigad district. It is one of the most popular and alluring beaches of Maharashtra.

Shriwardhan

Shriwardhan is the place for seafood lovers and adventure buffs. Tourists can enjoy different varieties of seafood in this beach. Adventure lovers can go out with a small boat to explore the place where Peshwas were originally resided.

Tarkali

Takarali beach is known for its clearness of water. One can sometimes see the seabed upto a depth of 20 ft. If we look the beach panoramically, one can see the serene beauty with shuru trees and wide Karli River at the background.

Velneshwar

Velneshwar is an ideal beach for swimming and sunbathing. The green coconut palm grooves and rock free seawater make the beach so beautiful and attractive.

Vengurla Malvan

Vengurla is famous for its long stretch of iridescent sand, lined up with thick cashew, coconut, jackfruit and mango groves. Vengurla rocks or Burnt Islands is so near to this beach.

Vijaydurg Sindhudurg

The great Maratha ruler Chhatrapati Shivaji used Vijaydurg - Sindhudurg as naval base during his reign. So this place has lots of historical sites to see apart from the picturesque beaches. The most important of all is the Vijayadurg fort built by Shivaji in the 17th century.

Sindhudurg has temples dedicated to Bhavani, Mahadeo, Jarimai, Mahapurush and Shivaji spreading over 48 acres. Nearest railway station is Kolhapur, while Sindhudurg is well connected by road as well. It is 510 km, and Vijaydurg is 425 km from Mumbai via the Goa highway.^{ix}

7.3.2 GOA:

Goa has a coastline of 100 kms that faces the Arabian Sea. Outlets of the state's seven rivers break the straight, uninterrupted coastline. Goa has a variety of breathtaking beautiful beaches for the tourists. A tourist can opt for crowded or some isolated or virgin beaches. One of the most popular Goa beaches is the Anjuna Beach. This beach is a crowded one and a shopper's delight at the same time. Other popular beaches are Vagator beach, Miramar beach, Dona Paula Beach, Colva Beach, Arambol Beach, Bogmalo Beach, Benaulim Beach, Calangute Beach, Chapora Beach, Mabor, Majorda etc. The beaches in Goa are also known by the quality of sand. For ex. Calangute Beach is known for its coconut grove. Shaped like the new moon, Goa's beaches are known the world over. ×

CALANGUTE:

Calangute is the most popular beach with thousands thronging it in both the peak and off-season. The waves rise high above as you wash away your city blues,

though swimmer need to be a trifle cautious because of the sudden drop and the rising waves. Experienced swimmers will, however, revel in the seas here.. The beach is fringed with popular restaurants and hotels, including the Calangute Residency operated by GTDC.

This long, seven-km sweep of sand located 15 kms from Panaji, is called the 'Queen of Beaches'. The village of Calangute has all basic facilities like post office, banks, foreign exchange offices, resort companies, all kind of bars and restaurants, besides medical facilities. The number of internet cafes in Calangute might even exceed that of the entire city of Panaji.

BAGA:

A few kms down the beach is another – Baga, part of a 30 km stretch of beach coastline along the west coast of Goa which begins at Fort Aguada, continues as Sinquerim Beach, moves on to Candolim which merges into Calangute Beach and then stretches on to Baga, Anjuna and on to Vagator, finally ending at Chapora beach. Truly a veritable feast of beaches. Compared to Calangute, Baga is quieter and also more isolated. It is more popular with western tourists who love to use it as a base for water sports and fishing in the area.

VAGATOR:

This most photographed beach of Goa forms a bay that curves from the headland to the hillock crowned by the Chapora Fort. This beautiful arc of sand is located about 22 kms from Panaji and is part of the 30 km stretch of beach coastline along the west coast of Goa. Adjoining Anjuna, Vagator is secluded, crescent shaped and situated on the Caisua bay along the Chapora river basin in the shadow of Chapora Fort. During the tourist season, it is a favorite venue for midnight parties.

ANJUNA:

Anjuna was made famous by the 'flower power and peace' generation of the sixties and early seventies and later by the 'trance' parties. Located about 18 kms from Panaji, the beach is known for its breeze-catching palms, soft sand, and the unusual rocky formation overlying a cove of whitish sand and black rock that juts into the sea. It is now famous for its weekly Flea Market, which draws legions of visitors every Wednesday and bargains can be had on apparel, footwear, jewellery, footwear, chess sets – and yak cheese.

SINQUERIM:

With its magnificent 17th century fort which has now been converted into a prison, Sinquerim is one of the finest beaches in Goa, offering international class facilities for water-skiing, parasailing, fishing, scuba-diving and wind-surfing. Home to the Taj Hotel Group, which dominates the headland around the historic Fort Aguada, Sinquerim is located some 13 kms from Panaji. The uninterrupted stretch of firm sand stretches all the way north to Baga, offering visitors a temptingly long walk along the beach.

CANDOLIM

Candolim is the first beach that can be approached from the city of Panaji and is like a gateway to the other more famous beaches. Though individual accommodation is available here, there are only a few hotels with restaurants attached. One highlight of Candolim is the parasailing and water skiing facility, besides other water sports.

AGUADA

Aguada beach is almost synonymous with the top-notch Fort Aguada Hotel complex, a superb hotel that is built on the cliff, around the remnants of the early 17th century Portuguese fort. Although access to the beach is not possible through the hotel grounds, which are private, you can walk along Aguada beach, for in India private beaches do not exist.

MORJIM

The VIPs on this beach are the Olive Ridley turtles that come to nest here helped by a group of volunteers who guard the nests and help the hatchlings get into the sea. A favourite of Russian tourists, along with Ashwem beach close by, visitors will find signboards and menu cards in Russian!

ARAMBOL or HARMAL

This is also a foreigners' haunt with a large number of Tai Chi, non-permanent mehendi or henna, tattoo, yoga and meditation centres. Harmal Beach is the one place you cannot drive on to, but there are narrow lanes that lead to the higher reaches of the coast. You have to walk down a slope to the beach itself. The black rocks on the silvery beach make for some pretty dramatic scenery at sunset. Further up near the hill is a pool with soft yellow clay, which is said to have

healing properties. Beauticians buy the clay as do the innumerable massage parlours in the area.

MIRAMAR

This beautiful 'urban' beach, akin to Chowpatty in Mumbai, is located just 3 kms from Panaji. It lies adjoining the estuary of the river Mandovi as it opens into the Arabian Sea. It was originally known as 'Gasper Dias Beach', named after Gaspar Dias, a prosperous landlord and where a Portuguese fort once stood at the far end of the 16th century.

SOUTH GOA

PALOLEM

Palolem is a cosy beach of white sand facing a blue bay between two headlands. The little wooded islands on the northern headland look alluring and you could try and persuade one of the fishermen – this is also a fishing beach – to ferry you across. They also offer to take you out to spot dolphins. Tourists have of late discovered Palolem and so there are quite a few shacks selling seafood snacks, souvenirs and clothes of the bright, informal kind. Panaji, the capital, is more than 70 kms away.

AGONDA

If you continue driving towards Panaji from Palolem, the next beach is Agonda. It's long and lonely, fringed with palms and casuarinas and dominated by a large hill to the south. It's not safe to swim out too far on this beach. There are very few facilities available here and you are needed to carry all the essentials.

Agonda is a 3 km long beautiful cove of white sand, safely secluded in the palms. There are no tourists, no souvenir stalls, no restaurants – just peace and tranquility. Just the trees, the beach, the big beautiful ocean and you. Not far from Agonda beach is Cabo de Rama, untouched by most of the visitors in this region.

VARCA, CAVELOSSIM, MOBOR

Varca, Cavelossim and Mabor are a trio of the most alluring beaches south of Benaulim. These beaches are much cleaner and quieter than most of the other more famous beaches of Goa. There are numerous beach shacks offering a variety of Goan dishes and seafood at reasonable prices. There are several food joints

around the grand 'Dona Sylvia' resort offering a splendid repast at reasonable rates. There are also facilities for Dolphin watching up the River Sal.

BETALBATIM

North of Colva is Betalbatim Beach which begins a long string of beaches with Majorda, Utorda, Arossim and Velsao at the north. It is a ten kilometre stretch of white sand which is not very crowded

COLVA

This is the most important beach in the South circuit, equipped with all modern amenities like air-conditioned resort complexes, tourist cottages, discos, besides several stalls, eateries and guest houses—all of which have expanded the village enormously. With 20 kms of virgin white sands, palm fringed, sun drenched beaches, Colva is the most loved beach in Goan.

Unlike Anjuna or Calangute, Colva has gained popularity only lately. Located just 39 kms from the capital Panaji, it was relatively little disturbed and life moved on quietly. The Church of Our Lady Of Mercy in Colva is famous for its miracle statue of Menino Jesus. The busy road leading from the Church to the beach is where all the facilities are located.

MAJORDA

This small stretch, about 5 kms north of Colva Beach, is as pretty as a picture, studded with several hotels, the most prominent being the starred Majorda Beach Resort. Majorda is the village where the Jesuits, fond as they were of the good things of life, discovered the best Goan toddy (sap from the coconut palm), which they used to leaven the bread. Naturally, then, Majorda is the place where the Goans were first trained in the delicate art of baking European breads. The Majordans are still Goa's best bakers.

BOGMALO

This beach, dominated by a 5-star hotel located right on its edge, is cut apart from both the North and South beach circuit. Just 4 kms from the airport at Dabolim, it is a favourite among the elite classes and has an air of exclusivity. Although the resort hotel towers above the village, there are still a few smaller and appealing places to stay in. Windsurfing and water skiing facilities are available.

BENAULIM

Less than 2 kms south of Colva is the more tranquil beach of Benaulim, is one of the few places in Goa where one can glimpse handicrafts typical to this area. The best of the traditional rosewood furniture is made here. Also, mythically Benaulim is famous as the place where the legendary Parashuram's arrow landed by which Goa was created.

BETUL

Betul is an important fishing port where all the mechanized boats and deep sea trawlers bring in their catch. Here headlands from the slopes of the Western Ghats protrude into the shore, imparting an imposing backdrop. Beyond this secluded beach is the hill of Cabo De Rama where the Portuguese built a fort. From the fort, a great view of the sunset on the beach can be viewed. However, there are very few places to stay in Betul.

4.3.3 Diu

A beautiful blend of sea, sand and sun, Diu is a God's gift to those in quest of a blessed land where the weary weight of this unintelligible world can, for a while, be lightened and the waking soul can hear the music of the nature. This tiny island of breeze, beauty and serenity situated off the southern tip of the Saurashtra (Kathiawar) peninsula of Gujarat, lapped by the Arabian Sea, is a picture of calmness with superb beaches and a fascinating history.

Nagoa Beach

It is located near the Nagoa hamlet of the village of Bucharwada. The Beach is exceptionally beautiful and quiet. In this horse - shoe shaped beach, various water sports facilities are available. It is completely safe for swimming. Plenty of Hoka trees whisper and sway in the intoxicating sea breeze all day long. The virginity of the beach and serenity of the surroundings give the visitor peace and pleasure beyond expression. A perfect semi circle beach where the gentle lapping waves beckon you to wade into them for a fun filled time of swimming, gamboling or just lolling around the soft sand shores or to find you napping under the palm trees filled with the soothing breeze

Ghoghla Beach

The Ghoghla Beach is a sandy beach. A tourist complex nearby provides all basic amenities to tourists. It is the largest and gentlest beach of Diu. The Golden sand beach undulates into the horizon while the Arabian Sea laps away at the edge as though imploring the sands to let it find its own peach. You can do swimming, sunbathing, parasailing, surfing etc.

Jallandhar Beach

Jallandhar Shrine is located on a hillock close to the beach. This small shrine crowned with a dome houses a stone carved face of Jallandhar a mythological demon who was killed by Lord Krishna. Nearby there is also a temple of Goddess Chandrika. The beach is at a distance of 1 km from Diu Town.

7.4 Natural Manifestations of Touristic Significance

In its broadest sense, nature in tourism involves experiencing natural places, typically through outdoor activities that are sustainable in terms of their impact on the environment. These can range from active to passive and include everything from bushwalking and adventure tourism experiences to sightseeing, scenic driving, beach experiences and wildlife viewing. Nature-based experiences are intimately linked to all other aspects of the visitor's total experience of a destination, such as food, culture, relaxation, health, escape, family needs, accommodation, transport, etc. All serve to complement each other and together form the basis of a visitor's overall satisfaction with their holiday. Conserved and protected areas (including Marine and National Parks), the Earth's biodiversity, and respect for local culture and those who have been traditional guardians of our natural environments, can be central to their interests.^{xi}

7.4.1 Maharashtra

Maharashtra is one of the most sought after tourist destinations in India. Maharashtra tourism offers almost everything from its pristine beaches, wildlife sanctuaries, hill stations, natural caves, waterfalls, to imposing forts, colourful festivals, ancient pilgrimage shrines, museums, and historical monuments that draw large number of travellers.^{xii}

Wildlife

The nature lovers, who come to India to explore its rich wildlife, must make a sojourn at Maharashtra also. The state is virtually a delight for those who love to visit wildlife sanctuaries and national parks and be a witness to nature's beauty. The various protected areas here are home to a wide variety of wildlife, comprising of Tigers, Crocodiles, Bisons, Gavas, Neelgais, Wild Deer, Sambar, etc. Apart from that, they serve as home to numerous birds and are also visited by the most exotic migratory birds every year. The facilities available at the various wildlife sanctuaries and national parks of Maharashtra include jeep rides, night safaris, comfortable accommodation, etc. With the below given information, explore the wildlife of one of the largest states in India.

Chikhaldara Wildlife Sanctuary: Chikhaldara Wildlife Sanctuary is situated in the Amaravati district of Maharashtra and forms one of the popular excursions from the Amravati city. The sanctuary forms a part of the sole hill station of the Vidarbha region, characterized by beautiful lakes, serene lakes and cascading waterfalls. Chikhaldara Wildlife Sanctuary boasts of a rich and varied wildlife and has been named after the spot known as 'Keechaka'. The wild animals that can be seen inside the precincts of the Chikhaldara Wildlife Sanctuary of India include Panthers, Sloth Bears, Sambar, Wild Dogs and Wild Boars. The sanctuary also offers panoramic views of the valley situated below. There are a number of places near it that are definitely worth having a look at. These include Melghat Tiger Reserve, Gavilgad Fort, Narnala Fort, Pandit Nehru Botanical Gardens, Tribal Museum and Semadoh Lake.

Doba National Park: Tadoba National Park spreads over 120 sq km, which is at an altitude of 200m. It is located 100 km south of Nagpur and 45 km north of Chandrapur. It is the oldest national park in Maharashtra.

Bharmragarh Sanctuary: Bharmragarh Wildlife Sanctuary has many types of wild animals like leopard, jungle fowl, wild boar and sloth bear, barking deer, blue bull, peacock and flying squirrel. The entire area is covered with the moist deciduous mix forests.

Dajipur Bison Sanctuary: Dajipur Bison Sanctuary is situated on the border shared by the Kolhapur and Sindhudurg districts of Maharashtra. The wildlife sanctuary derives its name from the splendid animal, Bison, which is found in

abundance here. Situated at an altitude of approximately 1200 m above the sea level, the Dajipur Wildlife Sanctuary boasts of a landscape that is primarily craggy and mountainous. The area in which the sanctuary is situated stands dotted with dense, lush green forests. These forests serve as the abode of a large number of wild animals, apart from Bison. These include Wild Deer, Chital, Antelopes, Bears, etc

Nagzira Wildlife Sanctuary: Nagzira Wildlife Sanctuary is situated at the Tirora Range of Bhandara Forest Division, which comes under the Bhandara District of Maharashtra. It is approximately 130 km to the west of Nagpur and makes one of the popular excursions from the city. The landscape of Nagzira Wildlife Sanctuary comprises of hills and small lakes. The forests covering the hills comprise of the southern tropical dry deciduous trees. The wildlife seen at the wildlife sanctuary includes 34 species of mammals, 36 species of reptiles and 4 species of amphibians. The wild animals found here consist of Tigers, Panthers, Leopards, Bison, Sloth Bears, Sambar Deer, Four-Headed Antelope, Blue Bull, etc.

Navegaon National Park: Navegaon National Park is located in the Navegaon area of Maharashtra, at a distance of approximately 150 km from Nagpur city. It is one of the most popular forest reserves of the Vidarbha region of the state and was established in the 18th century. Flowing through the Navegaon Wildlife Park is the beautiful Navegaon Lake that flows with crystal clear water. You can hope to see Scarlet Minivets, Paradise Fly Catchers, Kingfishers, etc, apart from a wide variety of migratory birds. You can also spot a number of wild animals at the national park, including Tigers, Panthers, Bisons, Sambars, Nilgais, Chitals, Wild boars, Sloth Bears, Wild Dogs, Langoors, etc.

Pench National Park: Pench National Park lies nestled in the lower southern reaches of the Satpura hills, on the southern boundary of Madhya Pradesh. Earlier a wildlife sanctuary, Pench was given the status of a tiger reserve in the year 1992, when it was included under the umbrella of "Project Tiger". The flora of the Pench Wildlife Sanctuary is basically made up of Southern Indian tropical moist deciduous forest. Amongst the commonly seen wild animals at the wildlife sanctuary are Jungle Cats, Cheetal, Sambar, Nilgai, Jackals, Wild Dogs, Gaurs, Sloth Bear, Chinkara, Langoors. The sanctuary boasts of around 39 species of mammals, 13 species of reptiles and 3 species of amphibians. There are also approximately 210 species of birds at the park, which includes the migratory birds

that come here every year. The birds that are commonly seen include Peafowl, Red Jungle Fowl, Crow Pheasant, Crimson Breasted Barbet, Redvented Bulbul, Racket Tailed Drongo, Magpie Robin, Lesser Whistling Teal, etc.

Katraj Snake Park: Katraj Snake Park is one of the popular conservation parks of India, situated on the Pune-Satara Highway. It is known for housing a significant population of snakes, birds, turtles, reptiles, etc. Situated at a distance of approximately 8 km from the Pune city of Maharashtra, the park was established in 1986.

Sanjay Gandhi National Park: Sanjay Gandhi National Park, also known as the Borivali National Park, is the only national park situated inside the Mumbai city. It was given the status of a national park in the year 1974 and since then, it has been playing home to some of the most exotic species of animals and birds. Located in the hill ranges around Borivili, the national park is the perfect place for the nature lovers coming to Bombay city of India. Sanjay Gandhi Wildlife Sanctuary is especially known for its Lion Safari, through which one can view the 'Big Cat' from just six feet away.

The entire vegetation inside the Borivali National Park can be divided into two main parts - South Indian Moist Deciduous and Semi Evergreen. The main bird species of Borivili National Park are Woodpeckers, Magpies, Jungle Owlets, Hornbills, Racket-Tailed Drongos, Minivets, Robins, Peacock, Golden Orioles, & Sunbirds. At times, one may also come across Paradise Flycatcher, Kingfisher, Swifts, Gulls, Egrets and Herons here. Lions and Leopards are the pride of the park. Other major animals found here include Palm Civet, Black Naped Hare, Hanuman Langur, Barking Deer, Hyena, Sambhar, Mouse Deer, Rhesus Macaque, Bounet Macaque, Spotted Deer, Indian Flying Fox and Porcupine. The reptiles inhabiting the Borivali National Park comprise of Pythons, Cobras, Monitor Lizards, Russell's Viper, Bamboo Pit Viper and Ceylonese Cat Snake.^{xiii}

Hill Stations

As the state of Maharashtra is the Home of Sahydri Mountains, the state has many appealing hill stations. The Britishers founded most of these hill stations during their colonial era to beat the scorching heat. But the beauty and the charming glory are still alive in these hill stations. The Western Ghats, which form a part of

the Sahyadri range, has also lots of beautiful hill stations. Hill stations of Maharashtra not only attract the foreign tourists but also Indian domestic tourists, which are exhausted with the fast urban life. Popular hill stations of Maharashtra are Matheran, Lonavala, Khandala, Mahabaleshwar, Panchgani, Bhandara, Malshej Ghat, Amboli, Chikhaldara Panhala, Panchgani, Sawantwadi, Toranmal, and Jawahar. It is said that each hill station of Maharashtra has unique characteristic and its closeness to a city makes it very popular.^{xiv}

Trekking

Trekking in Maharashtra might not be that adventurous and risky like any Himalayan trekking. It is calm and easy; still it is enjoying and thrilling giving a lifetime experience. Sahyadris is the most important trekking region in the state. Sahyadri is known to be a trekker's paradise with green hills, dotted lakes and forests all around. This region is popular for its incredible historic forts and wonderful ancient Buddhist caves. Having exotic natural locations, Rajmachi Fort too is famous for trekking. This beautiful place is a historic site as well. Rajmachi can be reached via the town of Lonavla along the Khandala plateau. Fort trekking can also be done at Karla Caves and Bedsa Caves. This trekking is long trekking involving different caves.^{xv}

Lakes

Having nearly around 23 lakes, Thane is popularly known as the 'City of Lakes' in Maharashtra. Talao Pali Lake, Upvan Lake are the most important most crowded lakes of the city. It is believed that Rankala Lake in Kolhapur is the oldest of all lakes in Maharashtra.

Waterfalls

Ramkunk Lake in Nashik is popular, as it is believed that Lord Rama and Sita used to take bath in this lake during their exile. The Mushi lake near Lonavala, Venna lake in Mahabaleshwar, Khindsey and Ambazari lakes near Nagpur, Lonar lake in Buldhana district, Pashan and Pimpri lakes in Pune and the Tansa, Tulsi, Vihar and Powai lakes in Mumbai are the lakes which attracts lots of visitors and popular as picnic spots where tourist groups often go for excursion on weekends and holidays.

Dudhsagar waterfall, Thoseghar waterfall, Lingmala fall, Dhobi waterfall, and Chinaman's waterfall are the important waterfalls in Maharashtra. Dudhsagar

waterfall, situated at Someshwar is a favourite destination for youngsters where they come often to liven up their spirits. This is one of the best picturesque spots in Nashik. The waterfalls are 10m long and the water is milky white, so it is called Dudhsagar waterfall. Thoseghar, near Satara is famous for its serenity, clam and quiet nature.

It is a newly developing picnic spot. Thoseghar is really a wonderful place where one can enjoy the beauty of the nature. July to November is the best season to visit Thoseghar. Dark woods and a clean lake add to the beauty of this hilly region. There are also other small waterfalls here, which are about 15-20 meters high. The highest one is of around 500 meters. Satara is on the Pune - Bangalore Highway, and is about 115 km from Pune. Lingmala Falls, Dhobi Waterfall, and Chinaman's waterfall are the waterfalls in Mahabaleshwar. July to December is the best time to see these waterfalls. Venna Lake is not far from here, which is on the way of Panchgani. Dhobi Waterfall is on the bridle path connecting Petit Road with Old Mahabaleshwar Road near Lily Cottage. Chinaman's Waterfall is on the Carviali Road, which can also reach by the Tiger Path Road or from Babington Point. Chinese convicts to cultivate the adjoining fields formerly used it; hence the fall is known by this name. Mahabaleshwar is 120 km from Pune via Panchgani.^{xvi}

7.4.2 Goa

Variously known as "Pearl of the Orient" and a "Tourist Paradise", the state of Goa is located on the western coast of India in the coastal belt known as Konkan. The magnificent scenic beauty and the architectural splendours of its temples, churches and old houses have made Goa a firm favourite with travellers around the world.

But then, Goa is much more than just beaches and sea. It has a soul which goes deep into unique history, rich culture and some of the prettiest natural scenery that India has to offer. Much of the real Goa is in its interiors, both inside its buildings and in the hinterland away from the coastal area.^{xvii}

Wildlife

Bhagwan Mahavir Wildlife Sanctuary and Mollem National Park: Situated along the North East border of Goa at Molem, about one-and-a-half hours' journey from Panaji (60 kms), the Bhagwan Mahavir Wildlife Sanctuary covers

240 sq.kms of thick forest clad slopes on the Western Ghats and its valleys and is the biggest of the three sanctuaries of Goa. Rich in wildlife, it is a paradise for bird watchers. Besides flora and fauna, there are many important geological and historical features in this sanctuary. Dushsagar falls, about an hour's journey from Colem by train, is a feast for the eyes. The 'Devil Canyon' is another beautiful geological spot. The famous Lord Mahadeva Temple situated at Tambdi Surla is about 13 kms from Molem. The Department of Tourism has built comfortable cottages and dormitories for tourists. Entry fee Rs.10/- per adult, Rs.5/- per child and Rs.3/- per student.

Bondla Forest: 52 kms. from Panaji and 36 kms. from Margao, it is the smaller of the three wildlife sanctuaries of Goa. More than a sanctuary, it is an ideal jungle resort, a major attraction for school going children and nature lovers. Its mini zoological Park, Deer Safari Park, , Botanical gardens, Nature Education Centre, wildlife and nature trails, and archaeological exhibit attract people through the year. Comfortable cottages are available here for tourists.

Cotigao Wildlife Sanctuary: The second largest of the three wildlife sanctuaries in Goa, with an area of 105 sq. kms. is located about 76 kms. from Panaji, in Cancona Taluka in South Goa.. It is covered with dense forest and varied wildlife. The ancient Jeevottam Partagal Math, noted for its Vedic studies, lies in the vicinity of the sanctuary.

Dr. Salim Ali Bird Sanctuary: Spread over 1.78 Sq. kms. and located at the western tip of the island of Chorao along the river Mandovi near Panaji, it is fully covered with mangrove species. Varieties of local as well as migratory birds frequently visit the area. This sanctuary can be visited anytime of the year with the permission of the Chief Wildlife Warden, Forest Department, Junta House, Panaji - Goa. The Sanctuary is approachable on foot after crossing over by ferry from Ribandar to Chorao. There are some private parties who take tourists around in their canoes fitted with outboard motors.^{xviii}

Caves

Arvalem Caves: The celebrated caves of Arvalem, found in a remote area but not far from the temple of Rudreshwar, are of great archaeological interest. Cave No. 2 has a Shivalinga with a circular top with Sanskrit and Brahmi characters dating back to the 7th century A.D.

Waterfall

Arvalem Waterfalls : Descending from the temple of Rudreshwar, one catches sight of a majestic waterfall cascading from a height of about 70 ft. to form a sizeable lake at the bottom – a tempting sight to seasoned swimmers.

Dudhsagar Waterfalls: 10 kms from Colem Railway Station, these majestic falls are accessible by train. Water plummets hundreds of feet in a milky foam in one of Goa's most spectacular sights which is also a lifeline to the ecosystem of the Bhagwan Mahavir sanctuary.. A popular destination for hikers and trekkers, the waterfall is also accessible by jeep through the sanctuary. However, one needs to obtain permission in advance from the Department of Forests at Junta House, Panaji.

Lakes/ springs

Mayem Lake: Surrounded amidst rolling green hills in Bicholim this lake is an ideal picnic spot with boating facilities. Comfortable cottage accommodation is available.

Carambolim Lake: Adding to the charm of the quiet village of Carambolim is the scenic reservoir fringed by lush greenery. Migratory birds seek this verdant landscape every year till the end of the season. The cacophony of 80 different varieties of birds is unbelievable, tending to their young in the mixed heronries on the aquatic vegetation. Jacanas with their iridescent colours and the spectacular purple moorhens can be seen delicately treading over the floating vegetation.

Netravalli Lake- Budbudyachi Tali: This lake in Sanguem Taluka has unique characteristics. Continuous bubbles emerge from the lake surface, and upon clapping the intensity of the bubbles grow, with live springs suddenly gushing out.

Kesarval Spring: 22kms from Panaji, the spring emerges from hard and compact rocks and people bathe in its water with strong belief that it has medicinal properties.

Pomburpa Spring: The natural spring at Pomburpa, situated on the outskirts of Bardez taluka, about 30 km from here, is one of the major centres of attraction for domestic and foreign tourists. Known for its medicinal values, the spring water

is used for bathing by ailing men and women who throng the spot throughout the year.

Boca De Vaca: Situated next to the Mahalaxmi Temple, the Boca de Vaca spring is one of the two springs that exist in Panaji Goa. The appearance of this Portuguese- built structure that remains aglow with soft decorative light in the evening gives it a name 'Boca De Vaca' literally meaning 'the face of the cow'.

Spice Plantations

Savoi Plantations - Spice of Life: Located at Savoi Ponda, 25 kms from Panaji and 15 kms from Ponda, it is one of the oldest tropical plantations. With intercropping of spices with coconuts, betel nuts, pineapples and other fruits. Experience typical Goan Hindu cuisine served in mud pots and banana leaf. En route to the plantation one can visit a cashewnut factory and Ananta temple, submerged partly in water.

Source: getsetgoa.com (Spice plantations in Goa)

Tropical Spice Plantation I: The plantation is located in Keri in Ponda Taluka. Visitors are welcomed with herbal tea followed by a guided tour of the plantation. On return, enjoy a local meal served on a banana frond.

Pascoal Spice Village: Located near the village of Khandepar, 8 kms. from Ponda National Highway (NH) 4 A., the lower end of the property is bounded by a tributary of the Mandovi River. A wide variety of spice plants and cash crops is grown here. For visitors there is restaurant with an open-air party facility along with boating,

Rustic Plantation: Situated on the extreme North-East of Goa at Dongruli village, Thane, Valpoi, Sattari, the plantation is a rejuvenating experience of a lifetime. Nestled in a valley amidst verdant grass and fruit bearing trees an rivulets, Rustic Plantation is an ideal getaway..

Sahakar Spice Farm: This spice farm on the Ponda-Belgaum Road, Curti, Ponda offers a guided tour of the plantation and an authentic budget village lunch on a banana leaf, besides a traditional welcome.

Sai Herbarium: Presents a superb, eco-tourism natural spot with herbal gardens which includes medicinal and aromatic plants. The spice plantation, cultivated by pure organic farming methods, has been maintained in its natural ecology

amidst a peaceful and relaxing atmosphere. Visitors can enjoy delicious Goan as well as Indian cuisine. Contact: C/o. Sai Organic Farm & Herbarium, Savoi Verem, Ponda-Goa 403 401. Tel: 2340308.

Parvati Madav Park Plantation: Situated in Keri village in Ponda, 30 kms. from Panaji. The place is gifted with natural beauty with plants arranged in scientific classification and categorized according to one's psychological, aesthetic and spiritual needs and grown in well demarcated plots.

Turtle Nesting Sites

Morjim, Galgibag and Agonda beaches – the largest nesting places of the giant Olive Ridley turtle. An amazing phenomenon of nature, this is a regular annual occurrence. While earlier it was a hunting ground for sea turtles, today it is a modal conservation centre.

Rock Art

The discovery of rare Stone Age rock carvings at Kajur, Panasaimol of Pirla village in Sanguem Taluka and Mauxi in Sattari Taluka has opened new vistas and thrown up new challenges to historians and archaeologists. The State Museum of Goa in Panaji has created a model of this entire site of Panasaimol.

Ancestral Goa, Big Foot

Located in Loutulim, 9 kms from Margao, this centre for art, culture and environment is an aesthetically developed open air site designed to illustrate Goa's traditional past. Set in eco-friendly surroundings, this mock up village traces 100 years of Goa's lifestyle and heritage. A giant size footprint, Big Foot, the only designer dance floor in Goa, is used as a venue for the promotion of dance, music and traditional culture.

Botanical Garden

The Garca Branca Bed and Breakfast Resort and Ayurvedic Botanical Garden is located in Loutolim, Goa, India and offers the finest, authentic Goan vacation experience to visitors from around the world. The Garca Branca is the ancestral home of the C.J. Mascarenhas family with genealogical history that has been traced back to the mid-1800s to Cupertino Joel Mascarenhas and his wife Divina Sobrinho. Cupertino was an avid naturalist and helped manage the local waterfowl population and wetlands. And it was his passion for birds that earned

him his nickname, “Bokem”, which means white heron in the local dialect of Konkani. Wishing to keep the spirit of Bokem Mascarenhas alive in the recently renovated home, his resident descendant, Carlos Jose Mascarenhas has named the home “The Garca Branca”, the Portuguese translation of white heron.

Other Attractions

Bambar Sacred Groves: Located at Bambar in Sattari Taluka, this is the abode of rare medicinal plants. The swamp forest has great ecological significance with numerous aerial roots. This grove is known to have existed for the last 250 years.

Cumbarjua Canal: The 15 km stretch of water links Zuari with the Mandovi river. A vibrant mangrove habitat, it is home to fresh water or marsh crocodiles and migratory birds. Boat cruise packages provide visitors most a memorable experience. The enchanting river journey takes one to the picturesque backwaters.

Satpal Arboretum: Established in 1972, about 3 kms from Mollem, a number of research plots have been laid here. The arboretum is ideally suited to meet the requirement of students in their fields studies.

Salaulim Dam: The monochromatic landscape, its silent, serene splendor beckons the traveller to relax in the secluded warmth of nature. A quaint picnic spot ideal for a languorous break, a drive such places is always an exhilarating and memorable experience.

Goa Chitra Ethnographic Museum: Housed in Mondo-Waddo, Benaulim, this lovingly collected museum exhibits agrarian Goa, with predominantly old agricultural and farming tools and equipment on display. A must-see for visitors.

7.4.3 Diu

Diu is a union territory spanning about 40 sq km off Gujarat’s Saurashtra coast. The Diu fort dominates the townscape from its eastern end. Built in 1535 when the Portuguese first took control. It has an impressive double moat which is worth visiting. During the Christmas the activities are shifted to St.Paul’s Church which was built in 1610 with an elaborate and imposing white façade, carved arched doorway and vaulted interiors. Another church dating from the 17th century, St.Thomas Church houses Diu Museum. The main areas of attraction at Diu are beaches, especially Nagoa beach, Ahmedpur Mandvi and Goghla beaches which

also have water sports facilities. There are restaurants along the seafront Road leading to the Fort.^{xix}

Sea Shell Museum - Nagoa, Diu

First museum in Asia which has maximum sea shells. First museum in World where sea shells are displayed in magnifying glass of various sizes. The collection of about 2500 to 3000 sea shells in museum.

Water Sports, Diu

The water sports facilities are available at Nagoa and Ghoghla Beach. There are various sorts of water sports facilities available such as Parasailing, Water Scooter Riding, Boat Sailing etc. In addition to this there is availability of Evening Boat Cruise at Diu Bunder. This facility is managed by Diu administration. The Evening Cruise ride starts from 7:30 P.M to 8:30 P.M with Music, Masti and light refreshments.

7.5 Check Your Progress

- 1. What do you mean by Coastal Tourism & Recreation?**

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- 2. Name any three beaches in Maharashtra?**

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- 3. Name any two beaches in Goa?**

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- 4. Name any two beaches in Diu?**

5. Name two sanctuaries in Maharashtra?

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6. Name two sanctuaries/ National Parks in Goa?

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7. Name two waterfalls in Goa?

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7.6 Summary

After going through this unit on beaches & natural manifestations, you must have understood about the famous beaches & natural bounties present in Maharashtra, Goa & Diu.

The various famous beaches of Goa are Agonda, Candolim, Calangute, Dona Paula. The beaches are known to witness a massive footfall throughout the year. Goa is blessed with splendid diversity of wildlife, culture as well as landforms also.

The beaches in Maharashtra fringe many historically important sites - temples, forts, churches. There are a number of wildlife sanctuaries & National parks which offer splendid opportunities to see a wide variety of wildlife in the spectacular natural setting.

A beautiful blend of sea, sand and sun, Diu is a God's gift. Also, this tiny island of breeze, beauty and serenity situated off the southern tip of the Saurashtra (Kathiawar) peninsula of Gujarat, is a picture of calmness with superb beaches and a fascinating history.

After going through this block, students you would have understood about the cultural & natural significance about the states of Maharashtra, Goa & Diu. These aspects play an important role in tourism of these states.

7.7 Clues to Answer

Check your progress

1. Refer Sec 4.3
2. Refer Sec 4.3
3. Refer Sec 4.3
4. Refer Sec 4.3
5. Refer Sec 4.4
6. Refer Sec 4.4
7. Refer Sec 4.4

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Unit-08

Odisha and West Bengal

Structure:

- 8.0 Introduction**
- 8.1 Beaches of Odisha**
 - 8.1.1 Puri Beach**
 - 8.1.2 Chandrabhaga Beach**
 - 8.1.3 Gopalpur Beach**
 - 8.1.4 Astaranga Beach**
 - 8.1.5 Satapada Beach**
- 8.2 Backwaters and Lagoons of Odisha**
 - 8.2.1 Chilika Lake**
 - 8.2.2 Bhitarkanika Mangrove Ecosystem**
- 8.3 Beaches of West Bengal**
 - 8.3.1 Digha Beach**
 - 8.3.2 Mandarmani Beach**
 - 8.3.3 Tajpur Beach**
 - 8.3.4 Shankarpur Beach**
- 8.4 Backwaters and Deltaic Region of West Bengal**
 - 8.4.1 The Sundarbans**
 - 8.4.2 Hooghly River System**
- 8.5 Tourism Significance of Beaches and Backwaters**
- 8.6 Summary**
- 8.7 Check Your Progress**
- 8.8 Suggested Readings**

8.0 Introduction:

India's eastern coastal region along the Bay of Bengal is rich in natural attractions such as sandy beaches, lagoons, deltas, mangrove forests, and backwaters. Among the eastern coastal states, **Odisha and West Bengal** occupy a prominent place due to their unique coastal landscapes, biodiversity, and cultural significance. These coastal areas not only serve as popular tourist destinations but also support fishing communities, wildlife habitats, and regional economies.

Beaches in Odisha and West Bengal are known for their scenic beauty, religious importance, and recreational value, while the backwaters, lagoons, and deltaic regions provide opportunities for eco-tourism, wildlife tourism, and sustainable tourism development. This unit discusses the major beaches and backwaters of Odisha and West Bengal and examines their importance in the context of tourism.

8.1 Beaches of Odisha:

Odisha has a coastline of about **480 kilometres** along the Bay of Bengal. The state is known for clean beaches, spiritual ambience, and increasing emphasis on eco-friendly tourism.

8.1.1 Puri Beach:

Puri Beach is the most famous beach in Odisha and one of the most important coastal destinations in India. It is located near the holy town of **Puri**, which is renowned for the Jagannath Temple. The beach attracts both pilgrims and leisure tourists throughout the year. Puri Beach is known for its golden sand, gentle waves, and beautiful sunrise and sunset views. Cultural activities, beach festivals, and sand art displays have further enhanced its tourism appeal.

8.1.2 Chandrabhaga Beach:

Chandrabhaga Beach is situated close to the **Konark Sun Temple**, a UNESCO World Heritage Site. The beach is known for its scenic beauty, peaceful surroundings, and cleanliness. It has received **Blue Flag certification**, reflecting high standards of environmental management, safety, and cleanliness.

Chandrabhaga Beach is ideal for eco-tourism, nature-based tourism, and photography.

8.1.3 Gopalpur Beach:

Gopalpur Beach is located in the **Ganjam district** of Odisha. It was once an important seaport during the British period. Today, it is known for its calm atmosphere, coconut-lined coast, and remains of colonial history. The beach is less crowded compared to Puri and is suitable for tourists seeking relaxation and tranquillity.

8.1.4 Astaranga Beach:

Astaranga Beach is situated in the **Puri district** and is known for its natural beauty and fishing activities. The name “Astaranga” means “colourful sunset,” which highlights the scenic sunsets visible from the beach. It is an emerging destination and holds potential for community-based and sustainable coastal tourism.

8.1.5 Satapada Beach:

Satapada Beach is located near the mouth of **Chilika Lake**, where the lagoon meets the Bay of Bengal. The beach is famous for dolphin sightings, especially the Irrawaddy dolphins. The combination of beach and lagoon tourism makes Satapada a unique attraction in Odisha.

8.2 Backwaters and Lagoons of Odisha:

8.2.1 Chilika Lake:

Chilika Lake is the most important backwater system of Odisha and the **largest brackish water lagoon in Asia**. It extends over the districts of Puri, Khurda, and Ganjam. Chilika is a Ramsar-listed wetland of international importance. It is well known for its rich biodiversity and serves as a wintering ground for thousands of migratory birds. Boating, bird watching, dolphin tourism, and eco-tourism are major attractions associated with Chilika Lake.

8.2.2 Bhitarkanika Mangrove Ecosystem

The Bhitarkanika region, located in the **Kendrapara district**, is one of the finest mangrove ecosystems in India. It consists of creeks, canals, estuaries, and tidal rivers. Bhitarkanika is known for saltwater crocodiles and diverse flora and fauna. Eco-tourism and wildlife tourism are promoted here with a focus on conservation and environmental sustainability.

8.3 Beaches of West Bengal:

West Bengal has a coastline of about **158 kilometres** along the Bay of Bengal. Though shorter in length, it plays a significant role in coastal tourism.

8.3.1 Digha Beach

Digha Beach is the most popular beach in West Bengal and is often referred to as the “Brighton of the East.” It is a well-developed seaside resort with hotels, markets, and recreational facilities. Digha attracts a large number of tourists, especially from Kolkata and nearby regions, and is an important centre for mass tourism.

8.3.2 Mandarmani Beach

Mandarmani Beach is known for being one of the **longest motorable beaches in India**. It is famous for its wide sandy stretches, calm waves, and red crabs. Mandarmani is less crowded than Digha and is suitable for family tourism and resort-based tourism.

8.3.3 Tajpur Beach

Tajpur Beach is a relatively less explored beach located between Digha and Mandarmani. It is known for its peaceful environment, fishing villages, and natural scenery. Tajpur is emerging as a destination for eco-tourism and responsible tourism.

8.3.4 Shankarpur Beach

Shankarpur Beach is located near Digha and functions mainly as a fishing harbour. It is gradually gaining popularity as a tourist destination due to its quiet surroundings and scenic coastal views. The beach offers scope for sustainable tourism development with local community participation.

8.4 Backwaters and Deltaic Region of West Bengal

8.4.1 The Sundarbans:

The Sundarbans is the most important backwater and deltaic region of West Bengal. It is the **largest mangrove forest in the world** and a UNESCO World Heritage Site. The region is formed by the delta of the Ganga, Brahmaputra, and Meghna rivers. The Sundarbans is famous for its dense mangroves, tidal waterways, and wildlife, including the Royal Bengal Tiger. Eco-tourism, wildlife tourism, and river cruises are major tourist activities in the region.

8.4.2 Hooghly River System:

The Hooghly River, a distributary of the Ganga, plays an important role in the coastal and estuarine environment of West Bengal. The river supports inland water transport and river cruise tourism. Several historic towns and cities have developed along its banks, making it significant from cultural and tourism perspectives.

8.5 Tourism Significance of Beaches and Backwaters:

The beaches and backwaters of Odisha and West Bengal contribute to tourism development in several ways. They promote coastal tourism, eco-tourism, wildlife tourism, and sustainable tourism. These regions generate employment opportunities for local communities, especially in fishing, boating, hospitality, and handicrafts. They also play an important role in conserving marine and mangrove ecosystems and preserving cultural traditions.

8.6 Summary:

Odisha and West Bengal possess rich coastal and backwater resources that enhance the tourism potential of Eastern India. While Odisha is known for its clean beaches and lagoons like Chilika, West Bengal is famous for its seaside resorts and the Sundarbans delta. Proper planning, environmental conservation, and community participation are essential for sustainable tourism development in these regions.

8.7 Check Your Progress:

- Name any two important beaches of Odisha.
- Why is Chilika Lake important for tourism?
- Mention two major beaches of West Bengal.
- What is the tourism significance of the Sundarbans?

8.8 Suggested Readings

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Block-3

Natural Tourist Attractions

Unit-09**Gujarat and Rajasthan**

Structure:**9.1 Introduction****9.2 Objectives****9.3 Sea Beaches and Scope for Water Sports and Nature Tourism in Gujarat****9.3.1 Natural Places of Gujarat****9.3.2 Beaches Of Gujarat****9.3.3 Water Sports On Gujarat Beaches****9.4 Role of Sea Beaches and Scope for Water Sports and Nature Tourism in Gujarat in Tourism Promotion****9.5 Glossary****9.6 Answer to Check your Progress****9.7 References****9.8 Suggested Readings****9.9 Terminal And Model Questions**

9.1 INTRODUCTION:

Gujarat is situated on the west coast of India. It has a long coastline extending to 1,600 kms. The state is dotted with some of the finest beaches of India, famous for its clear blue water, swaying palm trees and a wonderful climate. A pleasant beach holiday is promised at the Gujarat beaches by relaxing on the sea beaches and with sightseeing and other activities. The coastal area is also famous for Portuguese forts, shore temples, port cities and beach resorts.

The state is well endowed with Gujarat's loveliest beach and Ahmedpur Mandvi whose chief attraction is the ethnic beach resort. One of the state's chief centres for water sports are the Cottages modeled on rural Gujarati architecture look out onto a secluded beach.

9.2 OBJECTIVES:

After reading carefully this unit you will be able to:

- Know the importance of Sea Beaches and Scope for Water Sports and Nature Tourism in Gujarat.
- Know in details about the Sea Beaches and Scope for Water Sports and Nature Tourism in Gujarat.
- Enrich your knowledge of various Sea Beaches and Scope for Water Sports and Nature Tourism in Gujarat.

9.3: SEA BEACHES AND SCOPE FOR WATER SPORTS AND NATURE TOURISM IN GUJARAT:

9.3.1: NATURAL PLACES OF GUJARAT:

Some of most tranquil and elegant beaches in India increase the beauty of Gujarat. The undulating trees of palm swinging with the melody of sea breeze can be viewed on the beautiful shores. Beach tours make this Gujarat extremely memorable. Varying consistency in sands and assortment in colors from grey to golden to silver on the coastlines of the state forms an enchanting view. On some of its exotic beaches, Gujarat also offers alluring water sports. On the shores of Gujarat one can find spume topped wave breakers rumbling. In the greenish blue Arabian waters, the beaches also offer the pleasure to view the beautiful sun setting. All these are the enchanting assets of the affluent coastal bequest of Gujarat.

Gujarat can include some of the best beaches in this state. Ahmedpur Mandvi beach is situated at a distance of about 228 km from Ahamdabad. Diu is called a marvelous island. The place makes you feel that you are on a Mediterranean island. A perfect place to swim and surf can be found on the white beaches with blur waters are idyllic for freaking and enjoying.

One can also have the enjoyment and pleasure of thundering water sports. The shores of Diu offer the opportunity of skiing boards, water scooters, surfboards, speedboats and Para sailing.

Earlier, the Chorwad beach served as an imperial retreat to the Junagadh Nawabs. The daunting Choward bastion and the exquisite span of beach near it make it the most exquisite place in your beach tours of Gujarat. This is the only beach bastion resort of India.

Kankaria Lake: Sultan Qutub-ud-Din built a circular lake in 1451. Nagina Wadi is known as summer palace, which is in the centre of the lake island garden. It has a very beautiful Musical Fountain show (although the music sucks but the lights and fountain are worth a

trip). Various sources of recreations are "Bal Vatika" - an aquarium, a boat club, a natural history museum and a zoo.

Vastrapur Lake: A lake which is situated in the city of Ahmedabad in the state of Gujarat in western India is The Vastrapur Lake. It is located in the western part of the city in the Vastrapur area. The Ahmedabad Municipal Corporation beautified the lake and has since become a popular spot in the city. The prestigious Indian Institute of Management Ahmedabad is located about 1km from the lake. The lake is about 5-10 minutes away from the Sarkhej-Gandhinagar highway.

Every weekend, a large number of people visit this lake. It currently boasts an open air theatre, children's park and boating facilities. There is a pathway all around the lake which serves many walkers and joggers in the early mornings and in the evenings. There is also a multi-speciality hospital "Sanjivani" located near the lake.

Dutch Garden: Other attractions are the ancient Dutch gardens, the Dutch cemetery and Makaipul, the ancient original port from where the ships sailed to other parts of the world.

Sursagar Lake: Earlier Chandan Talao, was known as the Sursagar Lake. In 18th century the lake was rebuilt with stone banks and masonry. It has a marvelous view particularly on moonlit nights, and is now used for boating.

Ajwa Dam: Ajwa is a reservoir situated around 10 miles east of the city of Vadodara. It's an earthen dam that was built early in 20th century by the ruler of Vadodara, Maharaja Sayajirao Gaekwad III. Its major goal was to provide water to the residents of Vadodara. It was the ruler's vision to build the reservoir 3 times larger, although the population of Baroda at that time was 100,000. Hence now this reservoir has ability to attend to water requirements of about 300,000 people residing in the eastern parts of the city. The dam is about 5 km long and can store water to the height of 212 feet above the sea level. The depth of the reservoir is at around 196 feet. The excess water in event of floods is dispatched to this river because it is connected to the Vishwamitri River which flows through the city of Baroda. Adjacent to the dam are the famous Vrindavan Garden which are also known as Ajwa gardens. They are an adaptation of the famous Vrindavan gardens located in Mysore.

Pavagadh: About 46 kilometres (29 miles) away from Vadodara, Gujarat, India, there is a narrow, tall mountain in the Panchmahal district which is known as Pavagadh. It is home to a famous Mahakali temple which draws thousands of pilgrims' every day. Pavagadh is the gateway to Panchmahal. It is populated predominantly by the Bhils tribe. The locations of hilly areas around Halol provide good scenery. A film studio at Halol has this added advantage.

Champaner Pavagadh Archaeological Park: A UNESCO World Heritage Site is Champaner - Pavagadh Archaeological Park which is located in Panchmahal district in India. It was inscribed in 2004. There is a collection of largely unexcavated archaeological, historic and living cultural heritage properties cradled in an impressive landscape which

involves prehistoric (chalcolithic) sites, a hill fortress of an early Hindu capital, and remains of the 16th century capital of the state of Gujarat.

Jubilee Garden: A large, open park area in the center of the city featuring many monuments to colonial time is known as the Jubilee Garden. It is located prominently in the center of the garden which is the Connaught Hall. Other special attractions near the Garden include the Alfred High School, Watson Museum, and Lang Library.

Aji River and Dam: At a distance of 8kms, Aji River and dam is situated, which are the main source of water supply to the city of Rajkot. The most important river

of Saurashtra is river Aji . It originates from the hills of Sardhar and Lodhika region and travels through most taluks of Rajkot district before flowing into the Arabian Sea. The name "Aji" is referred to the Sanskrit word meaning mother. The government of Gujarat had built this dam. The downstream area of the dam is maintained by the Rajkot Municipal Corporation. The citizens can spend their leisure time in a beautiful step garden, amusement park for children, zoo, bird aviary, Crocodile Park.

Lal Pari Lake and Randerda: Lal Pari Lake and Randerda is popular picnic spot which is located at a distance of 5kms from Rajkot. It is one of the most exotic natural spots on the outskirts of the city and is a popular bird watching venue. The lakes are roosting places for different species of birds including rare migratory birds. Black tailed godwit, rosy pastor, pheasant tailed jacobin, and purple moor hen, wigeon, common teal, pelican and spoon bill are some of the species of birds found here.

Marine National Park: India's first marine national sanctuary, the park is located almost 16 nautical miles away in Great Arabian Sea near Jamnagar and spreads over an area of about 458 kms. It is located at about 7 km from the city centre; the park includes an archipelago of 42 islands well known for their coral reefs and mangroves. It is possible to visualize dolphins, finless porpoise and sea turtles and various colourful tropical fish. Various marine lives can be found in the entire forest. The area also attracts a host of water birds.

Rozi and Bedi Ports: Two prominent ports along the shores of the mighty Arabian Sea are Rozi and Bedi. Fishing and angling are the excellent facilities which these attractive seaside picnic spots offer.

Ghogha Seashore: A favorite outing spot, Ghogha beach is 19 km away from Bhavnagar.

Mahuva: Mahuva is a small town situated in the district of Bhavnagar in Gujarat. The scenery around makes it Kashmir of Saurashtra. The coconut tree plantations add to the beauty of the town. Tourists also enjoy at the beach of the city. Near the beach is the ancient Bhavani Temple, which is the major attraction of the city of Bhavnagar. Throughout the year, the town enjoys an extremely pleasant climate.

Sunrise Point: Sunrise is a point which gives the opportunity to visualize the Saputara and adjoining Malegoan. It could be reached after a walk of 1.5 km in the direction of Waghai.

The naming restricts the tourist traffic to this best place as tourists believe that the point should only be visited at sun rise, however, one may visit it at any time of

the day to catch a panoramic view. Valley View Point is the name suggested by the Tata Consultancy Services for this point, as to enhance tourist traffic.

Girnar Hill: A collection of mountains in the Junagadh District of Gujarat, India is known as 'Girnar Hill'. The tallest of these rises to 945 meters (3600 feet), the highest peak in Gujarat. Digambar and Shwetamber temples are located on the first peak of Girnar. The Shwetambar temples are more intricately carved but are more modern in terms of history. It is claimed that there are exactly 9,999 steps from the trailhead to the last temple on the highest peak, but the actual number is roughly 8,000.

Saputara: Saputara is a hill station town in Gujarat. 'Adobe of Serpent' means Saputara, is situated at an altitude of 1000 m, and is located in the heart of Dangs district. Any tourist may be swayed away with the beauty of the second highest plateau of the Sahyadri range with cool bracing climate and a scenic view of the verdant valley. Saputara has been developed as a planned hill resort with all the necessary amenities. The thick forest around Saputara is dotted with tribal villages and their unique dances are of great interest. Gujarat's picturesque hill station is perched on a plateau in the Dang forest area of the Sahyadri Range. It has a cool bracing climate.

Vansda National Park: The private forest of Mahararaja of Vansda was later named as the Vansda National Park. It is situated over an area of 24 sq km; the park is now under the control of the government. Tigers, leopards, four horned antelope, pangolins, rusty spotted cats, pythons and giant squirrels lived here. The main attractions of the park are Monkeys and langoor. Covered by tall teak trees, some parts of the park are dark even during day time. Prior permission is needed to visit the park.

CHECK YOUR PROGRESS - 1:

1. Which lake was built by Sultan Qutub-ud-din?

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2. Where is Vastrapur Lake situated?

3. In which century Surasagar Lake was rebuilt?

4. Who's built the Ajwa Dam?

9.3.2: BEACHES OF GUJARAT:

Ubharat Beach: Ubharat is a place which is full of natural wonders. Ubharat captivates the imagination of the travelers within no time whether it is the golden and serene sea beach or the splendid aura of the place.

Diu Beach: It is located at a distance of 125 km from Junagada. The island Diu is a beautiful beach holiday destination in Gujarat. A combination of sun, sand and deep blue sea with numerous historic buildings and churches of Portuguese architecture make it one of the most sought after beach holiday destination in Gujarat.

Mandwi Beach: It is situated on the northern coast of the Gulf of Kutch, the Mandwi beach is at a distance of 288km from Ahmedabad. It is an ideal for beach for walking and swimming. It also offers several water sport options like skiing, scooting, surfing, Para sailing etc.

Chorwad Beach: Chorwad is a small fishing village which is located at a distance of 66 km from Junagadh. A delightful beach is most ideal for long beach walks and a quiet holiday. It was once the royal summer retreat for the erstwhile Nawab of Junagadh and the old palace adds beauty to this unique beach.

Ahmedpur Mandvi Beach: One of the finest beaches in India on the coastline of Gujarat is Ahmedpur Mandvi. It is heaven for the water sports freaks. So many adventurous activities are there such as water scooting, skiing, surfing, Para sailing, and speed boat trips. It has beautiful blue waters, bubbly birds, soft sands and the captivating colorful fishing hamlets.

Gopnath Beach: Gopnath Beach is profusely supplied with a dainty and colorful birdlife along with the presence of limestone cliffs. Other adjuncts to the Gopnath Beach like a pleasurable sea breeze and breathtakingly beautiful views enthrall the tourists who come down to these beaches. It also houses the world's biggest ship breaking zone and along with that there is the Talja temple famous for its sacredness, which is built on a 350 feet high volcanic hill.

Beyt Dwarka Beach: Beyt Dwarka, is a very picturesque and scenic island which is enthralling enough for the tourist and attracts them to visit it often. Beyt Dwarka, in Dwarka is an isolated island with the people coming to visit from the

seafront of Okha. A ferry or a small boat takes around half an hour to reach the Beyt Dwarka seafront with the separation between the Okha land portion and the Beyt Dwarka Island located in around four kilometers.

Porbandar Beach: The beach of Porbandar is amongst the many un-spoilt beaches of Gujarat which is on the southeast coast in between Veraval and Dwarka. Porbandar is picture perfect with the many beautiful beaches and beach villas on the seaport of the Arabian Sea.

Veraval Beach: It is located at a distance of 6 kilometers from the Somnath town and Veraval is the fortified royal town of the dynasty of Junagarh. The fort in Veraval lies alongside the Veraval Beach and though many thick and impressive walls have been pulled down but still the impressive veneer of the Veraval fort near the Veraval Beach remains intact. The benches and a jogging track is provided on the Veraval Beach which can be utilized by the morning joggers. It is also for safe swimming.

Chorwad Beach: One of the most popular excursions from Junagadh is Chorwad Beach. The spectacular views of the rocky shores are one of the main attractions of this place. The tourists also enjoy a ride on country boats as well.

CHECK YOUR PROGRESS - 2

1. Where Diu Beach is located?

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2. Where is Mandvi Beach situated?

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3. In which site Chorwad beach is situated?

4. Where is Porbandar beach is situated?

9.3.3. WATER SPORTS ON GUJARAT BEACHES:

Some of the serene beaches in Gujarat are Somnath beach, Ahmedpur Mandvi beach, Chorwad Beach, Kutch Mandvi Beach, Gopnath beach and Dwarka beach. Swimming in

the turquoise waters of the Arabian Sea is an exhilarating experience. Strolling on these beaches provides relaxation from the humdrum of the buzzing city life. The panoramic view of fishermen catching fish in their fish trawlers is simply outstanding.

Indian Beaches are full of water sports and Gujarat beaches are one of them. Various beach resorts and sports clubs offer Water sports activities, sailing, Para Sailing Windsurfing, and Water Skiing. Every beach destination of India is completely unique in its own way and they all have varieties of dive conditions and marine life. One of the best coastal beauties in India is the Gujarat Beach and because of its natural location; it affords facilities for a safe sea bath.

Scuba Diving: The underwater world has always been a mystery for those who would like to touch the depths of the mysterious sea world. Unexplored and

unspoiled, destinations are usually opting for diving, which are like a never-ending adventure. The sports destinations of Gujarat in India are considered to be the most unique diving haunts of India.

In Gujarat has the clear blue lagoons of soft and hard corals, and then second forming are gifted with some of the most amazing and least explored coral reef sites in the world. The next forming that will catch a diver's interest are the beaches of Gujarat.

Snorkeling: A family activity for the kids and adults at a beach side is Snorkeling in the shallow water besides making a sand castle, while on a beach holiday. An easy way to visit and solve the mysteries of the underwater world, take a dip and we will be hooked. Many new tourist take trainings about what is snorkeling is all about and the safety measure that one should follow while involving in this water sport. It is an enjoyable experience to learn about marine life.

Canoeing, Kayaking & Surfing: Surfing is one of the best sports when it comes to making a splash in water and the craze of this water sport is fastly catching up as a favorite beach water sport in India. There are lots of thrills, surfing for enjoyment. Here are a quick senses and a balancing act on the surfboard.

But one must always remember that with the thrills comes the danger. The beaches of the Indian western coast have quiet unpredictable surprises for a water sport lover. The beaches of Gujarat include the major surfing and canoeing sites in India where numerous beach resorts are well equipped with excellent quality surf boards, Kayaks and canoes. Even untrained and inexperienced people may derive enjoyment through these water activities as the beaches also offer expert training.

Water Skiing: One of the major extreme sports in the sport is Skiing and even water skiing is something that gives water sport lover the opportunity to make a splash at the watery depths of the sea world. Similarly as in surfing, you do get to balance on the ski board, but a strong a sensory power is also required over here too. When you are on a beach, water skiing is one sport that one must indulge into if you are eligible to try one out. There aren't many private beaches at Goa, but the beaches attached to the luxurious beach resorts that

provide the facilities of hi-tech water sports with proper equipment and the highest safety standards.

Water Skiing, Canoeing, Kayaking & Surfing, Snorkeling, Scuba Diving makes the visit of tourist more memorable. One can also participate in fun and frolic

activities. Riding a water scooter, wind surfing, paragliding, skiing, sailing offer more than mere entertainment.

CHECK YOUR PROGRESS - 3:

1. Which kind of water sports are played in Gujarat beach?

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2. What is scuba diving?

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3. Which kind of equippeds are used in water sports?

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4. On which beaches we enjoy water sports?

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9.4 ROLE OF SEA BEACHES AND SCOPE FOR WATER SPORTS AND NATURE TOURISM OF GUJARAT IN TOURISM PROMOTION

On the bank of Arabian Sea in Gujarat, Porbandar is located. The beaches at Porbandar offer splendid sunsets, trendy boulevards and luscious maritime foodstuffs in Bistros. Various things allure the populace like Tourist chalets and inns serving along the sea façade. Chowpatty is a beautiful beach at Porbandar which is popular among the people not finicky about the beaches.

The beautiful shrine of Somnath is most popular of the 12 jyotirlingas. Prabhas Patan is its another name which is located on the bank of violent Arabian Sea. In the wake of Ahilwadi shrine, a magnificent beach of Somnath serves people with its pleasing sands. A gorgeous sea sight, colt and camel rides, coconut freezes and nibble stores are some of the enthralling features of this beach. The place is included in the religious as well as beach tours of Gujarat. Veraval is located a few kms from Somnath. One can find extensive sea beaches with grey colored sand at the place. This place is perfect for the masses that yearn for wacky beaches.

9.5 GLOSSARY:

- **Reservoir**- A large natural or artificial lake used as a source of water supply.
- **Adjacent**- Having a common vertex and a common side.
- **Cradled**- Hold gently and protectively.
- **Mangroves**- A tree or shrub (families Rhizophoraceae and Verbenaceae or Avicenniaceae) that grows in muddy, chiefly tropical coastal swamps.

9.6 ANSWERS TO 'CHECK YOUR PROGRESS':

Check Your Progress - 1

1. Kankaria Lake
2. Western part of Gujarat
3. 18th century
4. Maharaja Sayajirao Gaekwad III

Check Your Progress - 2

1. 125 km from Junagadh
2. Northern coast the Gulf of Kutch.

3. 66c km from Junagada
4. Southeast cost in between Verval and Dwarka

Check Your Progress - 3

1. Para-Sailing, Windsurfing, Water Skiing
2. Touch the depths of mysterious sea world
3. Surf boards, Kayaks and canoes
4. Somnath beach, Chorwad Beach, Kutch Mandvi Beach etc.

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9.9 TERMINAL AND MODEL QUESTIONS:

Short Answer Type:

- Why Ajwa Dam famous?
- Which lake was known as the Chandan Talao?
- In which city site Aji River and dam is situated?
- Discuss the Mandwi beach.
- Explain main attraction of Gopnath beach.
- Which beach known as the isolated island?
- Explain Scuba Diving.
- Discuss the water skiing.

Long Answer Type:

- Describe the main natural tourism places of Gujarat.
- Discuss about the Gujarat beaches on regard of tourism.
- Explain the main water adventure mode related to tourism.

Unit-10
Meghalaya, Assam and Tripura

Unit-11
Bihar and Jharkhand

Unit-12
Odisha, West Bengal and Sikkim

Block-4

Other Natural Tourism Resources of India

Unit-13

Desserts of India

Structure:

- 13.0 Objectives**
- 13.1 Introduction**
- 13.2 Deserts**
- 13.3 Thar Desert**
- 13.4 Check Your Progress**
- 13.5 Summary**
- 13.6 Glossary**
- 13.7 Self-Assessment Questions**
- 13.8 References and Suggested Reading**

13.0 Objectives:

After completing this unit, you will be able to:

- Understand the meaning and features of Deserts.
- Explain the role of Deserts in promotion and development of the tourism industry.

13.1 Introduction:

Deserts also attract a large number of tourists. Desert tourism is based on unique natural landscapes and environmental features. Deserts offer distinctive flora and fauna species, vast sand dunes, camel safaris, and a rich and unique local culture that attracts visitors from different parts of the world. Popular desert-based tourism activities include desert safaris, cultural performances, camping, and experiencing traditional lifestyles adapted to arid conditions. Some important deserts of the world that are significant tourist attractions include the Sahara Desert, the Gobi Desert and the Thar Desert.

13.2 Deserts:

Meaning of Desert:

Deserts cover more than one-fifth of the Earth's land area and are found on every continent. A place that receives less than 10 inches (25 centimetres) of rain per year is considered a desert. Deserts are part of a broader class of regions called

frequently lose more moisture through evaporation than they receive from annual precipitation.

Despite the common conceptions of deserts as hot, there are also cold deserts. The largest hot desert in the world, northern Africa's Sahara, reaches temperatures of up to 122 degrees Fahrenheit (50 degrees Celsius) during the day. However, some deserts are always cold, like the Gobi desert in Asia and the polar deserts of the Antarctic and Arctic, which are the world's largest. Others are mountainous. Only

about 20 percent of deserts are covered by sand.

The driest deserts, such as Chile's Atacama Desert, have parts that receive less than .08 inches (2 mm) of precipitation a year. Such environments are so harsh and otherworldly that scientists have even studied them for clues about life on Mars. On the other hand, a stormy period can produce "super blooms" every few years, where even the Atacama becomes blanketed in wildflowers.

Major Deserts of the World:

Sr. No.	Desert	Region
1.	Sahara	Northern Africa
2.	Barberton, Simpson, Gibson, Australia Stuart, Victoria	Australia
3.	Nafud, Hamada	Saudi Arabia
4.	Gobi	Mongolia and China
5.	Kalahari	Botswana
6.	Taklamakan	Sikiang province of China
7.	Sonoran	USA & Mexico
8.	Namib	Namibia
9.	Karakum	Turkmenistan
10	Thar	India and Pakistan
11.	Somalian	Somalia

1. Sahara Desert:

The Sahara is the largest hot desert in the world and the third largest desert behind Antarctica and the Arctic, both cold deserts. The Sahara is one of the harshest environments on Earth, covering 3.6 million square miles (9.4 million square kilometres), nearly a third of the African continent, and about the size of

the United States (including Alaska and Hawaii). The name of the desert comes from the Arabic word *ṣaḥrā'*, which means "desert."

The Sahara is bordered by the Atlantic Ocean on the west, the Red Sea on the east, the Mediterranean Sea on the north and the Sahel Savannah on the south. The enormous desert spans 11 countries: Algeria, Chad, Egypt, Libya, Mali, Mauritania, Morocco, Niger, Western Sahara, Sudan and Tunisia.

The Sahara desert has various land features but is most famous for the dune fields often depicted in movies. The dunes can reach almost 600 feet (183 meters) high, covering only about 15 percent of the entire desert. Other topographical features include mountains, plateaus, sand- and gravel-covered plains, salt flats, basins and depressions. Mount Koussi, an extinct volcano in Chad, is the highest point in the Sahara at 11,204 feet (3,415 m), and the Qattara Depression in Egypt is the Sahara's deepest point, at 436 feet (133 m) below sea level.

2. Kalahari Desert:

Stretching around 360,000 square miles across Botswana, Namibia and South Africa, the Kalahari Desert is not a desert in the strictest sense of the word. It receives too much rainfall - between 5 and 10 inches annually. Only its vast expanses of sand, through which precipitation filters rapidly, leaving nothing on the surface, have made the Kalahari into the "thirstland" that early European settlers described.

The desert is part of the 970,000-square-mile Kalahari Basin, which includes the Okavango River Delta and other wetter areas.

The basin encompasses virtually all of Botswana and more than half of Namibia.

The Kalahari dunes, some stretching west to the Namib Desert, compose the largest continuous expanse of sand on earth. Although the Sahara Desert is larger overall, dunes comprise only about 15% of its area.

These dunes are covered with a relative abundance of vegetation, including grass tussocks, shrubs, and deciduous trees that have evolved to use the area's infrequent precipitation and wild swings in temperature. In summer, the heat can top 45 degrees Celsius (115 degrees Fahrenheit); on winter nights, lows can drop to -15 degrees Celsius (seven degrees Fahrenheit).

Flora and fauna:

Animals adapted to the Kalahari's arid conditions include meerkats, gemsbok, a large member of the antelope family, social weavers, and other types of birds. And the Kalahari lion.

Kalahari's endemic wildlife species have adapted to survive many days without water or obtaining water from plants. Many reptiles live in the Kalahari, including Cape cobras, puff adders, and rock monitors.

Numerous other birds and mammals utilize the desert, but most are migratory, venturing into the Kalahari only when adequate water is present. In addition to the Hoodia cactus, other edible plants - used by both animals and humans - include creeping tsamma melons, gemsbok cucumbers, and wild cucumbers.

3. Gobi Desert:

The Gobi Desert is a large desert or brushland region in East Asia. It covers parts of Northern and Northeastern China and Southern Mongolia. The Gobi measures over 1,600 km (1,000 mi) from southwest to northeast and 800 km (500 mi) from north to south. The desert is most expansive in the west, along the line joining Lake Bosten and the Lop Nor (87°–89° east). It occupies an arc of land in the area as of 2007; it is the sixth-largest desert in the world and Asia's 2nd largest. Much of the Gobi is not sandy but has exposed bare rock. The desert basins of the Gobi are bounded by the Altai Mountains and the grasslands and steppes of Mongolia on the north, by the Taklamakan Desert to the west, by the Hexi Corridor and ~~Tibetan Plateau to the southwest and by the North China Plain to the southeast.~~

The Gobi is notable in history as the location of several important cities along the Silk Road. The Gobi is a rain shadow desert formed by the Tibetan Plateau that blocks precipitation from the Indian Ocean, reaching the Gobi territory. More recently, the Gobi Desert has also witnessed desert sporting events from enthusiasts, such as "The Gobi Desert Cup". Founded in 2016 by FEI 3* Endurance Rider Camille Champagne, the Gobi Desert Cup is a multi-stage endurance ride and cultural experience through the Gobi Desert, riding trained and conditioned Mongolian horses every day for six days over a total of 480 kilometres (300 mi).

4. Thar Desert:

The Thar Desert, also known as the Great Indian Desert, is a large arid region in the northwestern part of the Indian subcontinent that covers an area of 200,000 km² (77,000 sq mi) and forms a natural boundary between India and Pakistan. It is the world's 17th-largest desert and 9th-largest hot subtropical desert.

About 85% of the Thar Desert is located in India, with the remaining 15% in Pakistan. India covers about 170,000 km² (66,000 sq mi), and the desert's remaining 30,000 km² (12,000 sq mi) is within Pakistan. The Thar Desert forms approximately 5% (c. 4.56%) of the total geographic area of India. More than 60% of the desert lies in the Indian state of Rajasthan, extending into Gujarat, Punjab, Haryana, and the Pakistani province of Sindh. Within Pakistan's Punjab province, the Thar continues as the Cholistan Desert. The desert comprises an arid part, the Marusthali region in the west, and a semidesert region in the east with fewer dunes and slightly more precipitation.

13.3 Thar Desert:

The origin of the Thar Desert is a controversial subject. Some consider it only 4000 to 10,000 years old, whereas others state that aridity started in this region much earlier. Also known as The Great Indian Desert, it is spread over four states in India, namely Punjab, Haryana, Rajasthan, and Gujarat, and two states in Pakistan and covers an area of about 4,46,000 square kilometres.

The average annual rainfall of the region varies from 100 to 500 mm. It is distributed very erratically, occurring primarily between July and September. The mean average temperature varies from a minimum of 24 to 26 degrees C in summer to 4 to 10 degrees C in winter. One unique feature of this desert is that there is neither an oasis in it nor any artesian well. No native cactus or palm tree breaks the monotony of the vast expanse.

Hillocks and sandy and gravel plains intersperse stretches of sand in the desert. Due to the diversified habitat, this arid region's vegetation and animal life are vibrant. About 23 species of lizards and 25 species of snakes are found here, and several are endemic to the region.

Some wildlife species, which are fast vanishing in other parts of India, are found in the desert in large numbers, such as the great Indian bustard, the black buck, the Indian gazelle, and the wild ass in the Rann of Kutch. How these animals and insects survive in these harsh conditions, under such high temperatures and without drinking water and green vegetation is fantastic. They have evolved excellent survival strategies; their size is smaller than other similar animals living in different conditions, and they are mainly nocturnal. Certain other factors are responsible for these animals' survival in the desert. Due to the lack of water in this region, the transformation of the grasslands into cropland has been very slow. The protection provided to them by a local community, the Bishnois, is also a factor.

The increase in human and livestock population in the desert has led to a deterioration in the ecosystem, resulting in soil fertility and vegetation degradation.

13.4 Check Your Progress:

- **Discuss the adventure sports activities which are performed on water bodies:**

- How do water bodies help the tourism industry's growth at any destination?

13.5 Summary:

Natural tourism resources attract nature lovers and desert is one among them, etc. A tourism service provider should have proper knowledge about such resource. Otherwise, he will not be able to satisfy customers' queries. Only a travel agent knowledgeable about a destination's natural resources can satisfy a customer's query.

13.6 Glossary:

- **Desert:** A large area covered with sand that receives very little rainfall.
- **Sand Dune:** Small-sized hill made with a large amount of sand.

13.7 Self-Assessment Questions:

- How do natural resources help the tourism industry's growth at the destination?
- Discuss the different tourism resources of Deserts.

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Unit-14

Water Bodies and Island of India

Structure:

14.0 Objectives

14.1 Introduction

14.2 Types of Water Bodies

14.3 Indian Ocean

14.4 Indian Seas

14.5 Indian Rivers

14.6 Indian Lakes

14.7 Significance of Water Bodies in the Development of the Tourism Industry

14.8 Islands

14.9 Check Your Progress

14.10 Summary

14.11 Glossary

14.12 Self-Assessment Questions

14.13 Reference and Suggested Readings

14.0 Objectives:

The following are the primary objectives of the present unit:

- To recognize the different categories of water bodies and Islands located in India
- To know the significance of different water bodies and Islands in the promotion and development of the tourism industry

14.1 Introduction:

A body of water or water body is any significant water accumulation, generally on a planet's surface. These water bodies can be small or large. The term most often refers to oceans, seas, lakes or ponds, but it also includes wetlands or, more rarely, puddles. A body of water does not have to be still or contained; rivers, streams, canals, and other geographical features where water moves from one place to another are also considered bodies of water. Most are naturally occurring geographical features, but some are artificial.

Uttar Pradesh occupies first place with the total length of rivers and canals at 31.2 thousand km, which is about 17 percent of the total length of rivers and canals in the country. Other states following Uttar Pradesh are Jammu and Kashmir, and Madhya Pradesh. Among the remaining forms of inland water resources, tanks and ponds have a maximum area (2.9 M.Ha.), followed by reservoirs (2.1 M.Ha.). Most of the area under tanks and ponds lies in the Southern States of Andhra Pradesh, Karnataka and Tamil Nadu. These states, along with West Bengal, Rajasthan and Uttar Pradesh, account for 62 percent of the total area under tanks and ponds in the country. As far as reservoirs are concerned, significant states like Andhra Pradesh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Rajasthan and Uttar Pradesh account for the more substantial portion of the area under reservoirs. The total area of inland water resources is, thus, unevenly distributed over the country, with five states, namely Orissa, Andhra Pradesh, Gujarat, Karnataka and West Bengal, accounting for more than half of the

country's inland water bodies.

Water bodies play a significant role in every country's tourism industry. Clean water bodies attract more tourists to the destination. In India, Rivers are treated as Goddesses, and people gather during festivals to take holy baths in the Rivers. Many fairs and festivals are celebrated on the banks of the rivers of India, such as the Ganga Dussehra, Ganga Mahotsav, Dev Deepawali, Kumbh fair, etc. Water-based adventure sports activities are performed on water bodies. For example, those who wish to participate in white water rafting can visit Rishikesh, Scuba Diving and Snorkeling lovers can visit the Andaman & Nicobar Islands, and parasailing adventure sports lovers can see the sea beaches of south India. However, many nature lovers visit water bodies to enjoy their beauty—the pleasant climate and to participate in boating activities.

14.2 Types of Water Bodies:

Water is one of the most essential natural resources on earth and can be found in various forms. Water bodies are divided into categories of salt and fresh and small and large. Their features differentiate them from each other. You must have seen oceans, streams, ponds and more. These are bodies of water that only carry the utmost importance for life on earth. Let us discuss the different types of bodies of water in detail for a better understanding.

Bodies of Water:

- Oceans
- Seas
- Lakes
- Rivers and Streams

• Glaciers

• Oceans:

Oceans are the most enormous bodies of water on Earth, covering at least 71% of the Earth's surface. The entire marine saltwater you see on Earth ultimately ends

up in the World's Oceans.

However, how our continents are arranged makes it easier to differentiate between specific ocean basins. Thus, looking at this distinction, the Pacific Ocean is the largest. Then we have the Atlantic Ocean, followed by the Indian Ocean.

Finally, we have the Southern Ocean and then the Arctic Ocean. Humanity depends on oceans in various ways; for instance, we get food from them, use them for transport, and use them for their impact on the water cycle.

- **Seas:**

These can be called sub-sections of the oceans. The coastal reaches of the oceans where land masses surround them are known as seas.

The most common example of a sea is the Mediterranean Sea. We also have other popular ones like South China, the Caribbean, and the Bering Sea. Most of these water bodies directly connect to the ocean.

However, there are particular saline water bodies; the Caspian Sea is one example. Furthermore, it is divided into smaller bays, straits, and gulfs categories.

- **Lakes:**

These are inland bodies of water found either in freshwater or saltwater. Lakes are also enclosed by land; some even categorize the Caspian Sea as a lake. There is no precise difference between a lake and a pond.

However, lakes, like the Great Lakes of North America and Lake Baikal of Russia, can also be huge. Many procedures create lakes, some of which are glacial erosion, volcanic eruption and damming of rivers.

- **Rivers and Streams:**

These are bodies of water in motion. In other words, the water which flows on the earth's surface creates rivers and streams. Streams can be said to be the smaller version of the rivers. They consist of fresh water in the ocean through the constant flow of rivers and streams.

Rivers are quite an essential source of water as well as energy. In addition to that, they are also significantly used for transportation purposes and as fishing grounds. River Nile in Africa is one of the longest rivers in the world, in addition

to the Amazon River in South America. Furthermore, we have River Mississippi, Congo, Mackenzie and more.

- **Glaciers:**

Glaciers are frozen bodies of water. They are also water bodies that move slowly, similar to frozen rivers. All the glaciers, ice caps, and glacial ice are millions of years old. They cover almost 10% of the earth's land and are freshwater sources.

Features of Water Bodies:

Oceans:

- The oceans are vast and deep bodies of water. Usually, these oceans separate continents from one another. The oceans are bodies of salt water.
- We have five oceans in our world. They are the Pacific Ocean, the Atlantic Ocean, the Indian Ocean, the Arctic Ocean, the Southern Ocean or the Antarctic Ocean.
- The largest and deepest ocean in the world is the Pacific Ocean, covering one-third of the earth's surface.
- This is followed by the Atlantic Ocean and the Indian Ocean in order of size.
- Oceans are home to various plants and seaweed and thousands of sea creatures like sea urchins, whales, sharks, octopuses, a variety of fish, snakes, squids, etc.
- Oceans also contain millions of tiny dead animals called coral polyps, which form the beautiful coral reefs. Australia is the largest coral reef in the world.
- Oceans are helpful to us in many ways as they are a rich source of minerals.

They provide energy and valuable fuels like petroleum.

- They work as an essential channel of transportation.

Seas:

- Seas are also big water bodies but are smaller than oceans. They are partly enclosed by a land mass and open into the sea.
- We see many seas eventually connecting to the oceans. For example, the Mediterranean Sea is attached to or joins the Atlantic Ocean.

- Some of the seas are the Red Sea, the Black Sea, the Arabian Sea, the Caribbean Sea and the Mediterranean Sea.
- The Red and the Black Seas have their names because the Red Sea has millions of tiny red plants growing at the bottom, and the Black Sea because of the thick black mud at its bottom.
- Under the seas, we find huge plains, high mountains, and even deep valleys. Interestingly, these various landforms are also present under the sea.
- The largest of the seas is the South China Sea, which is supposed to hold hundreds of islands in its waters.
- Like the oceans, the sea is helpful to us in many ways. It is a rich food source, providing various kinds of seafood.
- It also works as a channel for transportation.
- Like oceans, seas are a food source used extensively as ship transport lanes.

Lakes:

- A lake is a water body surrounded by land on all sides. It is the opposite of an island, a piece of land surrounded by water on all sides.
- Lakes can be salty or freshwater lakes. Salty lakes are due to the evaporation that takes place.
- Some famous lakes are Lake Superior, the Caspian Sea, Lake Victoria, Lake Aral and the Dal Lake.
- The Caspian Sea is the world's largest salt lake. It is so big that it is referred to as a sea.
- Lake Superior is the biggest freshwater lake.
- The Dead Sea is a saltwater lake.
- It is said that nothing can survive in the Dead Sea because it is very salty.

Rivers:

- Rivers are large streams that flow over the land. They are, hence, large flowing water bodies. They usually end up in an ocean or sea.
- Rivers are freshwater bodies that generally originate in mountainous or elevated areas.

- We have two kinds of rivers, which are the Snow-fed Rivers and the second is the Rain-fed Rivers.
- Snow-fed rivers find their source in the snowcapped mountains, where the snow melts, flowing down and forming rivers; rain-fed rivers, as the name suggests, are formed in areas where it rains a lot, giving rise to these rivers.
- The place where a river starts its journey is called the source, and where it ends its journey is called the mouth of a river.
- Rivers, again, are very useful. As we have seen in history, most civilizations were formed near the banks of rivers, like the Egyptian Civilization on the banks of the River Nile and the Indus Valley Civilization on the banks of the River Indus.
- This is because the rivers deposit much fertile soil called silt, which is excellent for growing crops.

Waterfall:

- Water falling from a height is usually called a waterfall. A waterfall is formed when a river flows over an edge of hard rocks and falls from a great height.
- Waterfalls make beautiful tourist spots and help generate hydroelectric power.
- The Angel Falls in South America is the world's highest waterfall.

14.3 Indian Ocean:

The Indian Ocean is a body of salt water covering approximately one-fifth of the world's total ocean area. It is the smallest, geologically youngest, and physically most complex of the world's three major oceans. It stretches for more than 6,200 miles (10,000 km) between the southern tips of Africa and Australia and, without its marginal seas, has an area of about 28,360,000 square miles (73,440,000 square km). The Indian Ocean's average depth is 12,990 feet (3,960 metres), and its deepest point, in the Sunda Deep of the Java Trench off the southern coast of the island of Java (Indonesia), is 24,442 feet (7,450 metres). The Indian Ocean is bounded by Iran, Pakistan, India, and Bangladesh to the north; the Malay Peninsula, the Sunda Islands of Indonesia, and Australia to the east; Antarctica to the south; and Africa and the Arabian Peninsula to the west. In the southwest

joins the Atlantic Ocean south of the southern tip of Africa, and to the east and southeast, its waters mingle with those of the Pacific Ocean.

Defining the oceanic limits of the Indian Ocean is complicated and remains unsettled. The most apparent border and the one most generally agreed upon is the Atlantic Ocean, which runs from Cape Agulhas, at the southern tip of Africa, due south along the 20° E meridian to the shores of Antarctica. The border with the Pacific Ocean to the southeast is usually drawn from the East Cape on the island of Tasmania south along the 147° E meridian to Antarctica. The Bass Strait, between Tasmania and Australia, is considered by some to be part of the Indian Ocean and by others to be part of the Pacific. The northeastern border is the most difficult to define. The one most generally agreed upon runs northwest from Cape Londonerry in Australia across the Timor Sea, along the southern shores of the Lesser Sunda Islands and of Java, and then across the Sunda Strait to the island of Sumatra. The boundary is usually drawn across the Singapore Strait.

There is no universal agreement on the southern limit of the Indian Ocean. In general (and for this article), it is defined as extending southward to the coast of Antarctica. However, many—notably in Australia—consider the portion closest to Antarctica (along with the corresponding southern extensions of the Atlantic and Pacific) part of the Southern (or Antarctic) Ocean. Australians often call the entire expanse south of that continent's south coast the Southern Ocean.

14.4 Indian Seas:

Arabian Sea:

The Arabian Sea is located in the northwestern part of the Indian Ocean, between the Arabian Peninsula and the Indian subcontinent. It merges with the Gulf of Oman to the northwest and the Gulf of Aden to the southwest and spans 1,491,000 square miles. The depth of the sea varies as it joins the Indian Ocean to the south, but it is generally approximated at 8,970 feet.

The Sea links the neighbouring areas of Iran, the Arabian Peninsula (including Yemen, Oman, and the United Arab Emirates), Pakistan, the Horn of Africa, and

trade route. Smaller political areas also fringe the Arabian Sea, including Socotra off the coast of Yemen, the Khuriyya Muriyya islands and the Lakshadweep islands.

The Arabian Sea is connected to surrounding bodies of water by a series of gulfs and straits that provide a steady avenue into the sea. The largest and most notable gulfs that feed into the sea are the Gulf of Oman, which connects the Arabian Sea to the Persian Gulf and the Gulf of Aden, which connects the Arabian Sea to the Red Sea. However, gulfs are not the only access point into the Arabian Sea, as two significant rivers drain into its borders. The Arabian Sea is augmented by water flowing down the Indus and Narmada rivers, the principal means of access to the Arabian Sea.

The Arabian Sea is distinguished by its intense water level, often maintained close to land masses. The deep water level is hypothesized to be one of the reasons there are no significant island developments in the centre of the Arabian Sea, even though islands have increased quite a lot on the outer borders. While far below the surface, the Arabian Sea floor exhibits a startling complexity akin to standard land formations. Perhaps most notable among the submarine features is the Maldivian Ridge, which runs along the ocean floor from the Arabian Sea into the Indian Ocean. This ridge, essentially similar to a mountain range on land, eventually rises above the water level to become the Maldives Islands.

The Maldivian Ridge, along with other seafloor formations in the Arabian Sea, is hypothesized to be the result of seismic activity roughly 50 million years ago. According to geologists, during this time, Asia collided with the subcontinent of India, forming the Arabian Sea and its unique underground ridges. After the initial collision of the two land masses, the Arabian Sea has been shaped by various highly influential factors, including erosion from water currents. One of the most profound areas of the sea floor is where the Indus River meets the Arabian Ocean. In the place where the two bodies of water meet, a sharp canyon has been formed on the sea floor as the forces of the incoming water

the sediment further into the sea, eventually depositing the excess into ridges or other formations.

The Bay of Bengal:

The Bay of Bengal Sea is a large but shallow embayment of the northeastern Indian Ocean, covering an area of about 2,173,000 square km. It is bordered by Sri Lanka and India to the west, Bangladesh to the north, Myanmar (Burma) and the northern part of the Malay Peninsula to the east. According to the definition of the International Hydrographic Bureau, the southern boundary extends from Dondra Head at the south end of Sri Lanka in the west to the northern tip of the Indonesian island of Sumatra in the east. The bay is about 1,000 miles (1,600 km) wide, with an average depth of more than 8,500 feet (2,600 metres). The maximum depth is 15,400 feet (4,694 metres). Several large rivers—the Mahanadi, Godavari, Krishna, and Kaveri (Cauvery) on the west and the Ganges (Ganga) and the Brahmaputra on the north—flow into the Bay of Bengal. The Andaman and Nicobar groups, the only islands, separate the bay from the Andaman Sea.

Salient features of the Bay of Bengal:

The Bay of Bengal is bordered to the north by a broad continental shelf that narrows to the south and slopes of varying gradients on the northwest, north, and northeast, all cut by canyons from the rivers. Most important are the Ganges-Brahmaputra, Andhra, Mahadevan, Krishna, and Godavari canyons. These were former estuaries when the shoreline was at the margin of the continental shelf during the Pleistocene Epoch (about 2,600,000 to 11,700 years ago). The deep floor of the bay is occupied by a vast abyssal (deep-sea) plain that slopes to the south. The main submarine features include the beginning of the long, seismically active Java Trench near the Nicobar-Sumatra mainland and the aseismic Ninetyeast Ridge. The fan of the Ganges River sediments is the most comprehensive—5 to 7 miles (8 to 11 km)—and thickest in the world. The bay itself was formed as the Indian subcontinent collided with Asia within roughly the past 50 million years.

14.5 Indian Rivers

The Rivers of India play an essential role in the lives of the Indian people. The river systems provide irrigation, potable water, cheap transportation, electricity, and livelihoods for many people all over the country. This clarifies why nearly all of India's major cities are situated on river banks. The rivers are also important in Hindu mythology and are considered holy by all Hindus in the country.

Eight major rivers:

(Indus, Brahmaputra, Narmada, Tapi, Godavari, Krishna and Mahanadi) Along with their numerous tributaries, they make up the river system of India. Most of the rivers pour their waters into the Bay of Bengal. Some rivers, whose courses take them through the western part of the country and towards the east of the state of Himachal Pradesh, empty into the Arabian Sea. Parts of Ladakh, northern parts of the Aravalli range and the arid parts of the Thar Desert have inland drainage. All major rivers of India originate from one of the three main watersheds.

- The Himalaya and the Karakoram ranges
- Vindhya and Satpura ranges and Chotanagpur plateau in central India
- Sahyadri, or Western Ghats in Western India

A detailed description of the famous Rivers of India are described below:

1. River Ganga:

Ganga is the most sacred river to Hindus and is worshipped as the goddess Ganga. Ironically, it is one of the most polluted rivers too. Not only humans but a range of water species are also a threat.

Origin: Gangotri (Himalaya)

Length: 2525Km

Depth: 17 m (56 ft)

Third Largest River in the world.

Major Cities: Patliputra, Kashi, Allahabad, Varanasi, Kolkata, Badrinath, Haridwar, Kanpur, Patna, Farrukhabad, Fatehgarh, Kannauj, Chakeri.

It also created the World's Largest DELTA in West Bengal - Sundarban Delta.

Major Tributaries: Gomti, Ghaghra, Tamsa, Yamuna, Koshi.
Merges into the Bay of Bengal.

2. Indus River:

This gave rise to the most significant ancient human civilisation, the Indus Valley civilisation, which holds great historical value.

Also, the word India has been derived from Indus.

India is a Greek and Latin term for the country of the river Indus.

Origin: Tibetan Plateau

Flows through: The Ladakh

Length: 3180 Km

Major Cities: Leh, Sukur, Hyderabad (Pakistan)

Major Tributaries: Balram River, Beas, Chenab, Dras, Gilgit, Jhelum, Ravi, Satluj

Merges into the Arabian Sea

Pakistan has 93 percent, India has five per cent, and China has a two per cent share of this river.

3. Yamuna River:

The name Yamuna is derived from the Sanskrit word "yama", meaning 'twin', and it may have been applied to the river because it runs parallel to the Ganges.

It is the longest and the second-largest tributary river of the Ganges.

One official has also called this river a sewage drain because of its high amounts of pollutants.

Origin: Yamunotri Glaciers (Himalaya) 70 percent of water to Delhi from the Yamuna

Tajmahal is situated on the banks of it

Major Cities: Etawah (UP), Agra (UP), Mathura, New Delhi

States Covered: Uttarakhand, Himachal Pradesh, Uttar Pradesh, Haryana, Delhi

Major Tributaries: Hanuman Ganga, Sharda, Chambal

Merges into: Ganga, Allahabad (It is the longest river in India which does not directly flow to the sea)

4. Brahmaputra:

Department of Tourism, Uttarakhand Open University

The lives of millions of Indian and Bangladeshi citizens are reliant on the Brahmaputra River.

Its delta is home to 130 million people and 6,00,000 people on the riverine islands.

Origin: Angsi Glacier (Tibet)

Entered from Arunachal Pradesh to Assam

Length: 2900 Km

Majorly covered cities: Dibrugarh (Assam), Guwahati

Another name: Jamuna (Bengali), Tsangpo (Tibet), Pinyin or Yarlung Zangbo (China)

Merges into: Padma River of Bangladesh

Also called as Tsangpo-Brahmaputra

5. Mahanadi:

The word Mahanadi is a compound of the Sanskrit words maha ("great") and nadi. It is the major river in Chattisgarh and Odisha. Its water is mainly used for irrigation and drinking purposes. Also known as The Ruin of Orrisa. (Devastating flood over the years but before the construction of HIRAKUND DAM)

Source: Sihawa, Dhamtari, Dandakaranya, Chhattisgarh

Length: 858 Km

Major cities on the river: Cuttak, Sambalpur.

6. Godavari:

The Godavari is India's second-longest river after the Ganga. The river has been revered in Hindu scriptures for millennia and continues to harbour and nourish a rich cultural heritage.

The longest river in Southern India is also known as 'Dakshina Ganga.'

2nd Largest after Gangas (Ganga)

Origin: Tryambakeshwar, Maharashtra

Length: 1465 Km

Major Towns along the river: Rajahmundry (AP), Nashik (MH), Nanded (MH), Nizamabad (AP).

States Covered: Maharashtra, Telangana, Chhattisgarh, Andhra Pradesh, Puducherry (Yanam).

Major Dam on River: Gangapur Dam, Sriram sagar dam. The Krishna Godavari Basin is one of the main nesting sites of the endangered Olive Ridley sea turtle.

Merge into The Bay of Bengal.

7. Krishna:

The Krishna River is India's fourth-biggest river in terms of water inflows and river basin area, after the Ganga, Godavari and Brahmaputra.

Also known as Krishnaveni, the Krishna River is the fourth largest in India (after the Ganges, Godavari, and the Brahmaputra).

Origin: Mahabaleshwar (Maharashtra)

Length: 1400 Km

Major towns along the river: Sangali (MH), Konya (MH), Vijayawada (AP)

Major Tributaries: Bhima, Paleru, Malaprabha, Tungbhadrā

It is a primary source of irrigation for Maharashtra, Karnataka, Telangana and Andhra Pradesh.

Dams: Nagarjun Sagar Dam, Dhom Dam, Narayanpur Dam.

This river's delta is one of India's most fertile regions and home to ancient Satavahana and Ikshvaku Sun Dynasty kings.

Vijayawada is the largest city on the River Krishna.

Merges into the Bay of Bengal.

8. Cauveri:

The primary uses of Kaveri are providing water for irrigation, household consumption, and electricity generation in South India.

Origin: Talakaveri (Western Ghats, Karnataka)

Important Tributaries: Amravati, Shemsha, Hemavati

Major Towns along the river: Kushalnagar, Mysuru northern suburbs, Srirangapatna, Karur, Tiruchirapalli (TN), Kumbakonam, Mayiladuthurai,

Poompuhar.

Length: 765 Km

Merges into The Bay of Bengal

14.6 Indian Lakes:

India is known for its diverse natural resources. There are many resources out of which water bodies have a significant hold on the scenic beauty of our country. Lakes are one of India's primary sources of natural beauty, and there are many lakes in almost every state.

Lakes can be classified into various categories:

Sr. No	Category of Lake in India
1.	Freshwater Lakes
2.	Saltwater Lakes
3.	Natural Lakes
4.	Oxbow Lakes
5.	Artificial Lakes
6.	Crater Lakes

List of Important Lakes in India:

The list of important lakes in India is given below:

Lakes in India	State/UT
Pulicat lake	Andhra Pradesh
Kolleru Lake	Andhra Pradesh
Haflong Lake	Assam
Deepor Beel	Assam
Chandubi Lake	Assam
Kanwar lake	Bihar
Hamirsar Lake	Gujarat
Kankaria Lake	Gujarat
Badkhal Lake	Haryana
Brahma Sarovar	Haryana

Chandra Taal	Himachal Pradesh
Maharana Pratap Sagar	Himachal Pradesh
Dal Lake	Jammu Kashmir
Wular Lake	Jammu Kashmir
Agara Lake	Karnataka
Ulsoor Lake	Karnataka
Kuttanad Lake	Kerala
Sasthamkotta	Kerala
Bhojtal	Madhya Pradesh
Shivsagar	Maharashtra
Loktak lake	Manipur
Umiam Lake	Meghalaya
Tam Dil	Mizoram
Chilika Lake	Odisha
Hariske	Punjab
Kanjli	Punjab
Sambhar Lake	Rajasthan
Tsomgo Lake	Sikkim
Chembarambakkam	Tamil Nadu
Hussain Sagar	Telangana
Govind Bhallabh Pant Sagar	Uttar Pradesh
Belasagar	Uttar Pradesh
Bhimtal	Uttarakhand
Kaliveli	Tamil Nadu

Significance of Lakes:

Lakes in India are a great source of:

- Irrigation
- Drinking-Water

- Navigation
- Livelihood

Essential Facts about Lakes:

- Wular Lake is one of the biggest freshwater lakes in Asia, and it was formed due to tectonic activity.
- Chilika Lake in Odisha is the largest saline water lake in India.
- Vembanad Lake in Kerala is the longest lake in India.
- Cholamu Lake in Sikkim is the highest lake in India.
- **Lonar Lake** is a notified National Geo-heritage Monument, saline, soda lake, located at Lonar in Buldhana district, Maharashtra.

14.7 Significance of Water Bodies in the Development of the Tourism Industry:

Clean water contributes to the recreation and tourism industry worldwide by accentuating beautiful beaches, white-water rivers, mountain lakes, and aquatic ecosystems such as coral reefs. Water has a powerful attraction for people. When people decide to plan vacations and travel for recreation, instruction, and pleasure, many have a solid tendency to head to the water.

For example, a day at the beach provides recreation, relaxation, and a chance to renew the spirit. A third of all Americans visit coastal areas yearly, making 910 million trips while spending about \$44 billion. Coastal tourism supports businesses like hotels, resorts, restaurants, outdoor outfitters, chartered fishing services, and travel agencies.

One of the largest service industries in the United States is travel and tourism, two broad categories which involve approximately 17 million jobs. Total travel and tourism expenditures in the United States for 2000 reached \$582.5 billion, while total revenue was \$99.5 billion. In increasing numbers, domestic and foreign travellers visit theme parks, natural wonders, and points of interest in major U.S. cities. Worldwide, tourism annually generates over 3.5 trillion dollars, a significant percentage of which involves water-related tourism.

Because of the popularity of tourism worldwide, coastal, lake, and riverfront

riverfront developments often include convention centres, hotels, retail and entertainment facilities, housing, and sometimes an aquarium or discovery centre. With the emergence of riverfront parks, land near rivers is becoming highly desirable.

Popular Water-Related Activities:

Almost all Americans participate in some water-based recreation and tourism and (on average) spend about 10 percent of their disposable income on recreational activities, including water-related tourism. Popular water-related vacations may involve cruise ships, ecotourism, sport fishing, underwater diving, and canoeing and kayaking, to name a few.

Cruise Ships:

Cruise ships are elegant vessels featuring swimming pools, theatres, restaurants, and luxurious passenger accommodations. Some ships built in the 1980s were twice the size of their 1970s predecessors and carried over 1,000 passengers. In the 1990s, these floating entertainment centres became even more significant, some carrying nearly 5,000 passengers and crew. One half-billion-dollar ship featured amenities such as a giant floating casino, a luxurious 1,350-seat theatre, a 9-hole miniature golf course, an ice rink, and a shopping mall.

Some cruise operators also offer small ships for up-close exploration of wilderness waterways. The shallow draft of small vessels can take tourists along shorelines, alongside icebergs and calving glaciers, and through the narrowest navigable channels. *The small vessels offer a more informal and relaxed way to observe difficult-to-reach water passages and landmasses.

Ecotourism:

Ecotourism is a popular way to enjoy water resources while still conserving the integrity of nature. Ecotourism is tourism directed toward exotic, often threatened, natural environments, primarily to support conservation efforts and to observe wildlife. The fastest-growing segment of the world's tourism business, ecotourism, is expanding at 30 percent a year worldwide. Many tourism experts

believe this increase is due to people becoming more knowledgeable about ecosystem values.

Sport Fishing:

Sport fishing is enjoyed in freshwater or salt water. Freshwater fishing takes place in such places as lakes, ponds, rivers, and streams. Game fish in these waters include trout, bass, and many other species. They range in size from 0.25 kilograms (0.5 pounds), such as bluegills, to as large as 45 kilograms (100 pounds), such as king salmon.

Salt-water fishing occurs in oceans, estuaries, and tidal rivers. Game fish in these waters tend to be larger than average freshwater fish. They include snappers, bonefish, striped bass, and tuna. Fish can be landed as large as 70 kilograms (150 pounds), such as sailfish and tarpon, and even as much as 225 kilograms (500 pounds), such as marlin.

Fishing expenditures are increasing, and participation rates outpace population growth in some areas. Much of recreational spending is tied to fish and wildlife, requiring high-quality water and habitat for survival.

Underwater Diving:

Underwater diving is entering and remaining below the surface to explore, work, or have fun. Diving is famous all over the world as a tourist activity. It is usually done in the ocean, but divers also explore other water bodies such as lakes, rivers, and ponds. Snorkelling is a popular underwater activity involving swimming face down on the surface (or just below). The essential equipment is a mask to observe underwater objects and aquatic plants and animals, fins for propulsion, and a slender plastic tube called a snorkel to breathe. Scuba divers carry a tank of air that allows them to breathe while diving deep underwater. The Professional Association of Dive Instructors estimates that there are now 6 million active scuba divers worldwide. They engage in many different types of diving: wreck, cave, commercial, and military. The most common form of scuba diving is sport diving, or recreational diving, which is practised at depths of less than 39 meters (130

feet). From these depths, divers can make a straight ascent to the surface. Diving beyond this limit requires advanced training.

In general, divers seek locations where the water is clear, the temperatures warm, and the marine life plentiful. Divers often visit areas with coral reefs because they are colourful and dense with life and provide shelter for many types of fish. The Caribbean is the most popular destination globally, with many designated marine parks or sanctuaries. The South Pacific, the Indian Ocean, and the Red Sea are other ordinary dive destinations. However, cold-water divers may venture into cold waters when fully equipped with proper exposure protection (such as a thick wet or dry suit) to endure the harshness of such climates.

Canoeing and Kayaking:

Canoes and kayaks are small crafts that are pointed at both ends. Most canoes are open-topped boats, while kayaks are entirely enclosed except for an opening for each occupant. One or more persons can paddle both types of boats. One of the sport's most exciting activities is whitewater kayaking. Participants sit in closed-topped boats and propel themselves with a double-bladed paddle through fast-moving water. Kayakers wear waterproof clothing, a life vest, and a helmet.

14.8 Islands:

An island is any land area smaller than a continent and surrounded by water. Islands may occur in oceans, seas, lakes, or rivers. A group of islands is called an archipelago. Islands may be classified as either continental or oceanic. Oceanic islands rise to the surface from the floors of the ocean basins. Continental islands are unsubmerged parts of the continental shelf surrounded by water. Many of the larger islands of the world are of the continental type. Greenland (840,000 square miles (2,175,000 square km), the largest island, is composed of the same materials as the adjacent North American continent, from which a shallow and narrow sea separates it. Likewise, the world's second-largest island, New Guinea 309,000 square miles (800,000 square km), is part of the Australian continental platform and is separated from it only by the very shallow

Torres Strait would be sufficient to join New Guinea to Australia; conversely, a slight rise in sea level may submerge a hilly coast and leave the hilltops remaining as small islands just offshore (such as those off the coast near Boston and the islands off the Maine coast).

Indian Islands:

- The central island groups of India are the Andaman and Nicobar Archipelago (A chain of islands similar in origin) in the Bay of Bengal and the Lakshadweep
- Islands in the Arabian Sea.
- Andaman and Nicobar Islands were formed due to a collision between the Indian and Burma Minor plates.
- Andaman and Nicobar Islands are southward extensions of the Arakan Yoma range (Myanmar)
- Lakshadweep Islands are coral islands. These islands are a part of Reunion Hotspot volcanism.
- Besides these two groups, there are islands in the Indo-Gangetic Delta and between India and Sri Lanka.

Andaman and Nicobar Islands:

- This archipelago is composed of 265 big and small islands (203 Andaman Islands + 62 Nicobar Islands).
- The Andaman and Nicobar Islands extend from $6^{\circ} 45' N$ to $13^{\circ} 45' N$ and from $92^{\circ} 10' E$ to $94^{\circ} 15' E$ for a distance of about 590 km.
- The Andaman Islands are divided into three main islands: North, Middle, and South.
- Duncan's passage separates Little Andaman from South Andaman.
- The Ten Degree Channel separates the Great Andaman group of islands in the north from the Nicobar group in the south.
- Port Blair, the capital of Andaman Nicobar Islands, lies in the South Andaman.

- Among the Nicobar Islands, the Great Nicobar is the largest. It is the southernmost island and is very close to the Sumatra island of Indonesia. The Car Nicobar is the northernmost.
- Most of these islands are made of tertiary sandstone, limestone, and shale, which rest on primary and ultrabasic volcanoes.
- The Barren and Narcondam Islands, north of Port Blair, are volcanic islands.
- Some of the islands are fringed with coral reefs. Many of them are covered with thick forests. Most of the islands are mountainous.
- Saddle Peak (737 m) in North Andaman is the highest peak.

Lakshadweep Islands:

In the Arabian Sea, there are three types of islands.

1. Amindivi Islands (consisting of six main islands: Amini, Keltan, Chetlat, Kadmat, Bitra, and Perumul Par). [do not have to remember all these names]

2. Laccadive Islands (consisting of five major islands of Androth, Kalpeni, Kavaratti, Pitti and Suheli Par) and

3. Minicoy Island:

- At present, these islands are collectively known as Lakshadweep.
- The Lakshadweep Islands are a group of 25 small islands.
- They are widely scattered about 200-500 km southwest of the Kerala coast.
- Amindivi Islands are the northernmost, while the Minicoy Islands are the southernmost.
- All are tiny islands of coral origin and are surrounded by fringing reefs.
- The largest and the most advanced is Minicoy Island, with an area of 4.53 sq km.
- Most islands have low elevations and do not rise more than five metres above sea level (Extremely Vulnerable to sea level change).

Their topography is flat, and relief features such as hills, streams, valleys, etc. are absent

14.9 Check Your Progress:

- Throw a light on the critical water-based adventure sports activities:

- How water bodies help in the promotion of the tourism industry at any destination:

14.10 Summary:

Water bodies are the lifeline of any country, and India is rich in all forms of water bodies. All Indian states have Rivers, lakes and ponds. Oceans and seas cover the south. Due to these water bodies, India offers every category of water-based tourism product, such as

- (a) places of recreation
- (b) alternate means of transportation
- (c) tourism, and they also help develop the town as a whole with its multiplier effects such as trade and commerce, local transportation, hotels and restaurants

Water bodies are the first victims of urbanization; hence, their conservation/restoration is imperative for a healthy and sustainable town or city. However, the future of water bodies will be influenced not just by climatic factors but also by policy decisions, technological changes, better spatial planning, and good governance.

Similarly, islands are small land areas surrounded by water on all sides. India is home to the Andaman and Nicobar Islands and the Lakshadweep group of islands. These have a large number of tourist attractions that attract millions of tourists each year.

14.11 Glossary:

- **Water Body:** An area filled with water.
- **Water-Based Adventure Activity:** Any adventure activity performed inside or above a water body.
- **Island:** A piece of land completely surrounded by water

14.12 Self-Assessment Questions:

- Explain in detail the different forms of water bodies found in India.
- Highlight the significance of water bodies in India's tourism industry.
- Discuss the popular water-based adventure sports activities.
- Highlight the Islands as important tourist attractions of India.
- What are the important Islands of India.

14.13 Reference and Suggested Readings:

- Shores E.L. (2018) "Bodies of Water", published by Capstone
- Rice D.H. (2014) "Water Bodies", published by Teacher Created Materials.
- Vaidyanathan S. & Mitra S. (2011), Rivers of India, published by Niyogi Books.
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Unit-16

Mountains of India

Structure:

- 16.0 Objectives**
- 16.1 Introduction**
- 16.2 Mountain Ranges**
- 16.3 Check Your Progress**
- 16.4 Summary**
- 16.5 Glossary**
- 16.6 Self-Assessment Questions**
- 16.7 References and Suggested Reading**

16.0 Objectives:

After completing this unit, you will be able to:

- Understand about the different Mountains of India.
- Explain the role of Mountains in promotion and development of India

16.1 Introduction:

Tourists travel to destinations to experience man-made or natural tourism resources. Natural resources include attractions created by nature, in which human beings have not played any direct role. In the present unit, we will discuss **mountain ranges** as an important natural tourism resource.

Mountain ranges attract a large number of nature lovers due to their scenic beauty and favourable climate. These regions are known for snow-covered peaks, hill stations, valleys, forests, rivers originating from glaciers, and rich flora and fauna. Mountain areas also provide opportunities for adventure tourism such as trekking, mountaineering, skiing, and camping.

Some of the important mountain ranges of the world include the Himalayan Mountain Range, Aravalli Range, Shivalik Range, Andes Range, and the Rocky Mountain Range. In India, mountain regions are popular tourist destinations, especially during the summer season, as tourists visit hill stations to enjoy a pleasant climate and natural surroundings.

16.2 Mountain Ranges:

A Mountain Range is a sequential chain or series of mountains or hills with similarity in form, structure and alignment arising from the exact cause, usually an orogeny. There are five major Mountain Ranges in the World, which are discussed below:

1. The Himalayan Mountain Range:

The Himalayas or Himalayas is a mountain range in Asia that separates the plains of the Indian subcontinent from the Tibetan Plateau. Its highest peak is Mount

folded over the Tethys Sea due to the inter-continental collision. It extends for about 2500 km between the Indus and Brahmaputra gorges from west to east in an arc-shaped manner. It plays an essential role in determining the climate of the Indian Sub-continent. It has enormous potential for various metallic minerals like Cobalt, Nickel, Zinc, Copper, Antimony, and Bismuth.

2. The Alps Mountain Range:

The Alps Mountain Range is the highest and most extensive mountain range system of Europe, stretching approximately 1,200 kilometres (750 mi) across eight Alpine countries (from west to east): France, Switzerland, Italy, Monaco, Liechtenstein, Austria, Germany, and Slovenia. It plays an essential role in determining the climate of Europe. Its highest peak is Mont Blanc (4,808.73 m).

3. The Atlas Mountains Range:

The Atlas Mountains Range stretches around 2,500 km (1,600 mi) through Morocco, Algeria and Tunisia. Its highest peak is Toubkal (4,167 m). It separates the Mediterranean and Atlantic coastlines from the Sahara Desert and is inhabited by Berber populations. It was formed during the Precambrian period.

4. The Andes Mountain Range:

The Andes or Andean Mountain Range is the world's most extended continental mountain range, stretching approximately 7,000 km (4,300 mi). Its highest peak is Aconcagua (6,961m). A continuous highland along the western edge of South America forms it.

5. The Rockies Mountain Range:

The Rocky Mountain Range, situated in western North America, stretches more than 3,000 miles (4,800 km) from the northernmost part of British Columbia, in western Canada, to New Mexico, in the Southwestern United States. Its highest peak is Mount Elbert (4,401 m). Public parks and forest lands protect it and are popular tourist destinations, especially for hiking, camping, mountaineering, fishing, hunting, mountain biking, skiing, and snowboarding.

The position of the mountain ranges influences the climate of any region. It also ~~obstructs the moisture laden winds. For example, the Himalayas act as a climate~~

barrier by blocking frigid winds from Central Asia and Siberia. These mountain ranges are also the source of the rivers.

16.3 Check Your Progress:

- Discuss the adventure sports activities which are performed on water bodies:

- How do water bodies help the tourism industry's growth at any destination?

16.4 Summary:

Mountain ranges are vital natural tourism attractions that draw many nature enthusiasts. These areas offer scenic views, a pleasant climate, diverse wildlife, snow-capped peaks, valleys, and opportunities for adventure and relaxation tourism. A tourism service provider should possess adequate knowledge about mountain ranges, as this helps in answering tourists' questions about destinations, climate, accessibility, and activities. Only a well-informed travel agent about mountain range destinations can effectively

16.5 Glossary:

- **Mountain** – A high natural elevation of the Earth's surface, higher than a hill.
- **Mountain Range** – A series or chain of connected mountains formed by the same geological processes.
- **Peak** – The highest point of a mountain.

16.6 Self-Assessment Questions:

- How do Mountain Ranges help the tourism industry's growth at the destination?
- Discuss the different tourism resources of the Mountains.

16.7 References and Suggested Readings:

- <https://courses.lumenlearning.com/suny-earthscience/chapter/introduction-to-the-oceans/>
- <https://www.britannica.com/place/Pacific-Ocean>
- <https://www.nationalgeographic.com/environment/oceans/reference/arctic-ocean/>
- <https://www.encyclopedia.com/environment/encyclopedias-almanacs-transcripts-and-maps/tourism-oceans>
- <https://www.toppr.com/guides/biology/difference-between-ocean-and-sea/>
- <https://www.jagranjosh.com/general-knowledge/list-of-major-mountain-ranges-of-the-world-1517574937-1>
- <https://www.livescience.com/57653-lake-baikal-facts.html>
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