

**Forest & Wild Life**

- Biosphere, the fourth sphere of the Earth, is a life supporting layer that exists on the earth's Surface.
- This layer on earth encompasses the Lithosphere, Hydrosphere and Atmosphere.
- It includes flora and fauna that thrive on or near the Earth's surface.
- The vertical range of the biosphere is approximately 20 km, which is measured from the ocean floor to the troposphere.
- However, most Plants and animals live in a very narrow section for about 1 km above and below the Mean Sea Level (MSL).
- Biosphere is made up of different Ecosystems and biomes.
- All living things, large or small, are grouped into species.
- The area in which an animal, plant or microorganism lives is called its habitat.
- A wide variety of plants and animals Live in a particular habitat known as biodiversity.

**Ecosystem:**

- An ecosystem is a community, where all living organisms live and interact with One another and also with their non-living Environment such as land, soil, air, water etc.
- Ecosystems range in size from the smallest Units (Eg: bark of a tree) that can sustain life to the global ecosystem or ecosphere. (Eg: Cropland, Pond ecosystem, Forest ecosystem, Desert ecosystem etc.).
- Biosphere harbours all ecosystems on the earth and sustains life forms Including mankind.

**Components of Ecosystem:**

- An ecosystem consists of three basic components, Namely
  - **Abiotic components**
  - **Biotic components and**
  - **Energy component**

### Abiotic Components

- Abiotic components include the non-living, Inorganic, physical and chemical factors in the Environment. Eg. Land, Air, Water, Calcium, Iron etc.

### Biotic Components

- Biotic components include plants, animals and Microorganisms.
- Biotic components can be Classified into three categories:
  - **Producers** are self-nourishing components the ecosystem. Hence they are called Autotrophs. They are found both on land and water. Eg. Plants, Algae, Bacteria etc.
  - **Consumers** are those that depend on Producers, directly or indirectly. Hence, they are called Heterotrophs. The common category of consumers are:
    - **Primary consumers** depend on producers for their food. They are exclusively Herbivores. Eg. Zebra, goat etc.
    - **Secondary consumers** are small carnivores i.e., they consume herbivores. Eg. Lion, snake etc.
    - **Tertiary consumers** are top carnivores that Prey on both herbivores and carnivores. Eg. Owl, crocodile etc.
  - **Decomposers** are some organisms that are incapable of preparing its own food. They live on dead and decaying plants and Animals. Hence, they are called Saprotrophs. Eg. Fungus, mushrooms etc.

### Energy Components

- All organisms in the biosphere use energy to work and convert one form of energy into Another.
- The Sun is the ultimate source of energy for the biosphere as a whole.
- The solar energy gets transformed into other forms of energy through the various components in the ecosystem.
- The Producers, consumers and the decomposers Contribute a lot to the energy flow in an ecosystem.

### Functions of an ecosystem:

- The living organisms form an interacting Set of flora and fauna which are organized into Trophic levels, food chains and food webs.
- The Functioning of an ecosystem depends on the Pattern of the energy flow, as it helps in the Distribution and circulation of the organic and Inorganic matter within an ecosystem.
- Energy Flow generally takes place in a hierarchical Order in an ecosystem through various Levels.
- These levels are called trophic levels.
- The chain of transformation of energy from one group of organisms to another, through Various trophic levels is called a food chain.
- A system of interlocking and interdependent Food chains is called a food web.

### Biodiversity:

- Biodiversity or biological diversity refers to a wide variety of living organisms (plants, Animals and other microorganisms) which live in a habitat.
- It is highly influenced by topography, Climate as well as human activities.
- It represents the strength of the biological resources of a Place on earth.
- In biodiversity, each species, no matter how big or small, has an important Role to play in the ecosystem.
- It maintains the Ecological balance and facilitates social benefits Such as tourism, education, research etc. Over an area.

### Loss of biodiversity:

- The extinction of species (flora and fauna) Due to human and natural influences is called Loss of biodiversity.
- A healthy eco system provides clean water, Pure water, enriched soil, food, raw materials, Medicines etc.
- Hence stable biosphere has to be Conserved.

### Biomes:

- A biome is a geographically extensive ecosystem where all flora and fauna are found collectively.
- It is the total assemblage of plant and animal life interacting within the biosphere.
- Biomes are defined by abiotic factors like, relief, climate, soils and vegetation.
- They are classified into two broad categories, terrestrial biomes and aquatic biomes.

### Terrestrial Biomes:

- Terrestrial biomes are a group of living organisms that live and interact with one another on land.
- They are mainly determined by temperature and rainfall.
- Some of the major Terrestrial biomes of the world are
  - Tropical Forest Biomes
  - Tropical Savanna Biomes
  - Desert Biomes
  - Temperate Grassland Biomes
  - Tundra Biomes

### Tropical Forest Biomes:

- The tropical forest biome is comprised of several sub-biomes, including evergreen Rainforest, seasonal deciduous forest etc.
- Tropical forests have the highest biodiversity and primary productivity of any of the terrestrial Biomes.
- The Amazon basin, Congo basin and Indonesian islands are the major regions of this Biome.
- These regions have very dense forests and so have great economic importance.
- Human Settlements are found scattered here.
- They sustain their livelihood through food gathering, fishing, Lumbering and shifting cultivation.

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- Due to the Humid nature of this biome, the people get Afflicted to tropical diseases like malaria, yellow Fever etc.
- The chief trees found here are rubber, Bamboo, ebony, etc. Bats, pheasants, jaguars, Elephants, monkeys etc.

**Tropical Savanna (Grasslands) Biomes:**

- Tropical grasslands are generally found Between tropical forests and deserts.
- Tropical Savanna biomes are found between 10° to 20° North and South latitudes.
- These grasslands are Generally flat and are found in the Sahel, south of Sahara in East Africa and in Australia.
- This Biome is generally hot and dry and experiences Moderate to low rainfall.
- So, the grass which Grow here are tall and sharp.
- Hence the chief Occupation of the people found here is herding.
- The primitive people living here are nomadic.
- The common animals found here are the Lion, leopard, tiger, deer, zebra, giraffe etc.
- Flora Such as Rhode's grass, red oats grass, lemon Grass etc.
- Are found in this biome.

**Desert Biomes:**

- Deserts are usually found on the western Margins of the continents between 20° and 30° North and South latitudes.
- The annual rainfall is Less than 25 cm in these regions.
- Due to the lack of rainfall and arid conditions, these regions do not possess any vegetation but have special Vegetation type called Xerophytes.
- As the soil is Sandy and saline, deserts remain agriculturally Unproductive.
- Drought resistant thorny scrubs and bushes, palms are found here.
- Tribal people who live here practice Food gathering and hunting.
- They move their temporary settlements frequently in search of Pastures.
- Transportation becomes very difficult here and is carried on by camels.
- Reptiles Like snakes, lizards, scorpions etc., are most Commonly found here.

### Temperate Grassland Biomes:

- Temperate Grasslands are usually found in the interior of the continents and are Characterized by large seasonal temperature Variations, with warm summer and cold Winter.
- The type of grassland in these regions Strongly depends upon precipitation.
- Higher Precipitation leads to tall and soft grass and Lower precipitation leads to short and soft Grass.
- These regions favour wheat cultivation.
- Extensive mechanised agriculture is practised Due to lack of farm labour.
- Pastoral industry becomes the main occupation, thereby Facilitating slaughtering of animals, packing of Raw and processed meat, dairy products etc.
- The Common birds and animals are grass hopper, Wolf, bison, prairie dog etc.

### Tundra Biomes:

- These vast lowlands are found where the Ground remains frozen.
- Greenland, Arctic and Antarctic regions and Northern parts of Asia, Canada and Europe fall in this biome.
- These regions are also called Barren lands.
- This biome experiences long severe winter and Short cool summer.
- Due to the prevailing of low Temperature and short growing seasons, the Net primary productivity is very low in tundra.
- People are nomadic.
- Hunting and fishing are their major occupations.
- The population here is extremely sparse and the harsh environment Makes them change their settlement frequently.
- They live in igloos in winter and in tents during Summer.
- Arctic moss, Arctic willow, lichens etc.
- Grow here Fauna like the polar bear, wolverine, Reindeer, snowy owl are found here.

### **Aquatic Biomes:**

- Aquatic biome is a group of living organisms that live and interact with one another and its aquatic environment for nutrients and shelter.
- Like terrestrial biomes, aquatic biomes are Influenced by a series of abiotic factors.
- It is Broadly classified as fresh water biomes and Marine biomes.

### **Fresh water Biomes:**

- It comprises lakes, ponds, rivers, Streams, wetlands etc.
- It is influenced by Various abiotic components such as the Volume of water, water flow, composition of Oxygen, temperature, etc.
- Humans rely on Freshwater biomes for drinking water, crop Irrigation, sanitation and industry.
- Water lily, Lotus, duck weeds etc. are the common plants found here.
- Trout, salmon, turtles, crocodiles Etc. are the animals found here.

### **Marine Biomes:**

- They are the largest aquatic biomes on Earth.
- They are continuous bodies of salt water and provide a wide range of habitats for marine Plants and animals.
- Coral reefs are a second kind of marine biomes within the ocean.
- Estuaries, Coastal areas where salt water and fresh water Mix, form a third unique marine biome.
- As Water provides maximum mobility to marine Organisms, nutrients are circulated more quickly and efficiently here than the terrestrial biomes.
- Apart from animals, plants such as kelp, algae, Phytoplankton etc. also grow in water.
- Aquatic Biomes are not only important for plants and Animals, but also for humans.
- Humans use aquatic biomes for water, food and leisure activities some of the threats and issues to aquatic biomes are overfishing, pollution and rise in sea level.

**Conservation:**

- The biosphere extends from the deep ocean trenches to lush rain forests.
- People play an important role in maintaining the flow of energy in the biosphere.
- At the same time, the primary Cause of today's loss of biodiversity is habitat alteration caused by human activities.
- The ever increasing population results in over exploitation of biological resources.
- This has an adverse Impact on flora and fauna on earth.
- There are Places on earth that are both biologically rich and deeply threatened.
- Hence it is man's duty to conserve and care for the earth and make it a better place to live in.
- A Biosphere Reserve is a Special ecosystem or specialized Environment with flora and Fauna that require protection and nurturing.
- There are 18 Biosphere Reserves in India.

**Natural Vegetation:**

- Natural vegetation refers to a plant Community unaffected by man either directly or indirectly.
- It has its existence in certain natural Environment.
- Natural vegetation includes all Plant life forms such as trees, bushes, herbs and forbs etc, that grow naturally in an area and have been left undisturbed by humans for a long Time.
- Climate, soil and landform characteristics are the important environmental controls of Natural vegetation.
- On the basis of the above factors the Natural vegetation of India can be divided into the following types.

**Tropical Evergreen Forest:**

- These forests are found in areas with 200 cm or more annual rainfall.
- The annual temperature is about more than 22°C and the average annual Humidity exceeds 70 percent in this region.



- Western Ghats in Maharashtra, Karnataka, Kerala, Andaman-Nicobar Islands, Assam, West Bengal, Nagaland, Tripura, Mizoram Manipur and Meghalaya states have this type of forests.
- The most important trees are rubber, Mahogany, ebony, rosewood, coconut, bamboo, Cinchona, candel, palm, iron wood and cedar.
- These have not been fully exploited due to lack of transport facilities.

#### **Tropical Deciduous Forest:**

- These are found in the areas with 100 to 200cm.
- Annual rainfall. these are called 'Monsoon Forests'.
- The mean annual Temperature of this region is about 27° C and the average annual relative humidity is 60 to 70 percent.
- The trees of these forests drop their Leaves during the spring and early summer. (Sub Himalayan – Region from Punjab to Assam, Great Plains- Punjab, Haryana, Uttar Pradesh, Bihar, West Bengal, Central India – Jharkhand, Madhya Pradesh, Chattisgarh, South India – Maharashtra, Karnataka, Telangana, Andhra Pradesh, Tamil Nadu and Kerala states are Notable for this type of natural vegetation.)
- Teak and sal are the most important trees.
- Sandalwood, rosewood, kusum, mahua, palas, Haldu, amla, padauk, bamboo and tendu are the other trees of economic importance.
- These Forests also provide fragrant oil, varnish, sandal oil and perfumes.

#### **Tropical Dry Forest:**

- These are found in the areas with 50 to 100 cm.
- Annual rainfall. they represent a Transitional type of forests.
- These are found in east Rajasthan, Haryana, Punjab, Western Uttar Pradesh, Madhya Pradesh, Eastern Maharashtra, Telangana, West Karnataka and East Tamil Nadu.
- The important species are Mahua, banyan, amaltas, palas, haldu, kikar, Bamboo, babool, khair etc.,
- **Desert and Semi-desert Vegetation:** These are also called as 'Tropical thorn forests'.

- These are found in the areas having annual rainfall of Less than 50 cm.
- They have low humidity and High temperature.
- These forests are found in North-west India which includes west Rajasthan, South-west Haryana, north Gujarat and south-West Punjab.
- They are also found in the very dry parts of the Deccan plateau in Karnataka, Maharashtra and Andhra Pradesh.
- Babul, kikar and wild palms are common trees found here.

#### **Mountain or Montane Forest:**

- These forests are classified on the basis of Altitude and amount of rainfall.
- These are found on the slopes of the Mountains in north-east states.
- These forests Found in the altitude of 1200-2400m. Sal, Oak, Laurel, Amura, Chestnut, Cinnamon Are the main trees found here.
- Oak, birch, Silver, fir, pine, spruce and juniper are the Major trees found at the altitude of 2400 to 3600m.
- The rainfall of this region is moderate.
- These Forests are found in Jammu & Kashmir, Himachal Pradesh and Uttarakhand.
- Upto 900 m altitude semi desert vegetation is Found and it is known for bushes and small Trees.
- In altitude from 900 to 1800m, chir is the most common tree.
- From 1800 to 3000m is covered with semi temperate coniferous Forests.

#### **Alpine Forest:**

- It occurs all along the Himalayas with Above 2400 m altitude.
- These are purely having Coniferous trees.
- Oak, silver fir, pine and juniper are the main trees of these forests.
- The eastern Parts of Himalayas has large extent of these forests.

#### **Tidal Forest:**

- These forests occur in and around the Deltas, estuaries and creeks prone to tidal Influences and as such are also known as delta or swamp forests.
- The delta of the Ganga-Brahmaputra has the largest tidal forest.

- The Deltas of Mahanadi, Godavari and Krishna Rivers are also known for tidal forests.
- These are also known as mangrove forest.

### Wildlife:

- The term 'Wildlife' includes animals of any habitat in nature.
- Wild animals are non-domesticated animals and include both Vertebrates (fish, amphibians, reptiles, birds and Mammals) and invertebrates (bees, butterflies, Moths etc.).
- India has a rich and diversified Wildlife.
- The Indian fauna consists of about 81,251 species of animals out of the world's total of about 1.5 million species.
- Our country is home to tigers, lions, Leopards, snow leopards, pythons, wolves, foxes, Bears, crocodiles, rhinoceroses, camels, wild Dogs, monkeys, snakes, antelope species, deer Species, varieties of bison and the mighty Asian Elephant.
- Hunting, poaching, deforestation and Other anthropogenic interferences in the natural Habitats have caused extinction of some species and many are facing the danger of extinction.

### Indian Board for Wildlife (IBWL):

- It was constituted in 1952 to suggest means of protection, conservation and management of Wildlife to the government.
- The **Government of India enacted Wildlife (Protection) Act in 1972** with the objective of effectively protecting the wild life of the country and to control poaching, smuggling and illegal Trade in wildlife and its diversities.
- To preserve the country's rich and diverse Wildlife a network of 102 National Parks and About 515 Wildlife Sanctuaries across the Country have been created.

### Biosphere Reserves:

- Biosphere reserves are protected areas of Land coastal environments.
- The Indian government has established 18 Biosphere Reserves in India which protect large areas of natural habitat which often include few National

Parks with buffer zones that are open to some economic use Biosphere Reserves in India Eleven of the eighteen biosphere reserves (Gulf of Mannar, Nandadevi, the Nilgiris, Nokrek, Pachmarhi, Simlipal, Sundarbans Agasthiyamalai, Great Nicobar, Kanjanjunga and Amarkantak) of India fall under the list of Man and Biosphere programme of UNESCO.

- Project Tiger was launched In April 1973 with the aim to conserve tiger population in specifically constituted “Tiger Reserves” in India.

### Nilgiri Biosphere Reserve

- Nilgiris (blue mountain) got their name from the purplish blue flowers of Neelakurinji (blossoms once in 12 years).
- The Nilgiri Sub-Cluster (UNESCO World Heritage Site) includes the Mudumalai, Mukurthi, Nagarhole, Bandipur and Silent Valley national parks, as well as the Aralam, Wayanad and Sathyamangalam wildlife sanctuaries.
- **Vegetation:** tropical evergreen forests (western side of Western Ghats), montane sholas and grasslands (at high altitudes), semi-evergreen forests, moist deciduous forests, dry deciduous forests, and thorn forests.
- **Major Fauna:** Lion Tailed Macaque (EN), Nilgiri Tahr (EN), Malabar Giant Squirrel (LC), Nilgiri Langur (VU), etc.

### Nanda Devi Biosphere Reserve

- Nanda Devi Biosphere Reserve = Nanda Devi National Park + Valley of Flowers NP.
- **Major Fauna:** Snow Leopard (VU), Musk Deer (EN), Bharal Or Blue Sheep (LC), etc.

### Nokrek Biosphere Reserve

- Nokrek (1,412 m) is the highest peak of the Garo hills.
- **Vegetation:** Evergreen, semi-evergreen & deciduous.
- **Key Fauna:** Red Panda (EN), Hoolock Gibbons (EN), Red Giant Flying Squirrel (LC), etc.

### Gulf of Mannar Biosphere Reserve

- It lies between the west coast of Sri Lanka and the south-eastern tip of India, in the Coromandel Coast region.

- The chain of low islands and reefs known as Ramsethu (Adam's Bridge), which includes Mannar Island, separates the Gulf of Mannar from Palk Bay, which lies to the north between Sri Lanka and India.
- The biosphere reserve comprises islands with estuaries, seagrasses, coral reefs, salt marshes and mangroves.
- **Major Fauna:** Dugong (VU), Olive Ridley turtles (VU), etc.

#### Sundarbans Biosphere Reserve

- It is located in the vast Delta of the Ganges, south of Kolkata and bordering Bangladesh in the east.
- It provides habitat for the threatened Royal Bengal Tiger (EN).
- Sundarbans BR = Sundarbans National Park + Sajnekhali Wildlife Sanctuary + Lothian Wildlife Sanctuary + Haliday WLS.

#### Manas Biosphere Reserve

- Manas BR = Manas National Park.
- It is contiguous with the Royal Manas National Park in Bhutan.
- Manas is famous for its population of the Wild Water Buffalo (EN).
- **Rare and endemic wildlife:** Assam Roofed Turtle (EN), Hispid Hare (EN), Golden Langur (EN) & Pygmy Hog (EN).
- **The grassland biomes:** Pygmy Hog, Rhinoceros (re-introduced in 2007), elephants, Bengal florican (CR) etc.

#### Great Nicobar Biosphere Reserve

- Great Nicobar BR = Campbell Bay National Park + Galathea NP.
- **Vegetation:** tropical wet evergreen forests.
- **Major Fauna:** Dugong (VU), Saltwater Crocodile (LC), etc.

#### Similipal Biosphere Reserve

- It includes Mayurbhanj Elephant Reserve (Similipal TR + Hadgarh Wildlife Sanctuary + Kuldiha WLS).
- **Tribes:** Erenga, Kharias, Mankirdias, Ho, Gonda & Munda.
- **Major Fauna:** Royal Bengal Tigers, Wild Elephants (EN), Gaurs (VU - Indian Bison), Chausingha (VU).

**Pachmarhi Biosphere Reserve**

- Pachmarhi BR (Satpura National Park + Bori Wildlife Sanctuary + Pachmarhi WLS) lies in the centre of the Satpura Range.
- The highest peak is the Dhoopgarh (1,352 m).
- Gonds are the major tribes.
- **Fauna:** Tiger, Gaur, Indian Giant Flying Squirrels (LC), etc.

**Khangchendzonga Biosphere Reserve**

- The biosphere reserve is a transboundary bio-diversity hotspot conservation area.
- It includes the third highest mountain peak in the world, Kanchenjunga (8,586 m).
- It is one of the highest ecosystems in the world, reaching elevations of 1,220 m to 8,586 m above sea level.
- The Khangchendzonga NP, which comprises the core area of the KBR, was inscribed as India's first "Mixed World Heritage Site".
- **Major Fauna:** Red Panda (EN), Snow Leopard (VU), Musk Deer (EN), Great Tibetan Sheep (Argali - NT), etc.

**Dibru-Saikhowa Biosphere Reserve**

- Dibru-Saikhowa BR = Dibru-Saikhowa National Park.
- **Major Fauna:** Bengal Tiger, Clouded Leopard (VU), Gangetic Dolphin (EN), etc.

**Dihang-Dibang Biosphere Reserve**

- The Mouling NP and the Dibang WLS are located fully or partly within this biosphere reserve.
- The terrain is rugged, with an altitudinal range of 750 to 3000 m at the highest point, the Mouling Peak.
- **Major Fauna:** Takin (VU), Red Panda (EN).

**Agasthyamala Biosphere Reserve**

- Agasthyamala BR = Shendurney Wildlife Sanctuary + Peppara Wildlife Sanctuary + Neyyar Wildlife Sanctuary + Kalakad Mundanthurai TR.
- The reserve is home to Kani tribes from both Tamil Nadu and Kerala.
- **Major Fauna:** Nilgiri Tahr (EN)

**Wild life and Bird Sanctuaries:**

- India possesses a wide range of forests and grasslands.
- Diversity of these lands makes it one of the hotspot for flora and fauna.
- The dense and dark forest of Indian States provides suitable habitat for a wide and a unique variety of animals and birds.
- Royal Bengal Tigers, Indian Lions, Elephants, Rhinoceros, Indian leopard and Reptiles are the major tourist attractions.
- Bird sanctuaries attract attention for their exclusive variety of birds.
- Diverse range of climate of India invite birds from remote Places to feed, breed and to nurture their young ones in the Indian bird sanctuaries.

**Wildlife Sanctuaries in India:****Wildlife Sanctuary / State / Animals**

- Mudumalai wildlife sanctuary Tamil Nadu Tiger, Elephant , Bison, Deer
- Kaziranga National Park Assam Tiger, Deer, Buffalo
- Ranthambor National Park Rajasthan Tiger
- Kanha National Park Madhya Pradesh Swamp Deer
- Sundarbans National Park West Bengal Bengal Tiger
- Gir National Park Gujarat Lions
- Bhadra Wildlife Sanctuary Karnataka Bison, Leopard, Gaur
- Periyar National Park Kerala Elephant, Deer
- Corbett National Park Uttarakhand Tiger

**Bird Sanctuaries in India:****Bird Sanctuary / State:**

- Koonthankulam bird sanctuary Tamil Nadu
- Kumarakom bird sanctuary Kerala
- Bharatpur bird sanctuary Rajasthan
- Mayani bird sanctuary Maharashtra
- Uppalapadu bird sanctuary Andhra pradesh
- Nal Sarovar bird sanctuary Gujarat
- Nawabganj bird sanctuary Uttar Pradesh

- Wildlife and Bird Sanctuaries in Tamil Nadu Wildlife sanctuary in Tamil Nadu includes Bird Sanctuaries and National Parks.
- Tamil Nadu is also Well known for the diverse natural heritage that it Possesses.
- Hence tourists are highly excited about the wildlife tour across the state.
- The total area of Tamil Nadu is approximately 130,058 sq.km.
- 17.6% of the land area comprises of thick forests.
- Visitors Will get to watch a smooth blend of wet evergreen Forest, dry and wet deciduous forests, grasslands, Sholas, mangroves and thorny scrubs.
- Besides varied Natural vegetation, another prized possession of Tamil Nadu is wildlife Sanctuaries including Tiger, Elephant, Deer, Monkey, Bison etc., for protecting the entire flora and fauna.

#### **Wildlife Sanctuaries of the Tamil Nadu:**

##### **Wildlife Sanctuaries:**

##### **Name of Wildlife Sanctuary / District**

- Mudumalai Wildlife Sanctuary - Nilgiris
- Mundanthurai Wildlife Sanctuary- Tirunelveli
- Point Calimere Wildlife Sanctuary - Nagapattinam
- Indira Gandhi Wildlife Sanctuary- Coimbatore
- Kalakad Wildlife Sanctuary - Tirunelveli

##### **Bird Sanctuaries in Tamil Nadu**

- vedangudi Birds Sanctuary - Sivagangai
- Karaivetti birds Sanctuary - Ariyalur
- Vellode birds Sanctuary - Erode
- Vedanthangal Birds Sanctuary - Kancheepuram
- National Parks in Tamil Nadu
- Guindy National Park - Chennai
- Gulf of Mannar Marine Park - Ramanathapuram
- Indira Gandhi National Park – Coimbatore
- Mukurthi National Park - Nilgiris
- Mudumalai National Park - Nilgiris



### **Tourism:**

- The word tourist was derived from an old English word “tourian” which refers to a person who travels out of his usual environment for not More than one year and less than 24 hours.
- The Purpose of travel may be religious, recreation, Business, historical and cultural.
- The Basic components of Tourism has become an important source of income for many regions and even for the Entire countries of the world.
- Tourism is an Essential part of the life of the society because of Its direct impact on social, cultural, educational and economic sector of the nation and on their international relations too.

The three main components of tourism are

- **Attraction**
- **Accessibility**
- **Amenities.**

These three components are together known as A3 concept.

### **Attractions:**

Attractions mainly comprise of two types such As:

- Natural attraction
- Cultural attraction
  - Natural attraction includes landscape, Seascape, beaches, climatic condition and forests.
  - Cultural attractions are historic monuments and other intellectual creations.
  - Apart from this a cultural attraction also includes fairs and Festivals.

### **Accessibility:**

- Accessibility means reachability to a Particular place of attraction through various Means of transportation such as road, rail, water and air.
- Transport decides the cost of travel and the time consumed in reaching or accessing a Specific attraction.

**Amenities:**

- Amenities are the facilities that cater to the Needs of a tourist.
- Accommodations in terms of hotels, Restaurants, cafes and other staying units.
- Travel organizers, Tour operators and Travel Agents Foreign exchange centres, passport and visa Agencies Sectors related to Travel Insurance, Safety and Security.

**Types of Tourism:**

- From the ancient times, travel is a Fascination for mankind.
- Tourism can be divided on the basis of nature, utility, time and Distance as indicated below.
  - Religious tourism
  - Cultural tourism
  - Historical tourism
  - Eco-Tourism
  - Adventure tourism
  - Recreational tourism
  - Religious Tourism

**Religious tourism**

- It is one of the oldest types of tourism, wherein people travel individually or in groups for pilgrimage to a religious Location such as temples, churches, mosques and other religious places.
- Religious tour the Kasi (Varanasi) by Hindus, to Jerusalem by Christians and to Mecca by Muslims are few of the examples for religious tourism.

**Historical Tourism:**

- It focuses on visiting historically Important places like museums, monuments, Archaeological areas, forts, temples and so on.
- Angkorwat of Cambodia, Tajmahal of India and Pyramids of Egypt are some of the examples to Quote for Historical Tourism.

### **Eco-Tourism:**

- Eco tourism typically involves travel to Destinations where plants and animals thrive in a naturally preserved environment.
- Amazon Rain Forest, African forest safari, trekking in the Slopes of Himalayas are the famous incredible Eco-friendly attractions.

### **Adventure Tourism:**

- Adventure tourism is a type of tourism Involving travel to remote or exotic places in order to take part in physically challenging outdoor activities.
- For e.g. sky dive in Australia, Bungee jumping in New Zealand, Mountaineering in the peaks of Himalayas, Rafting in the Brahmaputra River at Arunachal Pradesh.

### **Recreational Tourism:**

- This type of tourism aims at enjoyment, Amusement or pleasure are mainly for 'fun Activity'.
- Waterfalls, hill stations, beaches, and Amusement parks are the attractive spots for Recreational tourism.
- Apart from this, there are certain modern types of tourism, which got developed in recent years. They are
  - Annual Holiday tourism
  - Industrial Tourism
  - Seasonal Tourism
  - International Tourism
  - Group Tourism
  - Sports Tourism
  - Health Tourism
  - Farm and Rural Tourism.
  - International Tourism

### **International tourism**

- It is undertaken to visit the places of international importance and to gather knowledge about international Culture and customs.

- For this, there are certain Travel forms and formalities to be fulfilled by the tourists, such as passport, Visa, Foreign Currency, Air ticket, Travel insurance, and other immigration details.
- Basic Elements of Tourism attractions certain elements are fundamental to attract tourists as travel destinations. They are
  - Pleasant weather
  - Scenic beauty
  - Historical and cultural monuments
  - Geographical Components of Tourism
  - **Landforms:** Mountains, Plateaus, Canyons, Valleys, Caves, Cirques, Sand dunes, Coral Reefs, Cliffs, etc.,
  - **Water:** Rivers, Lakes, Waterfalls, Hot springs And Geysers, Snow and Glacier, Water Currents, Tides and Waves.
  - **Vegetation:** Forest, Grasslands, Moors, Deserts etc.,
  - **Climate:** Sunshine, Clouds, Admirable Temperature, Rain and Snow.
  - **Animal life: Wildlife:** Birds, Game Reserves, Zoos.
- Hunting and Fishing Settlement features, Towns, Cities, Villages Historical remains and Monuments Culture Ways of life, traditions, folklore, arts and crafts.
- Tourism Attractions in India is a country known for its gentle Hospitality with spicy food and culture.
- Visitor friendly traditions with varied life style, culture, Heritage, colourful fairs and festivals are abiding Attractions for the tourists.
- All types of land Form, varied climate, rich resources for eco and Adventure tourism are the versatile specialty of India.
- Technological parks and science Museums, pilgrimage centres with wonderful Art and architecture are an added advantage for Tourists.
- Yoga, Ayurveda and Natural remedial Health resorts attract tourists from all over the World.

### Religious Tourism:

- India being a multi-religious country, religious Tourism is the most popular type of tourism.
- Various package tours are organized for the People to attend the religious rituals and to visit Places of religious importance.
- Most famous religious spots of India are as follows:
  - Rameswaram – Tamil Nadu
  - Kanchipuram – Tamil Nadu
  - Varanasi(Kasi) – Uttarpradesh
  - Saranath – Uttarpradesh
  - Vaishnavadevi temple – Jammu & Kashmir
  - St. Francis Xavier Cathedral – Goa
  - Amritsar – Punjab
  - Monasteries of Ladakh – Jammu & Kashmir
- Scenic attraction is a very important factor in tourism.
- Scenery consisting of Mountains, Lakes, Waterfall, Glacier, Forests, and Deserts are the major features attracting people to visit Them.
- India is blessed with nature and gifted with immense beauty from rolling hills to deep Valley and snow-covered mountains to lush green carpet.

### Hill Stations in India:

- The Indian sub-continent has seven Principal mountains ranges and the largest of hill is the Himalayas that lie in the northern part of India.
- Most of the Himalayan hill stations In India are located in states of Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, West Bengal, Arunachal Pradesh, Nagaland and Meghalaya.
- Maharashtra, Karnataka, Tamil Nadu and Kerala have hill Stations in the Western Ghats.
- Andhra Pradesh, Odisha have hill stations in the Eastern Ghats
- The beautiful hill stations in India
  - Kodaikanal, Ooty – Tamil Nadu
  - Nainital, Mussoorie – Uttarakhand

- Darjeeling – West Bengal
- Gulmarg – Jammu & Kashmir
- Shillong – Meghalaya
- Shimla, Manali – Himachal Pradesh
- Munnar – Kerala
- Gangtok – Sikkim

#### Water falls in India:

- In India there are many spectacular and wonderful waterfalls covered by dense forest, huge walls of rock and lush green trees.
- Among these waterfalls, some are seasonal, while some are perennial.
- Few of the amazing waterfalls are in swing during the monsoon season.
- This season brings lot of Tourists to these bubbling waterfall sites.

#### Notable waterfalls of India are given below:

- **Thalaiyar** - waterfalls Horse tail type located in Dindugul district of Tamil Nadu
- **Jog water falls** - Segmented waterfall (Raja, Rani and thunder) located in Shimoga district of Karnataka.
- **Nohkalikai waterfalls** - Tallest plunge type of waterfall situated in the East Khasi Hill District of Meghalaya.
- **Talakona waterfalls** - It is the highest waterfall in Andhra Pradesh. A lot of medicinal Herbs are seen around the region.
- **Aathirappally waterfalls** - The Niagara of India, is located in Thrissur district of Kerala.

#### Beaches:

- India is a country with 7517 km long coastline comprising the most beautiful beaches bounded by Arabian sea and Bay of Bengal.
- Indian beaches are enriched with diverse coastal land forms filled with aquatic flora and fauna.
- Lush backwater in the lagoons of Kerala and picturesque beaches of Goa such as Calangute, Aguda are the notable tourist destinations for water sports activities.

- The most charming and enchanting beaches of India are listed below.
- **Dhanushkodi** - Tamil Nadu Turquoise blue sea water
- **Varkala Beach** - Kerala Sea Cliffs for wonderful sunset views
- **Tarkarli Beach** - Maharashtra Coral reefs and marine adventure
- **OM Beach** - Karnataka Two semi-circular caves that join together forming the Inverted symbol of OM
- **Aguda Beach** Goa A huge hill dominates the southern side of the beach.
- **Marari Beach** Kerala Saddle like rock (Hammock) Beach

#### **Tourist Attraction in Tamil Nadu:**

- Tamil Nadu has various tourist attractions like religious centres, spiritual retreat centres, Beaches, hill stations, waterfalls, wildlife, art, culture, architecture, crafts, heritage monuments etc.
- The Government of Tamil Nadu has recognized the importance of tourism long ago and facilitated Its development in desired directions.
- Exploring new avenues like medical tourism and adventure Tourism in the past decades have helped Tamil Nadu tourism to achieve more than twenty percent Annual growth.
- Tamil Nadu earns the largest share of income from tourism in India.

#### **Religious Tourism:**

- Tamil Nadu is a state popularly known as land of Temples and has been the greatest source for Spiritual rejuvenation for travellers all over the world.
- The state is home to around 33,000 ancient Temples that mainly belongs to Dravidian style of architecture.
- Some of the world renowned religious

#### **Destinations are as follows:**

- Thanjavur Big temple
- Madurai Meenakshi temple
- Rameswaram Ramanathaswami temple
- Temples of Kancheepuram
- Velankanni Madha church
- Nagore Dargah

**Hill Stations in Tamil Nadu:**

- Tamil Nadu being situated in the Southern end of the Western and Eastern Ghats is the home for several hill stations.
- Popular among them are Udagamandalam (Ooty), Kodaikanal, Yercaud, Coonoor, Valparai, Yelagiri, Sirumalai, Kalrayan Hills and Palani Hills, Shevroy hills and Cardamom Hills.
- They are also abodes of thick forest and wild life.
  - Ooty – Queen of Hills
  - Yercaud – Lake forest (Poor Man's Ooty)
  - Yelagiri – 14 hairpin bends
  - Kodaikanal – Princess of Hill Stations
  - Kotagiri – Green Hills
  - Velliangiri Hills – Kailash of the South
  - Kolli Hills – motor able terrain with 70 hairpin bends
  - Anaimalai Hills – Top slip
  - Meghamalai – High wavy mountains
  - Javadi – Nature's Heaven

**Waterfalls in Tamil Nadu:**

- Mountains and rivers of Tamil Nadu combined together created many endearing waterfalls.
- Waterfalls in Tamil Nadu with its inspiring natural wonders attracts many tourists.
- A trek amidst Thick green trees, steep hills and a bath in the gushing water is most rejuvenating.
- Here is the list of Famous water falls of Tamil Nadu.

**Waterfall's Geographical location:**

- **Hogenakal falls** - It is a beautiful waterfall located in Dharmapuri district.
- **Kumbakkarai falls** - River Pambar cascades to form this fall at the foot hills of Kodaikanal in Theni district.
- **Monkey falls** - This waterfall lies on Anaimalai hills range in Coimbatore surrounded By Evergreen forests.



- **Killiyur falls**- Situated in the shervarayon hill ranges of the Eastern Ghats.
- **Courtallam water falls** - courtallam is located in Tirunelveli district. It is known for medical Spa.
- **Agaya Gangai falls** - It is a waterfall in Puliacholai on Kolli Hills in Eastern Ghats of Namakkal district.
- **Suruli Falls** - This fall is also called as Cloud Land falls (or) Meghamalai falls. It is Located in Theni district.

#### Beaches in Tamil Nadu:

- Tamil Nadu being a Coastal state in India Which consists of several beaches.
- Some of them are world famous tourist spots.
- Beach is a lovely Place to hang around with friends, families and Kids.
- All these are ideal destinations for sun Bath relaxation and water sports activities.
- **Kovalam Beach** – Kanchipuram - Small fishing Village
- **Marina Beach Chennai** - Second longest Urban beach
- **Kanyakumari Beach** - Multi-coloured Sand
- **Rameshwaram Beach** - Waveless beach
- **Elliot Beach** - Chennai - Beautiful beach -Active in day & Night
- **Mahabalipuram Beach** -Kanchipuram - Architectural and Archeological Beach
- **Silver Beach** - Cuddalore - Water Sports is the Entertainment
- **Muttukadu Beach** - Kanchipuram - Calm and Shallow
- Environmental Impact of Tourism the quality of the environment is essential for tourism.
- The tourism industry created Several positive and negative impacts on the Environment.

#### Positive Impacts:

- Direct financial Contributions
- Contributions to government revenues
- Improved environmental management and planning

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- Increasing environmental awareness
- Protection and reservation of Environment

**Negative Impacts:**

- Depletion of Natural Resources
  - Water resources
  - Local resources
  - Land degradation
- Pollution
  - Air and Noise Pollution
  - Solid Waste and Littering
  - Sewage
- Destruction and Alteration of Eco system
  - Air
  - Water
  - Soil

