

- > 2000mm rainfall - Evergreen rain forest
- 1500mm - 1000mm - Monsoon deciduous forests.
- 1000mm - 500mm - Drier deciduous or tropical Savana.
- 500mm - thorny bushes.

## (A) Tropical Forest (moist)

### (i) Tropical Wet Evergreen

- Typical rain forest
- 2500mm rainfall, 25°-27°C avg temp.
- => They are lofty, very dense multi-layered forest with mesophytic evergreen (height 40m to 60m)

- variety of orchids flourish on the tree.

Extent:- western side of Western Ghats (500m - 1370m ASL) South of Mumbai, a strip running from North East to S.W direction across Arunachal, upper Assam, Nagaland, Manipur, Mizoram & Tripura, and Andaman & Nicobar Islands.

Species: mesua, white cedar, Calophyllum, teak, deerp, Palaquium, hopea, Jorua, canes etc. in western Ghats, gurjan, Chaplasha, Jamun, mesua, Agar, Muli, bamboo etc. in Himalayan region.

### (ii) Tropical Semi-Evergreen

- Rain fall - 250 - 2000mm.
- Temp - 26° - 27°C

Extent:- Western Coast, Assam, Lower slopes of the Eastern Himalayas Orissa & Andaman.

Ashi, Semul, gutta, mundani, hopea, beetleak, kadam, irul, laurel, rosewood, mesua, haldu, Kanju, byasal, kuseum, Thorny bamboo etc on the Western Ghats, bonseum, white cedar, Indian chestnut, litca, hollock, champa, mango etc in Himalayan region.

### (iii) Tropical moist deciduous - (Largest area)

- Rain - 100 - 2000mm.
- Temp - above 27°C

Extent: A Belt running along the Western Ghats surrounding the belt of evergreen forests both on the western and Eastern sides, a strip along the Shivalik range including Terai, Bihar, Manipur and Mizoram, hills of Eastern Pradesh and Chhattisgarh, Chota Neelgarh Plateau

most of Orissa. Parts of West Bengal & in Andaman & Nicobar Islands.

main species: Teak, Sal, Paduk, Laurel, white chuglam, badam, dhup, chikoo, kokko, holdu, rosewood, mahua, bijara, ludi, semul, irul, dhama, amla, keum, tendu, Paula, Jamun, Sandalwood etc.

#### (4) Littoral and Swamp Forests

while littoral forests occur at several places along the coast. Swamp forests are confined to the deltas of the Ganga, the Mahanadi, the Godavari, the Krishna & Cauveri. India has 7% of total mangrove area of the world.

#### (B) DRY TROPICAL FORESTS.

##### (5) Tropical Dry Evergreen Forests:-

- Tamil Nadu Coast (w. rain 100cm - Oct. Dec).

They are short situated trees, up to 12m high, with complete canopy, no canopy layer differentiation, bamboos are rare.

species:- Khirni, Jamun, Kokko, ritla, ramari, neem, toddypalm etc.

##### (6) Tropical Dry Deciduous Forests:-

They represent a transitional type on the wetter side they give way to moist deciduous and on the drier side they degenerate into thorn forests.

extent (2nd largest area) except Rajasthan they occur all along the foot hills of Himalaya to Kanniyakumari (except Rajasthan) Western Ghats & West Bengal.

species: Teak, aklewood, tender, bijara, rosewood, amal tas, Palas, holdu, karai, bel, ludi, papera, achar, sal, khair, etc.

##### (7) Tropical Thorn Forests:-

Low rain 75cm

acacias are very prominent, wild date.

NW Country including Rajasthan, SW Punjab, West Haryana, Kachchh & Saurashtra.

Important species:- Khair, reerha, neem, babel, thar, cash, Palas, etc.

③ Montane Sub-tropical forests

⑧ Sub-tropical Broad leaved Hill forests

Rain - 75 cm to 125 cm

Eastern Himalayas

Species: Oaks, chestnuts, beech, ash. Climbers and

epiphytes are common.

Extent: - Eastern Himalayas to east of  $88^{\circ}$  E longitude.

1000 m - 2000 m.

South: - Nilgiri & Palni Hills.

⑨ Sub-tropical moist Pine forests

Western Himalayas. Some parts of Arunachal, Manipur, Meghalaya, Khasi Hills of Meghalaya.

Species: - Chir (valuable timber)

⑩ Sub-tropical Dry Evergreen forests

Extent: - Bhabar, the Shiwaliks & western Himalayas.

(up to 1000 MASL)

This is a low practically scrub forest with small evergreen stunted trees and shrubs.

Species - Olive, acacias, modesta, pistacia.

⑪ Montane Temperate forests

⑫ Montane Wet temperate forests

Height 1800 to 3000 m.

Rain - 150 cm to 300 cm, temp -  $11^{\circ}$  C to  $14^{\circ}$  C.

Extent: - higher hills of Tamil Nadu & Kerala.

Eastern Himalayan region, Hills of West Bengal, Arunachal Pradesh, Sikkim & Nagaland.

Species: - Deodar, chitauri, Indian chestnut, birch

Ratna Plum, oak, hemlock etc.

## (12) Himalayan moist temperate forests

Height - 1500 + 3800 metres

Kashmir, Himachal Pradesh, Uttarakhand, Sikkim & Jammu.

Species: - Pines, cedars, silver firs, spruce

## (13) Himalayan Dry temperate forests:-

Predominantly coniferous forest with xerophytic shrubs - deodar, chilgoza, oak, ash, maple, celtis etc.

Extent: - Ladakh, Lahul, Chamba, Kinnaur, Garhwal and Sikkim.

## (E) Alpine forests:-

Height - 2900 to 3500m

### Geographical distribution of Forest Area.

20.50% forest area (2005)

1.66% very dense

10.12% moderately dense

8.82% open forest

Scrub - 1.17%

⇒ Madhya Pradesh has the largest area under forest cover, followed by Assam, Chhattisgarh

%, Bihar - Mizoram has the maximum percentage of 88.43%, followed by Nagaland 82.75%, Assam - 80.93%

Andaman & Nicobar Islands (80.36%).

Andhra Pradesh has the largest area under scrub.