

SOIL AND NATIONAL PARKS/ BIOSPHERE RESERVES



Soil

Factors for the formation of soil:

1. Parent Rock
2. Climate
3. Time
4. Topography

- a. 1 & 2
 ✓ b. 1, 2, 3
 c. All
 d. 1, 3, 4

• Study of Soil: Pedology

- ICAR: Indian Council of Agricultural Research
- HQ: New Delhi
- This institute has categorised soil into 8 categories
- Indian Soils lack: N_2 , P, Humus (Organic matter)

Categories:

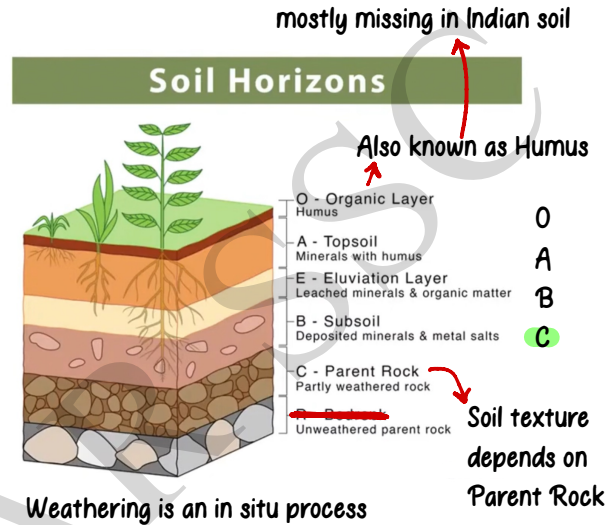
1. Alluvial soil: 40%
2. Red soil: 18%
3. Black soil: 15%
4. Laterite soil: 4.3%
5. Desert soil
6. Montane soil
7. Marshy/Peaty soil
8. Alkaline soil

more imp **

Uttar Pradesh, Bihar, West Bengal, Assam

1. Alluvial Soil

- Covers 40% area of India (In India, most fertile type of soil)
- Found in Northern Plains + Deltas of Peninsular rivers
- Rich in Potash and poor in Phosphorus



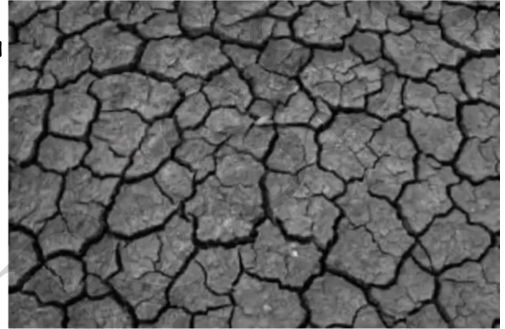
- Formed due to sediments deposited by rivers

They are of two types:

1. Khadar: New Alluvium, more fertile
2. Bhargar: Old Alluvium, less fertile

2. Black Soil (15%)

- It is formed due to eruption of lava
- Found in North Western part of Peninsular Plateau
—Maharashtra, Gujarat
- Also known as Regur
- Clayey in nature
- It is impermeable soil (high water holding capacity)
- It develops cracks when dry and sticky when moist



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Self-ploughing characteristics

- Most suitable soil for cotton cultivation

↓
requires 210 frost free days

- They are rich in Iron, lime, Alumina

- Loamy Soil: sand content is more

3. Red Soil (18%)

- Formed by the weathering of the metamorphic rock
- It is red due to presence of Iron Oxide
- Changes colour to yellow on hydration
- It is found in water deficit region: Karnataka, Tamil Nadu, Maharashtra, Piedmont Zone of Western Ghats
- In low rainfall areas

4. Laterite Soil (4.3%)

- It is formed by leaching process (where important minerals such as Silica washes away with the soil)
- Found in regions of high temperature and high rainfall
- It is known as Brick Soil

- Good for Cashew growth and cultivation
- Found in Tamil Nadu, Andhra Pradesh, Kerala

5. Marshy/Peaty Soil

- Seen in coastal areas
- Has organic matter/humus
- It is seen in regions of high humidity and high rainfall

6. Desert Soil

- Seen in extremely low rainfall areas (<50 cm): Western Rajasthan, Gujarat, Haryana

7. Montane/Forest Soil

- High humus is seen

National Parks

- Fixed boundary
- Limited human activity allowed
- Protects flora, fauna, landscape

Biosphere Reserves

- Fixed boundary
- Human activity is allowed to a certain level
- It has three zones:
 - Core
 - Buffer
 - Manipulation

National Parks

Assam

Manas



Manas NP

Na Meri



Nameri NP

Kazi



Kaziranga NP

करवादी मेरी शादी



Dihang NP

Aurang



Orang NP

Sheikh



Dibru Saikhowa NP

के साथ

Famous for One-horned Rhino

→ Raimona National Park (notified in 2021)

→ Dihing Patkai National Park (notified in 2021)

West Bengal

WB

की

Jalpari



Jaldapara NP

Nora



Neora Valley NP

Single



Singalila NP

है

और

बड़ी

सुंदर



Sunderban NP

और

गोरी



Gorumara NP

है

लेकिन

Boxer



Buxa NP

है

Madhya Pradesh

MP

के

Sanjay



Sanjay Gandhi NP

और

माधव

Madhav NP

अपने

Bandhu



Bandhavgarh NP

काण्डा से मिलने Paanch पैसे लेकर
 ↓ ↓
 Kanha NP Pench NP

Paan खाकर Monday को Saat वजे
 ↓ ↓ ↓
 Panna NP Mandla Plant Fossil NP Satpura NP

Van से पहुंचे
 ↓
 Van Vihar NP

Rajasthan

Raja Mukund is Running in Saree in Desert
 ↓ ↓ ↓ ↓ ↓
 Mukundra Hills NP Ranthambore NP Sariska NP Desert NP
 ↓
 Great Indian Bustard (state animal)

लेकिन क्यों ?
 ↓
 Keoladeo NP

Uttar Pradesh

UP के Pilibhit के Nawab को बेटी Chandraprabha
 ↓ ↓ ↓
 Pilibhit Tiger Reserve Nawab gang Bird Sanctuary Chandra Prabha WS

को Chambal के किनारे Dudh से
 ↓ ↓
 Chambal WS Dhudhwa NP

नद्याते धुर देखा मया

Uttarakhand

1. Jim Corbett NP: India's first NP, estd. in 1936, Project Tiger 1973 started from here



Old names: Hailey's National Park → Ramganga NP

2. Rajaji NP
3. Nanda Devi NP
4. Valley of Flower NP
5. Gangotri NP

• Project Elephant: 1992

Gujarat

Gujarat मे Meri Black Van Beach पर

↓ ↓ ↓

Marine NP Blackbuck NP Vansda NP

Gir मई

↓

Gir NP

↓

Famous for Asiatic Lions

Himachal Pradesh

1. Pin Valley NP
2. Simbalbara NP
3. Great Himalayan NP
4. Khirganga NP
5. Inderkila NP



Jammu and Kashmir, Ladakh — State animal: Snow Leopard

1. Hemis NP: largest National Park
2. Salim Ali NP
3. Dachigam NP
4. Kishtwar NP

• Salim Ali Bird Sanctuary: Goa

Kerala

1. Eravikulam NP
2. Periyar NP
3. Silent Valley NP

Tamil Nadu

1. Annaimudi NP
2. Mudumalai NP
3. Guindy NP
4. Indira Gandhi NP
5. Gulf of Mannar NP
6. Palani NP

Karnataka

1. Rajiv Gandhi NP (Nagarhole NP)
2. Kudremukh NP
3. Anshi NP
4. Bannerghatta NP

→ रजिव नगर के कूड़े का एक अंश भी बँन है।

Sikkim

1. Kanchenjunga NP

Bihar

1. Valmiki Tiger Reserve

Odisha

1. Bhitarkanika NP
2. Simlipal NP

Jharkhand

1. Palamu NP
2. Betla NP

Chhattisgarh

1. Indravati NP
2. Kanger Valley NP
3. Guru Ghasidas NP

Manipur

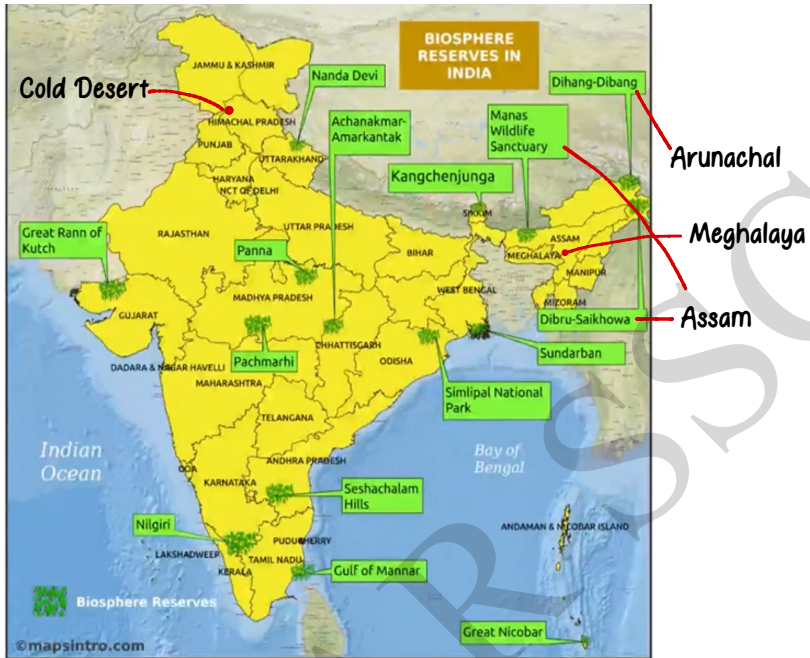
1. Keibul Lamjao NP (World's only floating NP on Loktak Lake)

famous for Sanghai Deer

A red arrow originates from the text 'famous for Sanghai Deer' and points towards the name of the Keibul Lamjao National Park in the list above.

Biosphere Reserves

- Total: 18
- 12 UNESCO Biosphere Reserves: Man and Biosphere programme (MAB), 1971



- Nilgiri Biosphere Reserves: 1st Biosphere Reserve to be included under MAB
- Largest: Great Rann of Kutch
- Under UNESCO, MAB:
 1. Nilgiri — Extended to 3 states → Kerala, Tamil Nadu, Karnataka
 2. Gulf of Mannar
 3. Sundarban
 4. Nanda Devi
 5. Nokrek
 6. Panchmarhi
 7. Simlipal
 8. Achanakmar–Amarkantak (Chattisgarh–Madhya Pradesh border)
 9. Great Nicobar
 10. Agasthyamalai → Added under MAB in 2018
 11. Kangchenjunga — Highest mixed first World Heritage
 12. Panna (latest added)

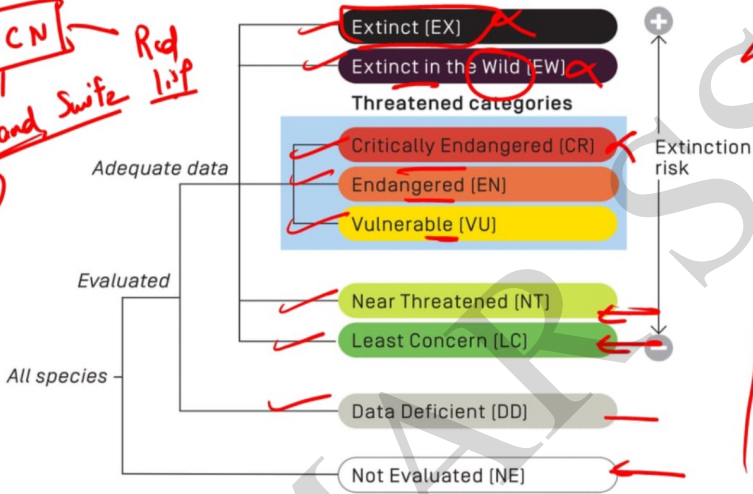


- National Commission on Agriculture (1976) of India has classified forestry into 3 categories:
 1. Urban Forestry
 2. Rural Forestry
 3. Farm Forestry
- In 1972, West Bengal Forest Department recognised its failures in reviving Sal forests in South Western districts of the State
- Coringa is a beautiful Mangrove forests where the Godavari joins the backwaters of Bay of Bengal (Godavari and in backwaters of Bay of Bengal)
- Littoral forests (Mangrove forests): Sundari trees
- Nallamala range of Forests: Andhra Pradesh-Telangana
- Moist Tropical Forests: Bamboo, epiphytes, Aini, semul, gutel and mundane
- Mid latitudinal coastal region: Temperate Evergreen Forest
- Hubbardia heptaneuron: a species grass which is on the verge of extinction due to its insensitivity towards the environment
- Temperate grasslands: ideal for wheat
- Roaring forties: other names — Shrieking sixties, furious fifties
It's in Southern Hemisphere because of less landmass
Westerlies in SH
- Largest tropical rainforest in the world: Amazon
- Artificial ecosystems: Garden
- Biotic component of an ecosystem: Wind
- Abiotic: non-living

IUCN

- Estd: 5 Oct 1948
- Red List of Threatened Species estd: 1964
- HQ: Gland, Switzerland
- Publishes Red List

IUCN
Red List
Gland Suisse
1964



PARMARISSC