

ENVIRONMENT NOTES - PART II

35. SAMBHAR SALT LAKE

The Sambhar Salt Lake, India's largest inland salt lake, is located 96km southwest of city of Jaipur. It surrounds the historical Sambhar Lake Town.

The lake receives water from five rivers Medtha, Samaod, Mantha, Rupangarh, Khari and khandela. Lake has 5700 square km catchment area.

Depth: 60 cm to 3 meters

Area: about 200 square kilometre

Shape: Elliptical

Sambhar Salt Lake is India's largest saline lake. It produces 196,000 tonnes of salt every year, which is around 9% of total salt production of India.

Salt is produced by evaporation of brine

Sambhar lake is a wetland.

Thousands of pink Flamingos and other birds migrate from northern Asia and Siberia.

Algae and bacteria growing in the lake provides the distinctive colour.

The colour of the brine ranges from green, orange, pink, purple pink, red due to bloom of haloalkaliphilic microorganisms.

Excavations near Sambhar lake was done in 1930s. Terracotta figurines, stoneware and decorated discs were found.

36. CHILKA LAKE

Chilka Lake-Odisha: with covering 1,100 sq km. Chilka is the largest brackish water lake in Asia. It is the largest coastal lagoon in India and the second largest lagoon in the world. It is the largest watering ground for migratory birds on the Indian subcontinent.

LAGOON: A LAGOON IS A SHALLOW BODY OF WATER SEPERATED FROM A LARGER BODY OF WATER BY BARRIER ISLANDS OR REEFS. LAGOONS CAN BE COASTAL LAGOONS AND ATOLL LAGOONS.

ATOLL: AN ATOLL ENCIRCLES A LAGOON

It is the largest wintering ground for migratory birds on the Indian sub-continent. The lagoon hosts about 160 species of birds.

The lake has large fishery resources. It sustains more than 150000 fisher-folk living in about 100 villages.

In 1981, Chilka lake was designated the first Indian Wetland of international importance under the Ramsar Convention.

Area: Water spread- 900 square km to 1165 square km.

A 32 km long narrow outer channel connects the lagoon to the Bay of Bengal.

37. NILGIRI BIOSPHER RESERVE

The Nilgiri Biosphere Reserve is an International Biosphere Reserve in the Western Ghats and Nilgiri Hills ranges of South India. The Nilgiri sub-cluster is a part of Western Ghats, which was declared a World Heritage Site by UNESCO in 2012. It includes the Aralam, Mudumali, Mukurthi, Nagarhole, Bandipur and Silent Valley national parks, as well as the Wayanad and Sathymangalam wildlife sanctuaries.

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38. SILENT VALLEY NATIONAL PARK

It is a national park with a core zone of 236 Sqkm.

It is located in the Nilgiri Hills, within the Palakkad District of Kerala.

The park is one of the last undisturbed tracts of South Western Ghats mountain rain forests and tropical moist evergreen forest in India.

The botanist Robert Wight named the area Silent Valley because of a perceived absence of noisy cicadas.

Silet valley is home to the largest population of Lion tailed macaques an endangered species of primate.

Kunthipuzha river passes through silent valley.

39. BIO FERTILIZERS

It is a substance which contains living micro-organisms which when applied to plant promotes growth of plants and increases the availability of primary nutrients to the plant. Ex. Rhizobium, Azotobactor, Anabaena

40. FLUROSIS

FLuorosis occurs when young children get too much fluoride, over an extended period of time. Dental fluorosis is a minor change in the appearance of the teeth, usually resulting in faint white marks on the enamel. Using too much of toothpaste can cause fluorosis.

41. JIM CORBET NATIONAL PARK

The major portion of Corbett is situated on the bank of Rivers Kosi and Ramganga. Located in Nainital district of Uttarakhand.

Jim Corbett National Park is the oldest national park in India. It was established in 1936 as Hailey National Park.

This park was the first park under Project Tiger.

It has 488 different species of plants.

Fauna: 50 species of Mammals, 580 Birds and 25 species of reptiles.

Area: 520 Square Km

Forest: Moist Deciduous- sal, haldu, peepal, rohini and mango. Forest cover 73%

Corbett National Park is one of the 13 protected areas covered by the World Wide Fund For Nature under their Terai Arc Landscape Program.

The program aims to protect three of the five terrestrial flagship species, the tiger, the Asian elephant and the great one-horned rhinoceros, by restoring corridors of forest to link protected areas of Nepal and India, to enable wildlife migration

42. KAZIRANGA NATIONAL PARK

Kaziranga National Park is a national park in the Golaghat and Nagaon districts of the state of Assam.

The sanctuary hosts two thirds of the world's great one horned rhinoceros.

It is a world Heritage site.

It also has wild water buffaloes and Swamp Deer.

It is situated on the banks of river Brahmaputra

It has the area of 430 sqkm.

The sanctuary has four different kinds of vegetation. The tropical moist mixed deciduous forest, Tropical semi evergreen forest, tall grasses and also short grasses.

43. FLURIDE

Fluoride is an important mineral for everyone, especially children. We all have bacteria in our mouth. Bacteria produce acid that harms teeth. Fluoride protects teeth and helps reverse early sign of decay.

44. FOREST TYPES OF INDIA

Wet Evergreen forest Semi Evergreen forest Dry Evergreen forest Moist Deciduous forest Dry Deciduous forest Mangrove forest Thorn Forest Sub tropical broad leaved forest

45. BIOGAS

Biogas typically refers to a mixture of different gases produced by the breakdown of organic matter in the absence of oxygen. Biogas can be produced from raw materials such as agricultural waste, manure, municipal waste, plant material, sewage, green waste or food waste.

Biogas is a renewable energy source.

46. BHARAT V

Bharat Stage Emission Standards (BSES)

India will implement the Bharat Stage-V or BS-V, emission norms for vehicles across the country from 2019. Bharat stage norms, based on European regulations, are emission standards decided by the government to regulate the amount for air pollutants from vehicles.

The problem in implementation are: increase in vehicle cost due to improved technology and higher fuel prices.

However the higher cost will be offset by savings in health costs for the public , as there will be lesser amount of disease causing particulate matter and pollution in the air.

exposure to air pollution can lead to respiratory and cardiovascular diseases, which is estimated to be the cause for 6.2 lakh early deaths in 2010.

The health cost of air pollution in India has been assessed at 3% of its GDP.

47. NOISE POLLUTION

Noise pollution (Environmental noise) is propagation of noise which can have harmful impact on the activity of human life.

The source of outdoor and indoor noise:

- a) Machines
- b) Transport & Transport System
- c) music
- d) Construction Activity
- e) Electricity Generators
- f) People yelling (sports games)

As per WHO permissible limit for Residential areas is up to 50 dB.

Noise pollution affects both health and behavior. Noise pollution can cause hypertension, high stress levels, tinnitus, hearing loss, sleep disturbances and other harmful effects.

High noise levels can contribute to cardiovascular effects in humans and an increased incidence of coronary artery disease.

Noise poses a serious threat to a child's physical and psychological health and may negatively interfere with a child's learning and behavior.

Noise-induced hearing loss can be caused by prolonged exposure to noise levels above 85 dB

Noise pollution affects animals equally.

India has rules & regulations against firecrackers and loudspeakers.

48. National Green Tribunal

The National Green Tribunal has been established on 18.10.2010 under the National Green Tribunal Act 2010.

Objective: to handle the expeditious disposal of the cases pertaining to environmental issues.

It draws inspiration from the India's constitutional provision of Article 21, which assures the citizens of India the right to a healthy environment.

The tribunal consist of a full time Chairperson, Judicial members and expert members. The minimum number of judicial and expert member prescribed is ten in each category and maximum number is twenty in each category.

A judge of the Supreme Court of India or Chief Justice of High Court are eligible to be Chairperson or judicial member of the Tribunal.

Tribunal is competent to hear cases for several acts such as:

Forest (Conservation) Act

Biological Diversity Act

Environment (Protection) Act

Water and Air (Prevention & Control of Pollution) Acts.

49. STERLITE PLANT ISSUE TUTUKUDI

There is a Sterlite Plant in Tutukudi, Tamil Nadu. The plant was shut down after violent protests by local people for environmental pollution of their farmland and habitats, drinking water facilities.

13 People died in police firing.

Tamil Nadu ordered the closure of the plant citing pollution concerns on May 28, 2018.

Bench of Green Tribunal set aside the closure order of Tamil Nadu Pollution Control Board.

Sterlite Company has offered to invest 100 Crore in social welfare schemes in villages around Tuticorin over three years.

50. PLASTIC BAG BAN

In India per capita of consumption of plastic is 24 pounds compared to 240 pounds in the US.

Every day, India generates 33.1 million pounds of plastic waste of which only 19.8 million pounds are collected and recycled.

Uncollected plastic pollute water, clog drains, kill cows and degrade soil.

Government has announced that India will "eliminate all single use plastics from our beautiful country."

Those caught using or selling plastics could have imposed fine upto `25,000 and three months jail for repeat offenders.

PM has said called plastic a "menace to humanity."

51. OLIVE RIDLEY TURTLE

The olive ridley sea turtle, also known as the Pacific ridley sea turtle are the smallest and most abundant of all sea turtles found in the world.

This species of sea turtle is found in warm and tropical waters, primarily in the Pacific and Indian Oceans.

These turtles are best known for their unique mass nesting called ARRIBADA, where thousands of females come together on the same beach to lay eggs.

They grow to about 2 feet in length. They have olive colored carapace, have broad head that appears triangular from above. It has paddle-like fore limbs.

In the Indian ocean, the majority of olive ridleys nest in two or three large groups near Gahirmatha in Odisha. The coast of Odisha in India is the largest mass nesting site for the olive ridley, followed by the coast of Mexico and Costa Rica.

In 1991 over 6lakh turtles nested along the coast of Odisha in one week.

They lay their eggs in conical nests about one and a half feet deep, which they laboriously dig with their hind flippers.

Gahirmatha Beach in Kendrapara district of Odisha. It is part of the Bhitarkanika Wildlife Sanctuary is the largest breeding ground for these turtles.

The olive ridley is exploited for food, bait, oil, leather and fertilizer. The eggs are eaten.

The olive ridley is classified as vulnerable according to the IUCN.

52. MOST ENDANGERED SPECIES IN INDIA

1. One Horned Rhinoceros
2. Nilgiri Tahr
3. Bengal Tiger
4. Asiatic Lion
5. Black Buck
6. Lion tailed Macaque
7. Snow Leopard

53. ENDANGERED ANIMALS FOUND ONLY IN INDIA

1. Andaman White-toothed Shrew
2. Asiatic Lion
3. Hard-ground Barasingha (Swamp Deer)
4. Kashmir stag
5. Lion tailed Macaque
6. Malabar Civet
7. Namdapha Flying Squirrel
8. Nilgiri Tahr
9. Pygmy Hog
10. Tiger Toad

54. WORLD SMALLEST FROG- NIGHT FROG

Night frogs discovered recently by Indian scientists, live in the Western Ghats.

They are 12 millimeter long. They always hiding under thick ground vegetation and leaf litter. Small enough to sit on fingernail.

They are found only in India's biodiverse Western Ghats region.

They are already under threat of extinction.

The smallest of frog (Vertebrate) is Paedophryne amauens of Papua New Guinea is 7.7 millimeter long (0.27 inches).

Largest frog in the world is goliath frog. It grows up to 12.5 inches long and can weigh up to 3.3 kg.
